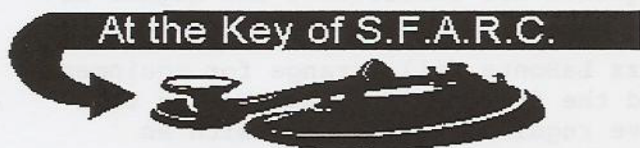


Sierra Foothills Amateur Radio Club

Newsletter

users.newworld.net/wingman/sfarc
November 2002
P.O. Box 1005, Newcastle, CA 95658



2002/3 Calendar of Events

(Operating Events in Italics)

PRESIDENT

Richard Kuepper, WA6RWS
530.878.6220
rkuepper@juno.com

VICE PRESIDENT

Eldred Wilkerson, KD6ZSL
530.878.6223
kd6zsl@yahoo.com

SECRETARY

Casey McPartland, K6WJM
K6wj@arrl.net

TREASURER

Mike Hudson, K6EFK
916.624.4714
mihudson@firstam.com

DIRECTORS

Debbie Cunningham, KF6LXN
916.663.4143
dmc@midtown.net
Bob Boeckman, WA6ULL
916.987.9910
wa6ull@aol.com
Roger Hedgpeth, N7TK
916.983.2912
rolifo@aol.com

REPORTERS

Satellite Report
Greg Dolkas, KO6TH
40 Years Ago at the SFARC
Gary Cunningham, KQ6RT

REPEATERS

145.430 (-0.6 MHz/PL 162.2)
440.575 (+5.0 MHz/PL 94.8)
223.860 (-1.6 MHz/PL 100.0)

CLUB NET

All welcome to check in
Thursdays, 7:30PM, K6ARR/R
145.430

CLUB MEETINGS

Second Friday of the month,
7:30PM at the Auburn
Library, 350 Nevada St,
Auburn

CLUB BREAKFAST

Last Sat of the month at
Susie's Café, Cirby at
Riverside, Roseville - 8:00 AM

NET CONTROL OPS

Dave Jenkins, WB6RBE
Gary Cunningham, KQ6RT
Joe Sylvia, KF6OQY
Casey McPartland, K6WJM

WEBMASTER

Chris Wright, KF6OGD
wingman@newworld.net

NEWSLETTER EDITOR

Fred Jensen, K6DGW
VOX: 530.885.8251
FAX: 530.745.9622
k6dgw@arrl.net

Nov 2-4	<i>ARRL Sweepstakes (CW)</i>
Nov 8	Regular Meeting (elections)
Nov 16-18	<i>ARRL Sweepstakes (Phone)</i>
Nov 30	Club Breakfast
Dec 6-8	<i>ARRL 160M Contest</i>
Dec 13	Christmas Dinner
Dec 14-15	<i>ARRL 10m Contest</i>
Dec 28	Club Breakfast
Jan 1	<i>Straight Key Night</i>
Jan 10	Regular Meeting
Jan 25	Club Breakfast
Feb 14	Regular Meeting
Feb 22	Club Breakfast

IN THIS ISSUE

President's Report

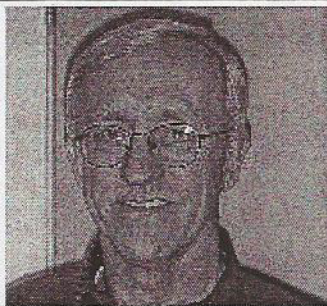
"Digital Musings"

White Elephant Sale

SFARC Cumulative CD

From the President's Shack

Richard
WA6RWS



Hi Everybody,

The white elephant sale was a great success again this year. Len Taylor did a great job as our auctioneer. He made it exciting to bid. I got excited and paid a fortune for 4 cinnamon rolls. I need to thank Eldred for running the price up!!! I think most everybody had a great time.

Our November meeting will be our election. At the last board meeting, I committed to run for president again. Eldred will not move up or run this year. Rob, WW6G committed to run for VP as well as Mike, KG6EFK for treasurer.

For the board, Bob, WA6ULL and Debbie, KF6LXN committed to run again. Casey, our secretary has also committed to run for the board.

Will someone out there commit to secretary? I will help all I can whoever would run having been a past secretary. So come out to the November meeting and vote for the slate or write-in who you would like to serve the club this coming year.

Have a great Thanksgiving

73,

Richard, WA6RWS

30 & 40 Years Ago In SFARC

Gary
KQ6RT



Forty Years Ago at the SFARC

Auburn, Calif.

Nov. 14 1962

The meeting was called to order at 8:30 P.M. by Pres. Dick Lund after a preliminary rag chew. Secretary read the minutes and they were approved. The

treasurer reported a balance of \$129.99 after expenses were paid.

With no new business to be discussed, the time was given to Buzz LaBonte the County CD Dept. He reported that RACES was started in 1952 and a special license can be obtained by applying on form 481-1 at the county clerk's office.

Narrow band F.M. on 6 meters was recommended by using surplus Hiway Patrol equip. After Jan. 1, 1963 on frequencies below 28 MC will be on S.S.B. and above 28 MC can be A.M. The types of license required are conditional and higher as well as 1st and 2nd class commercial.

Buzz LaBonte will arrange for equipment and the frequencies used. We can then have regular check in and with an absence of 3 months, one will be cancelled out.

Ernie Dodd, a guest from Loomis told us of his joint family fallout shelter built in Lakeview Hills. His main interest was in CD communication and desires to obtain a Ham license.

Refreshments were served and meeting adjourned at 9:50 P.M.

Respectfully Submitted,

Sage Otow

(Secretary wishes to report that notice of Nov. and Dec. meetings have been published in the Auburn Journal and also announced on Radio KAHN Bulletin program.)

Thirty Years Ago at the SFARC

Nov. 14, 1972

Rocklin Lyons donated to Post 29/SFARC, \$50.00 for emergency service radio equipment.

73,

Gary, KQ6RT

(Ed Note: Gary reports that the minutes for "Thirty Years Ago" are a bit scarce ... as in almost nothing. We'll carry them whenever there are any in the record for that month. And, yes, Buzz LaBonte is the late brother of Judy and son of Lou, the founder of Lou LaBonte's Restaurant on I-80, an Auburn landmark for well over 50 years. Buzz used to run an ATV repeater atop Channel Hill, across the interstate from the restaurant)

Amateur Satellites

**Greg
KO6TH**



AMSAT OSCAR-Echo

(Greg is somewhere between apogee and perigee with a bad squint angle ... we look for him to return to orbit next month)

VE Test Report

October's VE session was a quiet one with two elements given and one new technician class operator successful. One candidate for the code examination was not successful.

The November examination session will be:

Date: 11/2/2002

Sponsor: UNSPONSORED

Time: 8:00 AM (Walk-ins allowed and preferred)

Contact: DONNA J HODGE

916.361.2476

VEC: ARRL/VEC

Location: SUTTER ROSEVILLE HOSPITAL

ONE MEDICAL PLAZA

ROSEVILLE, CA 95678

From December on, the sessions will be held at the Folsom Lake College Center located near the intersection of Highway 50 and East Bidwell in Folsom. From US50 eastbound, exit at Scott Rd/E. Bidwell and take E. Bidwell north to Clarksville. Right to the FLCC.

This should provide easy access to much of the east side of Sacramento and Placer County along Route 50. We hope that members of SFARC will also find it convenient.

If there is interest in a test session in the Auburn area, the VE team is open to the suggestion and would be happy to accommodate. Please speak to one of the VE's at an upcoming meeting.

73,
Rob, WW6G

Swap Meets

Foothill Flea Market - 2nd Saturday of each month from March through October at Foothill College, Los Altos.

Livermore Swap Meet - 1st Sunday of each month at Las Positas College in Livermore, 7:00 AM to noon, all year.

Talk in 147.045 from the west, 145.35 from the east. Contact Cliff Chiba, KF6EII, larkswap@usa.com

Roseville Holiday Parade

The City of Roseville, and the Roseville Chamber of Commerce are looking for Amateur Radio Operators for the 2002 Roseville Holiday Parade. This year's theme is "Holiday Magic & Memories".

The parade begins at 10 a.m. on Saturday, November 23 at the Riverside/Vernon/Douglas intersection. The entire family is welcome to see the parade march down the newly constructed Vernon Street to Folsom Road and Roseville Square. After the parade, enjoy music, food booths, a visit from Santa and a 16-ton snow hill in the Tower Theater parking lot, so bring the kids & grand kids!.

If you are interested in helping with this years parade, please e-mail or call Matt Diridoni, KC6RUO, 916.632.4011, e-mail: mdiridoni@rsvl.net.

Annual SFARC CD

The annual SFARC CD will again be available at the January, 2003 meeting. This is a cumulative CD and will contain material from 2000 - 2002. Cost is \$1.00 each which covers the cost of the CD blank.

The CD contains all newsletters (both MS Word97 and PDF) for the three years, all the photos in the archives from various club events, and a number of other goodies such as software, reference information, etc. This year, it will contain an index you can bring up in your browser to help find things and display/print pictures.

Burning the copies is a bit labor-intensive, so I'd like to hear in advance from those members who want one. Just email k6dgw@arrl.net or call me at 530.885.8251.

YL's? Y Not?

(Casey McPartland, K6WJM)

I've noted that this summer there has huge influx of new licenses here in "6-land". I've further noticed that a large number of the new tickets are being taken by women, young and not so young. Yet there is a clear lack of female voices on the frequencies that I work. Now I realize that I spend a fair amount of time on HF, and that most of the new licenses are Technician class having no HF privileges, but I also work a fair amount of two meters. I know that many of the YLs out there have vhf/uhf radios, yet they are mysteriously missing from the day-to-day activities.

This brings to mind a number of things that trouble me about some of the backward thinking that goes on in today's society. Regardless of how far we've come, there still seem to be domains that "belong" to women, or that "belong" to men. I don't personally believe that there is any place in amateur radio for this line of thinking. Many people out

there think of hams as men, especially "older" men (OMs or OBs?) that steal off into their "secret place" and speak "secret language" to their buddies, other OMs. However, I think of hams more like colleagues than buddies, and colleague is a word without gender.

During my time in amateur radio I have known a number of YLs and YFs (I use YF in deference to those who are justifiably put off by the use of XYL!) Some of them have been super-op's, handling traffic, emergencies, crushing DX, pounding brass, controlling nets, riding sweep, etc. So they *are* out there and they *are* active, and many of them have General or better tickets, so it can be done.

I know that some of the absence of YLs from the circuit is due to those OBs that think that the airwaves are their private domain to exercise *their* masculinity. We hear them all the time, "my amp is bigger than yours is", or "my antenna is at 120 feet on a 90 foot boom, with a chevy small block for a rotor." While I'm not particularly a feminist, I believe that all hams are brothers and sisters, and must be treated as such. I'm inclined to listen to the flow of the conversation, and if I don't like it, or I can't get a "break", I move on to friendlier hamming! If I really need that repeater or frequency, I may make my need more emphatic, as in squeaky wheels get oiled!

My point is that I believe that many of us in the OM category would be delighted to converse with YL's of all ages. It's just that sometimes it's such a unique event, that we have problems coming up with stuff to talk about; kind of absurd considering we have a built-in common interest in ham radio! Having said that, I believe that there is very little in the radio spectrum that will draw an OB's attention that the voice of a YL, chauvinists that we seem to be.

So, YL's now that you're sporting those new call letters, and have privileges to speak on the radio, let's communicate! If you hear me on the club machine (145.43) or more usually on the N6ICW two meter repeater (147.195+ pl 123.0) drop in a give me a call (even in the morning commute!) Listen to how "things" work, and give it a shot - it's time! C'mon YL's, Y not?

Digital Musings

(Rob Carpenter, WW6G)

Digital DX: The month of October has been fun for digital DX and, at the same time, a little frustrating. Propagation has been pretty good from a solar flux perspective with daily readings in the 170's and 180's. Anything above 150 indicates that there will likely be openings all the way up to 10 meters. While the solar flux has been good, the first part of the month saw magnetic activity high with K_p readings of 3 [unsettled] and 4 [storm]. After the 16th, K_p were down to 3 and an occasional 2 and just when we thought all would be well, K_p went to 5 on the 24th. This means that the upper HF openings come and go. Fun, challenge, frustration - just make's it more interesting.

Here are the results of October's other activities.

Project 1: The project to make a simple PSK cable [just 2 stereo plugs to a 13 pin DIN for an IC-706 and to a 8 pin DIN for an IC-746] was a success. It is really simple, fun, and cheap. No ground loop problem was encountered. This makes it really easy and really inexpensive to get on the air with PSK -- and all of the other digital modes running on a soundcard. Let me know if you are interested, need help or just inspiration.

Project 2: Have you ever wanted to watch a ball game AND run your station. Well, digital modes are well suited to watching and QSO-ing at the same time. I put together remote control for my PSK station and am happy to report that it works just fine. Here's the setup: (1) the basic PSK station consists of a homebrew computer [1.7 GHz Celeron with 512 MB RAM - definitely overkill] connected to (2) my IC-746 transceiver. There are two connections: (a) sound card to rig, and (b) RS232 to rig for CAT [optional]. I run MixW 2.06 but any software will do. My rig is in a rolling rack in a spare bedroom. It is wired by standard Ethernet cable to my wireless router in that same room.

To use it remote, I use a Toshiba 1.1 GHz Celeron notebook computer with a wireless LAN card and run Incredisoft's Remote PC on the laptop and on the computer in the rack. You could also use Microsoft's Remote Desktop Connection and if you do call me to discuss my experience with it and some setup issues.

Once everything is running, just open up the session on the notebook and MixW appears. Everything works as it should and I am happy to report some nice DX during the World Series. It just does not get a lot better than that !

Neat new Idea/Product and Pacificon 2002: It was really great to see so many of the club members at Pacificon and, naturally, the seminar on a PSK31 meter caught my notice. Here's the idea. As you will recall from my presentation on PSK31, tuning up and over-modulation are an issue for PSK. Because it uses phase shift keying and the "tones" are only 32 cycles apart, IMD can occur, which leads to splatter. There is no way to know whether you are under-modulated [i.e. <100%] or over-modulated [i.e. >100] except by asking for a detailed report. Of course, you can reduce power to mid-range, make sure the ALC does not come on, turn off speech compression, etc. Most hams simply find a sweet spot manually and ignore small variations. Signal reports then help the operator to make adjustments if needed. There has to be a better way.

Well, George Rothbart, KF6VSG, does have a better idea. Here's how it works: Sample your transmit signal, condition it [voltage divider], and run it into a A/D converter [PIC MPU Phillips 16F876]. Then, in the computer transform the data via the venerable Fourier transform. The whole process takes the voltage samples and converts them into their frequency counterparts. Subtract away the frequencies we want, sum up what is left is a measure of IMD. Most PSK programs do this in software and display it for you, but here

is the difference. Given the right software, if IMD is present, you could tell Windows to turn down the volume of the audio to reduce the transmitter drive and, consequently, reduce/eliminate the IMD. If, on the other hand, your sampled signal is less than expected for a pure sine wave, you could tell Windows to turn up the volume a little and put out more power without causing IMD. You have built a simple control loop that finds the most power you can put out without IMD automatically !!!

George has stated that he would consider putting the whole thing out as a kit to connect to your RS-232 or better yet to your USB port for about \$35. If you might be interested, let George know by sending a e-mail to: george@softsci.com. He has about 10 requesters now and if he gets to 25-30, he will make the kits. You might enjoy his Pacificon presentation at: <http://ssiserver.com/info/pskmeter/pskmeter.pdf>

Hope to print you on my waterfall soon !

73,

Rob, WW6G

Intermodulation Distortion (*"The athlete's foot of radio"*)

Rob's "Digital Musings" this month points out the critical requirement to minimize intermodulation distortion (IMD) in digital modes, especially the very narrow bandwidth PSK. To remove some of the mystery, here's a short primer on IM and IMD.

Intermodulation

Intermodulation is just the combining of two or more signals to produce additional signals. When we plan for it, we call it "heterodyning," "modulation," or "mixing." It only becomes "intermodulation" when we wish it wasn't happening.

If two signals of differing frequency are present in a circuit that contains a non-linear element (like a diode), the two signals will mix to produce two new signals at the sum and difference of their frequencies. The amplitude of these two new signals will be lower than the original two. These four signals also mix in various combinations to produce additional signals, these lower still in amplitude. Worse yet, all of the signals have harmonics (multiples of their fundamental frequencies), and these harmonics also mix with each other and all the other signals present in the circuit.

Thus, simply having two signals of different frequency in a non-linear circuit produces a whole array of new signals. Some have negative frequency and aren't really there. Some are very low amplitude, however our receivers are extremely sensitive, and often hear them. Some get attenuated to essentially zero by tuned circuits and filters, and some create havoc.

Non-Linear Elements

What's a non-linear element? It's any circuit element where the relationship between voltage across the element and current through the element does not follow a straight line (i.e. Ohm's Law). A resistor obeys Ohm's Law ... double the voltage across it and you double the current through it ... its resistance is constant, and it is linear. A diode behaves differently ... its resistance depends on the current flowing through it.

The really (really!) bad news is that practically any connection between two conductors can act as a non-linear element. The joints in the sections of your tower, the joints in the tri-band beam elements, and the connection between the guy wires and turnbuckles are all semi-diodes. So is a bad solder joint on a circuit board or a loose coax connector. The RF amplifier in the front end of your receiver is non-linear in the presence of strong signals. Ever notice that when your friend a mile or two away transmits, you hear lots of splatter and key clicks? They're almost certainly generated within your receiver by intermodulation.

Repeater Sites

A very common location for IM problems is on mountain tops and towers where hams like to put repeaters ... and other folk like to do the same. All these signals, inducing currents in towers, guys, cables, and connectors create a horrendous racket of intermodulation products, some of which may fall in the passband of receivers. Possibly the worst is a site that hosts one or more UHF TV stations, with multi-megawatt ERPs.

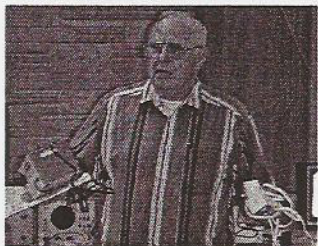
IM and Transmitters

When you modulate an AM or SSB transmitter, you are mixing one set of frequencies (audio) with another frequency (RF), and, as you might suspect, any non-linear elements anywhere in the circuit create intermodulation products that distort and broaden your signal. Transmitter circuits are designed to be very linear, but can only be so over some limited range of audio signal levels. Beyond those limits, the amplifiers become non-linear and voila! ... intermodulation distortion. Unfortunately, the power amplifier then amplifies the IM products along with your desired signals and distributes it as gunk and splatter all over the band (and planet).

So, it is critical that you control your audio level such that it stays in the range where your transmitter circuits are linear. ALC does this for SSB transmitters (at least partially). Digital modes like PSK are extremely sensitive to IMD, and you must use great care to assure that your sound card does not overdrive the transmitter. As Rob points out, it is difficult to know at just what input level the IMD begins to occur, so the safe approach is to increase the level from your sound card until you just see ALC, and then decrease it until no ALC is shown.

Annual White Elephant Sale

As events go, the 2002 SFARC White Elephant Sale was a resounding success. And, while there were a few possible albino pachyderms on the tables, there were a number of true treasures as well.

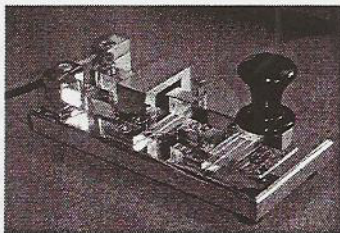


Much of the success can be attributed to our auctioneer, Len Taylor, WB6HGS, seen here flogging your editor into yet another purchase (Heath bench power supply and some assorted stuff). Len and his wife, Marilyn, WB6KFL have been SFARC members and supporters for more years than some at the sale had been alive, and Len has been our auctioneer on many occasions.

Also, as in past years, Bob, WA6ULL assisted in the packaging of the auction lots. *(My apologies ... In the frenzy of bidding and taking photos, your editor failed to get the identity of the other helper in the photo)* Bob was also the primary "identifier" of the various more obscure items. The bidding went briskly on virtually every lot, including some cinnamon rolls which attracted our president's interest.



All kidding aside, there really were some true ham treasures this year. An Astatic D-104 in mint condition (known to DX'ers the world over) was snapped up with some really rapid fire bidding. On the CW side, a truly exquisite, hand-made CT



hand key (2001 S.N 028) became yet another "had to have" item for your editor, who pretty much exhausted the hobby budget for the remainder of the year. Fortunately, the lot included a mint condition Bencher paddle which Puma, K6BJS, gladly took off my hands. The final item of the evening was a vintage Mode A KLM satellite rig. It



operates duplex on 10M and 2M, and, with the resurrection of Oscar 7 recently, it will be a sure winner. Danny Cunningham left with a great little TV for his room, and enough coax changed hands to feed antennas on a 500' tower.

The White Elephant Sale proceeds provide the funds for the Club's contribution to the annual Christmas Dinner. Thanks to all who attended and bid.

National Ham News

(Courtesy ARRL Letter and Bulletins)

ARRL Announces W1AW Schedule

Morning Schedule:

Time	Mode	Days
-----	----	-----
1400 UTC (9 AM EST)	CWs	Wed, Fri
1400 UTC (9 AM EST)	CWf	Tue, Thu

Daily Visitor Operating Hours:

1500 UTC to 1700 UTC - (10 AM to 12 PM EST)
 1800 UTC to 2045 UTC - (1 PM to 3:45 PM EST)
 (Station closed 1700 to 1800 UTC (12 PM to 1 PM EST))

Afternoon/Evening Schedule:

2100 UTC (4 PM EST)	CWf	M-W-F
2100 " "	CWs	Tu-Th
2200 " (5 PM EST)	CWb	Daily
2300 " (6 PM EST)	RTTY	Daily
0000 " (7 PM EST)	CWs	M-W-F
0000 " "	CWf	Tu-Th
0100 " (8 PM EST)	CWb	Daily
0200 " (9 PM EST)	RTTY	Daily
0245 " (9:45 PM EST)	SSB	Daily
0300 " (10 PM EST)	CWf	M-W-F
0300 " "	CWs	Tu-Th
0400 " (11 PM EST)	CWb	Daily

Frequencies (MHz)

CW: 1.818, 3.5815, 7.0475, 14.0475,
 18.0975, 21.0675, 28.0675, 147.555
 RTTY: 3.625, 7.095, 14.095, 18.1025,
 21.095, 28.095, 147.555
 SSB: 1.855, 3.990, 7.290, 14.290,
 18.160, 21.390, 28.590
 FM: 147.555

Notes:

CWs = Morse Code practice (slow) = 5, 7.5, 10, 13 and 15 WPM

CWf = Morse Code practice (fast) = 35, 30, 25, 20, 15, 13 and 10 WPM

CWb = Morse Code Bulletins = 18 WPM

CW frequencies include code practices, Qualifying Runs and CW bulletins.

RTTY = Teleprinter Bulletins = BAUDOT (45.45 baud) and AMTOR-FEC (100 Baud). ASCII (110 Baud) is sent only as time allows.

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds.

On Tuesdays and Fridays at 2330 UTC (6:30 PM EST), Keplerian Elements for active amateur satellites are sent on the regular teleprinter frequencies.

A DX bulletin replaces or is added to the regular bulletins between 0100 UTC (8 PM EST) Thursdays and 0100 UTC (8 PM EST) Fridays.

In a communications emergency, monitor W1AW for special bulletins as follows: Voice on the hour, Teleprinter at 15 minutes past the hour, and CW on the half hour.

FCC licensed amateurs may operate the station from 1500 UTC to 1700 UTC (10 AM to 12 PM EST), and then from 1800 UTC to 2045 UTC (1 PM to 3:45 PM EST) Monday through Friday. Be sure to bring your current FCC amateur license or a photocopy.

The W1AW Operating Schedule may also be found on page 100 in the November 2002 issue of QST or on the web at, <http://www.arrl.org/w1aw.html>.

Indian Pirate Stations

Sahrudin, VU2SDN, the president of the Amateur Radio Society of India, reports a spate of pirate operations using call signs VU4A, VU7A and similar other call signs continues. These have all been pirates, he says. A blanket ban exists on operations from Andaman, Nicobar and Lakshadweep islands, so VU4 and VU7-prefix call signs have not been assigned for 10 years, although the brief 1993 VU2JPS from the Andaman Islands was valid. Sahrudin reported last April that India's QSL Bureau was receiving many QSL requests for contacts apparently made by bootleggers using VU call signs. Sahrudin has explained that call signs that begin with VU2 followed by two or three letters or with VU3 followed by three letters are the only valid call signs for India.

Copyright © 2002, All Rights Reserved

The SFARC Newsletter is published monthly by the Sierra Foothills Amateur Radio Club for the information of its members and friends. The newsletter is distributed via the US Mail and E-mail, and is posted to the SFARC Web Site. Permission is granted to non-profit amateur radio organizations to reproduce text verbatim with attribution. Use of images is prohibited without prior written approval of the SFARC, and of all individuals pictured in the images. All logos are the property of the represented organizations and may not be used without their permission.

Vanity Call Sign Procedures

When applying for a vanity call sign, the application purpose on FCC Form 605 should always be "Modification" (MD). ARRL VEC Manager Bart Jahnke, W9JJ, advises that vanity applicants within their 90-day license renewal window should not attempt to do a "Renewal/Modification" (RM) when applying for a vanity call sign.

"I would recommend that you renew first," Jahnke said. "If vanity processing is delayed for some reason--as happened last fall and spring--your license could expire while awaiting processing, and your application would be dismissed."

The fee for a vanity call sign increased to \$14.50 in September. Jahnke says it is possible for vanity applicants to register a name, address or contact information (eg, e-mail or telephone number) change with the FCC while also applying for a vanity call sign, since both actions can be dealt with as a Modification. Note, however, that if you're only changing such data as name, address or contact information and not applying for a new call sign, you should check "Administrative Update" (AU) as the application purpose--and, yes, this is confusing.

By the way, unlike a vanity application, which requires a fee and goes to the FCC's fiscal agent in Pittsburgh, an Administrative Update application requires no fee and goes directly to the FCC in Gettysburg.

Amateur applications may be filed electronically via the FCC's ULS Web site <http://wireless.fcc.gov/uls/> or on paper (using FCC Form 605). The FCC says that anyone filing any application with the FCC--whether for a vanity, license renewal, upgrade or modification--first must be registered with the Commission Registration System (CORES) and have obtained an FCC Registration Number (FRN).

For more information on vanity filing, visit the Amateur Radio Vanity Call Signs page <http://www.arrl.org/arrlvec/vanity.html> on the ARRL Web site.



4755 Pacific St., Rocklin, CA 95677-2407

Manager: Randy Erwin

TEL: 916.624.0641 / FAX: 916.624.5249

<ur29@unitedrentals.com>

**MAJOR SPONSOR OF
THE SFARC FIELD DAY!**

**SIERRA FOOTHILLS AMATEUR RADIO CLUB
2003 MEMBERSHIP APPLICATION**

Name: _____ Call: _____ Class: _____ e-mail: _____

Address: _____ City: _____ State: _____ Zip: _____

Associate Name: _____ Call: _____ Class: _____

Phone Number: _____ Application: (Circle One) New Renewal

Member Dues: Circle Amounts That Apply. Applications received in the middle of the year will be pro rated. Contact the President or Treasurer for exact rate.

Membership:	\$22.00	Name Badge:	\$6.50
Associate:	\$ 7.00	Repeater Donation:	\$ _____
Auto Patch Donation:	\$ _____	Newsletter Booster:	\$ _____
Miscellaneous Donation:	\$ _____	Christmas Donation:	\$ _____
Worldradio Renewal:	\$ _____	TOTAL:	\$ _____

OFFICE USE ONLY:

DO NOT WRITE BELOW THIS LINE

Date: _____ Treasurer: _____ Secretary: _____ Roster: _____

Payment: _____ Check Number: _____ Cash: _____

SIERRA FOOTHILLS AMATEUR RADIO CLUB
P.O. Box 1005
Newcastle, CA 95658

