



Smoke Signals

Newsletter of Fullerton Radio Club

August 2017

THIS MONTH

Dig out that unused “stuff” from your ham shack, clean it up a bit, and prepare to bring it to the August club meeting. The theme of this month’s meeting will be a SWAP MEET, where by you can present your extra or not-used equipment for sale, or maybe pick up a bargain to add to your ham shack. Other clubs have been invited so there may be some competitive bidding. There are no arrangements for credit cards, and most sellers probably will not consider checks, so bring CASH. See Page 3 for further information and location.

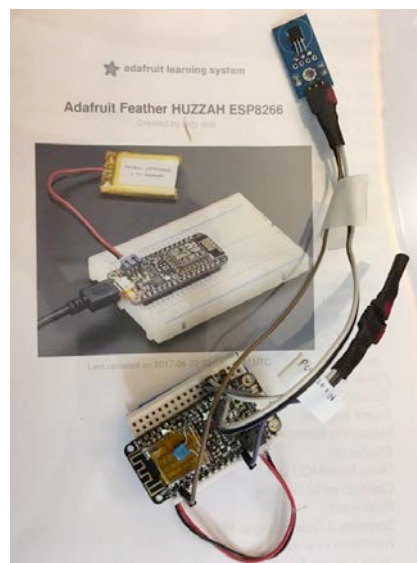
LAST MONTH

The July club meeting saw several members with demonstrations of “show-and-tell” items. We had back-up batteries in an ammo can,

complete station in a case, fancy/expensive test equipment, RDF equipment, microwave receiver, and stuff I don’t remember. Really would have been nice to see more of you there!!! Here’s examples.



Bill Webb and “Alexa”



Attachment for “Alexa”. You’ll have to ask what is is.

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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

August Board Meeting

The August 2017 FRC Board meeting was called to order at 7:40pm by Vice President Walter Clark. Others present: Treasurer Gene Thorpe KB6CMO and Secretary: Linda Endsley KJ6IHB. Directors: Paul Broden K6MHD, Richard Belansky KG6UDD, and Robert Gimbel KG6WTQ. Members: Cheryl Thorpe KE6TZU and Bill Preston KZ3G.

Treasurer's report: Savings - \$2,607.11; Checking- \$4,043.01

Minutes from the July Board Meeting were read and approved.

Old Business:

Need speakers for the general meetings.

Discussed the Boy Scouts' Eagle Scout project.

Dues are due for those who have not paid. Four renewals were received.

According to the feedback on the show and tell, it went well.

New Business:

The August general meeting will be a swap meet. Need to organize swap meet items. Members can bring radio and related items. Paul will send out emails to other clubs.

Ham Con will be September 15th, 16th, and 17th in Torrance.

The Holiday Dinner will be Friday, December 15.

Next board meeting: 6 SEP 2017

Adjourned at 8:30 pm

Submitted by Linda Endsley KJ6IHB

CLUB DUES STATUS – AGAIN

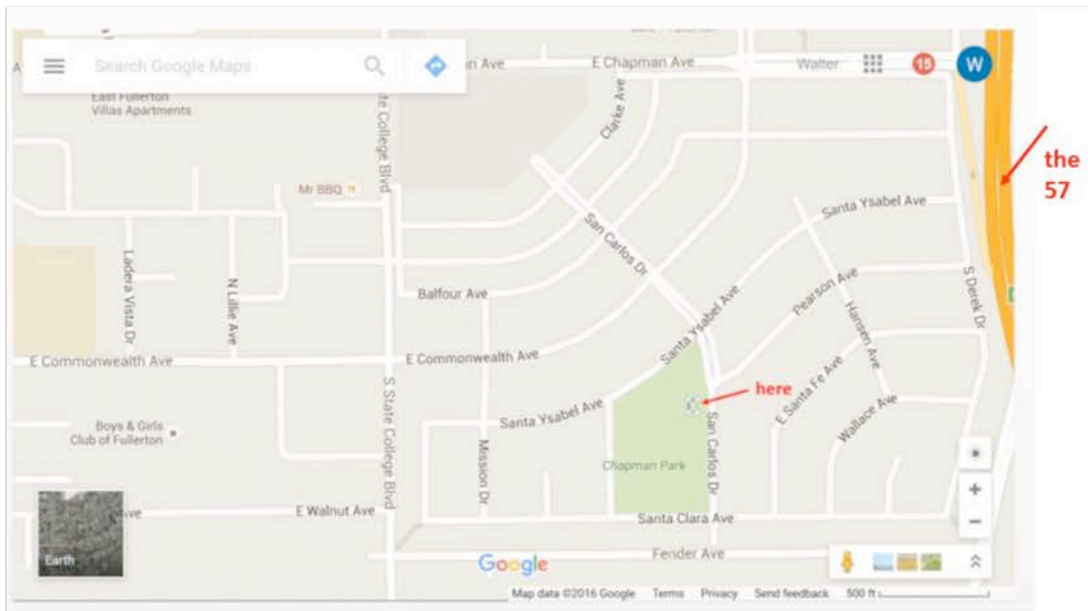
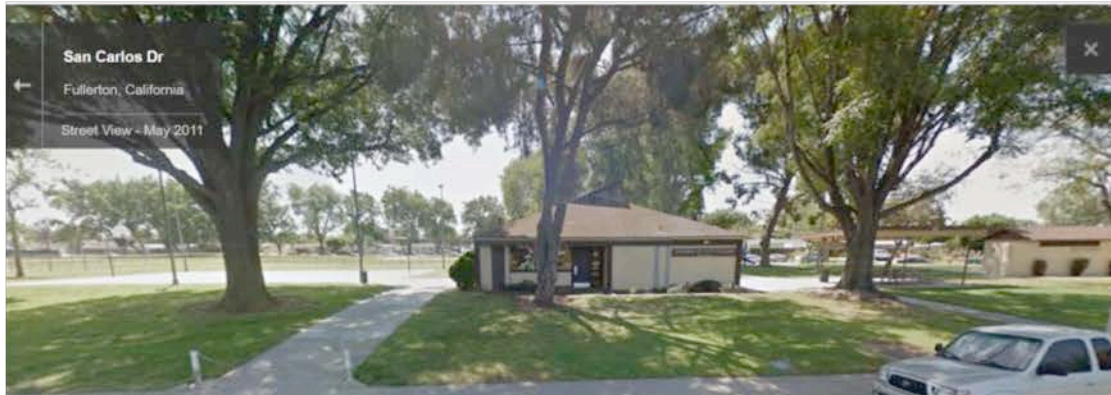
We've recently looked at the latest roster of members and have tallied the status of dues paid for 2017. Of the 75 names on our list of active and inactive members we're shocked that less than 30 (including 3 Life members) have maintained current in dues payment for 2017. Seven haven't paid since 2011, six since 2012, eight since 2013, eight since 2014, three since 2015 and thirteen since 2016. That's over 60% of our roster that are behind in dues payment!!! The year is half over and dues are still not paid? Additionally, attendance at regular club meetings has dwindled to an average of 12 to 14; that's very disappointing. Your Directors are curious as to why for both issues. What do we need to do to spark interest in YOUR club? *We'd like your input*, attendance at meetings and, of course, maintenance of current dues.

YOU ARE INVITED

SWAP MEET

Fullerton Radio Club (W6ULI) will be presenting a swap meet on Wednesday, August 16, 2017. Numerous items will be presented from donations made by estates of silent key members, as well as from active members. You also can bring items you'd like to sell. The focus will be on amateur radio related equipment and related items (i.e. test or construction equipment).

DATE: Wednesday, August 16, 2017
Time: 7:00 PM to 9:00 PM
Location: Chapman Activity Center
2515 San Carlos Dr.
Fullerton, CA



CASH ONLY

AUGUST SOLAR ECLIPSE

You all know by now that there will be a solar eclipse visible over most of the USA on August 21, 2017, in about three weeks. The path of solar eclipse totality traces an arc from the northern west coast to South Carolina; only on this narrow path will the eclipse be total and the sun's corona visible naked-eye. However, even in Los Angeles there will be a 70% partial eclipse, meaning the moon will block 70% of the sun's disk area. This will be obvious to careful observers but you **must** use a solar or eclipse filter to look at the sun during a partial eclipse. Looking directly at the sun from Los Angeles without such a filter or "eclipse glasses" will definitely damage your eyes. BE Careful!! Here is a link to a website with summary information on the eclipse from the perspective of Los Angeles; this information is reasonably accurate throughout the entire greater LA

ares: <https://www.timeanddate.com/eclipse/in/usa/los-angeles> This webpage can be modified for other locations by city name or zip code. Here in Los Angeles, the eclipse will begin (when the moon first touches the disk of the sun) at 9:05 am. Eclipse maximum

(the 70% obscuration here) will be at 10:21 am and the eclipse will conclude at 11:44 am. I just noticed that Lowe's Hardware stores are selling "Eclipse Glasses." You will need to be persistent and ask as there is no telling where the display stand with these eclipse glasses will be found in the store! These are inexpensive paper but with excellent solar filter material that gives a pleasant orange color to the sun and makes looking at the partial eclipse safe. Just don't remove the glasses while looking! Because the path of eclipse totality traces across the entire USA, this will be the most-observed solar eclipse ever! Usually, it is necessary to travel to remote locations to observe a total solar eclipse; this year many folks will travel to the US to see this eclipse. The duration of totality varies with the relative distances of the Earth and Moon and is governed by celestial mechanics; the longest period of totality for this eclipse is about 2-1/2 minutes. The longest possible period for any solar eclipse is about 7-1/2 minutes. There is vast information available about solar eclipses and this eclipse in particular throughout the Internet. If you can arrange to travel to the path of totality,

seeing a total solar eclipse is a life-awakening event! At no other time can you see naked-eye the white solar corona extending 2-3 solar diameters or more from the sun. Totality is simply spectacular! Be aware that most hotels along the path of totality have long been sold out! At totality, it appears to be dark twilight and the temperature drops. You can immediately grasp how much energy we get from our sun! This will be my seventh solar eclipse and at every one something unexpected has happened! For example, ground bats flew out from our feet in a field and cows in an adjoining field mooed and walked off for milking. It does not get dark as night but if you (think of the ancients) don't expect or understand the eclipse, it can be really frightening. Unfortunately for Los Angeles, the 70% partial eclipse will not be so dramatic. If you have young children, be sure they don't look at the sun without the eclipse glasses! The **only** time it is safe to look directly at the sun is during the brief period of totality visible **only** when you are on the narrow band along the path of totality. --

Best wishes,
Larry McDavid W6FUB

FRC Mobile T-hunts

The intrigue continues as Fullerton Radio Club holds its mobile hidden transmitter hunt on the third Saturday of each month. In May, Deryl Crawford N6AIN put his transmitter in the Park-and-Ride parking lot at the east end of the 105 and 605 freeway junction, just inside the western boundary for the hunt.

| <u>Team Calls</u> | <u>Odo Miles</u> |
|-------------------|------------------|
| KG6EEK/AB6PA/Ryan | 18.5 |
| N6ZHZ/W6XRT | 19.5 |
| WA6CYY | 19.5 |

That gave the June hunt duties to Bill Greganti KG6EEK and Glenn Tobey AB6PA. They got a late start, so they put the transmitter at the end of Green Crest Drive in Yorba Linda, near the road to the water district facility.

| <u>Team Calls</u> | <u>Odo Miles</u> |
|-------------------|------------------|
| N6ZHZ/W6XRT | 12.6 |
| N6AIN/WA6PYE | 14.3 |
| WA6CYY | 22.8 |

This meant that Bob Miller N6ZHZ and David Whittlesey W6XRT needed to find a good spot to hide on July 15. They chose a spot on Fairway Drive, north of Carbon Canyon Road, at the entrance to Western Hills Estates. The transmitter ran one watt with a four-element beam pointed at the starting point to give the illusion of a Baldy signal bounce.

| <u>Team Calls</u> | <u>Odo Miles</u> |
|-------------------|------------------|
| N6AIN/WA6PYE | 22.4 |
| WA6CYY | 29.6 |

So it's Deryl and Steve's turn to hide again on August 20. The hunt begins at 8 PM from the top of Acadia Avenue in Fullerton. Get there early so your mileage can be taken, as the hunt is scored only by odometer mileage. The signal is to be continuous on 146.565 MHz simplex.

73, Joe Moell K0OV

ARDF Enthusiasts Win Medals in the Buckeye State

The Seventeenth USA National Championships of Amateur Radio Direction Finding (ARDF) took place near Harrison, Ohio from August 3 through 6, 2017. The 4,345-acre Miami

Whitewater Forest and other nearby wooded sites attracted over eighty fans of the sport, which is also called foxtailing and radio-orienteeing. This year's USA Championships were combined with the Ninth ARDF Championships of IARU Region 2 (North and South America).

There were classic competitions on separate days on the two-meter and 80-meter bands with up to five transmitters to find. Course lengths, from start to each required transmitter and then to the finish, ranged from 2.8 to 7.1 kilometers depending on age/gender category. There were also two additional events, both on 80 meters: The sprint is a shortened course with ten transmitters and a faster transmitter cycle. Foxoring is a combination of orienteeing and foxhunting in which participants receive maps marked with the approximate locations of a dozen very low power transmitters that they are to find.

Competitors in all events were divided into six age categories for males and five for females, with medals awarded to winners in each category. The four championship events were preceded by three days of informal training in other nearby parks.

USA's national championships are open, meaning that radio-orienteeers from other countries are welcome on the courses. Non-Region 2 visitors compete for individual medals in a separate division. This time, that division included approximately forty middle- and high-school students from Guangzhou No. 2 High School in southern China, along with some instructors and parents. There were also adult participants from Australia, Germany, Russia and Ukraine.

Medal-winners included five persons from California: Bob Cooley, Jay Hennigan WB6RDV, Scott Moore KF6IKO, Eduard Nasybulin and Bill Wright WB6CMD. All of them have attended our Antennas In The Park event over the years. April Moell WA6OPS was the Field Medic, treating scratches, cuts, bruises, sprains and bites at the finish line.

Complete results of all events are online in the event Web site: www.ardfusa.com. Many photos are being posted at www.homingin.com, where there is also more information about the growing sport of ARDF.

Joe Moell K0OV
ARRL ARDF Coordinator

Activity Reports of the Fullerton Radio Club TAG group for August 2017

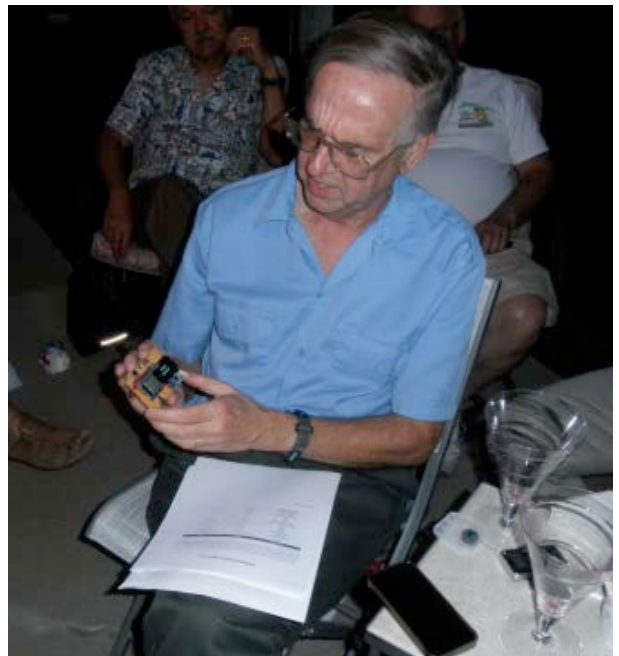
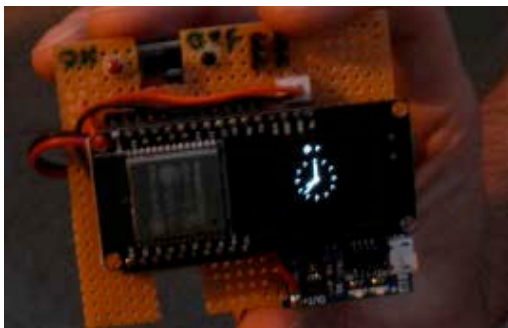
Because of the heat the Technical Adjunct Group TAG move outside.

Tom Fiske built a loop for 2 meters many years ago and lost track of it so a few months ago built another to the exact same specifications. He couldn't get over the gain it had, both in transmit and receiver.



To Tom's right is **Larry McDavid** who brought some parts that he knew would be more appropriate for this audience than at the swap meet. He didn't want to accept money for them. Your editor got from Larry, for example a Surge Protector for an HF antenna. I got it because I shared an interesting story about being electrocuted repairing the G5RV that Dick Palmer gave me. Larry also gave us some advice in updating our computers by pieces instead of buying the whole thing at Fry's.

Bill Webb is quite the advocate for a board that he feels should replace the Arduino. What keeps it from being more popular surely must be the name; ESP32. The one he's holding here, he programmed in it a simple clock. It has a built in screen and WiFi, for less than \$15. Bill says it's the cheapest really neat hobby he's ever had. Bill has also been experimenting with the latest from Joe Taylor, the JT8 which is notable in that it is much faster than JT65.



Tom Gaccione picked up the Pizza for this evening and it seems to be better received that the high brow stuff Walt has been trying to promote, sherry, wine and cheese. (The classical music was also a bit much for these guys.) Here's a description of repair work done on his 2meter/220 rig...

Despite my best (or worst) efforts, the summer of 2017 was pretty tough on my radio equipment. A noisy/ bad connection on my 2m/ 220 radio finally got the best of me. I had had enough; it was time to see if I could repair it. After much examining and a bit of prying, I got the radio apart and discovered the problem: bad solder joints. A quick tap with a soldering iron and I'd be all set! As I was set to reassemble the radio, I heard a loud SNAP! I noticed it, but continued assembly as nothing looked amiss. Unfortunately, at power up, I had no functional display. Well, that was it for that radio. After attempting a few auctions on E-Bay, I promptly struck out.

It was time for a new radio. Of course, I couldn't replace what I had with anything close: My setup was a 2m/220 radio and a 440/1.2 radio. I would have to start from scratch. Fortunately, there were a few sales going on; I was able to pick up a new 10m/6m/2m/440 radio for not much money. This, plus a new 220 only mobile, and I was back on the air. That was certainly an expensive repair job.

Tom WB2LRH: For more from Tom, see bottom of report.

Dick Palmer (not shown, sorry Dick) just got back from visiting relatives in the wine counties of California. A close friend of his lives up there and Dick took some time away from relatives to actually make a whole QRP radio at the guys house. Is that a vacation within a vacation? He also shared with us his experience with a computer simulation of a low pass filter called Tonne. He made a filter from that software for the QRP he made up there.

Gary Barta brought an interesting thing of experimenter's history; a home made digital clock. He bought it at the Ontario Swapmeet for next to nothing from the very fellow who built it. Not quite in the class of discreet parts, but old anyway. We encouraged Gary to just turn it on and leave it on as a memorial to electronic hobbists of the 1970s.



Dan Slater is visiting a Montana State University friend in Idaho Falls for the eclipse later this month. His radio work has been to find a standard of antenna gain so he can compare antennas on his drones.

Brooks Kachner didn't bring wine (he usually does) because, he said he's cutting back. Just recently back from Northern California he brought back only five cases instead of the usual 15. (Rich Belansky brought the wine for this evening.)

Rich Belansky was part of the Nike Rocket adventure which Bill Preston and Walt Clark shared with the group. Rich, Walt and Bill went looking for a high unobstructed site to reach Rein Smit (at the right) on 10 GHz. Rein lives in Alta Vista and usually uses Cucamonga Peak as a very high reflector. No ham activity in that trip but boy what an interesting adventure.

Walter Clark shared his work with Rein at various places in Fullerton. Rich joined Walt on the trail above Summit Restaurant in Fullerton. We found a shady spot on the golf course property. So Rich and Walt were all over no trespassing areas this past week.

Rein Smit drove all the way from Alta Loma to share with us his experience with satellite LNBS and SDRs in the form of dongles. These make a very sensitive receiver for 10 GHz. He also shared with us single side band makes it through the transverters to be detected (or is it discriminated) in the SDR.

Here's more from **Tom Gaccione** on his repair work. Upon hooking up 2 new radios I recently purchased, suddenly the 4 band radio failed. After inspecting the fuses, I discovered 17.9V was coming out of my power supply! Great, now I needed a new power supply too! After my success with the previous radio repair, what did I have to lose?



After much solicited advice and a bit of probing around, I discovered a loose board with most of the regulating components on it. As I jiggled the board, the output voltage fluctuated wildly!

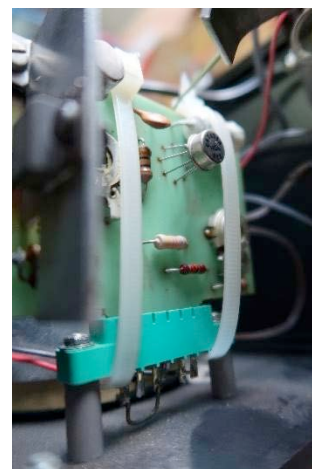
There it was: I discovered the dreaded "sub-optimal" design. After I developed a leading edge advanced solution to the problem, my station was back on the air!

Never underestimate the power of a strategically placed wire tie! (or two...)

Here's Tom's report on his experience at Mt Wilson.

Mt. Wilson is certainly an interesting place! Obviously a Repeater Owner/ RF engineer/Hiker's dream, there was also another reason to visit.

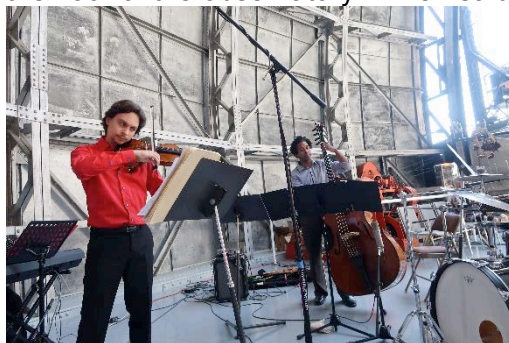
In 1904, George Ellery Hale began to work on a state of the art observatory. New 60 and 100 inch telescopes would be built to study the universe. Completed in 1917, the Carnegie Foundation owned and operated the facility and performed ground breaking research on the universe.





However, as time went on, newer, more powerful facilities scattered around the world left Mt. Wilson behind. In 1989, the facility was handed over to the Mt. Wilson Institute, a Non-Profit that runs the facility to this day. I ran into the Executive Director and he explained that a group of retired astronomers and JPL employees dedicated themselves to upgrading the facility for modern use. Recent upgrades have put the facility back on the map for Infrared Astronomy. In fact, it is available to the public for rental if you'd like to stargaze!

What was I doing up there with the Executive Director? As the group is a Non-Profit, I was attending a Jazz/ Classical Fusion concert fundraiser on the floor of the observatory! Like I said, an interesting place....



Tom, WB2LRH

FRC Board Meeting Open to all Club members

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

Next Board Meeting
September 6, 2017

QSO and dinner; 7:00 PM

Meeting: 7:30 PM

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 above address.