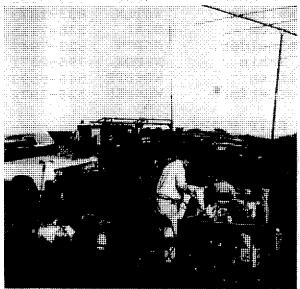
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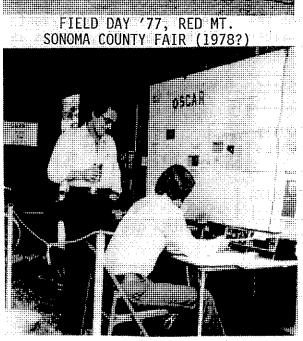


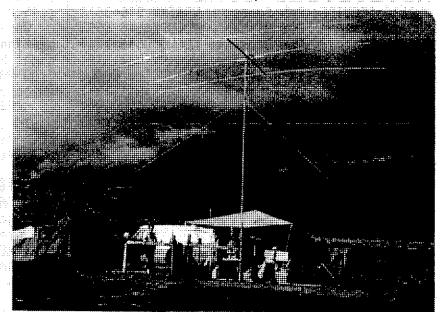
CHOW TIME, FIELD DAY '73, PINE MT.



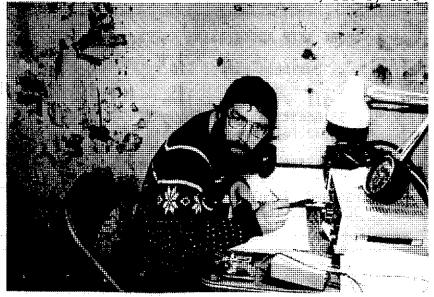
CHRISTMAS PARTY, 1950



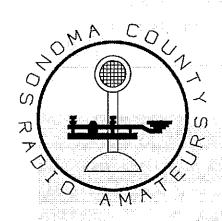




DEATH VALLEY MINI-DXPEDITION, FEB 16-17, 1980 WD6AJR FELT RIGHT AT HOME AT ALCATRAZ, DEC 1, 1979



823-7885



OFFICERS FOR

PRESIDENT: VICE PRESIDENT: SECRETARY: TREASURER:

MEMBERS-AT-LARGE: Chuck Sabin

REPEATER CHAIR:

CIRCULATION MGR:

SWAP SHOP:

Glen Crownover N6DNB 546-8955 John Wallack W6TLK 833-1873 Alan Bloom NIAL 538-7115 Jim Pelmulder N6PTM 823-7947 N6DDK 795-2371 Bob Olsten WD6DPE 546-5593 Jim Rutherford WB6PER 526-2972

---- SHORT SKIP STAFF: -----

Alan Bloom N1AL (e)538-7115 1578 Los Alamos Rd, Santa Rosa, CA 95405 (d) 577-3981

Tracy Reese Hank Davis WB6TMY

W6DTV

N1AL 538-7115 ARRL LIASON: Alan Bloom ASST. DIRECTOR: Chuck Sabin N6DDK 795-2371 BADGE CHAIRMAN: Jim Pelmulder N6PTM 823-7947

CLUB HISTORIAN: ConnieFreitas N6FYV

ACTIVITIES COMITTEE:

PUBLIC SERVICE: Bob Sones WB6EKV 546-3873 PROGRAMS: Bob Olsten WD6DPE 546-5593 FIELD DAY: Don BoosingerKD6HQ 546-1217 EDUCATION: Tracy Reese WB6TMY 527-8124 WA6ACX WW6D WA8LLY WB6PDP W6TLK WB6TMY KF6WV TV1/RFI: John Lynch AWARDS: Steve Lund VEC EXAMS: Steve Lund W6CCY 823-1357 Steve Lund WA8LLY 823-4544 WA8LLY 823-4544 WA6ACX NIAL K6ANP AG6C WD6CKP WN6D WW6D W6DTV WW6F WB6FRZ KF6FX W6RIA WB6UDR WU6W REFRESHMENTS @ MEETINGS: Bob Olsten WD6DPE GREETER AT MEETINGS: Jane Vanderslice N6NTB MEMBERSHIP LOTTERY: Bob Scolnick K6GEV Doug Bender WW6D QSL MANAGER:

REPEATER CONTROL OP'S:

WD6CKP Hoppy 542-6750 N60NZ Garry 584-3425 WB6PER Jim 526-2972 W6TLK John 833-1873 WB6UAZ Kathi 544-7943 WN6D Jim 544-7943 PACKET COMMITTEE: AT Bloom NIAL, Jim Boyett WN6D, Rich Freitas KA6SSL

SHORT SKIP ADVERTISING RATES:

Business cards: \$10

\$11 First 1/4 Column \$3 Additional 1/4 Columns (\$32 Full Page, 1 side)

Pre-printed inserts: \$32/sheet

Guaranteed circulation: 200/month AD DEADLINE: 15th of previous month

ARE YOU NOT AN SCRA MEMBER?

IF SO, then this is a complimentary copy. Our club is involved with almost every area of Amateur Radio: Repeaters (13/73), Field Day, license classes (Novice through Extra). volunteer exams, RACES, DX programs, packet (145.03), hidden xmtr hunts -- you name it.

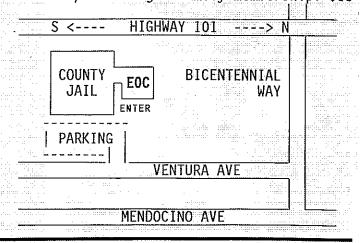
We invite you to attend our next monthly meeting (see below)or check into the Tuesday night SCARS net on the 146.13/73 repeater at 7:00 PM. You will hear the latest Westlink Amateur Radio News broadcast, announcements of SCRA activities, and a Swap Shop. If you would like to join SCRA, please refer to the dues listed below. Hope to have an "eyeball" QSO with you at the next meeting! 73 ...

CLUB MEETINGS:

7:30 PM, 1st Wednesday each month at the EOC (Emergency Operations Center, see map below) All are welcome to attend.

NEXT MEETING: October 4,1989

"Networking, Microwaves and the PROGRAM: Future of Amateur Radio", Glenn Elmore N6GN DUES: \$12 per year, plus a one-time \$4.00 initiation fee. Dues are pro-rated \$1/month for new members. With membership, comes an SCRA call/name badge. Family membership: \$18



NOVICE NETS

DEAR FELLOW HAM RADIO CLUBS ...

This is an open invitation for members of your club to join the members of our club for two great nets every Wednesday. For the last several years, we have hosted a slow CW net at 8 PM followed by an SSB net on 21.395 at 9 PM. Due to Novice enhancement, we recently changed the SSB net to 28.395 MHz. Our goal is to provide a meeting place for Northern Californians to share ideas.

We have had check-ins from as far away as Pennsylvania for the CW net and many out-ofstate check-ins on the 10 meter net. Our discussions have been everything from ice hockey to satellites, but they are never dull!

EBARC Slow CW Net EBARC SSB/Novice Net

Wed 8 PM 21.115 MHz Wed 9 PM 28.395 MHz

73 de Bob Fields KC6AOH, East Bay ARC.

NEW AND RENEWED **MEMBERS**

SINCE LAST MONTH

Art Clark 263 Fig Ct. Rohnert Park, CA 94928 584-5800

Bob Shrader W6BNB 11911 Barnett Valley Rd 615 Coddingtown Ctr Sebastopol, CA 95472 823-9122

Grant Canfield NH6GF 1950 W. Dry Creek Rd Healdsburg, CA 95448 431-7706



Bill Kaiser N6OLD 346 Lakeville Circle Petaluma, CA 94954 763-7845

Alan Judd N6VUD #175 Santa Rosa, CA 95401 575-1736

> We now have 182 members.



In October 1979, planning was already well under way for the upcoming DX-pedition to Alcatraz island in December and Death Valley trip in February. Lyle N6BLN (now WW6F) is the ringleader.

A transmitter hunt is planned for the club meeting, with an ARRL publication as prize. On October 20 and 21, the club will operate the Boy Scout Jamboree On the Air from the scout clubhouse in Doyle Park to kick off the club's Amateur Radio Explorer Post.

The Elmer Club is a list of members willing to help others get started in Amateur Radio. Rose WA6CWL keeps the list.

SCRA MEMBER OF THE YEAR

Nominations for SCRA Member of the Year are due by October 31. Send the candidate's name and list of accomplishments and reasons for nomination to Sarah Davis N6FAX, 7822 Washington Ave, Sebastopol, CA 95472. Each entry must be signed by a club member.



1989 SCRA FLEA MARKET

by CHOD HARRIS WB2CHO

The weather forecast for Saturday, Sept. 16 was for increasing clouds during the day, with a slight possibility of showers in the evening. By 11 am, the handful of people still at the Fairgrounds were ankle-deep in that "slight possibility." For the first time in 43 years, Santa Rosa had a rainstorm in mid-September, and, of course, it had to coincide with an outdoor flea market.

The Flea Market started well, with plenty of vendors and a reasonable crowd building around 8am. The parking lot was a little wet from a rain shower about 6:30, but it seemed to be clearing up. Then about 8:30 we began to see lightning. A count of the time between flash and the thunder (five seconds is about one mile) showed the storm moving toward us. A lightning bolt hit less than a block away, and the rain started in earnest.

The storm lasted less than half an hour, and soon vendors were again negotiating prices. Unfortunately, the rain picked up again around 9:30, and didn't let up. By 10 AM, half the sellers had packed up and left, and most of the buyers were huddling in their cars, listening to the prize announcements. By 11 AM, when everyone still there could pack under the snack booth tarp, the flea market was essentially over.

Financially we did okay, considering the miserable weather. (Details below). The grand prize of the complete 10-meter station, including rig, key, and antenna, was won by Noel Newton W6DPC, of San Rafael.

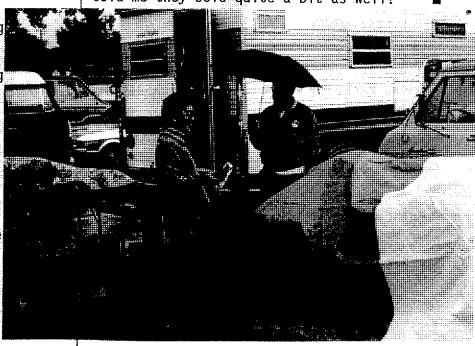
The flea market would not have been possible without the help of dozens of SCRA members, who braved the elements to provide vital services. Deserving special recognition in this group are Chuck Sabin and Marilyn Frank for a great job on the snack bar, Russ O'Neill for his public address system and prize announcements, Sarah Davis for handling the talk-in, Jim Pelmulder for working throughout the day, rain or no rain, Steve Lund for handling

the exams, and Alan Bloom for his publicity efforts. We should also note the invaluable assistance of Zane Bates at the Montgomery Village Radio Shack for his help with the raffle prize, Ray Miller of HSC Electronics for additional prizes, the ARRL for handouts and door prizes, and HRO for helping with the flyer. Thanks to one and all for their help!

SCRA 1989 Flea Market Finances:

Income:	
Tables rented - Advance Door	\$115 133
Raffle	304.25
Food	272.20
Club Table	46
Advertising (HRO)	100
Total Income	\$970.45
Expenses:	
Site Rental	\$200
Raffle prize	187.62
Food	200
25% of food to Fairgrounds	68.05
Flyer printing & postage	<u> 253</u>
Total Expenses	\$908.67
Excess of income over expenses:	+\$61.78

Note from N1AL: It really wasn't a bad flea market from a seller's standpoint. I sold \$250 worth of "junk", and 3 other people told me they sold quite a bit as well!





COMING EVENTS:

SCARS NET: 146.73 MHz Tuesdays at 7 PM.

VE EXAMS HOTLINE NR: 408-984-8353

OCTOBER:

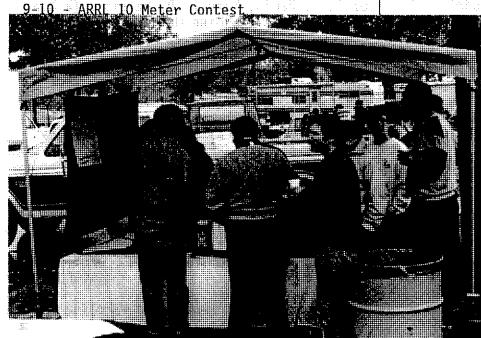
- * 1-2 Caliifornia QSO Party
 - 2 RACES etc. Net 7:30 PM 4 - SCRA meeting 7/7:30 PM
 - 6-8 ARRL Div Convention, San Jose
 - 7-8 California QSO Party
 - 7-8 Waves to Wine Bike Tour
 - 16 RACES etc. Net 7:30 PM
 - 19 CDF/VIP Meeting 7:30 PM
- 21-22 ARRL Simulated Emergency Test
- 28-29 CQWW SSB DX Contest 23 - Young at Heart Run

NOVEMBER:

- 1 SCRA meeting 7/7:30 PM
- 5 Windsor Whale Run
- 4-6 ARRL Sweepstakes, CW 18-20 ARRL Sweepstakes, Phone
- 25-26 CQ Worldwide CW DX Contest

DECEMBER:

1-3 - ARRL 160 Meter Contest



MICROSATS COMING

On November 10, from the spaceport of the European Space Agency located near the equator in Kourou, French Guiana, a powerful Ariane IV rocket is scheduled to carry six Amateur Radio satellites into orbit. Four of the six have been dubbed MicroSats because of their unusually small cube-shaped size measuring 9 inches on a side.

These tiny satellites, in comparison to the huge military and commercial units common today, represent the ultimate in small, lowcost, highly-efficient spacecraft design. Design and construction has been coordinated and organized by AMSAT in collaboration with the ARRL and TAPR.

Although OSCAR satellites have been getting heavier and larger, the MicroSats represent a radical departure in philosophy. Because of the dearth of launch opportunities caused by the Shuttle Challenger accident over 3 years ago, AMSAT now has to pay the full cost for launches. The tiny MicroSats require only modest launch support services and can fit in places on the launch vehicle normally reserved for lead ballast.

While large aerospace companies employ thousands of engineers and technicians. supercomputers and almost unlimited budgets, AMSAT and the Amateur Radio community prove that state-of-the-art, back-of-the-envelope

> design is alive and well. For more info, contact AMSAT, POB 27, Washington DC 20044.

For further information contact:

Jon Bloom KE3Z,ARRL Lab Supervsr 203-666-1541

John Champa K80CL, AMSAT ExecVP 301-589-6062

Andy Freeborn NØCCZ, Pres. TAPR 719-598-8373

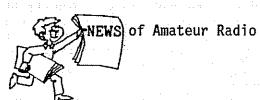
Tnx Westlink Report.





From the Sebastopol Times (?) sometime in 1966. Front row: Warren Hansen W6KXL, Hank Davis W6DTV, Glenn Elmore WA6STS (now N6GN). Back row: Daryl Eggleston WB6OCZ, Charles Smith WB6OCY, and Charles Polley WB6JFM.

OFF THE AIR, TOO!—Chatting by for the area's amateur radio operators, as above, in informal groups at each the study at the home of Mr. and front row). Beside Hansen is Henry "Glenn Elmore, Forestville, af right. At Smith, both of Forestville, and Charle



HURRICANE HUGO emergency traffic has been on 14.303, 14.283, 14.325 and 28.450 MHz. Many of the first reports out of the Caribbean were by Amateur Radio. ARRL

CONGRESS PROPOSES FEES FOR HAM LICENSES in HR 3299, introduced into the House Sept 20. Letters to your Congresspeople are in order. Sen. Carl Levin of Michigan desires to work with hams to defeat the proposal. *ARRL*

ARRL FILES IN FAVOR OF NO-CODE. On Aug 31, ARRL petitioned FCC for a new "Communicator" class license with no Morse requirement. It would allow up to 250W above 220 MHz and require an exam at Technician+ level. ARRL

WB6PTI INDICTED FOR MAIL FRAUD. The supposed purveyor of Uniden radios under the banner of Atlas Radio, Michael D. Harrison (a.k.a. John McNamara and Mike Hanson) has been charged with 50 counts of mail fraud. ARRL

CONTEST ENTRIES ON DISKETTE are now allowed for the ARRL Sweepstakes and other ARRL contests. Use IBM-compatible MS-DOS 5-1/4 or 3-1/2 inch diskettes. Log info should be a true ASCII file using the layout of the official forms. ARRL

ALLIANCE NO LONGER MAKES ANTENNA ROTORS as of August 1. They will stock spare parts until the supply runs out. Westlink

CALLSIGNS ISSUED AS OF SEPT 1: (ARRL)
EXTRA ADVANCED GECH/GEN NOVICE
AA6QE KJ6ZE N6WET KC6FOP

Thanks to the ARRL Letter and Westlink Report for the above info.



mike or Morse code on the airwaves is not enough They get together in club meetings and sometimes, h other's homes. Here are a few Sebastopol "hams", Mrs. Bob Hansen and their son, Warren, (at left, Pop" Davis, Analy High electronics instructor, with rear, left to right, are Daryl Eggleston and Charles s Polley Jr., Sebastopol.

> **EDITORIAL:** N1AL's **PREDICTIONS**

I hereby make the following predictions:

- We will have a codeless license.
- It will increase the Amateur population by less than a third.
- 3. As the years go by, there will be many requests to increase the privileges and reduce the testing requirements.
- Some of these requests will be granted.
- 20 years from now most old-timers (those now licensed) will feel that the quality of Amateur operators has deteriorated.

ICC }an 19: October 19:of

UNITED STATES OF AMERICA FEDERAL COMMUNICATIONS COMMISSION

Tier Appelier. Bouget Burenit ber 52-feb. 2.2

KINESVILLE MONITORING STATES

P.O. BOX 632, KINGSVILLE, TEXAS, 78363

OFFICIAL NOTICE OF VIOLATION

The facts set forth below indicate that you have violated the requirements of law or treaty. This Notice is issued in accordance with Section 1.89 of the Commission's Rules

Within 10 DAYS from receipt of this Notice, a written answer in DUPLICATE shall be addressed to "Federal munications Commission" and SENT TO THE ADDRESS ABOVE. DO NOT address your reply to an individual.

- MAKE CERTAIN THAT YOUR ANSWER: (a) Is dated and signed by licensee or an officer of the licensee
 - (b) Is identified as a reply to this notice
 - (c) Fully explains each violation (d) Does not refer to a reply to another notice
 - (a) Specifically describes the action taken to prevent continuation or recurrence of each violation listed below

An X indicates that the reverse side must be completed by operator and submitted with your answer. An extra copy is enclosed for this purpose. The rule violations marked with an asterisk (*), if repeated or willful, as well as your failure to reply to this notice, may result in the imposition of menetary ferfeitures. (See Section 510 of the Communications Act) Any of the rule violations, if repeated for willful, may result in the revocation of your station license or suspension of operator license. (See Sections 312 and 303(m) of the Communications Act.

SONOMA COUNTY RADIO AMATEURS, INC. 2555 MEDOCINO AVENUE & CLASS OF STATION SANTA ROSA, CALIFORNIA 95401 AMATEUR FREQUENCY JUNE 26, 1966 12:28 PM EST 21329.5 kc/s

VIOLATIONS

Failure to give geographical location while operating portable. Non-compliance with Section 97.87 (b) of the FCC Rules and Regulations.

12:28 FM EST CQ FIELD DAY CQ FIELD DAY CQ FIELD DAY THIS IS W61FJ PORTABLE SIX CALLING CQ FIELD DAY CQ FIELD DAY CQ FIELD DAY W6 LONDON FRANCE JAPAN CALLING CQ FIELD DAY AND LISTENING

Valent y Hush Robert H. Irion, Electronic Tech.
ISSUING OFFICER

ENGINEER IN CHARGE - LOCATION

JUN 3 0 1566 DATE MAILED/SERVED

folse statement in reply to this NOTICE is punishable by fine or imprisonment under Title 18,

A less welcome certificate from 1966.

The first annual Pacific Coast Bicycle Trek benefitting the American Lung Assoc. started Sept 25 from Seattle WA headed for San Diego, CA. 95 bicyclists from 39 states hope to raise \$600,000. 40 Amateurs are acting as base support stations, including WB6UDR Ed in Cloverdale and W6DTV Hank in Sebastopol. They pass through Sonoma Co. Oct 8/9. Tnx W6DTV

Radio Shack

STORE No. 3855

ZANE BATES MANAGER

510 FARMERS LANE SANTA ROSA, CA. 85405

TELEPHONE 546-8423

YOSEMITE 2M REPEATER

Amateurs planning to visit Yosemite National Park should make note of the new 2-meter coverage now available in Yosemite.

The Turlock Amateur Radio Club (TARC) maintains a 24-hour, 2-meter repeater system which affords handheld service in the majority of Yosemite Valley Floor as well as service to parts of the high country.

The Yosemite access port uses open carrier access on 147.000 Mhz (input is 600 khz up). It is linked to the W6BXN wide-area coverage multi-freq repeater system (147.030 &444.700 on Mt. Bullion near Mariposa 4400 ft above the San Joaquin Valley floor) covering a large population of Central Valley Amateurs.

The new port operates from Turtleback Dome with an 8db beam pointed directly into Yosemite Valley from above Inspiration Pnt.

The site was selected because it has great coverage into Yosemite, but is shaded from the San Joaquin Valley so as to keep cochannel interference with stations in the Central Valley to an absolute minimum.

The station was designed by Grady K6IXA and was installed by K6IXA and Ed KB6DRN. It consists of two VHF Engineering Transmitter-Receiver combinations with a VHF 4-element KLM/Mirage beam and a UHF 6-element Scaa beam with associated duplexer cavities and radiates 200W ERP to the Valley Floor.

Amateur-band coverage in Yosemite Valley had been very minimal until now due to the enclosed geography of the Park, leaving a great national facility with poor coverage for the large number of American and Foreign Amateurs visiting the Park each year.

The TURLOCK AMATEUR RADIO CLUB looks forward to meeting visitors to Yosemite and welcomes all to make their presence known. W6BXN Repeater covers much of the Central Valley from Mt. Bullion near Mariposa. 444.700, 147.030 & 147.000 are accessable 24 hours a day. (Tnx to N6IIU BBS)

W6BXN CENTRAL VALLEY 147.030 / UP .600 W6BXN Y0SEMITE VALLEY 147.000 / UP .600 W6BXN CENTRAL VALLEY 444.700 / UP 5.000

CDF-VIP NEWS



NEW CHIEF RANGER

The highlight of the September 21 meeting was the introduction to the group of the new Chief of the Sonoma Ranger Unit, Bill Harrington. Chief Harrington said he is well aware of and grateful for the help of Amateur Radio -- the CDF couldn't buy this kind of resource. He was happy to note that the Press Democrat has announced that fire season is over, and hopes that nature has got the word.

Rudy N6KLU and Garry N6ONZ have met with CDF staff to explain Amateurs' functions in field operations.

CDF needs volunteers to man the booth at the Harvest Fair Saturday Oct 7.

Hank W6DTV presented a proposed layout for the radio room.

Garry N6ONZ reported the Comm Van now has a generator, inside paint, stove, 'fridge, and antenna mounts. Still to do are body work, outside paint, carpentry and wiring.

CDF Training Officer Dan Uboldi and Rudy N6KLU reviewed response procedures for the VIP group in time of emergency.

Fire Prevention Officer Gerry Murphy talked about how former Sonoma Countian Diann Sanders is organizing up a storm up in the Lake-Napa Ranger Unit. We plan to start a non-ham VIP unit here in the SNU as well.



George Shedore Manager KS6W

6819 REDWOOD DRIVE COTATI, CA 94931

PHONE: (707) 792-2277 FAX: (707) 792-0146

SCRA MINUTES

September 6, 1989



The meeting was called to order by President Glenn Crownover N6DNB 7:30 PM. VISITORS introduced by Jane N6NTB: Dave Jackson, and Alan N6VUD.

The **PROGRAM** was arranged through Tom KB6UOJ. The speaker, Ian Hunt VK5QX, introduced Tom to Amateur Radio a few years ago when Tom needed a "health & welfare" phone patch to the US while on vacation in Australia.

Ian is with the Australian Dept of Defense and works with over-the-horizon radar. He gave a very interesting talk.

The MINUTES were approved as published in Short Skip. m/s N6KMJ/K6GEV

EDUCATION: WASLLY will start a class in January. The VEC exams at the Flea Market will include Novice exams this time.

TREASURER'S REPORT: \$1447.81 General Fund, \$1785.07 Repeater Fund. Approved. m/s N6KMJ/K6GEV. Jim has magnetic Amateur Radio public service signs for \$8 each.

AMSAT: Bob WB7CNJ is the new AMSAT area coordinator. There's lots of DX on the satellites -- many DXpeditions use them for base communications. There are no propagation problems and the small antenna required won't annoy the neighbors.

The FLEA MARKET was discussed by Chod WB2CHO. We are an official ARRL hamfest. Notices have appeared in the major ham magazines. There will be a Press Democrat article. We plan on operating a station in honor of Amateur Awareness Day.

FIELD DAY: KD6HQ will be next year's Chairman. Don would like to make it more family-oriented next year. Suggested sites have been Fort Ross, Spring Lake, the Cheese Factory, and Sugarloaf State Park.

Don asked about a SPECIAL EVENTS STATION. We haven't done one in a long time.

Do we need additional **FUNDRAISERS**? Don suggested an Amateur Radio cookbook. (Ham dinners, of course. Perhaps "TA" and all the trimmings. Some "CE" con carne? Baked "KL7" for dessert? Just the thing for all those "HA" DX-ers.)

PUBLIC SERVICE: Hank W6DTV discussed the Canada-to-San Diego bike tour that will pass through Sonoma county on the 9th. Freq's used will be 146.73, 146.91 or 145.11.

EMERGENCY MONITOR FREQUENCY: Rick N6RXA moved that SCRA sponsor 146.52 MHz as an emergency monitor and calling frequency. Seconded by KD6HQ. Passed.

The RAFFLE would have gone to Norm WB6VSD had he been present.

CORRESPONDENCE listed by N1AL included: a list of East Bay ARC nets, and a letter from ARRL commemorating our 50 years as an affiliated club.

WESTLINK: The club voted to donate \$100 to Westlink Radio News. m/s N6FYV/N6KMJ

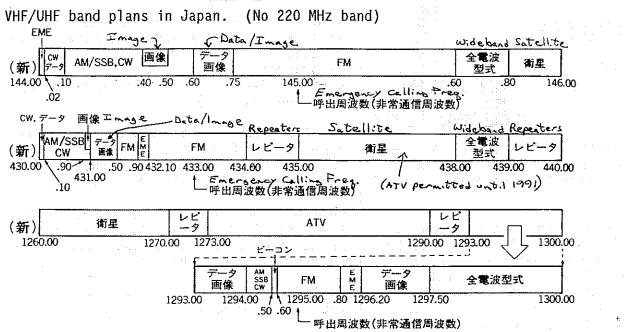
Adjourned at 9:16 PM. m/s N6KMJ/K6GEV Respectfully submitted, Al Bloom N1AL, Sec.

TREASURER'S REPORT

FOR MONTH ENDING August 31, 1989



ACCOUNT	REVENUE	<u>EXPENSE</u>
Refreshments at meetings Dues and Initiations	63.00	6.91
Fund-Raisers (ARRL)	20.00	
(Flea Market).	50.10
Badges	• •	10.92
Misc(Donation)	85.00	1.99
(Club Radios).	33.00
Repeater		166.64
Short Skip Newsletter	190.00	144.57
Westlink Report	• • •	15.12
Membership Supplies		104.76
Officers' Expenses	••	10.00
		
ACCETO	363.00	562.01
ASSETS:	7 1 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
General Fund Account	1424.73	
Cash/checks on hand	23.08	
Total General Fund	1447.81	
Total Repeater Fund	1785.07	de N6PTM



CQ ham radio

Teen-Age Hero in Amazon Jet Rescue

By JAMES BROOKE

Special to The New York Times

RIO DE JANEIRO, Sept. 6 — Survivors of a jetliner crash in the Amazon attributed their rescue today to an unemployed 19-year-old passenger who proved to be schooled in the ways of the rain forest.

Marooned in thick jungle without food and fresh water, the crew and passengers pinned their hopes Tuesday morning on Alfonso Saravia, a short, unassuming man who had suffered a deep head wound in the crash on Sunday night, which killed 13 passengers and injured 30. Forty-one people survived.

vived.
"I felt it was my duty to try it," Mr. Saravia told a Reuters reporter who reached the base camp for rescue operations on a ranch in São José do Xingu, a remote village in the east.

In the crash, the Boeing 737 cut a 200yard-long slice in the jungle, apparently not large enough to attract the attention of search planes that survivors heard flying overhead on Monday and Tuesday. Rain and smoke from forest fires also hampered the search.

They Set Out on Foot

With several passengers delirious from their injuries, Mr. Saravia, a native of the Amazon region, decided to set out on foot at the head of four-member party searching for help.

After walking for three hours into dense jungle, through the jungle, Mr. Saravia's ground first. Empt group came upon a ranch house. An broke off, sma older passenger, Epaminondas Souza against tree trunks.

Chaves, was driven to a second ranch, where civil aviation authorities were contacted by amateur radio.

Today, the last survivors were raised by winch from the crash site into helicopters. During the day, Brazilian television broadcast live reports from Brasilia where the injured could be seen hobbling weakly off rescue planes or rushed on stretchers to helicopters.

Lost Navigational Systems

The drama started Sunday afternoon when the regularly scheduled Varig flight took off from Maraba for a 40-minute trip to Belém.

Shortly after takeoff, the airplane lost all its navigational systems, said Solange Pereira de Mello, a flight attendant interviewed at the rescue camp. After drifting over the Amazon for three hours, the pilot, César Augusto Garcez, started searching in the dark for a place to crash land.

"The pilot warned that he was flying in circles until the fuel was used up," one passenger, Maria Inês Araujo Coimbra, recalled today on television. "Then he told everyone to sit down, put on their safety belts, put their heads down, and that the fall was starting."

O Estado, a São Paulo newspaper, reported today that the jet made a low pass over a clearing filled with stacks of tree trunks. Lumbermen flashed

Survivors said the jet had descended into dense jungle, its tail hitting the ground first. Empty of fuel, the wings broke off, smashing harmlessly against tree trunks.

But inside the fuselage, the airplane's momentum threw several rows of seats forward, crushing about six passengers to death, including a child. One man was killed apparently because he panicked and stood up.

On the ground, in the dark, the survivors found themselves virtually without food and water. Four years ago. Brazil's Civil Aviation Department dropped a longstanding requirement that airliners on domestic routes carry jungle survival kits. The kits carried food, water, medical supplies, a machete, compasses and hunting gear.

Bowing to airline complaints that the kits added an extra 100 pounds, the department replaced them with flares and smoke signaling devices. But smoke signals are hard to detect in the Amazon when ranchers burn large stretches of forest for pasture land.

Amateur Radio Essential

Four survivors are in serious condition, several with multiple fractures. One woman died this morning in a plane taking her to Brasilia.

The crash also underlined the enduring emptiness of Brazil's Amazon.

For three hours, the Boeing pilot flew in the opposition direction of his flight plan without ground controllers noting that he was off course. Today, Brazilian aeronautics officials repeated that the nation's air traffic control radar covers only the fringes of the Amazon.

Indeed, amateur radio seems to be the technology that saved the 41 survivors. In São José do Xingu, as in much of the Amazon, amateur radio is the primary form of communication.

By chance, a young radio buff in São Paulo, João Capanema Jr., overheard the survivor's plea for help.







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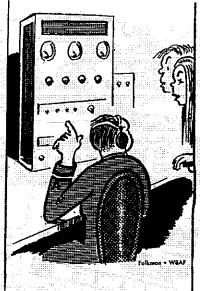


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