

September Club Meeting

Date: Friday, September 24, 2010

Time: Socializing at 7 pm, Meeting at 7:30

Place: Covington School, 205 Covington Road, Los Altos

Speaker: Club Members and Guests

Topic: FARS Annual Home Brew Contest

Summary: Show off your best amateur radio project of the last 12 months. Voting determines who wins cash prizes!

The club offers refreshments (great coffee, great cookies). Bring your questions for Dr. Know-It-All and get great answers.

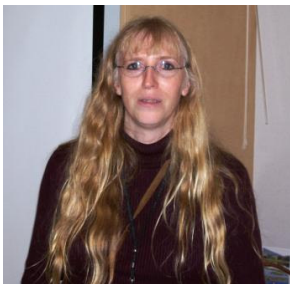
Pre-Meeting Dinner, 6pm at the Beausejour Restaurant, 170 State St., Los Altos. Great "Prix Fixe" menu.

September Raffle Prizes

The prizes for the raffle at the September meeting are: First Prize a Fluke 115 True RMS Multi-meter; Second Prize: MFJ -260C 300 watt Dry Dummy Load. Third prize is a 2010-2011 ARRL Repeater Directory. See later in this newsletter for more information.

August Meeting Report

Kristin McIntyre, K6WX, presented DX for beginners. Kristen described the ins and outs of DX, radios, antennas and other equipment, logging, contests, grounding, modes, operation, bands, best times for operation, beacons, sunspots and books (Complete DXer, ARRL Handbook) and websites (dxsummit.fi, dailydx.com and ncdxc.org).



Kristin McIntyre, K6WX
August Speaker (File Photo)



Carrol, Antonio, Don, Jerry
August Raffle Winners

The first prize, a Yaesu FT-1900R 2 meter 55 watt Mobile transceiver with MH48A6J, was taken home by Don Frevert, KG6GLU. Antonio Forenza, KE5MRG, won the 2nd prize, a MFJ Clearstone speaker. 3rd prize, NAARCC 2010 Northern California Repeater Directory, was won by Carrol Kerns, KG6YPH. Jerry Haag, K6GAC, won an ARRL Repeater Directory. The Wish You Were Here (WYWH) number for Chris Munson, KG6MOZ, was chosen. Unfortunately, Chris was not present to claim the prize.

President's Corner



Membership Meeting. "Home Brew Amateur Radio" is our next regular meeting on Friday, September 24th at 7pm. Bring along that ham radio project you've just finished or are still refining. This is a chance to share your experience with other hams and inspire others to try similar projects. If that's not enough, then there are prizes: \$40 – 1st place, \$30 – 2nd place, \$20 – 3rd place, and \$10 – 4th place. If you are not presenting, then come and help pick the winners and get some ideas for your own projects. Check the web site (k6ya.org/amtechday/) or the email list (k6ya.org/mail) for the date and program information.

Am-Tech Day. The next Am-Tech Day is scheduled for October 23rd. Don't miss out! There will be food, radios, and hams. Check the web site (k6ya.org/amtechday/) or the email list (k6ya.org/mail) for the date and program information.

Electronics Flea Market. The last electronics flea market of 2010 is October 9th. The host and beneficiary of this flea market is the Palo Alto Amateur Radio Association. Check out www.electronicfleamarket.com for all the details.

October 22nd Membership Meeting. "Learning to Operate Morse CW" with Dave Wolfe, AA6XV. The talk covers various aspects of operating CW and is primarily intended for people who have not operated CW before, or are perhaps, returning to it after being off for a while.

CQP – California QSO Party, October 2-3. We would like to get a group together to work this contest as a FARS activity. Please come to the September meeting to volunteer and help organize this activity. This contest should be a lot of fun since stations around the country are looking to contact California stations. Even a modest field station should make a lot of contacts.

Board of Directors Election, November 19th. Our November membership meeting is our annual membership meeting. All members are encouraged to attend and exercise their right to vote. There are two board seats up for election this year. The FARS board has nominated Mark Hardy, K6MDH, and Kevin Weiler, K6XXX to each continue for another 3-year term. At the September and October meetings, members have an opportunity to nominate directors for the FARS board of directors.

Email Notices. Subscribe to the FARS Announcement list (k6ya.org/mail) to receive reminders of FARS activities and other news.

de Mikel, KN6QI

Upcoming Events

Sep 24	7:00 pm, Club meeting , Covington School
Oct 2-3	California QSO Party, www.cqp.org
Oct 7	7:30 PM, Board Mtg at the Los Altos Town Crier
Oct 9	Electronics Flea Market , hosted by PAARA
Oct 23	8 am to 9 pm, Am-Tech Day , SLAC NAL
Oct 22	7:00 pm, Club meeting , Covington School
Thursdays	8:00 pm, FARS net, 145.230(-), 100 Hz PL

See more events, [FARS Calendar](http://www.fars.k6ya.org/events/calendar) <<http://www.fars.k6ya.org/events/calendar>>

CLUB INFORMATION

President: Mikel Lechner, KN6QI
Vice President: Steve Stearns, K6OIK
Treasurer: David Cooper K6WA
Secretary:
Radio Officer: Phil Hawkins, KA6MZE
Training Officer: Kevin Weiler, K6XXX
Relay Editor: Mark Hardy, K6MDH
FARS Board: Dick Baldwinson N6ATD, Peter Chow AF6DS,
Robert Flemate KE6TFU, Charlie Morrin KI6FXV,
Barbara Neuhauser AE6RM.
K6YA Trustee: Phil Hawkins, KA6MZE
FARS Web Page: <http://www.fars.k6ya.org>
Download Relay: <http://www.fars.k6ya.org/relay>

Club members and non-members are encouraged to subscribe to the FARS Announcement list by browsing www.fars.k6ya.org/mail, clicking on Subscribe/Unsubscribe and following the instructions under "Subscribing to fars-announce."

You may submit announcements to the FARS Announcement at fars-announce@svpal.org. The list is moderated and messages will be posted as approved by the list moderator.

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

Club 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 Nov. & Dec (for holidays).

Annual club membership is \$20. Club badges are \$9. Visitors are always welcome! Directions in this newsletter. Talk-in: N6NFI (145.23-, 100 Hz) or W6ASH repeater (145.27-, 100 Hz).

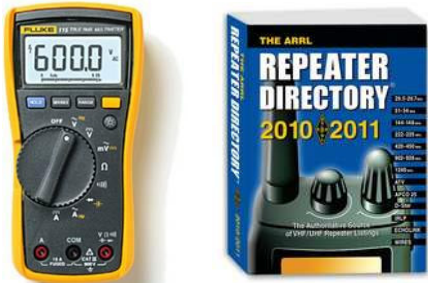
FARS *Relay* is the official monthly newsletter of the Foothills Amateur Radio Society. Contributions to the newsletter from members, family, and guests are earnestly solicited! Contributions are subject to editing and/or compression. All readable forms welcome.

Here is how to reach the editor:

Mark Hardy, K6MDH
Mail: P.O. Box 2248
Santa Clara, CA 95055
Voice: 408-243-0701 (Before 9 PM, preferred)
Email: mark.k6mdh@gmail.com, At FARS meetings.

September Raffle Prizes

First prize for the August 27th meeting is a Fluke 115 True RMS Multi-meter: it measures DC and AC volts and amps, continuity, ohms, diode test, capacitance, and frequency to 50 kHz. Second Prize is an MFJ-260C Dry Dummy Load, 300-watts for 30 sec, 25-watts continuous, SWR <1.1 to 30 MHz and <1.5 to 650 MHz. Third prize is a 2010-2011 ARRL Repeater Directory. See <http://www.mfjenterprises.com> for more information about the MFJ dummy load.



FARS September VHF QSO Contest

FARS sponsored the ARRL September VHF QSO Party, the weekend of 9-11. <http://www.arrl.org/september-vhf-qso-party>

The contest was organized and lead by Gerry K6TXD.

The site of the contest was held at the Agnews Historic Park in Santa Clara, a historic easement on the former Agnews Developmental Center (now Oracle/Sun campus). This site has picnic tables, electrical power, clean bathrooms, plenty of trees to hang antennas, and almost no park visitors.

Gerry was gracious to provide almost all the equipment to run the contest, which included the rig, power, antennas, canopy, water, etc.

Peter AF6DS, provided a pneumatic tennis ball launcher for putting up the 6 meter antenna. Nimit K6XOX, bought sandwiches, and Gerry bought food from KFC.

Folks that operated at the site, or stopped by, include: Gerry K6TXD, Peter AF6DS, Nimit K6XOX, Michael NE6RD, Lee KG6EPQ, Greg AF6IA, Mikel KN6QI, Bryan W7MAN, Keith KA4PNC, Dick N6ATD.

Other activities at the park included: Michael NE6RD tested out a 20m end-fed antenna for Parachute Mobile use. Peter AF6DS tested out a project for the upcoming FARS September homebrew contest.



VHF QSO Pictures (Thanks to Peter AF6DS)

Update on Electric SmartMeters

Steve Stearns, K6OIK

September 2010

The saga of PG&E's SmartMeters continues to unfold. You may recall, in April I wrote on technical reasons why the power measurement method used by the new digital SmartMeters might need rethinking at the California Public Utilities Commission (CPUC), [1]. Due to many complaints from PG&E customers, the CPUC hired a private consulting firm, Structure Consulting Group, in Houston, Texas, to independently review PG&E's SmartMeter roll out and the customer complaints that followed. The consultant's report was released on September 2, [2]. Soon thereafter, articles appeared in the public press which claimed that the report exonerated the accuracy of the new meters, [3, 4].

Not so fast! I read the Structure Consulting Group's report. The articles in the public press left out key details. First, Structure did not lab test the meters itself, but rather subcontracted out to a third party, Trimark Associates, in Folsom, California. Trimark lab tested a sample of 156 meters using an older ANSI test protocol C12.20-1998 that does not include tests with nonlinear loads. Essentially all meters of both types, digital and electromechanical, passed those tests – as would be expected. Six SmartMeters were subjected to environmental testing, but the maximum temperature was limited to a balmy 122 degrees F, roughly equivalent to summer daytime temperatures in the shade in Phoenix. This is nowhere near hot enough to simulate a meter operating in direct sunlight. In addition to laboratory tests, field tests were performed on 611 SmartMeters and 147 electromechanical meters. In some cases, two meters were compared simultaneously side-by-side, a comparison test long demanded by Dr. Bill Wattenburg, [5]. At 19 sites, Structure compared SmartMeters against an Elster digital meter. At another 18 sites, PG&E compared SmartMeters against electromechanical meters, with Structure observing. However, the loads were neither controlled nor documented. Thus any difference between electromechanical meter and SmartMeter on nonlinear loads was not captured. The main part of Structure's report is based on review of documents and information provided by PG&E and interviews with customers.

As Structure's report to the CPUC was nearing completion, a new wrinkle emerged. As reported in the San Jose Mercury News, some SmartMeters appear to have EMC problems, [6-12]. SmartMeters appear to cause interference to many different kinds of consumer electronics – everything from Part 15 wireless devices, such as cordless phones and baby monitors, to AM radios, HD television sets, and electric circuit protection devices. Many folks assumed that it is an RFI problem caused by interference from the Silver Spring Networks transceivers inside the SmartMeter, but the transceivers may not be the source of the problem. The interference could be coming instead from the measurement electronics. It could be a conducted emission on the residential wiring instead of a radiated emission from the meter into the house. Keep in mind that meters having sigma-delta A/D converters also have a high-frequency clock that operates at approximately 1 MHz plus harmonics. So it's conceivable that the measurement electronics is creating interference. The meters should be tested by an EMC lab to characterize their emissions and find the source of the interference. The Silver Spring Networks transceivers passed FCC certification tests, but the overall, integrated SmartMeter did not.

References:

1. Steve Stearns, K6OIK, "SmartMeters and Electric Power Measurement," *FARS Relay*, pp. 3-10, Foothills Amateur Radio Society, Apr. 2010. Available online at: <http://archive.k6ya.org/relay/Relay1004.pdf>. Also published in two parts in *PAARAgaphs*, Palo Alto Amateur Radio Association, June and July, 2010.
2. *PG&E Advanced Metering Assessment Report Commissioned by the California Public Utilities Commission*, Structure Consulting Group, Sept. 2, 2010. Available online at: <http://www.cpuc.ca.gov/PUC/energy/Demand+Response/solicit.htm>
3. Dana Hull, "PUC: PG&E SmartMeters OK, but Company Needs Better Customer Service," *San Jose Mercury News*, Sept. 2, 2010. Available online at: http://www.mercurynews.com/ci_15977183

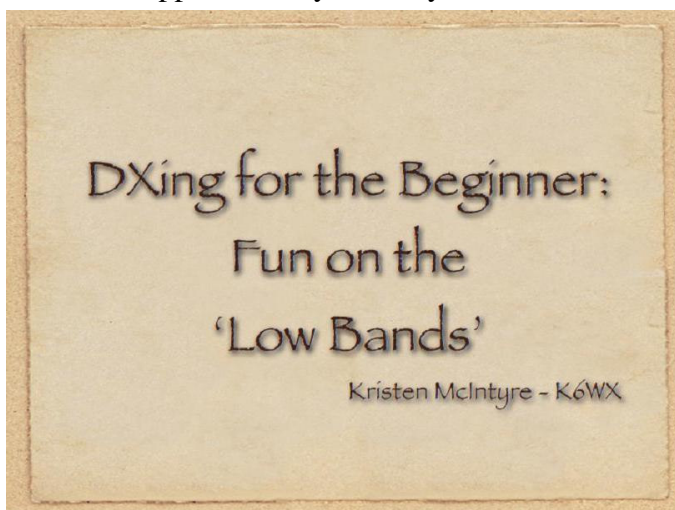
4. Don Tuite, "Independent Report Clears California Smart Meters, Faults Utility," *Electronic Design*, Sept. 10, 2010. Available online at http://electronicdesign.com/article/editors-notebook/independent_report_clears_california_smart_meters_faults_utility.aspx
5. Dr. Bill Wattenburg, "Why Won't California Test the Smart Meters?" KGO Radio, March 20, 2010. Available online at: <http://www.kgoradio.com/Article.asp?id=1740790&nId=0&spid=33179>
6. Dennis Rockstroh, "Action Line: PG&E's SmartMeter Causes Cracking Sounds on Baby Monitors," *San Jose Mercury News*, Aug. 10, 2010. Available online at: http://www.mercurynews.com/ci_15720296
7. Dennis Rockstroh, "Action Line: PG&E SmartMeters Make Home Appliances Go Snap, Crackle, Pop," *San Jose Mercury News*, Aug. 15, 2010. Available online at: http://www.mercurynews.com/ci_15743434
8. Dennis Rockstroh, "Action Line: More on SmartMeter Interference," *San Jose Mercury News*, Aug. 19, 2010. Available online at: http://www.mercurynews.com/action-line/ci_15805966
9. Dennis Rockstroh, "Action Line: Engineer Questions SmartMeters' Unintended Consequences," *San Jose Mercury News*, Aug. 21, 2010. Available online at: http://www.mercurynews.com/action-line/ci_15817075
10. Dennis Rockstroh, "Readers: SmartMeters Interfere with Baby Monitors, Other Household Gadgets," *San Jose Mercury News*, Sept. 6, 2010. Available online at: http://www.mercurynews.com/action-line/ci_16007725
11. Dennis Rockstroh, "Action Line: Reader Reports No Interference from SmartMeter," *San Jose Mercury News*, Sept. 8, 2010. Available online at: http://www.mercurynews.com/action-line/ci_15984627
12. Dennis Rockstroh, "Action Line: Remodeler Finds SmartMeter Interference with Circuit Breakers," *San Jose Mercury News*, Sept. 12, 2010. Available online at: http://www.mercurynews.com/action-line/ci_16058380

Link to August Presentation

Kristen McIntyre, K6WX, has graciously provided a link to a copy of the wonderful presentation that she gave at the FARS meeting in August. You may get your own copy at the following website:

<https://files.me.com/kristenm/5g5r3j>

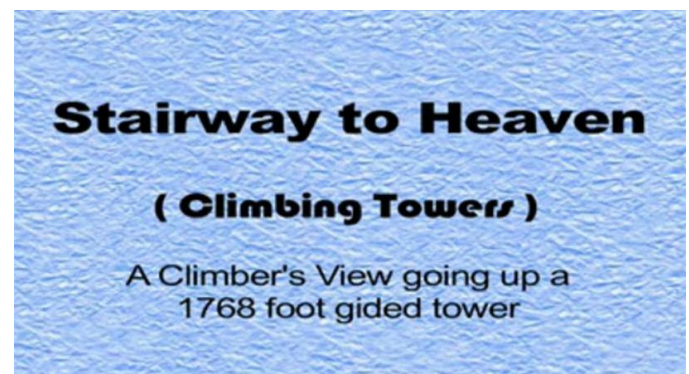
The file is approximately 38 MBytes.



Link to Interesting Video

Paul Zander, AA6PZ, sent the link to this video, which shows some work being done on a tower. It is quite interesting and exciting. You may see the video at the following website:

<http://video.yahoo.com/network/101149635?v=8244494&l=5144241>



The Video has a short introduction and then shows the work on the tower.

FARS 2010 MEMBERSHIP RENEWAL FORM

Date: _____

PLEASE fill out the form for all new/renewal memberships.

Name(s) & Callsign(s) & Class (E-A-G-T-N-None): _____

Mailing Address: _____

Home phone: _____ Work phone: _____

Fax (H or W?) _____ Packet BBS Address: _____

E-mail: _____ ARRL Exp Date(s): _____

Preferred modes: (e.g. HF-SSB/VHF/QRP/Other): _____

I'm willing to Elmer new hams with: _____

Special topics of interest / suggestions for club meeting speakers:

Dues: \$20 per year, new members add \$9 for badge fee. **Please note:** Membership runs from January 1 to December 31.

Send your check payable to FARS, to:

David A. Cooper
PMB 41
270 Redwood Shores Parkway
Redwood City, CA 94065-1173



How to get to FARS Club meetings (Visitors always welcome)

Meetings are held at the Covington Elementary School (directions below) 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.

DIRECTIONS:

From Interstate 280. take the El Monte exit Northeast. Cross Foothill Expressway. (A) At the first traffic light turn right on Covington. (B) 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., take the El Monte exit and go Northeast; then follow directions as above at point (A).

From US101 or El Camino: take San Antonio Road west (to Foothill Expressway). Then follow directions above at point (A).

TALK-IN via the [N6NEI](#) (145.230-; 100Hz PL) repeater or the [W6ASH](#) 145.27- (100Hz PL) repeater.