



Smoke Signals

Newsletter of Fullerton Radio Club

April 2018

April 2018 President's Column

Greetings of the Vernal Equinox type!

My wife and I just returned from three wonderful weeks of camping around Arizona and New Mexico - lots of beautiful scenery and great hiking. Although Larry would wonder how camping could ever be described as 'wonderful,' to paraphrase Mark Twain, "If it weren't for differences of opinion, we couldn't have horse races."

Along with four National Parks, four National Monuments, one National Historical Park, and four State Parks, we visited museums at White Sands Missile Range and Los Alamos, and so experienced lots of interesting history. We returned home Tuesday and it was good to visit with a number of FRC members at Wednesday's TAG Meeting. If you haven't been to a TAG meeting lately (or ever) - you should make the effort. It's always interesting to see and hear about everyone's projects and 'show and tell.'

As I write this, it is 23 days until Antennas in the Park - our big outdoor event at the newly refurbished Hillcrest Park. I hope you will join us on Saturday May 5 for some radio geekery, Amateur Radio Direction Finding, QRP, and (perhaps not least) some free burgers and drinks ... actually, you have already paid for them [dues], so you should come and get your money's worth!

Have you contacted Gene Thorpe to help out with this year's Donate Life Walk/Run at CSUF on April 28? If not, why not charge the batteries

on that HT and send Gene an email at kb6cmo@arrl.net. A bunch of us will be there.

I'm still thinking about how to continue to make the FRC website more useful to the greater ham community. I am going to try to gather some resources for new hams, as I think that is one of the more important roles that a club can play. If you have suggestions, I'd appreciate hearing them.

If you haven't visited the website lately, its fullertonradioclub.org.

I hope to see you this Wednesday!

73, Bob - AD6QF

April Meeting Program

This month we'll hear from William Phinizy, K6WHP and John Frerichs, N6VCW with presentation on the Civil Air Patrol and why it needs communicators. See page 3 for details.

Wednesday, April 18, 2017

Chapman Activity Center

2515 San Carlos Drive, Fullerton
(Second street east of State College Boulevard
off Commonwealth)

Meeting time – 7:00 PM

Visitors are always welcome

Dinner before the Meeting:

Black Bear Diner

5:00 PM

1011 N. Harbor Blvd., Fullerton (at Berkeley)

Fullerton Radio Club
P.O. Box 545, Fullerton, CA 92836-0545

President

Bob Houghton AD6QF
Phone: (714) 446-0520
E-mail: bobhoughton@mac.com

Vice President

OPEN
(This could be YOU)

Secretary

Linda Endsley, KJ6IHB
Phone: (714) 992-4645
E-mail: lindiend@sbcglobal.net

Treasurer, Public Service, Membership

Gene Thorpe, KB6CMO
Phone: (714) 680-4258
E-mail: kb6cmo@juno.com

HDSCS

April Moell, WA6OPS
Phone: (714) 879-6895
Emergency Coordinator, HDSCS
E-mail: emcom4hosp@aol.com
www.hdscs.org

T-Hunt

Joe Moell, K0OV
http://www.homingin.com
E-mail: homingin@aol.com

License Trustee

Albert Solomon, AG6OF
Phone: (714) 476-9638
E-mail: albertsolomon18@gmail.com

Directors

Richard Belansky, KG6UDD
Phone: (714) 970-6385

Walter Clark

Phone: (714)-882-9647
E-mail: walterclark@roadrunner.com

Robert Gimbel, KG6WTQ
Phone: (714) 657-2862

Larry McDavid, W6FUB
Phone: (714) 630-5672

Albert Solomon, AG6OF
Phone: (714) 476-9638

Director & Newsletter Editor

Paul Broden, K6MHD
Phone: (714) 871-9478
E-mail: pbroden@sbcglobal.net

Show –and–Tell

Bring something of interest to the meeting to show and share your story.
Something old, new, or just of interest to hams.

Web site: www.FullertonRadioClub.org

April Board Meeting Minutes

The 2018 FRC Board meeting was called to order at 7:30pm by Walter Clark. Others present: Secretary Linda Endsley KJ6IHB. Directors: Richard Belansky KG6UDD, and Paul Broden K6MHD; Visitor: Irene Broden.

Treasurer's report: Savings - \$2,607.42; Checking - \$4,154.08

Old Business:

No progress with Boy Scout project.

Donate Life will be Apr 28

New Business:

0 new member or renewals

Bob Houghton will purchase food for Antennas in the Park on May 5. Voted to spend up to \$250 on food. Donations accepted.

General meeting speakers, William Phinizy K6WHP and Air Force Major John Frerichs N6VCW; Topic: Communications and Civil Air Patrol

Next board meeting: 2 MAY 2018

Adjourned at 8:15 pm

Submitted by Linda Endsley KJ6IHB

Donate Life Run Walk - Saturday April 28.
2018 Save The Date

The Donate Life Run / Walk Event still needs at least **6 more Amateur Radio Operators** to help with this "FUN" Event. The 5K Run/1K Walk is at CSUF on Saturday 28 April 2018 at 06:30 - 11:30 hrs. or so. We have members from many different groups in the O.C., FRC; WARA; HDSCS; and a few RACES groups as well. Can You Please Help Us this Year? If Yes, I Need Your Name, Call Sign, E-mail Address, Cell Phone #, and T-Shirt Size and send the information to: Gene Thorpe KB6CMO@ARRL.net.

God Bless America & U 2

Gene Thorpe KB6CMO

April Meeting Presentation

This month's talk is about the Civil Air Patrol and why it needs communicators -- and why amateurs would be an ideal fit.

Our speakers are William Phinizy, K6WHP and John Frerichs, N6VCW.

William Phinizy was commissioned into the USAF out of UCLA in 1968 and served ten years (four years active duty and six years USAF reserve) where he rose to the rank of Captain. He has been in the USAF Auxiliary (Civil Air Patrol since 2005 and is currently the Deputy Commander of Group 7 in the California Wing.) William has been a ham off-and-on since 1962 and has held an Amateur Extra Class license since 1996. He is devoted to QRP and tends to build and restore more than operate, i.e., burns up more rolls of solder than log books. He is looking to recruit hams into the Civil Air Patrol because he believes that, with their technical abilities and innate talent for communications, they will be an invaluable resource for CAP.

John has been a Ham since the early 80s. He holds an Amateur Extra class license and he is a VE with the ARRL, W5YI and Greater L.A. VE teams. He is active on the HF, VHF and UHF bands and is a fan of DMR, PSK31 and CW.

John says, "CAP has an extensive VHF and HF communications network that I thought would benefit from my Ham Radio and USAF MARS experience. They also have Urban Direction Finding teams that appealed to my ARDF experience. I got involved with CAP for those two main reasons."



William Phinizy K6WHP

Transmitter Hunting News

May will be a very busy month for fans of hidden transmitter hunting. Of course the main event will be FRC's annual Antennas In The Park on Saturday, May 5 at the Izaak Walton cabin in Hillcrest Park. If you don't already have a directional antenna for two meters, you can build one right there, as there will be kits and a construction table for the popular measuring tape yagi. Then try to find some of the simple and not-so-simple hidden transmitters around the park. If you don't want to go transmitter hunting, this would be a good opportunity to try out your QRP rig, Buddipole antennas and so forth.

For those who want even more transmitter tracking fun, there will also be an on-foot hunt in San Diego County on May 12, as well as a hunt being planned for San Luis Obispo County in a few weeks. Time and location of all of these events are at www.homingin.com, as well as information on the antenna and attenuator kits.

Of course the monthly FRC mobile transmitter hunts are still taking place on the third Saturday of each month, beginning at 8 PM from the top of Acacia Avenue in Fullerton. The winner is determined by elapsed odometer mileage, so you can take your time and still finish first. On March 17, Bob Miller N6ZHZ and Cathy Livoni KD6CYG parked at the top of Sylvan Glen Drive in Diamond Bar, just north of the 60 freeway. Their transmitter only ran about a dozen milliwatts into a four-element beam pointed at the start point. Of course everyone lost the signal once they drove down off the hill. Here are the results:

<u>Team Calls</u>	<u>Odo Miles</u>
N6AIN/WA6PYE/Teddy	26.2
KA6UDZ/Rich	27.7
KG6EEK/AB6PA	32.6

Deryl Crawford N6AIN and Steve Wallis WA6PYE will be hiders for the April 21 hunt.

73, Joe Moell K0OV

Antennas In The Park

It's almost time for our largest event of the year; ***Antennas In The Park*** on **Saturday, May 5, 2018**. As always, a key feature will be the popular Joe Moell K0OV on-foot T-Hunt, but let's also have some other activities! Maybe portable HF/VHF/UHF or even microwave stations? We always like to see results of QRP. There's LOTS of room to put up ***antennas in the park***! Or perhaps a demonstration or two – or more – from the TAG group projects? What else? It's up to your imagination!

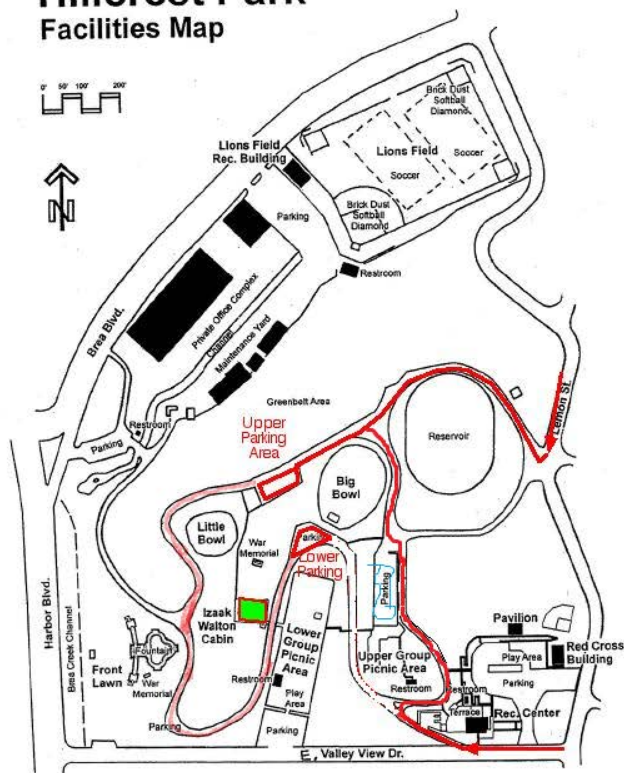
The cabin should be open by 9:00 AM for those wishing to set up antennas and radios. The T-Hunt antenna-building project table will start at about 10:00 AM, with actual T-Hunt activities beginning at about 11:00 AM. Additional details of the T-Hunt can be found at <http://www.homingin.com/park>.

We are typically active until about 3:00 PM. Burgers will be available around noon.

We'll have the usual BBQ – club funded [dues] for club members, but donations accepted. And again this year the event will be at the Izaak Walton Cabin at Hillcrest Park (with restroom). There are plenty of spaces for set up of radios (bring batteries) and antennas on the cabin porch and on the lawn in front of the cabin.

Parking is available at several locations near the cabin. See the attached map for cabin location (marked in green) and parking. Note that the map shows two entrances; one off E. Valley View Drive, and one off N. Lemon Street. If you use the Lemon Street entrance you **must** be coming south from Brea Boulevard, because there is **NO LEFT TURN** allowed into the park if north bound on Lemon.

Hillcrest Park Facilities Map



from north, go south on Lemon St (from Brea Blvd) to park entrance on right. Enter park & follow roadway to stop sign, turn right & curve left to **upper parking area** on the left.

from south, go west on Valley View Dr. (from Lemon St. NOTE: there is no left turn off Lemon into main entry of the park.) to 2nd entry (1st goes into Rec Center etc) . Follow roadway to the right, curve left to stop sign. Continue straight ahead to left curve to **upper parking area** on the left.

If **upper parking area** is full, there is additional parking in **Lower Parking**. Continue following the roadway down hill to the right & back up hill.

A parking lot that requires some steps is located on around the roadway. Those who come in off Valley View Dr. pass it by the stop sign.

Activity Reports of the Fullerton Radio Club (Technical Advisory Group) for April 2018

Tom Gaccione talked about a book/demo that teaches the technology of 77 GHz automobile radar. This is in the several thousand dollar range, so he didn't buy it but was amazed that it is available. There was then a discussion on how much of that cost was instruction and how much hardware.



Tom also told us about Falcon 9 Heavy to launch from Vandenberg early in the morning of May 5th. There was then some discussion on the spacecraft to be launched. It is a lander for Mars. It will be doing some amazing seismic studies which should reveal the size of the molten core. Part of the molten core study is measurement of the distance from earth to the lander within mm. It has something to do with the way it spins on its axis.

Tom said that he and Bob Houghton will be going to Maker Faire in July. They will be going as attendees but will meet up and probably spend time with Dennis Kidder and his famous "This isn't your grandpa's radio anymore."

Bob Houghton was 4 weeks camping in New Mexico. He passed around pictures of that aspect of his trip of interest to us. Antique X-ray and radio equipment. A table radio for example that took up the whole table. There was also some discussion on the nuclear hazard involved with experiments at Los Alamos.

Bob reminded us of the Donate Life and Gene's need for more ham volunteers. And of course the need for speakers. There was then a discussion on what kind of subjects the TAG members were good at that would be of interest to the general audience. It was a very valuable discussion.

Larry McDavid has 9 GPS devices some of which need an active antenna on the top of his house. He brought in one that failed and there was discussion on the fix-ability of Chinese modules that were so cheap. Tom Gaccione is going to have a go at it with the test equipment he has available where he works.

Larry also talked about his weather monitor and the curious anomaly in the output data from his Sun Run solar collecting system. There followed a discussion on "aspirated" solar radiation measurement.

Larry made another pitch for Tindie. <https://www.tindie.com/> He brought an example in the form of a GPS-clock readout, good to microsecond accuracy of "absolute" time. He told us again of his joy seeing an old Heathkit WWV clock clicking the same tenth second number as the GPS based clock.

Dick Bremer bought some test equipment at the recent SBMS meeting. There was then quite a discussion about CDMA test sets. The one he bought was good from 400 KHz to 1 GHz. And it does PL (for two way radios). It is capable of power, modulation and frequency.

Dick Palmer used Walter's 80 meter antenna (the one Dick helped Walt install last year) to demonstrate Dick's most recent favorite QRP radio. Hans Sommer is the designer. It uses a Tayloe high dynamic range (106 dB) mixer. Dick has two interests in life; oscilloscopes and QRP. He has more than 60 QRP radio sets. They are small, so there's no need to throw them away as the latest and greatest keep coming out. This is the first one that is software defined where the computer is in the radio instead of the other way around. There was some discussion on digital modes. The unit he demonstrated to us was showing a connection to Arizona or some state outside of California. It is capable of 80, 60, 40, 30, 20 and 17 meter bands. Four thousand were sold. (about \$50) and takes about 7 hours to solder up. One highlight of the discussion on digital modes is that we are now seeing guys contacting 2/3 of all countries and 3000 contacts in 6 months.

Walter Clark showed a Sterling Engine powered by a cup of hot tea. This was followed by discussion of where this kind of engine fit within the history of steam, gasoline and diesel engines.

Rich Belansky recently bought a Davies Pro-2 Weather Monitor. That led to a two-way discussion and comparison with Larry's Weather Monitor. He also brought a restored Atomic Laboratories Geiger Counter Tube with mica window. He's considering collecting nuclear detection gear.

Brooks Kachner showed a kit he built (\$10) that tests anything; caps, diodes, inductor. You don't even need to tell it what the device is or whether it is a collector, emitter or drain. It seems to know. Walter held his glasses over it to reveal that it doesn't measure everything.

His current project is extensively testing AA batteries with a kit built discharge and current integrator. It plots the results too. He showed some results of carbon zinc versus alkaline and said the project is going to take a while because he wants to test many different brands and with some very low discharge rates. That means many days to discharge. We expressed how valuable that will be since alkaline batteries are all over the map in price.

Brooks reported on an article he read in CQ about WSPR through a total eclipse. Apparently propagation is effected by a giant shadow flying a thousand miles an hour.

He also brought in a TAPR <https://www.tapr.org/> Raspberry Pie based 20 meter band WSPR source. This led to a lengthy discussion on WSPR for propagation studies. Bob Houghton said the simplest way to understand this is as a kind reverse beacon where there are sources, but the receivers do the work. They are networked through the internet to identify where the clear paths are. This is of course in real time in case you wanted to take advantage of a particular direction for DXing.

May BOARD MEETING

Open to all Club members

Marie Callender's Restaurant
126 Yorba Linda Blvd., Placentia
First Wednesday of each month.

Next Board Meeting

May 2, 2018

QSO and dinner; 6:30 PM

Meeting: 7:30 PM

DUES REMINDER

We're already into April, and some of you haven't submitted your 2018 club dues!

MEMBERSHIP RENEWAL / APPLICATION

Fullerton Radio Club
PO Box 545, Fullerton, CA 92836

(Please Print)

Name #1 _____

Call: _____

Class: _____

Name #2 _____

Call: _____

Class: _____

Address: _____

City: _____

State/Zip: _____

Phone #1: _____

Email #1: _____

Phone #2: _____

Email #2: _____

ARRL Member ☐ Yes ☐ No

Special Amateur Radio Interests: _____

Dues are \$20 per member, or \$25 per family. Students (full time) \$10

Bring your application and dues payment to the next meeting or mail to the abo