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# PAARA

## GRAPHS



vol. 24  
DECEMBER  
1980

palo alto  
AMATEUR  
RADIO ASSN.

MENLO PARK C.D. RADIO CLUB, K6YQT

# SHAVER RADIO, INC.

(408) 998-1103

1378 S. BASCOM AVE. SAN JOSE, CALIF.

DAVID SHAVER  
K6DTX

SALES  
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INSTALLATION



When is a handheld a radio module? When it is designed from the start to be part of a complete 25 or 50W mobile system. Not only can the **Santec HT-1200** operate on its own Ni-Cd battery, but also it can function respectably as the center of a modular synthesized high power mobile.

□ The **HT-1200** produces at least 4 watts on all the ham frequencies, from 144.000 to 147.995, for the punch needed for repeater/handheld communications. The low power mode is true low current drain. □ A Texas Instruments TMS 1000 microprocessor powers the brain of the unit, providing keyboard entry of all digits down through the kHz digit. □ In addition to providing

## More than a dream.

### The Santec HT-1200

#### 4W SYNTHESIZER RADIO MODULE

- 4W Minimum / 1W Low (True low power, no resistor)
- 10 Memory Channels with Auto Memory Initialize Digital Display—Reliable Long-Life, Rugged LED's
- TI 4 Bit Microprocessor/Keyboard Control
- 16 Tone Touchtone Generator
- Single Button Memory Recal
- Heavy Leather Case (Optional)
- 800 Channels plus MARS (143.0—149.995)
- Keyboard Entry of All Frequencies, All Digits plus Autotone
- Up/Down Bandscan (Stops on signal, resumes scan on sq.)
- Up/Down Memory Scan (10 memories)
- Up/Down Bandsearch (Stops on signal, locks entry)
- Up/Down Memory Search (Locks on first used memory)
- Scan Steps in 5 kHz Increments, Keyboard Selected
- Preprogrammed : 600 kHz
- Any Split Programmable by the User
- Automatic Display or Continuous Readout

Sale subject to FCC Certification to Part 15.

10 programmable memories, the microprocessor programs 10 different popular frequencies into the memory on initial start-up. These may be overwritten by the user when programming his favorites. This added convenience is standard in the **Santec**.

Compare the features and functions that come with the competition's popular 25 watt mobile units and you will find the **HT-1200** system has them all beat! This dream of a radio is more than a dream, it's a reality. See us at the Dayton Hamvention for a hands-on demonstration of all the capabilities of the **Santec HT-1200**.

VOLUME 24 NUMBER 12

DECEMBER 1980

PAARAgaphs is the official organ of  
The Palo Alto Amateur Radio Association and the Menlo Park Civil Defense Radio Club

1980 CLUB OFFICERS

President	:	Bob Wheeler	K6SEM	494 6549
Vice President	:	Eric Edberg	W6DU	948 1748
Secretary	:	Gerry Tucker	WA6LNV	326 9408
Treasurer	:	Irene Lile	WB6RAF	851 7473
Trustee, K6OTX	:	Fred Canham	K6YT	948 9238
Property	:	Ed Fairbanks	W6AIN	322 0319
ARES Officer	:	Steve Stuntz	K6FS	322 4952

BOARD OF DIRECTORS

Chairman:	Bob Wheeler	K6SEM
Members :	Ed Fairbanks	W6AIN
	Swede Swenson	N6CHL
	Shannon Lile	K6TNY
	Gerry Wagstaffe	W6NIR
	Dave Daniel	KB6WP
	Jock MacKaign	N6YV

PAARA POLICIES

Membership in PAARA is \$6.00 per calander year (payable in January) which membership includes a subscription to PAARAgaphs. Interested others may subscribe to PAARAgaphs for \$6.00. Make payment to:

PAARA, P.O. Box 911, Menlo Park, CA 94025

Written contributions to P. O. Box above, or, 1043 Del Norte Av., Menlo Park, CA 94025

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Cover	:	Sue Lindner	L6VLY

R E G U L A R   M E E T I N G

FRIDAY DECEMBER 5, 1980

7:30 P.M.

Rooms 15 & 17, Menlo Park Recreation Center,

Alma at Mielke Drive

Menlo Park

Single-Handing a Small Boat and Ham Radio

by

Jack Dausend, WB6FGC

Jack will tell of his experiences sailing a small boat alone over long distances and the value of Amateur Radio aboard.

Circle the date

December 5



MERRY CHRISTMAS

PAST CORNER: The November 7 meeting was delayed in its start because of the many congenital eyeball QSO's that started about 1915P. By 1940P everyone was disrupted by a plaintive plea by Bob, K6SEM, that the meeting should come to order.

Guests, six, were introduced including George, K6OG, Charles, KA6DNX and Jack, W6MOV, from Los Altos, Art Adams, NC, and Bob Vaughn, NC, from Palo Alto, and Erik, KA6FRY, from Sunnyvale.

Irene, WB6RAF, gave the treasurer's report: PAARA is not hurting now, and she thanked all for their help at the Auction/Flea Market. Bob, SEM, gave a breakdown of profits and losses for the event but they came too fast to record. PAARA should be solvent well into next year.

Fred, K6YT, hoped for the return of his hand cart, short six-outlet extension cord and a 25 foot cord missing after the Flea Market. Such losses make it an expensive outing for Fred.

Bob, SEM, Fred, YT, Gerry, W6IR, and Jim, K7UDG discussed the trade of Bob's Atlas for Post 599's 12.5KW generator to the satisfaction of all.

Jim, UDG, discussed problems with Post 599's repeater, W6OTR/R and indicated most were solved. Chris, WB6WBK and John, KA6CUG, did much of the circuitry with gear supplied mostly by Bob, SEM. There is a just-under-three-minute-timer on 144.57/145.17. Try it.

Gerry, NIR, gave a report of the nominating committee for the 1981 Club Officers and Board of Directors.

Gerry, WA6LNV, gave a report on the Christmas Party December 15: \$8.00/head, \$1.00 to \$2.00 gift exchange from him to him and her to her, cocktails at 6, dinner at 7. Dinner to be paid for no later than the December 5 meeting to be sure of reservations. The Place? Rick's Swiss Challet, 4085 El Camino Way, Palo Alto, 493 7575. Fred, YT, suggested we make it a party party.

Raffle tickets were found and sold for 5/\$1.00 while all consumed coffee, hot chocolate and cookies while chinning with whoever happened to pass by.

Merl, K6DC, described the aims of the Northern California DX Foundation, what the members do, how they do it, solving political and logistical problems of DXpeditions. Radio gear all around and it turns out smoke signals "saved" one effort.

To those not present: You should have been.

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BOARD CORNER: Bob, K6SEM, opened the Board of Directors meeting promptly at 1930P. Secretary Gerry, WA6LNV, gave a report and background information on a misunderstanding between PAARA and the insurer of the Club trailer with the Company finally realizing the coverage desired.

Shannon, K6TNY, filling in for XYL Irene, WB6RAF, gave the treasurer's report. A discussion of the Auction/Flea Market followed with schemes to get

more "recent" gear for auctioning next year. An analysis of the auction items was made by Bob, SEM, who compared PAARA's effort with those of other Clubs.

Gerry, LNV, gave more information about the Christmas Dinner—Chicken or beef plus everything that goes with. Bob, SEM, suggested he would take care of the door prizes and met little obstruction from those present.

Fred, K6YT, discussed the "new" generator with all and described what needs be done to it. The Board approved getting it in good shape, loading the chore on Fred as crew chief.

Gerry, W6NIR, talked of applicants for the treasurer's post for the Nomination Committee Report. George, GI3OEN, was selected for, among other reasons, his availability to the P.O. Box.

There was no old business brought up if one considers the Club trailer repair that started fifteen or twenty years ago had been completed.

New business started shortly after adjournment at 1215P to da placia de refreshamentos to discuss recaulking of the roof seams of the Club trailer.

Others in attendance were Ed, W6AIN, Swede, N6CHL, Eric, W6DU, Mac, N6YV, and Dave, KB6WP.

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NOMINATIONS CORNER: Gerry, W6NIR, reported that he, Fred, K6YT and Mac, N6YV, after several months of seeking the best possible candidates for 1981 Officers and Board Members came up with an outstanding slate:

President : Gerry Tucker, WA6LNV  
Vice President: Dave Daniel, KB6WP  
Secretary : Mac MacKaig, N6YV  
Treasurer : George Nixon, GI3OEN

Board Members chosen for 1981-1982 included  
Ed Fairbanks, W6AIN  
Bill McElhinney, KA6LVI  
Bob Wheeler, K6SEM

Board Members chosen for the remainder of two-year terms vacated by nomination include

Kevin Lapp, WA6FAC  
John Buonocore, KA6CUG .

NEW MEMBER CORNER: Welcome Charles B. McDermott, KA6NDX, at the December meeting. Mac received his license about a month ago (at this writing). His home station is a Heathkit SB104A while he mobiles with a Swan MX100. Listen for Mac on the air and give him a shout if you hear him.  
" " "

HIGH VISIBILITY CORNER: Swede, N6CHL, recently was the principal in a 21 column-inches and a 4"x4" picture in the Menlo-Atherton Recorder. It was a fine article full of good words for Amateur Radio and Swede's activity in the Atherton Civil Emergency Preparedness program which he, Police Chief Moore, and Council Member Nan Chapman have started.

PAARA DECEMBER 1980 ROSTER

Aguilar, Liza	WA7WXA	P.O. Box 7410	Stanford, CA	94305	
Alexander, Mike	KA6GRU	355 Barton Way	Menlo Park, CA	94025	324-9246
Anderson, Andrew J.	K6EHS	735 Mayview Ave.	Palo Alto, CA	94303	494-0831
Arnold, John L.	WA6YSY	550 Morse Ave.	Sunnyvale, CA	94086	
Bartelme, John P.	WA6AMC	1025 San Mateo Dr.	Menlo Park, CA	94025	323-6295
Baum, Douglas A.	KA5DQR	1043 Del Norte Ave.	Menlo Park, CA	94025	
Baum, Robert A.	W6BFH	1043 Del Norte Ave.	Menlo Park, CA	94025	325-0497
Brodie, D.H.	W6PGQ	315 Cotton St.	Menlo Park, CA	94025	323-0353
Brubaker, Alan A.	K6XO	43456 Colville Pl.	Fremont, CA	94536	792-5736
Buonocore, John J.	KA6CUG	112 Oakwood Dr.	Redwood City, CA	94061	366-1658
Cady, Henry G.	W6PSY	P.O. Box 883	Clearlake Highlands CA 95422		
Callander, George	WA6SZX	51 Primrose Way	Palo Alto, CA	94303	856-1752
Camp, Edwin K.		1161 Cloud Ave	Menlo Park, CA	94025	854-5640
Canham, Fred F.	K6YT	691 Casita Way	Los Altos, CA	94022	948-9238
Cary, Charles E.	KA6CZN	940 Arbor Rd. Apt C	Menlo Park, CA	94025	323-6401
Chan, Loren B.	WA6ENC	6182 Ocho Rios Dr.	San Jose, CA	95123	629-1852
Chandler, Frank	WB6QPV	1040 Menlo Oaks Dr.	Menlo Park, CA	94025	322-7678
Chiappari, Ronald F.	N6AVU	113 Foxwood Rd.	Portola Valley, CA	94025	851-1688
Churchill, Paul K.	W6QBY	3706 Pacific Coast Hwy.	Ventura, CA	93001	643-6760
Clark, Ed	W6KJI	3657 Oak Knoll Dr.	Redwood City, CA	94062	366-1817
Collins, H.R. (Dick)	K6ANN	1921 Birch Ave.	San Carlos, CA	94070	593-8952
Conboy, Terry	N6RY	2631 S.W. Orchard Hill Pl	Lake Oswego, OR	97034	
Crocker, Earl W.	W6VYC	224 Selby Lane	Atherton, CA	94025	
Croft, William	WD9ADG	22 Coleman Ave, Apt 20	Menlo Park, CA	94025	
Curry, Daniel L.	WB6STW	166 Midwick Dr.	Milpitas, CA	94035	
Daniel, Dave	KB6WP	240 University Dr.	Menlo Park, CA	94025	325-3347
DeLiban, Robert	WG6GL	1015 Lemon St.	Menlo Park, CA	94025	322-6906
Dorrance, David	WA6YSO	1216 Fernside St.	Redwood City, CA	94061	
Doster, Landry G.	K6MPN	966 Glennan Dr.	Redwood City, CA	94061	368-8156
Dwight, Kenneth W.	WA6NYB	2371 Carmel Dr.	Palo Alto, CA	94303	856-0727
Edberg, Eric B.	W6DU	461 Heather Ct.	Los Altos, CA	94022	948-1748
Edgerton, Millard J.	WA6VZZ	49 Showers Dr.	Mt. View, CA	94040	965-6433
Edson, Willard		2165 Carmelita Dr.	San Carlos, CA	94070	
Elge, Al	AG6D	1710-A Marshall Ct.	Los Altos, CA	94022	969-1083
Fairbanks, Edmund U.	W6AIN	1049 Sonoma Ave.	Menlo Park, CA	94025	322-0319
Famulener, Keith	WB6GYT	2380 Waverly St.	Palo Alto, CA	94301	326-8673
Ferranti, Richard L.	WA6NCX	215 Herrick Rd.	Newton Center, MA	02159	
Finkbeiner, Dick	W6AQL	267 Bonny St.	Mt. View, CA	94043	961-6655
Fraher, John	KA6FRK	23000 Cristo Rey Dr.	Los Altos, CA	94022	967-3822
Frye, William		536 Lincoln Ave.	Palo Alto, CA	94301	326-2610
Gallagher, Robert J.	KA6IRT	1378 Ensenada Way	Los Altos, CA	94022	968-0847
Godwin, Myron R., Jr.		720 Coleman Ave.	Menlo Park, CA	94025	322-1737
Harper, David	WB6JFH	Route 1, Box 287B	Deer Park, WA	99006	
Harper, Walter H.		Route 1, Box 287B	Deer Park, WA	99006	
Hartwell, James W.	K7UDG	1777 Woodland Ave. #38	Palo Alto, CA	94303	325-8309
Hausafus, Edward T.	WA6FSQ	467 Encina Ave.	Atherton, CA	94025	366-5640
Hill, Bob	WLARR	1621 Redwood Ave.	Redwood City, CA	94061	367-9388
Hotz, Preston E.	K6WD	209 Blackburn Ave.	Menlo Park, CA	94025	325-8900
Ice, George E.	K6CMT	855 Somerset Ct.	San Carlos, CA	94070	593-0661
Jenkins, Bill	WB6LML	2360 St. Francis	Palo Alto, CA	94303	
Jenson, Alan S.	W6UVP	2312 Santa Anna	Palo Alto, CA	94303	856-6274
Johnson, Don	W6AAQ	809 Capay St.	Esparto, CA	95627	

Kanthack, Kurt H.	WD6BGV	165 Stonepine Lane	Menlo Park, CA	94025
Katz, Nolan	KB6LT	1030 Silverhill Rd.	Redwood City, CA	94061 366-7286
King, William R.	N6CHI	875 Sunset Dr.	San Carlos, CA	94070 595-0258
Kirkley, Charles R.		P.O. Box 3694, Dept PAAR	Stanford, CA	94305
Korsak, Andrew J.	VE3FZK	504 Lakemead Way	Redwood City, CA	94062 366-5228
Krawetz, Howard M.	N6HM	654 Barnsley	Sunnyvale, CA	94087 739-7936
Lapp, Kevin	WA6FHC	1096 Connecticut Dr.	Redwood City, CA	94061 364-2654
Larson, R. Alan	WA6AZP	700 Arbor Rd. #3	Menlo Park, CA	94025 326-6430
Lazier, John K. D.	W6HBJ	950 Blair Ct.	Palo Alto, CA	94303 326-0594
Lile, Irene	WB6RAF	154 Wayside Rd.	Portola Valley, CA	94025 851-7473
Lile, Shannon	K6TNY	154 Wayside Rd.	Portola Valley, CA	94025 851-7473
Lillegren, Gary	W6SH	P. O. Box 73	Des Moines, IA	50301 277-1111
Lin, David	N6WN	892 Mango Ave.	Sunnyvale, CA	94087
Lockhart, Robert J.	N1AFN	P.O. Box 1026	Mt. View, CA	94042 854-5426
MacKaig, Jock	N6YV	651 Teredo Dr.	Redwood City, CA	94065
Magnuski, H.S. (Hank)	KA6M	311 Stanford Ave.	Menlo Park, CA	94025
Martin, Hank	W6UCE	3283 Kipling St.	Palo Alto, CA	94306 493-9046
McElhinney, W.G. (Bill)		666 Tennyson Ave.	Palo Alto, CA	94301 325-9808
McEnnerney, Jack	W6LII	73 Ensenada Rd.	San Carlos, CA	94070 591-8526
McGuire, David	W6JHU	5943 Tompkins Dr.	San Jose, CA	95129
Maciejowski, Antoni	WA6KJJ	734 Ashbourne Dr.	Sunnyvale, CA	94087 739-1145
Moore, Harold F.	W6DEF	286 Terrace St.	Auburn, CA	95603 823-2600
Morton, Bob	WA6SOI	748 San Jude Ave.	Palo Alto, CA	94306
Moss, George E.	W6AZS	4049 Middlefield Rd.	Palo Alto, CA	94303
Nelson, Raymond A. (Ray)	KB6RZ	786 Allen Ct.	Palo Alto, CA	94303 493-9251
Nicholson, Carl, Jr.	KA6EKG	1167 Walnut	San Carlos, CA	94070 592-5287
Nixon, George	GI3OEN	1140 Sherman Ave.	Menlo Park, CA	94025 854-6445
Panton, Ronald A.	W6VG	5 Cedar Ct.	Menlo Park, CA	94025
Pierce, Cameron G.	K6RU	570 La Mesa Dr.	Ladera, CA	94025 854-3055
Porter, Wallace (Wally)	K6URO	3328 Kenneth Dr.	Palo Alto, CA	94303 494-7038
Praft, James	N6IG	2605 Central Ave. #C	Alameda, CA	94501 522-3178
Rasmussen, Erwin A.	W6YPM	164 Lowell St.	Redwood City, CA	94062 368-2558
Read, Walter A.	W6ASH	10371 Berkshire Dr.	Los Altos, CA	94022 948-6753
Roberts, John F., Jr.	W6QXP	2140 Bryant St.	Palo Alto, CA	94303 327-0690
Roché, Curtis H. (Curt)	K6AL	3890 Louis Rd.	Palo Alto, CA	94303 494-2643
Root, L. Eugene	WB6OOO	1340 Hillview Dr.	Menlo Park, CA	94025 323-2666
Ryan, Ralph B.	WB6NNL	1021 Stanley Way	Palo Alto, CA	94303 323-9362
Schellenberg, Chris	WB6WBK	311 Oakwood Pl.	Menlo Park, CA	94025 324-4591
Scherf, Thomas	K6JBR	411-B 5th Ave.	Redwood City, CA	94063 365-4068
Schrauwen, Adrianus	KA6ATG	3155 Stockton Pl.	Palo Alto, CA	94303 494-6256
Schumacher, Leonard J.	WA6HLE	902 Avon	Belmont, CA	94002 591-4385
Sherrod, H.C. (Clay)	K5OSQ	1475 Woodberry Ave.	San Mateo, CA	94403 349-1876
Shore, J. Neville, Sr.	K6OYN	4272 Suzanne Dr.	Palo Alto, CA	94306 493-6926
Simpson, Richard A.	W6JTH	3326 Kipling	Palo Alto, CA	94306 494-9272
Smith, Dan	KA6IXE	2001 Valparaiso Ave.	Menlo Park, CA	94025 325-9995
Starkey, Jerry	WA6LIJ	736 Filip Rd.	Los Altos, CA	94022 964-6584
Stein, Seymour (Sy)	WA6ROM	13080 Lorene Ct.	Mt. View, CA	94040 967-0362
Streib, Fred	W6NA	736 Garland Dr.	Palo Alto, CA	94303 326-7846
Stuntz, Stephen E.	K6FS	164 Oak Court	Menlo Park, CA	94025 322-4952
Sue, Jeffrey	WA6SLF	1016 Middle Ave. #1	Menlo Park, CA	94025 321-7750
Swenson, Lloyd L. (Swede)	N6CHL	73 Adam Way	Atherton, CA	94025 368-8503
Talbert, Elmer	W6PFC	2414 Read Ave.	Belmont, CA	94002 593-7320
Tallmon, W.B. (Bill)	W6DVB	355 Santa Margarita Ave. (101)	Menlo Park, CA	94025 326-0112
Taylor, Rob		925 Waverly St.	Palo Alto, CA	94301 321-5089
Tennissen, Thomas	KH6DZB	23000 Cristo Rey Dr.	Los Altos, CA	94022 967-3822
Thekan, Paul	WA6JJP	335 Rutherford Ave.	Redwood City, CA	94061 369-4034
Tiffany, Willard D. (Tiff)	W6GNX	880 Coleman Ave.	Menlo Park, CA	94025 324-4524
Topp, Don	W6CFZ	1092 Metro Circle	Palo Alto, CA	94303 858-0225
Troster, John G. (Jack)	W6ISQ	82 Belbrook Way	Atherton, CA	94025 854-3939
Tucker, Gerald H.	WA6LNV	1112 Ramona St.	Palo Alto, CA	94301 326-4908

Vanover, James F.	KA6KJP	VA M-C Sect 18, 4100 W 3rd St., Dayton, OH	45428	
Vickery, Leslie	W6AKR	980 Third Ave. Redwood City, CA	94063	368-5175
Vosper, Larry	KA6DZM	P.O. Box 8398, SF Arpt. San Francisco, CA	94128	349-9374
Wagstaffe, Gerard	W6NIR	4 Roberts Dr. Menlo Park, CA	94025	325-4670
Wheeler, Robert	K6SEM	868 Elbridge Way Palo Alto, CA	94303	494-6549
Wilder, H. Kenneth	K6RB	58 Catalpa Dr. Atherton, CA	94025	323-9953
Wilson, William J.	K6TBE	1011 Henderson Ave. Menlo Park, CA	94025	325-4342
Wortman, Leon	W6KTP	743 Holly Oak Dr. Palo Alto, CA	94303	494-2613
Yelton, Perry	KD6ID	3401 E. Bayshore Rd. Redwood City, CA	94063	366-7880
Zaner, Bill	WB6IYS	885 Sharon Ct. Palo Alto, CA	94301	328-2677
Zobel, Jerome F.	W6ARA	877 Northampton Dr. Palo Alto, CA	94303	322-0063

**ADDENDUM:**

Mc Dermott, Charles B.	KA6NDX	349 San Luis Av.	Los Altos, CA	94022	941 6556
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W6AAQ	Don Johnson	W6KJI	Ed Clark	W6YPM	Erv Rasmussen
WD9ADG	Bill Croft	WA6KJJ	Antoni Maciejowski	WA6YSO	David Dorrance
N1AFN	Bob Lockhart	W6KTP	Leon Wortman	WA6YSY	John Arnold
W6AIN	Ed Fairbanks	W6LII	Jack McEnnerney	K6YT	Fred Canham
W6AKR	Les Vickery	WA6LIJ	Gerry Starkey	N6YV	Jock MacKaig
K6AL	Curt Roché	WB6LML	Bill Jenkins	Ed Camp	
K6ANN	Dick Collins	WA6LNV	Gerry Tucker	Willard Edson	
WA6AMC	John Bartelme	KB6LT	Nolan Katz	Bill Frye	
W6AQL	Dick Finkbeiner	KA6M	Hank Magnuski	Tad Godwin	
W6ARA	Jerry Zobel	K6MPN	Dusty Doster	Walt Harper	
WLARR	Bob Hill	W6NA	Fred Streib	Charles Kirkley	
W6ASH	Walt Read	WA6NCX	Rick Ferranti	Bill McElhinney	
KA6ATG	Adrianus Schrauwen	W6NIR	Gerry Wagstaffe	Rob Taylor	
N6AUW	Ron Chiappari	WB6NNL	Ralph Ryan	Jim Vanover	KA6KJP
WA6AZP	Alan Larson	WA6NYB	Ken Dwight		
W6AZS	George Moss	GI30EN	George Nixon	ADDENDUM:	
W6BFH	Bob Baum	WB6000	Gene Root	KA6NDX	Mac Mc Dermott
WD6BGV	Kurt Kanthack	K50SQ	Clay Sherrod		
W6CPZ	Don Topp	K6OYN	Neville Shore		
N6CHI	Bill King	W6PFC	Elmer Talbert		
N6CHL	Swede Swenson	W6PGQ	David Brodie		
K6CMT	George Ice	W6PSY	Henry Cady		
KA6CUG	John Buonocore	W6QBY	Paul Churchill		
KA6CZN	Charles Gary	WB6QPV	Frank Chandler		
AG6D	A1 Elge	W6QXP	John Roberts		
W6DEF	Hal Moore	WB6RAF	Irene Lile		
KA5DQR	Doug Baum	K6RB	Ken Wilder		
W6DU	Eric Edberg	WA6ROM	Sy Stein		
W6DVB	Bill Tallmon	K6RU	Cam Pierce		
KH6DZB	Tom Tennissen	N6RY	Terry Conboy		
KA6DZM	Larry Vosper	KB6RZ	Ray Nelson		
K6EHS	Andy Anderson	K6SEM	Bob Wheeler		
KA6EKG	Carl Nicholson	WØSH	Gary Liljegren		
WA6ENC	Loren Chan	WA6SLF	Jeffrey Sue		
W6FGL	Rob DeLiban	WA6SOI	Bob Morton		
WA6FHC	Kevin Lapp	WB6STW	Dan Curry		
KA6FRK	John Fraher	WA6SZX	George Callander		
K6FS	Steve Stuntz	K6TBE	Bill Wilson		
WA6FSQ	Ed Hausafus	K6TNY	Shannon Lile		
VE3FZK	Andy Korsak	W6UCE	Hank Martin		
W6GNX	Tiff Tiffany	K7UDG	Jim Hartwell		
KA6GRU	Mike Alexander	K6EURO	Wally Porter		
WB6GYT	Keith Famulener	W6UVP	Alan Jenson		
W6HBJ	John Lazier	W6VG	Ron Panton		
WA6HLE	Leonard Schumacher	W6VYC	Earl Crocker		
N6HM	Howard Krawetz	WA6VZZ	Millard Edgerton		
KD6ID	Perry Yelton	WB6WBK	Chris Schellenberg		
N6IG	James Praft	K6WD	Pres Hotz		
WA6IJP	Paul Thekan	N6WN	David Lin		
KA6IRT	Bob Gallagher	KB6WP	Dave Daniel		
W6ISQ	John Troster	WA7WXA	Liza Aguilar		
KA6IXE	Dan Smith	K6XO	Alan Brubaker		
WB6IYS	Bill Zaner				
K6JBR	Tom Scherf				
WB6JFH	Dave Harper				
W6JHU	Dave McGuire				
W6JTH	Richard Simpson				

EARLY START CORNER: W6CBI cleaned out his garage of "oldies but goodies" gear. It has been divided between PAARA and Post 599. Ed, W6AIN, has some of it in his garage, and Gerry, W6NIR, has the remainder, to be used in the October, 1981 Auction/ Flea Market.

de Ed, W6AIN

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ROSTER CORNER: The art work of Marilynn, DW1GHT, appears as a centerfold this month. Listed are all known members of PAARA. Don't lose your copy. Only a few extra are printed—for new members in 1981.

Marilynn is an unusual gal with an unusual call, and anyone who can use a typewriter like she is an artist.

o o o

#### NEW CODE TEST TO DEBUT:

The FCC has been concerned about its multiple-choice code test format for some time now. Cheating, unfortunately, has been a definite problem.

To remedy this problem, Atlanta and Denver were the scenes of an experimental type of code test run this past February. With promising results recorded from the new exam, the FCC will initiate such a test around October.

The test will still consist of ten questions based on a typical Amateur Radio QSO. The applicant will then be required to answer the questions by filling in the correct answer. Multiple choice questions will no longer be used in FCC code exams. (No change is to be made in the written test.)

FCC exam creator, Jay Jackson, feels the new test will still give an advantage to the marginal code copier as compared to putting down a perfect string of copied text on paper.

Also mentioned by Jackson was the possibility of changing the code passing requirement from 80% to 70%. No final decision has been made on this subject, but be aware of this possible future change.

de QSA-5, August, 1980

(ed: reports are that while FCC feels the new test should be easier for a marginal CW man to pass, there are indications some of the applicants don't feel as enthusiastic. Unverified word is that passing grade has been lowered to 70%. But go take the exam with the express idea of getting 100%)

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#### THIRD PARTY AGREEMENTS

Argentina	Equador	Liberia
Bolivia	El Salvador	Mexico
Brazil	Ghana	Nicaragua
Canada	Guatamala	Panama
Chile	Guyana	Paraguay
Colombia	Haiti	Peru
Costa Rica	Honduras	Trinidad and
Cuba	Isreal	Tobago
Dominican Republic	Jamaica	Uruguay
	Jordan	Venezuela

#### U. S. RECIPROCAL AGREEMENTS WITH THE FOLLOWING COUNTRIES

Argentina	Ireland (EI)
Australia	Israel
Austria	Jamaica
Barbados	Jordan
Belgium	Kuwait
Bolivia	Liberia
Botswana	Luxembourg
Brazil	Monaco
Canada	Netherlands Ant.
Chile	Netherlands
Colombia	New Zealand
Costa Rica	Nicaragua
Denmark	Norway
Dominican Republic	Panama
Ecuador	Paraguay
El Salvador	Peru
Fiji	Philippines
Finland	Portugal
France	Sierra Leone
Germany (DL-etc.)	Spain
Greece	Surinam
Guatemala	Sweden
Guyana	Switzerland
Haiti	Trinidad and Tobago
Honduras	United Kingdom
Iceland	Uruguay
India	Venezuela
	Indonesia

These two listings are from Bill Stevens' Pacific Division Newsletter, Fall, 1980. While more than half PAARA members are ARRL members and so received the Newsletter, there are still many who didn't. Cut the Newsletter lists out and put them under the glass of your operating table. Then when you get third party traffic to pass you'll know whether you can accept it or not.

Also: Going on a trip? The list will tell you whether it's worth while taking the rig along.



ARRL CORNER: With about 70 of our members also members of ARRL, the Club is, for the most part, missing a source of income. For each membership (new or renewal) the Club would retain \$1.50. Granted, we have some life members and some with shorter-term memberships, but if all would renew through the treasurer, Fred, K6YT, could ferret out a new Field Day tower for PAARA—or get the Club to work on a trailer for the one he rebuilt last spring.

CONSTRUCTION CORNER: With the risk of offering a primer in unit construction, Dave, KB6WP, offers the following hints & kinks: If you have metal bending equipment and need a cheap chassis, try the dime store and a cookie sheet of the required size. Payless has metal recipe card boxes with hinged covers for less than \$2.00. This is the cheapest pre-fab metal chassis around. Our esteemed editor says if you have extra copper circuit boards, solder them together in order to make a chassis. Should work. More Hints & Kinks as the brain is interrogated.

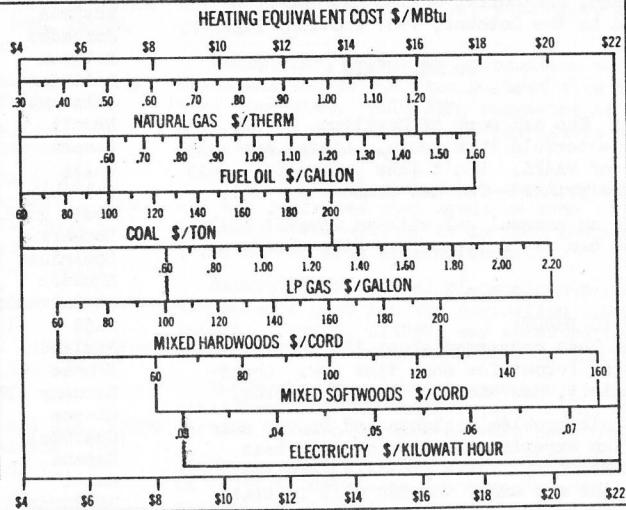
de Dave, KB6WP



## FUEL COST COMPARISON

**ASSUMPTIONS:**

- Natural Gas - Therm = 100,000 Btu  
= 100 cu ft  
75% Efficiency  
\$/MBtu = 13.33 x  
\$/therm
- Fuel Oil - 158,000 Btu/gallon  
65% Efficiency  
\$/MBtu = 11.15 x  
\$/gallon
- LP Gas - 95,000 Btu/gallon  
75% Efficiency  
\$/Btu = 14.34 x  
\$/gallon
- Electricity - 3,412 Btu/kwh  
(Resistance) 100% Efficiency  
\$/MBtu = .293 x \$/kwh
- Mixed Hardwoods - 34 Btu/cord  
50% Efficiency  
\$/MBtu = \$/cord + .12
- Mixed Softwoods - 15 MBtu/cord  
50% Efficiency  
\$/MBtu = \$/cord + 7.5
- Coal - 12,500 Btu/lb  
60% Efficiency  
\$/MBtu = \$/ton + 15



WOMAN'S DAY 10/14/80

88

## COMPARE FLUORESCENT LIGHT SAVINGS!

FLUORESCENT LIGHTS		INCANDESCENT BULBS	
SIZE	AVG. BULB LIFE	SIZE	AVG. BULB LIFE
22 WATT	12,000 HOURS	100 WATT	1,000 HOURS
40 WATT	10,000 HOURS	180 WATT	1,000 HOURS
54 WATT	12,000 HOURS	180 WATT	1,000 HOURS
80 WATT	10,000 HOURS	360 WATT	1,000 HOURS
150 WATT	10,000 HOURS	500 WATT	1,000 HOURS
160 WATT	10,000 HOURS	700 WATT	1,000 HOURS

FREE ADVICE CORNER: Light your shack with flourescent tubes—heat it with a pair of 4X1000's.

UNCLASSIFIED CORNER: This space is allocated to members who wish to find gear or to get rid of it, and to others as space permits.

WANTED: Items advertised so when space runs out something can be carried on to the next month.

HAL'S CORNERS: Enjoyed reading PAARAGraphs again this month. Was especially interested in the improvement in the Civil Defense Communications efforts and the cooperation from the City.

Am a member of the Sierra Foothill ARC but no Civil Defense or Red Cross Communications efforts locally.

I do check into several nets regularly even though my gear is old-fashioned. The antennas are the dipoles and seem to work OK.

Transmitter is a Hallicrafters HT37 and the receiver is Hallicrafters SX101. I can work complete break-in on CW and VOX on radio-telephone phone.

The two meter gear is a Comcraft and the antenna is a ground plane.

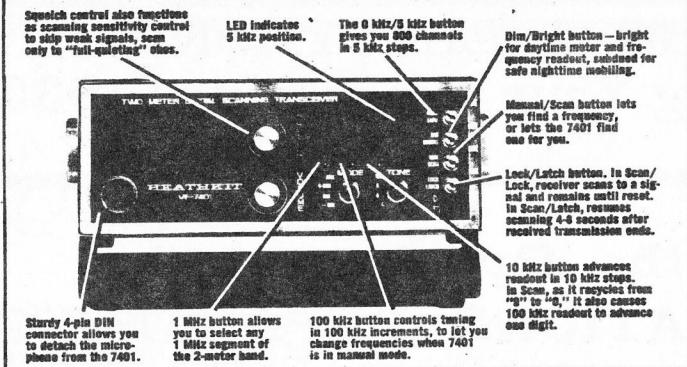
Am kept busy during the day-time helping the XYL and the Sweet Earth Shop where she has a Costume Rental Service. Some 290 costumes were rented during October.

I take care of my 6 year old grandson also, several afternoons a week. We find interesting things to do. He isn't oft en boarded.

Merry Cryistmas and Happy New Year to all,

*Hal Moore*  
WLDGF

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## Give the Amateur on your list the ultimate gift: the VF-7401 2-Meter FM Digital Scanning Transceiver!

**\$349.95**  
with PTT  
microphone

- Continuously adjustable, 15-watt output
- Band scan capability 1 MHz at a time — front panel selectable
- 800-Channel synthesized capability
- Preprogrammed power-up on your favorite channel
- Microphone is detachable

If you have one or more repeaters in your reception area, you need the Heathkit VF-7401 2-Meter FM Digital Scanning Transceiver. You can't effectively monitor one or more repeaters, plus simplex frequencies, without a scanning transceiver like the VF-7401. And never again will you have to search through a repeater guide on the highway. The VF-7401 will find all of the local activity for you, because this exciting Transceiver scans the entire 2-meter band in 1 MHz segments. When it finds an active channel, it stops! It stays on the active channel, when you select the Scan/Lock Mode, until you reset it. Or, set your VF-7401 in the Scan/Latch mode, and it will resume scanning when the received transmissions end.

You can adjust the receiver to stop scanning for "full-quieting" signals only. Or, open up the squelch when there are 2-meter band openings. Your VF-7401 will find that "2-meter DX" for you without the tedious task of flipping through channels one by one. Naturally, your VF-7401 lets you change frequencies manually, too. Three small front panel switches allow you to select manually any desired frequency at this scan rate. Once you have the frequency you want, you may also offset it by a separate 5 kHz switch.

Your VF-7401 will "power-up" on the frequency of your choice. While building your transceiver, you program in any simplex or repeater frequency. Then, every time you turn it on, before it begins to scan, that frequency is monitored first. Besides simplex, your VF-7401 has +600 kHz, -600 kHz and 1 MHz offsets. It can accommodate any 2-meter amateur band offset combination, even MARS and CAP. The VF-7401 is a continuously adjustable, 15-watt (nominal), solid-state, narrow-band FM transceiver. Featuring a hot receiver, it incorporates a double-tuned front end with MOSFET RF amplification, dual-conversion, 8-pole crystal IF filter

ing for perfect bandpass shaping and outstanding adjacent channel selectivity, IC limiting, Quad detection and excellent audio quality. An improved synthesizer eliminates the need for a panel-mounted syn lock light. Power amp tuning and output power level adjustment are both accessible from the rear panel without removing the case. Also added — a sturdy SO-239 antenna connector, plus chassis-mounted power and external speaker jacks.

Your VF-7401 has a detachable microphone with rugged 4-pin DIN connector. And if you choose the optional Micoder™ II Microphone/Auto Patch Encoder (described on page 91), stop worrying about where your mike battery is going to run down. The Micoder II draws its power directly from the VF-7401. Also included is a handy gimbal-mount bracket for mobile installation. The Transceiver requires a 13.8 V, 3 amp continuous, 4 amp intermittent, power source such as a charging automobile electrical system, or the optional VFA-7401 AC Power Supply described on page 94.

**Kit VFS-7401-1, Transceiver and Micoder II, Shpg. wt. 12 lbs. .... \$369.95**

**Kit VFS-7401-2, Transceiver and PTT Microphone, Shpg. wt. 12 lbs. .... \$349.95**

**VF-7401 SPECIFICATIONS:** Receiver: Sensitivity: 0.5  $\mu$ V for 12 dB SINAD (or 15 dB of quieting). Squelch Threshold: 0.3  $\mu$ V or less. Audio Output: 1.5 watts at less than 10% THD; 2 watts maximum output (typical). Image Rejection: -50 dB or greater. Spurious Rejection: -50 dB or greater. IF Rejection: -80 dB or greater. Internally Generated Spurious Signals: Below 1  $\mu$ V equivalent. Bandwidth: 6 dB at 15 kHz minimum and 60 dB at 15 kHz minimum and 60 dB at 30 kHz maximum. Modulation Acceptance: 6.5 kHz minimum. Transmitter: Power Output: 15 watts nominal to a 50  $\Omega$  <0° (resistive) load at 25°C and 13.8 VDC. Harmonic and Spurious Output: -60 dB. Modulation: FM, 3-7 kHz, adjustable. Duty Cycle: 100% with VSWR of less than 10:1. Tone Encoder: 3 tones 70 to 200 Hz, approx. 700 Hz deviation. Transmitter Offset: -600 kHz, +600 kHz, -1 MHz (AUX). General: Frequency Range: 4 MHz to 144.5 MHz. 144.5 MHz Frequency Increments: 5 kHz. Frequency Stability: ±0.05%. Operating Temperature Range: +15° to +125° F (-10° C to +50° C). Operating Voltage Range: 12.6 to 16 VDC (13.8 VDC, nominal). Current Consumption: Receive Mode: 550 mA max., squelched; 750 mA max., full rated audio. Transmit Mode: 4A max. at 13.8 VDC. Dimensions: 2 1/4" H x 7 1/4" W x 10 1/4" D (7.0 x 18.4 x 26.0 cm).

## Code Courses and Reference Books to help you get more from Amateur Radio

**Amoco Junior Cassette Code Course.** This tape cassette course presents 10 lessons of Morse Code instruction. It begins with letters of the alphabet, numerals, punctuation, increasing code speed, progress tests, final test, and, throughout, eight words-per-minute, more than enough to qualify you for the FCC Novice or Technician class license code requirement of five words-per-minute. **HDP-432, Shpg. wt. 1 lb. .... 4.95**

**Amoco Senior Code Course.** Two 33 RPM long-playing records, 22 lessons take you from an introduction to the code through 18 words-per-minute. **HDP-332, Shpg. wt. 2 lbs. .... 7.95**

**Amoco Stenier Cassette Code Course.** As above, cassettes instead of LP's. **HDP-532, Shpg. wt. 1 lb. .... 8.95**

**"By the Word" Code Course.** Two audio cassettes teach you code using world-famous "By the word" method. Begins with simple material at 13 words-per-minute, then increases in complexity, not speed. **HDP-132, Shpg. wt. 1 lb. .... 8.95**

**Amateur Radio License Study Guides.** Makes getting your license easier, since serves as a convenient reference.

**GENERAL, EHP-123 ..... 7.95**

**ADVANCED, EHP-124 ..... 8.95**

**EXTRA, EHP-125 ..... 8.95**

**US Callbook.** Complete listing of Radio Amateurs in all US call areas and territories; SSTV, AMSAT, OSCAR users; Great Circle Bearings, more. 1070 pages. **EHP-126 ..... 16.95**

**DX Callbook.** Complete listing of foreign Amateurs, addresses, postal rate charts, call zone maps, world time conversion chart, world GSE, much more. 900 pages. **EHP-127 ..... 16.95**

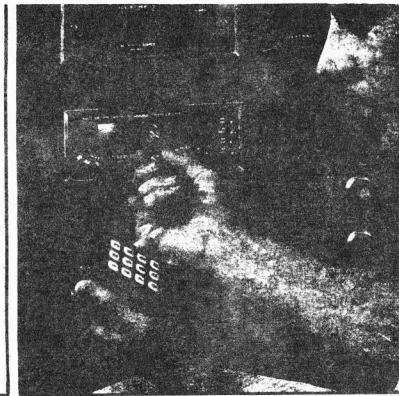
**1980 Edition, ARRL Radio Amateur's Handbook.** Up to date electronics theory and application. 538 pages. **HDP-233 ..... 10.00**

**73 Dipole Antennas.** Description, construction of 73 different dipole and long-wire antennas. 160 pages. **EHP-180 ..... 4.95**

**ARRL Antenna Handbook.** Antennas, transmission lines, propagation, antenna design. 336 pages. **EHP-182 ..... 5.00**

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