

QSA-5

Founded 1933

The Marin Amateur Radio Society Monthly Newsletter

June 2008

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Greetings from the desk of the Pres.

Summer is almost here, time for reflecting on the first half of the year, and reviewing a seasonal check list. I had an opportunity to read another club's newsletter last week and the president's column had a timely reminder about emergency preparedness.

Most of us have backup communication by the nature of our association with ham radio but do you have a few things in reserve around the house? I'm not talking about an earthquake kit but, if you have one, is it time to rotate newer stocks of food into it? Do you have fresh batteries and a supply of bottled water around the house along with easy to heat canned food and a manual can opener in a convenient location? Battery operated radio to receive local news? Do you have blankets or sleeping bags for family members and a working flashlight and water in your vehicle? Extra water during the summer months might be a good idea. Do you have children out of school or grandchildren coming to visit? Remember to watch for balls followed by children running out from between parked cars. Do you share ham radio with your grandchildren? Bring them to Field Day! You will not need a license to operate at this annual event. There will be a BBQ dinner and dessert Saturday evening 6/28. If you plan to come, please let Dave KG6TCJ or another board member know so we can plan enough food for everyone. A dish to pass (salads or snacks) is not required but will be greatly appreciated. For those of you who have missed my voice on the 2 meter net, I will return. I recently sent my radio out for upgrading of the power connection to be compatible with my new vehicle. I'll be using a temporary setup until I can find a suitable mounting configuration for the new cockpit.

If anyone has a catalog for gooseneck mounting brackets I would appreciate it if you would email me with the web site.

I will be out of town the week of our regular June membership meeting. Don't forget to mark your calendar that the July meeting has been canceled due to conflict with Independence Day.

See you all in August and at the Rod & Gun club on June 28/29.

Column two, >>>>

Website at W6SG.NET
Phone 415.389.6630
For ARRL SF Section news, go to
www.arrl.org/sections/?sect=SF

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One of our members, who wishes to remain anonymous, has generously offered to match donations by club members, dollar for dollar, up to one thousand. That's \$2000.00 we can add to the clubhouse building fund with your support.

We have several projects that need attention around the clubhouse and grounds. The most serious of these is the rear deck off the second floor apartment which has a leak issue. We need to fix this instead of putting temporary repairs on it. The roof over the back garage needs to be replaced and of course the building needs a fresh coat of paint.

So please help us take advantage of this generous offer, which will double your donation, by sending your check to "MARS Building Fund", P.O. Box 6423, San Rafael 94903 or put it in the hands of Treasurer Dave KG6TCJ. Checks can also be dropped off at the clubhouse at general or board meetings or at Sunday 'bible/babble' class. Cash also works.

Issue #3 of The Wayback Machine on page three covers the end of spark, the birth of the ARRL in 1914 to the beginning of World War 1.

As always, if there are activities that you would like to see the club get involved in, be sure to come to a meeting and voice your ideas. This is your club and we can't know what you'd like to see happen unless you participate. **Be sure to read the article in this column about the matching gift challenge that has been offered by one of our members!**

73 es 88, Denice Stoops, President

P.O.Box 6423
San Rafael, CA 94903

Board of Directors Meeting 8 May 2008

In attendance: Denice Stoops, Phil Dunlap, Rich Carbine, Norm Baetz, Horst Dannecker, Dave Hodgson, and Randy Jenkins. John Boyd and Augie Koehler arrived while the meeting was in progress.

The meeting was called to order by President Denice Stoops at 19:38 hours. The agenda was accepted as printed. The minutes of the previous (April 10) board of directors meeting were accepted as amended.

Correspondence: A letter from the California Secretary of State was received, and forwarded to the Treasurer, Dave Hodgson. A letter from the Marin County Registrar of Voters was received requesting use of the clubhouse for the June election.

Treasurer Dave Hodgson submitted his monthly report. April income was \$2155.00 and April expenses were \$5,104.66. The checking account balance was \$10,088.52. Dave reported that he was expecting the tax forms from the accountant very soon. There was a question about the rent being paid on time.

Committee reports:

Public Service Committee - Chairman Jenkins reported on The Human Race on May 10, the Dipsea Race on June 8, and the Double Dipsea on June 21. Jenkins also commented on the August 2 Marin Century / Mt. Tam Double Century.

Technical Committee - Hodgson reported that we will probably have to replace antennas on the Mount Tam Middle Peak site. There were also comments about local reception of the repeater located in Coalinga.

Comm Truck Committee - Jenkins reported that the generator in the Comm truck was not functioning again; apparently a spark problem. However, an air leak that affected the pneumatic mast had been corrected, and the mast was staying up very well, using the DC compressor in the truck.

Education Committee - Nothing scheduled.
VE Liaison - No change in the previously reported dates.

Page two, column two.

K6GWE Repeaters
Big Rock Ridge 147.330 +
2 meters **INPUTS**
 pl 203.5 Big Rock
 pl 179.9 Mt. Tam west
 pl 167.9 Mt. Barnabe
 pl 192.8 Tiburon
Mt. Tamalpais 146.700 -
 pl 179.9 Mt. Tam input
San Pedro Ridge 147.330 +
 pl 173.8 off-line - reserve status.
440
San Pedro Ridge
 443.525 + pl 82.5
Mt. Tamalpais
 443.250 + pl 179.9

Here's the MARS Calendar of Public Service Events for 2008
 (so far):

Sunday, June 8 - The Dipsea Race
 8AM- 2 PM 12 - 14 Volunteers

Saturday, June 21 - Double-Dipsea
 8AM - 3 PM 8-10 Volunteers

Saturday, August 02 - Marin Century / Mt. Tam Double Century 4AM - Midnight 20+ Volunteers

Saturday, August 16 - Holstein Hundred 6AM-7PM 15+ Volunteers

Randy Jenkins, KA6BQF,
 ka6bqf@arrl.net
 Vice Pres. & Public Service
 Coordinator 510-526-4089

From an email by Bill KH6GJV
 Noble Grand Poobah, ARRL SF Section

As to the other clubs, frankly, I have been amazed at how "reluctant" the clubs are to interact. Coming from a service club background where interclub activities are encouraged, I have been disappointed in what happens between radio clubs. It has been good that SCRA and MARS have gotten together to help each other.

When I talked about this with ARRL HQ people, they said that many times clubs in the same area are "spite clubs." This is where a club is formed with disgruntled former members of another club. So there are hard feelings and no desire to work together. Sad.... They said that in a town with three Hams, there will be two clubs.

Let's keep MARS and SCRA working together. 73, Bill

Board Meeting, cont.

RACES Liaison - Hodgson reported that work was proceeding on an interface protocol for RACES and CERT. The next RACES meeting was scheduled for July 19.

Building Managers - Jenkins commented that we still need to install the hand rails in the handicapped bathroom.

Old Business:
 Fundraising - One of our members has anonymously offered a one to one match for all funds raised up to \$1000.00. There was also a discussion of other fundraising ideas.

Easement Sign - There was no report from Doug.

Cleanup Crew - Dave Hodgson will recruit people to help clean up the clubhouse prior to the June election.

Field Day - RedX will be staging Field Day equipment at the clubhouse on a trailer. We need a chairperson for the third operating station for Field Day.

New Business:
 Kitchen Cabinets - No report on the cabinets from Davis. The treasury will soon support direct purchase of the cabinets and sink.

Denice will be out of town June 6-11. Randy will chair the June 6 membership meeting.

Elisabeth will be absent from the June 6 meeting, and need someone to take over the secretarial duties. Norm Baetz volunteered to take the minutes.

There was a discussion about suggestions for presentations at the general membership meetings.

Treasurer Dave Hodgson announced that he would be setting up online bill pay for some of the accounts for the club.

There being no further business, the meeting was adjourned at 20:43 hours.

Respectfully submitted, Randy Jenkins, KA6BQF, acting Secretary.

As a pilot, only two bad things can happen to you and one of them will.

- a. One day you will walk out to the aircraft knowing that it is your last flight.
- b. One day you will walk out to the aircraft not knowing that it is your last flight.

General Meeting 2 May 2008

Meeting called to order 7:30 sharp with a decisive rap of the gavel.
 Item added to agenda without objection (within fundraising).
 Minutes of last meeting approved.

Communications: Dave reports a letter from the Marin voter registrar asking to use the clubhouse on June 3.

Actions of April 10 board meeting: Christmas party venue has been decided for 12/07/08 at Deer Park Villa; July meeting is cancelled (the Fourth).

Treasurer's report: Bank account is slowly rising, last large bill till autumn is paid.

Committee Reports:
Public Service: Miwok-100 is staffed, still need Dipsea volunteers.

Repeaters (Doug Slusher): Baynet—a series of linked repeaters in the South Bay, secondary service for Red Cross—would like to expand its UHF system. Our Mount Tam 443.250 system is rarely used and conceivably could be available as a north-south link. We would maintain control of the system, but they could bring it up and turn it off as necessary. (Website: <http://www.bay-net.org/>)

Old business:
Christmas party has been scheduled and reserved, ticket prices to be announced. Rich Carbine will have Deer Park Villa fax a menu to Denice.

75th anniversary party needs a chairman by next month.

Prescriptive easement, prevention of: John Boyd has engaged a different sign company, and the order has been placed.

New business:
 Dave announces we have a member (who wants to stay anonymous) who will match dollar-for-dollar, up to \$1,000, donations by members, for the building fund.

Next VE session is July 12.
 Rich proposes a swap-out of one of the Tam repeater antennas—he is in discussion with Matt from M² repeater company.

Adjourned: 7:48 p.m.
 Elisabeth Thomas-Matej, Secretary.

Field Day June 27-28 setup.
Operating June 28-29.
Marin Rod & Gun Club

Club picnic Sept. 14.

THE WAYBACK MACHINE -- ISSUE #3
 by Bill Continelli, W2XOY
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Amateurs entered the summer of 1912 with a new Radio Act in place. Thanks to the Titanic disaster and the fear that commercial interests would try to monopolize the radio spectrum, the government stepped in and set up a licensing structure administered by the Secretary of Commerce. In the new law, amateurs (actually "private stations") were limited to a wavelength of 200 meters and a maximum power of 1 kW. Since the known usable spectrum at that time ran from about 300 to 3000 meters (1000 kc to 100 kc), it was widely believed that amateur radio would fade away, without expensive government enforcement.

At first, it appeared that the bureaucrats were correct. Before the Radio Act, there were an estimated 10,000 stations. Now, there were only 1200 licenses issued by the end of 1912. Amateurs were finding it difficult to get their spark stations going on 200 meters and, when they did, they discovered their maximum range was 25-50 miles, instead of the 250-500 mile range they had on the longer wavelengths. Amateur radio was slowly heading for oblivion.

The big stumbling block to effective communications on 200 meters (or indeed any wavelength) was the spark transmitter and unamplified detector, both of which were extremely inefficient. On the transmitting end, no method, other than spark, was known. As for the receiver, there had been two developments in the vacuum tube area. J.A. Fleming had developed the diode detector in 1904. It cost a lot of money, provided no amplification, and used expensive batteries. It was not practical at the time, but it was covered by a patent. In 1906, Lee de Forest took Fleming's valve, added a third element, called a grid, and named the result the Audion. In the right circuit, the Audion could amplify by a factor of 5x. Still, because of the cost, battery requirement, and the ever popular patent fights of the time, it went unnoticed and unused until 1912, when a 22 year old amateur made an important discovery.

Edwin H. Armstrong was an experimenter and almost militant individualist. He had obtained an Audion for use in his station. Dissatisfied with the poor amplification, he tried different circuits. At one point, he "fed back" a portion of the output back to the input to be re-amplified.

Column two.

Instead of just a 5x amplification, the output was now 100x stronger than the input. He also discovered that if too much feedback was used, the tube began to oscillate. This regenerative circuit was the most important discovery in radio in years. One tube could amplify more than 100x, two tubes in series could give a gain of 2000+. In addition, an alternative to spark was now available. Instead of a raspy, broad, inefficient signal that took up hundreds of kilocycles, the Audion could be made to oscillate a stable, pure signal on one frequency. In fact, that's where the abbreviation "CW" comes from, (a Continuous Wave on one frequency rather than a broad, intermittent wave on many). Although it would take 10+ years to develop the stability in transmitters and receivers to fully utilize CW, King Spark was doomed.

Realizing the importance of his regenerative design in both transmitting and receiving, but lacking the money to develop it, in January 1913 Armstrong had the diagrams of his circuit notarized. This was only the first of many spectacular inventions Armstrong would come up with. Within 10 years, he would also develop the superheterodyne (now used in ALL receivers), and the superregenerative (the basis of all VHF and UHF receivers from the 20s to the 50s, and still used today in children's walkie-talkies). Even his first design, the regenerative circuit, is used by Ten-Tec and MFJ in their receiver kits. The crowning achievement in Armstrong's career came in the 30's, when he developed Frequency Modulation. With all due respect for those who flock to Loomis, Tesla, or Marconi as the father of radio, my vote goes to Armstrong, for without him, wireless would be stuck at the 1912 level. Armstrong had a tempestuous life, full of public and private battles, advancements, setbacks, and lawsuits, before his tragic death in 1954. The final legal battles didn't end until 1967. ("The Wayback Machine" will devote an entire column to Armstrong in a future edition.)

Meanwhile, back in 1913, word of the regenerative circuit spread quickly throughout the amateur world. Experimenters who added the Audion to their receivers discovered that distances of up to 350 miles were now possible on 200 meters. The Audion, already scarce and expensive, became even more so under the laws of supply and demand. The search for an Audion to the amateur

Column three.

was like the Quest for the Holy Grail. In fact, it was this search which led to the second pivotal event in amateur radio history.

Hiram Percy Maxim was a 44 year old engineer and inventor who had a 1kW amateur station in Hartford, Connecticut. He wanted an Audion for his receiver and was unable to locate one. Finally, he heard of an amateur in Springfield, MA, who had one for sale. Hartford was (and still is) only 30 miles from Springfield, yet Maxim's station could not cover the distance. He found a station midway between the two cities that was willing to relay his purchase offer. Maxim thought about this and eventually realized that a national organization was needed to coordinate and standardize message relay procedures, as well as act as a national lobby for amateur radio interests. On April 6, 1914, Maxim proposed the formation of the American Radio Relay League. With the backing of the Radio Club of Hartford, who appropriated \$50, and some volunteers, Maxim developed an application form explaining the purpose of the ARRL and inviting membership. These were sent out to every known major station in the country.

Maxim, like Armstrong, was a prolific inventor. Unlike Armstrong, however, Maxim was also an expert in publicity and public relations. By July, national magazines such as Popular Mechanics were writing favorable reports about the ARRL. Maxim also traveled to Washington, DC, to explain the ARRL to the Department of Commerce and the Commissioner of Navigation.

The P.R. blitz paid off. By September, 1914, there were 237 relay stations appointed, and traffic routes were established from Maine to Minneapolis and Seattle to Idaho. Realizing that long distances on 200 meters were not possible at that time, even with a regenerative receiver, Maxim got the Department of Commerce to authorize special operations on 425 meters (706 kc) for relay stations in remote areas.

Boosted by the publicity, the number of amateur stations, as well as the relay stations in the ARRL, continued to grow. By 1916, there were 6000 amateur licenses, (of which 1000 were ARRL relay stations) and 150,000 receivers in use. The emphasis in the ARRL was on the word RELAY; ARRL stations were expected to handle traffic on the 6 Main Trunk Lines (3 North/South and 3 East/West) that served more than 150 cities. And there was traffic.

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From page three.

The general population (to whom phones were a luxury, long distance an exotic concept, and telegrams expensive) flocked to the idea of coast to coast free messages. As a P.R. exercise to test the system nationwide, on Washington's Birthday, 1916, a test message was sent to the Governors of every State, and President Woodrow Wilson in Washington, DC. The message was delivered to 34 States and the President within 60 minutes. By 1917, the system was so refined that a message sent from New York to California took only 45 minutes. To deal with the increasing number of relay stations, the ARRL started a little magazine, which they called QST.

Other amateur activities in this period brought favorable publicity to the hobby. In March 1913, a severe windstorm had knocked out power, telegraph and telephone lines in the midwest. Battery powered amateur stations handled routine and emergency traffic until regular service was restored. This was the first documented emergency communications in amateur radio history. In 1915, amateur station 2MN determined that the powerful Telefunken station (see August 1996 issue of "Popular Communications" magazine) at Sayville, Long Island, was sending information concerning Allied and neutral shipping to submarines at sea. Thanks to the work of this amateur, the government took over the station.

However, the war in Europe was getting closer. In April, 1917, based on continued violations of our neutrality and unrestricted submarine activity, Congress declared war against Germany. With the US now in World War I, a message went out from the Secretary of Commerce to all private stations. By order of the Chief Radio Inspector, all transmitting AND RECEIVING stations were to be closed AND DISASSEMBLED, and all antennas taken down. Complete radio silence was to remain until the war ended and the order was revoked.

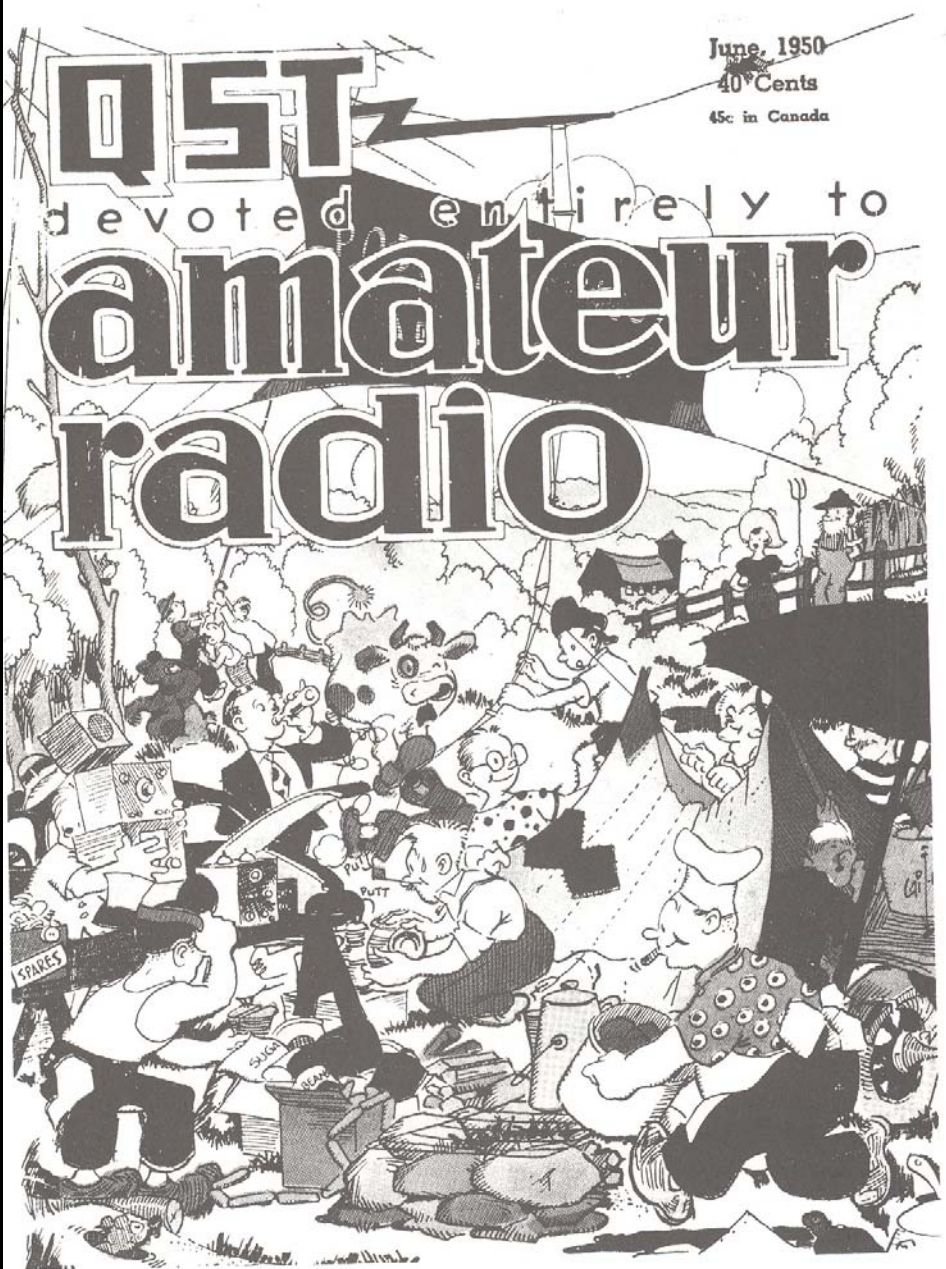
Amateurs by the thousands packed away their stations and marched off to war. The 200 meter band was silent. In September 1917, with no radio activity permitted and 80% of the amateurs at war, QST ceased publication.

Would amateur radio survive the war?

Join us next time as "The Wayback Machine" waits for Johnny ham to come marching home again.

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June, 1950

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MARS and RACES member Madelaine Matej welcomes all club members to her upcoming performance singing the role of Flora with San Francisco Lyric Opera's production of "The Turn of the Screw" by Benjamin Britten (sung in English with English supertitles):

Cowell Theatre at Fort Mason, San Francisco

- Friday May 30 7:30pm
- Sunday June 1 2:00pm
- Friday June 6 7:30pm
- Saturday June 7 7:30pm

Single Tickets

- General Admission \$32
- Students \$18
- Children under 12 FREE

• Fort Mason Foundation Box Office:

<http://www.fortmason.org/boxoffice/index.shtml>
(open Tuesday-Saturday, 11:00 a.m.-5:00 p.m.) or call 415-345-7575 • At the theater one hour before performances.

• Visa, Mastercard, and American Express accepted.

More information online:

<http://www.sflyricopera.org/index.html>

Denice Stoops pegged it when she said it sounds like a Victorian, operatic version of the old TV soap, "Dark Shadows"!

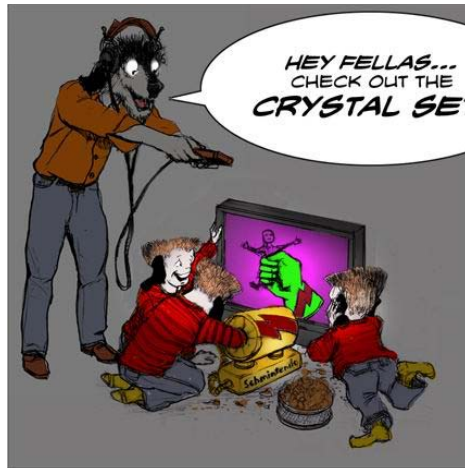


YA KNOW
AT NIGHT
**THIS GETS
CINCINNATI...**

From K1NSS Jeff

Dash, the Dog-Faced Ham

Go to www.dashtoons.com



**Our antennas are in there,
somewhere.**

**This is how our repeaters stay on the air.
Site is San Pedro.**



General Membership Meeting is held on the first Friday of each month at Alto District Clubhouse on Shell Road in Mill Valley, starting at 7:30 PM. Turn right at the first stop light west off hwy 101 at the Mill Valley/Tiburon exit. Angle right at next stop sign, then turn left at next street, Shell Road. We are in the two story building on the left directly under the power lines.

Business/Board Meeting meets at the Alto District Clubhouse in Mill Valley on the second Thursday at 7:30 PM. Members are encouraged to attend to try to keep the clowns honest.

Sunday morning informal meeting, grinningly called the bible/babble class, meets every Sunday morning at the Alto District Clubhouse in Mill Valley starting at roughly 0800 hours and runs to around 1100 hours +or-. Sometimes we even talk about radio. This weekly event is hosted by **Ben Sawtelle N6PJZ**, our Ham of The Year in 1996, whose absence would be the result of serious disease or dismemberment, only. So far, he hasn't forgotten how to get there.

Dues structure is: \$25. per year. \$30. for family memberships. No dues are charged for Life or Honorary members.

<p>Marin Amateur Radio Society President: Denice Stoops KI6BBR 672-0303 Vice President: Randy Jenkins KA6BQF 510-526-4089 Secretary: Elisabeth Thomas-Matej KG6IMV 381-0585 Treasurer: Dave Hodgson KG6TCJ 332-1864 Additional Board Members: Norm Baetz WA6CLK 898-4887 John Boyd KE6ORI Rich Carbine W6UDS 479-3136 Horst Dannecker KA6BHZ Phil Dunlap K6PHD 491-0318</p>	<p>Education Chair: Ben Sawtelle N6PJZ 382-1170 kermode7@hotmail.com Membership: Dave and Phil VE Liaison: Randy Jenkins KA6BQF 510-526-4089 Bldg. Manager Rich Carbine W6UDS 479-3136 Trustee for W6SG: Augie Koehler KØCQL Trustee for K6GWE: Doug Slusher KF6AKU Sunday Emergency Nets: HF Ben's been doing both. VHF</p>	<p>DX Representative of ARRL: Jerry Foster WA6BXV 892-3829 WEBMASTER Glenn Meader N1ZKW 987-3948 N1ZKW@ARRL.NET Public Service Event Coordinator Randy Jenkins KA6BQF 510-526-4089 ARRL San Francisco Section Mgr. Bill Hillendahl KH6GJV@ARRL.ORG Editor of QSA-5: Phil Dunlap K6PHD 491-0318 K6PHD@ARRL.NET</p>
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Address
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