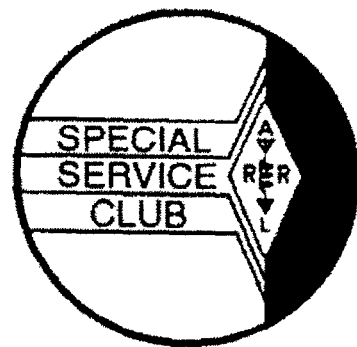


Mike And Key



An ARRL Special Services Club

Founded 1914

SARC Calendar

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, Keith Crandall's QTH at 7:00 PM.

March

- 10th General Meeting: Sacramento Blood Bank, 1625 Stockton Blvd. Sacramento at 7:00 PM. Informal get-together at 6:30 PM.
- 31st Executive Committee Meeting: Keith Crandall's QTH at 7:00 PM.

April

- 14th General Meeting: Sacramento Blood Bank, 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.

Kit Korner

(This may be Frank's last Kit Korner column as he has written about all the kit sources that he knows of. If you have any suggestions let him know. Ed.)

By Frank Zawalick, WD6DCV

This month the topic of discussion is Tucson Amateur Packet Radio or TAPR for short. I must admit I was not familiar with this fine organization until I started the research for this article. If you have ever heard of a terminal node controller (TNC) or have an interest in amateur digital communication, TAPR is the organization of choice.

If you have used a packet radio TNC, then you are already a part of TAPR history. The TNC project grew from a discussion in October of 1981 at a meeting of the Tucson Chapter of the IEEE Computer Society. A week later, six of the attendees gathered and discussed the feasibility of developing a TNC that would be complete and available to amateurs at a modest

cost. This was the genius of TAPR.

On June 26th 1982, Lyle Johnson, WA7GXD and Den Connors, KD2S, initiated a packet contact with the first TAPR unit. The project progressed from these first prototype units to the TNC-1 and then finally to the TNC-2 which is now the basis for most amateur packet operations worldwide.

TAPR was founded in 1982 as a international organization with interests in the areas of packet and digital communications. Today, TAPR continues as a membership supported Non-profit amateur research and development organization. TAPR currently has more than 2000 members worldwide and continues to develop kits for the amateur community and is working actively on publications and communications standards.

Continued on page 2

Our People

1998 SARC OFFICERS

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PIO

Vacant

Newsletter Editor

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

PREZ SEZ

By Tom Preston, KQ6EO

Dear members:

Greetings to all fellow club members. Hope all is going well for everyone as things slow down after the holidays and the new year.

Thank you all who returned your survey forms. Those who have not yet returned your form please get it back as soon as possible. About one-third of the surveys are in but we need more to get the best possible information from them. One item looks like it is going to have a lot of interest, the SIGs (Special Interest Groups). Several members have been working on APRS in the last month and I will try to formalize that into a SIG during February. Other SIGs that have good interest are kit building, computers, emergency communications, and special event support. We will be looking into these areas in the near future.

I have had several members state that they wanted to get involved in emergency communications or special event support but do not know who to contact. In response to this problem I am adding a monthly section to the newsletter to post this information. If you have any organizations you would like added let me know.

73's until next month.

KIT KORNER

Continued

The benefits of TAPR membership includes a subscription to the quarterly published Packet Status Register newsletter, 10% off all TAPR kits and publications and

full information on TAPR Research & Development projects and other activities. Membership in TAPR is \$20 per year US and possessions, Canada and Mexico and \$25 outside North America.

Proper operation of Data Carrier Detect (DCD) is imperative for efficient sharing of a packet channel. Many TNC's do not provide optimum DCD operation, and version 2.0 of the AX.25 Level 2 protocol compounds the problem. TAPR provides TNC modem, state machine DCD upgrade kits for the PacComm, DRSI, Kantronics, AEA, TASC0 and Heath line of modems. There is also the XR2211 DCD modification designed for XR2211 based modems. This upgrade will dramatically improve DCD operation, allowing the use of an unswitched radio.

There are two kits designated for the AEA PK-232. The first is a PK-232 Modem Disconnect. It provides a convenient header to install the DCD state machine upgrade kit, the TAPR 9600bps modem or a PSK modem. The PK-232MBX installation kit allows owners of the PK-232MBX with the "new" motherboard to install the TAPR 9600bps modem.

The TAPR 9600bps modem is a full duplex baseband modem compatible with K9NG and G3RUH standards. This modem requires an interface to your radio other than via microphone and speaker jacks. The modem fits internally into the case of many popular TNCs and supports a 20-pin modem disconnect header which allows for a second external modem to optionally be connected.

The AN-93 HF Modem kit provides any PC user with the capability for operating RTTY, AMTOR and FACTOR with its simple modem-only design. The

AN-93 is equivalent to a BayComm, BayPac or PMP setup, but is for HF digital operations. It allows an amateur to play on HF without the expense of an expensive multi-mode controller. The AN-93 comes with a tuning indicator to allow visual tuning and the unit also provides audio output for oscilloscope display. Shareware software is included.

As of December 1997, the TAPR AMSAT DSP-93 is no longer being sold, however some kits have been returned for redistribution. TAPR provides numerous information packages, and software packets to support the DSP-93.

The TAPR APRS Mic-Encoder installs between the radio mic and radio, and allows your GPS unit to transmit APRS AX.25 frames at designated intervals without the need of a TNC. As mobile GPS/APRS continues to grow, the APRS Mic-E can eliminate the need for every mobile to have a TNC, digital radio and second antenna by simply integrating the position report into a brief tone burst at the end of a voice transmission over any two-way radio. No additional hardware is required in the vehicle other than a GPS unit. The system not only reports position and vehicle type, but also one of 7 canned messages and 4 analog telemetry values.

The W3IWI/TAPR TAC-2 (Totally Accurate Clock) kit is intended to serve many purposes. It provides a "universal" electrical and mechanical interface for a number of common OEM board-level GPS receivers including specifically the Garmin GPS-20, Motorola Oncore and the Trimble SK8. It provides interfaces for the 1 pulse-per-second (1PPS) signal generated by these receivers. It also provides several different power supply options to make use of your GPS receiver easier. The power

interface is similar to (and compatible with) those used for computer disk drives. It has provisions for an Uninterrupted Power Supply (UPS) to buffer the GPS receiver through brief power outages. It provides a battery backup so the GPS receiver can wake up "smart". It can provide isolated power for an amplified GPS antenna. TAC32 software is also available to support the TAC-2.

I have not included prices for the above mentioned kits, as prices are dependent upon membership status and kit availability. I encourage anyone interested in digital communication research to join a TAPR.

Tucson Amateur Packet Radio
8987-309 E. Tanque Road #337
Tucson, AZ 85749-9399
Office: 940-383-0000
Fax: 940-566-2544
Internet: www.tapr.org

Personality Profile

By Tom Hughes WA6ZYK

Who's Next

To make my preparation of the Profile column easier, I would appreciate it if everyone, who is agreeable to be interviewed, would either contact me in person at a meeting, by E-mail or phone. Let me know what days and hours are best for you to be interviewed.

It usually takes no more than 30 minutes. I will call you on the phone and record our conversation. ASAP, I then transcribe the information using Microsoft Word. I will forward that first draft to you, via E-mail or S-mail, for you review, modification or approval. Following receipt of your

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>

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

approval, I send the final draft to Tom for publication. It's really quite painless. Your co-operation will be appreciated.

Thanks,
Tom Hughes, WA6ZYK
(916) 428-8503
htech@cwnet.com

Meeting Minutes

January Meeting Minutes
by Jim Rich, N6SZQ

The Sacramento ARC meet at the blood bank on Wednesday, January 13. Our new President, Tom Preston, KQ6EO, began the meeting with the usual round of introductions for the 20 members and visitors. We welcomed a first-time visitor (and new ham), James, KF6UIJ. James was encouraged to study for his Amateur Radio license by Tom.

Marv, N6XML, then gave a short progress report on getting our new 220 MHz repeater on the air. He and others are making progress towards that goal.

Tom then announced that Mike McDermott and Bob Browning had been appointed Field Day co-chairmen. Mike and Bob solicited suggestions for a new Field Day site. They also wanted to know which members have equipment that was used in past Field Days.

Tom then asked for a volunteer for SARC "public events coordinator". Jim, N6SZQ, noted that two other club positions remain vacant: Public Information Officer, and Technical Coordinator. If you are interested in applying for any of these jobs, or would just like more information about their duties, contact any club officer.

Keith, K6QIF, then discussed a possible partnership involving the SARC, an emergency response organization, and a 6-meter repeater. He'll know more about this in two months, and will brief the club then.

Ben Green, the recently appointed head of the State OES's Auxiliary Communications Service (ACS) and Emergency Alert System, then gave a well-prepared slide presentation on the Governor's Office of Emergency Services. He said our State responds to disasters using a mutual aid system, which includes cities, all 58 counties, and State agencies. Resources are shared, while local jurisdictions

retain control over disaster response in their communities. The State OES has resources to assist in responses to all types of disasters and emergencies, including major Search and Rescue missions, volcanoes and hazardous materials incidents.

The OES includes an Information Technology Branch, which contains the State Warning Center and the Telecommunications Unit. The Warning Center is manned around the clock, and can publicize an earthquake only 10 minutes after it occurs.

The Telecommunications Unit uses a satellite telephone system, called OASIS, or Operational Area Satellite Information System. This system includes at least one fixed site in each of our counties, two hubs (one in Sacramento), and three mobile Comm vans with dispatch and OASIS capabilities. The system can handle EDIS messages (sent to news media outlets) and RIMS reports (used by government agencies during disasters to communicate with each other).

Ben was asked if the OES had a contingency communications system, to back up OASIS. He replied, "Yes, and it is in this room." Amateur Radio operators who belong to the ACS work alongside paid OES staff during disasters and day-to-day operations. For instance, one local ACS volunteer, Bill Pennington, is working to make RIMS reports

sendable through a packet radio network, in case OES ever loses its satellite system.

What about the "Y2K problem?" Ben replied that their biggest concern was not over the computer bug, but with the "Y2K hysteria" which might occur. The OES and other State agencies are making good progress on being Y2K compliant before January 1.

Will the new communications technologies, such as PCS and the Iridium satellite phone system, help in emergency communications? Ben replied, "Yes and no." He said that Iridium is too expensive, and won't give OES the "footprint" they need for emergency communications in California.

Ben then discussed the planned move of the State OES headquarters to Mather Air Field. This is scheduled to occur in 2000, but Ben would be surprised if they meet that schedule. For instance, OES discovered they have to go down about 70 feet at Mather to get a true earth ground. They will have to spend about \$150,000 to construct a first-rate grounding system.

In 1990, the State OES employed between 200 to 300 workers. However, due to all the disasters which have occurred in California since then, there are now more than 700 State OES employees. Most of them are involved in processing claims for disaster assistance, which can be a rather long process. For instance, the last check to a

The Sacramento Amateur Radio Club *Founded 1914.* An ARRL Special Service Club. **1998 SARC Officers:** President—Tom Preston, KQ6EO, 722-9358; Vice President—Frank Zawalick, WD6DCV, 682-1589; Secretary—Jim Rich, N6SZQ, 361-3542; Treasurer—Ed Braaten, K6EKB, 939-1432; **Directors:** Les Ballinger, WA6EQQ, 393-4775; Herb Bennett, KA6VHF, 451-6864; Gary Bryant, KB6KZZ, 646-1171, Keith Crandall, K6QIF, 452-5056, Glenn Hartzell, W6WBO, 428-0885; 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, 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 Tom Preston, email at mikekey@jps.net, or snail-mail at *Editor, Mike 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.

local government for financial assistance to respond to the 1971 Silmar earthquake was not sent out until 1994.

Ben Green concluded by praising Comcast for becoming a part of the Emergency Alert System. He recently toured their "back room" in Sacramento, and was quite impressed

January Board Meeting Minutes By Jim Rich N6SZQ

The SARC Board of Directors met at Keith's house on Wednesday, January 27. The club officers and directors were joined by Field Day Co-Chairmen Mike McDermott and Bob Browning. We began the meeting by discussing possible Field Day sites and operating improvements. It was agreed to make Field Day even more "family-friendly" this year, with a bar-b-que or a picnic for members and their families. Mike and Bob agreed to contact County Parks Dept. officials to discuss a possible new Field Day site they will soon investigate.

We also discussed a draft club logo which our new President, Tom Preston had drawn up. Should the new logo be used on T-shirts or caps? We agreed to solicit help from any SARC members with graphics skills.

The Board also discussed the White Elephant raffle, as well as future speakers and programs. Jim Rich suggested an informal intra-club competition during the March CQ Magazine International DX Contest, as a first step towards a team effort in a contest involving other area Amateur Radio clubs during another DX competition later this year.

The meeting concluded with Jim Rich and Frank Zawalick suggesting possible future SARC

special operating events. Jim and Frank agreed to investigate the feasibility of these events, and report back to the Board and club members with their findings.

February Meeting

Ed Richins, K6KAB and associate, Mr. Yaffee, from Capital Tax Service/Triple Check will be the speakers at the February meeting. Both gentlemen have visited the club in the past, explaining the new tax laws and the numerous deductions an amateur can legally deduct while performing public service functions. Both individuals have helped club members save money on their taxes. Their discussion will be educational and informative.

BUY, SELL, or TRADE

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. Carmichael 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.

North Hills Radio Club - Sunday May 23rd at Bella Vista High School in Fair Oaks.

River City ARCS - Saturday April 24 at Bella Vista High School.

Emergency Service Organizations

SBC

Sacramento Blood Center
Contact Jim Rich N6SZQ

OES-ACS:

Auxiliary Communications Service of the Governors Office of Emergency Services

Contact Cary Mangum, State ACS Officer at 916-2621670

or

Les Balinger WA6EQQ
Herb Bennett KA6VHF

SARCR

Sacramento Amateur Radio Communications Reserve
Sacramento City RACES
Contact Chuck Miller KD6AQM at 916-362-5924

CDF-VIP

California Division of Forestry
Volunteers in Prevention
El Dorado Co.

Contact Bill Ozment, W6LSW at
530-644-7066

Please contact Tom Preston
KQ6EO with any other
organizations that should be listed
here

Contest Reminders

by Jim, N6SZQ

The sunspots are increasing, the
higher HF bands are finally starting
to open up, and the winter contest
season is in full swing. A few
reminders of some upcoming "big
ones":

February 6 (evening): North
American Sprint, Phone. A contest
where the playing field is more
level - the big stations with the
huge antennas and die-hard
operators don't have all the
advantages. More dial-turning
action than most contests. You can
only keep up the frantic pace for so
long, so it only lasts four hours.
Separate contests on 80/75, 40 and
20 meters. See page 91 or 92 of the
February 1999 QST for more
details on this and the following
contests.

February 6 - 8: Delaware QSO
Party; Vermont QSO Party; New
Hampshire QSO Party. Do you
need these rare states? Participate
in these parties, and you've got 'em!

February 5 - 7 (local times): Ten -
Ten Winter Phone QSO Party?
Ten meters is the band for low-
power fun! Novices can use a
microphone on part of this band.
When it is open you can work
stations around the world with a
simple dipole and 100 watts. You
don't have a 10-10 number? This is
the contest in which you can
quickly earn one!

February 20 - 21: ARRL
International DX Contest, CW.

Carl Crump, Jim White, and the
rest of you CW aficionados - this is
the contest for you! See December
1998 QST, page 97 for details.

Friday, March 5, 4 PM PST to
1600 on March 7: ARRL
International DX Contest, Phone.
My favorite contest of the year.
Try to work as many stations in as
many DXCC countries as you can
on 160, 80, 40, 20, 15, and 10
meter bands in 48 hours! This is a
great way to work rare DX. See
December 1998 QST, page 97 for
details.

Stroke Prevention Guidelines

from Jim Rich, N6SZQ

According to an article in the
8/31/98 Wall Street Journal, if a
new drug called t-PA is
administered by a doctor within
three hours of the onset of
stroke symptoms, many of the
effects of a stroke can be
reduced or minimized in many
patients, and lives can even be
saved.

National Stroke Association's
(NSA) Prevention Advisory
Board is releasing its Stroke
Prevention Guidelines, the first-
ever national expert consensus
set of recommendations on
what the public can do to
prevent the third leading cause
of death in the United States.

Stroke Prevention Guidelines:

1. ... Know your blood pressure.
Have it checked at least
annually. If it is elevated, work
with your doctor to keep it under
control.
2. ... Find out if you have atrial
fibrillation.
3. ... If you smoke, stop.
4. ... If you drink alcohol, do so
in moderation.

5. ... Find out if you have high
cholesterol.
6. ... If you are diabetic, follow
your doctor's recommendations
carefully to control your
diabetes.
7. ... Include exercise in the
activities you enjoy in your daily
routine.
8. ... Enjoy a lower sodium
(salt), lower fat diet.
9. ... Ask your doctor if you have
circulation problems which
increase your risk for stroke.
10. ... If you experience any
stroke symptoms, seek
immediate medical attention.

Symptoms:

If you have any stroke
symptoms, **seek**
immediate medical
attention

These include:

Sudden weakness or numbness
of your face, arm or leg
especially if it's on one side of
your body;
Sudden blurred or decreased
vision in one or both eyes;
Difficulty speaking or
understanding simple
statements;
Dizziness, loss of balance or
loss of coordination, especially
when combined with another
symptom, such as slurred
speech, double vision,
numbness, or weakness;
Sudden, unexplainable, and
intense headache often
described as the "worst
headache ever;"

If you have experienced any of
these symptoms, you may have
had a TIA or mini-stroke. Ask
your doctor if you can lower
your risk for stroke by taking
aspirin, or by other means.

For more information,
visit this fine Web site:
<http://www.stroke.org/>

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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.

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Telephone 916/387-0730 FAX 916/387-0730



Sacramento Amateur Radio Club
P.O. Box 161903
Sacramento, CA. 95816-1903

FIRST CLASS

To: