



Smoke Signals

Newsletter of Fullerton Radio Club

December 2020

REMINDER!

The Club will be finalizing its selection of Officers and Board Members At Large at the December regular Zoom meeting on Wednesday, December 16 at 8:00 PM. The Board would like to see **all** of you on Zoom so we can prepare for the new year. If you haven't voted yet please do so no later than midnight on Monday (tomorrow)

List of Candidates:

President:	Bob Houghton AD6QF
Vice President:	Paul Broden K6MHD
Secretary:	Linda Endsley KJ6IHB
Treasurer:	Gene Thorpe KB6CMO

Members at Large

Richard Belanski KG6UDD
Walter Clark
Tom Gaccione WB2LRH
Robert Gimbel KG6WTQ
Larry McDavid W6FUB

FRC Program - Wednesday December 16

Bob Houghton AD6QF will lead a presentation and discussion on the topic of the Automatic Packet Reporting System, or APRS. Bob will give a brief history of APRS followed by an overview of some of the capabilities of this system. He will highlight some of the radios that have APRS features built-in. He will also demonstrate some websites where APRS stations can be viewed on a map. The presentation will also demonstrate sending and receiving short text messages through digipeaters, both with and without help from the internet. Finally, Bob will be surveying club members for interest in starting an APRS experimentation with the intention of getting other club members to try out this interesting mode.

December FRC Meeting

The December Club meeting will again be presented by video teleconference using Zoom. Members will receive Zoom connection information by our Groups.io.

Meeting date: December 16 2020;

On ZOOM! 8:00 PM

President's Message

Happy December Everyone! The FRC Board hopes everyone is staying safe!

Fortunately, Bob Houghton and Paul Broden have generously stepped forward and have agreed to be candidates for President and Vice- President of the club. Paul is a long time FRC member and writes our newsletter; he and Bob have been contributing to the club for many years and we are very fortunate to have them! Please assist them any way that you can.

Larry McDavid sent out several emails to confirm the vote for the board slate; please reply to him to confirm the 2021 board ASAP.

While the virus has hampered club get togethers, remember, we still have a two meter net on Wednesday nights as well as a Zoom meeting. And if you have a technical interest, we have the Technical Advisory Group (TAG) meeting on the second Wednesday also! We'd love to see and hear from you! If you are interested, VP Bob Houghton AD6QF can get you the details.

We're always looking for speakers to talk about things they are interested in, and it doesn't have to be amateur radio. Please let us know if there's anything you'd like to talk about. We'd like to see you at the Zoom meeting or on the two meter net!

PLEASE remember to renew your membership for 2021. Your \$20 goes towards the costs the club incurs each year: Postal Service charges, Club Insurance, gifts for the holiday dinner, and government fees that are required to keep the club incorporated. Send your check to Gene Thorpe at the club PO Box or follow this link <https://fullertonradioclub.org/application-renewal-form/>.

[Membership form is also attached at the end of the newsletter]

Thank you!

73,

Tom, WB2LRH

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

Board of Directors

President

Tom Gaccione WB2LRH
Email: tsgaccione@yahoo.com

Vice President

Bob Houghton AD6QF
Email: bobhoughton@mac.com

Secretary

Linda Endsley, KJ6IHB

Treasurer, Public Service, Membership

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

Members At Large

Richard Belansky, KG6UDD

Walter Clark

Robert Gimbel, KG6WTQ

Larry McDavid W6FUB

Paul Broden, K6MHD

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: pbroden@sbcglobal.net

FRC BOARD MEETING

***The next Club Board meeting will be on
January 13, 2021 and will be conducted
using Zoom video conferencing
platform.***

5:40 PM

Members are welcome.

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.

EVERY, MEETING

Web site: www.FullertonRadioClub.org

FRC Board
Coronavirus Special Remote Meeting

The December 2020 FRC Board meeting was called to order at 5:40 pm by Tom Gaccione WB2LRH via Zoom (Coronavirus). Others present: Vice President Bob Houghton AD6QF., Treasurer Gene Thorpe; KB6CMO; Secretary Linda Endsley KJ6IHB, Paul Broden K6MHD, Larry McDavid W6FUB, Robert Gimbel KG6WTQ, and Walter Clark.

Minutes were approved.

Treasurer's report:

Checking - \$3,980.42; Savings - \$2,608.60.

Old Business:

34 paid and 3 life members; 2 renewals, 1 new member

Tax and corp filings status: Gaccione report – As of 11-30-2020, we ARE a tax-exempt entity in California. In California, our Entity ID is 0248963 (FTB) or C-0248963 (SOS). We determined we didn't need federal tax-exempt status.

Bob filed our incorporation documents for 2020, we are good until 2022.

New Business:

Need a check for Bob for \$96 for web site and check for Gene for PO Box rental \$92.

Voting will take place by email.

Next board meeting: 13 January 2021

Adjourned at 7:05 pm

Submitted by Linda Endsley KJ6IHB

TAG Activity Report
(Technical Advisory Group) of the Fullerton Radio Club
for December 2020

Walter was the field coach for the meeting but Bob Houghton hosted the Zoom part of it. Walter moved the meeting along and arbitrarily chose who was to speak next. One important role of the host is determining where some strange sound is coming from. Often a participant doesn't himself notice some machine that's on, or someone dozed off and is snoring. Bob can actually mute each of us in turn until he discovers the source. For big meetings, the host mutes everyone and then unmutes those that are about to speak. But for Zoom meetings of only a dozen or so we can all speak anytime we want and politeness is what controls that. Here's something interesting. In a real meeting your ability to sense direction more than the voice itself determines who is the one that wants to speak next; one of the many things missing in a Zoom meeting. I don't think even stereo would help that.

Dick Palmer was asked to go first. No new QRP radios, but he did tell us of an adventure he had in Mesa, Arizona. It was a ham swap of about 25 vendors and a hundred or so customers. His carpool mate sold a lot, but Dick himself didn't even pay for the gas. Dick goes to swaps to sell O-scope he repairs, and calibrates. (I have one of Dick's Tektronix and love it.)

Of most interest to us was a restaurant where he and a lot of hams spent time. It was Organ Stop Pizza. We all took turns talking about how many pizza places had organs and how few now.



Tom Fiske told us about the ways he was helping Leo Kim get on the air so he could exercise his new Extra Class license.



Leo Kim didn't have as much to say as some but we all congratulated him for getting that Extra Class license. He lives where there is a home-owners-association limitation on antennas. The HF antenna that Tom helped him build has to fit in the attic which led to a discussion on radiant barrier on the inside of the roof.

Larry McDavid had several things to share with us. Of most interest to me was his presentation of coating steel parts. He contrasted “bluing” with the easier process of black oxide coating. He also mentioned two aluminum coating methods where again one is harder than the other; anodize vs. Alodine Chem film Chromate Conversion.

Click here for more → https://en.wikipedia.org/wiki/Chromate_conversion_coating.

Of the many other things Larry talked about is this intriguing photograph of how he gets on the roof of his house. Below is the front of Larry's house and you can see why he needs to get up there so often.



Bill Webb combines his two hobbies; electronics and 3-D printing. This month's project is three little boxes that held a sensor, microcontroller, and display used to position his car within inches of the most efficient use of space. Here's a slide from his PowerPoint presentation:

Zoom Meeting

Don W6fozz Dustin 0000K Leo Kim Dick Bremner

The sensor I used to detect the location of the car was the VL53LOXV2 Infrared Time-of-Flight Sensor

- Range 2m with $\pm 10\%$ worst case accuracy
- Arduino compatible I²C Interface
- Mature Arduino libraries are available.
- Cost \$4.00

A photograph of a purple VL53LOXV2 Infrared Time-of-Flight Sensor module. The module has a gold-colored PCB with a black sensor chip in the center. It has six pins labeled VCC, GND, SCL, SDA, EP101, and XSHUT. The module is shown with its 6-pin header.

Dustin Rachuy KK6KND is holding a cellphone case he made on his 3D printer. Yes, another 3D printer person. His preferred software tool is TinkerCAD. Bill Webb likes TinkerCAD but now mostly uses Fusion360. It is a strongly supported Autodesk product for commercial design and is free to hobbyists for personal use.

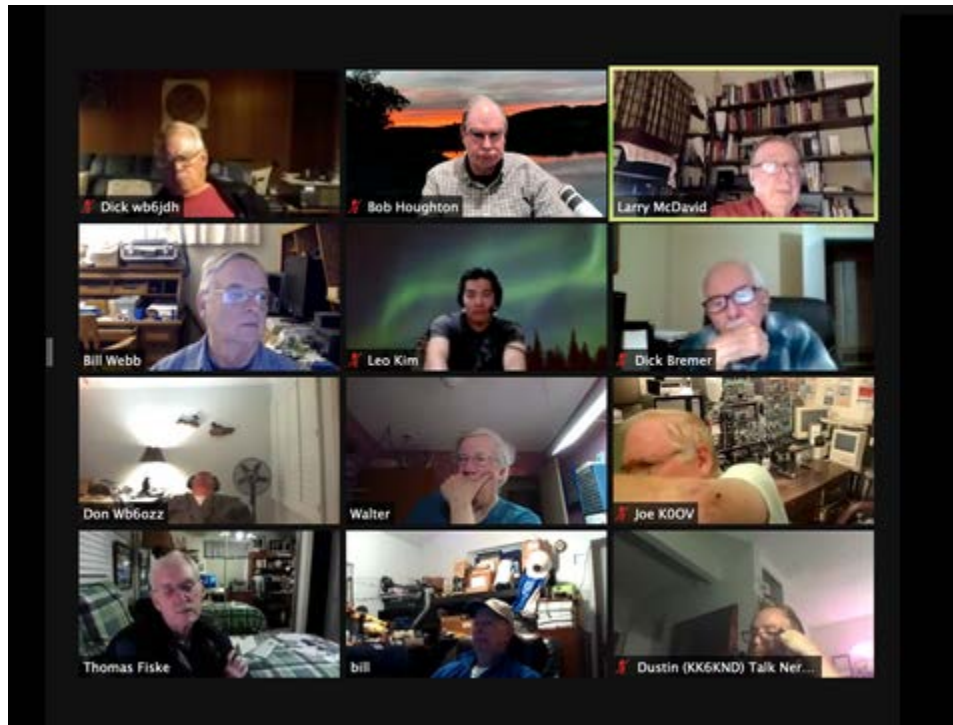


Dustin has built antenna mounts with his 3D printer. His occupation is the electronics of large fireworks shows. His most recent project that used his 3-D printer was to make holders for drill batteries. Those batteries are cheaper and handier for charging than the batteries that were normally used with the fireworks master console.

Joe Moell is sitting in front of his man-cave, ham shack. The Macintosh and telephone work, he assured us. This is the guy that communicates with satellites, so don't worry about his tech pedigree.



He shared with us how he avoided the ire of the homeowners association by using a flag pole as a J-pole 2 meter antenna. He also told us of his efforts to hide a 15 meter antenna below the rail. That rail gave him some grief on his SWR measurements but eventually got it. Presumably he has some gain with its use.



Interesting Voyager Space Probe Info

There has been a brief discussion on Time-Nuts email reflector about the frequency control means on the Voyager spacecraft. This topic has diverged into some more general information that may be of interest to you. Please read below one recent Group message.

Note the Voyager signal strength! That's impressively weak... In comparison, the GPS satellites signal strength is about -130 to -140 dBm here as received. That small GPS receivers can capture this GPS signal is itself rather impressive. But -156 dBm is something else again!

Round trip radio comms to Mars is about 45 minutes max. Round trip comms to Voyager (1) is now about 35 *hours*.

Voyager launched before there were "atomic" frequency standards available for spacecraft so stabilized quartz crystals were used. Note the 10 Hz bandwidth of the Voyager receiver at 8 GHz...

I don't twit so I don't know what is out on Twitter about Voyager.

Larry W6FUB

Ham Gear Available

Hi guys,
This is a voice from the past, George Oelkers-W6QOL, in Placentia. I have been inactive for a while. My son is a ham now and is taking over the reigns when he can find the time. But I have MFJ equipment I would like to donate to a new home. Do you know anyone who would be interested? I

would love to have you call me when you have time.
714-993-7372

Best Regards
George Oelkers W6QOL

* * * *

[Gene Thorpe KB6CMO also has some old gear to pass on if someone is interested. 714-680-4258]

FRC Wednesday Net:

We're continuing to conduct a 2-meter net on Wednesday evenings. All members, prospective members and friends are welcome. Raytheon repeater, 7:30 PM: 146.970 (-) PL 136.5. This is followed by a chat session on Zoom at 8:00PM. Members will have the Zoom code, but we don't publish it openly to prevent unwanted interruptions.

TAG MEETING

The Technical Advisory Group (TAG) meets each second Wednesday at 8:00 PM by Zoom, until such time as safe small group meetings are acceptable. We don't publish the Zoom log-in number or password to prevent unwanted interference, but you can receive this information by contacting Walter Clark (TAG meeting host) by email or phone.

Smoke Signals Input Request

How about some of you providing a brief article for Smoke Signals? It doesn't have to be elaborate, or extensive; just of interest, and perhaps related to amateur radio. Something with a photo would be especially good. Or maybe just a photo of something you've done, with caption and source (your name and call). A trip you took with ham station set-up; a new or antique radio with some detail; a project you've done or are doing; new or novel antenna; photo of your ham shack; a contact method you've never tried before; new DX contact; details about a particular band opening. Use your imagination. But help fill the pages with Amateur Radio "stuff" that will demonstrate that at least some of us are active within the hobby, and interested in the Club. Send to my email address (see Newsletter Editor; page 2). Any format: .doc, .docx, .txt, .rtf. I can edit photos to fit the space available. I reserve the option to edit as needed.

Paul Broden, K6MHD, Newsletter Editor

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

Bring your application and dues payment to the next meeting or mail to the above address.