



Mike And Key



An ARRL Special Services Club

Founded 1914

SARC Calendar

March

- 7th SIG Meeting: Sacramento Blood Center, Alhambra Annex, 1625 Stockton Blvd, Sacramento at 7:00 PM.
- 14th General Meeting: Sacramento Blood Center, Alhambra Annex, 1625 Stockton Blvd, Sacramento at 7:00 PM. Informal get-together at 6:30 PM.
- 28th Executive Committee Meeting, Keith Crandall's QTH at 7:00 PM.

April

- 4th SIG Meeting: Sacramento Blood Center, Alhambra Annex, 1625 Stockton Blvd, Sacramento at 7:00PM
- 11th General Meeting: Sacramento Blood Center, Alhambra Annex, 1625 Stockton Blvd, Sacramento at 7:00 PM. Informal get-together at 6:30 PM.
- 25th Executive Committee Meeting, Keith Crandall's QTH at 7:00 PM.

Amateur Radio Spectrum Protection Act of 2001

The Amateur Radio Spectrum Protection Act of 2001 is now officially HR 817. Rep Michael Bilirakis of Florida introduced the bill on March 10, 2001 in the US House of Representatives. Last week, ARRL President Jim Haynie, W5JBP, and ARRL First Vice President Joel Harrison, W5ZN, visited the congressman's office to thank him personally for his continuing interest in protecting Amateur Radio Frequency allocations.

This measure has been referred to the House Committee on Energy and Commerce. The bill seeks to amend the Communications Act of 1934. It would require the FCC to make no allocation of primary Amateur and Amateur-Satellite allocations, diminish any secondary allocations, or make additional allocations within amateur allocations that would substantially reduce their utility without also providing equivalent replacement spectrum

League officials traveled to Washington in late February and early March for a three day round of visits with senators and representatives and their staff members.

Haynie and Harrison also visited the FCC, where they spoke with Peter Tenhula, Chief of Staff to FCC Chairman Michael Powell. Haynie was upbeat about the impact of the visits. "Once again, we had the opportunity to tell our story about Amateur Radio and the important function it serves, especially in public service and education," he said.

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AO-40 Team Reports Success In Slowing Satellite Spin Rate

Initial efforts to slow AO-40's spin rate have met with success. The AO-40 team says magnetorquing has been able to decrease AO-40's initial spin rate from 17.59 RPM to 15.9 RPM. "The target is

something in the area of 5 RPM.” Peter Guelzow, DB2OS, of AMSAT-DL.

The onboard magnetorquing system—which consists of selenoid coils—makes use of Earth’s magnetic field to control the spacecraft’s spin and orientation. Magnetorquing is most effective when Earth’s magnetic field is strongest, so it typically only takes place at perigee—when the satellite is closest to Earth. Ground controllers have been making incremental adjustments during each perigee.

Guelzow said that as soon as the spin is favorable, AO-40’s altitude will be adjusted to improve communications on Earth. De-spinning the spacecraft is a necessary first step to making any attitude adjustments, however.

Guelzow said the onboard YACE camera was used to take some photographs “for a quick attitude determination.” But he said the highly compressed JPEG-format photos were inconclusive. More photos are planned once the spin rate is reduced.

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LF-TO-LF Transatlantic Amateur Contact Is History

Amateur Radio history was made in February, when amateurs in Canada and the UK completed what appears to be the first two-way transatlantic Amateur Radio exchange on 136 kHz. Larry Kayser, VA3LK, and Lawrence “Laurie” Mayhead, G3AQC, managed the LF feat using extremely slow CW that featured 90-second-long dits and 180-

second-long dahs. The two-way contact took two weeks to complete

“We are the first to do a two-way QSO on LF across the North Atlantic as far as I am concerned,” Kayser said. “We are the ones who put the stakes in the ground; others will build on what we have done.”

The VA3LK-G3AQC contact began February 5 and was completed February 19 with the reception and confirmation of VA3LK’s report by G3AQC. Kayser said the participants agreed in advance to a “firewall” between them for the duration of the contact and that all QSO information was exchanged over the LF radio link.

The UK has authorized amateur operation on 136 kHz, with special authorization and strict limits on radiation power. While Canada has not yet authorized general Amateur Radio operation on 136 kHz, Kayser and a few other Canadian amateurs have received special authorization to experiment there.

Reception of weak LF signals typically is done using spectrographic software like ARGO or Spectran. Signals are transmitted using dual-frequency CW (DFCW) or very slow-speed CW, also known as “QRSS.” Using their particular brand of QRSS, Kayser calculated that it took nearly 70 minutes for him to send his call sign. “Certainly the information rate will improve,” he said. “We did the best we could with what we had to work with over the last two weeks.”

G3AQC and VA3LK were using a combination of commercial and surplus equipment at their respective stations. G3AQC estimated his effective radiated power at 350 mW, while VA3LK said he might have been at the 5 W ERP level.

In October 1998, the ARRL petitioned the FCC to create two amateur LF allocations at 135.7-137.8 kHz and 160-190 kHz. The FCC has not yet acted on the request.

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February Meeting

The Sacramento ARC meeting day was on Valentine’s Day. Only Keith, K6QIF, had the good sense to bring his sweetheart, Charlotte, KF6DHU, to the meeting at the Annex of the Sacramento Blood Center. Our President, Tom Preston, KQ6EO, began the meeting with a round of introductions for the 14 members and visitors.

We then discussed our club’s support of the Sacramento Sheriff’s Department Search and Rescue (SAR) Unit. Several SARC members, including Bob Browning, K6RWB, and Mike McDermott, KF6RUQ, are involved with that group. They are teaching an informal ham radio class to many of the SAR volunteers. They are recruiting a few Volunteer Examiners to give a Technician Class licensing exam for the SAR students sometime in March.

The club members then discussed Field Day. Most of those who plan to participate in this year’s nationwide test of the emergency communications capability of the Amateur Radio Service preferred operating again in conjunction with the State OES, somewhere up in the Sierras.

Keith then announced that his church is donating to the Sacramento Blood Center an old radio console, for use in the SBC’s radio room. Jim Rich, N6SZQ, said that the blood bank plans to

move its radio room and put at least one additional antenna on the roof later this year. The Blood Center will be needing help from SARC members for that event.

Our Vice-President, Tim Tribble, KD6MDV, then introduced the evening's speaker, Gene Trasti, W6JMP, who has been a ham for more than 40 years. Gene is a volunteer in the civilian arm of the U.S. Air Force, the Civil Air Patrol (CAP). He is a retired CAP Group Commander, and Major in the USAF Auxiliary.

The CAP was formed in late 1941, and was soon patrolling for, and even attacking, German U-boats. The CAP lost 59 pilots during World War II, and sunk at least two U-boats using light aircraft. There are two CAP squadrons in the Sacramento area. Their members have full use of local Air Force bases during their training and missions.

The three major mandates for the Civil Air Patrol, as established by Congress, are:

1) Search and Rescue. The CAP conducts about 90 percent of all USAF SAR missions each year, including searching for downed military planes. Some of those missions involve tight flying at low altitudes over dangerous mountain terrain. The local CAP Groups have lost planes over the years. However, Gene estimated that each year the CAP saves about 2,000 lives.

Gene explained that when an airplane crashes or has a very hard landing, an Emergency Locating Transmitter (ELT) in the plane is activated, and sends out a radio signal, that is picked up by a satellite when it passes overhead. The CAP aircrews search for these ELTs using radio direction finding (DF) equipment. Gene estimates

that 97 out of 100 of these ELT activations are "false alarms". However, the CAP volunteers must mobilize and search for each one until they are certain that no plane has gone down.

The CAP also flies two other SAR-related missions: drug interdiction missions, carrying law enforcement personnel; and working with the INS, searching for illegal aliens trying to enter this country. The CAP's drug enforcement missions are cloaked in secrecy, and have sometimes involved the CAP planes being shot at.

2) Aerospace education. This mandate was added soon after Sputnik, and even involves an amateur rocketry program. Today's CAP is not as involved with this function as it once was during the height of the Cold War.

3) The CAP Cadet Program. This program of military-style training, education, and character development for young people is still an important part of the CAP's mission. The CAP cadets help support CAP missions, and some even fly as observers on those missions. There is an active CAP Cadet group in Sacramento, which Gene recommends for the children or grand children of SARC members.

Gene concluded his presentation by responding to questions: The CAP pilots fly both private and USAF planes. The ratio of support personnel to pilots in the CAP is about 4 or 5 to 1. So there are plenty of important tasks that Amateur Radio operators could perform as members of the CAP. These include maintaining the CAP repeaters, flying as observers with radio DF gear on SAR missions, operating the CAP communications equipment, or even working in Public Affairs, as Gene does. The CAP uses packet radio and APRS

on some of their SAR missions. They have even used ATV.

The CAP also transports blood products and live organs throughout the State. (Gene said that if a blood bank needs blood flown to a location hit by an earthquake, and can't contact the CAP directly because the telephone lines are down or overloaded, then the blood bank staff should use Amateur Radio volunteers to contact the CAP via the State OES. The CAP also flies State OES observers over areas hit by earthquakes and floods.

The evening's meeting concluded with the traditional white elephant raffle.

Jim Rich, N6SZQ

March Meeting

As customary for the month of March, Eddie Richins, K6KAB, our resident income tax advisor will present the changes in 2000 that will effect us in our income tax preparation. He will inform us of the deductions that are legally available when we use our time, equipment and resources as volunteers. He has been employed in the tax preparation and financial planning business for many years and the information he has provided in past years has saved our members many tax dollars.

Board Meeting Minutes

The SARC Board meeting was held February 28, 2001. The minutes are unavailable for publication at this time.

SARC OFFICERS

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Emergency Service Organizations

SBC

Sacramento Blood Center
Contact Jim Rich N6SZQ
361-3542

OES-ACS:

Auxiliary Communications
Service of the Governors
Office Emergency Services
Contact Cary Mangum, State
ACS Officer at 916-2621670
or Les Balinger WA6EQQ or
Herb Bennett KA6VHF

SARCR

Sacramento Amateur Radio
Communications Reserve
Sacramento City RACES
Contact Chuck Miller
KD6AQM at 916-362-5924.
Net on Monday's at 19:00 on
145.190 PL 162.2

CDF-VIP

California Division of
Forestry Volunteers in
Prevention El Dorado Co.
Contact Bill Ozment,
W6LSW at 530-644-7066

SHARP

Sacramento County Sheriff
Amateur Radio Program
Contact: Jim Collentine,
K6JMC, 977-1862

FCC Amateur Enforcement

Compliance and
Information Bureau
Compliance Division
Attention: Amateur
Complaints
1919 M Street,
Mail Stop 1500E1
Washington, D.C. 20554
202-418-1184

Riley Hollingsworth
717-338-2503
Fax 717-338-2694

Newsletter sent to
paid-up members
only effective
April 01, 2001

W6AK

ON THE AIR

146.91 – PL 100
224.10 – PL 100
442.80 + PL 100

RADIO NET

Sacramento Valley
Noon Net
Every Day at Noon

Membership Meeting

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

On the WEB

<http://w6ak.home.sprynet.com>

w6ak@arrl.net

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, \$16.00+\$5.00 for each additional 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.

The Sacramento Amateur Radio Club Founded 1914. An ARRL Special Service Club. **2001 SARC Officers:** President—Tom Preston, KQ6EO, 722-9358; Vice President—Tim Tribble, KD6MDV, 689-7680; Secretary—Bob Browning, K6RWB, 689-9594; Treasurer—Ed Braaten, K6EKB, 939-1432; **Directors:** Les Ballinger, WA6EQQ, 393-4775; Herb Bennett, KA6VHF, 451-6864; Keith Crandall, K6QIF, 452-5056; Mike McDermott, KF6RUQ, 682-6994. W6AK Trustee—Keith Crandall, K6QIF, 452-5056; Mike and Key Editor—Frank Zawalick, WD6DCV, 682-1589. **Club Dues** -- \$16 per year, from January to December (new memberships will be prorated). **The SARC Newsletter, Mike 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 Frank Zawalick, email at wd6dvc@arrl.net, or snail-mail at *Editor, Mike and Key*, 8191 Heflin Ct. Sacramento, Ca. 95828. **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.