# Smoke Signals

## Newsletter of Fullerton Radio Club

August 2025

## President's Column

It's been a year and a half since we introduced the weekly FRC "Dual-mode" net. For anyone unfamiliar with what we do, here is the original description from March 2024:

Each Wednesday at 6:30 pm, we start with a "normal" check-in on the K6QEH "Raytheon" repeater, followed by a *second* check-in using a different frequency, band or mode. For example, perhaps after our K6QEH check-in, we might follow-up with a check-in using 10 meter SSB. Everyone should be able to participate in the repeater check-in, while fewer members are likely to be equipped to check-in on 10 m SSB. Each week, the first check-in stays the same (so that everyone is able to participate) but the second check-in changes each week (to encourage members to try a less-used mode). When our regular Wednesday Zoom meeting begins at 7 pm, we announce who we heard on the first and second check-ins and find out who tried but wasn't heard.

Since we started doing this, participation has been good, with a surprising number of folks able to regularly participate in both check-ins.

To keep things interesting, I'd like to occasionally expand the scope of our "second-check-in." In March, we did a pretty successful test of an experimental text-over-radio app called Rattlegram. Next week, on September 3rd, we will try a decoding test of slow scan television (SSTV).

To participate in this SSTV reception test, you'll need a radio (duh) and some software that will convert the tones coming out of your radio into an image. SSTV applications are available for smartphones that use iOS, and Android. There are also programs for Windows, MacOS, and Linux operating systems.

The simplest way to decode an image will be to place the microphone of your phone or computer near the speaker of your radio. If you want to be more sophisticated, the audio can be routed from your radio to computer via the same sound card interface that you likely use for FT8. Look for more details in an email this week.

## The Post Office Net

By Joe Moell K0OV

The August 2025 issue of IEEE Spectrum includes an article by Allison March titled "How the U.S. Post Office took point on civil defense." It details how cold war leaders put the Post Office Department in charge of preparing 1,500 community fallout shelters, mostly in the basements of Post Office buildings. A major concern was how, with disrupted communications, shelter inhabitants would be informed when they could leave shelters, where they could go, how decontamination would take place, and so forth.

Heath CA-1 Conelrad Alarm receiver

From the Spectrum article: "In May 1958, Postmaster General Arthur E. Summerfield made an appeal to all postal employees who happened to be licensed amateur radio operators, to form an informal network that would provide emergency communications in the event of the collapse of telephone and telegraph networks and commercial broadcasting. The result was Post Office Net (PON), a voluntary group of ham radio operators. By 1962,

about 1,500 postal employees in 43 states had signed on. That year, PON was opened up to nonemployees who had the necessary license."

As a pre-teen, my primary Elmer was Ken Frazer K0KKJ, who was a clerk at the post office in our town of 12,000 souls. He administered my Novice test and later my test for the Conditional Class license, which was equivalent to General Class but was available by mail to candidates living over 75 miles from locations where FCC periodically gave the exams. Almost every day after school I would climb the well-worn steps of the 1890's vintage post office building and stand at the window to talk with K0KKJ. In between dispensing stamps and weighing packages for postal customers, he patiently taught me all about antennas and answered my ham radio questions.


US Post Office, Beatrice, Nebraska

Ken was a very active member of the Nebraska Post Office Net (NPON), which convened daily at 1815 CST on 3,980 KHz. (It was kilocycles in those days). Propagation was excellent on 75 meters most of the time, especially in winter, and the manmade noise level was low. The lengthy roll call included stations from all parts of the state. Most were post office employees, including the postmaster of one village who was married to one of my great aunts.

As soon as I got my Conditional ticket, I began checking into NPON, making plans around supper as necessary. My Heathkit DX-40 and my adolescent voice were always welcome in this community of adults, many of whom ran homebrew kilowatt stations on AM. There were a few check-ins using that newfangled single-sideband, too. Whenever any of us were on the air, our CONELRAD monitors (such as the one in the page 1 photo) were operational in case our local radio station dropped carrier for a national Emergency Broadcast System alert, which would require us to immediately sign off.

There was never any discussion of post office shelters or nuclear war survival on NPON, but there was plenty of informal training. The primary net activity was relaying messages in ARRL format. A liaison station to the National Traffic System took outgoing cross-country traffic and brought in messages to be delivered in Nebraska communities. Every summer our local club's ham radio booth at the county fair originated dozens of "hello family" messages and I was one of the members who passed them on NPON.

NPON was not affiliated with ARRL's Amateur Radio Emergency Corps (AREC, as it was called in those days), but the net performed plenty of public service. When tornados and other severe weather occurred, the net took statewide damage reports for the authorities. When rivers flooded, NPON members collected and relayed their levels hour-by-hour to officials in the state capital. Road reports to the Nebraska Safety Patrol (its name back then) followed every snowstorm.

NPON was good for Nebraska and good for its members. If I sound professional on the air, it is thanks to the lessons I learned from my many Elmers on NPON. And if I don't, it isn't their fault.

References:

https://spectrum.ieee.org/civil-defense-cold-war

https://about.usps.com/who/profile/history/pdf/postal-service-role-in-civil-defense.pdf

**Fullerton Radio Club**
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## September schedule

Wednesday 9/3/25
5:00 pm Board Mtg (Zoom)
6:30 pm - Dual-mode Net
7:00 pm Zoom
Wednesday 9/10/25
TAG at Walter's
Saturday 9/13/25
8:00 am Hillcrest Park & Lunch
Wednesday 9/17/25
6:30 pm - Dual-mode Net
7:00 pm Zoom
Wednesday 9/24/25
6:30 pm - Dual-mode Net
7:00 pm Zoom

# FRC August 6, 2025 Board Meeting Minutes

The monthly FRC Board Meeting was called to order by President Bob Houghton AD6QF at 5:30 pm on Wednesday, August 6, 2025 via Zoom.

Board Members present: Bob Houghton AD6QF, Robert Gimbel KG6WTQ, Ray Rounds K6RAX, Walter Clark, and Larry McDavid W6FUB.

Board members absent: Bart Pulverman WB6WUW, Gene Thorpe KB6CMO.

The July Board Meeting Minutes were reviewed and approved without amendment.

Treasurer's Report:
- New deposits: $.02 interest
- New expenditures: None
- Bank balance: $6,010.16 as of July 31 bank statement.

Membership:
- New members: None
- Bob's records show 27 paid members, plus 1 life member as of 8/04/2025.

Old Business:
- There was no old business discussed.

New Business:
- Bob mentioned the upcoming club election process and requested each Board member review Article VII of the by-laws at https://fullertonradioclub.org/frc-bylaws/
- Saturday in the Park with possible plans to be discussed at the weekly club meeting later in the evening. Ray to work with Dick Palmer WB6JDH for the upcoming training time.
- Bob requested thoughts about the end of year Holiday Party. Discussion ensued. While other options may be available the general consensus was to stay at Sizzler in Fullerton.
- Bob also mentioned the upcoming Meteor Scatter QSO Party at 0000 UTC August 11 to 2359 UTC August 12.

Meeting was adjourned at 5:46 PM

Submitted by Ray Rounds K6RAX, Secretary

## What's up with security?

#3 in a series by Ray Rounds K6RAX

**Two-Factor Authentication: Your Security Sidekick**

In the battle for online security, passwords are your first line of defense. But what if someone steals, guesses, or gets your password in a data breach? That's where **two-factor authentication (2FA)**, or multi-factor authentication (MFA), comes in as your super-powered security buddy. It adds a crucial second step, making it much harder for bad guys to get into your accounts, even if they have your password.

So, how does 2FA work? Think of your online account as a locked door. Your password is the first key. With 2FA turned on, there's a second lock on that door, and you need a second, special key to open it. This second key usually falls into one of three categories:

**Something you <u>have</u>:** This is the most common. After you enter your password, the service sends a unique, time-sensitive code to your trusted device – usually your phone. This could be a text message, a push notification from an app, or a code from an authenticator app (like Google's Authenticator or Apple's Passwords). Since a hacker would need to touch your phone to get this code, it's a big obstacle.

**Something you <u>are</u>:** This involves biometrics, like a fingerprint scan or facial recognition. Many phones use this for unlocking and app access, and some online services are starting to use it for 2FA.

**Something you <u>know</u>:** Less common for the *second* factor, but sometimes used with another. This might involve answering a security question that only you would know.

The best part about 2FA is that it's easy to use and hard for bad guys to use. Even if your password is stolen, (maybe through a phishing scam or a data breach), they won't be able to log in to your account without that second piece of info – the code sent to your phone or generated by your authenticator app. This makes your accounts much more secure.

Where should you enable 2FA? The simple answer is: **everywhere it's offered, especially for your most important accounts.** Start with your email account, as it's often the "recovery key" for many other services. Then move to banking, financial institutions, cloud storage (like Google Drive or Dropbox), social media platforms, and any online shopping accounts where your payment information is stored. Most major online services now offer 2FA as an option. Look for "Security Settings" or "Login & Security" within your account profiles to enable it. It might take a few extra seconds to log in, but that small inconvenience is worth it for the peace of mind knowing your digital life is far more secure.

## ICOM refreshes the IC-7300

After ten years and 100,000 units produced, Icom has recently announced the IC-7300MK2. While front panel layout is identical to the original IC-7300, the rear panel hints at a number of improvements inside.

The refreshed model has an HDMI port to allow the attachment of a large external monitor. An ethernet port and internal LAN server allows remote operation without the need for an attached computer. A RX antenna connector allows the use of separate RX and TX antennas. Receive current draw, which was already low for a 100 W transceiver, has been reduced from 900 ma to 700 ma. The radio now features a built-in CW decoder. The USB has been updated from a large square USB-B connector to USB-C. Receiver phase noise has been reduced by 12 dB.

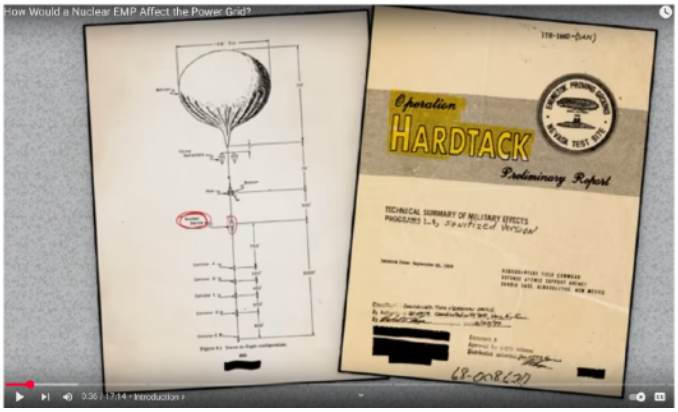
In summary, while there are no radical changes, several features and refinements that users have

# TAG Activity Report for August 2025

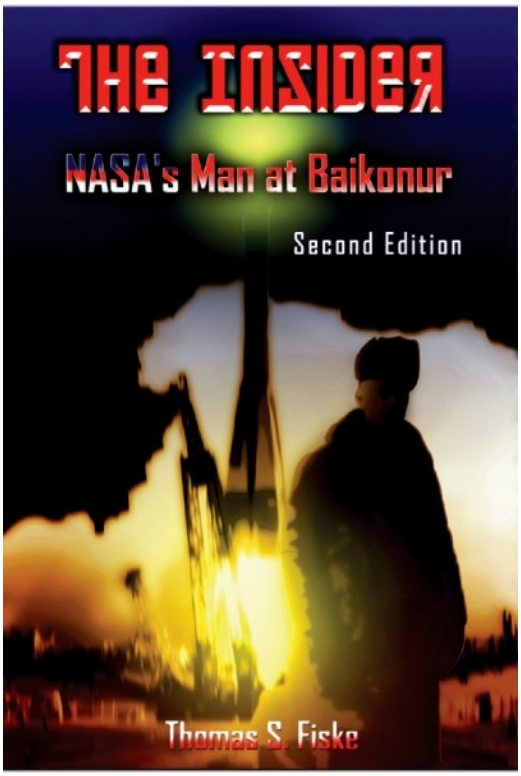
The theme for the evening was science and ham radio. Presumably, how the hobby of radio can demonstrate some physics. John's story is most appropriate.

**John Stevenson** is back with us. He was a caretaker for an elderly gentleman, and shall we say John's work is now complete. He had a story to tell about using FM broadcast stations to reveal meteors. This story was appropriate since this very week is the peak of the annual Perseid meteor shower. Step one, go so far away –in this case 15 miles east of Bishop-- where you can only receive a few FM radio stations. You push the preset button on the car radio for the station in a city in a particular direction and then wait. And wait. When you hear one second of music or a few words from the announcer, you declare victory. I guess.

There was a great deal of discussion about the ionosphere because it is played with by hams, but I guess with Putin's aggression in Ukraine in mind **John Mock** talked about the effect of nuclear weapons on the ionosphere and in particular the effect of the EMP, (electro magnetic pulse) on the power grid and satellite communications. His point was that it really isn't as bad as the media makes out, but at the same time he felt it was irresponsible on the part of the media to create fear and panic in the public.




Here's an excellent 17-minute video on How Would a Nuclear EMP Affect the Power Grid? https://www.youtube.com/watch?v=FksEGpBLfis

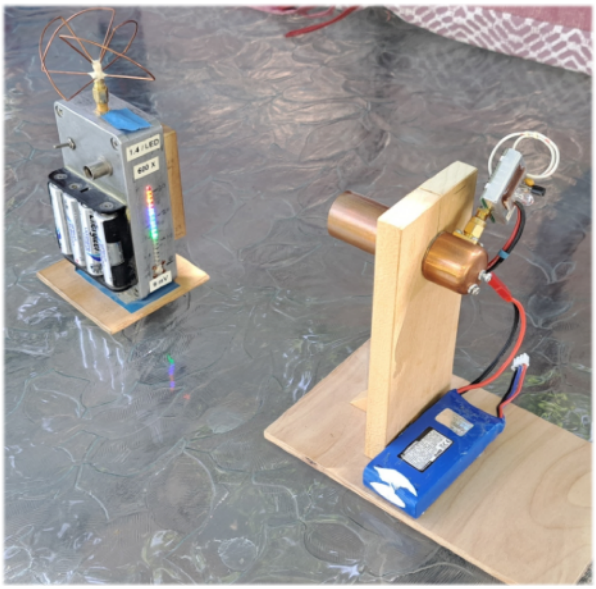



Also not seen in a long time is **Tom Fiske**. He's renewing his CW skill. It's been a while he said. Like 1949 ago. His goal, (or is it what he's doing now) is 13 words a minute. He reminded us that the August 2025 issue of QST has a Special Section titled "HamSCI: The Ham Radio Citizen Science Investigation.

Tom told us his son isn't too keen on capitalism so he moved to Ecuador. Perhaps his boy is enthusiastic about nature and the ecosystem and it follows therefore that anything moderno is no bueno.

Tom reminded us about his time with his friend who used to work at the CIA. John's book on that subject is "The Insider."

**Walter Clark** (our host) brought out a microwave lecture apparatus. He shared with us that his interest in microwave was the physics and his audience was the San Bernardino Microwave Society. They found it interesting of course and attending those meetings between the few where he was the speaker he learned about ham radio. He later became the secretary and newsletter editor for three more years. He never did get his license though. It is interesting that when you have a reputation of respect, you don't mind asking dumb questions. It's good to have someone like that around when there's newbies that would hesitate to waste the time of the members in asking beginner questions.

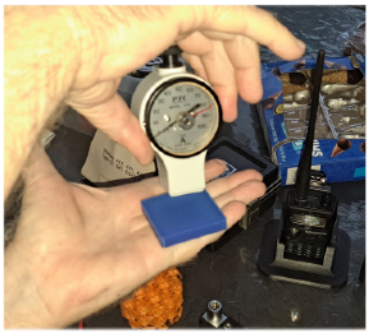


**Ray Rounds** talked about replacing his key fob which began a discussion on the radio and encryption (or lack of it) of those things.

**Bill Webb** brought samples of his latest 3D printer outputs. He has been experimenting with a filament called TPU (Thermoplastic polyurethane). It is soft, flexible and somewhat difficult to work with. With TPU you can make things like cellphone cases and drink coasters. Larry McDavid brought his hardness tester. We tested a printed TPU block against the specification. The Shore hardness spec. was 95A and it tested 97A. Amazingly close!

**Larry McDavid** showed the final version of the car mobile 3D printed holder for the Kenwood TH-D75 HT that he and Bill Webb have been working on. Sitting next to it on the table, is a 3D printed a desktop stand for a Kenwood TH-F6 HT.

Larry talked about the difficulty of running cables through a modern car firewall, which he's done twice now. The first picture shows a Jurassic Park-size hypodermic needle used to penetrate a rubber grommet in his car firewall to feed the power cable through. The middle picture shows a Shore A durometer testing the hardness of a TPU (thermoplastic urethane) test block printed by Bill Webb. And on the right is a car battery terminal adapter block allowing good connection of a ham radio rig power cable directly to the automotive battery.



**Dick Palmer's** interest in QRP seems to have no bounds. Turns out there's a QRP cult, I mean fan club, that makes dozens of kits and test equipment. It's not that the RF signal generator is obligated to put out 5 watts, it's that it turns out there's a favorite set of frequencies this cult uses. I had to look that one up on Google:

- For the 3.5 MHz (80-meter band), the QRP CW (Morse code) center of activity is around 3,560 kHz,

- while for 7 MHz (40-meter band), it is 7,030 kHz for CW and 7,285 kHz for SSB (voice).
- For the 14 MHz (20-meter band), the primary CW QRP calling frequency is 14,060 kHz, with the SSB QRP activity it's 14,285 kHz.

Dick said their kits tend to be the size that fits in their favorite instrument enclosure…


The cult website is: https://www.qrparci.org/toystore