

# SHORT SKIP

Sonoma County Radio Amateurs, Inc.



JULY 1988

P.O. Box 116 W6LFJ Santa Rosa, CA 95402

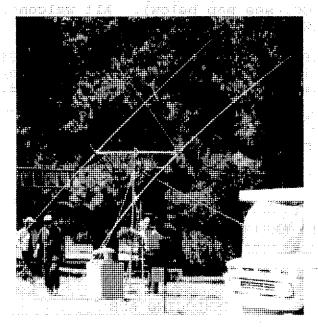
Repeater Station

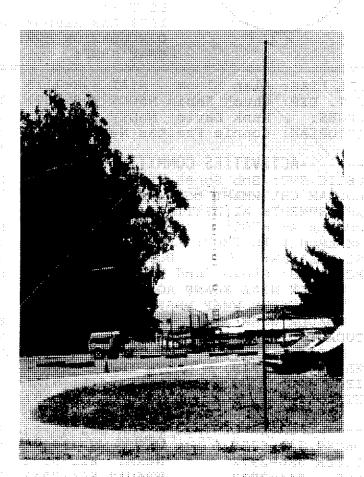
WB6PVS

VOL 13 # 7









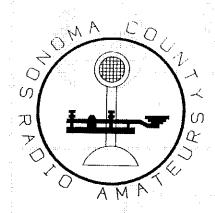
FIELD DAY 1988

See Also

Photos, tnx: NORMW, NIAL







	FFICERS FOR 1988:			
PRESIDENT:	Russ O'Neill	N6KMJ	823-9691	
VICE PRESIDENT:	Glen Crownover	N6DNB	938-5986	
SECRETARY:	Alan Bloom	N1AL	538-7115	
TREASURER:	Jim Pelmulder	N6PTM	823-7947	
MEMBERS-AT-LARGE:	Chuck Sabin	N6DDK	795-2371	
and the second of the second o	Bob Sones	WB6EKV	546-3873	
REPEATER CHAIR:	Hoppy Bravin	WD6CKP	542 <b>-</b> 6750	
ACTIVITIES CHAIR:	Steve Schaffer	KD6GC	546-8860	
SHORT SKIP STAFF:				
EDITOR:	Alan Bloom		538-7115	
1578 Los Alamos Ro	l, Santa Rosa, CA	95405 (di	577-3981	
CIRCULATION MGR:	Tracy Reese			
SWAP SHOP:	Hank Davis	W6DTV	823-7885	

ARRL LIAS: Alan Bloom N1AL 538-7115 ASST. DIR: Chuck Sabin N6DDK 795-2371 BADGES: Hank Davis W6DTV 823-7885 HISTORIAN: Connie Freitas N6FYV

## -----ACTIVITIES COMMITTEE-----

PUBLIC SVC: Bob Sones WB6EKV 546-3873
PROGRAM CHAIRMAN: Bob WD6DPE 546-5593
REFRESHMENTS AT MEETINGS: Bob WD6DPE
GREETER AT MTGS: Jane N6NTB
MEMBERSHIP LOTTERY: Warren WB6RHP
QSL MANAGER: Doug Bender WW6D
VEC EXAMS: Steve Lund WA8LLY 823-4544
WA6ACX N1AL K6ANP AG6C WD6CKP WN6D
WW6D W6DTV WW6F WB6FRZ KF6FX W6RIA
WB6UDR WU6W

EDUCATION: Steve Lund WA8LLY 823-4544
WA6ACX, WW6D, WB6PDP, W6TLK, KF6WV
AWARDS CHAIRMAN: Steve Lund WA8LLY
FIELD DAY: Steve KD6GC and Al N1AL
INTERFERENCE CHR: John W6CCY 823-1357

## ----REPEATER CONTROL OPERATORS-----

WD6CKP 542-6750 W6DTV 823-7885 WB6PER 526-2972 N6KMJ 823-9691 WN6D 544-7943 WB6UAZ 544-7943 PACKET COMMITTEE: Al NIAL Jim WN6D Rich 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 into almost every aspect of amateur radio: repeaters (13/73), Field Day, license classes (novice/upgrade), volunteer exams, RACES, DX programs, packet(145.03), hidden xmtr hunts -- you name it.

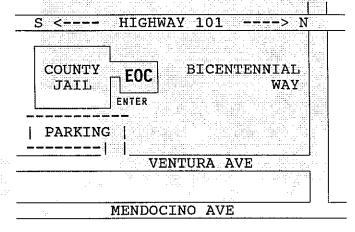
We invite you to attend our next monthly meeting (see below) or check into the Tuesday night SCARS net on the 146.13/73 repeater at 7:00PM or on 28.400 MHz at 7:30 PM.

You'll hear the latest Westlink Amateur Radio news broadcast, SCRA announcements, and a Swap Shop. If you would like to join SCRA, please refer to the dues listed below. 73!

#### 

7:30 PM 1<sup>st</sup> Wednesday each month at the Emergency Operations Center (EOC, see map below). All welcome. NEXT MEETING: July 6, 1988

DUES: \$12/year plus a one-time \$4 initiation fee. (Includes callsign/name badge) Family membership: \$18.



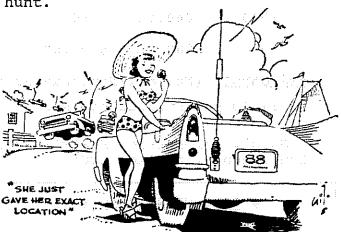
### WHO WON THE FOX HUNT?

Saturday June 11 saw our first "two-legged" Fox Hunt. No, "two-legged" doesn't mean the contest is limited to humans, chimpanzees and ducks -- It means it has two parts, with an "easy-to-find" hiding place for the first leg followed by a more challenging second leg.

The first leg turned out to be a bit more challenging than expected. It took the first team about 45 minutes to find their way from the start at Garwood's Market to the hidden transmitter at the nearby Santa Rosa Air Center. Congrats to the first place team of Jeremy KB6KUI and Wayne W6RIA.

The second location was a bit more diabolical, being located in a cul-de-sac off a cul-de-sac off a cul-de-sac in Rohnert Park. I'm told you couldn't see Chuck N6DDK's installation from 20 yards away. First to thread their way through the cul-de-sac<sup>3</sup> were Hoppy WD6CKP and Aaron KA7YXF. They have won the right to change from hunter to huntee for the next event.

Thanks to Jim N6PTM for coming up with the locations and arranging the hunt.



#### REPORT FROM PARADISE

Jim Tomer W6CYM has gone through three weeks at Enloe Hospital in Chico. This reduced the tumor size, and some response is returning to his legs. We hope Jim will regain full use very soon.

- W6DTV



The June issue of the Santa Rosa Cycling Club newsletter included an "Honor Roll" of those who helped at the recent Wine Country Century. Under the heading "Sonoma County Radio Amateurs" were listed the names of the 18 hams who helped out.

This is SRCC's only fundraiser for the year. The money goes to support the Special Olympics Cycling Team, prizes for the Police Dept's Bicycle Safety Program and Bike Rodeo in the elementary schools, the "Terrible Two" bike tour, and other SRCC club activities.

#### **BICYCLE MADNESS**

I didn't get a report on the June 19 "Terrible Two" 200-mile bike event, but I know a lot of members put in a lot of time on this one. It started early in the morning and I heard Rudy still at it on the repeater after 8 PM that night.

The "Rumpstomper" to benefit the Roseland Volunteer Fire Dept on June 5 saw service by Rudy N6KLU, Marie KI6QY, Hans KI6PD, Phil N6OOA, Jim N6PTM, Rick N6RXA, Brad KB6SQY, Wilber N6MGY, Russ N6KMJ, Connie N6FYV, John W6TLK, Bob N6RMW and Jane N6NTB. And a good time was had by all.

#### YOUR ARRL DUES ...

If you renew through SCRA, it costs you the same and the club gets \$2 (renewals) or \$5 (new members).

Just send your check MADE OUT TO SCRA with the application to SCRA, POB 116, Santa Rosa, CA 95402, or bring them to a meeting.

#### NOVICE OPERATION ON 10 METERS

When using phone mode, respect the other fellow's frequency. He may be a DX station or a rare state for WAS. If you wish to work him, do so, and when the QSO is finished, move up or down frequency, and let him continue at his location. After all, he was there first. Staying on his frequency and working someone else makes you a "lid" in training. n't become one. En le brûke live en Don't become one.

## NEW/RENEWED MEMBERS SINCE LAST MONTH

Marilyn Franc 6695 Sonoma Mountain Rd. Santa Rosa, CA 95404 . 4/527-9349 - 1 gastin and milestands.

Ralph Wedertz N6DYE 718 S. Ely Blvd Petaluma, CA 94952 763-2364

Gary Maresh WD6EVL 1867 Jonive Rd. English Sebastopol, CA: 95472: 

Dan Swann KG6HO Pox 137 Glen Ellen, CA 95442

Bill Harris W7KXB POB 962 Bodega Bay, CA 94923 875-3679

We now have 168 members



### CLUB QSL CARDS

The Treasurer now has "blank" club OSL cards available at meetings for \$4/100. If you want personalized cards, be aware that we wait for at least one other order of the same quantity before sending the job to the printer. If you can't wait, ask for "Express" service.

Payment must accompany the order. If you want to have the cards mailed to you, so indicate and add \$3.00 postage/handling. Bring your order to a club meeting or send to:

SCRAT QSL PO Box 116 .... Santa Rosa, CA 95402

The drawing is in Red and Black with the Call/Name/Addr in dark blue on light blue card stock.

## PERSONALIZED CARDS:

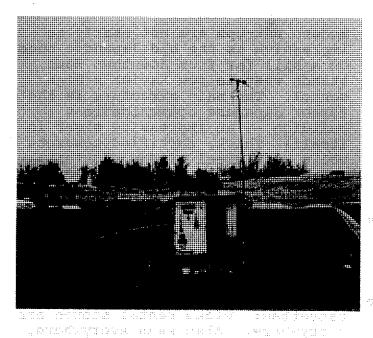
# CARDS	NORMAL SERVICE	EXPRESS SERVICE
250	\$19.00	\$28.00
	\$29.00	\$40.00
1000	\$49.00	\$60.00
2000	\$89.00	\$100.00

BLANK CARDS: (No Call/Name/Address)

\$4.00 per hundred cards.

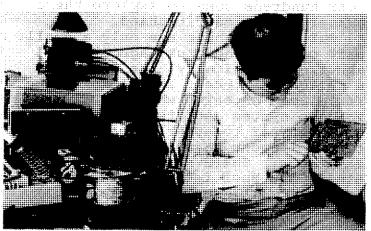
Supply information EXACTLY as it should appear on the card:

	SCRA MEMBERS ONLY *
ADD ARRL	CALLSIGN:
YES   _	NAME:
NO	ADDR:
<u> </u>	
Nr CARDS	
\$	(Include payment w/order)

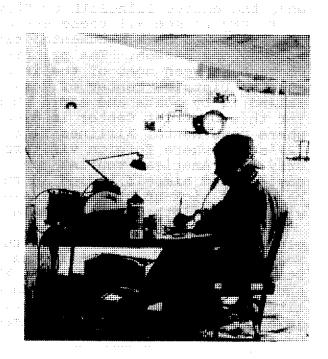




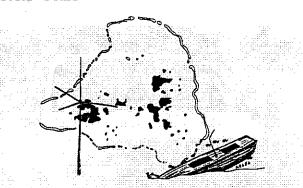








Photos: thanks Bob N6RMW



### SUNKEN SHIPS AND RAISED ANTENNAS

To most people, if the name "Truk" means anything, it is the place where a fleet of Japanese warships was laid to rest during World War II. To scuba divers, the terms "Truk Lagoon" and "wreck diving" are practically synonymous, and each year hundreds come to explore these submerged relics firsthand.

But sunken ships are only a small part of what the Truk Lagoon is all about. Geologically, the lagoon is a delightful treat: It is one of the few places on earth where a sinking volcano system and its resultant atoll appear together, creating one of the largest barrier reefs in existence. There are almost 200 atolls and reef islands outside the lagoon itself. Here, a Micronesian lifestyle unaffected by Western influence prevails. Men still know the ancient navigational skills and wear the native loincloth or "thu."

To try to see all these aspects of Truk would be a monumental task for any one person. The principal contact between most of the islands and the District Center of Moes Island is by boats and copra ships. Yet this District Center is also where Continental Airlines flies its 727's and where foreign visitors stay. An American tourist can easily find himself riding in the back of a pick-up style taxi along with a loinclothed Western Islander.

Moes is also the center of electronic communication for Truk. Not far from the airport is the State Radio station WSCZ (1593 kHz), short-wave antennas, and the Satellite Communication Center. But, as is often the case for Truk, these

modern set-ups are not nearly as impressive as the old Japanese ones. On a hill far from downtown Moen, stands what is now Xavier's High School. The main structure is the former Japanese communications building — an impressive sight in itself! Thick, fortified concrete walls with steel window shutters: There is good reason the building withstood the American bombings and various subsequent typhoons. Even the most dedicated ham has never dreamed of a "shack" like that.

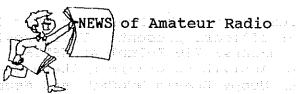
The Trukese on Moen are not in the stone age as far as electronic interests. Direct TV viewing has succumbed to a profusion of video cassettes: video rental stores are everywhere. Also seen everywhere, & apparently growing in popularity, are vertical HF antennas. To hams in other parts of the world "CB radio" may be a foul word, but in Truk, it can be a useful tool. Telephones are not available to all who desire them even on Moen itself, much less on the outer islands, so the practicality of a Citizen's Band set-up is quite apparent. A person may live where there isn't even a car, but with an inexpensive radio, he can keep in touch.

This is not to say that Truk is devoid of Amateur Radio. Some dedicated and long-term operators live on Moen. Their 3-element beam antennas tower high above the much larger number of CB ground planes.

How many of those now enthralled by these simple CB sets will progress to ham radio, only time will tell. Truk is anything but stagnant, and communications is playing a more and more important part in its future. Scuba divers may go on thinking that all there is to Truk is sunken ships, yet Amateur Radio operators who have the chance to contact resident Truk hams, will have opportunity to learn about caves and tunnels, birds and bats... and much, much more.

Ran Annim o Fik-me-unungat. (Good day and Seventy-three)

- Nancy Vander Velde AA6EA



OSCAR 13 HAD A PERFECT LAUNCH and deployment with telemetry indicating all important parameters right "on the money." Ground controllers successfully fired the kick motors June 22. Beacon frequencies: Mode B: GB: 145.812, EB: 145.985 MHz Mode L: GB: 435.651, EB: 435.677 MHz Transponders will be open for use in 4 to 6 weeks. Other info was in June QST, page 22. (W1AW)

THE SATELLITE should have better DX coverage than any previous amateur "bird." Its highly-elliptical orbit has an apogee as high as that of a geosynchronous satellite, covering nearly a full hemisphere at one time. At 15 degrees West, for example, All the US east of the Mississippi, all of South America, Africa, Europe, and the Middle East are in view! (Westlink)

SERA WILL NOT COOPERATE WITH ARRL.
The Southwestern Repeater Assn will
follow the lead of the Mid-America
Coordination Council, and has
copyrighted its published list of
repeaters. ARRL will not get a copy
due to ARRL's refusal to determine
who is and is not a legitimate
cootrdinator for purposes of listing
in the Repeater Directory. ARRL
will use direct listings by repeater
owners where the coordinators pull
their information. (Westlink)

DEPT OF DEFENSE AGAINST 220 GIVEAWAY Calling the UPS proposal "seriously flawed," the DoD and the National Communications System (NCS) have filed reply comments on Docket 87-14 that emphasize that government Radiolocation must remain a primary service in the 216-225 MHz band. They point out that Amateurs also need the 220-225 band for control links, beacons, weak-signal work, and high-speed data links. (ARRL)

ELEVEN HAMS MAY LOSE THEIR LICENSES in Puerto Rico due to charges of testing fraud. FCC became suspicious when it noticed an average annual growth in amateur operators of over 50% per year in Puerto Rico vs 3.5% for the rest of the U.S. (Westlink)

A W6AM MUSEUM is taking shape on a 10-acre parcel about 40 miles north of Los Angeles. A rhombic antenna, salvaged from W6AM's famous rhombic farm, will be installed along with a treasure trove of spark-gap and other early wireless equipment discovered stashed in a storeroom after W6AM died. (Westlink)

Thanks to the ARRL Letter, W1AW bulletins and Westlink Report for the above info.



SEND/RECEIVE GRAPHICS VIA PACKET with the new program by N1CH. With it, anything that can be displayed on the computer's monitor can be transmitted via packet. Cost is \$10 to Bob Corbett N1CH, 46 Prospect St, Torrance, CT 06790. (Gateway)

A PACKET HT? At Dayton, Pac-Comm was showing a miniature TNC board small enough to fit inside an HT. (Gateway)

9600 BAUD ON STANDARD NBFM RADIOS is claimed with a new modem designed by G3RUH. It uses direct connection to the transmit varactor along with sophisticated digital filtering to keep the signal within a 20 kHz bandwidth (-60 dB). 20 PC boards will be sent out for beta testing in mid-July 1988. (Gateway)

## MINUTES OF THE GENERAL MEETING OF SCRA JUNE 1, 1988



The meeting was called to order by President Russ O'Neill N6KMJ at 7:30 PM. Other officers present: Vice President Glen Crownover N6DNB, Treasurer Jim Pelmulder N6PTM, Secretary Al Bloom N1AL, Activities Chairman Steve Schaffer KD6GC, Repeater Chairman Hoppy Bravin WD6CKP, and Members at Large Chuck Sabin N6DDK, and Bob Sones WB6EKV.

Jane N6NTB introduced visitors: Steve Miller N6RHQ & Marion Pannaton. The May minutes printed in Short Skip were approved. m/s WB6RHP/N6DDK N6PTM gave the Treasurer's report. The major income was \$258 in dues. m m 1 H m

Approved. m/s K6GEV/N6DDK

KD6GC and N1AL presented the Field Day program. It started with two videotapes of past Field Days, one the "outtakes" from TV50's coverage in 1986. Next, Field Day operating procedures were explained in detail. Finally, Steve WA8LLY covered logging and duping.

After intermission came the committee reports.

REPEATER COMMITTEE: W6DTV notes the "alligator" crud seems to appear whenever the weather gets wet. In the past few years, 3 different machines have done it, so it must be the site. Hoppy WD6CKP notes that the County tech that has looked into it has always failed to find any Hoppy notes we need a net control for next month.

EDUCATION: Steve WA8LLY hopes to have volunteer exams set up for the

flea market in September.

PACKET: The WB6PVS-1 digipeater on 145.03 is now sporting a "new" corner reflector pointed South for about 100 Watts ERP, according to Al There appears to be some NETROM activity on the channel.

ACTIVITIES: Steve KD6GC noted the fox hunt June 11. Also, bring in your canned goods for the Christmas food drive. No dented cans. Good stuff only (caviar, smoked oysters).

PUBLIC SERVICE: Bob WB6EKV reminded everyone about the 22 mile bike race at Annadel Park on Sunday. We need to man 9 posts plus NCS. Thanks

to Bob N6RMW and Jane N6NTB for the photos. The "Terrible Two" 200-mile bike race is coming up June 18. Most hams will be in the sag wagons. We can use another volunteer.

BADGES: N6PTM listed badges waiting for their owners: AA6GT, KB6UWX, AL7GI, N6EWV, and WA6HYE.

NEW BUSINESS:

Garry N6ONZ told about a recent emergency incident. Always stop and get the facts before calling in an accident: 30 min were lost getting the ambulance to the scene because nobody knew the lady was hurt.

RAFFLE: This was the month to keep drawing until a winner was present. Those who lost were WB6TMY, N6QAV, and WD6CCG. She who won was N6FAX. Sarah took home \$50.90.

The meeting adjourned at 9:18 PM. m/s N6DDK/K6GEV

Respectfully submitted by Al Bloom N1AL, Secretary.



## TREASURER'S REPORT FOR MONTH ENDING MAY 31, 1988

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ACCOUNT	
13 of the section of the least	
Activities (FD advance)	200.00
Refreshments 7.16	3498
Dues & Initiations 258.00	12.00
Badges	6.36
Misc	28.60
Newsletter 20.00	
Westlink Committee of the Committee of t	
Officers expenses	i i 3. <b>. 31</b>
a and the second	
HTA disability of the $^{1285\cdot16}$	
ASSETS: District Contract Cont	
General Fund Account	
Cash/checks on hand	
Total General Fund	
Total Repeater Fund	1888.07

-- de N6PTM

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## H.S.C. ELECTRONIC SUPPLY

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24-Hour Bulletin Board 300/1200/2400 Baud

## COMPUTERS AND PERIPHERALS

TURBO XT SYSTEM FOR ..... \$ 549.00 Includes: \_- 4.77/8 MHZ Switchable Mother

Board
-- 4.77/8 HHZ DWITCHEAD
BOARD
-- 10 MHZ Version Available, add \$30
-- 256K DRAM (expandable to 640K)
-- 360K Disk Drive
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-- 150 Watt Power Supply
-- AT Style Keyboard
-- Parallel Printer Port
-- Monochrome Monitor
-- FCC Class B Approved

## MFJ 1278 PACKET RADIO

Now in stock. Call store for details.

## CLOSE OUT ON SCANNERS

BEARCAT SCANNERS --\$100.00 for BC145XL, base unit -- \$160.00 for BC175XL, base unit -- \$115.00 for BC50XL, hand held

BETTY BEARCAT SCANNER BOOK for \$7

REGENCY SCANNERS --\$200.00 for HX1500 -- \$ 99.00 for R1070 -- \$235.00 for TS1 Turbo -- \$115.00 for R1080 POWER SUPPLIES

- \$ 99.00 EP1510 15 amp. regulated - \$119.00 EP2010 20 amp. regulated - \$159.00 EP3030 30 amp. regulated

ON ALL ALINCOS

- \$549.08 for ALD24T Bual bander - \$250.00 for ALM203T Hand held - \$275.00 for ALM203T Mobile - \$360.00 for ALR22HT Mobile, 45W - \$350.00 for ALR22T Mobile, 2-meter - \$399.00 for ALR22T 440, 25W - \$205.00 for ALX2T 2-meter, hand held, 4W with CTCSS board DELCOM

## (IC 2AT CLONE) hand held for \$160.00 LINEAR AMPLIFIERS

R F Concepts: -- RFC2-117 for \$250.00; 10 in/170 out -- RFC2-317 for \$225.00; 30 in/170 out

Mirage: 024 for \$150; 420-250mhz, 2 in/40 out -- 81016 for \$210; 10 in/160 out TELESCOPING STEEL

MASTS Great for 2-meter, 440 beams, and light HF antennas
-- 20 foot for \$19.97
-- 30 foot for \$29.97
-- 40 foot for \$39.97
-- 50 foot for \$54.97

## PAGING RECEIVER

SHORT SKIP



---- HANK'S SWAP SHOP

Hank Davis W6DTV 7822 Washington Ave Sebastopol, CA 95472 823-7885 (Noncommercial ham ads printed free)

2 SWR METERS: Archer/Micronta \$15 ea KENWOOD TS-430 xcvr, mic, book \$550. \$650 with KENWOOD PS-430 pwr supply. 2 COAX SWITCHES: \$5 each. DUMMY LOAD, 52 Ohms, 20 Watt \$5. CURTIS KEYER "Little Bugger" \$25. VIBROPLEX paddle for above \$25. VIBROPLEX speed key (bug) \$25. ICOM IC-730 xcvr, mic, book \$425. REALISTIC tape recorder, 6V. SEARS Roadtalker 40-channel CB \$70. VSI 5600A Freq counter, ps, book \$75 DRAKE R4B rcvr \$100. 2B rcvr \$50. KNWD TR-7625 2m xcvr, mic, book \$150 ICOM 2AT, 2-BP3, 1-BP4, book \$125. HUSTLER 6-BTV trap vertical. HUSTLER Mobile HF ant, 1 rsnatr \$30. LARSEN LM-150 2m 5/8 wave mag mount \$15. Sam W6WXU 1-938-4197

ICOM 551-D all mode, 6m xcvr, 85 Watt, FM/CW/SSB. N6DIP 1-942-6894.

KENWOOD TM-221A 45W 2m with mobile mount. AVANTI on-glass antenna. Books. \$345. Gary AA6CC 538-9283. WANT: Kenwood SM-200 monitor scope.

KENWOOD 2400 HT, P/L, new batteries. \$150. Garry N6ONZ 584-3425.

KENWOOD TS-180, dummy load, xtal calib., Prof. Morris, coax cables, connectors, misc, 2 fixed verticals. \$500. Seymour W6FPL 996-5012.



#### **EVENTS CALENDAR:**

Don't forget SCARS nets on Tuesdays.

#### JULY:

- 4 RACES etc. Net 7:30 PM
- 6 SCRA meeting 7/7:30 PM
- 9 Foothill College Flea Market (Perham Fndatn 415-960-4383)
- 9-10 IARU HF World Championship
  - 10 KiWi Kayak Races
- 16-17 CQ WW VHF WPX Contest
  - 18 RACES etc. Net 7:30 PM
  - 21 CDF VIP Meeting 7:30 PM
  - 30 Healdsburg Harvest Bike Tour

#### AUGUST:

- 3 SCRA meeting 7/7:30 PM
- 13 Stride for Life Run
- 28 Bodega Bay to Breakers run

#### SEPTEMBER:

- 7 SCRA meeting 7/7:30 PM
- 9-10 ARRL Natl. Conv. Portland OR
  - 10 Foothill College Flea Market
- 10-12 ARRL VHF QSO Party
  - 17 SCRA Flea Market

#### NOVEMBER:

5-7 - ARRL Sweepstakes, CW 19-21 - ARRL Sweepstakes, Phone

#### DECEMBER:

2-4 - ARRL 160 Meter Contest 10-11 - ARRL 10 Meter Contest

VE EXAMS HOTLINE NR: 408-984-8353

## SILENT KEY

Vern Miller K6ROP, long-time member of SCRA, passed away the last weekend in May. He was a retired member of the Dept. of Agriculture.

Vern was a person willing to help at club activities, and had been an officer of the club. He worked setting up many Field Day operations.

We extend to his family our deepest sympathy in their time of grief.

- W6DTV





*GGOGHRON* TIME INDICATOR

- Detailed illuminated map shows time, time zone, sun position and day of the week at a glance for any place in the world.
- Continuously moving areas of day and night change as you watch.
- Mounts easity on a wall. Size: 341/2"x221/2"

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## 21 DAY NOVICE

\$19.95



RU FCC FORMS . SAMPLE TESTS . PLUS MORE!

- \$70 in equipment certificates from KOM, KENWOOD, & YAESU.
- Ham radio equipment: "Wish Books
- ARRL membership forms.
- Hotline for student questions. ADDITIONAL
- Course completion certificate.





Contemporary design, quality and a 5 year warranty on parts and labor. 6 months on the RF Final transistors.

All amplifiers have GaAsFET receive pre-amps and high SWR shutdown protection.



MA-40

\$809 SALE! \$629

MA-550♥ 55' TUBULAR TOWER

## <del>- \$1369</del> **SALE! \$999**

 Handles 10 sq. ft. at 50 mph Pleases neighbors with tubular streamlined look

## **●**TX-455

55' FREESTANDING CRANK-UP

- Handles 18 sq. ft. at 50 mph
- No guying required
   Extra-strength Construction

Can add raising and motor

TOWERS RATED TO EIA SPECIFICATIONS OTHER MODELS AT GREAT PRICES IN STOCK FOR QUICK DELIVERY



Advanced Electronic **Applications** 

PK-232 Multi-mode **Data Controller** 



- **NEW IBM Fax Screen** Display Program Available
- Transmit/Receive on Six Modes
- CW/RTTY/ASCII/ AMTOR/Packet/FAX
- IBM and Commodore terminal programs available
- Radio Ports for HF and VHF

In Stock for Quick Delivery **Free Shipment** 

KENWOOD

TM-721A DUAL BANDER 2 MTR / 70 cm

EXTENDED RECEIVING RANGE (2 m)



TM-621 A DUAL BANDER 2 MTR / 220 MHz

AUTOMATIC OFFSET

CALL FOR LOW.LOW PRICE

Mast

not included

REG.

319.95

SALE

259.95

Plus Shipping

DX THAT STANDS OUT FROM THE CROWD

10, 15, 20 Meters

Whether busting pileups, rag chewing or hunting rare DX, the A3 stands out from the crowd with the perfect combination of easy assembly, the right size, rugged durability and great

- performance. Boom Length 14 ft., Weight 27 lbs.
- Wind Surface Area 4:36 ft.

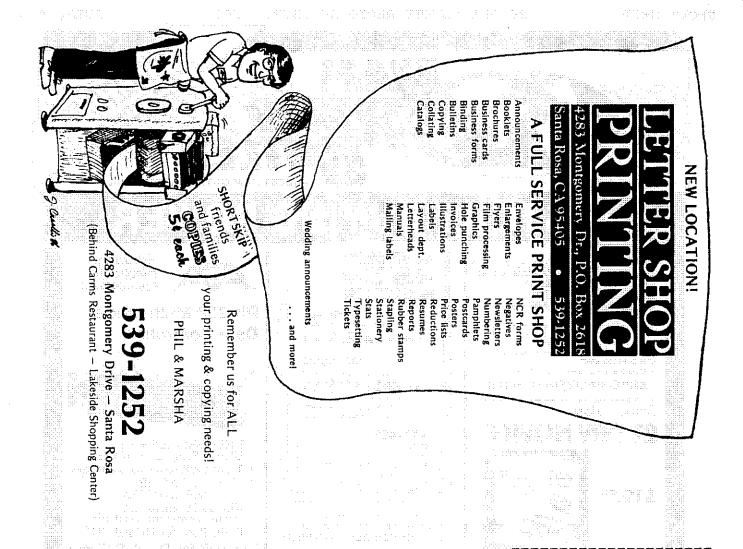
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