



Mike And Key



An ARRL Special Services Club

Founded 1914

SARC Calendar

- July
- 8th General Meeting: Radar Site tour at Mather at 6:30 PM. Directions and map elsewhere in this months newsletter
- 29th Executive Committee Meeting: Sacramento Blood Bank at 7:00 PM.
- August
- 12th General Meeting: Sacramento Blood Bank, 1625 Stockton Blvd. Sacramento at 7:00 PM. Informal get-together at 6:30 PM.
- 26th Executive Committee Meeting: Sacramento Blood Bank at 7:00 PM.
- September
- 9th General Meeting: Sacramento Blood Bank, 1625 Stockton Blvd. Sacramento at 7:00 PM. Informal get-together at 6:30 PM.
- 30th Executive Committee Meeting: Sacramento Blood Bank at 7:00 PM.

Field Day 1998 a HIT

By Tom Preston, KQ6EO

The SARC Field Day at William B. Pond Park was a big success. We ran 3A with 3 HF rigs, one 40 and 80 meters, one 20 meters, and one moving around on all the bands. We also had one VHF 2-meter SSB rig and a packet station.

Mike McDermott, our newest member, passed his test on the Friday before field day. Even though he had not received his call yet he was our most consistent operator

The weather was nice. The propagation was better than it has been the last few years. And the stories were free flowing. We were

also visited by Channel 10 News. All in all, I think everyone had a good time. The only thing that marred this years outing was that 8-year-old Ben Braaten fell out of a tree Saturday evening and broke both his arms. But he is a real trooper and told me he was going to get his Ham ticket someday so he will be back.

Attending this year were:
 Les Ballinger, WA6EQQ
 Ed Braaten, K6EKB and son Ben
 Bob Browning, KE6YHQ
 Gary Bryant, KB6KZZ
 Keith Crnadall, K6QIF
 Carl Crump, WA6VLS
 Marv Hanely, N6XML
 Tom Hughes, WA6ZYZK
 Carl Jensen, KF6LBM
 Mike McDermott, (no call yet)
 Tom Preston, KQ6EO
 Jim Rich, N6SZQ
 Jim White, WS6K
 Dick Yeager, KG6GE
 Frank Zawalick, WD6DCV

Hope I didn't miss anyone.

Jim Rich gives his Field

Day Chairmans Report
on page 5

Our People

1998 SARC OFFICERS

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SK

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PIO

Richard Yeager, KG6GE

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Newsletter Editor
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722-9358 KQ6EO@ns.net

PREZ SEZ

By Gary Bryant, KB6KZZ

Dear members:

I am typing this note at the 98 field day that the club held at William B. Pond Park on Arden Way. I was very impressed with the club, and the setup of the radio equipment, despite not having the use of the O.E.S. van.

Everyone seemed to be having a good time, and the farthest contacts made were from Florida as of this writing. With another 16 or so hours to go, I am sure they will make it to somewhere on the other side of the Atlantic Ocean. Les Ballinger has cooked up some kind of stew for dinner in his trailer, and others are preparing to start a barbecue.

I thank all of you that helped make this day a success for the club. I hope you enjoy the photographs that Tom said he was going to put in our newsletter. I look forward to seeing most of you at our next meeting at the FAA radar center near Mather AFB.

73 until next month.

KIT KORNER

By Frank Zawalick, WD6DCV

Ten-Tec products are designed, manufactured and distributed from a 48,000 square foot facility located

in the foothills of the Great Smoky Mountains. Ten-Tec applies unique manufacturing and design skills to produce World Class Amateur Radio, Commercial and OEM products. The in-house facilities include Engineering, Printed Circuit Board Manufacturing, Plastic Molding, Sheet Metal Fabrication and Finishing as well as electronic assembly and testing. Ten-Tec also produce their own tooling in a well equipped tool and die shop.

Tennessee Technology (Ten-Tec) for many years has provided Amateurs time tested, high quality kits and pre-assembled items. In the tradition of Heathkit, Knight, WRL, Lafayette and those other grand kits complete with all hardware and enclosure there still is the other tradition of simpler kits with PC-board, primary parts and instructions only, designed for those who prefer to find their own kit finishing hardware. That is why Ten-Tec T-KIT MODULE BOARDS, are the very best in "little kits" for careful budgets.

In a T-KIT you get the circuit board with all needed I/O pads, all board-mounted parts, a well-engineered circuit and high quality set-by-step instruction manual. Finish the job with your own switches, connectors and enclosure or purchase a Ten-Tec Enclosure-PLUS Hardware Pak with blank aluminum boxes, plus a useful assortment of finishing hardware and components.

The following is a listing of Ten-Tec T-KIT MODULE BOARDS available for both Amateurs and Shortwave Listener:
Model 1051 Transmatch Tuning Bridge allows tuning of a transmatch without on-air transmitting. \$17.00
Model 1058 Foxhunt "Beep-Beep" Transmitter allows Broadcast Band

(FM) fox-hunting experience and is ideal for translocation demonstration. \$12.00

Model 1553 Budget Electronic Keyer features self-completing dis and dahs for standard single-lever keyer paddles. It is not designed for iambic operation and is a very nice introduction to electronic CW keying. \$12.00

Model 1050 Universal BFO for SWL Receivers with no CW-SSB capability. The on board tuning control compensates for alignment variations from one receiver to another in addition to permitting fine-tuning of SSB/CW signals. \$9.00

Model 1054 Regenerative 4-Band SWL Receiver includes a drilled, painted, silkscreened aluminum front panel. This great little receiver beats the pants off those 3-tube radios with the big plug-in coils. Coverage includes 49 Meter SWL, 40 Meter Ham, 31 Meter SWL and 20 Meter Ham bands. \$24.00

Model 1061 6-to-10 Meter Receiver Converter allows you to get more fun and use from the often-idle 10-Meter mobile rig or ANY ham transceiver (or receiver) with a good 10 Meter capability. \$17.00

Model 1056 ANY BAND "Direct-Conversion SSB/CW Receiver provides all the parts needed to build a 160, 80, 75, 40, 30, 20, 17, 15, 12 or 10 meters. This kit is not intended for shortwave AM broadcasts. \$29.00

Model 1552 Active Antenna for Receivers without paying the typical \$40-\$100 typical price. You can bring ANY HF receiver to life with a small length of wire or a simple whip antenna. \$12.00

Model 1001 Universal Low-Noise Broadband DC to 1 GHz Preamp provides excellent noise figure, gain and frequency coverage at a BUDGET PRICE. Up to 18.5 dB gain at 100 MHz, 17 dB gain typical at 500 MHz. \$9.00

Model 1550 Utility Audio Amplifier provides 1.5 watts of

low- distribution audio with no worry about motorboating and other unwanted oscillations. Includes optional preamp input for 10 dB gain. \$10.00

Model 1551 Microphone Speech Processor provides speech processing for plenty of nice equipment at hamfest flea-markets. \$12.00

Ten-Tec also has complete kit packages. These are equivalent to the traditional Heathkit variety. The model and description are:

Model 1201 - Desk Microphone
Model 1202 - SWR
Bridge/Wattmeter
Model 1203 - 300 W RF Dummy
Load

Model 1208 - 20 M / 6 M
Transverter

Model 1209 - 2 M / 6 M
Transverter

Model 1210 - 10 M / 2 M
Transverter

Model 1220 - 2 M Transceiver
Model 1230 - 220 M Transceiver
Model 1251 - Compact RF
Counterpoise

Model 1252 - High Sensitivity
Audio Amplifier

Model 1253 - 9 Band SW Receiver
Model 1254 - Shortwave Receiver

Model 1260 - 6 M Transceiver

If you enjoy operating QRP CW, there are three Ten-Tec T-Kit complete kits designed for the 40, 30 and 20 meter bands. Each model covers a 50 KHz segment selected at time of construction. RF output is typically 3 W with no external adjustment. Receiver sensitivity is .25uv typical for 10 dB S/N.

Receiver type is single conversion superhet, JFET mixer. Audio output is .3 W @ 4 ohms into a built-in 3" speaker. These kits are real winners.

Model 1340 40 Meter QRP -
\$95.00

Model 1330 30 Meter QRP -
\$95.00

Model 1320 20 Meter QRP -
\$95.00

Ten-Tec - Made in the USA
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Meetings

**General Meetings are the second
Wednesday of every month at the
Sacramento Blood Bank, 1625
Stockton Blvd. Sacramento.
7:00 PM**

Please Join Us

Personality Profile

By Tom Hughes WA6ZYK

Due to time constraints Tom was not able to submit a personality profile article this month. He should be back next month.

Meeting Minutes

June General Meeting Minutes
by Jim Rich K6SZQ

Fourteen SARC members and visitors skipped a Jazz-Bulls NBA playoff game on TV to attend our

June meeting. They were rewarded with an interesting talk and demonstration on Near-Vertical Incidence Skywave (NVIS) antennas by Dave Walker, KQ6LW. The Red Army first used NVIS antennas for HF radio propagation. During the 1970's the US military learned of this method of placing horizontally oriented HF radio antennas low and parallel to the ground from spy photos and defector interviews. The defectors claimed that using NVIS antennas on the HF bands was the best method for medium-range communications under a wide variety of conditions. Our military communications teams tested this method, and soon agreed. The practice was later adopted by Amateur Radio operators involved with emergency communications.

The high angle of radiation of a NVIS antenna produces a radio signal that goes almost straight up, bounces off the ionosphere, and comes back down to cover a circular area around the transmitter with a radius of 150 to 300 miles, according to Dave.

Dave explained that the ideal location for a NVIS dipole antenna is 10 to 15 feet above the ground. However, NVIS antennas will still produce good results tied between vehicle bumpers or placed on top of traffic cones. You do need an external antenna tuner to use a NVIS antenna. The 40 and 75-meter bands are the most popular ham bands for effective use of NVIS antennas.

Finally, Dave listed some other benefits of using NVIS antennas: You usually don't need more than 100 watts of power to get a strong signal. It is difficult to locate or jam a radio signal from a NVIS antenna. And NVIS antennas can do quite well from the bottom of deep canyons, as Dave discovered in the hills and mountains to the north and east of his Auburn home.

The rest of the meeting concerned itself with Field Day preparations. Ed Braaten demonstrated a 12-foot metal and plastic whip antenna for 10 through 160 meters that he later used - to good effect - on Field Day. The antenna, available through Ham Radio Outlet, appeared to be rugged, light and highly portable. It could be operated as a vertical antenna, and can collapse down to four feet.

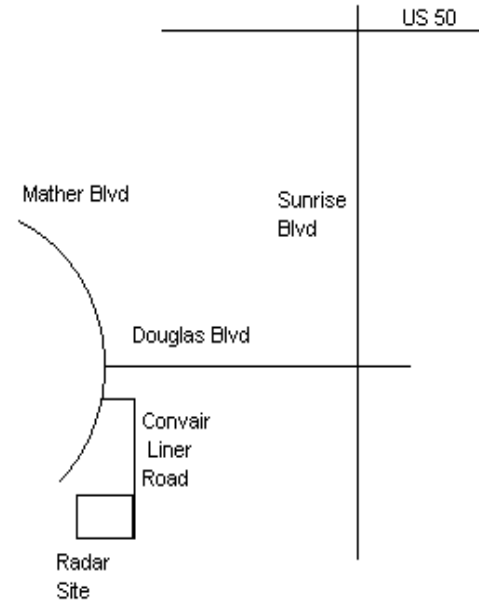
The meeting concluded with a White Elephant raffle.

June Executive Committee Minutes
By Jim Rich N6SZQ

The SARC officers and directors met at Keith's house Wednesday evening, June 24. Three regular club members who plan to participate in Field Day joined us. We discussed our special July trip to Mather AirField, future club programs, the Noon Net, and the club repeater. We concluded the meeting by making final arrangements for Field Day.

July Speaker

The July General Meeting will be the tour of the FAA radar site at Mather Field. Our host is Don Holton, KF6NT. The meeting will start a half-hour earlier at 6:30 PM to maximize the sunlight. The



directions are as follows: From Highway 50, go south on Sunrise Blvd 3.7 miles to the light at Douglas Blvd (NOT the one in Roseville). Turn right and go 1.2 miles west to the dead-end at Mather Blvd. Turn left and go about 100 yards to Convair Liner Road. Turn left and proceed about .25 miles to the Radar site.

The Sacramento Amateur Radio Club Founded 1914. An ARRL Special Service Club. **1998 SARC Officers:** President—Gary Bryant, KB6KZZ, 646-1171; Vice President—Stan Harter; Secretary—Jim Rich, N6SZQ, 361-3542; Treasurer—Steve Cates, KC6TEV, 391-7341; **Directors:** Les Ballinger, WA6EQQ, 393-4775; Herb Bennett, KA6VHF, 451-6864; Ed Braaten, K6EKB, 939-1432; Glen Hartzell, W6WBO, 555-5555; Tom Preston, KQ6EO, 722-9358; Jim White, WS6K, 456-9206. **W6AK Trustee—**Keith Crandall, K6QIF, 452-5056; Mike and Key Editor—Tom Preston, KQ6EO, 722-9358. **Club Dues—**\$16 per year, from January to December (new memberships will be prorated). **The SARC Newsletter, Mile and Key,** is published monthly by and for the membership of the Sacramento Amateur Radio Club. Permission is granted to other amateur radio organizations to reproduce in whole or in part for internal non-profit use, provided credit is given to the SARC Newsletter and to the authors of the reproduced materials. **Articles—**Manuscripts and letters are welcome. Items may be sent to Tom Preston, email at KQ6EO@ns.net, or snail-mail at Editor, *Mile and Key*, 8425 Arcaro Ct. Citrus Heights, Ca. 95610. **Advertising—**commercial non-personal advertising, business cards through full page, is available. Contact the editor above for information. Classified advertising is free to members of SARC. Submit ads monthly to the Editor at the above addresses.

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For more information call
Frank Zawalick, WD6DCV
916-682-1589

Advertising of Ham related items
are free to club members. So if you
have anything to sell or trade or
you are looking for something, get
the information to Tom Preston,
KQ6EO and I will post it here.

Field Day 1998 Preliminary Report

By Jim Rich, N6SZQ, Field Day
Chairman

The SARC had a good turnout for
Field Day at William B. Pond Park
along the American River. We
were on the air by 1101, thanks to
the efforts of about 14 club
members. At least nine members
had QSO's on 2, 10, 15, 20, 40 and
75 meters. Les copied the ARRL
bulletin and sent a Field Day report
via packet radio to Jettie Hill, our
Section Manager. Twelve visitors
signed our Field Day Visitors' Log.
Propagation appeared to be slightly
better than last year. Complete

results, including our claimed
score, will be given at the next
meeting, and will be printed in the
next Mike & Key.

Five aspects of this year's event
stand out, and mark it as different
from Field Days during the past ten
years: First, we did not have the
use of an OES Communications
Van. However, club members
pitched in and brought a wide range
of equipment to the site, including a
new battery, two generators, a 40-
foot antenna mast, antennas, coax,
a grounding rod, three HF rigs,
tables, chairs, shade awnings, an
RV and a trailer. Technical
problems arose, but were quickly
solved. Special thanks to Keith
Crandall, Ed Braaten, Bob
Browning and Jim White for each
making available vital equipment.

Second, Field Day was more of a
family event this year. Several
participants were joined in the park
by their wives and children for at
least part of the event.

Third, we had good media coverage
this year, thanks to the outstanding
job done by our PIO, Richard
Yeager, KG6GE. The
Sacramento Bee ran a
notice for our operation
on Saturday, and a
Channel 10 news crew
came out on Sunday
morning. The Sunday
evening local news
featured film of Jim

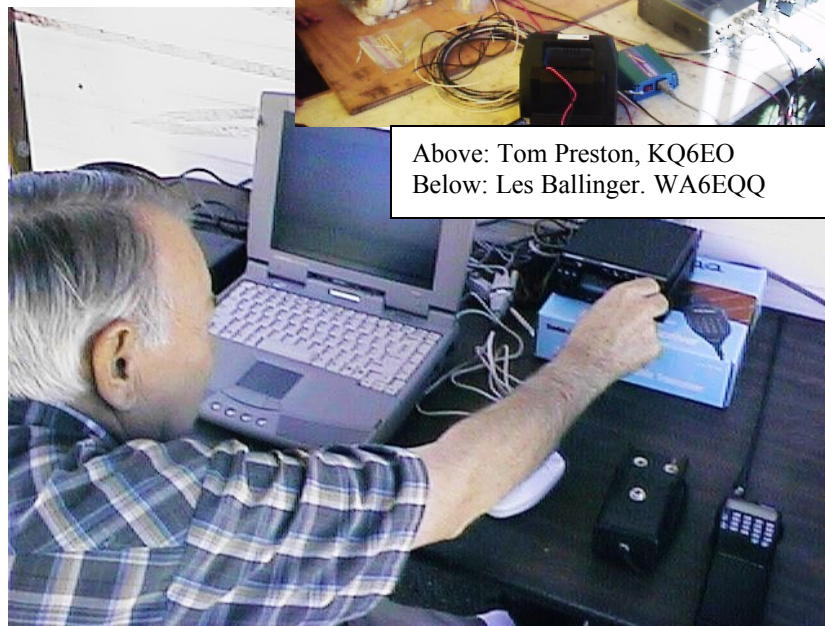
White, WS6K, and Mike
McDermott operating HF rigs, and
a short interview of Jim, who
explained what Field Day is all
about.

Fourth, we had a significant
contribution by the club's newest
member, Mike McDermott, who
passed his first Amateur Radio
license exam the day before Field
Day started. Mike helped us set up
and take down the equipment, and
contributed a fair number of QSO
points to our total.

Finally, SARC members made
quite an impression on at least one
of the visitors to our Field Day site.
Ms. April Gomez, of Sacramento,
wrote in the "Comments" column
of our Visitors' Log, "Hams are
hunks."



Above: Tom Preston, KQ6EO
Below: Les Ballinger. WA6EQQ





Above: Ed Braaten K6EKB

Left: Ben Braaten, Mike McDermott,
Ed Braaten K6EKB, Tom Preston KQ6EO

WS6K, Ed Braaten K5EKB (Hidden), Jim Rich N6SZQ, Keith Crandall K6QIF, Mike McDermott (Call not yet received)





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MEMBERSHIP APPLICATION and RENEWAL FORM

Date _____ New Renewal Change of Address

MEMBERSHIP CLASS

General, \$16.00 Associate, \$16.00 Family, \$21.00 Student, \$8.00

Please fill in and circle anything you do not wish to have printed in the SARC Roster.
 Family memberships must reside in the same household.

NAME _____ CALL _____

LICENSE CLASS: N T T+ G A E ARRL Member: Yes No

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Areas of interest, bands and modes used:

Emergency communications capabilities: ACS/RACES or ARES

New memberships in mid-year will be pro-rated.

This form must accompany your check made payable to SARC. Send to SARC at address above.

