



- The - READOUT

Vol. 9 No. 9 ■ Sept 1986

VISITING EXPO '86 by W6XK

My family (Karen, Andrea and Adam) and I combined summer vacation and Amateur radio this summer when we visited the World's Fair, EXPO '86 in Canada. The initial idea came from Jae Suseoff, VE7BJE. Jae, his wife, Elaine, 12 year old son, Misha and 9 year old daughter, Cally, are close friends of my family. Our families hold a schedule every Sunday on 75 meter SSB and every Wednesday on 80 CW. Jae suggested that we travel to Vancouver, British Columbia, to visit EXPO. He offered to arrange the living accommodations, transportation around town and sight-seeing activities for our families. As

an added incentive, Jae scheduled some operating time on VE7EXPO, the official voice of the World's Fair located in the Canadian Pavilion. Jae, Karen, WA6HRC and I were offered operating positions (and "staff entry passes") for the days we attended the fair. Naturally, we couldn't refuse the offer. We spent 8 days

(Continued on Page 3)



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

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EADOUT is the official publication of the STANISLAUS AMATEUR RADIO ASSOCIATION INC. "SARA" P. O. Box 4601 Modesto, CA. 95352. Entered as bulk mail at the post office Modesto, CA. Contributions may be submitted to the editor, Bob Pinheiro, WA6ZLD at 1221 Mist Flower Ct. Modesto, CA. 95355. SARA owns and operates two F.M. repeaters. 145.39 MHz (-) located on Mt. Dso 18 miles SW of Modesto at an elevation of 3,370 feet. Our 220 MHz repeater operates of 223.68 MHz (-) and is also located on Mt. Dso at an elevation of 3,500 feet. Both repeaters are equipped with an autopatch for the use of SARA members. SARA owns and operates a packet digipeater also located on Mt. Dso at 3500 feet. The frequency is 145.01 MHz. SARA conducts an informational net on both repeaters each Thursday evening at 730 pm with the exception of holidays. SARA meets the third Tuesday of each month at the Stanislaus County Administration building at the 12th and H streets in downtown Modesto. Meetings begin at 730 pm. SARA is incorporated with the State of California and is an affiliated club of the American Radio Relay League (ARRL) and Stanislaus County RACES. Dues are \$15.00 per annum, \$7.50 for students up to sophomore in college and \$7.50 per year for Associate membership. Dues are pro-rated for newly joining members from the date they join. ARRL membership and QST renewals may be made through SARA with a 2.00 commission retained by SARA.

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PROGRAM THIS MONTH

COLOR SLIDES

OF

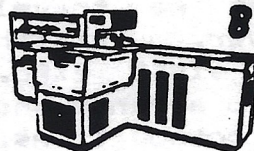
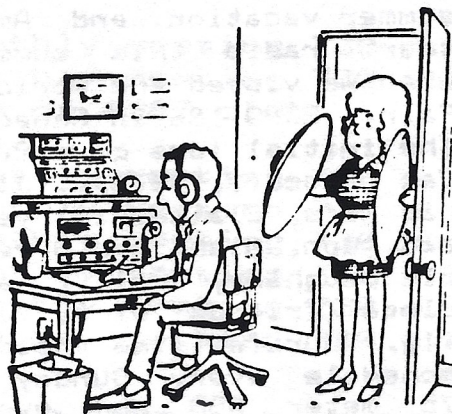
RECENT TRIP

TO JAPAN

PRESENTED BY TOM

WJ60 / 7J1ABS

SARA MEETING



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1325 J. Street
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VISITING EXPO '86

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(From front page)

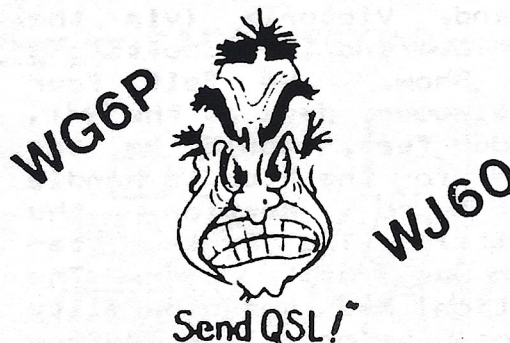
with the Suseoffs in a 6-bedroom house in suburban Kerrisdale (Jae exchanged his house on the Shuswap Lake for the house in town for a week, free of charge.) We decided to break up our visit to the fair with sight-seeing trips to Stanley Park, Vancouver Island, Victoria (via the ferries) and the Abbotsford Air Show. We felt four continuous days at the fair, on our feet, would be too much for the kids to handle (not to mention the adults)! The Amateur station was a ham's dream. The station had the capability to operate on all bands from 160 meters through 70 cm. The operating modes included CW, SSB, FM, Packet, RTTY and OSCAR. The gear was ICOM throughout. The antennas included all-band verticals, dipoles and a three-element beam for 20, 15 and 10 meters. We were given 6 hour shifts on-the-air. Karen and I operated 80 and 40 meters CW, while Jae worked 20-meters CW and SSB and 2-meter FM. Now we know what it is like to be "DX". Pileups were common! Needless to say, we took

frequent breaks for refreshments, pit stops and sight seeing around the Canadian Pavilion. The station was plagued by several problems. First, the antennas were located inside the pavilion building. This caused a general attenuation of all signals. Second, there was a lot of RF hash being generated by nearby neon lights, motors and displays. This resulted in an 8-9 noise level most of the time. Finally, the general level of noise (people generated) in the building necessitated the use of headphones during all periods of operation. On the positive side, we were able to demonstrate Amateur Radio to a large population. We answered questions passed out literature and proudly pointed to the large display of equipment with pride. QSL cards were also available to visiting hams at the fair. I had many enjoyable eye-ball QSO's with hams from all over the world. If you are planning a trip to EXPO, be prepared for long "line-ups", high prices and lots of walking! On the other hand, you will experience fascinating 3-D movies, a vast array of entertainment, fantastic ethnic food and a glimpse at

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In this chapter of tips for QSL'ing, we shall discuss QSL'ing through QSL managers. Managers are hams who, for a variety of reasons, handle cards for various DX stations. This provides an easy way for most of us to get a card from an otherwise difficult station. Quite a number of managers are stateside, meaning that a SASE will buy you your card. It is always a good practice when working a DX station to follow these two guidelines. (1.) If you work the station either in a "pileup" or a net (list) operation, listen for the QSL information. In pileups, the DX will usually give it out every so often. During a net operation, the net controller will give it out at least at the close of the net. (2.) If the info is "via the buro (bureau)" or "QSL direct", then you already know what to do. But, if the info is QSL to my manager (call), then you will want to use that call to address your card to. Fill out the QSL card as always. If the manager is a stateside manager, lookup the station manager's call in the Callbook and send your card and SASE directly

to him. It is sometimes a good idea, especially for the more famous managers, i.e., W7PHQ, W3HNN, W0TEC, KA6V etc. to include an extra, loose 22 cent stamp if you can afford it. Being a manager is not profitable and sometimes the manager has to pay for postage. So,



a little help will not be forgotten. Having been a QSL manager for 7J1ABS (WJ60), I can tell you that it is a lot of work. If the manager is himself DX, follow the same guideline as QSL'ing direct with a foreign country. If you are not sure of QSL routing, don't first send the card off to the station worked. He or she may not pass your card on to the manager. There are better ways. (1.)

Check one of the several publications such as W660 list, WB4KCL Manager Directory, Callbooks, QST, World-Radio etc. The DX may be listed there and QSL info given. (2.) There are several 20 meter nets where QSL info may be obtained. Most popular of these is INDEXA (International DX Association) at 14.236 MHz at 2330 Z daily except Wednesdays. Others are the FAMILY HOUR at 14.226.6 at 1430, 1930 and 2330 Z. HIXA net at 14.220.00 at 0630 Z or IAR net at 14.243 at 2330 Z. Of course you can always call Tom (WJ60) or Denny (WG6P) and between the two of us, we have most of the listings. Well, DX buffs, those are a few tips for successful QSL'ing. Remember, patience is it's own reward for QSL'ing with DX station, but using these techniques you will be amazed at what the postman will bring you. Good Luck, good DX and see you in the pile-ups!

STATION LOG: The minutes of the SARA August meeting were not received in time for this months READOUT. They will appear next month.

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CB'ER FORCIBLY SILENCED

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A CB transceiver in La Habra, CA. was shot to death by an armed intruder in June. According to the Orange County Register, Dennis Carrico was talking on his CB radio after midnight when he sensed he was no longer alone. Carrico turned and saw a stranger with a gun standing over him. The gunman ordered him off the air and to move away from the radio. Carrico obeyed, after which the visitor shot it three times and promptly left. Carrico was not harmed, but his \$500 transceiver was destroyed.

(Westlink Report)



"Delta ... India ... Sierra ... Hotel ...
Echo ... Sierra."

(Thanks Communicator)



Editor's WA6ZLO Notes

A couple of new calls arrived this month. Bob Vreugdehil, ex-W6WDZ, is now N6QCS and Bud Pelletier, KB6JHU, is now N6OCV. +++The club has tentatively scheduled it's next VE Exam in Modesto on November 1, 1986. +++The SARA-BASH is coming up soon on October 11th at the new Sylvan Clubhouse. Get your tickets from Lynn, KB6DXX by calling 523-0141. Price is \$15.00 per person. +++There is a new digipeater on Mt. Oso. KB6C-4 operates on 145.05 MHz and provides a direct path to KB6C-1 on Frazier Peak near Gorman (south of Bakersfield). The system is owned by Dennis, KB6C, in Reseda. +++ As you probably know by now, Patrick Sherrill, 44, was the postal employee in Edmond, Oklahoma who went berserk and killed 14 fellow employees and then turned the gun on himself. What you may have missed was

that he was a ham radio operator. He was N5PS, an Extra Class, who was active on all bands. According to friends who knew him he was a quiet, introverted and a most reserved person who lived alone. +++ William Reinke, WA7TCC, of Brea, California, was sentenced to 5 years in prison and fined \$140,000 following his conviction on two counts of defrauding the government during his employment at Northrop on the top-secret stealth bomber program. He allegedly awarded a \$600,000 contract to an engineering firm he owned. He also lied about being an ex-con, having served time at a Florida prison. +++ Figures released by the FCC indicate that for the month of July 1986, 2,806 first time Amateurs joined the ranks. This figure compares to 1,431 for July in 1985. It is now taking the FCC 17 calendar days to issue an Amateur license. Add 2 to 3 weeks more for the application to filter through the VEC channels. +++The Jack Ravenscroft's fund is now at \$55,000. Jack, VE3SR, is appealing his conviction six months ago on a nuisance complaint of interfering with his neighbor's RFI prone appliances.

THE AMERICAN RADIO RELAY LEAGUE, INC.

SECTION MANAGER

SAN JOAQUIN VALLEY

Charles P. McConnell W6DPD

The JAS 1 satellite, now called Fuji, reached its planned circular orbit. The 435.795 MHz beacon is operational. The mode J analog transponder is now available for use. Amateurs are requested to use the minimum power necessary. The use of excess power puts a drain on the spacecraft electrical sources. See the June 1986 QST for more information.

The FCC has acted in PR Docket 85 196 to amend Part 97 of the Rules to permit volunteer examiner coordinators (VECs) to maintain question pools for Amateur exams. This will cause the deletion of PR Bulletins 1035 A, B, C, and D which contain the questions and PR Bulletin 1035, the Study Guide for Amateur Radio License Examinations. The effective date will be released later, but the FCC told the VECs to begin to prepare their question pools immediately. The FCC indicated that the VECs should be responsive to new developments in Amateur Radio and should update question pools as needed. The ARRL had opposed this Docket because if the FCC maintained the question pool, then there would be a single standard, high quality pool of questions for each examination element. Further details in this action can be found in *The ARRL Letter* and QST.

Here are some highlights from the 1986 Second meeting of the ARRL Board of Directors:

The Board approved in principle the creation of an ARRL Museum and Visitor Center at Headquarters and directed that possible sources of funding be explored.

The 1989 ARRL Diamond Jubilee National Convention will be in Las Vegas. The dates will be announced in the future.

During 1987 to celebrate the 50th anniversary of DXCC, the Golden Jubilee DXCC will be available. Details on this are in the Sept. 1986 QST.

Starting with the January 1987 issues, authors of articles for QST and QEX will be paid for their contributions.

"IT'S ABOUT TIME"

....Let me tell you a little story:

Once upon a time there was a King of England whose name was Charles II. When he took the throne in 1660, he proved to be a patron of the sciences, giving his encouragement to scientific academics, and learned societies, which included his special interest in the study of heavenly bodies (incidentally, history records that Charles ran the most immoral court known to mankind, which is the wrong connotation of the phrase "study of the heavenly bodies" for the purposes of our story; at least that's some constellation (sic)!!) It so happens that two events had occurred in 1609 which marked the birth of modern science. Johannes Kepler, a German astronomer, formulated the theory that the planets move around the sun in ellipses rather than in perfect circles and that the time taken to complete their revolutions varies according to their average distance from the sun, thus destroying the old belief that the universe was made up of heavenly bodies moving in perfect circles and at uni-

form speeds. In that same year, Galileo Galilei, in Padua, made the first astronomical telescope and studied the movement of the planets, confirming the theory of Copernicus that the earth and the planets move around the sun. This got Galileo in a heap of trouble, because this was the exact opposite of Church dogma and he almost lost his life as a result of his published studies. Historians still disagree on who first divided the day into 24 hours; after all, an hour glass was in use at least 2000 years ago and simple water clocks were in use in Egypt, Greece and Rome before 150 BC. At any rate, by the 17th century the basic elements of time-keeping had also become basic elements in navigation and aboard ship the duty watches were recorded by bells. Navigators had learned to use readings of the sun and stars to determine their latitude, or north-south position; but there was no reliable way to determine longitude -- the east-west basis. They had to rely on "dead reckoning" -- which frequently resulted in

STANISLAUS AMATEUR RADIO ASSOCIATION

MEMBERSHIP LIST 1986

As of 9-1-86

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WGAFS G BILL PIETZ 902 CALIFORNIA AVE MODESTO 95351 523-4352
K16AG A RANDY ANDERSON P.O. BOX 725 RIVERBANK 95367 523-5447
WD6AKT T BILL PHILLIPS 1199 KIMBALL OAKDALE 95361 847-9400
WG6JU A FRANK ASHBY P.O. BOX 280 EATONVILLE, WA. 98328
KB6ANA A RANDY FRANCIS 321 DE PAUL TURLOCK 95380 667-5767
WG6PF T LARRY MERRITT 400 PIRINEN LANE MODESTO 95354 521-8778
HK1AMV E ARMANDO VERGARA P.O. BOX 909 HUGHSON 95326 883-0694
KG6YA E PAT PATTERSON 1200 SKYVIEW DRIVE OAKDALE 95361 847-7702
WG6YQ E R. LEONARD CARY 426 HOLLYWOOD AVE. TRACY 95336 835-1554
KE6BE A EMILE LENGVEL 4141 CARVER RD. MODESTO 95350 522-5753
KB6BI A BILL HICKMAN 4549 ALLA ROAD MARINA DEL RAY 90291 823-2252
K6BII G CAL PURVIANCE 3328 CLAREMONT AVE. MODESTO 95350 529-8921
N6BLA T CHUCK BONASERA 707 MEADOW WAY MANTECA 95336 239-6382
NK6C E BRUCE JOHNSTON 1261 POPLAR ST. OAKDALE 95361 847-0232
K6CAR G KLEM NIELSON 2219 TIOSA DRIVE OAKDALE 95361 847-0133
WD6CEV A BOB CRAWFORD 2120 BARRINGTON LANE MODESTO 95350 522-9111
KB6CCI T PENNY CRON 1525 GALVEZ AVE. MODESTO 95355 521-2032
KB6CCL T LILLY DALTON 2430 CALIFORNIA AVE. MODESTO 95351 522-5108
KB6CCX T DOUG CRON 1525 GALVEZ AVE. MODESTO 95355 521-2032
K6CHL T BRIAN LACY 517 LATHROP MODESTO 95351 538-7591
K6CJO T BILL EATON 3001 HOLIDAY LANE MODESTO 95350 523-8820
HK1CLT E RICARDO VERGARA 2404 SUSSEX MODESTO 95351 575-3550
WD6CMI T LARRY MANNING 1400 TRINITY TURLOCK 95380 667-8363
K6CUJ T MAX CAMPBELL P.O. BOX 287 MURPHYS 95247 728-3911
K6CXR A ED LACY 517 LATHROP MODESTO 95351 538-7591
WG6CYR E JACK STORNE 1525 ROOSEVELT ESCALON 95320 838-7763
WC6D E MARK TAYLOR P.O. BOX 4659 MODESTO 95355 527-6326
K16DC A GENE RONG 326 DANA CT. MANTECA 95336 239-9236
KB6DJ A JIM SMITH 1908 VALLE VISTA MODESTO 95350 524-2719
K6DJR N WILLIAM LUEBKE 1901 MARGATE WAY MODESTO 95355 575-6172
WD6DKX T DOROTHY CURLING P.O. BOX 2325 MODESTO 95351
W6DSM A BOYD HORNBERG 1400 BAYWOOD DRIVE MODESTO 95350 524-7412
W6DUZ A V. DALE BROOKS " SILENT KEY " FAIRFIELD
KB6DXM T MARGE LOWE 6419 W. MAINST. TURLOCK 95380 634-8424
KB6DXX G LYNN WINDUS 2331 EDELL LANE MODESTO 95351 523-0141
KB6DXZ G TIM MATHIES 258 CHURCH ST. OAKDALE 95361 847-6381
KB6DYA T BRUCE DAVIS 1505 N. SCHOOL ST. STOCKTON 95205 944-7794
W6DYF G JIM HILDRETH 171 1/2 N. STEWART ST. SONORA 95370 533-0155
KB6EBV T CYRIL WARD 7851 E. LATHROP RD. MANTECA 95336
KB6EBI T DEON WARD 7851 E. LATHROP RD. MANTECA 95336
KB6ECF T LAVERNE LANDEROS 1417 VERNON MODESTO 95351 578-5554
WD6EFM G MIKE LARI 4974 PERCEPTIVE WAY SACRAMENTO 95842 334-2776
KF6ER A BYRON OH 2845 ATLANTA DRIVE TRACY 95376 835-0310
N6ELA T RICHARD GHILOTTI 801 17TH ST. MODESTO 95354 529-6578
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N3ELB	G	H. DAN VON JENEF	1157 MAY AVE.	MANTECA	95336	239-6711
N6EEX	T	KEVIN MC CLARTY	3424 VINTAGE #225	MODESTO	95356	
N6EKV	G	STEVE FARIES	1126 DURANT ST.	MODESTO	95350	521-7834
W6EVD	E	GENE PERRY	30,000-113 KASSON RD.	TRACY	95376	836-0642
W6ENR	G	CLIFF WILTON	21550 PHOENIX LAKE RD.	SONORA	95370	532-8295
W6EYX	A	PAUL CARUSO	205 GLACIER AVE.	MODESTO	95351	522-5413
KR6F	E	SHERRY TAYLOR	P.O. BOX 4659	MODESTO	95352	527-6326
W6FBE	G	DERRILL COFFMAN	P.O. BOX 54	CERES	95307	537-9129
N6FCN	T	JIM WALKER	P.O. BOX 1008	TRACY	95378	982-1584
W6OFFX	A	PHIL HARTZ	2509 KILKENNY DRIVE	MODESTO	95355	523-0832
W6FBC	A	BURT WILCOX	P.O. BOX 891	TWAIN HARTE	95383	586-3394
N6FMW	G	LARRY NEIMA	2824 RUDGE PLACE	MODESTO	95355	578-5319
W6FOL	G	LEN MENDONCA	1407 S. STORY RD.	TURLOCK	95380	634-1475
W6FVD	T	JACK HAMILTON	300 N. ISABEL #9	GLENDALE	91206	956-8191
N6GG	E	CHUCK LOVELAND	1105 MATHIA DRIVE	MODESTO	95351	524-0002
N6GBB	T	DON FINK	25976 TRISLER CT.	TRACY	95376	835-2689
KL7GHT	A	JERRY NICHOLS	4024 MC HENRY AVE. #75	MODESTO	95356	523-4560
KL7GHV	T	FLORA NICHOLS	4024 MC HENRY AVE. #75	MODESTO	95356	523-4560
KR6GKA	N	BRIAN BONASERA	707 MEADOWN WAY	MANTECA	95336	239-6382
W6GKS	G	HARLEY LEE	1613 ROBBIE AVE.	MODESTO	95350	529-4333
W6GIW	A	ED BEMLEY	3318 COLORADO AVE.	TURLOCK	95380	634-4550
W6GJT	G	LARRY DEWITT	420 BALBOA WAY	MODESTO	95350	523-5952
KR6GMU	N	CAROL HEATH	690 POPULAR AVE.	MANTECA	95336	823-7795
KR6GYM	G	CHRISTIA DUNCAN	1074 MARION ST.	MANTECA	95336	239-9486
W6GVN	A	MAX SAYRE	P.O. BOX H	WATERFORD	95386	874-9488
N6GH	E	MARILYN VAN DYK	19119 E. RIVER RD.	RIPON	95366	599-3030
KR6HCJ	G	CHUCK SCHWARZ	1525 MC HENRY AVE.	MODESTO	95350	579-2293
W6HRC	G	KAREN JENSEN	3124 PIONEER RD.	HUGHSON	95326	883-2968
W6HOG	A	ERIC HANSEN	14167 MEADOW DR.	GRASS VALLEY	95945	477-1234
KR6IDC	N	BOB RUDHMAN	3101 E. ORANGEBURG AVE	MODESTO	95355	522-1241
N6ICH	T	MARK LOCKWOOD	1416 LAKEPARK CT.	MODESTO	95355	578-5703
KR6ILO	G	RON WATKINS	963 ALPINE AVE.	MANTECA	95336	823-0741
KR6IGS	N	RICHARD DANA	300 MANZANITA DRIVE	ATWATER	95301	529-3723
W6ISA	T	WILMA STORNE	1525 ROOSEVELT	ESCALON	95320	838-7763
W6JBD	T	RALPH STORTI	625 CARLISLE WAY	MANTECA	95336	239-9858
W6JFL	G	MELVIN SHEETS	1301 MOCCASIN DRIVE	MODESTO	95351	575-4458
KR6JHU	G	BUD PELLETIER	1345 MASERATI CT.	MANTECA	95336	823-0877
KR6JHV	A	BILL EBELING	700 BARNET PLACE	MANTECA	95336	823-7492
N6JSN	T	JOHN DE ROOS	2617-B LAWRENCE ST.	CERES	95307	537-6958
N6JTD	T	LORI FARIES	1126 DURANT ST.	MODESTO	95350	521-7834
N6JYP	T	PHYLLIS RAPP	1289 WIMBLEDON WAY	MANTECA	95336	239-4618
KR6JXV	N	MICHAEL OHLSSON	284 VILLA	TURLOCK	95380	634-0376
W6K	E	LUIS H. NUNES	109 E. 22ND ST.	TRACY	95376	835-8340
W6KDC	A	DANIEL TONINI	2204 MOFFET RD.	CERES	95307	537-3335
N6KDJ	T	HAROLD JOHNSON	P.O. BOX 197	KEYES	95328	537-2565
W6KHX	A	RAY CURLING	P.O. BOX 2325	MODESTO	95351	
N6KIB	T	TERRY PINHEIRO	2405 ROSE AVE	MODESTO	95355	522-5069

NGKMR	A	JIM HERTEL	214 PECOS AVE	MODESTO	95351	527-4719
NGKMU	G	TOM BAUMANN	1229 BRIGHTON #137	MODESTO	95355	526-5752
NGKNQ	A	CHUCK CAPPRI	2421 ELLISON DRIVE	MODESTO	95355	577-3921
KGKQE	G	BOB LE CLERT	"SILENT KEY"	TRACY		
WGPU	A	BOB HUFF	3028 FREDRICKSBURG	MODESTO	95355	522-7831
KBGKYI	G	DALE ROOT	3208 TOPEKA ST.	RIVERBANK	95367	869-4763
NGLAB	T	NEIL C. HEATH	690 POPULAR	MANTECA	95336	823-7795
NGLAH	T	PAM WOODS	322 CAMELIA WAY	MODESTO	95354	575-3634
NGLRB	T	LOUIS SOUTHERLAND	P.O. BOX 151	OAKLEY	94561	625-0228
NGLRZ	G	DOTTIE DUNCAN	1074 MARION ST.	MANTECA	95336	239-9486
NGLSC	T	JEAN HAYES	823 SEYBOLD AVE.	MODESTO	95351	522-5450
NGLSA	T	TOM GRISWOLD	2020 MATHER DRIVE	MODESTO	95350	577-3524
NGLSF	G	TOM JOHNSON	12442 VALLEY HOME RD.	OAKDALE	95361	847-6394
NGLTx	T	ROBERT HAYES	823 SEYBOLD AVE.	MODESTO	95351	522-5450
NGLYQ	T	SHERYL DAVIS	1505 N. SCHOOL ST.	STOCKTON	95205	943-7794
WBELZA	G	HARRY LAFFERTY	3545 LAS PASAS WAY	SACRAMENTO	95864	489-5419
WAGMIZ	G	STEVE RAPP	510 NORTHGATE DR. #116	MANTECA	95336	823-5733
WGMNH	A	FRANK WHEELER	26312 E. RIVER RD.	ESCALON	95320	838-3771
NGMOG	T	RICHARD WAGNER	1605 ORTEGA DRIVE	MODESTO	95355	522-4096
NGMOK	T	DICK WHARTON	385 W. CENTER	ROSEBURG, OR	97470	672-6223
NGMOL	T	TOM WOMACK	3000 DRY CREEK DR.	MODESTO	95354	527-5479
WBENAO	A	AL PLATT	5100 RAINBOW TRAIL	POLLACK PINES	95726	644-2646
KBGNAK	N	HELEN DANA	300 MANZANITA DRIVE	ATWATER	95301	
NGMSB	T	JUDY RONG	326 DANA CT.	MANTECA	95336	239-9236
NGNGB	G	SHEILA GROTHE	2625 CABERNET CT.	MODESTO	95355	527-8876
NGNSC	G	JEANNE STEVENSON	2625 CABERNET CT.	MODESTO	95355	527-8876
KBGNMF	N	MARION ZIMMERMAN	920 BERKELEY AVE.	TURLOCK	95380	634-3283
NGNNB	N	LYNNETTE KNIGHT	P.O. BOX 725	RIVERBANK	95367	539-1786
NGNNH	G	CHUCK HAIGHT	2864 MARIETTA CT.	STOCKTON	95207	478-7383
NGNUO	T	WES COOPER	1520 KEATING CT.	CERES	95307	538-1156
KBGNZ	A	TERRY MORLEY	735 MONTANA ST.	RIPON	95366	599-3278
WAGNSK	A	JIM CLARK	P.O. BOX 173	MI WUK VILLAGE	95346	586-4917
KBGMYB	N	KEVIN POLHEMUS	711 N. FRANKLIN AVE.	MODESTO	95351	526-3994
WJGO	E	TOM FARR	640 NORTHSIDE CT.	TURLOCK	95380	668-1633
NGOCS	G	BOB VREUGDENHIL	4024 MCHENRY AV. #30	MODESTO	95356	522-6127
WAGOHF	E	BILL DUNCAN	1074 MARION ST.	MANTECA	95336	239-9486
WSDIN	A	JACK SCANLON	512 MORAY CT.	MODESTO	95355	577-0926
WAGOOX	A	JACK SMITH	1026 ARBOLEDA DRIVE	MODESTO	95351	529-0895
WAGOGF	A	RAY OLIVE	2570 ROEDING RD.	CERES	95307	537-4466
WAGOVF	G	ALLEN WOODS	322 CAMELIA WAY	MODESTO	95354	575-3634
WGOYK	A	JOHN BETTS	1613 VALLEJO	MODESTO	95355	526-8691
WAGOYP	A	MEL MC COY	1228 BRADY AVE.	MODESTO	95350	523-7941
KBGOU	A	JOHN COMMAN	1300 WOODLARK WAY	MODESTO	95355	527-7258
WAGOVE	G	HARRY ODGERS	P.O. BOX 68	EL PORTAL	95318	379-2621
KBGOX	A	CLIFF EDGINTON	906 SAN MARCOS CR.	MOUNTAIN VIEW	94043	965-3275
WGGP	E	DENNIS DUGAL	2008 SHARILYN DRIVE	MODESTO	95355	571-9046
KGPDE	G	CHARLES STROBEL	" SILENT KEY"	ARNOLD		

KJ6Q	E	GARY DAVIDSON	4558 ROBINSON RD.	VACAVILLE	95688	448-5221
WS6Q	E	LEE MACKENZIE	3917 SPARROW CT.	MODESTO	95356	545-1428
NS6Q	E	JACK HARTON	1349 ELENA DR. NBU #6	RIPON	95366	599-6431
WSQDL	A	E.W. MACKENZIE	540 VALLEY VIEW DRIVE	OKDALE	95361	847-6179
WASQKR	T	LARRY R. SEESE	1772 67TH AVE.	SACRAMENTO	95822	428-1307
WASQWY	A	DON BUTTERFIELD	1124 SKYVIEW DRIVE	OKDALE	95361	847-6523
WBSREM	A	JOHN BETHMAN	29480 S. KOSTER RD.	TRACY	95376	835-5748
NV6S	E	LEROY CAMPBELL	1105 EL VECINO	MODESTO	95350	523-4727
WSBE	E	DAN CRON	1525 BALVEZ AVE.	MODESTO	95355	521-2032
K6SEZ	A	WIL SENIOR	929 TALBOT	ALBANY	94706	525-6900
WBSHE	G	BILL MATHIES	258 CHURCH ST.	OKDALE	95361	847-6381
K6SJV	G	OKIE CLARK	2508 17TH AVE. FOREST GROVE, OR		97116	
WBSKH	G	IVAN LOWE	6419 W. MAIN ST.	TURLOCK	95380	634-8424
WSSQP	E	JIM HANSON	412 STANDIFORD AVE.	MODESTO	95350	523-8516
K6SMH	G	CHARLIE HARDING	1224 MILLS AVE.	MODESTO	95350	523-0290
K6SXF	G	BUD PETERSON	3805 SURFSIDE	MODESTO	95355	527-3180
K6GT6	A	RUDY ARREYBLU	1300 MOCCASIN	MODESTO	95351	522-2136
KASTIO	T	JASON V. PEITZ	1895 W. DURHAM FERRY RD	TRACY	95376	835-8930
KITKJ	T	GEORGE LEDOUX	2017 HUNT AVE.	MODESTO	95350	571-1000
WSTND	A	LOREN BUMP	5736 ESMAR RD.	CERES	95307	537-9934
WSTLM	A	TONY NOBREGA	924 TERRACE DRIVE	OKDALE	95361	847-4596
WSTWJ	A	HUGH BRYANT JR.	1426 STANLEY DR. NBU #15	RIPON	95366	599-3066
KF6UL	E	ED JONES	1021 GRAND PRIX DR.	MODESTO	95356	529-7108
WBSUJD	A	TIM BOSMA	623 BROOKFIELD DRIVE	MODESTO	95355	524-5653
KASUPS	T	DAVE FARIES	4043 BURCKHALTER AVE.	OKLAND	94605	569-1050
K6LVI	A	ERNIE RADER	4920 FAITH HOME RD. #105	CERES	95307	537-8093
WBSV	E	ED WATSON	2727 CHARLOTTE AVE.	CERES	95307	538-2866
WBSVSH	A	DAVE GROW	1416 PROSPECT LANE	MODESTO	95355	577-6159
KBSVI	E	RUSS CLARK	1034 HARVARD	MODESTO	95350	524-0597
W6VY	E	MIKE WHEELER	2816 DARIUS	MODESTO	95355	571-3399
WBSW	E	JOE FONTES	8069 SHOREEN ST.	HILMAR	95324	667-0428
KASWBY	T	GLEN HOTCHKISS	2250 N. GRATTON RD.	TURLOCK	95380	634-1859
NSWC	E	PHILLIP JENKINS	3616 CHERRYGLEN WAY	MODESTO	95356	575-1363
WBSWOL	G	DAVE TERRY	8206 CRANE RD.	OKDALE	95361	847-6968
KASWNT	T	RANDY HOTCHKISS	255 SNOW HAVEN CT.	MERCED	95348	
WSXK	E	CHET JENSEN	3124 PIONEER RD.	HUGHSON	95326	883-2968
WGYCB	A	RAY SCHMIDT	2501 DORRINGTON CT.	MODESTO	95350	523-5707
K9YBM	A	SHORTY SUTTER	P.O. BOX 1664	OKDALE	95361	847-6908
K6YII	G	KEN DEADMOND	3526 D STREET	SACRAMENTO	95816	451-0603
WASZLO	A	BOB PINHEIRO	1221 MIST FLOWER CT.	MODESTO	95355	523-5880
KASZSM	T	LEWIS GARDINER	125 AILEEN WAY	GRASS VALLEY	95945	273-8625
WASZSY	G	LEE CLARK	20705 WILLOW SPRGS	SOULSBYVILLE	95372	532-5714

TOTAL 182

a lot of dead sailors due to miscalculations. So, in 1675 Charles ordered the construction of a royal observatory on a level grassy knoll in the village of Greenwich, about 18 miles from London (it is now a suburban area of London). He then charged his Astronomers Royal with the primary duty to find, in the stars, a reliable way to determine longitude; after all, they had all the ingredients and he was providing them with the mixing bowl, so all they had to do was come up with the right formula. It took a while, especially with breaks for tea and crumpets, but in 1767 The Royal Greenwich Observatory finally published its first annual nautical almanac, which predicted the positions of the moon and stars each night over Greenwich. Now navigators could compare what they saw in the sky with the predictions for Greenwich and calculate their distance east or west of the "Greenwich Meridian," the imaginary north-south longitude passing through Greenwich. In 1833 they also started lowering a big canvass ball from the tower at exactly 1:00 pm every day ...one hour "post meridian," or after the sun had crossed

the Greenwich meridian. The nautical almanac had established Greenwich as the center of the navigator's world; now it was to become a time keeping center as well. The next step forward was totally predictable; ships in the harbor used the time marker to set their clocks and later "traded" time with other ships at sea; and the introduction of the telegraph brought an added service as time signals were sent electrically to train stations and cities in England and Europe. But the mushroom growth of railways in the United States threw a big monkeywrench into the time-keeping machinery, since there were no time zones or standard time here until the last of the nineteenth century; towns and cities kept their own time, based on local noon, which made it difficult for railroads to establish anything like a reliable timetable. By 1872 a railroad group had begun meeting to work out the adoption of summer timetables, with William F. Allen, the editor of the Official Guide of the Railways, as their secretary. Both he and Dr. Charles F. Dowd, a New York educator, were strong proponents for establishing standard time

OES RACES BULLETIN

de KH6GBX

Rubber duck antennas on hand-held radios are a severe compromise on efficiency. On the plus side is their short size and flexible forgiveness to brutish handling. On the negative side is their terrible radiation inefficiency, probably worse than many of you expected. When did you last replace your helical spring antenna we call the rubber duck? On testing a hundred or so portable radios that had been out on the fire lines for a few weeks, we found a typical 50 percent failure rate. Most of the antennas looked fine, but the only way you can detect an invisible rubber duck failure is by measuring the microvolts per meter with a calibrated receiver over a measured range under controlled conditions, such as done routinely by the Boise Inter-agency Fire Center. Since this is difficult for most to do, it might not be a bad idea to replace rubber ducks as a matter of course when they show signs of wear or if they are a year old. You might want to consider using

a telescopic antenna under non-violent conditions to vastly improve the range of your hand-held. The National Bureau of Standards ran some tests that proved what we had long suspected. The efficiency of a hand-held is dependent upon how much antenna it has and how good the ground plane. Most portables have very poor ground planes; the more metal the better. Also the more antenna the better. Hence, the rubber duck is a woefully, but often necessary compromise. But, if a portable is not going to be subjected to the abuse of fireground or street cop utility, you should consider the telescopic antenna. It is nowhere as rugged as the rubber duck, but, it will talk circles around it. You might say that the quarter wave whip is to the rubber duck what a 106 inch CB quarter wave whip is to a 36 inch whip on a base loaded coil to compromise range for low garages.

W5YI REPORT.....

>>> Amyway Corporation, the in-home cosmetics/housewares sales company, intends to become a door-to-door marketer of encrypted cable-delivered programming and plans to introduce its own (\$3,000) 10-foot home dish satellite setup this fall.

>>> Radio Marti, the government's answer to Cuba's news monopoly, could have a television counterpart. Dallas entrepreneur, Earl Jones, is lining up investors to beam American news telecasts to Cuba from a nearby Caribbean island.

>>> Much infighting going on in the AM stereo broadcasting business. Motorola's C-Quam system has been given a clean bill by the FCC after Kahn Communications (SSB stereo system) interference accusation. Although most consumers still don't know that AM stereo even exists, the C-Quam system is the biggest seller by far.

>>> Tandy (Radio Shack) introduced three aggressively priced Intel chip based IBM clones (personal computers)

two weeks ago. The \$1699 Tandy 3000-HL is IBM-XT compatible while the \$4299 (40 meg hard disk version) Model 3000-HD is compatible with the IBM-AT. The Tandy 1000-SX (\$1199) is supposedly twice as fast as the IBM-PC it emulates. They also debuted a new \$219 "Color Computer 3. Tandy, with 22 % of the small business computer market versus IBM's 45 %, is increasing its outside sales force by 40 %.

>>> Comsat Labs in Clarksburg, Maryland, is looking toward the day when everyone has a home satellite station to receive high-definition television signals (HDTV). They have developed a flat-phased array satellite antenna and a system to digitally compress HDTV signals from 25 to 7 MHz so that they can easily be transmitted by satellite. Their new Ku-band flat antenna, just 50 inches square and containing more than 4,000 copper elements can pull in current satellite signal as good as any commercial-quality dish antenna in use today.

"IT'S ABOUT TIME"
(from page 9)

zones across the country. Dowd had reasoned that the sun appeared to travel across 15 degrees longitude each hour and thus proposed that the country be divided into zones 15 degrees wide, based on the meridian at Greenwich; times should be the same within each zone, with a one-hour time difference between zones. Allen, although working independently, came up with a similar plan. In October 1883 the railroads agreed to operate according to five standard time zones, four in the U.S. and one for Eastern Canada, and on November 18, 1883 this was put into effect. The following year an international conference adopted standard time worldwide and established Greenwich, England, as the prime time meridian (as well as the zero meridian for sailors), and thus was born on June 26, 1884 Greenwich Mean Time (GMT). Greenwich Mean Time remained unchallenged as the world standard for time measurement for 40 years, until the International Astronomical Union decided that the astronomical day should start at midnight instead of noon and in 1925 they called their new midnight-based time

"Universal Time," or UT. Naturally, the British didn't want to lose the prestige of having GMT as the world time standard, so they switched their GMT day to begin at midnight also. But this caused some confusion between the old and new GMT with UTC. UTC is the abbreviation for the French words that mean "Coordinated Universal Time" in English, and the French abbreviation was chosen because the International Time Bureau is in Paris. In the days before radio, when ships traded time at sea, a flag code was developed in which the Signal Flag "J" meant "Time will follow." This flag code had 25 letters of the alphabet used to represent different zones; the letters start one zone east of Greenwich with "A" and continue eastward to "M" on the western side of the International Date line; then they return to Greenwich and start with "N" as the first zone west and continue westward to "Y" on the eastern side of the date line. The half zone on each side of the date line accounts for using 25 letters instead of 24 and since "J" already had a time meaning, it was the obvious letter to drop when 25 letters were needed to set up time

zones. When radio communications became worldwide it became necessary to note the originating time of any message, so the military adopted a letter system to identify each zone, with Greenwich Time being "Z" (for the Zero Meridian). The Navy still refers to this as "Zone;" phonetically, it is "Zulu" (the British influence again). "And so everybody lived happily ever after." Or did they? Unfortunately, the word we have is that time may be running out for GMT. According to the New York Times, "In an era of belt-tightening and advancing technology, Britain has decided that it can no longer afford the upkeep of Greenwich Mean Time...because of reductions in spending for scientific research, the timekeepers at the Royal Greenwich Observatory are being forced to let their six costly atomic clocks run down and stop over the next year or so. When their clocks stop, the Observatory will become a user of international time, instead of a contributor to it. So, what about Daylight Saving Time? The inspiration apparently came from Benjamin Franklin while he was minister to France in 1784, where he liked to rise at

dawn and walk the streets of Paris. He noted that many people shuttered their windows against early light, and then spent money on candles to light their nights; he calculated they could save 64 million pounds of candles every year by rising with the sun. Nothing was formally done until Germany adopted daylight saving time in 1916 and Britain followed suit to keep them from enjoying any advantage in conserving critical fuel. Seeing the British success in conserving energy, the United States briefly adopted daylight saving as part of its war effort in 1918, but dropped it at the end of the war. Our Congress finally passed the Uniform Time Act in 1966 with the Federal law declaring daylight saving to begin on the last Sunday of each April and end the last Sunday in October. In October 1985 the House of Representatives voted to increase each year's daylight time from six months to seven. On May 20, 1986 the Senate voted to begin daylight saving time on the first Sunday in April; since these two bills were not alike, they must now go to a conference committee to resolve the dif-

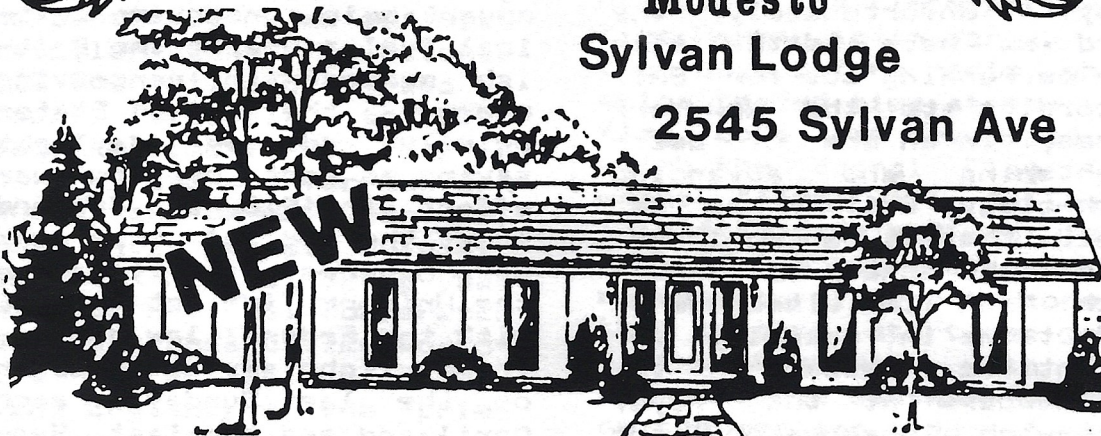
(See page 15)

9th Annual
**SARA
DINNER
DANCE**

Saturday October 11 th

Modesto
Sylvan Lodge

2545 Sylvan Ave



Social Hour 630 pm Buffet Dinner 730 pm

You're Invited...

Dancing by Music Plus

\$15.00 ea.

For tickets call Lynn 523-0141

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"I'VE BEEN HOME SICK"

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VISTING EXPO '86

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(Continued from page 3)

A North Carolina Highway Patrolman stopped a drunk driver on the Interstate. He was in the process of checking out the male driver when an accident occurred across the median divider in the opposite lanes. The officer instructed the driver to wait while he ran to the accident scene to check for injuries. The drunk waited for a short while and then decided to drive off. A few hours later, two highway patrolmen arrived at the his home. His wife answered the door and the officers asked for her husband. The suspect was summoned and greeted the officers in his night gown wheezing and coughing. He told the officers that he had been home in bed all day with a bad cold. The officers asked to see his vehicle. When the suspect opened his garage door the officers found their patrol unit with it's blue lights still on. The suspect was arrested. Case closed!

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BUMPER SNICKER

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"YESTERDAY- A MEMORY"
"TOMORROW - A VISION"
"TODAY - A BITCH "

cultures different that our own. Most of all, we felt fortunate to be able to share this experience with the Suseoffs -- a friendship made possible entirely through Amateur Radio. If you wish to operate VE7EXPD, contact Jack Running, VE7-BDL, the station manager for

SARA
DINNER-DANCE
Oct. 11 1986

"IT'S ABOUT TIME"
(from page 13)

ferences. It is also interesting to note that the European version of DST starts on the first Sunday in April. Is it conceivable we could end up with UCDST? One thing is sure: east or west, the rising and setting of the sun will benefit some, bother others and inspire timeless controversy. Which is my reason for wanting to tell you this "timely" story.

(Thanks K0LST and QSP
newsletter & K660U)



CALENDAR



Sept. 16, 1986...SARA Monthly meeting 730 pm.
Program: Slides on WJ60's
(7J1ABS) trip to Japan.

Sept. 5-6-7, 1986...ARRL National Convention at
the Convention Ctr. San
Diego.

Oct. 3-4-5, 1986...Pacific Div. ARRL Convention
at the Le Baron Hotel
San Jose.

October 11, 1986...9th annual SARA dinner-dance.
Sylvan Club house.

October 21, 1986...SARA Monthly meeting 730 p.m.

Nov. 7-8-9, 1986...Ham West Convention in Las
Vegas.

Nov. 18, 1986...SARA Monthly meeting 730 p.m.

Dec. 16, 1986...SARA Monthly meeting 730 p.m.
Election of 1987 club
officers.

Jan. 20, 1987...SARA Monthly meeting 730 p.m.

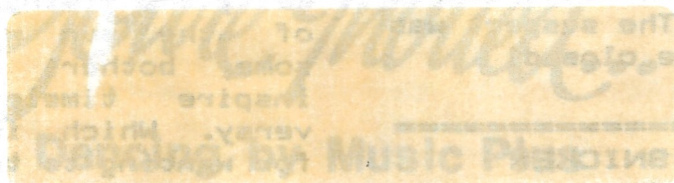
Feb. 17, 1987...SARA Monthly meeting 730 p.m.

Mar. 17, 1987...SARA Monthly meeting 730 p.m.

April 21, 1987...SARA Monthly meeting 730 p.m.

May 19, 1987...SARA Monthly meeting 730 p.m.

June 16, 1987...SARA Monthly meeting 730 p.m.



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