



Mike And Key



An ARRL Special Services Club

Founded 1914

SARC Calendar

- December
- 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: Keith Crandall's
QTH at 7:00 PM.

January

 - 13th General Meeting:
Sacramento Blood Bank,
1625 Stockton Blvd.
Sacramento at 7:00 PM.
Informal get-together at
6:30 PM.
 - 27th Executive Committee
Meeting: Sacramento Blood
Bank at 7:00 PM.

February

 - 10th General Meeting:
Sacramento Blood Bank,
1625 Stockton Blvd.
Sacramento at 7:00 PM.
Informal get-together at
6:30 PM.
 - 24th Executive Committee
Meeting, Sacramento Blood
Bank at 7:00 PM.

Thank You To our 1998 Speakers

By Tom Preston, KQ6EO

Just wanted to end the year by again thanking all our excellent speakers of 1998. **Please join us for our Christmas Party on Dec. 9 as a small token of our appreciation.** Our speakers included, Ed Richins K6KAB on taxes, Ed Farmer AA6ZM on NVIS Antenna's and propagation, Dave Walker KQ6LW on NVIS Antenna's, Jettie Hill W6RFF on the ARRL, and Wally Jukes KA6EOZ on Terrorism. We appreciate the time you took to come and share your experience with us. Everyone was very interesting and very informative. We hope all of you can come back again.

Also a big thanks to our own members who spoke during the

year. They included, Carl Crump WA6VLS, Jim Rich N6SZQ, Les Ballinger WA6EQQ, Stan Harter KH6GBX (SK whom we miss), Frank Zawalick WD6DCV, Gary Bryant KB6KZZ, and Tom Preston KQ6EO. And last but not least Don Holton for that great tour of the FAA radar site. If I missed anyone I deeply apologize

Christmas Party

The annual SARC Christmas Party and business meeting is this month. The club will provide pizza and soda. Members are invited to bring goodies.

BRING THE FAMILY ALONG.

All members are urged to attend to vote for next years Officers and Board members.

By the way, topping our raffle prizes this month is a brand new Alinco 220 Mhz Handheld. Don't miss your chance, it could be

yours!

|

|

Our People

1998 SARC OFFICERS

President

Gary Bryant, KB6KZZ
646-1171

Vice-President

Stan Harter, KH6GBX
SK

Secretary

Jim Rich, N6SZQ
361-3542
JWRich9@aol.com

Treasurer

Steve Cates, KC6TEV
391-7341

Directors

Les Ballinger, WA6EQQ
393-4775
lballinger@juno.com
Herb Bennett, KA6VHF
451-6864 hbenn66018@aol.com
Ed Braaten, K6EKB
939-1432 ekb@sprynet.com
Glenn Hartzell, W6WBO
428-0885

Tom Preston, KQ6EO
722-9358 KQ6EO@jps.net
Jim White, WS6K
456-9206

W6AK Trustee

Keith Crandall, K6QIF
452-5056 k6qif@cwnet.com

PIO

Richard Yeager, KG6GE

489-6334

Newsletter Editor
Tom Preston, KQ6EO
722-9358 mikekey@jps.net

PREZ SEZ

By Gary Bryant, KB6KZZ

Dear members:

I was very pleased with all the cooperation, and effort that went into our club's November meeting. We had a number of new hams that were interested in what our club was all about. We even had two people that weren't even hams yet that showed interest in the world of ham radio, but that was the whole idea of the program-so you can definitely say that the meeting was a great success. Again I say thanks to all the speakers, and club members for a job well done.

Our next meeting is the club's official business meeting of the year. We will have our officer elections, and Christmas party. The club provides pizza and soft drinks for the party. Club members are invited to bring family members too participate. As we do every year club members are also encouraged to bring any goodies that members would like to have to go along with pizza. This has been somewhat of a good year for the club, so lets keep-up the good work, and welcome the New Year.

73's until next month.

Amber Alert

By Jim Rich N6SZQ

Like several other SARC members, I've helped local law

enforcement search for missing kids in the past. So my ears perked up when I heard Dan Rather talk about "Amber Alerts". As reported on the CBS Evening News recently, virtually all the major radio stations in north Texas have joined together with the local law enforcement agencies to issue "Amber Alerts". As soon as one of the local police or sheriff departments receives a report of an abducted child, or a child missing under suspicious circumstances, they issue an "Amber Alert". The alert automatically goes out to all the radio stations throughout north Texas who have signed up for the program. These stations then interrupt their programming to issue an Amber Alert, giving a description of the child, any suspect, the place the child was last seen, and so forth. Listeners are instructed to phone 911 if they see the child. Then the police have tens of thousands of people keeping an eye out for the child. Amber Alerts have helped quickly return several children to their parents during the past few years in north Texas.

Would it be possible to start such a program in the greater Sacramento area?

KIT KORNER

By Frank Zawalick, WD6DCV

JAMECO Electronic Components and Computer Products of Belmont, Ca has been providing electronic kits and electronic components for the amateur radio hobby since 1977. Products are available directly from JAMECO Electronics or through a worldwide distributor network

More than 1000 items are available through these JIM-PAK distributors.

All JAMECO kits are identified with the degree of expertise required to complete the project. Of interest to amateurs are a Universal Battery Charger/Discharger with charge current from 15mA to 750mA selectable. It charges both the Ni-Cad and Ni-MH batteries. Quick charge rate is 52 minutes and a normal charge rate is 14 hrs. A 6 Digit LED clock kit is available in 12/24 hour format and with a viewing distance of 50 feet. It is also available preassembled. Dual voltage adjustable power supply and a triple voltage power supply is available for the circuit designer or experimenter. A laboratory grade power supply is also available. A Morse Decoder with LC Display (1 line of 16 characters) decodes morse at virtually any speed. Center tone and maximum tone deviation is adjustable.

JAMECO products may be obtained locally from Metro Electronic (916) 442-1512 or directly from JAMECO, 1355 Shoreway Road, Belmont CA 94002-4100. Order telephone number is 1-800-831-4242. E-mail address: info@jameco.com. Web site: www.jameco.com

Personality Profile

By Tom Hughes WA6ZYK

Dennis Bartholomew KE6MFF

Dennis was born in New York state about 60 miles south of Syracuse. As he says "out in the Boonies". He then came west to attend a

college in Idaho. While there he first met his future bride Barbara who was from Sacramento.

Following college, he went to the Dallas-Fort Worth area on a two year mission for his church. When that was completed, he returned to New York but also came to Sacramento long enough to propose to Barbara. After their marriage, they moved to New York and remained there for about a year and a half before the snows there convinced them that they should come back to California.

After returning to Sacramento, Dennis worked at a number of jobs. One of these jobs was with Electronic Data Systems. This didn't ring a bell with me until he mentioned Ross Perot. At one point he worked in one of their buildings located at the corner of Data Drive and Disk Drive! Later he worked at their Print Center in Woodland.

Dennis came to Ham Radio by way of the C.A.P. He had always had an interest in getting a pilot's license and was advised that joining the C.A.P was one of the ways of achieving that goal. He did obtain his license and remained with that group for some time but his present work schedule prevents him from participating. His use of radios there generated an interest in obtaining his Ham license so he bought a book and studied on his own and, as they say, the rest is history. His goal now is to get his General Class License. By the way, Barbara is also a Ham. Her call is KF6RWA.

In addition to the usual Ham radio activities, Dennis is involved with the ERRS system of the L.D.S. Church. He also devotes time to their food processing and warehousing operation. Another interest of his is the activities of NASA, which he observes on their

channel on satellite. His latest radio project has been to put a 2 meter repeater on the air from his home in the south area of Sacramento where he lives with his wife Barbara and their children Brad, Karen and Lee.

On the Air W6AK

146.91 – PL 100
442.80 + PL 100
224.1 - (coming soon)

Sacramento Valley Noon Net
Every day at Noon

On the Net

[http://home.sprynet.com/
sprynet/w6ak](http://home.sprynet.com/sprynet/w6ak)

Meetings

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

Please Join Us

November/December General Meeting Room

For the rest of the year we will be in the Sierra - Tahoe Room of the Alhambra Annex. This is the room in which we have met for the last couple of months. For newcomers this is the building at the corner of Stockton and Alhambra. Do not confuse this with the meeting room that used to be in the main building called the Sierra - Tahoe Room. If you have any problems finding us just give a call on the repeater, as we will be monitoring. See you there at 7:00 PM.

Meeting Minutes

November General Meeting
Minutes
By Jim Rich N6SZQ

The Sacramento ARC meet in the Alhambra Annex on Veteran's Day - Wednesday, November 11, the 80th anniversary of the end of WW I. Our President, Gary, KB6KZZ, began the meeting with the usual round of introductions for the 26 members and visitors. We welcomed six or seven first-time visitors, including Mark and Mary Cherry, Alan Talbert, Ben Braaten, plus George and Andy. Many of these visitors were new hams, or people who were interested in becoming ham radio operators.

We then began the "Introduction to Amateur Radio" presentation. Jim Rich, N6SZQ, introduced a video loaned to us by the ARRL: *The New World of Amateur Radio*. The familiar video provided an interesting introduction to the many facets of Amateur Radio today, including satellites, DX, Amateur TV, public service, ham fests, fox hunts, model airplanes and emergency communications.

Jim then introduced Carl Crump, WA6VLS, who discussed VE exams, the no-code Tech license, and how easy it is to become a ham radio operator today. Then N6SZQ showed a photo display of SARC activities over the last three years. He also presented a mounted collection of colorful QSL cards from around the world, and said a few words about DX. Les Ballinger, WA6EQQ, then talked briefly about Amateur Radio use in support of public safety and disaster response services.

Tom Preston, KQ6EO, then gave a well-prepared talk on ARPS (Amateur Radio Positioning System), which combines packet radio with GPS (Global Positioning System). His presentation included a live, hands-on demonstration of an APRS set-up. After that, Frank Zawalick, WD6DCV, talked about Amateur Radio kits, in years past and today. He then showed off two scale models of Amateur Radio antennas made of PVC pipe. He has used them to demonstrate ham antennas to blind citizens.

Jettie Hill, W6REF, our ARRL Section Manager, then said a few words about the benefits of League membership, and the many things the ARRL does to support Amateur Radio and defend our frequencies.

Finally, Gary briefly described how the CDF uses Amateur Radio operators in its VIP program. Gary then used the blood bank's TV monitor and VCR to show photos he had taken during his days this past summer as a volunteer fire lookout at the CDF's new facility on Mount Howell (?). The photos looked like they had been taken by a professional photographer. In fact, they were.

While the visitors examined Tom's ARPS display, the SARC members concluded the meeting with a brief discussion of club business. Gary reminded everyone to write down the month of their birth on the new SARC membership form. Then we discussed club officer nominations. Gary mentioned we were still looking for a member who wanted to serve as Vice President in 1999. Jim Rich said that while he is willing to serve a twelfth year as SARC Secretary, he would gladly step aside and support any other member who wanted the position.

November Board Meeting Minutes
By Tom Preston KQ6EO

The SARC Board of Directors met at Keith's house on November 25. The club officers and directors were joined by Carl, KF6LBM, who is providing publicity for our November "Introduction to Amateur Radio" meeting. We began the meeting by addressing envelopes and placing fliers in them for that meeting.

We next discussed the program for that meeting, including who had volunteered to give short presentations on various aspects of Amateur Radio. Then the club's latest bank statement was examined, to confirm there were enough funds remaining for insurance renewal and the Christmas party.

We also made final plans for the antenna party at the blood bank on the following Saturday, and discussed officer nominations for the 1999 term.

Dipole Definitions

By Frank Zawalick, WD6DCV

A quick way to operate the HF amateur radio bands is to construct your antenna from wire. The dipole wire antenna can be easily constructed, but you must make sure that you have enough space to put one up. On the lower frequencies the dipole lengths become quite large. A dipole on the 40 meter band is nearly 66 feet long!

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 mikekey@jps.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.

HF DIPOLE ANTENNAS

BAND	FREQUENCY	LENGTH OF WIRE
10 Meters	28.450 MHZ	99-7/8"
10 Meters	28.100 MHZ	101-1/4"
12 Meters	24.950 MHZ	115-1/8"
15 Meters	21.300 MHZ	134-3/16"
15 Meters	21.100 MHZ	135-3/8"
17 Meters	18.120 MHZ	13'-3/8"
20 Meters	14.250 MHZ	16' 9-7/16"
20 Meters	14.100 MHZ	16' 11-3/4"
30 Meters	10.125 MHZ	23' 9-7/8"
40 Meters	7.200 MHZ	32' 10-7/16"
40 Meters	7.050 MHZ	33' 6-7/16"
80 Meters	3.800 MHZ	61' 9-1/16"
80 Meters	3.600 MHZ	65' 3-3/16"
160 Meters	1.900 MHZ	125' 8-3/8"

NOTE: The 160 Meter dipole SWR did not model below a 3.3 : 1.

VHF / UHF DIPOLE ANTENNAS

6 Meters	50.500 MHZ	56-7/16"
6 Meters	52.000 MHZ	54-11/16"
2 Meters	145.000 MHZ	19-1/2"
2 Meters	147.000 MHZ	19-1/4"
1.25 Meters	223.000 MHZ	12-5/8"
1.25 Meters	224.000 MHZ	12-9/16"
70 Centimeters	430.000 MHZ	6-1/2"
70 Centimeters	440.000 MHZ	6-3/8"

Source: www.qth.com/antenna/diplens.htm

There are a couple of tricks that you can use if space is limited. For example, you could just extend the center part of the antenna (out from the feed point) as far as you have room and then let the ends hang vertically for the remainder of the antenna. The ends of a dipole are not responsible for much of the radiated signal so this method will work well. Another method is to zig-zag the legs of the antenna in a sort of "Z" shape. This will reduce the area required to mount the antenna. The main thing to remember is to try and not fold the antenna back on itself. This could cause

cancellation of some of your signal.

There are just two easy steps to design of a dipole. First, decide the frequency of operation and second, calculate the length. The formula for the calculation is $468 / \text{Frequency (in MHz)}$. Let's try an example: Design a dipole for the 10 meter band. The frequency chosen might be 28.5 MHz. Plugging this in the formula ($468 / 28.5$) gives a dipole with a length of 16.42 feet. A good rule of thumb is to cut the wire a little longer than you need, then you can shorten the wire to adjust your match.

The feed point impedance is around 75 ohms so the SWR should be a 1.5 : 1. The actual impedance and the SWR will vary due to location, mounting height, near by structures, etc.

I have provided computer modeled dipole lengths, which were designed for the best SWR over ground at each given band. The lengths are rounded off to the nearest 1/16 of an inch. These antennas were modeled 40 feet over ground. The lengths given are for one half of the antenna. You will require two equal lengths for each antenna.

Happy Holidays December Meeting

December's General Meeting will be the Christmas Party. Current plans are for Pizza and sodas. An Alinco DJ-280 (a brand new 220 MHz handheld) will be raffled off. So come on by and join the celebration. This meeting will also be the yearly business meeting with elections for next year's Officers and Board members.

January's speaker will be Ben Green, WD8CZP, ACS/EAS Coordinator for the State Office of Emergency Services. Ben replaced Stan Harter when Stan became a SK earlier this year.

BUY, SELL, or TRADE

Estate Sale

ELENCO Signal Generator SG-9000 100Khz-150Mhz

Oscilloscope (Unknown Manufacturer) Wideband 12 Mhz

EICO TV Sweep Generator

EICO VTVM

LAFAYETTE Telsat-23 23 Channel CB

SBE Model 33 Mobile HF SSB XCVR (2 available) 80-10 Meters (Pre-WARC)

HEATHKIT HW-22 Mobile SSB XCVR

Home Brew HF RF Amplifier (Output Unknown)

All items are offered as "Best Reasonable Offer". Contact: Frank Zawalick / WD6DCV / 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.

Classes and Testing

VE Testing - 3rd Saturday of the month at 9:00 AM. Carmicheal Elks Lodge, 5631 Cypress Ave. Carmichael. Corner of Cypress and Hackberry.

RCARCS will have classes starting after the new year. Call 492-6115 for further info.

Ham Swaps

Placerville - 3970B Missouri Flat Rd. #3 Placerville. Third Sunday of the month, 7:00 AM to 11:00 AM.

Talkin 146.865 - PL 142.2 or 440.700 + PL 88.5

Livermore Swap Meet - Las Positas College in Livermore. First Sunday of each month, 7:00 AM - 12:00 noon. Talkin 147.04 (from west) or 145.35 (from east).

Foothill Flea Market - Foothill College in Los Altos Hills. Second Saturday of March through October.

Dear Santa

Submitted by Frank Zawalick, WD6DCV

I only want one thing for Christmas this year. I am writing early because the specifications of this gift require some early planning to produce. Please Santa, this year I want the "Ultimate Amateur Radio".

Specifications are as follows:

Bands: 1.8 MHz - 1.3 GHz
Output: 1500 Watts with ability to set to the maximum power your license allows.
Built in automatic antenna tuner able to handle the output power.
Built in radio direction finding control to aim the antenna at the signal.
IF level digital signal processing.
Built in RS-232 and TTL interface.
Control software that can restrict the transmitter to only the sub-bands I am licensed for.
Clock with push-button to start/stop a 10-minute ID alarm.
EPROM or flash-ROM containing bands, so that as bands are moved or changed the transmitter can add them.
General coverage receiver.
All filters included.

Low-noise PLL synthesizer,
digital display.
Tone control or built-in digital
audio filter.
Keypad for direct frequency
entry.
Built in code-practice oscillator
with simulated QSOs.
Desk mic and key.
Spectrum analyzer.
Built in antenna switch and six
antenna connectors.
Additional clocks/timers with text
display programmed to alert for
upcoming nets and schedules.
With a press of a button a pre-
programmed frequency would
be set.
DTMF pad included both on mic
and radio.
Dual VFO's (Triple VFO's
optional).
Ability to listen to any 2 bands at
once.
Automatic Triple DSP Filter with
no tuning necessary.

I don't know of anything else to
include, but you can add any
thing else you might happen to
think of.

One more request. PLEASE
DELIVER BY DEC 24. I WANT
TO GET A JUMP ON
CHRISTMAS DAY!!!!

PS. I have been REAL GOOD.

Merry Christmas



Quad A's Electronic Supply
7360 Auburn Blvd. Suite "B"
Citrus Heights, Cal. 95610

(916) 723-7360 (916) 723-7366 Fax (916) 723-7368
 www.quads.com

Samuel E. Ansell

A Woman Owned Business

Retail and Commercial Sales

METRO ELECTRONICS

ELECTRONIC DISTRIBUTORS

1831 J STREET
 SACRAMENTO, CA 95814

(916) 442-1512
 FAX: (916) 442-1586

Sacramento Amateur Radio Club

P. O. Box 161903, Sacramento, Ca. 95816-1903

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 Birthday _____ ARRL Member: Yes No

Family member: NAME _____ CALL _____

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

Family member: NAME _____ CALL _____

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

ADDRESS _____

CITY _____ ZIP _____

TELEPHONE (____) _____

E-MAIL ADDRESS _____

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.