
QSA-5

The Marin Amateur Radio Society Monthly Newsletter

Founded 1933

January 2015

Presidents Corner

On January 17th we held our third Public Service Lunch. Randy Jenkins KA6BQF wore the toque blanche and served up Lasagna, and salad. John Boyd KE6ORI made his famous Garlic Bread, the vampires never had a chance. This year we gave out Marin Amateur Radio Society baseball caps. Those of you who could not attend the lunch can get your cap at any meeting.

This year we gave our awards as well. Those of you who have wandered around our website have found the Public Service Honor Roll, the 2014 listing is now available at http://w6sg.net/site/page_id=473 each ham who worked an event is listed with a number of gold stars one for each event worked. This year we gave out actual gold stars (metal not paper) to each ham who worked three or more events. Those of you who did not pick your gold star can get it from me.

In the past we have asked for and received comments on how we can improve the public service experience. For most of my working life I have been involved in large complex projects and so I have been part of a lot of post mortems which often have a way of descending into war stories and complaints about things that are outside of the control of the group conducting the post mortem. Each year I have been impressed with the quality and imagination of the suggestions that come out of our Public Service meeting. We have a crop of new ideas to work on this year. Once we have nailed down what we can do I will tell you about changes we will make.

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What's Happening in Radio

On the Air

Ham Projects- Rotator Control

USS Pampanito Report

MARS Public Service Events

Board Minutes

Meeting Minutes

From the Editor

Ed Essick, K6ELE

Ham Radio in 2015

I just finished a small construction project that allows me to control my Yeasu Rotor with my computer. The fun part of the project was learning about soldering very small components and seeing the completed project work as intended.

What are you going to do with ham radio in 2015? There are so many different things we can do; chase DX, build antennas, work the Sunday nets, learn new software, operate in the club public service events, participate in Field Day, and others I am sure you could list here. The point is that by being involved in ham radio we stay active, learning, and communicating with our fellow hams in the club.

Starting in this first issue of the New Year I am introducing a new column for the newsletter **Ham Projects**. Take a look at my article in the new **Ham Projects** column about building the Easy Rotator Control on page 4. It the first Ham Project article and I hope I can encourage some of you to send me your project for Ham Projects in QSA5 this year. It can be a rough draft or you just your notes that I will complete for the article.



Prior to our meeting Rich Cochran AG6QR suggested that we have a show and tell of public service stations that some of our more experienced hams have built. We had half a dozen really cool stations on display. We have some very talented builders in our club and a lot of questions were asked and answered. I think we should do this again next year and I hope to see more quality work. Some of these setups are so well done that maybe we should have a presentation on the topic at a regular meeting.

Once again I want to thank all the people who participated in public service events last year. I also want to encourage those of who have not volunteered in the past to come out this year. We are going to schedule a public service orientation session and if you are new you will be assigned to work a location partnered with an experienced ham for your first few events. We are also looking for people to be net control and again you would work with an experienced net control operator.

Lastly I begin my first harangue about renewing your membership. Shortly you will be receiving an email reminding you to renew. Of course with online renewal on the site you can go online any time and renew. Just go to http://w6sg.net/site/?page_id=715 and please consider a tax deductible donation as well.

73 DE WA6UDS

On The Air

Contest Calendar

Vermont QSO Party, 0000Z, Feb 7 to 2400Z, Feb 8
10-10 Int. Winter Contest, SSB 0001Z, Feb 7 to 2359Z, Feb 8
British Columbia QSO Party, 1600Z, Feb 7 to 0400Z, Feb 8
CQ WW RTTY WPX Contest, 0000Z, Feb 14 to 2359Z, Feb 15
ARRL Inter. DX Contest, CW 0000Z, Feb 21 to 2400Z, Feb 22
North American QSO Party, RTTY 1800Z, Feb 28 to 0600Z, Mar 1

2 Meter Critical Mass Radio Practice

Our next radio practice will be Saturday February 14, 2015, from 1000 hrs to 1200 hrs, again at Spreckels Lake in Golden Gate Park (36th Ave and Fulton).

That's the second Saturday of the month. Most of our practices in 2015 will be held on the 2nd Saturday.

If you come 15 or 20 minutes early you can be the Net Control Operator and take check-ins as everyone arrives. Also, everyone can "make-contact" as they get close to Spreckels Lake and then again when you are in sight of the practice location.

The check in frequency will be 146.550, simplex, tone 100.

What's Happening in Radio?

Australian "Pico Balloon" Piques Ham Radio Interest

A foil "party balloon" released in late December from Melbourne, Australia, carrying an HF Amateur Radio payload, ended its journey on January 16 off the east coast of Africa near Madagascar. Andy Nguyen, VK3YT, of Kensington, Victoria, Australia, released his PS-30 "pico balloon" on December 27, hoping that it might circle the globe. Its 13-gram Amateur Radio payload included a solar-powered 25 mW transmitter, sending telemetry on 30 and 20 meters using WSPR and JT9 digital modes. Many radio amateurs tracked the balloon's progress during its 20-day flight.

A map showing the track of the PS-30 pico balloon -- from Australia to Madagascar.

"There was some bad weather in the region, but speculations also include the possibility it was brought down (attacked) by the naughty penguins on the Island," Nguyen quipped, referring to the 2014 animated movie comedy, "Penguins of Madagascar." Several radio amateurs in South Africa reported that PS-30 was down. Following its launch, the balloon had traveled east across the southern tip of New Zealand, across the Pacific Ocean to South American and then to southern Africa. To return home, PS-30 would have had to cross Madagascar, the Indian Ocean, and part of Australia.

"The level of interest from all around the world has been amazing," Nguyen said. "The trip would not have been so successful without the collective effort of the like-minded community built up along the way." Transmissions from the balloon at times were plagued by poor propagation, and its progress was impeded by the fact that it circled on a few occasions along the way. Nguyen said the balloon looped for an entire day at one point while over the Pacific.

"HF propagation has been different from previous flights," he commented during the flight, noting the lack of long-range WSPR spots. "Reception of JT9 packets so far generally requires some type of directional antenna with some gain," he said. Nguyen said planning for PS-31 is already under way. "See you at the next trip," he said. -- Thanks to Jim Linton, VK3PC

(Reprinted with permission from The ARRL Letter for January 22, 2015)



Navassa DXpedition Team Poised to Offer "Once in 32 Years" Opportunity

The K1N Navassa DXpedition team hopes to be on the air with up to eight stations in less than 2 weeks, offering a "once in 32 years" opportunity to work the most-wanted DXCC entity. It's been 22 years since the last Navassa operation, and the US Fish and Wildlife Service (USFWS), which is responsible for the island, will



not permit another operation for at least 10 more years. The team said its exact departure date will not be determined until the last minute and will depend on the USFWS and on weather conditions. The team will arrive at its staging point a few days before the earliest possible departure window and will be ready for rapid deployment to Navassa.

"As soon as the USFWS has landed on the island and declared it is safe to proceed, we will start the helicopter flights and commence operations," the K1N team said this week in a media release.

"We hope to have a basic camp established by the end of the first day, and, if things go extremely well, we hope to have several stations on the air by nightfall on the second day," the K1N media release said. The K1N team will take along a VHF/UHF transceiver and an Arrow antenna in the hope of making some satellite contacts via FO-29. AMSAT has provided the DXpedition with a Yaesu FT-817 transceiver and associated equipment, as well as pass predictions, an operational plan, and training.

The K1N stations will always operate split frequency, listening up or down, depending upon the band plan. Stations should avoid transmitting on the DXpedition's frequency.

FCC Eliminates Paper Licenses

Starting 2/17 all licenses will be issued electronically. Paper copies of a license can be requested from the FCC via the ULS License Manager.

ARRL Board Okays Changes to DXCC Program, VHF and Above Contesting Rules

The ARRL Board of Directors has tweaked the DX Century Club (DXCC) rules to clarify and expand their recognition of remotely controlled station technology. It has also added a rule that puts greater ethical responsibility on operators with respect to remotely controlled operation. In addition, the Board adopted changes to the ARRL VHF/UHF contest rules that are aimed at encouraging greater participation. The Board took the actions during its annual meeting January 16-17 in Windsor, Connecticut.

ARRL President Kay Craigie, N3KN, prepares to gavel the 2015 Annual Meeting of the ARRL Board of Directors to order. [LJB Special Photography photo] The DXCC Rules changes, which affect Section I, subsections 8 and 9, explain and extend how contacts with remotely controlled stations now may be applied toward the DXCC award. According to ARRL CEO David Sumner, K1ZZ, the changes are subtle but significant. The modified rules make clear that contacts with legally licensed, land-based, remotely controlled stations count for DXCC, but the control point -- the operator's location -- of a remotely controlled station no longer has to be land based; the operator can be literally anywhere.

"It has always been permitted for a QSO to count for both stations, if either station was operated remotely from a control point within the same DXCC entity," Sumner explained. "Now the location of the operator doesn't matter; the operator could be on the far side of the Moon, if he or she could figure out how to remotely control a station on land back on Earth from there." Transmitter location continues to define a station's location, and, for DXCC purposes, all transmitters and receivers must be located within a 500 meter diameter circle, excluding antennas.

Under the old rules, if either station was operated from a control point in another DXCC entity, the contact did not count for DXCC for either station. "This was unenforceable unless someone was transparent about what they were doing," Sumner said.

The Board further adopted a new rule, now Subsection 11 (subsequent rules have been renumbered accordingly), that acknowledges the reality of the technology enabling remote operation, and it puts greater responsibility on individuals when it comes to applying that technology ethically and responsibly.

VHF and Above Contest Rules Revised

The Board also adopted amendments to the General Rules for ARRL Contests Above 50 MHz to encourage greater participation and band utilization. The changes become effective with the 2015 June ARRL VHF Contest.

(Reprinted with permission from The ARRL Letter for January 22, 2015)

Creating Software Controlled Rotator

Ed Essick, K6ELE

In the November 2014 QST I read an article that reviewed the Easy-Rotator-Control (ERC). I have a Yeasu G-450A rotator that I purchased about 15 years ago and it has been in operation turning a 3-element 10-15-20M yagi beam. The operation of the Yeasu G-450A is like many other rotators, you press a left or right switch to move the antenna. The ERC automates this function by working with a software program to control the rotation of the rotator. The

as



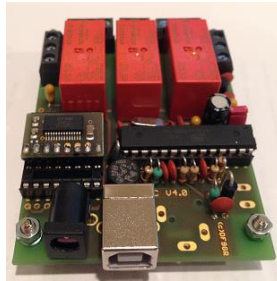
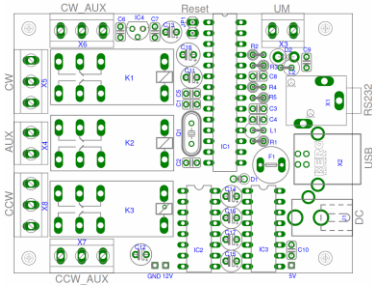
1 Yeasu G450-A Rotator

ERC came as a PCB board with all of the required components or assembled. I choose the kit. The ERC comes either with a USB or RS232 interface. Since USB is replacing RS232 for most ham gear, I choose the USB kit (\$90). Two versions of the kit are available: a single-axis interface for azimuth-rotators (my Yeasu G-450A) or a dual-axis interface for azimuth and elevation (for satellite tracking). Assembly took about 2 hours as you have to solder the IC sockets to the PCB well as the other components. (Thanks to Mike, AI6II, for the use of his solder station with fine tips.)

The rotator kit is produced by a German ham, Rene DF9GR. The kit comes with complete instructions and setup software on a DVD. All components are visually identified on a completed board and the PCB board is also shown with placement information for components. This made it

really easy to get each component soldered in the right place.

The controller consists of three relays, a USB module, and an EPROM chip that is programmed for the movement of the rotator.



2 PCB layout for components

3 Completed ERC controller

Once completed, I ran the test procedure software that came with the kit, but could not get the correct response from the controller I emailed Rene and he responded immediately to my email and suggested we use Skype to troubleshoot my problem. I have to admit, this was the first time I had used Skype, which is a program that does the same thing as Apple Facetime, allowing two people to essentially video conference. I activated the desktop feature of Skype and he could see my desktop and the failure of the USB software. My USB module turned out to be bad and Rene replaced it. His customer service is absolutely amazing. He also setup N1MM contest logging software for rotator control, while we were connected by Skype. The ERC uses a COM port, in my case COM2. It needs to be set to 9600 Baud.

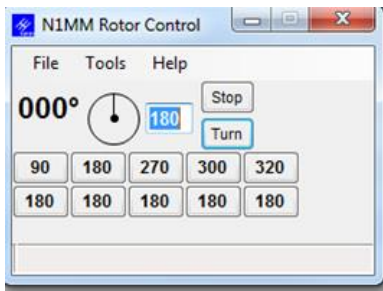
Now it was time to put the completed controller in my Yeasu rotator box. There is a Yahoo group for the ERC controller and it had pictures of an installation like mine. The manual that came with the kit also showed to be connected between the Yeasu and the two holes in the back of the Yeasu to allow and the USB port. I do not have any the holes are not that clean, but it works.



4 ERC installed in Yeasu rotator box

ERC installation the wires that needed ERC. I had to drill access to the 12V plug Greenlee punches, so

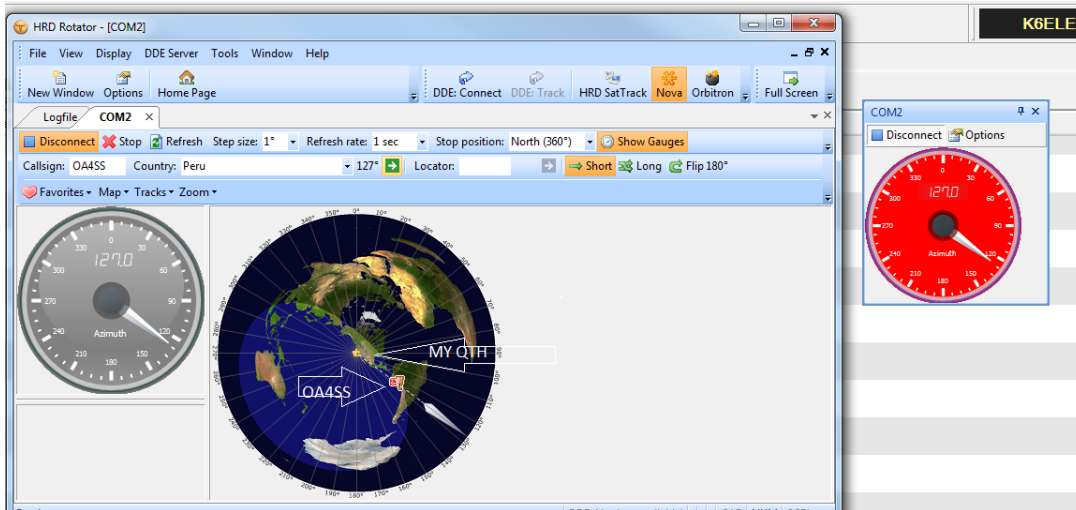
OK, so it was time to test the rotator controller. I started N1MM and clicked on its rotator interface window to turn the beam to 180 degrees. The rotator started to turn and positioned my beam on the heading.



5 N1MM controlling Yeasu rotator

Next was to get it working with HRD (Ham Radio Deluxe). For this I called Mike, AI6II, as he already had rotator control working with HRD. In about 5 minutes by Skype he helped me setup HRD for rotator control. Here I have put in the call sign OA4SS for the station I want the rotator to turn to a heading. HRD shows the station, in Peru, on the map. This is after the rotator has moved to the heading to Peru station.

6 HRD Rotator control



So it was a rewarding experience overall. I learned more about soldering small components on a PCB and how to interface the rotator controller to my logging software.

USS Pampanito Report

Our regularly scheduled Dedicated Day of Operation (DDO) was underway before 1100 hours, Saturday, January 10, 2015 aboard the USS Pampanito. Aboard were myself, Den Regan, K6ZJU, and our Yeoman, Hal Strunk, WA6JNZ.

Our station, NJ6VT, was operating on the 40 meter CW and SSB bands making a few QSO's under rather poor radio propagation conditions. We worked a few stations to the east in the Sierra foothills and tried several times to work the USS Midway, NI6IW, in San Diego. The first QSO with the Midway needed the assistance of a relay station, N6UFE, around the San Luis Obispo area, as the Midway was experiencing a high, receive noise level. We did manage a direct QSO with the USS Midway later in the day. Also worked was K6KPH in Bolinas and Taka, JA1KIH, in Japan on the 17 meter CW band.

Visitor traffic was very light aboard the boat with the Golden Gate Bridge shut down for the entire weekend. Nonetheless, we did have several nice conversations with visitors from several countries including Morocco and Russia who managed to find their way to the boat.

Our next scheduled DDO is set for February 14th, 2015. Hoping we can get better participation this next time around!
73,

Den Regan, K6ZJU
CO Pampanito A.R.C. NJ6VT
USS Pampanito, SS-383
Pier 45, Shed "A"
San Francisco



Ham Radio and EME Rob Rowlands, NZ6J

"One of the professional magazines I get, IEEE Microwave, has a great article in the current issue on ham radio in general, and moon bounce in particular. Ham radio sometimes gets a bad rap in the engineering community, despite that many of us got into engineering through ham radio. More recently I often hear engineers opining that ham radio is dead at the hands of the internet!"

Microwave and RF engineers are, by their very nature, experimenters. This experimentation comes in various guises; the traditional definition is the engineer working tirelessly (and often in obscurity) on circuits on the workbench, but other equally valid definitions include playing what-if scenarios with microwave/RF computer-aided design (CAD) input variables or even trying various input parameters to explore the limits of a mathematical theory. Through experimentation, many advances in technology have been found, with new advances being reported each day in the literature. (Abstract reprinted from Microwave Magazine Vol. 16, Issue 1)

2015 MARS Public Service Events

The club public service season starts April 25th with the Ridge to Bridge Run. There are volunteer slots available for these events that run through October 2015. Contact Randy Jenkins, KA6BQF, or Michael Fischer, K6MLF if you would like to participate in one or more of these events.

Public Service Luncheon

A luncheon was held at the clubhouse on Saturday January 18th to recognize those hams who volunteered for public services events in 2014. Volunteers each received a lime-green w/reflective tape "Radio Operator" cap in recognition of their service.



Club Jackets Available

Like the new MARS logo? Need a toasty, spiffy jacket? Look at the photo of Steve, Jerry and Michael wearing theirs, and get one for yourself! You order them directly from Debbie Diaz of Catto's Graphics in Santa Cruz. Her telephone number is 888-722-7135 (0700-1530L) Base price is \$52 w/logo.

Add your name and call sign, tax and shipping, it's around \$80. Up to 6XL available. (Base price for XXL and up is \$58) Her email is debbie@cattosgraphics.com



Minutes for Board Meeting

Thursday, January 08, 2015

Board Members present: Curtis Ardourel, Dave Hodgson, Marc Bruvry, August Koehler, Doug Slusher, John Boyd, Cal Anber. Rita Brenden and Randy Jenkins arrived a few minutes late.

The meeting was called to order by Curtis Ardourel at 19:30 hours.

The agenda was approved as amended.

The minutes of the November 13, 2014 meeting were approved as published. Due to a lack of a quorum, no Board Meeting was convened in December 2014.

Officers for 2015 - There was a motion to continue with the current slate of officers. VNT/TIA/Pass.

Randy reported no significant mail, under correspondence.

Treasurer: Dave submitted reports for December. The report showed \$7,140.00 income and \$473.95 expenses; and total cash assets of \$56,320.74. There was a message from Fireman's Fund about a potential rate increase.

Committee reports:

Membership- We have 83 Members and 17 renewals for 2015.

Public Service – We have a thank-you lunch scheduled on January 17.

Technical- No report, things are working.

Comm Truck- Rusting.

VE Liaison – Randy reported that dates for 2015 have been posted to the website.

Education – John Boyd had a question about conducting classes by Skype.

Speakers – Doug is looking for speakers.

Building Committee – Doug is scheduling a roofing contractor for an estimate.

Old Business:

Ham Shack Procedures – Marc has produced a binder. Doug will work on a laminated card with return-to settings.

The Sunday Nets - Curtis reported that the webpage had been fixed, and that rosters can be downloaded.

Parking Signs – No report.

Inventory of Equipment – Doug is half way through. It has been stalled.

Building Inspection – The report was discussed. Safety issues need to be addressed ASAP. Doug will get estimates on plumbing, and roofing issues. Randy capped open electrical boxes, and replaced a ballast.

Antenna Analyzer – Doug is working on check-out procedures.

DBA Corporate name: John Boyd is still researching this issue, and should proceed. Trademarking or copywriting the Club Logo could be expensive.

New Business:

Cal's Car – Cal has the car up for sale.

Door Prizes at Meetings – Was discussed. There are State rules for conducting "raffles". We already provide food, which most clubs do not.

There being no further business, the meeting was adjourned at 21:03 hours.

Respectfully submitted,

Randy Jenkins, KA6BQF

Secretary, Marin Amateur Radio Society

The official copy of these minutes shall reside in the Secretary's files as maintained at the Corporate Office.

Membership Meeting

Friday, January 2, 2015

The meeting was called to order at 19:30 hrs by President Curtis Ardourel.

A round of introductions was the first order of business. Twenty-five members or guests were present.

The agenda was adopted as presented.

President Ardourel reported on the actions at the December Board of Director's Meeting. The Board election results for five seats were announced: Ed Essick, Rita Brenden, Khaled Anber, Randy Jenkins, and Marc Bruvry were elected to two year terms. Doug Slusher was confirmed as the Trustee of K6GWE.

There were three reports under "Fun with Amateur Radio".

The following new members were announced: John Girton; Howard Leister, W2BBF; Peter McElmury, AA6SF; and Francis Strohmeier, WA6TFP.

Secretary Jenkins reported no significant communications.

Treasurer Dave Hodgson was not present and submitted a written report showing \$7,140.00 income and \$473.95 expenses for December. Assets totaled \$56,320.74.

Membership: 83 for 2014. Curtis reported that renewals would go out for 2015. Members can renew and pay on the website.

Public Service: The 2014 Thank-you lunch is scheduled for Saturday, January 17. Please RSVP. The 2015 events are filling in on the chalkboard, and on the website.

The Technical Committee: Doug reporting that things were going OK.

Comm Truck: Still rusting.

Education: Nothing scheduled.

Christmas Party: Thank you to Randy and Rita for a great event.

Old business: None

New Business: None.

There being no further business, the business meeting was adjourned at 19:50 hrs.

Respectfully submitted, Randy Jenkins, KA6BQF, Secretary.

Dr. Edison Fong, WB6IQN, made a presentation on his dual-band j-pole antenna design. edison_fong@Hotmail.com

Marin Amateur Radio Society W6SG.NET, membership@w6sg.net General Membership Meeting is held on the first Friday of each month at Alto District Clubhouse at 27 Shell Road in Mill Valley, starting at 7:30 PM. Come a little early for pizza or whatever.

From highway 101, head west toward Mill Valley on E.

Blithedale. Turn right at the first stop light. Stay right at next stop sign, then turn left at next corner, Shell Road. We are in a two story building, second from the corner 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.

Sunday morning informal meeting (aka bible class) meets every Sunday morning at the Alto District Clubhouse in Mill Valley starting around 8am and runs to about 11am. Sometimes we even talk about radio.

The Sunday Emergency nets. The K6GWE emergency VHF net check-in is at 10:15 am on 147.700 (-pl 203.5). This is a directed net and the net control station may operate at the club house or at a member location. Members on the net check-in list that do not check in for three consecutive weeks are removed from the list until they reestablish check-in. Any member can sign up to act as the net control station. See the club website for signup instructions. The W6SG emergency HF net check-in is at 9 am on 3.915 Mh.

Marin Amateur Radio Society Officers and Board Members:**President**

Curtis Ardourel WA6UDS 510-595-3494

Vice President

John Boyd KE6ORI 924-04419

Secretary

Randy Jenkins KA6BQF 510-526-4089

Treasurer:

Dave Hodgson KG6TCJ 332-1864

Board Members

Cal Anber N6TIA 209-275-5252

Rita Brenden KG6WPN 707-557-5521

Marc Bruvry KF6VNT 492-9292

Phil Dunlap K6PHD 491-0318

Ed Essick K6ELE 456-1715

Other Positions:**Education Chair**

Randy Jenkins

VE Liaison

Randy Jenkins

Building Co-Managers

Curtis Ardourel

Dave Hodgson

Trustee for W6SG

Augie Koehler K0CQL

Trustee for K6GWE

Doug Slusher KF6AKU

Sunday Emergency Nets

Mark Bruvry and other volunteers

DX Representative of ARRL

Jerry Foster WA6BXV 892-3829

Public Service Event Coordinator

Randy Jenkins KA6BQF 510-526-4089

Membership**Editor of QSA-5**

Ed Essick K6ELE 456-1715

e.essick@comcast.net

ARRL San Francisco Section Manager

Bill Hillendahl

KH6GJV@ARRL.ORG

WEBMASTER

Glenn Meader N1ZKW 987-3948

N1ZKW@ARRL.NET