



September 2013 The California QSO Party is next month!

SEPTEMBER CLUB MEETING

When & Where

Date: Friday, September 27th, 2013

- **Time:** Socializing at 7PM Meeting starts at 7:30PM *Guests are welcome to join us*
- Place: Covington School, 205 Covington Rd, Los Altos (near Foothill Expressway and El Monte Rd)

Snacks: Cookies and coffee will be served.

Questions: Bring your hardest radio questions. The mysterious Dr. Know-It-All reveals all answers.

Post-Meeting Snacks: Denny's on Mathilda in Sunnyvale.

Raffle Prizes

We will have a great selection of Raffle Prizes as well as the CA\$H Wish-You-Were-Here Prize.

1st Prize: Tigertronics SL-USB-6PM Signalink Computer Interface

2nd Prize: Evil Mad Scientist "Three Fives" Discrete 555 Timer Kit. The kit is a faithful and functional transistor-scale replica of the classic NE555 timer integrated circuit, one of the most classic, popular and all-around useful chips of all time. http://www.evilmadscientist.com/2013/555-kit/

3rd Prize: Powerwerx HY4300 Digital Multimeter

4th Prize: ARRL Repeater Directory 2012-2013

Wish-You-Were-Here Prize: A CA\$H prize awarded to a member who is present and has paid their 2013 dues. (September Meeting = \$15)

Presentation

* <u>Home</u> <u>Brew</u> <u>Contest</u> *

This is your time to shine!

Come on out and show 'n tell!

Ca\$h Prizes to the Top 4 Presentations

Share your ham radio project with us!



CALENDAR OF UPCOMING EVENTS

www.fars.k6ya.org/events/calendar

* Visitors are welcome at all FARS events! *

FARS is an amateur radio organization in the southern San Francisco Peninsula area serving residents of Los Altos, Palo Alto, Mountain View, and several other communities.

SEPTEMBER

27	FARS Club Meeting, Covington School, Los Altos, CA, 7PM
	Home Brew Night – CA\$H PRIZES!

OCTOBER

5-6	California QSO Party 2013, Los Altos, CA, 11AM Sat – 3PM Sun
	An excellent opportunity to get on the air!
	Details at <u>www.cqp.org</u>
9	Board meeting

- 12 <u>Electronics Flea Market</u>, DeAnza College, Cupertino, CA, 5AM This Flea Market cancelled due to conflict with Pacificon
- 11-13 Pacificon 2013, Santa Clara Marriott Hotel, CA A San Francisco Bay Area amateur radio convention you won't want to miss
- 13BARC Meeting, Los Altos Public Library, CA, 6PM
Possible date change, please see the website / Yahoo Group
- 25 <u>FARS Club Meeting</u>, Covington School, Los Altos, CA, 7PM Preserving the Forgotten Electronics and Radio History of Silicon Valley and the Bay Area, by Charles DiLisio

NOVEMBER

- 10 <u>BARC Meeting</u>, Los Altos Public Library, CA, 6PM Possible date change, please see the website / Yahoo Group
- 13 Board meeting
- 22 FARS Club Meeting, Covington School, Los Altos, CA, 7PM New Holiday Goodies for the Ham Shack, by HRO

DECEMBER

8	BARC Meeting, Los Altos Public Library, CA, 6PM
	Possible date change, please see the website / Yahoo Group

- 11 Board meeting
- 20 FARS Club Meeting, Covington School, Los Altos, CA, 7PM
- 29 <u>ARRL Rookie Roundup CW</u>, 1800 UTC 2359 UTC A great opportunity for new operators to get on the air and learn the skills of CW. "Rookies" are those licensed in 2013, 2012 or 2011.

UPCOMING

Jan 2014 FARS/PAARA Winter Banquet

Jul 2014 ARRL National Centennial Convention, Hartford, CT

FARS Membership

Joining FARS and renewing your membership to FARS provides much needed:

*

Support for your club activities,

*

Qualifies you for the CA\$H Wish-You-Were-Here **Prize** awarded at each membership meeting,

*

Plus you'll receive a **FARS Relay** to your email each month!

Join us!

Have a photo, article, or operating news to share?

Email your FARS newsletter editor at <u>K6YL@ARRL.net</u>

PRESIDENT'S CORNER Mikel KN6QI

Membership Meeting. Our next membership meeting is on September 27th and our program is our annual Amateur Radio Home Brew Contest with you as our speaker. This is your opportunity to show off something you've worked on in the past year. Everyone is invited to participate and to make it even more interesting we are offering cash prizes for the best presentations.

Bring a project to show or an experience to share with our audience who are the judges for the prizes. The prizes are as follows: 1st - \$40, 2nd - \$30, 3rd - \$20, and 4th - \$10. And if you are not presenting, come to be a judge or be inspired. Remember to bring a few dollars for our raffle.

The FARS Electronics Flea Market was a success! Thanks to everyone who helped out including Peter W0NG for bringing donuts; Dick N6ATD for handling supplies and cash; Daniel KJ6SEE, Seth KF6UZX, and Michael NE6RD for handling the vendor ticket sales; Svend KF6EMB for bringing ice; Joanna K6YL, Rick N6DQ, Dona KI6DAR, Clark KE6KXO, Mike KJ6ZOM, Charlie KI6FXY, and Keith KJ6PUO for working the booth; and George N6NKT for the Red Cross equipment. Thanks also to everyone else I may have overlooked. We could not do it without all of you.

We had a strong turnout of vendors and buyers at this last flea market of 2013 and it made for a good result. We managed to clear over \$2000 after all expenses, which is (to the best of my knowledge) the best flea market FARS has ever had. Thanks again to all who helped make it possible

Board Members Needed. FARS needs help to organize, plan, and run our various activities. We could use another two members for the board of directors who meet once a month to plan activities and generally run the organization. If you can spare one evening a month to help out, please consider joining the board helping FARS. It's also an opportunity for you to develop your leadership skills and get us involved in new and interesting activities. Please consider it and contact myself or any board member to find out more.

de Mikel KN6QI

PHOTO TIME: FARS August Meeting

Congratulations to the August prize winners! (listed left to right)

Jeanette (no callsign) (Joanna K6YL's mom) won one of the ARRL Repeater Directories.

Jose KJ6WCX scored a roll of Rescue Tape.

Daniel KJ6SEE took home a copy of ARRL's "Small Antennas for Small Spaces".

Byron N6UOB won the Grand Prize Yaesu FT-60R HT.

Bob WB2URF took home the second ARRL Repeater Directory.

Peter Griffith WA6VAQ (not photographed) would have won the CA\$H Wish-You-Were-Here prize except unfortunately he wasn't present. Doh! This is actually the 2nd month in a row that Peter's name has been announced and he's missed winning this prize! Whoa! At the September meeting the WYWH prize will increase to \$15.









PACIFICON 2013

All the information you need

www.pacificon.org

Marriott, Santa Clara, CA October 11th, 12th and 13_{th}, 2013

- The great west coast ham radio convention
- Largest west coast vendor show for amateur radio gear
- More than 75 outstanding technical forums
- Great swap meet
- Parking is **FREE** for convention attendees
- Youth aged 17 and under attend for **FREE**
- And thanks to some sponsors college students can also attend for FREE (w/ student ID card)

Friday, October 11, 2013

Friday, October 11,	2013		
6:00am - 5:00pm	Registration & Will Call Desks Open		
8:00am - 4:00pm	Antenna Forum (addtl cost, order during Registration)		
8:15am - 4:45pm	Forums		
8:30am - 12:00pm	Legal Seminar (public may join after 9:30 am)		
3:00pm - 6:00pm	Vendor Expo		
Saturday, October 1	2, 2013		
6:00am - 5:00pm	Registration & Will Call Desks Open		
6:00am - 12:00pm	Swap Meet		
7:00am - 8:00am	Coffee with Gordon West (RSVP with registration)		
8:00am - 4:00pm	Technician One Day Class (RSVP via website)		
8:00am - 12:00pm	Amateur License Testing (\$15 VEC Fee, pay onsite)		
8:15am - 4:45pm	Forums		
8:15am - 4:45pm	NorCal QRP		
9:00am - 5:00pm	Youth Activities (in Vendor Expo hall)		
9:00pm - 5:00pm	Vendor Expo		
7:00pm - 10:00pm	Banquet Dinner (addtl cost, order during Registration)		
Midnight	Wouff-Hong Initiation Ceremony		

Sunday, October 13, 2015		
	7:00am - 12:00pm	Registration & Will Call Desks Open
	8:00am - 12:00pm	Amateur License Testing (\$15 VEC Fee, pay onsite)
	8:15am - 12:00pm	Forums
	9:00am - 1:00pm	Youth Activities (in Vendor Expo hall)
	9:00pm - 1:00pm	Vendor Expo
	1:00pm - 2:15pm	Annual ARRL Pacific Division Forum & Final Prize Drawing







See you there!



GENERAL ADMISSION \$23

for all 3 days! Reserve online by Sept. 30th (or pay \$28 at the door)

UPCOMING HOME BREW NIGHT At the September FARS Meeting

It's show and tell time! What projects have you been working on that are related to amateur radio?

Projects both small and large are welcome at the FARS Home Brew Night in September. Winners will take home cash prizes, and all present will be take home a wealth of new information. Come share with us!

Ideas...





[By XE1JHJ]



Unusual antennas!

[Photo collage by Venci Ristov Z39Z]

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ELECTRONICS FLEA MARKET Report & Photos



On September 14th FARS hosted the <u>Electronics Flea Market</u> at DeAnza College in Cupertino. This summer flea market is held once a month and is organized by <u>ASVARO</u> for the benefit of amateur radio organizations in the Silicon Valley. For the Foothills Amateur Radio Society the opportunity to host the event for one of the months results in a vital source of income, which could not be accomplished without dedicated volunteers.

Thank you to all who made this possible!





Keith KJ6PUO on donut duty

This fundraiser was a huge success!

Thank you to the above volunteers, as well as:

Peter W0NG Dick N6ATD Rohan KJ6LXV Mike KJ6ZOM Dona KI6DAR Daniel KJ6SEE Mikey NE6RD Svend KF6EMB Seth KF6UZX George N6NKT

And anyone I may have missed!



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INFO FROM THE AUGUST MEETING Island and Lighthouse On The Air by Joanna K6YL & Rick N6DQ

Thank you to all who attended the August meeting. I've had a few requests for information on the Lighthouse Bed & Breakfast we operated from so here it is. The inn keepers were incredibly supportive of our amateur radio operation!



East Brother Light Station www.ebls.org

Located just 30 minutes from downtown San Francisco, perched atop an island in the strait that separates San Francisco and San Pablo Bays.



US Island # CA069S (see http://www.usislands.org/)

Lighthouse ID's: ARLHS # USA-258 WLOTA # L0709

(see <u>http://wlol.arlhs.com/lighthouse/USA258.html</u>) (see <u>http://www.wlota.com/wna.htm</u>)

QUIZ YOURSELF with questions from the test for an Amateur Radio Technician License:

Q1 - Which of the bands available to Technician Class operators have mode-restricted sub-bands?

- a.) The 6 meter, 2 meter, and 70 cm bands
- b.) The 2 meter and 13 cm bands
- c.) The 6 meter, 2 meter, and 1.25 meter bands
- d.) The 2 meter and 70 cm bands

Q2 – What is the "Q" signal used to indicate that you are receiving interference from other stations?

- a.) QRM c.) QTH
- b.) QRN d.) QSB

Q3 - What is the "Q" signal used to indicate that you are changing frequency?

- a.) QRU c.) QSL
- b.) QSY d.) QRZ

Q4 – Why are UHF signals often more effective from inside buildings than VHF signals?

- a.) VHF signals lose power faster over distance
- b.) The shorter wavelength allows them to more easily penetrate the structure of buildings
- c.) This is incorrect; VHF works better than UHF inside buildings
- d.) UHF antennas are more efficient than VHF antennas

Q5 – What term is commonly used to describe the rapid fluttering sound sometimes heard from mobile stations that are moving while transmitting?

- a.) Flip-flopping
- b.) Picket fencing
- c.) Frequency shifting
- d.) Pulsing

Answers on page 13



CALIFORNIA QSO PARTY 2013 October 5th – 6th, 2013 www.cqp.org

Save the date!

CQP is coming up and the airwaves will soon be filled with stations looking for California!

CQP is a fun contest for every type of station -- QRP, low power, high power, phone or cw. If your QTH is in California then you'll represent points for anyone working the contest. You'll also represent California and help put all 58 counties on the air.

For California stations the object of the contest is to work as many stations as possible on SSB and CW. You can work the same station on each band and each mode for score credit.



The Exchange:

California Stations send QSO # and County.

Stations outside of California send QSO # and State (or Canadian Province or DX).

For a printable page of multipliers for the California QSO Party, click here: <u>http://www.cqp.org/pdf/cqp_mults.pdf</u>

ARICEBO OBSERVATORY

Opportunity for an awesome QSL card!

Special Event Station KP4AO

Celebrating the 50th Anniversary for the Arecibo Observatory in Puerto Rico

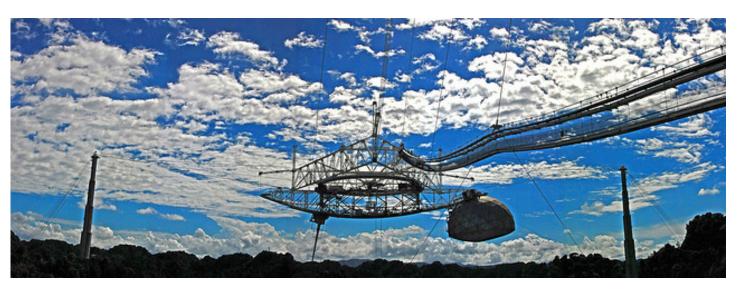
When: November 10, 2013 9am - 3pm

Sponsor: Caribbean Amateur Radio Group WP4CRG and the Arecibo Observatory Amateur Club

Operation: 20 meters. All operation will be in the Control Room and broadcast via video stream.









The Arecibo Observatory is a radio telescope in the municipality of Arecibo, Puerto Rico. The observatory's 1,000 ft (305 m) radio telescope was completed in 1963 and is the world's largest single-aperture telescope. It is used in three major areas of research: radio astronomy, aeronomy, and radio astronomy.

If you recall the telescope has made appearances in several motion picture and television productions...

The film *Contact* features Arecibo, where the main character (played by Jodi Foster) uses the facility as part of a SETI project (Search For Extraterrestrial Intelligence).

Arecibo was also used as a filming location in the climax of one of the **James Bond** movies, do you know which one? It was 1995's **GoldenEye**, the 17th movie in the series and thefirst to star Pierce Brosnan as the fictional MI6 officer. Special effects showed a lake being drained of water to uncover a secret satellite dish! *[info from Wikipedia]*

VOICE MODES Overview by the ARRL

www.arrl.org/voice-modes

Voice over radio channels (radiotelephony or just "phone") is probably the most popular form of Amateur Radio. A number of modulation modes are available to support voice work.

- AM is the oldest form of voice modulation. A CW carrier signal is controlled (modulated) by an audio voltage, so that the amplitude of the radio carrier ranges from zero (at negative audio peaks) to 200% (at positive audio peaks). Generation and reception of traditional AM can be done with relatively simple circuits, and it is still in use by a small, but hardy group of amateurs. (See the AM Phone page.) Nevertheless, most ham voice activity on HF has moved to SSB (see below).
- Digital Voice is a new technique built around analog to digital converters and codecs that sample a voice signal, compress it, and transmit it as a bit stream. Like other digital media, digital voice offers interference free communications if the radio signal is strong enough to overcome the general noise and interference level.
- **FM** is the voice mode of choice for local VHF / UHF operations, fixed or mobile, simplex or repeater based. It offers good performance with simple equipment requirements. The audio signal controls (modulates) the frequency of the transmitter over a small range.
- SSB is the descendant of traditional AM. Compared to AM, SSB requires less than half the bandwidth and it offers much more "talk power", since the unnecessary carrier and second sideband are not transmitted. SSB requires more frequency stability and somewhat more complex circuitry than AM, but essentially all mainstream amateur gear for the HF bands now supports SSB voice.

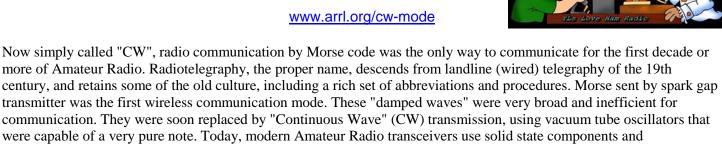
CWMODE Overview by the ARRL

AM Amplitude Modulation

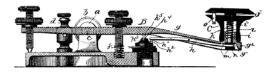
> Double-Sideband Full Carrier

FM Frequency Modulation

"Side Band" Single Sideband Suppressed Carrier



microprocessors to support a variety of communication modes including CW, voice, image and many digital data modes.





COOL USE OF HAM RADIO

Reported by BBC News Technology, 26Aug13 http://www.bbc.co.uk/news/technology-23840596

Giant Leap for Pi-powered Teddy Bear

A soft toy controlled by a Raspberry Pi computer has recreated Felix Baumgartner's record-breaking skydive.

Mr Baumgartner made the furthest freefall in October 2012, from a balloon almost 39km (24 miles) high.

A bear called Babbage has now leapt from a similar height after ascending beneath a hydrogen-filled balloon.

The Raspberry Pi low-cost micro-computer inside Babbage transmitted his position and shot stills and video throughout the flight and descent.

Sky high.

The robot Babbage was created by high-altitude ballooning enthusiast Dave Akerman, who has used the Pi as the control centre on other flights.

Babbage the bear is the official mascot of the Raspberry Pi project. The bare-bones computer was created to serve as an introduction to computers for children, but it has become a favourite among hobbyists who use it to control their home-brewed tech projects.

The Babbage flight is one of the more ambitious projects centred on the Pi and shows what the low-cost computer can do.

The launch site was a field near Mr Akerman's home north of Newbury, Berkshire.

Take off was at 12:25 GMT on 26 August. Babbage drifted south-west during his flight and rose to a height of just over 39km - slightly higher than Mr Baumgartner's record of 38,969m.

Mr Akerman made a cradle that Babbage sat on during the flight that was equipped with another camera that shot images similar to those taken over the shoulder of Mr Baumgartner before he jumped.

The Raspberry Pi inside the bear and his cradle switched from stills to video to record the moment when the toy fell off the cradle and started its descent.

On the Babbage flight, the Pi inside the bear's body logged altitude, shot footage and transmitted it back to

the ground. It also constantly broadcast the craft's location so the flight could be mapped and the pioneering toy retrieved. Many people followed the flight online via the streaming video feed sent back by Babbage.



Babbage the bear snapped stills during its ascent

Mr Akerman said the whole flight had gone "brilliantly".

"It released on time at just above 39km," he told the BBC, adding that a firing mechanism on the balloon was set to triggered just above that altitude. "Now," he said, "we just need to get all the bits back."

Babbage landed at about 16:00 GMT, in a field a couple of miles south of Shaftesbury.

During his descent, Babbage had been pursued by Mr Akerman and helpers in a chase car, and he was found at about 17:26 GMT.

Check Dave Akerman's website for details, photos, and even video footage from the flight.

http://www.daveakerman.com/



PHOTO TIME What's wrong with this photo?

How well do you know your CW?

Can you spot any mistakes on this "International Morse Code" watch?

- a.) 1 mistake
- b.) 2 mistakes
- c.) 3 mistakes
- d.) No mistakes



Answer on the next page.

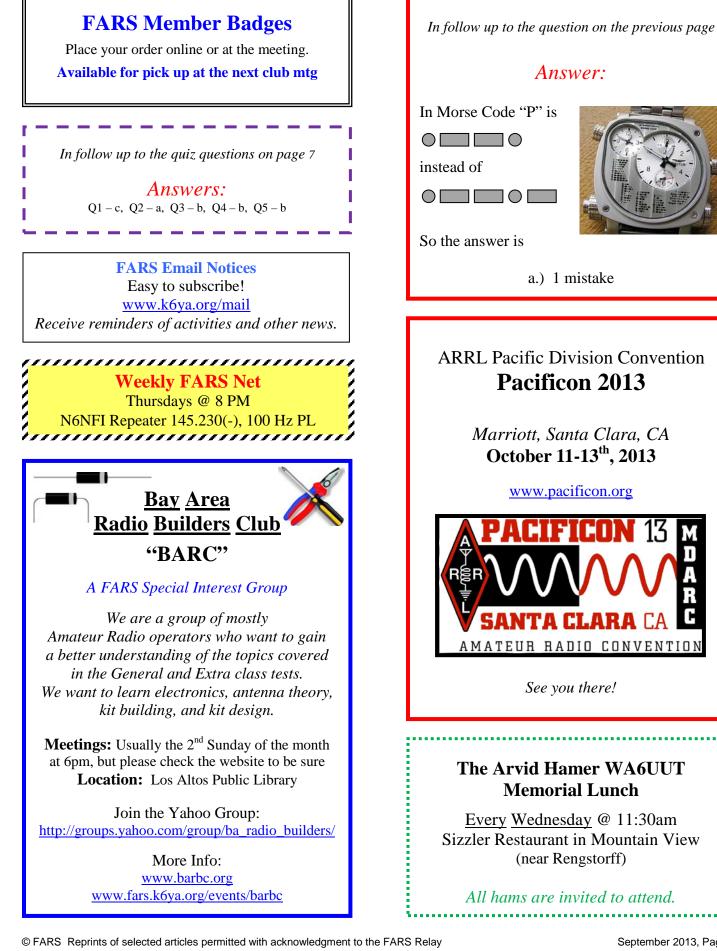
MISC INFO



Ever eaten a sandwich named after **Samuel Morse**? The <u>Heimerhaus Deli</u> in Redwood City has one!

The Samuel F. B. Morse sandwich consists of salami, pastrami, swiss, tomato, pickle, pumpernickel, dash of mustard

Amazingly this information arose as a question on the TV show "Who Wants to be a Millionaire".



HAM RADIO NETS – Getting On The Air

FARS Weekly Net Thursdays @ 8 PM

N6NFI repeater, 145.23-/100Hz **This net is open to all interested hams.**

The purpose of the net is to keep club members informed about club activities; to exchange other club-related info; and to socialize.

9AM Talk Net Weekdays @ 9 AM

N6NFI repeater, 145.23-/100Hz This net is open to all interested hams.

This is an informal net that is very popular. Check out <u>www.9amtalk.net</u> for more information.

READY TO UPGRADE YOUR LICENSE?

What is a Passing Score you might ask? Technician & General exams – 26 out of 35 (74.2%) Amateur Extra exam – 37/50 (74%)

BAEARS (Bay Area Educational Radio Society) Crams & Exams, <u>www.baears.com</u> -

This group holds "Ham Crams" 4 times a year for Tech and General licenses (Amateur Extra test available but no cram). A guided study consisting of six 45-minute reading periods, with breaks and lunch. They have a high success rate! *Pre-registration required, sign up on the website.* \$30

• Saturday 9/28, 8 AM @ Fremont (exam starts at 4 PM)

Sunnyvale VEC Exams, <u>www.amateur-radio.org</u> -

Holds test sessions on Saturdays often alternating between Sunnyvale and Redwood City. *Walk-ins only, no pre-registrations.* \$15

- Saturday 10/12, 10:30 AM @ Sunnyvale
- Saturday 11/9, 10:30 AM @ Sunnyvale
- Saturday 11/16, 10:30 AM @ Redwood City

Silicon Valley ARRL VE Exams, <u>www.svve.org</u> -

Holds test sessions on the 1st and 3rd Saturdays of each month. Arrive between 8 AM and 10:00 AM to the Saratoga Fire Station at 14380 Saratoga Avenue (in downtown Saratoga).

Walk-ins only, no pre-registrations. \$15

- Saturday 10/5 *8am to 9am only for this session*
- Saturday 10/19
- Saturday 11/2

Tri-City VE Group Exams, http://www.sbara.org/tricity_ve.html -

Holds test sessions at Hurricane Electric in Fremont each month, alternating between Saturday morning and Tuesday evening. The address is 48233 Warm Springs Blvd.

Walk-ins welcome. \$15

- Tuesday 10/8, 6:30 PM
- Saturday 11/9, 9 AM
- Tuesday 12/10, 6:30 PM

CURRENT US AMATEUR RADIO BAND PLAN: <u>www.arrl.org/band-plan</u> (<u>click here for printable PDF</u>) Effective March 5, 2012



CLUB INFORMATION

www.fars.k6ya.org

President: Vice President: Treasurer: Secretary: FARS Board:

Radio Officer: Training Officer: K6YA Trustee: Relay Newsletter Editor: Mikel Lechner KN6QI Steve Stearns K6OIK Dick Baldwinson N6ATD (open) Charlie Morrin KI6FXY Phil Hawkins KA6MZE (open) Phil Hawkins KA6MZE (open) Phil Hawkins KA6MZE Joanna Dilley K6YL

one mor roluntoe would be much approclate

Contact the FARS Board of Directors at fars-board@svpal.org.

<u>Membership</u>: An annual FARS membership is \$20 and provides much needed support for your club activities, qualifies you for the CA\$H Wish-You-Were-Here prize drawn at each membership meeting, plus you'll receive a FARS Relay to your email each month! An optional club badge is \$9.

FARS is a California 501(c)(3) non-profit corporation, so donations and membership dues are tax deductible with the CA Franchise Tax Board and the Internal Revenue Service.

<u>Meetings</u>: FARS meetings are held at 7 PM on the fourth Friday of each month except January (Winter Banquet); and sometimes there are changes for June (for Field Day) and November & December (for holidays). Visitors are always welcome! Directions on the website as well as in this newsletter.

Email Announcements: Members and non-members are encouraged to subscribe to the FARS Announcement list to receive reminders of FARS activities and other news. Browse <u>www.fars.k6ya.org/mail</u>, click on Subscribe/Unsubscribe and follow the instructions under "Subscribing to fars-announce". You may submit announcements to the FARS Announcement at <u>fars-announce@svpal.org</u>. The list is moderated and messages will require approval by the moderator.

<u>Newsletter</u>: The FARS *Relay* is the official monthly newsletter of the Foothills Amateur Radio Society. Contributions to the newsletter from members, family, and guests are earnestly solicited! Photos, operating news, articles, etc. can be submitted to the editor at any time. Contributions are subject to editing and/or compression.

Newsletter Editor:

Joanna Dilley K6YL <u>K6YL@arrl.net</u> PO Box 399, San Carlos, CA 94070 Also available at FARS meetings.

Photos © K6YL unless noted otherwise.



Mikel KN6QI













Joanna K6YL

Charlie KI6FXY September 2013, Page 15

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FARS New Membership / Renewal Form

The annual dues for 2013 is \$20. You may renew with this form or online by logging onto the FARS website and then using PayPal. <u>https://www.fars.k6ya.org/membership</u> Membership runs from January 1 to December 31. New membership applications accepted later in the year may have their dues <u>prorated (see dues schedule)</u>.

Prorated Dues f	for <u>New</u>	Members	July to	September:	\$10
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	Date:
Name:	
Callsign:	Phone:
Class (eg Technician, General):	ARRL Member?
Email:	
Mailing Address:	
Special topics of interest / suggestions for	or club meeting speakers:
Optional FARS Badge Please include \$9 if desired.	
First Name for Badge:	Select: Clip / Magnet / Pin
Sand your shack never le to EADS to	

Send your check payable to FARS, to:

FARS c/o Michael Lechner, 436 Memphis Drive, Campbell, CA 95008



DIRECTIONS TO FARS MEETINGS:

Visitors are always welcome.

Meetings are held at the Covington Elementary School on the fourth Friday. Socializing at 7 PM with the regular meeting at 7:30 PM. There may be changes in the meeting dates for January, June, November, and December.

From Interstate 280 – Take the El Monte exit Northeast. Cross Foothill Expressway. * At the first traffic light turn right on Covington. Immediately at the fork take the left street (Covington). Go about 1/10th of a mile. Turn left into the parking lot. The gym is the tall building to your right with red and white stripes.

From Foothill Expwy – Turn Northeast onto El Monte, then follow directions as above at the *.

From US101 or El Camino – Take San Antonio Road west (to Foothill Expressway), then follow directions as above at the *.

TALK-IN via the <u>N6NFI</u> repeater (145.230-; 100Hz PL) or the W6ASH repeater (145.27-; 100Hz PL).