



# Smoke Signals

## Newsletter of Fullerton Radio Club

### October 2023

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#### PrezSez

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Election for our 2024 officers and members at large is upon us; our nominating committee has put together a slate of those who have agreed to serve next year but we will also accept additional nominations from the floor at our October general meeting on Zoom. If you would like to help manage the club, please volunteer! Election will be at the November general meeting on Zoom and recognition of those newly elected will be done at our usual Holiday Dinner.

Speaking of the Holiday Dinner, the board is working on that. We expect it to be much like our recent ones, but we will have more info soon. These dinners have always been fun and provided an evening of good food and conversation.

I know life is busy! Gosh, I've certainly had unexpected household tasks. I've just done some prep work for a planned whole-house paint job. Painters will have to deal with all those coax cables, too. No fun there! I've just received a new laptop computer small enough to carry about but capable enough for graphic work in Photoshop. Adding a computer and making it work like others already in use has filled my spare time! New laptop computers now seem to have only two very-capable Thunderbolt USB Type C ports--and nothing else, not even a dc power input connector! Always something different to think about...

TAG continues to be a great fun evening at Walter Clark's home. We see lots of new things and get to talk about a wide range of topics. If you are not joining us there, please consider it. It is a good opportunity to meet in person since we have not found a way back to an in-person club monthly meeting.

Bob Houghton is promoting some actual radio research work during the annular solar eclipse this month. That will be over by the time this gets published but perhaps Bob can squeeze in a report. This is only an annular

solar eclipse. I have been to nine total solar eclipses and those are entirely different! There will be an easily observed total solar eclipse across the US next year and you should plan to get to the eclipse path and actually see this impressive event.

Larry W6FUB

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#### Club Officer Elections

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It's that time of the year again: time to consider who will be the Club Officers for 2024. By-Laws indicate that we require four officers (President, Vice President, Secretary and Treasurer) plus a minimum of one board member at large. A nominating committee was appointed to identify one candidate who is willing to run for each office. The list of nominees is presented below in advance of the "official" announcement by the club President during our regular October meeting on Wednesday, October 18. However, please note that **ALL** offices are subject to additional nominations from the floor during the October club meeting. Nominated candidates must have the approval of the nominee and they must be a paid or lifetime member. **You can nominate yourself!**

The election will occur during the November regular club meeting, and installation of officers will follow at the December Holiday dinner meeting [see dinner announcement on page 2 of the newsletter].

**Candidate nominations** selected by the nominating committee.

President: Bob Houghton AD6QF  
Vice President: Robert Gimbel KG6WTQ  
Secretary: Paul Broden K6MHD  
Treasurer: Gene Thorpe KB6CMO

**Members at-large:**

Bart Pulverman WB6WUW  
Walter Clark

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

**Board of Directors**

**President**

Larry McDavid W6FUB  
Email: lmcDavid@lmceng.com

**Vice President**

Robert Gimbel KG6WTQ  
E-mail: kg6wtq@arrl.net

**Secretary**

Paul Broden, K6MHD  
E-mail: Pbroden53@gmail.com

**Treasurer, Public Service, Membership**

Gene Thorpe, KB6CMO  
E-mail: gtkb6cmo@juno.com

**Members At Large**

Walter Clark  
Bob Houghton AD6QF  
Bart Pulverman WB6WUW  
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**Volunteers**

**T-Hunt**

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

**W6ULI License Trustee**

Albert Solomon, AG6OF  
E-mail: albertsolomon18@gmail.com

**Newsletter Editor**

Paul Broden, K6MHD  
E-mail: Pbroden53@gmail.com

**December face-to-face dinner  
meeting**

**Save the date! We're planning our  
December club meeting and new  
officer installation as a face-to-face  
holiday dinner at Sizzler restaurant in  
Fullerton located at Harbor Boulevard  
just north of the Brea Boulevard  
junction (same place as last year); on  
December 15, from 5:30 to 9:00 PM.  
You can order your dinner from the  
regular menu. Come for an enjoyable  
meal and leisurely chat, ,,as well as  
new officer installation.**

**Show –and–Tell**

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

**Web site: [www.FullertonRadioClub.org](http://www.FullertonRadioClub.org)**

**October Board Meeting Minutes**

The October 2023 Board Meeting began at 5:31PM on October 4 by use of Zoom with President Larry McDavid W6FUB presiding. Additional members present were Secretary Paul Broden K6MHD, Treasurer Gene Thorpe KB6CMO, Board Members Bart Pulverman WB6WUW, Walter Clark and Bob Houghton AD6QF. Absent was Vice President Robert Gimbel KG6WTQ.

The September Board meeting minutes were reviewed and approved.

Treasurer's Report.

- Bank balance: \$6,440.28. No unpaid expenditures or new deposits.

Membership:

- 30 paid plus 1 life member as of 9/10/23 with no additional renewals or new members.

Upcoming activities:

- Officer election nominations will be announced at the October regular Zoom meeting with acceptance of additional nominations from the floor.

Items for the newsletter:

- Nothing identified.

Old Business:

- Paul Broden will cease editing Smoke Signals as of the end of December. Bart Pulverman has volunteered to take on the duty, with practice attempts before year end. Paul will assist as needed during the next few months.

New Business:

- Club priorities for 2023? None identified.
- A brief discussion was held regarding a holiday dinner meeting. No date or location were selected.
- The potential of restarting a club radio net was discussed. The topic discussion is to be continued during the next Wednesday meeting.
- Bart is in the process of arranging a guest speaker with topic of digital commercial radio communication. No date has been confirmed.

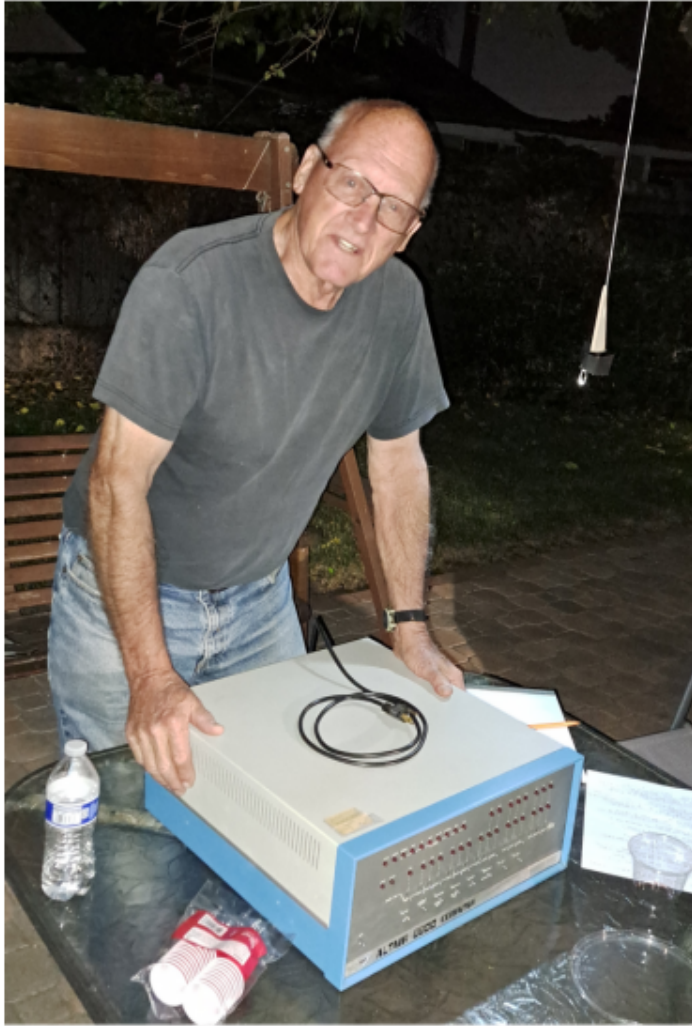
There were no further business items for discussion. The meeting was adjourned at 6:12 PM.

Submitted by club secretary Paul Broden

## TAG Activity Report for October 2023

**Tom Fiske** brought some red wine for us so we would be impressed by his good taste. Larry brought chocolate chip cookies which were appreciated even though it was 16 db down in sophistication.

**John Mock** was the first to arrive with his Altair 8800. He was so excited to talk about it, he was talking about its origins as he was carrying it into the backyard. I had to hold him back until the others came. "That's OK, I'll tell it again." I guess the fun is in the telling. And of course, that's why we get together.



What was unique about home computers in those days was that they were kits. See all those LEDs? There are switches too. What was not in kit form were the boards that would fill this space. He has yet to collect those. There are boards that interface with the floppy disk. A video card to drive a TV set. (Remember those). And of course, a teletype card which was both the keyboard and printer in those days. (Remember the paper tape reader on the side?) John has a collection of those too. The Altair was built by MITS. Names like Don Lancaster and Forrest Mims were associated with this computer and wrote extremely valuable guides (thin books with lots of pictures) on not just computing but circuits that most of us in our 70s now, learned so much from.





John's goal is more than to get it to play Pong on a TV set. It is to collect software for it, to have it do spread sheets, and word processing. He has collected documentation including receipts for when it was originally purchased and a Popular Electronics magazine that had this computer on the cover. John's interest is more than historical. He figured out a way for the instrumentation lab at Hughes back in the 70s to buy one of these to solve one of their problems. So impressed was he with this, John went into the business of selling these. He had the second home computer store in Orange County. But then, Apple and IBM happened.

**Dick Bremer** is into RACES, and the Fullerton Radio Club but perhaps his longest interest is SBMS, (San Bernardino Microwave Society). That's where I got to know him. Each month for 8 years we would carpool to the meetings. All that time he was the treasurer. (I was the Secretary and Newsletter editor for 3 of those eight.) Well, he finally turned in the key to the vault. And we were all glad to hear, the new treasurer found all the money was still there.

Somehow the discussion turned to just how rich is the SBMS and whether it came from being a 501C3. And that led to a discussion, a follow-on from a discussion at the Board Meeting last week on whether FRC should be one. (Answer: No, by the way.)

A RACES friend of Dick's died because of a misdiagnosis and that led to a free-for-all on geezer ailments we are suffering from. But **Bill Webb** took home the prize when he told us that his diaphragm had a hole and that his stomach went into it. His large intestine wound round his lungs and his stomach was twisted almost all the way around. Recovery from the operation that straightened him out, kept him from working on projects to share. This evening's night out with us is the first in a while. He was able to use his 3D printer earlier today to make for Larry, a digital sundial. <https://www.youtube.com/watch?v=78I-A7ikXYU>



Walter observed that RACES may be a left-over dream of old hams who would like their hobby to also make them be heroes, and was of course immediately put in his place by old hams who would like their hobby etc. etc. But that lead to a discussion on how the cellphone network can protect itself against overload. There was much discussion on emergency communications where we learned that Dick had some expensive emergency services added to his land line at only \$9 a month. What ! ! ! Almost zero phone bills for life is one of the benefits from retiring from the phone company.

**Tom Fiske** normally leaves early to go to choir practice at the Presbyterian Church walking distance from my house. No choir practice this night. His story begins with a bit of teasing. It seems that he's addicted to buying radios and parts from MFJ Enterprises. Apparently, they have a reputation for being cheap and of low quality and the initials wind up being translated to things like Mostly F-word Junk. Rather than replace a rotary switch he burned up and having to solder all those wires, he chose to buy a whole replacement MFJ Antenna Tuner. The new tuner costs about \$220. Tom has decided it is better to turn off the power when rotating the "Inductor" switch.

**Bob Houghton** is looking forward to being involved with some science that uses ham radio during this Saturday's eclipse. **HamSCI** is a program that got started with a conference in March at the University of Scranton. One professor there has obtained some funding from the National Science Foundation to get hams involved with each other to be a planet-wide space-weather station. The SCI acronym stands for Science Citizen Investigation. The current project is how the moon's shadow affects the ionosphere. Bob, like most hams who are not in the path of the eclipse, participate by communicating with those on the other side of the path and of course those within it. Somehow the performance of each contact (S meter value perhaps) before, during and after the event will yield some information on the ionosphere's reflectivity during the change from day to night and back to day again that takes place in just minutes during an eclipse. <https://www.facebook.com/HamSCI/>

The HamSCI discussion led to how a ham can measure the height of the ionosphere without contacting anyone else. **John Mock** described an Australian Space-Weather Forecasting Centre which uses dozens of "Ionosondes" spread throughout the country. In this case instead of glancing blows off the ionosphere that the HamSCI folks are doing, an ionosonde is like a straight up radar. And instead of discrete frequencies, it is chirp of different frequencies. The radar-like invention including the idea of using sweep of frequencies was invented



in 1925; some 20 years before *radar* was a word. For more on Australian Space Weather Forecasting: [https://www.sws.bom.gov.au/HF\\_Systems/6/5](https://www.sws.bom.gov.au/HF_Systems/6/5)

There was much discussion on the fiber laying going on in Fullerton including John's story about using a soy product as cladding which resulted in lots of squirrel damage. Bob has been a fan of fiber for quite a while and it finally reached his house. Larry McDavid shared a story about drawing a fiber from a bar of glass and a Bunsen burner. He was a boy of 8 and a GE Science Popularizer was lecturing and needed an assistant to run down the aisle in the auditorium holding the rod with the molten end.

Most impressive for the evening was **Larry McDavid's** medical instrument he was the lead on at Beckman. It measured both CO<sub>2</sub> and oxygen in arterial blood. Our bodies transpire some gas through the skin so it is possible to measure oxygen and CO<sub>2</sub> blood content (or, partial pressures) by monitoring those skin-transpired gases; slightly heating the skin helps. Larry developed an instrument to do just that while working at Beckman Instruments. Premature babies are often placed on ventilators, and it is necessary to know the arterial blood oxygen and CO<sub>2</sub> content to adjust those life-saving machines. Often, the baby's heel is pricked to get a tiny amount of blood; this causes the baby to scream and actually changes the blood gas content. Using this transcutaneous gas sensor eliminated the need to lance the heel and gave a continuous reading of the blood gas partial pressures. The sensor Larry is holding is highly miniaturized, includes active electronics and has a twelve-conductor shielded cable flexible enough to be used in tiny premature babies. Today, pulse oximeters are commonly used but they measure only hemoglobin saturation percentage and not blood gas partial pressures so they cannot be used to adjust ventilators. He was most proud of the fact that babies were involved with this instrument and of course they didn't scream like the traditional way which was to make the poor things bleed.



## FAST USB CHARGERS, ADAPTERS AND FITS

I recently bought a very large capacity Li Ion power bank to recharge my cell phone and some Bluetooth speakers I use for listening to audio books. I wanted a QC smart fast-charger to charge this high-capacity power bank; I had made sure the new power bank would accept a QC fast charger. It is not obvious, but a fast charge rated USB cable is also required. Verifying that QC fast charging is actually working is not easy; noting the recharge time is the best I've found. That's how I discovered that you must verify the device you want to charge can accept a QC fast charge, that you have a charger that supports QC fast charging and that you have a QC-rated USB cable (a cable that is actually full of electronics!).

When I tried to plug the new fast charger into the adapted ac mains outlet where I wanted to use it, I found the new charger was wider than the original standard-rate charger and would not plug into the wall outlet adapter. A flange at the base of the adapter interfered with the new charger. You can see these details in the attached pictures.

That adapter flange seemed to be there only for appearance, so I decided to just remove it. Well, that's what a machine shop is for! Note the outlet adapter clamped into my vertical mill vise and the mill cutter removing the flanges.

Now, the adapter still fits the wall outlet as intended but that pesky flange is gone; the new, slightly larger, high-rate charger now fits. Problem solved! See the pictures.

There seems to never be enough ac outlets in bedrooms (where I want to use this charger) so I've had that outlet adapter there for many years. It powers a small microwave oven, a HT charger, a toothbrush sterilizer, an electric razor charger and now this Li Ion power bank charger. None of these is a high-current device and modifying the wall for more duplex outlets was just not practical. Hence, that adapter, which now accommodates the new USB fast charger!

Sometimes, you just have to adapt...

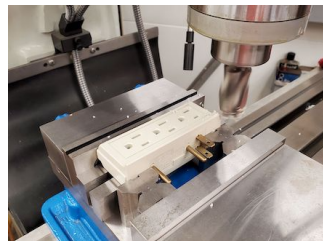
Larry W6FUB



Adapter Flange Interferes



High-Rate Charger Won't Fit



Remove Flange



The Output Adapter



Low-Rate Charger Fits



High-Rate Charger Now Fits

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## October Zoom Meeting

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The October regular club meeting will be held on Wednesday, October 18, at 7:00 PM, by Zoom at the usual address and passcode. If you need this connection information, please contact one of the Board members who will provide the information.

Remember please, that this meeting will include the “official” announcement of officer candidates for 2024 – and the opportunity to nominate additional candidates for ALL offices from the floor. Candidates nominated must have the nominee’s approval! Please plan to attend and cast your vote.

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## November 2023 FRC BOARD MEETING

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*The next Club Board meeting will be on Wednesday, November 1, 2023*

*We will continue to hold the meeting by Zoom at the usual Zoom ID and passcode.*

*Meeting time: 5:30 PM*

***All Members are welcome.***

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## Special Thanks

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I’m providing my personal thanks, as well as that from the entire club, to Bart Pulverman WB6WUW as he has volunteered to take over as editor of our newsletter *Smoke Signals* beginning in January 2024. In the meantime, Bart is preparing a few practice issues to identify any potential needs for assistance. Many thanks Bart.

Paul K6MHD

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## 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: \_\_\_\_\_

ARRL Member ☐ Yes ☐ No

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

**Mail to the above address.**