



Smoke Signals

Newsletter of Fullerton Radio Club

November 2020

President's Message

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

November is a very important month for the club. It is when we have an election to determine who will be the leaders of the club for 2021. As such, we will be holding the election for leadership this coming Wednesday night (our regular meeting night) via Zoom. We would like to see a nice turnout; it takes a minimum of 7 club members to have a quorum for the election. Any member can run for office; we still have vacancies for positions, and we'd love to see some new faces! New blood in the leadership roles of the club brings new ideas and interests to the membership. It takes little time each month, and the board is always a big help if you're new at it! Please consider becoming a club officer; remember it's YOUR club.

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/>. Thank you!

73,

Tom, WB2LRH

CLUB ELECTION

We continue to have a problem with the upcoming election. No one has volunteered for nomination to the offices of President or Vice President as of today's date, and the nominating committee hasn't been able to identify anyone to fill either position nomination. We're at that impasse again without a nomination for club President or VP. Nominations may still be made during our Zoom November club meeting prior to the vote, but are subject to approval of the candidate. *And yes, you can nominate yourself.*

But that's not the only reason for elections. We really desire to keep the club active, and perhaps identify an improved direction. By-laws indicate that the objectives of the club are:

1. To further the interest of amateur radio in the general community,
2. To maintain a well organized group of amateur radio operators for the purpose of providing communications in case of emergency or disaster,
3. To advance the understanding of radio theory and practice, and to provide dissemination and discussion of information to advance individual efficiency in the construction and operation of equipment used for amateur radio communication,
4. To secure for ourselves the association of persons commonly interested in amateur radio, and,
5. To affiliate or cooperate with selected individuals, groups, firms, organizations. Or corporations for the furtherance of the foregoing objectives.

How do **YOU** think you fit into the scheme of these objectives? Where can **YOU** assist the Club in our in this next year?

Attend the Zoom Club meeting on Wednesday, volunteer and VOTE!

Current List of Candidates:

President:	Open
Vice President:	Open
Secretary:	Linda Endsley KJ6IHB
Treasurer:	Gene Thorpe KB6CMO

Members at Large

Walter Clark
Robert Gimbel KG6WTQ
Larry McDavid W6FUB
Paul Broden K6MHD

Remember, just because there is one candidate now doesn't mean that others can't be added to the list! Maybe YOU?

November FRC Meeting

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

**Meeting date: November 18
2020;**

On ZOOM! 8:00 PM

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

BOARD MEETING

***The next Club Board meeting will be on
December 9, 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.

Web site: www.FullertonRadioClub.org

November Board Meeting Minutes

The November 2020 FRC Board meeting was called to order at 5:40 pm by Vice President Bob Houghton AD6QF via Zoom (Coronavirus). Others present: Treasurer Gene Thorpe; KB6CMO; Secretary Linda Endsley KJ6IHB, and Board Member Paul Broden K6MHD

Minutes were approved.

Treasurer's report:

Checking - \$3,980.42; \$Savings - \$2,608.60. No new expenses.

Old Business:

33 paid and 3 life members.

Tax and corp filings status: Gaccione report – As of 10-30-2020, we are still not a tax-exempt entity. The FTB sent a letter to Gene Thorpe on 10/19/20 requesting we submit an electronic 2013 Form 199N income tax form. Tom filed the 199N form, and sent a new letter to the FTB verifying the submission on 10/30/20. We submitted the original application at the end of November 2019. Our Entity ID is 0248963 (FTB) or C-0248963 (SOS).

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

New Business:

Election 2020 suggested to seek officers for 2021. Need candidates for the election. Tom will continue to support the government agencies (forms that need to be submitted).

It was suggested that the club get back to more ham radio related items.

November general meeting discussion on where the club is headed.

Next board meeting: 9 December 2020

Adjourned at 6:37 pm

Submitted by Linda Endsley KJ6IHB

All stuck up

We all use adhesives around the house from time to time. I prefer to use urethane and epoxy two-part adhesives. I use urethane adhesive when I need some joint flexibility when bonding different kinds of materials, such as plastic and metal. Epoxies may form stronger bonds but don't always work well when the materials bonded are very different, with different thermal coefficients of thermal expansion.

The problem is how to get these adhesives in the very small quantities you often want, and to prevent waste and spoilage. I use small foil pouches, each of which contains the correct proportions of the base resin and the accelerator. See the photo for an example of a two-part urethane adhesive packaged in a small, single-use pouch. I buy these pouches from McMaster-Carr and I keep them in a wine cooler at about 56°F. The supply I have now is at least 5 years old and the adhesives still work well.

Recently I needed to bond some short aluminum shafts into plastic balls. I used the urethane adhesive. One pouch was more than enough for the seven balls I needed. See photo.

I wanted to attach these balls to a large steel cylinder in a turret punch. After curing the urethane adhesive holding the short shafts in the balls, I used a weak Loctite, 222MS, to bond the shafts into the steel cylinder. That particular Loctite is weak enough that the shafts and balls could be removed if necessary. See photo of the final assembly.

I once, in the very dim past, worked for the 3M Company in their adhesive development lab. I learned a lot about making adhesives work! Besides selecting the appropriate adhesive, the most important requirement is cleanliness! Complete removal of all joint contaminants, such as grease and finger oils, is essential. But, on my very first day at 3M, I learned a lesson: "son, these are adhesives, not glue!" Glue, or mucilage, used to be available in glass pots in our post offices; it is made from horses hooves...

Best wishes,

Larry McDavid W6FUB



pH Measurement

Recently, Walter Clark described an experiment evaluating the effect of dissolved air on the carbonation of water. I suggested he might learn more about how well the CO₂ is dissolved by his table-top SodaStream carbonator by measuring the pH of the resultant carbonated water. Dissolving CO₂ in water produces carbonic acid that will surely affect the pH of the water. I proposed a simple hand-held, low-cost (\$9.89 postpaid) pH meter available on eBay:

<https://www.ebay.com/itm/Digital-Electric-PH-Meter-LCD-Tester-Hydroponics-Aquarium-Water-Pocket-Test-Pen/333657508909?epid=12031271888&hash=item4daf898c2d:g:KBoAAOSwayZfERaP>

I've had several table-top, laboratory 3-decimal-place pH meters but have not kept them operational. So, interested as always, I ordered one of the simple, two-decimal-place pH meters offered on eBay. I see even simpler one-decimal-place pH meters offered on eBay, good enough to measure the pH of your spa water.

The pH meter arrived and looked really neat! There was a relatively large size glass bulb pH electrode and a visible reference electrode, the two essentials for measuring pH. The meter came with three foil envelopes of powdered chemicals to prepare buffer solutions of pH 4.01, 6.86 and 9.18.

I wanted to determine how well calibrated was the pH meter as delivered so I mixed the buffer powders and stored the resultant solutions in amber glass, PolyCone-closure quart bottles (I keep a supply of various kinds of bottles on-hand). The buffers were to be prepared by mixing with 250 ml of pure water; in this case, I used distilled water and followed good lab practices for cleanliness. See attached picture. The meter has a CAL mode and there are instructions on how to calibrate it using the supplied buffers. I measured the buffer solutions with the as-received pH meter and after one calibration cycle.

Here are the results data:

<u>BUFFER pH</u>	<u>Meter as Delivered</u>	<u>Meter After Cal</u>
4.01	3.17 pH	4.05 pH
6.86	6.70	6.91
9.18	8.63	9.20

As you see, as delivered, the meter was not well calibrated. I have performed only one CAL cycle and marked improvement is seen. Really, considering what this meter is, these after-CAL values are reasonable. This is not a professional laboratory instrument! However, it appears calibration after receipt is necessary to get reasonable readings. Additional CAL cycles might produce better results.

Glass pH bulbs are made of a special glass and contain an internal electrolyte inside the blown bulb. If kept externally dry, the glass takes some time to hydrate after immersion so the meter working-

end should be placed in pure (RO is fine, tap water is not) water for a half-hour initially. And, it takes at least 30 seconds for this meter to settle to a stable reading after immersion. As I explained, this is not a lab instrument!

If measuring the pH of carbonated mineral water, remember that the CO₂ continuously evolves from the water so the pH will continue to rise with time; you need to be quick or use a repeatable interval after dispensing the water to get comparable results.

Recall that neutral (neither acidic nor alkaline) liquid has a pH of 7.0. Carbonated soft drinks will be acidic with a low pH reading; some folks seek "alkaline water" to drink and these will have a high pH reading. I don't know how low or high but it will be interesting to find out!

This pH meter is similar in shape, size and operation to a Total Dissolved Solids meter used to evaluate mineral content of tap and RO water. These TDS meters are even less expensive and are also available on eBay.



Best wishes,

Larry McDavid W6FUB

FRC Wednesday Net:

We're conducting 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. Sorry, we didn't have a November TAG meeting, so there is no article this month.

Smoke Signals Input

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. 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: _____	
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.