SEPTEMBER 2025 VOLUME 22 ISSUE 9

THE LOGGER'S BARK

a magazine

Radio Club of Tacoma

In this issue:

Cover:

September Sunset Operating Portable from Our 3rd Floor Balcony Newport, Oregon Elecraft AX-1 Antenna 2024

Photo by W7UUU

W7DK 2025 Officers and Committee Leaders

Executive Committee:

President:	Adam Barbera W2NCC
Vice President:	Mike Isakson W7XH
Secretary:	Mike Drorbaugh W7MKE (PT)
Treasurer:	(Acting) Doug Schafer AB7DG

Board of directors:

Board:	Mike Drorbaugh W7MKE
Board:	Paul Matney W7PFU
Board:	Doug Schafer AB7DG
Board:	Dan Vacanti KD7SV
Board:	Dave Ashley W7GEL

Key Committee Chairpersons:

Membership:	Mike W7XH
Salmon Run:	Mike W7XH
Infotech/IT:	Randy WB4SPB
HF Operations:	Phil K7PIA
Facilities:	Adam W2NCC
Property Mgmt.	Red WB7EC
Museum:	Dan KD7SV
Planning:	Mike W7XH
POTA:	BJ KO7T
General Meeting:	Dave W7UUU
Bark layout & Editor:	Dave W7UUU
Assistant/Copy Editor:	Anne N7ANN

Contents

QUICK LINKS TO THE BIG STUFF!

But don't stop there! Each issue is 100 or more pages of fun and cool stuff to explore! Scroll on!

***xx**=nothing submitted*

In Memoriam

Silent Keys & Friends Remembered

In memory of
Marvin "Marv" Wheeler KG7V
January 17, 1938—June 22, 2025

With great sadness, we have to yet again report the loss of another beloved member of the Radio Club of Tacoma—in this case, Marvin "Marv" Wheeler KG7V of Ocean Shores, WA. Marv was a long-time member of the club, having joined in May of 1970 as member #638. By 1976, his constant contributions to the club resulted in his being awarded the (then) highest honor of the RCT, the Doc Spike Award, as the third annual recipient since Doc Spike himself became the first. Marv went on to be President for a single term in 1984. I remember him very well from those years, along with his loving wife Jean W7OII (who joined in 1971, was president for two terms, and was a *two-time* winner of the Doc Spike award. Jean still lives in Ocean Shores, WA). The Wheelers were just the nicest folks and they took me under their wing during my teenage years with the RCT—one of the couples who were not "cliquish" but rather welcomed youthful new members like me (I joined in August 1975 as #743)

In August, 2024, Anne N7ANN and I spent a few hours with Marv at a meeting room in our hotel in Ocean Shores, shooting a "W7DK Living Histories" video of Marv. He was such a good sport doing the video with us, and gave us a wonderful interview. The footage is still in production, but will be finished before the end of my term as Bark Editor and will be published in an upcoming issue. Many of us, myself very much included, will miss Marv, his stories, and jovial voice. I even had him recorded in my own logbook one last time back in November 2024. Rest in peace, Marv!

-Dave W7UUU

Marv Wheeler KG7V ca. 1971 in his shack
Photo: W7DK Club Archives

Marv Wheeler KG7V August 14, 2024—still shot from his Living History video (to be finished soon)
Photo: Dave W7UUU

In Memoriam

Silent Keys & Friends Remembered

In memory of
Steven J "Steve" Blacksten AD7VL
August 28, 1936–August 16, 2025

This month we have the sad duty of reporting a second long-time member of the club as a Silent Key. In this case, Steve Blacksten AD7VL. Steve was a great guy and a friend to just about everyone in the club. He joined in 2003 after getting his Technician license (KD7UBE). He later earned his General and finally his Extra and for a time taught Extra Class classes along with Harry Adams W7HSA (SK) and even taught a number of General classes on his own. Over the years, Steve helped the club in a number of ways, and finally in 2011 won the coveted Doc Spike W7OS Inspiration Service Award for his years of service. He was instrumental in the club's kitchen remodel, furnace replacement, front yard flagpole, and sourcing and helping install a new roof on the clubhouse. In 2019 he donated materials and advice on the building of the club's new storage building. He was also very active with the Boy Scouts, setting up and training scouts at portable stations for the Jamboree on the Air. He was also well-known around the club for building 80 -10m "Screwdriver" mobile antennas –having made over 75 of them. Another great skill of Steve's was his ability to shoot weights over tall tree limbs to antenna wires for friends and club members. In fact, Steve shot the lines into the trees on my own property in the Spring of 2018 when I moved out to Burley, and his aim was second to none. The antennas he helped install that day still stand. Steve was a strong proponent of CW, and club comradery, and will be missed by many of us. May he rest in peace.

-Dave W7UUU

Steve AD7VL with his loving wife Sharon in June 2024

Steve, AD7VL, the last time I saw him on May 24, 2025—photos by Dave W7UUU

PRESIDENT'S CORNER

Monthly ruminations from our President

Adam Barbera W2NCC

CLUB GEMS – RESEARCH & LENDING LIBRARY

Did you know the Radio Club of Tacoma has not one, but *two* libraries available to members?

The Oakman Research Library is located on the second floor of the clubhouse and is open to all club members. It's a great place to dig into technical topics, read about digital modes, or just browse for inspiration on your next project. Members are encouraged to use the library during Saturday's Open House hours, whether for research or just for fun.

The collection includes a run of QST magazines going back decades, historic ham radio books, and a deep assortment of ARRL technical publications. From vacuum tube fundamentals to the latest in digital operating, there's a wealth of material here. You'll find original manuals for Collins and Heathkit gear, early editions of The Radio Amateur's Handbook, engineering references, and antenna design guides with real-world build notes.

Photos: Dave W7UUU

Materials in the Research Library are for in-house use only—they don't circulate—but a photocopier is available if you want to take reference pages home with you.

Downstairs on the first floor is the Lending Library, known as the DeMaw Library (named in honor of prolific ham radio author Doug DeMaw, W1FB). Unlike the Research Library, this one is set up for borrowing. Members can check out one book or resource at a time for up to 21 days. After that, the item must be returned—and it can't be checked out again by the same person until it's been available to others for at least a week, whether it's sitting on the shelf or in the return box.

If you're like me and prefer the feel of a real book over scrolling through a PDF, these libraries are well worth a visit. Next time you're at the clubhouse, take a few minutes to browse. Whether you're repairing a classic rig or mapping out a new antenna system, the W7DK Research and Lending Libraries are here to help.

73,
Adam Barbera, W2NCC

FROM THE DESK OF THE VP

Insights from our Vice President

Mike Isakson
W7XH

IT IS TIME TO CALL FOR A DO-OVER!

Sometimes we have to re-think previous decisions. Sometimes wearing blinders helps us focus our attention, allowing us to see the tree but not the forest.

In July of 2024, our then vice president, Adam W2NCC, wrote an article about the General Mobile Radio Service – GMRS. At his own expense, he purchased and installed a GMRS radio at the clubhouse and set up an antenna. His reasoning was that GMRS repeaters and nets were very active, and that one particular net was teaching amateur radio technician material for GMRS operators who wanted to become hams.

Photo: Dave W7UUU

Bob K7MXE, despite his reputation as a "Tubes and CW Ham" actually tries to embrace newer ham radio technologies as they come along. Here, he spent some time with the Flex 6600 in the club's HF room learning the ins and outs of using FT8. His takeaway: "it's a great mode for older hams struggling with hearing problems. It gives them a chance to stay on the air making contacts" -editor

As membership chairman, I was aware that several of our members started as GMRS operators and later became hams. Member Andy KE7RTB had interacted with the GMRS community, inviting them to the radio club. Thank you, Andy! Several came to the clubhouse to experience ham radio, with Andy teaching the class.

Unfortunately, GMRS was met with some resistance and the radio Adam installed was removed from the clubhouse.

I want a do-over! I will donate a GMRS radio to the club and help reinstall an antenna. I think the presentation given at our July general meeting by John Beaston, K7TY, from Manzanita, Oregon, on the use of GMRS radios was *outstanding*.

John's presentation should encourage our club to re-evaluate our stance on GMRS radios, accept them, and understand that they can become a positive gateway to the amateur radio community. I wish we could clone him and bring him to this region. In fact, his presentation has encouraged me to explore some possibilities in our area. More on that at a future time.

In the August 2025 Logger's Bark, there was an article about Bob Heselberg K7MXE. Bob has been a ham forever and a member of the club since 1960. I was working FT-8 at the club in October of 2024 with Bob watching, and I invited him to work the station. His first FT-8 contact! "Boat Anchor Bob" even built a GMRS repeater (even though he's through—and –through a "ham guy") before John's presentation. Bob is working to get it in service in

FROM THE DESK OF THE VP

Insights from our Vice President

Mike Isakson
W7XH

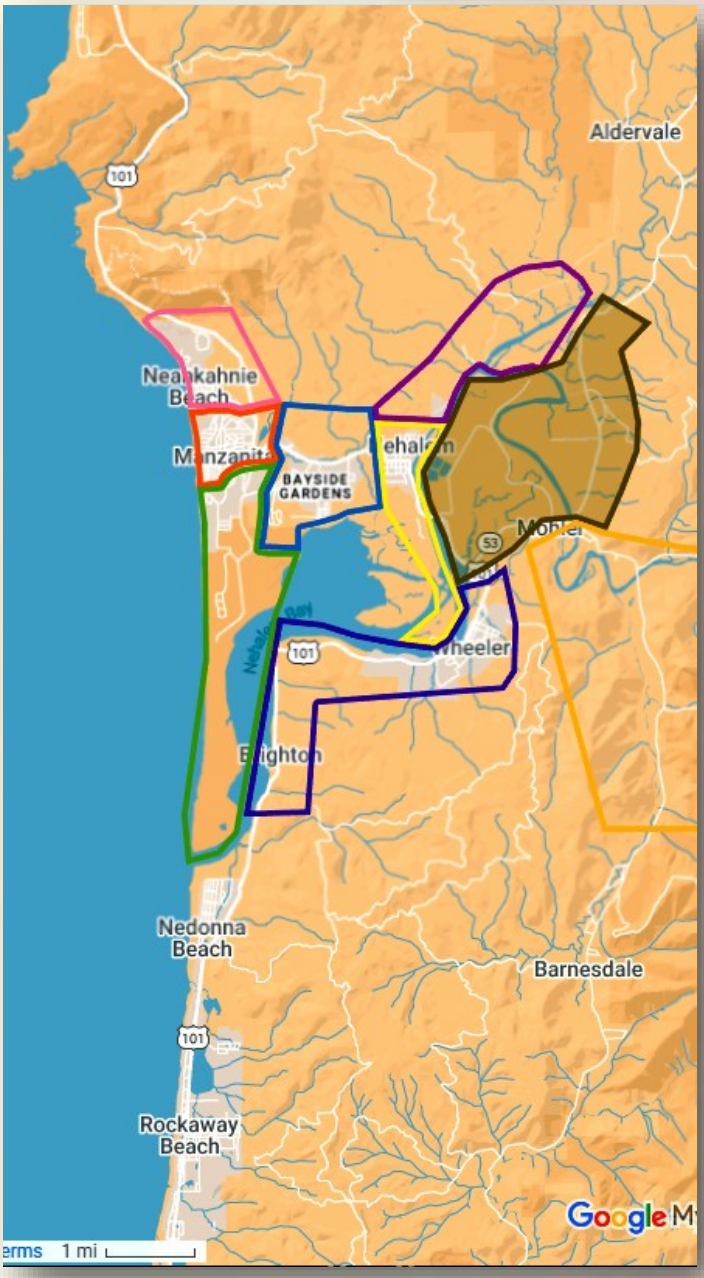
the Eatonville, WA area, where it would cover a large portion of Pierce County. Hats off to Bob!

Let's share our amateur radio experience with everyone. That is how we grow our community. I think, over the last few years, amateur radio operators like Andy KE7RTB, Adam W2NCC, Bob K7MXE, and John K7TY have been pointing to the gateway—or bringing light to the bridge—*between FCC cousins*.

It's time for a do-over!

-Mike W7XH, Vice President
WSCG386, GMRS license call sign

Motorola Radius-based GMRS repeater built by Bob K7MXE for club & community use



Coverage area of the integrated GMRS and amateur radio emergency communications system—the Emergency Volunteer Corps of Nehalem Bay, Tillamook County AuxCom—Oregon coast
-John Beaston K7YT, Manzanita, OR

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SECRETARY'S REPORT

W7DK Secretary Pro Tem—Mike W7MKE

I FEEL LIKE I'VE BEEN HERE AND DONE THIS BEFORE.

It is an honor to take over the reins of Club Secretary once again to fill in for our retiring Secretary, Gary McAdams, WG7X, who is such a hero in our club. He did it all, and did it with a smile. So, thank you so much for all your efforts over the years. Everyone looks forward to seeing you at the club, rested and happy once again.

Yes, before Gary took the secretary position, I was the man in the hot seat. There are some jobs at this club which MUST get done, and Secretary is one. Keeping minutes is time-consuming but necessary, and filings and record keeping are the unseen jobs that really must—often by law—be done.

While it seems that in a club with 415 members it would be easy to find members to fill the positions needed, it is not easy at all. I suppose that is the lament of many nonprofit or voluntary organizations. Most of the members are not inclined to step into the busier positions that keep the club operating. That's just the way it is, and probably will always be that way, with the few doing the work for the many.

I joined the Radio Club of Tacoma back in 2016, so by RCT standards, I'm a newbie. I did jump in with both feet when I joined, as I recognized that if you value the club, you need to do something to keep it going. Some of my initial activities were working with George Salisbury, K7GRS, on membership. George is a fantastic mentor and is very good at planning and executing jobs. Membership involves not only the record keeping for membership, but has also always (as long as I've been here) involved handling our annual fundraising event, Salmon Run. That is a significant undertaking; we must mail pledge forms to all members. Membership also handles the annual election ballots, which again need to be mailed out. So, I've helped with or managed those events.

In 2016 we needed more storage space than our garage, so we decided to build a 10 x 20-foot shed. A 10 x 20-foot size is allowed by city code without a permit, which is why we decided on that size. As anyone knows, once you have space, you fill it up—and so we have. Anyway, I was straw boss on that building, organizing many members who turned out to help.

Now, I'm a member of our Board of Directors and filling in as Secretary till the end of the year. I also work on our HF Committee, which oversees the radio stations at the clubhouse—of which we have five operating stations permanently. A VHF station in our kitchen area, three stations upstairs in the HF room, and one downstairs in the Lou Room. These stations are in addition to those in the Museum (not in our portfolio) and those that are hooked up temporarily for tests, etc., and various specialty stations. I, along with other HF Committee members, also open the club every Thursday evening to members who wish to learn to use the club radios.

I am happy to once again serve our club as the temporary Secretary. RCT is a super group and has super members, so it's an honor to help.

73—Mike Drorbaugh W7MKE
Secretary Pro Tem

Photo by Dave W7UUU

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SECRETARY'S REPORT

W7DK Secretary—Gary WG7X (Retired)

HELLO AGAIN, CLUB MEMBERS...

As I write this, it's 06:47 on Thursday, August 7th, 2025. I'm writing to say goodbye to my role as Secretary for the Radio Club of Tacoma.

I've been a member of the club for 38 years and have held every elective office except Vice President and Treasurer. But it's become clear to me that it's time to step back from being an officer for a while and just be a regular member again.

Not that there's anything wrong with being a club member! I'll still be at the clubhouse on Saturdays, at special events, and things like that.

I'm just feeling a bit burned out, and the idea of sitting through endless meetings doesn't appeal to me right now.

My term was set to end at the close of this year anyway—I'm just stepping away a little early. I'm sure the club will find someone great to take over the job, and I'll be happy to help them get up to speed, if they'd like.

By the time you read this, I'll have been enjoying my freedom from responsibility for at least a month. I plan to get back to basics—actually getting on the radio and talking to other hams, instead of just staring at letters on a screen.

Photo by Dave W7UUU

If you're curious how it's going, I'll let you know next month. My address and email will still be in the Logger's Bark for a while, so feel free to reach out anytime.

So, 73 for now—CU on the bands!

-Gary WG7X

Now a private citizen—and still a proud member of the Radio Club of Tacoma!

I'M HEADING INTO THE BUSIEST MONTHS

of the year for membership activities. When I first started this position several years ago, the membership committee handled the WAQP "Salmon Run" mailing, complete with the associated letter and fund-raising pledge form. We also printed and mailed annual renewal forms and club election ballots. All of the printing — including envelopes — is done in my home office, with much of the folding and assembly handled by my granddaughters. Thanks, girls!

The September and October mailings will include about 2,100 envelopes, 1,700 8.5×11 sheets of paper, 420 laminated new membership cards, and 420 membership certificates. Thankfully, there are 840 no-lick stamps — but then, several hours of folding, stuffing, and envelope sealing to get it all done.

Our PayPal online payment option has been extremely well received. If I had to guess, about 90% of all membership and Salmon Run funds now come through online payments. While this is much easier for our members and our treasurer, it has substantially increased the processing time on the membership side.

Over the last couple of years, I've added a few more tasks to my list. I send out birthday cards to members and invitations to new hams in the Tacoma–Seattle area. I also maintain a list of over 1,100 email addresses for hams within a 20-mile radius of the club. Each month, I send out our newsletter along with details on club activities, local hamfests, and amateur radio events in the area.

I believe these efforts have paid off. As of mid-August, our club membership is at 420, with 64 new members added so far this year. These numbers are exciting because they tell a story — and I'll get to that in a moment — but I also watch renewal numbers closely. Last December's renewals were higher than in previous years, which was encouraging.

Here's what I believe: a lot of other people are working hard, too. We have an active license training group and dedicated VEs, Thursday night HF training at the clubhouse, monthly classes in basic soldering and kit building, and antenna workshops for 9:1, J-pole, 49:1, and dipole designs, plus 1:1 balun builds. Every general meeting features an informative presentation. We have monthly POTA outings, and last year we added our special event station for Sasquatch Awareness — "BIGFOOT." We host Camp Quest Northwest to introduce young campers to amateur radio. We also put on Field Day, Salmon Run, the annual picnic, and the December banquet and awards night. If I've missed anyone — sorry, folks — but I think we offer plenty of on-ramps. Come join us!

I'm looking for a few people interested in helping with membership. Maybe you have some skills and talents you'd like to share with the club. If so, contact me at membership@w7dk.org.

Until next month, 73!

Mike W7XH
Membership Chair

IF YOU'VE EVER VISITED THE W7DK CLUBHOUSE, you may have noticed the "Reserved W7OS" parking space at the NE corner of the building. It recently came to my attention that not everyone knows what this space is for. And no, it's not for the Doc Spike W7OS Memorial Museum or its staff. It's for the current year's recipient of the Doc Spike award. And for those not aware what that is, it's the award that was begun in 1974 to honor a member of the club who over the course of their years with the club, made significant contributions of effort and time for the betterment of the order.

The first time the award was granted, it was a big surprise for the recipient —it went to Doctor Clifford J. "Doc" Spike W7OS, for his nearly 50 years of hard work and devotion to the Radio Club of Tacoma. The following year it was awarded to Jerry Seligman, W7BUN for his many years running license training classes from his home and the club.

Over the years, some members, due to their tireless efforts on behalf of the club and its members, were awarded this prestigious plaque more than once—Jack Hayworth WB7AJR, Steve Dightman (first as K7SSC in 1979, and again in 2016 as AF7YD), and Jean Wheeler WA7OII (1985 and again in 1986).

In 2015, Bob K7MXE with approval from the Board of Directors created the handsome router-engraved plaque and installed it on the clubhouse siding to set aside a parking space for the current winner of the Doc Spike award.

So that's why the parking space is often seen as vacant. Unless the Doc Spike award winner comes to the clubhouse, the space goes unused. The current winner, Manny AD7MA, recently moved to the Philippines with his family so the space will remain vacant until December, when the award will be given to a new recipient. Wishing Manny and his family all the best—it's too bad he was not able to spend more time with the club. He was just getting off to a great start. So now at least you know what that reserved parking space was intended for.

Until next month, 73—*Dave W7UUU*

For a full list of recipients of the Doc Spike Inspirational Award, click HERE & scroll to page 23

HAM RADIO WORLD NEWS

Ham Radio—A Path to Public Service

Web

A PERCENTAGE OF PEOPLE SEEM TO BE HARD-WIRED for or drawn to community service, leadership roles and events in which they can serve their neighbors and fellow citizens. The amateur ham radio service offers a path to many rewarding public service opportunities.

James Jalbert and Aroostook County Emergency Management Agency Deputy Director Derrick Ouellette repair a radio connector during the recent Aroostook Amateur Radio Emergency Service field day. (Courtesy of Derrick Ouellette)

Moni Cormier, Jared Hitchcock, and James Jabert participate in the recent Aroostook (ME) Amateur Radio Emergency Service Field Day (courtesy of Derric Ouellette)

Ham radio operators volunteer with county or local programs like the Amateur Radio Emergency Service, an American Radio Relay League program. These teams often serve the county emergency management agencies in Maine, according to Derrick Ouellette, deputy director of the Aroostook County Emergency Management Agency.

Members of the Aroostook ARES team recently participated in the annual field day exercise, held every year in June when ham operators all over the U.S. and Canada join for excercises simulating disaster conditions.

They practice emergency communications with portable radios and antennas and make as many contacts as possible in a fun "contest-style," off-grid event.

In times of disaster or other emergencies, radio service members provide backup communications when existing public safety systems get overloaded or fail.

In non-emergency times, these teams practice and hone their skills by providing communications at public events such as the Can-Am Crown International Sled Dog Races, the Northwoods Gravel Grind and much more.

Amateur radio is regulated by the Federal Communications Commission, and one of its primary purposes is recognition and enhancement of the value of the amateur service to the public as a voluntary non-commercial communication service, particularly with respect to providing emergency communications.

If this kind of public service piques your interest, and if you would like to earn your FCC-issued amateur radio license, contact Ouellette via email at derrick@aroostookema.com or call 207-493-4328, and he will help start you on a path of valuable public service and a fun hobby.

NEW ARRL® DXCC® TRIDENT PLAQUE HONORS 100 CONFIRMED ENTITIES ON THREE MODES

08/08/2025

ARRL The National Association for Amateur Radio® announces the DXCC® Trident plaque, a new award to honor the accomplishments of radio amateurs who have confirmed contacts with at least 100 ARRL DXCC award entities on each of three modes: phone, CW, and digital. The plaque is endorsable at levels of 200, 300, and Honor Roll, based on achieving that level on all three modes at the time of application.

ARRL Radiosport and Regulatory Affairs Manager Bart Jahnke, W9JJ, says the new award should be exciting to hams. “It gives all participants of the DXCC program, especially those new to DXCC, something fresh to work towards,” he said. ARRL has long had the Worked All States Triple Play award, but this introduces the multi-mode achievement to the DXCC program.

Confirmation of QSOs toward DXCC Trident is done only through the standard process by credits within the ARRL DXCC program via Logbook of The World® (LoTW®). No QSL cards will be accepted with a plaque order. If your DXCC credits are not already visible in LoTW, you must first link your DXCC and LoTW profiles by requesting a credit merge from the ARRL Awards Desk.

The earliest QSO date, and starting date for the DXCC Trident award, is November 1, 1976, when RTTY (now included with all digital QSOs) DXCC was introduced.

Additional details for determining eligibility and instructions for ordering a DXCC Trident plaque are included at www.arrl.org/dxcc-trident-award. The plaque is issued by completing the official DXCC Item Order Form which will be used by the ARRL Awards Department to verify eligibility. Plaque prices include shipping and handling and are subject to change without notice. All prices are in US dollars: shipped to US addresses $95; to Canada $114; to other international $134.

Celebrate your achievement and dedication to the DXCC program across all modes with the ARRL DXCC Trident award – a symbol of excellence in amateur radio operating and DXing.

THE MAILBAG

LETTERS To The Editor

W7UUU

Milan NØEUV with his Logger's Certificate—our first one from Virginia!

Good morning Dave,

Thank you again for this beautiful Logger's Certificate #699, and for the post, "How to search my logs" in QRZ to find out I had enough contacts to qualify!

I look forward to reading a new copy of the Logger's Bark each month. 73 and keep up the good work,

Milan NØEUV
Stanley, Virginia

Dear Milan,

The pleasure is all ours (mine, and the Radio Club of Tacoma's). We really value our new-found distant recipients of the Logger's Certificate, with yours being our first ever sent to Virginia. As much as you appreciate it, we as a club appreciate knowing it's hanging on your shack wall so far away yet so close.

73—Dave W7UUU

From QRZ,

What every else has said… I agree and to add, reading *The Logger's Bark* is more enjoyable than reading my monthly issue of QST.

Bill K2WH
Hewitt, New Jersey

From QRZ,

I love *The Logger's Bark*. It's a great ham magazine with lots of interesting articles. I loved the Sherlock article and his finding the "Music Man". But I was frustrated that the article never told if the Music Man was actually caught and punished. Sort of like watching a movie that doesn't have an ending.

Pat K7GUD
Victor, Idaho

Dear Pat,

Great point—and one that I had thought the same! Maybe Sherlock will see this comment and send us a short addendum to tie the story up once and for all—what DID happen to the Music Man?

73—Dave W7UUU

THE MAILBAG

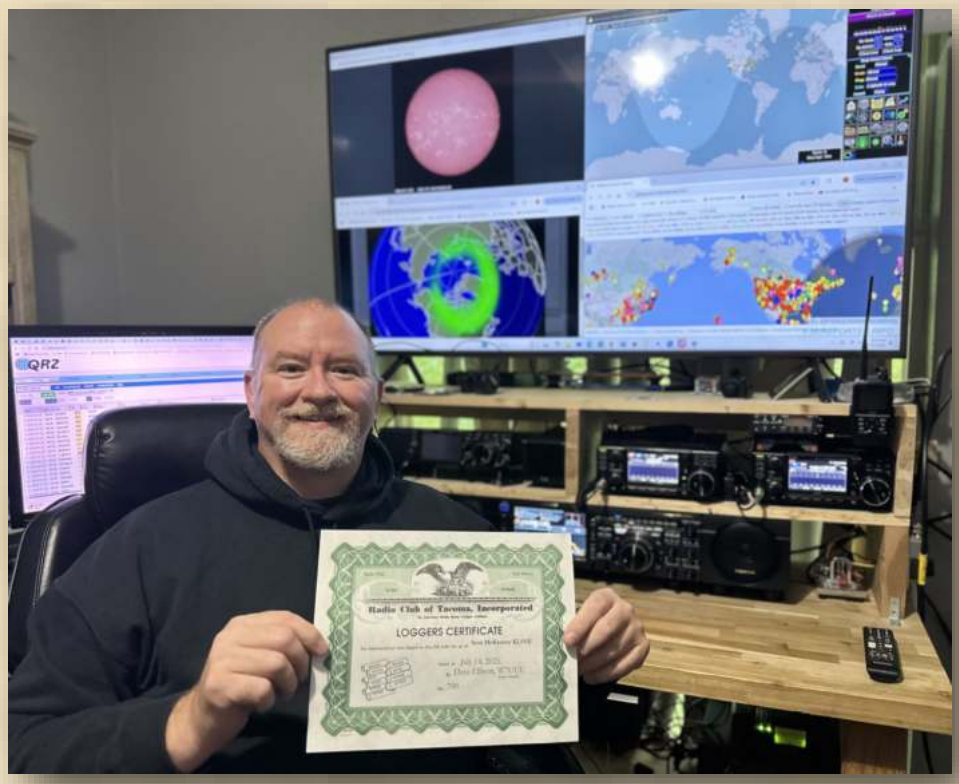
LETTERS To The Editor

W7UUU

Hello Dave,

First, thanks for an amazing magazine. I also hope to visit your club someday. I had a good excuse to clean up my station a bit—thank you for the Logger's Certificate #700 and the first one to Alaska! Such an honor—Thanks!

Sean KL5NE
Palmer, Alaska



Sean KL5NE with his Logger's Certificate—our first one from Alaska!

Dear Sean,

I was very happy to issue the certificate to you—thanks so much for reading The Bark and taking the time to apply for the Logger's Certificate! By all means—if you're ever in the greater Seattle area, we would love to have you visit the club most any Saturday of the year.

73—Dave W7UUU

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W7DK LOGGER'S CERTIFICATE

Classic "first award" for Members

HAVE YOU APPLIED for your own W7DK Logger's Certificate?! It's FREE and it's EASY! All you have to do is work at least 10 members of the Radio Club of Tacoma, then send in your list of call signs worked, and BAM! We'll print out your certificate and get it to you toot sweet by US Mail.

There are no confirmations required, no logs to submit, and really no rules other than the call signs you submit must be members of the club. You may work them on HF, 2m FM, on FT8 or SSB or any other mode! In fact, one of the best ways to get your 10 contacts is to check into the weekly Tuesday Night Net on the 147.28 club repeater… every Tuesday at 7:30 PM.

This venerable award was first launched in 1957, using certificate paper printed by club member Dick Ryan, W7RGD using a donated printing setup.

As of the date of this publication, there have been almost 700 certificates issued, including a few reissues over the years to replace lost certificates.

The original certificates were hand-lettered by long-time RCT member Barbara Osborne, W7UYL (SK 2022), and all of the records were kept in a series of recipe boxes still held by the club.

We still have a huge stash of this beautiful OFFICIAL logger's Certificate paper…. So if you do not already have yours, just shoot us an email with your list of call signs worked, and put "Logger's Certificate" in the subject line… ■ *-editor*

Wanna get yours? Send in those contacts!

Barbara Osborne W7UYL in 1955 an RCT USO event

Two more "firsts" this month! Our first Ohio (Bob NØEUV) and Brazil (Marcos PP5AMP)!

W7DK LOGGER'S CERTIFICATE

SEARCH YOUR LOGS!!! GET *YOUR* CERTIFICATE!

THE W7DK RADIO CLUB OF TACOMA LOGGER'S CERTIFICATE is available to *anyone anywhere who has worked at least 10 members of the club*. It's a long-held club tradition to issue these certificates, with just shy of 700 having been produced since the start of the program in 1957.

Are you active on the HF bands? If you are, it's entirely possible you already have all the contacts you need to get your own Logger's Certificate! And it's really easy to search this.

Almost all modern computer logging systems have a way to search for the county of stations you have worked. For example, in the popular N3FJP Amateur Contact Log (ACL), to find stations that could possibly be W7DK members, just go to the "County" field in the ACL interface, then click "Search". If you have at least 10 results come back, send me the list and I will check to see how many are members!

For those who use QRZ's powerful logbook software, just open your main logbook, click the pulldown menu for "Filter" and select "New". In the "Filter Name" box you could call it "Logger's Certificate" (and then "save" if you want to use this rule in the future) - then in "Select Field" select "Their County", then for "State" pick WA for Washington, and lastly "Compare Value" set to "Pierce County, WA". Lastly, click "Add Rule". Once you do this, you will now see only those logged QSOs that the other station reported Pierce County. Since the Radio Club of Tacoma is in that county, your likelihood of pulling up club members is very high.

Regardless of the logging software you use, most should have a means for searching out county information.

Just note that if you find "Special Event" call signs such as W7F, W7B, etc., those don't count as multiple operators share those call signs during the club's Bigfoot event every October. Only actual FCC-assigned call signs count for the Logger's Certificate. The club call of W7DK or the museum call of W7OS are considered acceptable to use.

Also consider filtering for Kitsap County (where I live) as we have a number of members there. You could also include King County, but I warn you: it's the largest county in the state, and has a lot of hams—most of whom will not be W7DK members. Searching there will result in a huge list without many "hits".

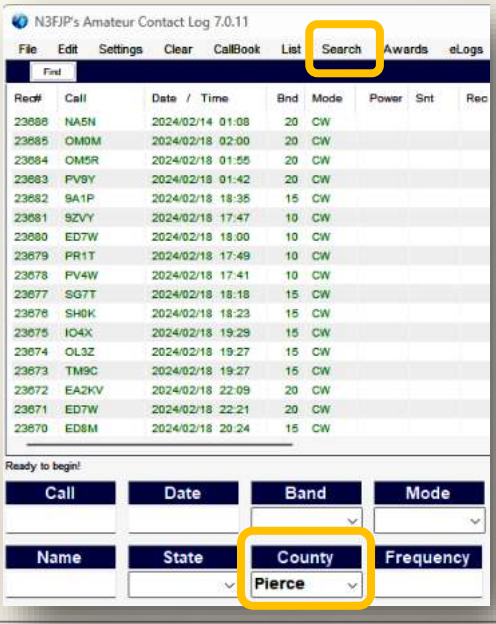
Wanna get yours? Send in those contacts!

Then just email me the list of calls—you don't need to include anything else: it's the Honor System. I won't be confirming anything other than if the call sign is (or ever was) a member of the club.

So start SEARCHING! I will send you your own beautiful Logger's Certificate free of charge—mailed to your listed QRZ mailing address. In return, just send me a photo of you holding your certificate and I will run that in a future issue of The Logger's Bark!

-Dave W7UUU

Above: *Custom Filter dialog for QRZ Logbook—just search for State=WA, and Value=Pierce (or Kitsap) County*



Left: *Using N3FJP Amateur Contact Log, simply enter Pierce (or Kitsap) for the County field, then click "Search" to see a list of calls from these counties*

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email loggersbark@gmail.com

MEMBER SPOTLIGHT

Pascal F4LPH, France, our *first-ever* "DX Member of the RCT"

I retired from France Telecom (now Orange) two years ago, where I worked as a technician. I am married to Valérie and have two sons, Séraphin and Ocilien. We live in central France, in Touraine, near the Loire Valley. My wife and I hope to attend the Dayton Convention in 2026, and possibly also visit Tacoma and the surrounding area. I'm passionate about American history, particularly the American Revolutionary War period and the Marquis de Lafayette. I drive a Jeep Renegade and am also passionate about Jeep Willys vehicles. In 2024, I obtained my radio operator's license. Before that, I was a SWL with the callsigns F11DRE & F10175. I also manage the C4FM F6ZBO repeater and have a YouTube channel called F11DRE – Pascal. Every Sunday at 6:00 PM French time, I host a QSO on 28.337 MHz. I am sending my 73 to all Oms & YLs!

ASK ELMER!

Mystery Elmer

Dear Mr. Elmer,

This might be a dumb question but I saw your column in the QRZ post about your magazine and didn't want to post in the forums with my question cuz I don't want to be flamed for asking.

But what I want to do is be able to use my ham radios to talk privately to someone else. By that I mean talk in a way that cannot be overheard by anyone even if they are tuned into my exact frequency. Do any of the tone functions in my radio do that like PL or DCS or that sort of thing? I guess what I'm saying is I want our conversation to be somehow encoded so that no one can just listen in to what we are saying.

-Secret Radio Man

Dear Secret Radio Man,

It is pretty much illegal to use encryption for private conversations, except for *very limited and specific* exemptions (such as protecting ham radio satellite command signals). Most countries, including the U.S., prohibit encryption on ham radio to ensure transmissions remain open and monitorable by others.

Regarding PL (Private Line) tones like CTCSS and DCS, they do not provide any actual privacy or encryption. These tones are sub-audible signals sent along with your voice to filter out unwanted transmissions on the receiving radio. They are intended to prevent your radio from hearing other users on the same frequency who are not using the same tone, reducing annoyance. However, anyone monitoring that frequency with the tone set to match will still hear your transmission clearly—there is no secrecy or encryption involved.

I hope this helps answer your question.

-Mystery Elmer #2

Dear Mr. Elmer,

Something that I've wondered since I got my HAM license almost twenty years ago, is how in the heck do they come up with the questions for the HAM test in the first place? Does one person write them all?

-Getting Testy in Cleveland, Ohio

Dear Testy,

Many people assume the FCC writes the amateur radio exam questions, but that's not the case. The actual work is handled by the Question Pool Committee (QPC), a group of experienced Volunteer Examiners working under the National Conference of Volunteer Examiner Coordinators (NCVEC). They operate under FCC oversight, but the agency itself doesn't write the questions.

Each license class — Technician, General, and Extra — has its own question pool, and those pools are updated on a fixed four-year cycle. For example, the General pool was refreshed in 2023, and the Extra pool got its latest update in 2024. The Technician pool was last revised in 2022.

The questions aren't the work of one person — they come from a collaborative effort. VEs contribute, suggest changes, and help weed out outdated or confusing material. New questions are added as needed, and old ones get retired to keep up with changing rules and technology.

Each pool has far more questions than show up on any one test, which keeps the exams varied and fair. The full pools are published well ahead of time, so anyone studying knows exactly what to expect. So there ya go—that's how the question pool system works in a nutshell.

-Mystery Elmer #7

THIS MONTH'S CALENDAR

W7DK

	August		September, 2025			October	
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
36	August	1	2 07:30pm 2 Meter Net 147 ...	3 07:00pm Board meeting	4 06:00pm HF Night at the ...	5	6 08:00am Technician Clas ... 10:00am Open House
37	7 08:00am Technician Clas ...	8	9 07:00pm VE License Exam ... 07:30pm 2 Meter Net 147 ...	10	11 06:00pm HF Night at the ...	12	13 10:00am Open House 01:00pm General meeting ...
38	14	15 07:00pm General Class	16 07:30pm 2 Meter Net 147 ...	17	18 06:00pm HF Night at the ...	19	20 10:00am Open House Salmon Run
39	21 Salmon Run	22 07:00pm General Class	23 07:30pm 2 Meter Net 147 ...	24	25 06:00pm HF Night at the ...	26	27 10:00am Open House
40	28	29 07:00pm General Class	30 07:30pm 2 Meter Net 147 ...	October	October	October	October

Recurring Special Contests All Categories ...

Click calendar to view on W7DK.org with current active links!

Did You Know??

The name September originates from the Latin *septem*, meaning "seven," a holdover from the early Roman calendar in which it was the seventh month of the year. This pre-Julian calendar, traditionally attributed to Romulus, began the year in March, aligning the calendar more closely with the start of the military and agricultural seasons. September retained its numerical name even after the later introduction of January and February, which shifted it to the ninth position. Notably, the Roman Consular form of government began on September 13, 509 BC (no more royalty, but Consuls would now lead on advice from the Senate). Emperors didn't come until many years later. Of course, they did NOT use "BC" for obvious reasons and would not have called it year 509. They would have called the year "244 AUC (*anno Urbis conditae*) meaning 244 years after the founding of Rome. But the *day* was September 13.

ARE YOU NEW TO HAM RADIO?
HAVE YOU HEARD OF A QSO PARTY?

Every state has one, and Washington State's is called The Salmon Run. The concept is simple—get on the air and make contacts—but there's more to it, and yes, there are rules.

The Salmon Run is sponsored by the Western Washington DX Club. The official rules are posted at this LINK. This year's event runs from September 20th at 1600Z (9:00 AM PDT) through September 21st at 2359Z (4:59 PDT). Experienced operators who want to activate a county can register at this LINK. What does this mean? Of the 39 counties in Washington State, a number of them have very few active hams. So some operators choose to travel to a "rare" one (such as Ferry, Pend Oreille, or Skamania, among others) and "activate" the county so others working the event have a chance to get all 39 for a "clean sweep".

The goal is to make as many QSO's as possible. Work all Washington counties, U.S. states, Canadian provinces and territories, and snag some DX along the way. There are multiple goals: each new county and each new state increase your score with multipliers; working all 39 counties earns you the Clean Sweep award. Operators can also keep an eye out for sponsor station W7DX for bonus points. But throughout, if you want to be competitive and get a good score, you need to keep the rate up—that's the key to success.

One of the best aspects of The Salmon Run is the fact it shuts down Saturday night at 11:00 PDT, and resumes at 9:00 PDT on Sunday—operators get a full night's rest so there's none of that "contesting all night" that can be off-putting to many.

Our club will be on the air for this event, as W7DK. We welcome guest operators, and you don't need to be perfect or have tons of experience. We will have skilled operators in the HF room with you to show you the ropes if you need it. You can choose to operate either SSB or, if you are proficient, CW. Due to the exchange The Salmon Run uses, FT8 is not an option. Sunday shifts are a great opportunity for those new to contesting, as the activity tends to die down from the more frantic pace of Saturday. This makes it more suitable for newbies to cut their teeth and work the contest at a slower pace.

So why is The Salmon Run important to the Radio Club of Tacoma? It's because it's one of our three main funding sources every year. Membership dues cover about a third of our expenses, property management sales bring in another third, and Salmon Run donations from members provide the rest.

Our dues haven't increased since about 2008, yet costs—property tax, insurance, utilities, internet, postage, and supplies—go up every year. The Property Management Team works hard selling donated gear at events like the Mike and Key Hamfest in March every year, and at the massive Sea-Pac Western Regional Convention and hamfest, but because revenue from this stream really depends on the resale value of the donated gear, it can't be counted on to provide a predictable revenue stream.

But Salmon Run donations are different—they're direct contributions by our members to help keep the club operating. Some members have been hesitant, thinking the money only buys radios. In

The Salmon Run

Washington State QSO Party

reality, nearly all our main radios were donated: the Flex 6400M, Flex 6600, Flex 6500, Icom IC-7610, Icom IC-7300, Icom IC-756 Pro 3, Yaesu FT-847, and Elecraft KX3—all donations. The only radio purchased in recent years was an Elecraft K3. Most spending goes toward amplifiers, tuners, filters, and core club expenses.

As Membership Chair, my annual budget exceeds $2,000, with postage alone over $1,200. Every committee request and every dollar spent needs to be justified, and as your new Vice President, I intend to make sure of that.

This year, I'm asking all 420 members to give—whether $5.00 per county worked, $1.00 per county ($39 total), or whatever level that you can manage. I'm committing $120 myself—that's just $10 a month. Please join me in supporting the Salmon Run and our club's future.

Aside from all of that, it's just plain a fun event—one of the few contests most of us can participate in and actually have a chance to come out on top!

See you in the contest—I look forward to working members and non-members alike (or as I prefer to say, future members!).

Questions or concerns? Email me at membership@w7dk.org.

-Mike W7XH
Membership Chair
Vice President

Dave W7UUU takes the key at the IC-7610 station for an hour stint at CW for Salmon Run 2024 at W7DK

Dan KD7SV takes his turn at the IC-7610 SSB during Salmon Run 2024 on September 21

IN OCTOBER 2024, THE RADIO CLUB OF TACOMA KICKED off the inaugural National Sasquatch Awareness Day special event. It was a fantastically fun experience for both the special event operators and those hunting for the sometimes-elusive BIGFOOT stations on the air. This year, we're back for the second annual National Sasquatch Awareness Day celebration.

The special event will be on the air from October 15, 2025, at 0000 Zulu (UTC) through October 21, 2025, at 2359 Zulu. Once again, we'll have available custom QSL cards and a unique special event certificate. Details for QSL cards and certificates will be posted on each special event callsign page on QRZ.com: W7B, W7I, W7G, W7F, W7O, W7T, and Bonus Station, W4S.

That's right! This year we're introducing a *bonus* station—W4S—to honor a more-rarely sighted southern cousin to Bigfoot: the legendary "Skunk Ape." Not everyone will be able to find this illusive beast… only the lucky few hunters will manage it!

We had so much fun last year that we're looking for additional volunteer operators to join in. There's no minimum time commitment—just a desire to have fun playing radio. If you're interested in volunteering, please fill out the National Sasquatch Awareness Special Event Volunteer Operator form at THIS LINK.

The BIGFOOT certificate is available to anyone who contacts at least one BIGFOOT special event station. The real challenge, however, is to work all the special event stations—W7B, W7I, W7G, W7F, W7O (at least twice on two different modes, bands, or Zulu days), and W7T—to claim the coveted "FULL STOMP" designation on your certificate.

Get ready to find those elusive cryptids calling out to you soon!

-BJ KO7T, Bigfoot Coordinator

Sample of the handsome 8.5" x 11" Bigfoot SES Certificate that can be yours, as well as the QSL card. The certificate can be had by anyone working at least one letter (with a rubber "stomp stamp" awarded for each, "Full Stomp" will be stamped if you get all) for a donation of $5. The QSL card will be available for just an SASE.

W7DK SUMMER PICNIC

SUNDAY AUGUST 10, 2025

Photos this page by Dave W7UUU

Photos this page by Dave W7UUU

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W7DK SUMMER PICNIC

SUNDAY AUGUST 10, 2025

Photos this page by Anne N7ANN

AROUND THE CLUBHOUSE

But first.... A little *about* the Clubhouse

THE RADIO CLUB OF TACOMA IS UNIQUE not only in its age (continuously operating since October 1916) but also in its ownership of an actual clubhouse and adjacent parking lot. The current clubhouse was purchased by members in 1957 (the previous clubhouse was purchased in 1927!) and has been maintained on this site ever since. But it takes time, talent, and treasure to keep this dream a reality. Club membership is one of the solid ongoing means with which the club maintains not only members to help with the upkeep, but to also raise the capital that's required to keep our clubhouse in tip-top shape.

If you are not yet a member, please consider joining—even if you're not local! If you enjoy reading The Logger's Bark from afar, you can be a part of our club just as if you were here. And if you are a local, please consider contributing your own skills and effort to keep this club the wonderful thing it is. Ask any officer how you can help. Thanks to all our loyal members! *-Dave W7UUU*

Photos on left from RCT Archives—photos on Right by Dave W7UUU

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AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

BJ KO7T handles Bigfoot SES planning with the group

Brad KK7YQC and Nolan K7GBM chat it up in the kitchen one recent Saturday

Rik N7RIK and Julie W7JUL yakking it up in the kitchen

Kathryn K7USR and Cathy W6PSY enjoying the morning with Cooper

All photos this page provided by Dave W7UUU

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Jim AG7LO hanging out in the classroom

Red WB7EC and Stephen AD7AB check out a Henry Radio Tempo One transceiver in the lockup

Ellen AI7FP always with a smile on a Saturday

Scott KA7IOX and Walt WA7SDY in the Lou Room

All photos this page provided by Dave W7UUU

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

W7DK

Beckie KG7FZH with nephew Beau (not yet a ham)

Chef Paul W7PFU talks shop with Rik N7RIK

BJ KO7T holds a group meeting for all of the planned participants for the upcoming Sasquatch Awareness Day event that happens in October

Photo by Anne N7ANN

Not at the Clubhouse… but doing club stuff! Your editor W7UUU working on the September Bark from a hotel in Bellingham, WA while on a get-away with XYL Anne N7ANN, Assistant Editor, on August 6th

All photos this page provided by Dave W7UUU except as noted

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

W7DK

Anna K7ANA, Greg KD7MJI, and Al N7OMS at K7MO's (SK) storage unit

Mike W7MKE ponders how to approach removing some longer materials from the unit

Jeff W8NGS and Mike W7MKE work on their calf roping rodeo techniques in the club parking area, but using steel rope instead of poly, nylon, or grass

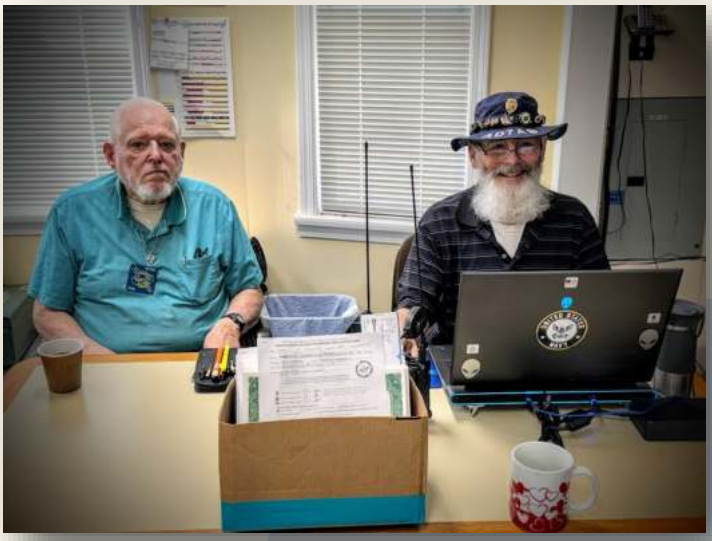
Jeff W8NGS, having successfully roped the calf, demonstrates the proper "over under" of coiling steel rope cables—yeehaw cowboy Jeff!

All photos this page provided by Dave W7UUU

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

W7DK



Phil KC7PS and Stephen AD7AB in the Lou Room

Pals Nolan K7GBM and Mike W7XTZ

Walt WA7SDY awaits the start of the Noontime Net

Mike W7XTZ chatting with Paul N7OSS

All photos this page provided by Dave W7UUU

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AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

President Adam W2NCC chats with member Bob Garden KF7GPO

Mike W7XH gearing up to work on Memberships

Paul W7PFU and Joe KF7PXB in the classroom

Another Saturday, another stint at the Membership computer in the Oakman Library—Mike W7XH

All photos this page provided by Dave W7UUU

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

W7DK

Wade W7ITL stops by the Doc Spike Museum

Paul N7OSS shows off a newly-donated Hammarlund HQ-120X receiver

Scott KA7IOX and Mike W7XTZ in the Lou Room

John N1JAB chatting about HOA antenna options

All photos this page provided by Dave W7UUU

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AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Dan KD7SV stops by the clubhouse kitchen

Nolan K7GBM talking tech with Mike W7XH

New member David WA7XX and Doug K7WYR visit the clubhouse on a recent Saturday

Doug AB7DG (blue hat) and John K2CCT discuss Winlink emergency messaging protocols

All photos this page provided by Dave W7UUU

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

September Birthdays!!!

Call Sign	Name
AD7LJ	Bob Purdom
AF7VW	Mike Shuster
AJ7R	Judy Kirkreit
K7GBM	Nolan Glenn
K7HW	Al Burleson
K7PJP	Paul Palinkas
KB8KB	Michael Stark
KD7QKU	Ron Baker
KE7CET	Paul Skyllingstad
KF4EDG	Tim Lee
KF7FEF	Franky Marsh
KF7SOX	Marie Redd
KI7GOC	Donna Stewart
KI7QQC	David Kelley
KI7QQE	Dani Na Fey
KK7OUZ	Cade Kennedy
KK7QLE	Nicole Olson
KK7STF	David Sheets
KK7WLP	Bill Callow IV
N6TO	Bill Hodge
NY6W	Howard Crane
W7GAN	Paul Saunier
W7JBB	Em Becker
WA4TIM	Tim Hosey
WB7J	Rich Trimble
WB7QAG	Eric Hansel

Happy Birthday, Pastor Nolan Glenn, K7GBM

Happy Birthday Bob Purdom AD7LJ, ARRL Section Manager, Western Washington

photos by Dave W7UUU

MOST EVERY THURSDAY EVENING from 6PM until 9PM, the Radio Club of Tacoma opens the HF room for one-on-one training time. Saturdays are a great time to come see the clubhouse and socialize, but often it's tough to get "quality time" with the radios. This weekly event is open to all—members and non-members alike. There is always at least one Extra Class operator on hand with a solid knowledge of the Icom and Flex radios in use, as well as the antenna patch bay, amplifiers, and tuners. Even non-licensed "hams to be" can take a hand operating under the tutelage and watchful eye of an experienced "Elmer" on hand to show the ropes. Other nights, the club takes on build-it projects in the classroom—Come on by any Thursday!

■ *-editor*

Members Bob AD7LJ (ARRL Western Washington Section Manager) and Al N7OMS take inventory in the HF Room on a recent Thursday evening
Photo by Mike W7MKE

Mike W7MKE & Julie W7JUL building antennas

Photo by Gary WG7X

Lee KF4EDG (left) & Jeff W8NGS fixing radios in the RF Lab
Photo by Gary WG7X

CLUB ACTIVITIES

RCT 4th Wednesday Workshop

The Radio Club of Tacoma's 4th Wednesday Activity Night on July 23 was a true hands-on builder's evening, with ten members (students) gathering at the clubhouse to assemble roll-up J-pole antennas for both 2-meter and 70-centimeter operation using twin-lead. Under the guidance of Bob AD7LJ and Paul N7OSS, with materials ready to go, each participant built their own folding antenna, tested it for proper function before leaving, and walked away with a functional, portable station accessory for just $10 in materials. The event had a friendly "makerspace" energy, complete with soldering irons, connector choices (BNC, male SMA, and female SMA), and plenty of peer help—so much so that if interest stays high, the club may repeat this same workshop in the future. ■ *-editor*

Photos provided by Doug AB7DG

Open House Reminder!

THIS IS JUST A WELCOMING & REMINDER that the W7DK Radio Club of Tacoma Clubhouse holds an open house on most Saturdays of the year (click HERE for exclusions) from 10:00 AM to 2:00 PM. There's always a nice group of members but ALL visitors interested in amateur radio are welcome to stop by! You do not have to be a member or even a ham to visit us. Please be sure to sign the Visitor's Logbook in the kitchen, say hello to your Clubhouse Host, have a cup of coffee and a donut (always a nice assortment on hand). You may wander the building—visiting the classroom, the downstairs "shack parlor" we call The Lou Room, and of course upstairs to see the main HF room and the W7OS Doc Spike Memorial museum—a living collection of vintage gear that regularly gets on the air.

The last Saturday of every month, we hold a mini flea market where members can sell their ham gear. But even non-members are eligible to dicker for deals and take home gear. And starting around 11:30, our club Chef Paul W7PFU serves up free chilidogs, or sometimes burgers or spaghetti at the chef's whim. We hope to see you stop by soon!
■ *-editor*

Mini-Swap Meet Monthly

DO YOU HAVE EXCESS GEAR TO SELL? Members of The Radio Club of Tacoma have a little perk every month with our own mini Swapmeet held in the clubhouse on the last Saturday of each month. No charge for a table—just bring your wares and set up shop! Non-members and visitors are free to stop by and see if they can pick up bargains. The club also has gear donated regularly that is made available to visitors and members alike, available for purchase via donation. And of course, as mentioned in the Open House reminder, the club chef Paul W7PFU cooks up chilidogs or spaghetti (whatever suits his mood!) at no charge for guests. ■ *-editor*

How To Lock The Doors

AS WAS REPORTED in last month's Bark by our club Secretary, Gary WG7X, in recent months there have been reports of the clubhouse being found unattended and the doors not even locked! Obviously, this is not acceptable. It's the responsibility of the Club Hosts on Open House Day (Saturday) or those who have door and alarm codes on other days to make certain the building is secure when leaving.

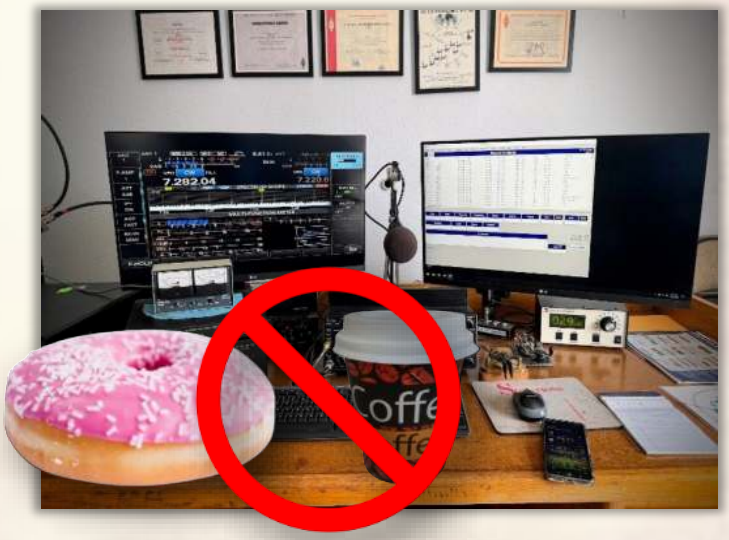
But should you be in the position of being the "last one out", you can still LOCK THE DOOR even if you don't have the code or a key. Simply pull the door closed and push the "lock symbol". The battery-powered mechanism will then lock the door (you won't be able to get back in without the code!). This applies to both the front door and the back door. See photo below—note the "lock" button.

-Dave W7UUU

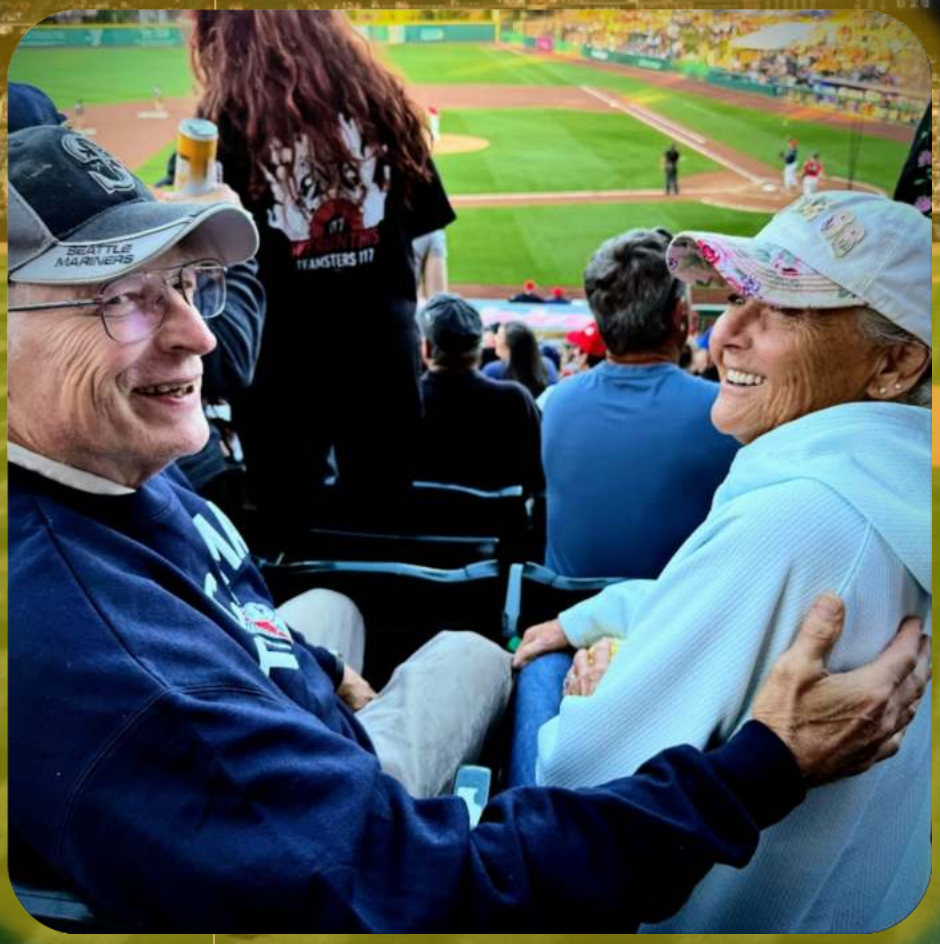
Help Keep The Clubhouse Clean

THIS IS JUST A GENTLE REMINDER that the W7DK Clubhouse is for all members to use and enjoy, and is a place to put our best foot forward as a club for visitors we welcome in almost every Saturday of the year.

Please be mindful of leaving trash, empty cans or bottles, food wrappers, McDonalds bags, and whatever else. Same holds for coffee cups… we frequently see cups left on classroom tables, the kitchen counters, at the Lou Room table, and wherever else. Please just make sure to "pick up after yourself". Also, remember that liquids and radios don't mix. Please don't take cans or cups of beverages into the HF room or the Museum—just water bottles with lids or closures of some sort. And no "sticky foods" like donuts! No one wants to reach for the tuning knob only to find your sticky donut residue on it!



TAKE ME OUT TO THE BALLGAME!
PHOTOS FROM JULY 24 GAME DAY!



Photos on this page by Dave W7UUU

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TAKE ME OUT TO THE BALLGAME!
PHOTOS FROM JULY 24 GAME DAY!

Photos on this page by Dave W7UUU

TAKE ME OUT TO THE BALLGAME!
PHOTOS FROM JULY 24 GAME DAY!

Photos on this page by Dave W7UUU

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Dave W7UUU's list of "20 Frugal Ham Radio Habits & Tips"

1. **BUY USED EQUIPMENT-**
Pre-owned transceivers and accessories can offer serious savings—especially when you know what to look for and buy carefully. If you're not sure, team up with a trusted ham friend to go with you and help sort it out.

2. **BUILD YOUR OWN ANTENNAS-**
Simple wire dipoles, homemade verticals, EFHW, and other DIY projects can cost next to nothing if you have some scrap wire and a little time. It's frankly appalling what some firms charge for "premade antennas" that any ham could have made himself for pennies on the dollar.

3. **HOMEBREW ACCESSORIES-**
Instead of buying off-the-shelf, build your own baluns, antenna tuners, or distribution panels using surplus parts and online schematics. Check with your club for group builds (the RCT has done several of these, most recently building EFHW POTA antennas as a group build).

4. **REPURPOSE OLD ELECTRONICS-**
Old PCs and broken gear can sometimes be troves for parts—think power supplies, fans, switches, connectors, and project enclosures. At least for basic stuff—again, check with a ham friend who knows this stuff for help if you're not sure what can be reused and what cannot.

5. **VISIT HAMFESTS AND FLEA MARKETS:**
There's absolutely no better place to score deals, haggle a little, and stock up on gear, cables, and tools for pennies on the dollar. Pro tip: Stick around—as the show wears on, sellers will often drop prices. And many times, if you stick around until the very end, stuff often is put on a table marked "FREE". It's very often worth the wait.

6. **USE FREE LOGGING AND PROGRAMMING SOFTWARE-**
Many excellent software tools cost nothing and do everything a typical ham needs—no paid subscriptions required. Some well-known free ones include QRZ.com Logbook, Log4OM, Winlog32, Logger32, Klog, CLLOG, and XMLog… or even create a simple spreadsheet yourself.

7. **JOIN LOCAL CLUBS-**
Club lending programs, gear swaps, and shared test equipment can stretch your ham radio budget a long way. Using the RCT as an example, we have a gear lending program for members, as well as the "RF Lab" with volunteer staff who can help repair gear or evaluate gear you want to test out before buying—to make sure it works.

8. **REPAIR INSTEAD OF REPLACING-**
Failed connectors on coax, test leads, and power cables can very often be repaired with a few tools and some soldering skills by simply replacing the connectors.

9. **PLAN BEFORE YOU BUY-**
Avoid budget creep and impulse buys. Make a list, check it twice, and focus on the gear that matters most. Don't buy an accessory or other item you think you *might* need one day—*if you don't need it today, don't buy it today*.

10. **BUILD YOUR STATION LAYOUT FROM SCRATCH:**
Save tons of money by making your own shelves, mounts, and operating desk from salvaged wood or office furniture. Habitat for Humanity, Goodwill Stores, and similar outfits will almost always have furniture and shelving that can be

repurposed into ham radio station applications. I saved a ton of money my on my 2021 "post fire" by building most of the shelving system myself using basic power tools.

11. **BORROW BEFORE BUYING-**
Test-drive someone else's antenna analyzer, rig, or power supply before deciding to invest in your own. Once again, ask at your club if they have a lending program.

12. **USE FREE ONLINE RESOURCES-**
Skip the expensive license study books and technical manuals sold online and via the ham distributors—search forums, club websites, and social media groups for advice and ideas on things you want to learn. Network with the members of your local club—that's another great way.

13. **DIY ANTENNA SUPPORTS-**
PVC pipe, scrap wood, or old fenceposts can become perfectly usable antenna masts with a little creativity.

14. **GO OFF-GRID ON A BUDGET-**
If going Off-Grid is in your plans, repurpose used car batteries (or better still deep-cycle RV batteries) and inexpensive solar panels and charge controllers. There are tons of online sites that talk about building your own power setups—no need to buy big expensive premade ones.

15. **RECYCLE AND LABEL EVERYTHING-**
Keep every usable bit—those straggler zip ties that fall out of the bag and get ignored, nuts, bolts and screws from gear you're disposing of—along with any other possibly-useful bits you find inside—and organize them so later on when the need arises, you're not buying what you already own (haven't we all done *that* more than we care to think?)

16. **CHOOSE MULTI-BAND GEAR:**
A good multiband transceiver or antenna can save you from buying multiple single-band setups down the road. While there are some benefits to single-band radios, if you're wanting to stretch the budget, radios that cover HF as well as 6m, 2m, and 70cm all in one box save on not only buying more radios but all the other stuff—additional power supplies being a big one.

17. **BUY IN BULK AND SHARE-**
Coax, ferrites, electronic parts, and connectors are cheaper by the spool or bag—split costs with friends or club members. Put out the word with your locals that you're looking to order bulk and see if you can get some folks to join in to bring the cost down for all.

18. **EXPERIMENT WITH QRP-**
Low power gear is often cheaper, easier to build or tweak, and just plain fun to operate. At least this has been my experience—especially if you are willing to work CW and FT8, where low power is vastly more effective than is SSB. QRP rigs can be had for under $200 that can do amazing things—QRP Labs, zBitx, and many others.

19. **TRADE SKILLS, NOT JUST GEAR-**
If you can solder or climb towers, you've got something to offer—swap skills to get help or hardware in return.

20. **SHARE YOUR PROJECTS-**
Writing up your builds or ideas can lead to swaps, freebies, or future favors—not to mention goodwill in the ham community. In fact, you could become the next editor of The Logger's Bark when my 2-year term is up with the December 2025 issue, and you too could share ALL your projects in one place for fame and fortune as I have. Ahem.

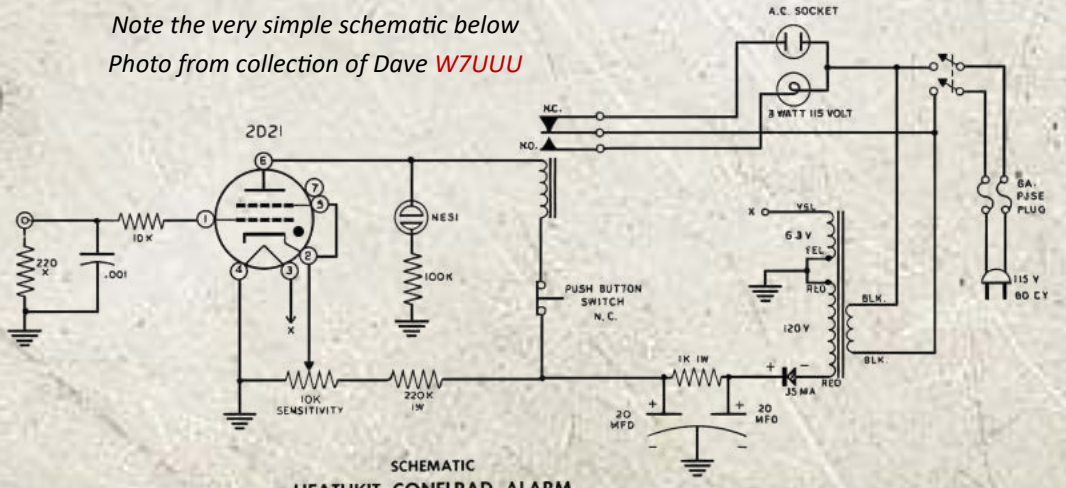
So that's my list of frugal tips that came to mind for this session—I say that because I could probably come up with another 20 if I spent a little more time. But this should be enough to get your gears turning on how you too can be a Frugal Ham if only you set your mind to it.

-Dave W7UUU

HEATHKIT CA-1 CONELRAD ALARM

IN THE 1950S, WHEN THE COLD WAR PARANOIA WAS at full boil, amateur radio operators found themselves swept up in the government's growing network of civil defense measures. Among the more intrusive—and fascinating—programs was CONELRAD, short for "**CON**trol of **EL**ectromagnetic **RAD**iation." While most people who lived through that era remember it as a system that cut off commercial radio broadcasts and replaced them with rotating "this is a test" announcements on 640 and 1240 kHz, hams ultimately were also directly affected by its implementation. And for many hams back then, the little Heathkit CA-1 CONELRAD monitor box was at the heart of their compliance efforts in their ham shacks.

Heathkit CA-1 CONELRAD monitor—sold 1957-1961 for $13.95
Note the very simple schematic below
Photo from collection of Dave W7UUU



SCHEMATIC
HEATHKIT CONELRAD ALARM
MODEL CA-1

When CONELRAD was activated by the feds (during the many drills, or if ever needed, during a national emergency), at first it was just the big AM stations that had to go off the air, after being contacted by government officials. But on January 2, 1957, ham stations were also required to immediately cease transmission as well. Every ham, whether operating from a city apartment or a rural garage shack in the middle of nowhere, had a legal obligation to shut down at the first sign that a CONELRAD alert was underway.

Since it was not practical for the FCC to try to contact all those

HEATHKIT CA-1 CONELRAD ALARM

Click the CONELRAD logo to read all about the system on Wikipedia

Excerpt of an actual CONELRAD broadcast heard during the nationwide civil defense drill on April 28, 1961. Click the image to watch the video on YouTube.

hams directly, they designated certain commercial broadcast stations as “key stations” - stations that all the other smaller stations and all radio amateurs had to monitor to determine when they would need to go off the air.

To pass these key station alerts on to hams, a system was set up that should an alert occur, the broadcast station was to drop its carrier twice at 5-second intervals. Then it would transmit a 1 KHz tone for fifteen seconds, and then either leave the air or, in the case of Key Stations, switch to one of the CONELRAD frequencies to pass on official news and information..

The mechanism hams used for detecting that alert was usually an automated monitor device—like the very-popular Heathkit CA-1—that would silently listen in the background for loss of a monitored broadcast station’s signal. If that station dropped off the air, the box would trigger an alarm light indicator, prompting the operator to stop transmitting at once. Or, if the amateur used the AC outlet on the front of the box as intended, it would shut down power to his transmitter the instant the box was triggered.

The Heathkit CA-1 was among the most popular of these monitors. Like most Heath gear from that period, it was offered in kit form and assembly was well within the reach of any reasonably technically competent ham. The unit included a circuit that monitors the Automatic Volume Control (AVC) voltage from a connected AM radio receiver tuned to a CONELRAD broadcast station—usually a strong, reliable one in the area. The radio could have its volume turned all the way down so the ham didn’t have to actually listen—the unit was triggered by the station going off the air, as fed directly from the AM radio circuitry.

HEATHKIT CA-1 CONELRAD ALARM

Once powered on, the CA-1 sat quietly, watching for any loss of carrier. If that station suddenly vanished (which it would during an actual CONELRAD activation), the light on the front panel would turn on, and the power to the transmitter would be turned off. That's only true if the ham wired it to cut power to a transmitter directly—depending of course on how civic-minded—you were (most builders of the CA-1 back then followed the rules to the letter, and had it wired to kill the AC feed to their transmitter).

Heathkit wasn't the only one in the game. Lafayette briefly sold a similar device, though theirs was more of a detection relay system and not designed to interface with existing station gear. But the Heathkit box was the one that ended up in countless ham shacks, often sitting right between the Johnson Viking and the Hallicrafters SX-99, glowing quietly and waiting for the day the Soviets might show up over the pole.

For most hams of that scary era, that alarm never went off. The CONELRAD system was never used in a real emergency, though it was drilled frequently enough that every ham knew the routine: cease transmission, secure gear, and monitor 640 or 1240 AM to listen for announcements. And while the idea of denying enemy bombers a directional fix by silencing the airwaves may sound quaint today, in the 1950s it was serious business—and amateur operators were very much part of the plan.

The circuit for the Heathkit CA-1 and the other such products sold at the time all worked more or less the same: the user had to dedicate an AM radio to the cause, then go inside the circuit to tap off the AVC (automatic volume control) of the receiver,

During the CONELRAD years, commercial radios were required to prominently indicate the primary CONELRAD frequencies of 640 and 1240 on the AM dial (either with a CD note, or a red dot). If you were listening to the radio and your normal programming went silent, that was your clue to immediately tune the dial to one of the frequencies for more information. But fortunately, virtually every time it was only a drill.

Photos: Wikipedia, public domain

HEATHKIT CA-1 CONELRAD ALARM

which then feeds into the CA-1. From there it was DC-coupled into a 2D21 "Thyratron tube" (which was essentially a switch). As long as the "key radio station" was on the air, the negative AVC voltage kept the thyratron at cutoff (the switch was off). But if the station went off the air, the tube would conduct and operate an internal relay. That relay then turned on a lamp on the front of the CA-1, and at the same time removed AC power from the outlet on the front of the CA-1 cabinet. This outlet was intended to power the ham's transmitter—meaning if the key station went off the air, the relay in the CA-1 would abruptly and without warning take you off the air—possibly mid QSO! Once triggered, the tube would remain in the locked state until the reset button was pressed on the front of the CA-1.

Unfortunately, false alarms were frequent. AM radio stations are prone to dropping off the air most any time of the year—think "power outages". Many hams chose to modify their CA-1 so that the relay contacts were in the "off" state when the key station was on the air. The AC outlet would then power a bright light or a loud bell, or both—if the key station went off the air, instead of killing the transmitter, the light and/or bell would alert the operator to quickly end his QSO and dutifully tune to the CONELRAD frequency on the associated AM radio that the CA-1 was monitoring.

The CA-1 in my own collection still works, at least as far as the circuit is concerned. Obviously, there will never again be CONELRAD used in the AM radio stations to trigger it to power off (even if I were to have it connected, which of course I do not). It's a piece of post-war engineering that reminds us how even hobbyists were enlisted in national defense back then—and how seriously that responsibility was once taken (would it be today? I wonder…).

On August 5, 1963 CONELRAD was officially replaced by the Emergency Broadcast System (EBS) which remained in service until it too was shut down in recent years.

Systems akin to "Amber alerts" on our smart phones have completely replaced CONELRAD and the EBS in ways the 1950s and 1960s engineers never could have conceived. Think of the last time you heard an Amber Alert play on your cell phone in a restaurant or a business gathering, when at the same exact time 40 other cell phones all fired off at the exact same instant—that's the modern incarnation of the intent of these old systems from the past.

Hopefully now you perhaps know a little bit more about CONELRAD should you ever hear the term, or see a Heathkit CA-1 for sale at a hamfest. Just know the CA-1 has essentially no practical purpose today—it's merely a collectible and a reminder of our Cold War past and the angst and fear that it evoked in people, hams in particular.

-Dave W7UUU

SHERLOCK

RADIO FAILURES ACT 2: Salt, Whiskers, and Scintillation

By Dave W7UUU

SHERLOCK INVESTIGATES:

RADIO FAILURES IN THREE ACTS

ACT 2

SHERLOCK

RADIO FAILURES ACT 2: Salt, Whiskers, and Scintillation

By Dave W7UUU

introduction

IN THE JULY *BARK*, I PUBLISHED A GREAT PIECE OF WORK submitted to me anonymously, titled "Sherlock: The 30 Year Transmitter Hunt Mystery". This story takes readers through a real-life 30-year effort to stop a habitual repeater jammer in an anonymous U.S. city.

I actually *do* know who the writer is, and can confirm that he is in fact a duly-licensed Extra Class ham with 50+ years of amateur radio technical experience. The articles he writes are not AI generated (confirmed by three different "AI detector" websites) but rather are the real deal. He is a prolific writer, but just prefers to remain unnamed for this series, collectively entitled Sherlock (obviously an homage to Sir Arthur Conan Doyle's famous private investigator, Sherlock Holmes).

This month we again present Sherlock, with the first act of a fascinating 3-part glimpse into sleuthing out difficult ham radio repair problems, all drawn from his own years of bench repairs.

Here is an outline of the series:

~~Act 1 August: The Science of Sleuthing:~~

- ~~Introduction and mindset~~
- ~~Overview of failures~~
- ~~"Black Widow" transistor~~
- ~~"Denny Dendrite"~~
- ~~The "Green Radio"~~

Act 2 September: Salt, Whiskers, and Scintillation:

- **3.5% saline failure**
- **Tin whiskers**
- **Tantalum capacitor scintillation**
- **Electrostatic discharge**
- **"Open Case" transistor issue**

Act 3 October: Cracks, Common Failures, and Final Clues:

- **Solder joint failures**
- **TS-440 foam reversion**
- **Audio cap polarity design flaws**
- **List of basic investigation equipment**
- **Safety precautions for circuit sleuths**
- **Resource epilogue**

As with the July opening Sherlock article, you'll find his writing clear and concise, evoking a true sense of the famous British detective himself—only here, he's solving "mysteries of electronics failures" instead of hunting criminals. Surprisingly, the two have quite a lot in common. I hope you enjoy reading along. I sure did.

-Dave W7UUU

SHERLOCK

RADIO FAILURES ACT 2: Salt, Whiskers, and Scintillation

By Dave W7UUU

Act 2: Salt, Whiskers, & Scintillation

The 3.5% Solution—but not of narcotic indulgence:

It was a golden Caribbean morning on the island of St. Lucia—sun streaming down, air sweet with salt, and radios humming with DX promise—when misfortune arrived on a cresting wave. A rogue breaker, tall and ill-tempered, swept across the rocks and drenched the HF operating site in one briny blow. The station's primary transceiver, caught in the deluge, went instantly mute. One could almost imagine hearing microscopic dendrites marching to war across circuit traces.

Our seasoned operator—an old goat by reputation, but quick as a fox—knew *precisely* what must be done. Without pause, he dashed to the nearest source of clean, fresh water and gave the salt-soaked rig a thorough rinse. Such drastic measures, while unsettling to behold, may indeed be the difference between recovery and ruin. (The same technique, for what it's worth, might even salvage a modern smartphone caught in Neptune's grasp.)

Seawater is roughly 3.5% salt by mass. If left to dry in situ, the sodium chloride will cling to every trace and *via* (pronounced "VEE-ya"… a small drilled and plated hole that provides an electrical connection between two or more layers of a PC board) like a determined saboteur. In laboratory settings, the correct response would involve a methodical rinse with distilled water, a bath of high-purity alcohol, and then a spell in a vacuum oven. In the field, an improvised drying regime—say, a warm oven paired with MIL-D-3464 desiccant or even a humble sack of rice—may suffice.

"Which is it today,' I asked, "morphine or cocaine?"
He raised his eyes languidly from the old
black-leather volume which he had opened.
"It is cocaine', he said, 'a seven percent solution.
Would you like to try it?"— S.H. & Watson
(*The Sign of Four*)

The Curse of the Tin Whiskers:

Should you possess a microscope with 15X magnification or better, I encourage you to engage in a little private investigation of your own. Peer closely at the old USECO turret stand-offs in your junk box—the ones with that dull silver plating. If you catch the angle just right, in the glint of overhead light, you may spot them: tiny, crystalline intruders known as *tin whiskers*.

These malevolent filaments are perhaps one-twentieth the width of a human hair, yet can extend up to a quarter inch in length. Perfectly straight and often unnervingly shiny, they sprout spontaneously from tin-plated surfaces and are capable of shorting adjacent conductors with silent efficiency. More insidiously, they've been implicated in triggering

SHERLOCK

RADIO FAILURES ACT 2: Salt, Whiskers, and Scintillation

By Dave W7UUU

multipactor discharges in vacuum and RF systems.

The defense? A touch of lead. Tin alloyed with a small percentage of lead (as in the good old days) curtails whisker formation. Silver- and zinc-plated components can also fall victim, so vigilance is advised. For further clues, consult the video and literature evidence at THIS LINK, or THIS ONE.

"You see, but you do not observe.
The distinction is clear"— S.H.
(*A Scandal in Bohemia*)

The Scintillation of a Tantalum Capacitor:

Ah, the tantalum capacitor. Its modest casing belies a fiery temper and a curious capacity for self-redemption. Have you ever witnessed its scintillation firsthand? It's a most illuminating affair—one part failure analysis, one part alchemy.

With a transistor curve tracer, gradually increase the voltage across a tantalum capacitor—three times its rated value will do—using a 1,000-ohm resistor in series. Just before catastrophe, the device flares with a visible spark: the manganese dioxide cathode (MnO_2) collapses, melting into the tantalum oxide dielectric. This is not destruction, but transformation. The capacitor, under the right conditions, "self-heals" by forming a new insulating layer.

Caution, however: omit the current-limiting resistor, and your experiment may end with a permanent short or a small, unceremonious explosion.

Manufacturing errors further muddy the waters. Sometimes, an incorrect tantalum slug is inserted or the case marked with the wrong voltage. Forensic disassembly—stripping the MnO_2 coating and studying the core's color—can reveal the true voltage rating. To see a video of such an event, click HERE.

The most reliable insurance against premature failure? Surge testing. NASA's NEPP repository holds a trove of studies on this very topic, including THIS DOCUMENT (LINK).

"Data! Data! Data!", he cried impatiently.
"I can't make bricks without clay"— S.H.
(*The Adventure of the Copper Beeches*)

The Electrostatic Discharge League:

There exists a secret fraternity—an invisible league of destruction—known as Electrostatic Discharge. The tools for detection are simple: a curve tracer and a damaged MOSFET can tell the tale. A single

SHERLOCK

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static zap to the gate can leave it ruined, no matter how fleeting the contact.

The rules of ESD prevention are carved in stone:

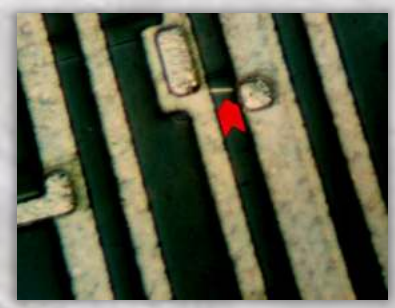
I. Always wear your electrostatic discharge wrist strap.

II. Always ground your soldering iron.

III. Avoid the careless friction of unlike materials.

Static waits like Moriarty, invisible and silent until the moment of sabotage.

Never assume you're safe just because the room feels calm. Complacency such as this can be an illusion that is fatal to your work at hand. That zap doesn't need thunderclouds overhead—just a poorly grounded workstation or the synthetic shuffle of your socks across carpet. Even a simple gesture, like peeling off a plastic wrapper or sliding a board across foam, can build up enough voltage to fry gate-level silicon. The tiniest static spark, imperceptible to you, can collapse a transistor junction like a house of cards. Respect that silence—because static doesn't announce itself. It lies in ambush, patient and merciless, waiting to strike when you let your guard down



Micro-photograph of ESD damage inside a solid state device

For deeper study, the Electrostatic Discharge Association offers a full dossier at THIS LINK.

The Case of the Open Case:

This final mystery takes us back to the winters of the late 1970s, when cold temperatures betrayed the humble JANTX2N2222A and 2N2907 transistors. The devices—standard fare for any amateur builder—were failing without warning. But why?

Upon close inspection, a flaw in manufacturing was revealed. One contractor, cutting corners or misled by confidence, had devised a TO-18 header sealed with glass powder. As it cooled, the glass contracted and held the collector lead in place by pressure alone. No weld. No permanent bond. Just contact by constraint.

More reputable manufacturers employed a more elegant solution: a silver pellet on the lead tip, fused in a proper “nail-head” weld during the sealing process. These transistors, predictably, did not fail in the cold.

A similar oversight afflicted TO-5 ground leads as well. When replacing the parts was impossible, resourceful engineers would weld nickel wire directly to the can and solder it to ground. A tidy repair, and a case well closed.

Join me next month, October 2025, for the final act of this piece, “Cracks, Common Failures, and Final Clues”.

-Sherlock

THE RUSSIAN WOODPECKER

By Dave W7UUU

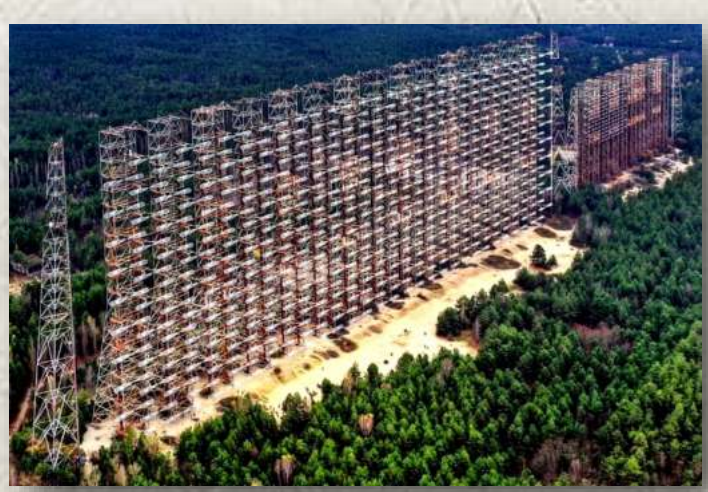
IN RECENT YEARS IN THE HAM RADIO INTERNET forums, discussion of interference caused by "over the horizon radar (OTHR)" has been on the rise. It's not just being imagined—it's quite real. And it's not just the perceived "bad actors" of the world—many nations are developing techniques to use HF (high frequency) to bounce signals off objects well beyond the horizon and pick up the reflections. But some of these nations are developing OTHR systems that are in fact known to transmit in the HF bands, including the ham bands from 5 to 30 MHz! Those nations include Australia with their JORN system, China using OTH-B "backscatter HF" systems, France using their hauntingly named "NOSTRADAMUS" radar, Iran with their Sepehr system, Brazil with their OTH-0100, and lastly Russia (who some argue never stopped using HF OTHR systems that intrude on the ham bands). Add to that list Canada, India, and even the United States—ALL developing systems to use the HF bands for Over the Horizon radar.

But of all these modern systems, none inspired the dread, outrage, and hatred among hams as the one that first turned heads and brought OTHR to the public—as it proceeded to ruin ham bands in the Cold War years of the late 1970s and into the '80s. Its official name in Russian was Duga (Дýга)—the Russian word for *arc*, as denoted by the massive curved antenna array located near Chernobyl, Ukraine, in the former Soviet Union. But to the global amateur radio community, it was known by a name that echoed its relentless and maddening staccato 10 Hz signal that obliterated the ham bands like hammers on tin….

The Russian Woodpecker: A Thorn in Amateur Radio's Side

In the late 1970s, amateur radio operators worldwide began hearing a peculiar sound on the airwaves. It wasn't a friendly CQ or a ragchew or even a contest—it was a sharp, repetitive, loud tapping noise that became famously known as the "Russian Woodpecker." This maddening interference originated from the Duga radar system, a Soviet over-the-horizon radar designed to detect incoming ballistic missiles during the height of the Cold War.

I was a young Novice ham in the spring of 1975, first operating CW and later that summer when I passed my General, taking my first steps into SSB operation. But the following summer, everything changed when in July 1976, I'd be happily in a QSO with another ham on 40 or 20 meters, then BAM! Like a Tommy gun in an old gangster movie, the band



The massive Chernobyl Duga antenna array—2300 feet long, 700 feet tall—in its time, it was one of the largest antenna arrays ever built on earth Photo: Wiki Commons

THE RUSSIAN WOODPECKER

By Dave W7UUU

would be obliterated in an S9+ clatter of 10 Hz broadband pulses that utterly wiped out any signals that could be heard. The sound is not unlike that of a helicopter engine in flight.

As a ham who lived through it, it was maddening beyond words. It would appear suddenly without warning, run for around 7 minutes unabated, then stop as suddenly as it started. After a period of time, presumed to be for cooling of the transmitter finals, it would fire off again for another 7-minute round. It didn't take long for hams to realize when that first blast hit, you might as well turn off the rig and do something else for the next few hours. Once started, it would usually continue on for hours into the night.

So what exactly was the Duga radar system?

The Duga system consisted of two massive installations in the Soviet Union—one near Chernobyl and the other in Siberia. Each installation was a colossal array of antennas, standing over 700 feet tall and stretching more than 2,300 feet in length. The primary site, near Chernobyl, became the most infamous due to its proximity to the 1986 nuclear disaster—the belief is it was sited there so the massive power requirements of the transmitters could easily be met with power from the Chernobyl plant.

Duga operated in the HF spectrum, using frequencies between 7 and 19 MHz, though it occasionally ventured outside this range. With an estimated output power of 10 MW—yes, ten *million* watts of RF—it packed a wallop that easily drowned out ham radio signals and shortwave broadcasts alike. Its signal consisted of sharp pulses emitted at rates of 10 Hz or 16 Hz, depending on the operating mode, and it was nearly impossible to ig-

Modern-era urban explorers explore the Duga site just outside of Chernobyl, Ukraine. Photo: Wiki Commons

THE RUSSIAN WOODPECKER

By Dave W7UUU

nore once it appeared on the band. While the bandwidth was determined to be roughly 40 kHz, in practice it had the effect of wiping out the entire 40- or 20-meter ham bands (depending on which frequency range was being targeted during that session).

The first signals attributed to Duga were heard in July 1976, and it continued its operations until 1989, when it abruptly ceased. The end of Duga coincided with the fall of the Soviet Union and a shift in military priorities. Amateur radio operators, who had dealt with over a decade of interference, were not sorry to see it go silent.

The Woodpecker's intrusion into the HF bands was a headache of epic proportions for hams. Its signals appeared across multiple bands, often rendering entire sections unusable. Imagine settling in for some 40-meter DXing, only to have your receiver blasted by a rapid, brain-rattling S9+ tapping. Efforts to nullify or notch out the signal using filters were only marginally effective due to its sheer power and broad frequency spread. Probably the most famous of these blankers (which I used to own but sold years ago) was the AEA (Advanced Electronic Applications company of Bellevue, Washington) "Moscow Muffler" MB-1 Woodpecker Blanker. It worked OK—but took a lot of fiddling to adjust for best effect.

The AEA Moscow Muffler filter was designed to mitigate the effects of the Russian Woodpecker. It was difficult to adjust, in that the width and sync controls had to be set to precisely align with the duration of the pulse, as well as it's spectral width which could vary according to propagation. Additionally, the operator had to figure out if the pulses were 10 Hz or 16, but due to ionospheric effects, could vary. In the end, the Moscow Muffler was a poor solution and was not very effective.

Photo: www.RigPix.com

Some inventive operators fought back with countermeasures, including "Woodpecker jammers." These devices transmitted signals specifically designed to interfere with the Duga signal. While satisfying to some, such actions were controversial and largely ineffective. They operated by transmitting synchronized unmodulated CW signals at the same rate as the Duga signal. The goal was to introduce interference confusion that might be interpreted by the Soviets as false signals. There was even a group formed for this pursuit called the "Russian Woodpecker Hunting Club."

But in the end, any perceived effect such jamming had could never be proven. And given the "David and Goliath" difference in power levels of the Duga vs. the hams running the jammers, it's very unlikely that any real jamming ever occurred.

During these years, there were lots of reports that for those using HF for emergency communications or public service nets, the interference posed serious challenges as well. The Woodpecker often obliterated critical communications during emergency drills or even actual natural disasters, adding significant frustration to the ARES emergency groups around the U.S.

THE RUSSIAN WOODPECKER

By Dave W7UUU

Though the Duga system is long gone, it remains a symbol of the Cold War's impact on civilian life—especially for those hams who lived during those years. Today, the abandoned antenna array near Chernobyl still stands as a haunting reminder of the era, drawing curious explorers and Cold War enthusiasts. And given the openness that now exists in those once-dark regions, there are even YouTube videos showing urban explorers climbing the massive Duga antenna array that still stands—as it slowly rusts back into the earth.

For amateur radio operators, the Woodpecker is a piece of history, a shared experience of battling QRM on a global scale. While the tapping sound is no longer heard, it left an indelible mark on the HF bands and the hams who endured it. As hams, let's all hope that the numerous OTHR systems being reported on the bands today will never rise to the insane level that was The Russian Woodpecker.

—Dave W7UUU

Audio clip of The Russian Woodpecker:

Click to hear a short sound clip of the Woodpecker as recorded November 2, 1984 interfering with a WWVH time broadcast at roughly 01:27 UTC that day

2024 remains of one of the Duga-1 control buildings in the Chernobyl Exclusion Zone—photos: ForgottenChernobyl.net

President Adam W2NCC gears up for the August meeting

New Club Secretary pro tem Mike W7MKE

Leonard KA7NWF welcomes in members

Lots of great stuff for the end-of-meeting raffle!

All photos this page provided by
Dave W7UUU

L>R: Dan KD7SV, Phil KC7PS, Mike W7XTZ, & Stephen AD7AB

Stephen AD7AB addresses the group regarding training classes

President Adam W2NCC looks on as the club Zoom presentation begins regarding Anderson Powerpoles

Our presenter for August was Lynn N7CFO who has a long expert background on using Anderson Powerpole connectors

All photos this page provided by Dave W7UUU

STRAY TOPICS OF INTEREST:

Pearce-Simpson CARIB 150-B

MANY OLDER HAMS WHO MAY HAVE BEEN A PART of the CB world in the 1960s and 70s will recognize the brand Pearce-Simpson. Based in Miami, Florida, the company was well-known for building pretty high-end CB radios as well as marine radios.

A recent donation to the Radio Club of Tacoma included such a radio—a beast of a marine transceiver housed in an elegant hand-crafted wooden cabinet.

The Pearce-Simpson Carib 150-B was one of their top-tier rigs for use aboard ships. This was a purpose-built marine MF/HF transceiver from the days when ship-to-shore radiotelephone service was a lifeline.

The circuit design was hybrid, in that most of the circuitry is solid state but the final amplifier was a quad of 6DQ5 TV sweep tubes. The Carib 150-B delivered around 150 watts of AM power into the 2 MHz and 4 MHz marine bands, carrying a vessel's voice across hundreds of miles to a coastal operator on shore.

Pearce-Simpson Carib 150-B Marine AM Transceiver
Photo by Dave W7UUU

The frequency markings on this example tell the whole story: 2003, 2110, 2126, 2102, 2630, 2670, 2738, and 4129 kHz. Those are classic mid-century maritime channels — 2003 and 2738 kHz were workhorse ship-to-shore channel assignments, 2670 kHz carried coastal weather broadcasts, and 4129 kHz was part of the 4 MHz marine band. In the days before satellite phones, these were the radio lanes where captains ordered repair parts, checked in with families, and pulled down the latest weather forecast.

STRAY TOPICS OF INTEREST:

Pearce-Simpson CARIB 150-B

The far left channel position is labeled "B.C." for AM Broadcast reception, and the far right panel knob is the tuning dial marked for the usual range of 550 to 1600 KHz. There are also CD (Civil Defense) markings for 640 and 1240 KHz—but this radio surely was built long after CONELRAD was in use, based on the mostly solid-state design. Documentation is scarce, but service manuals do survive in private collections and from suppliers who produce reproduction manuals—not cheaply I might add. Without purchasing one, I wasn't able to find out much about this cool old radio. But it's pretty obvious what all the Carib-150B functions were—it's not complex in actual on-air operation.

Note the amazing channel switching arrangement
Photo by Dave W7UUU

Looking inside the rear cover, one of the truly fascinating things to note: take a look at that 12-wafer rotary channel switch. If you follow the center shaft down, you will see where it actually connects to a motor drive housed in the silver box. The channel switch on the front panel turns very easily—but in reality, it's simply sending voltage to the motor to rotate it clockwise or anticlockwise to change channels. I can't imagine the hand force that would be required to directly turn a 12-wafer 8-position rotary switch like this! This also allowed for remote channel changing as well.

Alas, the Carib 150-B really serves no useful purpose today. With its beautiful cabinet, it would just be a neat looking display piece. Those marine channels were long since reassigned to other services in the modern GMDSS global marine radio era. But for anyone who appreciates the romance of marine radio in its golden age, the Carib 150-B is a tangible link to a time when a radio like this was really and truly a ship captain's only possible link to anyone on shore or aboard another vessel.

-Dave W7UUU

Meet MLB All-Star Joe Rudi NK7U

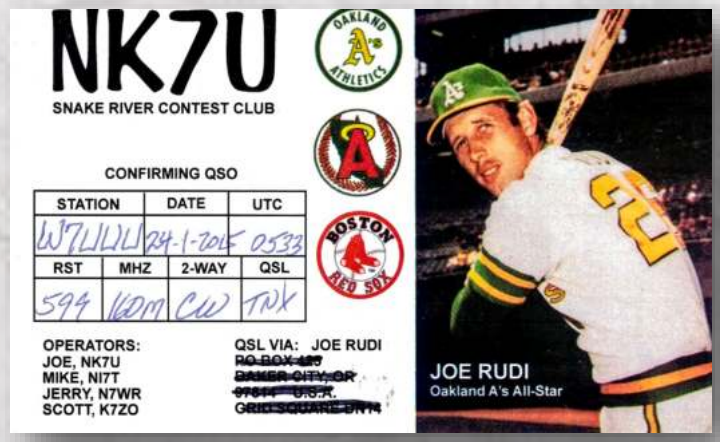
HOW COOL IS IT TO WORK A BASEBALL GREAT ON RADIO?

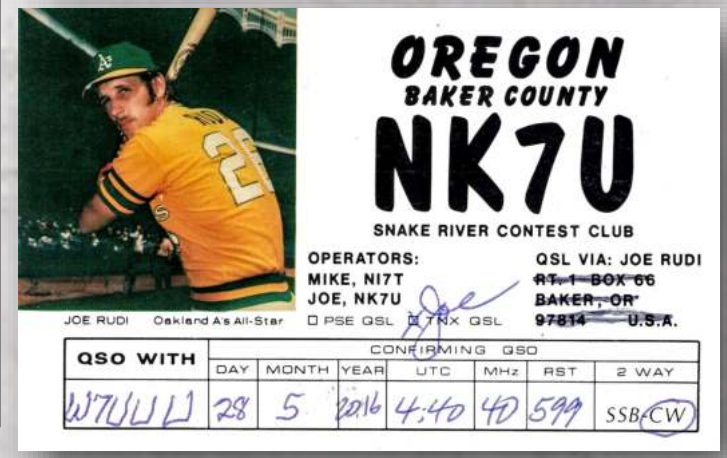
Meet Joe Rudi, NK7U—our "Famous Ham Birthday" for September (7th)

Imagine this: you're tuning around the bands during a contest or other event, you hear someone identify as NK7U—and it's none other than Joe Rudi, the quiet "clutch hero" of the early '70s Oakland A's World Series run. That's exactly what makes Joe so cool—not just his amazing MLB baseball story, but the fact he's an "ordinary average ham radio guy" as well. Just a plain old nice guy!

If you remember the Oakland A's teams of 1972–1974, Joe expertly played left field: *three* straight Gold Gloves (1974, 75, 76), *three* All-Star nods, and famously stepping in to make jaw-dropping catches when it mattered most. One of the greatest examples came in Game 2 of the 1972 World Series. The Reds' Denis Menke sent a shot deep to left—an "almost home run"—but Rudi tracked it all the way, leapt up at the wall, and snagged it midair in the webbing of his glove to preserve a critical win. He didn't pump his fist or strut—he just turned and jogged in like it was routine (video link next page).

He hit .257 in that World Series and .264 overall in postseason play—respectable numbers, especially when





Above: my two QSL cards for CW QSOs with Joe NK7U

Below: Joe's former "Mega Contest Station" in Oregon, 2008

Meet MLB All-Star Joe Rudi NK7U

paired with his flawless glove work and timely hits. He was right in the MVP conversation during the regular seasons that surrounded that amazing era, and his teammates trusted him to come through when the pressure was high—*that's just what Joe did*.

Joe is Extra-Class licensed as NK7U, and his ham-radio life has been just as impressive. While living in Baker City, Oregon, he built a *serious* contest station on his 20-acre property: seven towers from 100 to 180 feet tall, about 45 antennas, and a truly competition-grade multi-operator shack.

He's been active in contesting for decades—hard hitting the airwaves during intense multi-hour events where operators aim to contact as many stations globally as possible (depending on the contest). It's team-oriented, and strategic, just like the baseball "contests" he used to win playing for the A's.

Baseball and RadioSport collide in fun ways—even contest blogs have pointed out how nicely the two hobbies mesh, noting Joe as perhaps "baseball's greatest contribution to amateur radio." I'm honored to have Joe in my own logbook three times—twice on CW (he's a great CW operator!) and once on SSB.

Joe shut down his big contest station in Oregon a few years ago, and has finally retired to Florida but he is still active on the air—just not the powerhouse he was during past decades when I was fortunate to get him in my own log.

BIG thanks to Joe for also autographing my two Joe Rudi baseball cards—such a super guy and I'm honored to know him and have our contacts in my own logbook.

Happy Birthday Joe!!

-73 Dave W7UUU

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RCT Bulletin Board

Posted notes and other important stuff

Here's a **useful tip** when reading the Bark: if you want to view a link, "right click" > "Open link in new window"… that way you won't lose your place in the Bark!

Salmon Run (WAQP) is coming soon and the Club needs volunteers to operate even if just for one hour… talk to any officer or round up Mike W7MKE or Mike W7XH to let them know you are interested—CW & SSB ops are needed

Last month's Hidden Object:

On page 100, center ad

Last Month's Hidden Word:

Potentiometer

It was hidden on page 105, 1st paragraph

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WA7BNM CONTEST CALENDAR

Contest events for the coming month

HUGE THANKS TO Mr. Bruce Horn, WA7BNM for publishing his "Contest Calendar" for all these many years… a truly wonderful resource for finding virtually every ham radio contest on Earth that might be happening, in most any mode and most any region in the world. Follow the link to take you to the site, then sort through the various options to find the specifics of every upcoming event. For now, here's the **WA7BNM** Contest Calendar for the this month. Click the calendar below to visit Bruce's site directly.

September 2025	
MI QRP Labor Day CW Sprint	2300Z, Sep 1 to 0300Z, Sep 2
ARS Spartan Sprint	0000Z-0200Z, Sep 2
All Asian DX Contest, Phone	0000Z, Sep 6 to 2359Z, Sep 7
Wake-Up! QRP Sprint	0600Z-0800Z, Sep 6
SARL VHF/UHF FM Contest	0800Z, Sep 6 to 1000Z, Sep 7
IARU Region 1 Field Day, SSB	1300Z, Sep 6 to 1259Z, Sep 7
AGCW Straight Key Party	1300Z-1600Z, Sep 6
IARU Region 1 145 MHz Contest	1400Z, Sep 6 to 1400Z, Sep 7
PODXS 070 Club Jay Hudak Memorial 80m Sprint	2000Z, Sep 6 to 2000Z, Sep 7
CWOps CW Open	2000Z-2359Z, Sep 6
Tennessee QSO Party	1700Z, Sep 7 to 0300Z, Sep 8
K1USN SST Open	2000Z-2359Z, Sep 12
WAE DX Contest, SSB	0000Z, Sep 13 to 2359Z, Sep 14
FOC QSO Party	0000Z-2359Z, Sep 13
SKCC Weekend Sprintathon	1200Z, Sep 13 to 2359Z, Sep 14
Africa FT4 DX Contest	1500Z-1800Z, Sep 13
ARRL September VHF Contest	1800Z, Sep 13 to 0300Z, Sep 15
North American Sprint, CW	0000Z-0400Z, Sep 14
4 States QRP Group Second Sunday Sprint	0000Z-0200Z, Sep 15
NTC QSO Party	1900Z-2000Z, Sep 18
AGB NEMIGA Contest	1600Z-1700Z, Sep 19
ARRL 10 GHz and Up Contest	0900 local, Sep 20 to 0759 local, Sep 22
Scandinavian Activity Contest, CW	1200Z, Sep 20 to 1200Z, Sep 21
Texas QSO Party	1400Z, Sep 20 to 2000Z, Sep 21
New Jersey QSO Party	1400Z, Sep 20 to 0159Z, Sep 21
Iowa QSO Party	1400Z, Sep 20 to 0200Z, Sep 21
QRP Afield	1500Z-2100Z, Sep 20
Washington State Salmon Run	1600Z, Sep 20 to 2359Z, Sep 21
New Hampshire QSO Party	1600Z, Sep 20 to 2200Z, Sep 21
Wisconsin Parks on the Air	1600Z-2300Z, Sep 20
North American Sprint, RTTY	0000Z-0400Z, Sep 21
BARTG Sprint PSK63 Contest	1700Z-2059Z, Sep 21
Run for the Bacon QRP Contest	2300Z, Sep 21 to 0100Z, Sep 22
SKCC Sprint	0000Z-0200Z, Sep 24
CQ Worldwide DX Contest, RTTY	0000Z, Sep 27 to 2359Z, Sep 28
YU DX Contest	1200Z, Sep 27 to 1159Z, Sep 28
Maine QSO Party	1200Z, Sep 27 to 1200Z, Sep 28
AGCW VHF/UHF Contest	1400Z-1800Z, Sep 27

Click Calendar to visit online

***WA7BNM** Contest Calendar data used with permission*

Background Image Source LINK

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email loggersbark@gmail.com

THE W7DK ELMER BOARD

Do you have a skill or tool to help new hams?

YOU! YES *YOU!* Do YOU have a skill you could pass on to new amateur radio operators? Do you possess a skill or piece of gear that you're willing to share with others to fix antenna problems, diagnose noise issues, drive a ground rod, teach Morse, help teach technical topics? If the answer is YES you too could be a W7DK Elmer!! Let any officer know what your skills are or how you could help new hams get a leg up on the hobby. And if you're one of those already on the list, are there any changes we should be aware of? If so please hit the email address (found bottom of page on the right) and let us know so we can update the W7DK Radio Club of Tacoma "Elmer Board".

NEW HAMS OR MEMBERS: If you are looking for help, and NEED AN ELMER to help guide your way, use this table! Find the skill you need on the left, then look for an Elmer Provider of that skill on the right and reach out to them. ALL of these Elmer's have committed to helping so please don't hesitate.

ELMER ("MENTOR") BOARD

Do you need help with some area of ham radio?

List of members' areas of interest:

1. Technical questions, Classes
2. Help with Morse Code
3. License Examinations
4. Antenna and Station Planning
5. Antenna and Tower Erection
6. Buying Equipment (new or used)
7. Equipment Repair
8. Understanding and Using Your Gear
9. DXing and Contests
10. Club and ARRL Activities
11. Using Test Equipment
12. IRLP, Digital, SDR, APRS, WinLink, etc.
13. Basics of Electronics—how things work

Current as of January 2025

Name/Call Sign/Phone Number/Topic:

Adam W2NCC 360-870-7894 (4, 5, 6, 7, 11)
Dave N7HT 253-363-1692 (1, 2, 4, 6, 8)
Dave W7UUU (253-820-0890 (2, 4, 6, 9)
Al N7OMS 253-495-9068 (10, 12)
Mike W7XTZ 253-405-8095 (6, 8, 10)
Stephen AD7AB 253-212-9437 (1, 3, 4, 12)
Randy WB4SPB 253-761-9391 (2)
Phil K7PIA 253-307-4781 (9, 10, 12)

Are you an RCT member with skills to offer?

Please let any officer know and we can add you!

Arduino Nano 2025

Note: *Providers or users of the Elmer Board must be local to the Radio Club of Tacoma. This is a local club service for our local members only. Thank you!*

STRAY TOPICS OF INTEREST:

Try out a PRC319 "Manpack Transceiver" for free*

Contributed by Paul WØRW

TRY OUT A PRC319—FREE* BACKPACK RADIO LOANER NOW AVAILABLE!

Ever wanted to get your hands on a PRC319? Now you can. One of these legendary backpack HF rigs is available on free loan to any licensed ham in the lower 48.

Whether you want to test it in the field, show it off at a club meeting, or just finally see what all the fuss is about—this is your chance.

Not familiar with the 319? It's a rugged, fixed-frequency, channelized HF radio originally built for military use. It's channelized—no VFO—just punch in a channel and go. It runs CW, USB voice, or data at either 5 watts or a full 50 watts. You can watch a great overview video at THIS YOUTUBE LINK.

You can read more about the PRC319 HERE.

The loaner comes as a complete kit: PRC319 radio, antenna tuner, handset, battery/AC supply, and satchel. Due to the battery, it ships *UPS only*.

Here's how this program works:

If you want to borrow it, drop me a line and I'll send you the loan agreement. When your turn comes up, I'll let you know. You'll send upfront $100 to cover shipping out, and you'll be responsible for return shipping too—figure around $200 total. You get to keep it for up to 90 days.

Sorry—CONUS *only*. No shipments to Alaska, Hawaii, or Puerto Rico. You'll need a General class or higher license and must appear in the FCC database.

This is the actual PRC319 "Manpack transceiver" that is available to borrow for up to 90 days (continental U.S. only).

This unit was donated by Clare Owens Jr. N2RJB, of Apex, NC. Accessories came from Al G8LIT. Thanks to both for helping make this possible.

Interested? Reach out to Casey Efaw KD2YMM KD2YMM@gmail.com

Information provided via WØRW

*Just pay shipping both ways. Disclaimer: Neither W7DK nor Editor W7UUU have any direct involvement in this offer. All details of the transaction and transfers of the radio are solely between the borrower & WØRW & Casey

QUARTZ CRYSTALS

Determining Frequencies for Over a Century

By Dave W7UUU

IN THE EARLIEST DAYS OF HAM RADIO, TRANSMITTERS were based on spark (which used the damping coil and antenna system together to determine the frequencies radiated) or as spark phased out, simple LC oscillators such as the Hartley or the slightly-more reliable Colpitts oscillator circuits. Both however were inherently unstable: a change in tube temperature (in a drafty backyard "radio shack" that was *literally* a shack), supply voltage fluctuation, or even antenna movement in a stiff wind could shift frequency significantly. By contrast, the invention of the quartz-crystal oscillator by Walter Guyton Cady in 1921 enabled a degree of frequency discipline previously reserved for laboratories and commercial broadcasters. Through the mid-1920s, the ham radio community, reading QST and other technical journals, took up the challenge of cutting their own quartz plates, mounting them, and building their own crystal-controlled oscillators as a path to "*never shifting frequency… even a particle*."

Walter G. Cady, inventor of the quartz crystal oscillator
Photo © IEEE History Center

Early amateur experimenters built their own crystals by slicing, grinding, and lapping raw quartz into very thin sheets that became resonators when a current was passed through them. Instructions—in the November 1925 QST and later issues—explained how to cut the wafers, inspect resonant frequency by spark or wavemeter, and mount the blanks in home-built holders. Commercial crystal production was minimal, and *expensive* (often $35–$50 per crystal *in 1925 dollars*) - as well as very small-scale. Hams persisted, though, because the precision of even a few parts per million was revolutionary compared with drifty LC oscillators like Hartley and Colpitts.

Early Bliley quartz crystal in HF2 mount
From the collection of Dave W7UUU

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QUARTZ CRYSTALS

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Between 1927 to 1930 amateur use of crystal control had become routine. Manufactures like F. Dawson Bliley founded Bliley Electric in 1930 specifically to supply hams. Others including Monitor Piezo, Valpey Crystal, and others followed shortly thereafter, offering crystals cut to improved AT-cut temperature-compensated blanks, which were introduced in 1934 and reduced frequency coefficient sensitivity over temperature. By the mid-1930s, crystal control in amateur transmitters was described less as a novelty and more as best practice.

A WWII Bakelite crystal tray half-filled with cosmetically restored FT-243 crystals on ham band frequencies. Alas, all of these were destroyed in my October 2020 shack fire. From the collection of Dave W7UUU

As World War II approached, military communications authorities embraced crystal control en-masse. Until then, production was limited and reliant on natural quartz from Brazil. But once the U.S. Army Signal Corps committed to mass deployment of crystal-controlled radios, scale had to ramp quickly. Kenneth Bruce Ross, through his company Ross Manufacturing, automated the tuning of FT-243 style crystals, sharing his methods freely as his patriotic duty, and vastly increasing throughput of precision crystals during wartime. By war's end, production had scaled to millions per month, making surplus providers awash in military-grade crystals by the 1950s.

The nearly-ubiquitous FT-243 crystal holder—about 13/16" × 3/8" × 1 1/8" in Bakelite with two pins spaced just shy of 1/2"—became iconic. These rugged holders could tolerate the high drive currents of tube transmitters, unlike smaller HC-6/U or HC-17/U types designed for lower power or temperature-controlled systems. In the post-war surplus glut, hams began to collect entire drawers of FT-243 crystals—some marked JAN (Joint Army-Navy), others by Bliley, CTS-Knights, Texas Crystal, and somewhere around 130 more.

Because it was somewhat rare to own crystals exactly on any given ham's preferred operating frequencies, hams improvised: they found that small amounts of hand-grinding using water, and a thick piece of glass as tools, using various grits to raise the crystal frequency (thinner = higher frequency), or coating one face of the wafer with graphite or pencil lead to lower it (which was far less inclined to work as well as

QUARTZ CRYSTALS

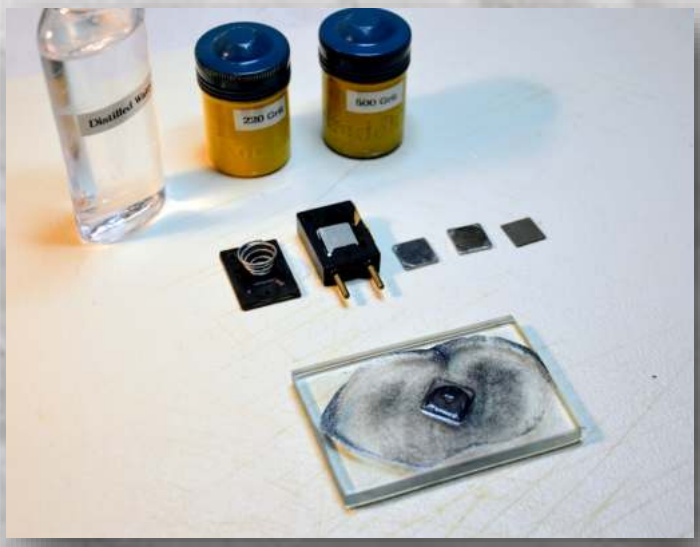
Determining Frequencies for Over a Century

By Dave W7UUU

grinding to go higher in frequency).

The blank piece of quartz crystal inside the FT-243 was roughly .03 inches thick, and shaped and sized about the size of a small postage stamp. Grinding too much or a getting ham-fisted and causing a crack in the crystal plate ruined it. Fixing one by re-grinding edges *sometimes* worked, but often ended in disappointment. Others even swirled gritty tooth-paste on a mirror to polish the crystal blank until it edged toward the desired frequency.

As an aside, around 2013 I went whole-hog at learning the art of crystal grinding. I got pretty good at it but the farthest "move" in frequency I could achieve that would work reliably was 5 KHz or so… not very much. But enough to "pull" an out-of-band crystal up into the low end of the ham band as long as the starting frequency was just below the ham band edge.



Basic crystal grinding setup: distilled water, 220 & 500 grit, and a thick piece of plate glass. It's not hard—just delicate.
Photo by: Dave W7UUU

Typical "Novice-era station" - Ameco R5 receiver paired with the iconic Ameco AC-1 single-tube crystal transmitter ca. 1965
From the collection of Dave W7UUU

In 1952, when the FCC introduced the Novice Class license, they *mandated* crystal-controlled transmitters for Novices: no VFOs allowed, no frequency drift allowed. It was both a regulatory limitation and a learning tool: Novices had to learn to operate only on fixed frequencies, listening first and transmitting clean CW signals. Many first ham experiences involved saving for or trading crystals for their allowed frequencies on 80 and 40 meters.

Here's a little-known fact: Novice hams from the early 1950s until about 1973 were very often working "split" long before it was common like it is today for hams working DX stations listening "up". The reason was simple: Novice ham A only had one crystal—say 7.110, while Novice ham B only had a crystal for 7.137. But that wasn't a problem! Novice ham A could simply call CQ on his 7.110 frequency, while Novice ham B would tune the Novice band segment looking for a CQ to answer. He would hear Novice A, then start calling back on his frequency of 7.137, at which point Novice A would in turn tune around looking for a reply to his CQ. Back then, it was cus-

QUARTZ CRYSTALS

Determining Frequencies for Over a Century

By Dave W7UUU

tomary for Novices to send the calling stations call sign a number of times to give the other guy time to spot the reply coming his way. This is how they would meet up—and once tuned in this way, off they'd go on a merry QSO despite being *27 KHz apart from each other in frequency*. Or in modern "split speak", Novice ham A was in fact listening "27 up"! He just didn't know it at the time.

The crystal-control requirement held until around 1973, when the FCC relaxed the crystal-control mandate for Novice stations, permitting VFOs to be used. By then, very stable VFOs were pretty much the standard in commercial ham gear, making crystals optional for Novices, although still common.

Despite their limitations, crystals remain in fairly-frequent use among many hams even today (myself included). Operators of tube-era gear still often rely on FT-243 crystals just for the nostalgic fun of it, not to mention the very solid frequency control that crystals afford.

One of many cosmetically restored FT-243 crystals from the collection of Dave W7UUU

In modern QRP transmitter kits, small crystals of the HC-49 (or similar) type are very common—they contain very small crystal wafers suitable only for the very low drive currents of transistor oscillators. Vendors such as AF4K Crystals often offer "restuffs" - installing a new modern crystal wafer inside an original FT-243 housing. That preserves the physical appearance and "feel" of the more-classic case, while delivering the low-current requirements of today's rigs. However, be cautious with "restuffs": if such crystals are installed in a high-current tube rig designed for vintage FT-243 crystals, the modern wafer may crack or fail under the heavier drive. If this happens, they cannot be repaired. Pro tip: If you think an FT-243 you have is a restuff (maybe it has a new fancy label), do yourself a favor and carefully open it up before putting it in your old Johnson or Heathkit rig… make sure it's not a low-current restuff. You'll know once you look inside—you'll see it.

Today's crystal technology is far more advanced: most crystals use AT-cut or SC-cut man-made crystal material, grown hydrothermally after Bell Labs developed synthetic quartz in the 1950s. Modern manufacturing yields wafers whose resonant frequency is determined within parts-per-billion tolerances. But the basic principle remains the same: a quartz plate vibrates at a precise mechanical resonance which translates into an electrical oscillation in a tuned circuit, providing exceptional frequency stability not easily matched by simple LC tanks.

No one knows how many FT-243 (and similar holders such as HC-6/U and FT-241) with similar "ham-friendly" pinouts were made in the 20th century—but it's easily in the many tens of millions if not hundreds of millions. Of those, many millions were made that either cover ham frequencies as manufactured or were ground up to usable ham frequencies by hams generations ago. So there are still plenty to go around if you decide you want to explore the nostalgia of "crystal controlled ham radio".

They still turn up regularly at hamfests. But if possible, avoid the sharks on eBay who can charge $25 or more for a ham-band FT-243 even today.

-Dave W7UUU

THE WAY BACK PHOTO BOOTH

Highlighted photos from the club's past

Researched & Compiled by the Dave W7UUU

Archive Photo

W7DK Ham Fair 1970

I REALLY LIKE THIS PHOTO, FOR MANY REASONS. One, it features my best friend in ham radio, Nick Winter, WA7IVO at the far left (later K7MO (SK)) - and the photo was taken by another great friend, Nick's Dad Joe Winter, WA7RWK (SK) - (Nick and Joe were my first 2 contacts as a ham, Nick first and his dad shortly after the same evening, back in March 1975).

The boys in the picture are Nick's young friends, Jon Wilkenson WN7OYN on the right, and one of Nick's best friends then, Kent Hoffman WA7NVX (SK) in the middle. The gear in the photo is up to debate, and I would *love* to hear your input as readers… what are the various rigs? EMAIL ME (address below—I'll send W7DK & QRZ stickers to the best answers!). And yes, I pulled a "Ted Turner" on this image—I "colorized it" using software— I wanted to bring it more to modern life, with green grass—young lives with futures ahead of them—not ancient B&W images of the long ago days gone by. *-Dave W7UUU*

MIGHTY DK! QSO REPORT

Reporting all the HF QSO action from the club

EACH MONTH in the Bark, the Radio Club of Tacoma recognizes the members and guests who have made non-contest QSOs using the HF stations at our clubhouse. Saturday Open House, especially, is a time when members have access to this equipment. Why not sit down at one of our operating desks and make a contact or two? Assistance is almost always available for those unfamiliar with the equipment, and if your license class doesn't permit HF operation, ask the denizens of the HF Room or the Saturday clubhouse host to help you find a suitably-licensed control operator to sit with you. It's a feather in the club's hat for the call sign of The Mighty DK to be heard on the airwaves. So get on the air and get your name in the Bark! (Don't forget to *enter your call sign as the operator* into our logging program.)

■ *-editor*

Clubhouse QSOs during this period:

NAME	CALL	QSOs
Mike	W7MKE	91
Dave	N7HT	21
Carson	KJ5MEW	20
Nathan	WA7BUG	16
John	K2CCT	10
Samuel	KK7USO	4
Julie	W7JUL	1
Scott	KA7IOX	1

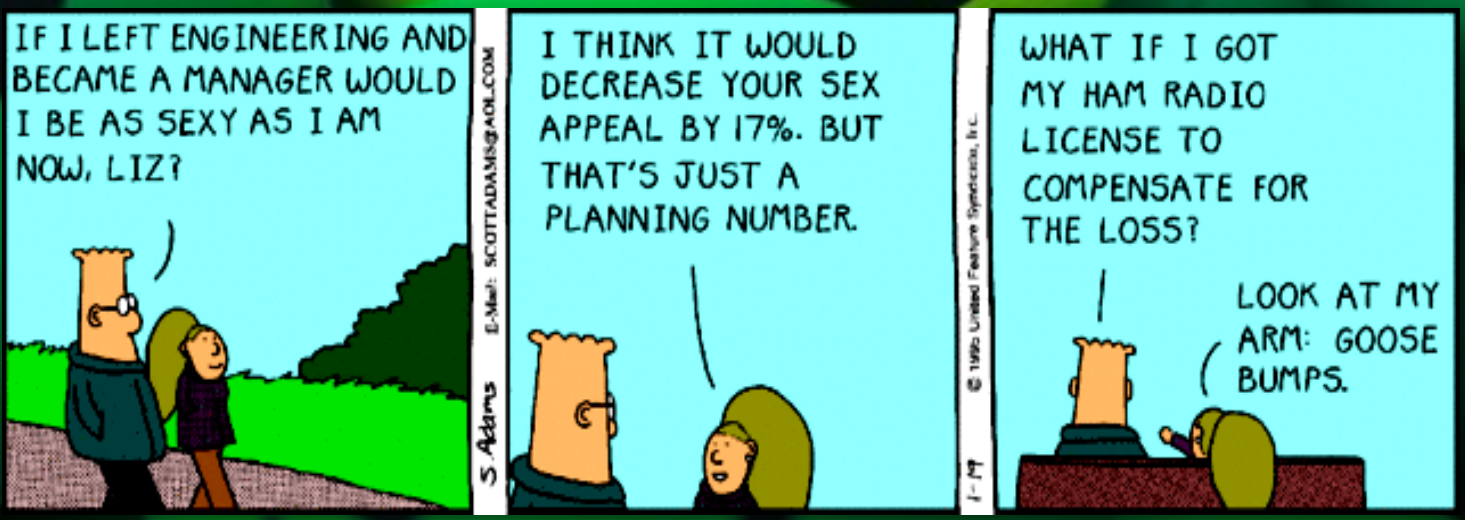
Above: HF Room Flex 6600 & Mercury III

Below: HF Room Icom IC-7610 & KPA-500

Photos this page provided by Dave W7UUU

THE FUNNY PAPERS

Ham Humor for Humorous Hams



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HOW'S DX?

DXpeditions and Notable DX operations

WEB

NG3K Upcoming DXpedition Calendar

September						
2025 Sep01	2025 Sep22	Rwanda	9X2AW NEW	LoTW	DXW.Net 20250713	By DF2WO fm Kigali (KI58aa); 160-10m, incl 60m; CW FT4 SSB; QSL via M0OXO OQRS
2025 Sep02	2025 Sep07	Palau	T88DZ	JR2JGR	OPDX 20250518	By JH2JGR fm Koror I (IOTA OC-009); 160-6m; CW SSB RTTY FT8 FT4 MSK
2025 Sep02	2025 Sep11	Palau	T88DF	LoTW	OPDX 20250518	By JH2DFJ fm Koror I (IOTA OC-009); 160-6m; CW SSB RTTY FT8 FT4 MSK; QSL via Club Log OQRS
2025 Sep12	2025 Sep22	Sint Maarten	PJ7K	LoTW	DXW.Net 20250612	By OK1FCJ OK2ZA OK2ZC OK6DJ OM5ZW; 160-6m; CW FT8 SSB RTTY; QSL via OK6DJ
2025 Sep12	2025 Sep22	Svalbard	JW6VDA	LoTW	OPDX 20241219	By LA6VDA fm Spitsbergen (IOTA EU-026); HF; FT8 FT4; SSB; holiday style operation; QSL via Club Log OQRS
2025 Sep15	2025 Sep19	Aland Is	OH0	LoTW	OPDX 20250226	By DL4APJ DL2AQI as OH0/DL4APJ fm IOTA EU-002 (KP00ad); 80-10m; CW SSB + digital; QSL via Club Log OQRS or DL4APJ (B/d)
2025 Sep22	2025 Oct06	Micronesia	V6D	LoTW	DXW.Net 20250415	By DG2RON DJ7TO DJ9KH DK5WL DL1KWK DL2RNS DL4SVA DL7JOM DL7VEE fm Chuuk I (IOTA OC-011, QJ57wl); 160-6m; CW SSB FT8 RTTY; QSL via Club Log OQRS or DL4SVA
2025 Sep24	2025 Sep28	Svalbard	JW0B	LoTW	DXW.Net 20250409	By F5FRM fm Longyearbyen; focus on high bands, perhaps 6m; CW RTTY, perhaps SSB; QRV for CQ WW DX RTTY
2025 Sep27	2025 Oct02	Ogasawara	JD1	LoTW	TDDX 20250610	By JQ3JUK as JQ3JUK/JD1 fm Chichijima I; 160-6m; FT8; 50w; QSL via JQ3JUK direct w/ SAE + 3USD
2025 Sep28	2025 Oct12	Seychelles	S79	LoTW	DXW.Net 20250315	By DL2SBY; HF; focus on 6m; QSL via DL2SBY direct

Click anywhere on the table above to visit Bill's site directly—the hyperlinks will be active there.

Courtesy Bill Feidt, NG3K
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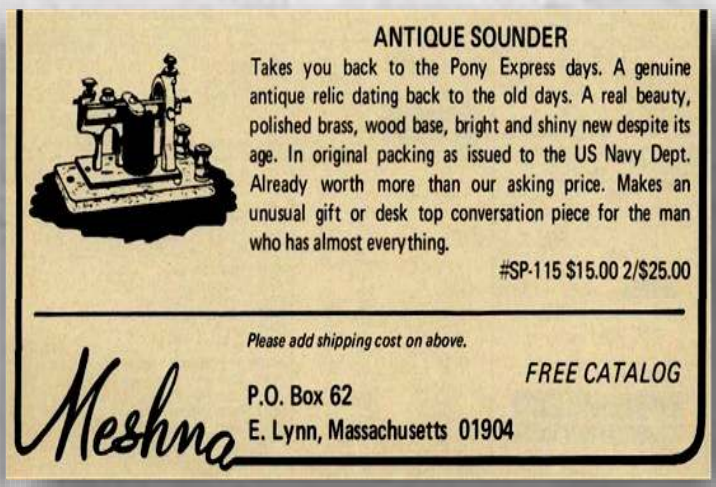
STRAY TOPICS OF INTEREST

RADIO ADS FROM 75 YEARS AGO THIS MONTH

W7UUU



1975 WAS THE YEAR I PRETTY MUCH "CAME OF AGE" IN HAM RADIO. While I passed my Novice tests (CW and written) in December 1974, I didn't receive my Novice ticket until March of '75. By the end of the summer, I had my General license and was really starting to enjoy the fruits of all my efforts. It's also when I started drooling over ads I might see in QST, 73, and CQ magazines. My Dad would take me to Radio Shack (#3322, on 6th Avenue in Tacoma, WA where I would start my first "real job" just four years later, in the fall of 1979!). One of the big attention getters for me was the Realistic DX-160 receiver, that seemed like such an amazing radio. My first (and only) rig at that time was the lowly Heathkit HW-7 QRP transceiver that was my first radio (Dad refused to buy used gear, but I only had a $100 budget, and the HW-7 at $79.95 was all we could afford. I built it by myself in January '75 while awaiting my license to arrive in the mail). Moving on to the ad at the right—can you imagine that? A NEW IN ORIGINAL BOX Morse sounder (Bunnell? No idea who made it) - from the previous century—for only $15 or two for $25??!! That very ad from the then– popular Massachusetts surplus reseller John Meshna Electronics Co. ran in 73 Magazine this month, 75 years ago. Lastly, the Heathkit ad below—offering the revolutionary fully–synthesized 2m transceiver, the HW-2036. This was a huge hit with Heath Co., eliminating the need for endless piles of crystals to set transmit and receive frequencies for the exploding 2m repeater world for hams at the time. But personally knowing one of the key designers of this radio, and from the "rumor mill" of other "Hams at Heath" I've met over the years, it was one of the most hated products that Heath ever released. It was just a tad too far ahead of its time, and was devilish for builders to build, and for Heathkit service staff to repair. But even today, if you have one that is "all there and well adjusted" the HW-2036 can still be a fun radio to use. -*Dave W7UUU*

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Homebrew & Kits corner

HD-15 PROJECT BOX

PROJECT PROFILE

ONE OF THE MOST POPULAR KIT PRODUCTS THAT HEATHKIT ever sold was the HD-15 phone patch. First released in 1966, it was a top seller for the next seventeen years, still being sold until 1983. During the Vietnam war years, hams running phone patches between soldiers overseas and the U.S. were very much in demand. While Heath Co. was not the only seller of phone patches, the HD-15 was hands-down the biggest seller of such devices during that era.

Because phone patch activity is all-but-dead in the ham radio world (with some exceptions of course, and I am aware of this), there is very little interest in these devices on the used market. It's not at all uncommon to see an HD-15 marked at $2 at a ham fest, usually in 100% working condition. The photo on the right is a stack of 3 HD-15s and an HM-15 SWR meter I recently bought for $5 for all three boxes!

The HD-15 as it was built can actually be adapted to make a very nice audio interface for running audio-based digital modes like AFSK, RTTY and FT8. Or you can reuse the box for a purpose that suits your current needs. I have used several old HD-15s to build "Fake Heathkits" as I call them—cool devices that Heath never thought of.

In the case of the box in the middle, it's simply a cabinet that holds a Lo-Z to Hi-Z Heil matching transformer to use a modern Lo-Z mic on an older rig like a Heathkit SB-101. I also kept the meter and ran it with a tiny homebrew amplifier to monitor the audio from the mic as it feeds the transmitter.

I'm sure some will shake their heads at my "desecration" of no-longer made Heathkit HD-15s. But the reality is, Heath probably sold several hundred thousand of them during its 17-year run. There is absolutely no shortage of them.

In this era of hard-to-find parts for hams, especially affordable project boxes, it's pretty hard to beat an old HD-15. You usually even get three nice matched knobs, a panel meter, a screw terminal strip, and a couple mounted RCA jacks! Think of all the things you could build into one. Keep your eyes peeled at the next ham fest and maybe bring one or two home with you.

-Dave W7UUU

Original HD-15 Phone Patch

Box repurposed as a mic impedance match box

Two HD-15 phone patches and one HM-15 SWR meter—all for only $5 at a recent ham fest. All photos by Dave W7UUU

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email loggersbark@gmail.com

COOL OLD RIG O'THE MONTH

A look back at the cool gear of the past

By Dave W7UUU

A FEW MONTHS AGO, MEMBER Bob K7MXE leant me his Harris Navy transceiver to use for this column. Alas, it was not operable during the week I had it (the magic smoke had sometime previous been released from some power supply components). But it's such a cool old rig that I still took nice photos and researched its background.

Harris RF-280 from collection of Bob K7MXE
Photo by Dave W7UUU

The Harris RF-280—officially tagged AN/URC-94(V)—was one of the real radio workhorses that held the line for U.S. Navy shipboard communications beginning in the late 1970s. Designed from the start to meet strict military standards, it wasn't your average HF transceiver. This was heavy-duty, rack-mounted gear built to endure the kind of abuse found aboard large naval vessels on critical navy missions.

Coverage was continuous from 2 to 80 MHz (transmit and receive), and could be configured for simplex, half-duplex, or full-duplex operation. That flexibility alone made it valuable in both routine as well as tactical communications. It supported the standard modulation types—LSB, USB, Independent Sideband (ISB), AM, and Link-11 (digital)—which meant it could handle just about any communications role the mission called for, from basic voice ops to encrypted digital traffic. Its ability to carry voice, CW, teletype, and even complex digital data gave it a lot of staying power over the years it was a current radio.

One of its biggest advantages was how seamlessly it integrated into the Navy's High Frequency Radio Group, or HFRG. That system was designed to automate and streamline naval HF communications, bringing together multiple bands—VLF, LF, MF, and HF—into a centralized control scheme. Within that system, the RF-280 handled much of the heavy lifting on the HF side, often forming the backbone of long-haul or beyond-line-of-sight links, especially when SATCOM wasn't available or was being jammed. That redundancy was key in Cold War-era fleet operations, where high-frequency fallback options were still mission-critical.

The hardware itself wasn't exactly compact. This thing is quite a beast. It's 8.5" tall ((not including the MT-4883 black shock-mount base), 19" wide (for rack mounting), and 18 inches deep. It weighs in at a whopping 75 pounds. It's definitely not a portable unit. It came configured for either shock mount or

COOL OLD RIG O'THE MONTH

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rack mount installations, depending on where it was going aboard the ship. The one that Bob K7MXE leant me that's in the photos is equipped with the shock-mount base. And like most Harris-built military gear from that era, it was seriously overbuilt—heavy-gauge metal, hardwired assemblies, and components meant to last for years if not decades. No frills, but also no nonsense.

Operators were typically Navy communications specialists—people trained to work with HF systems in the larger context of shipboard comms. The RF-280 wasn't intended for casual use or temporary setups. This was long-term, fixed-install equipment, part of a networked system that allowed a ship to maintain contact with command, other vessels, or even aircraft over the horizon. It earned a solid reputation for dependability, and you didn't have to sweet-talk it into working—it just did (at least until the moment it doesn't, as in the case of Bob's!).

Original cost data is hard to come by, which isn't surprising for something developed under military procurement. Regardless, given its performance specs, rugged construction, and role as a critical shipboard system component, it likely ran well into the tens of thousands of dollars per unit when you factor in full system integration, not just the radio itself.

While modern digital gear and SDRs have long since taken over, the RF-280 served faithfully through a pivotal time in Navy communications. It's the kind of equipment that doesn't get much glory but did its job day after day, rack after rack, watch after watch. And in that world, that's just about the highest compliment you can give. *-Dave W7UUU*

Top: Remote audio control box
Above: Inside view showing the modular construction for ease of servicing in the field
Left: Official advertising copy for the RF-280 transceiver. Click on the image to see and read it full size.

Photos by Dave W7UUU
From the collection of Bob K7MXE

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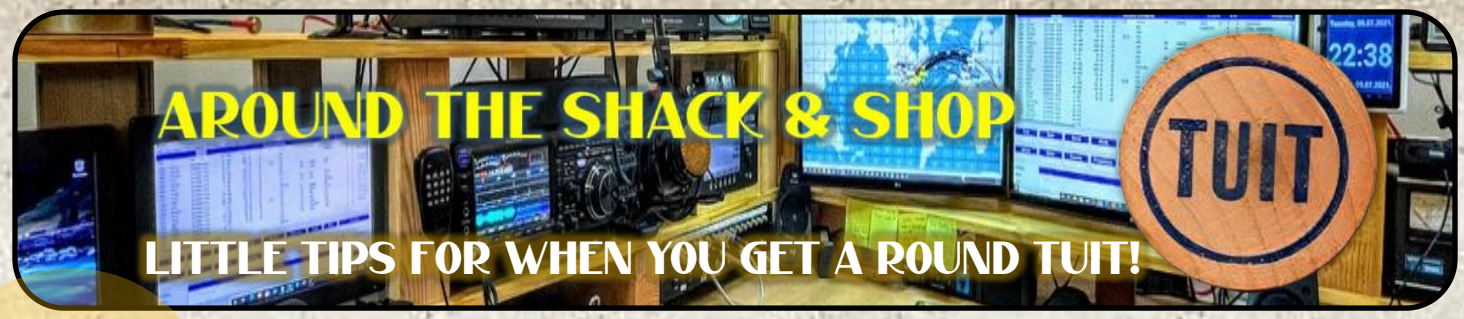

HAVE YOU EVER HAD A HANKERING TO EXPERIMENT

with tubes but were put off by working with aluminum (or worse, steel!) chassis panels and cutting holes for tube sockets? Well there's an easy solution (at least for 8-pin octal tube types). Aptly titled "8-pin octal relay sockets", these have been a very common item in the world of commercial electrical work—especially HVAC and fire/security alarm systems. Most frequently, these sockets are used for large 8-pin hard-plastic relays—commonly called "ice cube relays" (see photos right).

But many don't know these neat little sockets can work with more than just relays—they can be used for octal tubes as well! The pins and screw-connection terminals are easily rated for hundreds of volts making them ideal for breadboarding homebrew tube projects. Whether you want to build a single-tube transmitter or a 5-tube superhet receiver, it's a piece of cake using octal screw bases like these. Each socket also has two mounting holes to screw them down to a piece of wood (breadboard style) or just use double-sided foam sticky tape to stick them to a copper PC board or sheet of plastic (like a plastic cutting board). You can even use them with octal audio transformers as seen in the bottom right, with a DuKane lo-z to hi-z unit, for adapting a modern 600-Ohm mic to an old hi-z transmitter. They are pretty reasonably priced—just click the link below to see them listed on Amazon (no affiliation). Have fun!

-Dave W7UUU

All photos by Dave W7UUU

Click ad below to view these sockets on Amazon

All photos by Dave W7UUU

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DESPITE BEING INTRODUCED YEARS earlier (as the original series, later updated to the B series), in September 1975 the Heathkit DX-60B, HR-10B, and HG-10B lineup was still extremely popular. Budding Novices or new General Class hams lined up to buy this really enticing set of "build it yourself" gear. The DX-60B was (and still is, when restored) a rock solid AM/CW transmitter covering 80 through 10 meters with up to 90 watts input (which is about 50 watts RF output). It was attractive, had a build-in AC power supply, built-in AM modulator, cathode keying, and a spotting switch. The RF amplifier tube was a 6146, which put it in the upper tier of "Novice-era" transmitters. Paired with the very stable HG-10B VFO, this was a "killer app" transmitter setup. Many hams today (myself included) still have a DX-60 or DX-60B around the shack.

The sleek-looking matching HR-10B receiver, while making for pretty amazing looks and styling, was not the receiver equivalent of the DX-60B transmitter. The list of limitations is long: poor selectivity (gentle skirt roll-off on the basic crystal filter); very poor sensitivity on the upper bands—15 and 10 meters are pretty much deaf; tuning dial inaccuracy—the slide-rule tuning looked great but lacked precision and lack of a product detector so was not much good for listening to SSB. But the biggest single fault was the low sensitivity. But despite all of these limitations, the DX/HR/HG trio was a huge seller for Heath Co. well into the 1970s, as this September 1975 full-page ad bears out.

The Right Way to Start in Ham Radio
Build Your Own Heath Rig

Heathkit Phone & CW transmitter runs up to 90 watts input...109.95

Run 75 watts CW input as a Novice . . . up to 90 watts phone or CW when you get your General ticket. Front panel controls for Drive Tune, Drive Level, Final Loading and Final Tuning allow proper tune-up for maximum output, minimum harmonics, high quality audio. Features include grid/plate current meter . . . 4 crystal sockets and provision for VFO operation . . . front panel microphone and key jacks. Easy assembly with the famous Heathkit manual . . . requires only a VTVM for alignment.

Kit DX-60B, 24 lbs., less crystals, mailable **109.95**

DX-60B SPECIFICATIONS — Power input: 90 watts, peak; controlled carrier phone, or CW. Output impedance: 50-75 ohm (coaxial). Output coupling: Pi-network. Operation: CW or AM phone — crystal or VFO control. Band coverage: 80 through 10 meters. Power requirements: 120/240 VAC, 50/60 Hz, 225 watts. Dimensions: 6½" H x 13¾" W x 11½" D.

Heathkit 5-band receiver tunes AM, CW & SSB for just 109.95

Top performance at a modest price. Full 80-10 M coverage with each band accurately displayed on the calibrated slide-rule dial. Separate RF and AF gain controls . . . adjustable BFO for easy sideband tuning. Sensitivity of 1 μV and 3 kHz selectivity from the crystal filter deliver performance comparable to more expensive receivers. Features include built-in "S" meter . . . switchable AVC . . . front panel head phone jack . . . provision for optional HRA-10-1 100 kHz crystal calibrator. Alignment requires VTVM and RF signal generator.

Kit HR-10B, less speaker, 20 lbs., mailable **109.95**

Kit HRA-10-1, plug-in 100 kHz crystal calibrator, 1 lb., mailable **9.95**

HR-10B SPECIFICATIONS — Frequency coverage: 80 Meter Band, 3.5 to 4.0 MHz; 40 Meter Band, 7.0 to 7.3 MHz; 20 Meter Band, 14.0 to 14.35 MHz; 15 Meter Band, 21.0 to 21.5 MHz; 10 Meter Band, 28.0 to 29.7 MHz. Intermediate frequency (IF): 1681.0 kHz. Sensitivity: 1 microvolt for a 10 dB signal plus noise-to-noise ratio. Selectivity: 3 kHz at 6 dB down, 9 kHz at 40 dB down. Image rejection: 40 dB or better. Input impedance: 50 to 75 Ω coaxial. Audio output impedance: 8 Ω, or 500 Ω. Panel controls: AF GAIN, AC OFF-ON; RF GAIN; BFO TUNE; BAND Switch; MAIN TUNING; CALibrate; ANTenna TRIMmer; RECSTBY Switch; CALibrate ON-OFF; BFO On-Off; AVC On-Off; ANL On-Off. Tube complement: 6BZ6 RF Amplifier; 6EA8 Mixer Oscillator; 6BA6 1st IF Amplifier; 6EA8 2nd IF Amplifier-BFO; 6BJ7 Detector-AVC-ANL; 6E88 1st Audio-Audio Output; 6x4 Rectifier. Power requirements: 120/240 VAC, 50/60 Hz, 50 watts. Cabinet size: 6½" H x 13¾" W x 11½" D.

80-2 meter VFO only 64.95

Ideal accessory for the HW-16 and DX-60B. Provides VFO control from 80 through 2 meters with separate calibrated scales for each band. Smooth 28:1 vernier tuning . . . temperature compensated circuitry for minimum drift. Provides 5 V rms at 3.4-4, 7-7.425 and 8-9 MHz range . . . compatible with virtually all grid-block keyed transmitters and most cathode-keyed transmitters. Alignment requires receiver of known accuracy covering 80-2 meter bands or 3.5 to 8.222 MHz.

Kit HG-10B, 12 lbs., mailable **64.95**

Optional plug-in crystal calibrator

An Amateur Radio hobby can open up a whole new world of adventure for you. These books and Heathkit Gear can get you started...now!

Amateur Radio License Study Guides — make getting any radio license easy — include typical FCC exam questions & answers — serve as a convenient reference after you get your license.
NOVICE, EDP-122 . . . . . 3.95*
GENERAL, EDP-123 . . . . . 6.95*
ADVANCED, EDP-124 . . . . . 3.95*
EXTRA, EDP-125 . . . . . 4.95*

How to be a Ham — ideal beginner's guide to an exciting Amateur Radio hobby.
EDP-115 . . . . . 3.95*

101 Questions and Answers About Amateur Radio — a great introduction for beginners, as well as a valuable reference for veteran hams.
EDP-118 . . . . . 2.95*

ARRL Amateurs Handbook — a classic reference work for hams, engineers, scientists — up to date info & theory on all ham gear.
HDP-293 . . . . . 5.50*

*$10 minimum order for book only purchase. No minimum when book order accompanies kit order. Include 35¢ for each book to cover postage and handling.

Ham starter group...19.95
Includes 4 ARRL handbooks, HD-1416 practice oscillator, 3 code-teaching records or two cassettes.

HDP-22, Complete group with records, 6 lbs., mailable 19.95
HDP-122, Complete group with cassettes, 4 lbs., mailable 19.95
HDP-32, Records only, 3 lbs., mailable 9.95
HDP-132, Cassettes only, 2 lbs., mailable 9.95
HDP-42, Books only, 2 lbs., mailable 4.00
HD-1416, Oscillator & key, 2 lbs., mailable 9.95

84 *Heathkit products are the result of a quarter-century of kit engineering experience*

-Dave W7UUU

STRAY TOPICS OF INTEREST

RADIO NEWS FROM 100 YEARS AGO THIS MONTH

W7UUU

With flappers on the sand and a TRF radio in the box, Radio Age captured the stylish optimism of the 1920s wireless boom. The September 1925 issue — 'The Magazine of the Hour' — sold for a quarter and came packed with blueprints, "hook ups", amateur radio & broadcast gossip, and big promises for a plugged-in future.

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email loggersbark@gmail.com

Plan Now: Upcoming POTA!

By BJ KO7T

RADIO CLUB OF TACOMA POTA 2025 Schedule

This past year, the club hosted 11 POTA activations at 7 different parks, and we have BIG plans for 2025!

The Club's POTA Chairman, BJ KO7T, is always looking ahead for fun new parks in the state to activate. It's always a great way for members to get involved with amateur radio while enjoying the great outdoors here in Washington State!

Here's the upcoming schedule:

PARK: Manchester State Park (US-3227)
DATE: Sept. 14th
TIMES: 10:00 AM PST
NOTES: Meet in the field across from the Torpedo Warehouse. In case of inclement weather, we can setup inside the old warehouse.

PARK: Millersylvania State Park (US-3231)
DATE: October 19th
TIMES: 10:00 AM PST
NOTES: Autum Support Your Parks Weekend

PARK: South Puget Sound Wildlife Area (US-12564)
DATE: November 9th
TIMES: 10:00 AM PST
NOTES: This is a newly added park. See South Puget Sound Wildlife Area Unit | Washington Department of Fish & Wildlife

Everyone is invited to come to our POTA activation events. It's a great opportunity to learn about different antenna types, setting up and tuning antennas with loading coils and/or a counter-poise, learn about different digital modes, and other topics related to portable operations. We usually have 3 to 5 stations set up running many modes on multiple bands. We encourage prospective hams to get on the air, and those with Technician licenses to operate on different bands with a control operator. For club members with a General license, we even have a portable POTA kit that is available to check out from the club the Saturday prior to our club activations. Please see or email BJ Rollison (KO7T) for more information.

-BJ KO7T

BJ KO7T operating at a recent POTA activation

IT'S BEEN A LONG TIME SINCE ANNE N7ANN

and I got out to do a POTA. What, with many aspects of our fairly-recent retirement, and the many hours I devote to *The Bark* every month, it's just hard to fit things in sometimes. But we just fit one in….

This past week, we headed out to what is one of our favorite spots, Joemma Beach State Park (US-3206) in the Longbranch area. We stopped in Key Center to pick up our Subway "picnic lunch" (so we cheat a little!), and drove the 16 miles out into the wilds of the Peninsula, and found our "favorite table" nestled in the trees, where we have done some 2 or 3 POTA activations in the last year or so. It's such a quiet serene place—especially on a weekday, when folks are at work. It's largely a boat launch day use area (with a camping area that's fairly far removed from the day areas). I was just getting the antenna set up and unfurled when it started….

…It was the *droning* RACKET of a backpack-style gas-powered industrial leaf blower as the State Park guy set about blowing parking lot leaves. We quickly realized the vast majority of these *clearly*-offensive leaves had chosen to fall in the large parking area that was closest to our table. And he was in no hurry. It was an otherwise empty park, with a single table in use (and there aren't many) - but that's the area that was most in need of blowing. It was LOUD. Like in the 90 dB range as he slowly moved around "our area" of the parking lot. So much for a peaceful picnic—never mind Anne reading her book, and me using the speaker instead of headphones.

We finished the picnic—but it was clear the 95 dB


Photo by Anne N7ANN


Photo by Anne N7ANN

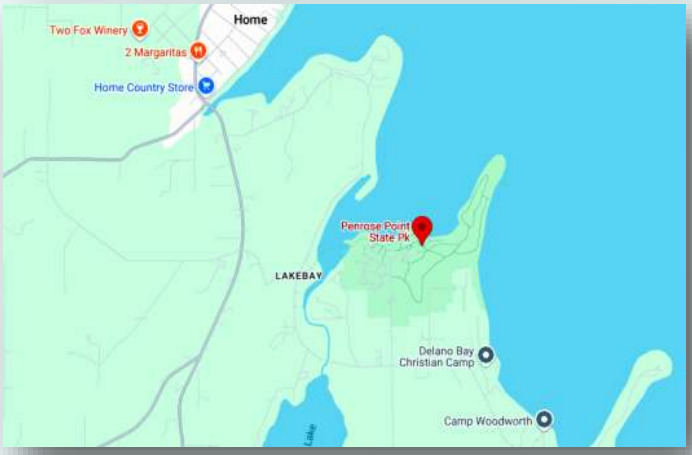
droning of the engine was not going away soon, so we packed up the gear without ever even fully setting up, and headed back up the road to another nice park, Penrose Point State Park (US-3248). So that's where the photos above come from! We initially headed down to the beach area where there's a small window to the East, but it was really crowded (odd for a weekday) so table options were some-

what limited. So we went to the hidden picnic area.

When you enter Penrose Point State Park, you will come to a "T" in the road. Right takes you to the very popular beach areas (and MILES of hiking trails in the woods). But if you go left, you will end up in a secluded picnic area settled amongst the trees. There is a path to the beach but it's pretty steep. There's a shelter with three tables, and then a number of tables facing out to the bay. The only downside to this area of Penrose from a radio perspective is your "radio view" is pretty much north and not much else, due to terrain. You don't get the "peekaboo" view to the east that you get from areas on the beach.

At most POTA activations I do, I set up for FT8 first—largely to assess the band conditions (dB readings from stations—where are the selected bands open to?). I like to get my "required 10 logged QSOs" on FT8, before moving on to CW—once I know where the band is open and what conditions are like overall from this location.


Photo by Dave W7UUU



The FT8 waterfall this day was packed with stations from all over Europe—Germany, England, France, Ireland, Guernsey, Wales, Denmark, Holland, you name it. My view to the north over the pole was pretty clear, and my full-size 1/4-wave 20m vertical with two radials, was pulling EU in like crazy at –14 to –10 dB but alas, I just didn't have the conditions to work them. It was actually something of a slog to get my 11 FT8 QSOs in the log, before switching to CW.

My luck was fairly good there as well—I managed 7 Q's before the radio battery started to fade. I'd have liked to work a lot more, as CW is far and away my favorite mode. I seldom use SSB on a POTA activation unless conditions are really good. It just seems so inefficient for me much of the time, even with the IC-7300 and the resonant 20m antenna.

But in the end, I managed 17 QSOs for the effort in about 1.5 hours, with a nice picnic lunch with my best friend and ham buddy, Anne N7ANN.

We hope to get in a few more POTA activations before the summer is over. Fingers crossed….

-Dave W7UUU

POTA FROM 3,000 FEET

On Sunday August 3, eight members of the Radio Club of Tacoma got together for our monthly POTA activation. This month's destination was Mount Walker in the Olympic National Forest (US-4532), about an hour and a half drive from the clubhouse. The final mile or so was along a fairly well-maintained gravel forest road that winds up to the summit.

Mount Walker is the only eastward-facing summit in the Olympic Mountain range with a road to the top. There are two parking lots with ample space. We chose the north lot and set up on a scenic precipice overlooking the Hood Canal region—some 2,800 feet below us. Not that there was much to see at first: a heavy marine layer had rolled in overnight, so we were playing in the clouds for the first couple of hours.

Mike W7XH and club president Adam N2NCC were first to arrive. They got started in the north parking lot, working out of the back of Mike's truck. BJ KO7T, Mike W7MKE, Eric KK7EMG, Jessica KK7VHH, John N7TES, and Leah K7IPT showed up shortly after and began setting up antennas and portable tables so we could get on the air. Dave W7GEL rode his motorcycle up the mountain to join us and made a few QSOs as well.

We had four HF stations on the air and made contacts using CW, SSB, and of course FT8, across a couple of different bands. We even managed a dozen contacts on 2 meters, spanning from British Columbia down to northern California. Around 1 p.m., the marine layer finally lifted and we were rewarded with a sweeping view of the valley below.


Photo: BJ KO7T

As usual, there was plenty of learning while playing radio.

Next month's POTA activation will be at Manchester State Park—another beautiful and historic spot in our region. Everyone is welcome to come out and join the fun!

-Editor

Mike W7XH (at car) and President Adam W2NCC

Mike W7MKE and Eric KK7EMG work the FT8 station

Leah K7IPT works the 2m Yagi to Canada & California

Another stunning 2800 foot high vista

Assembling BJ KO7T's hex beam—how's that for a POTA antenna?!

BJ KO7T and Jessica KK7VHH working the SSB station

STRAY TOPICS OF INTEREST

Fun stuff for Hams to read!

W7UUU

Hidden Word Contest

This month's hidden word is **Arduino** (Uno model in this case) which is widely used in amateur radio devices to enhance or automate radio operations. Everything from custom controllers for antenna rotators, automatic antenna tuners, or for DDS VFO development—the Arduino is often there. Lots of digital projects also derive from the Arduino Uno include Morse keyers, fox hunt transmitters, repeater ID devices, beacons for WSPR, QRSS, APRS, and for Terminal Network Controllers (TNCs) for packet radio, and even automated weather stations. Interfacing can be via serial (to a computer), GPIO, or directly to radio I/O for digital communications. The programming has a learning curve: Arduinos program using C++ programming language but there are a great many resources on the web for those wanting to get started with one. What's really amazing is this powerful, versatile micro-computer platform comes at a price of around $27 for the standard Uno Rev3 model from the Arduino online store (as of July 2025). Find the hidden word, shoot me an email with the page number and where you found it, and I will mail you some pretty cool W7DK and QRZ stickers! *-Dave W7UUU*

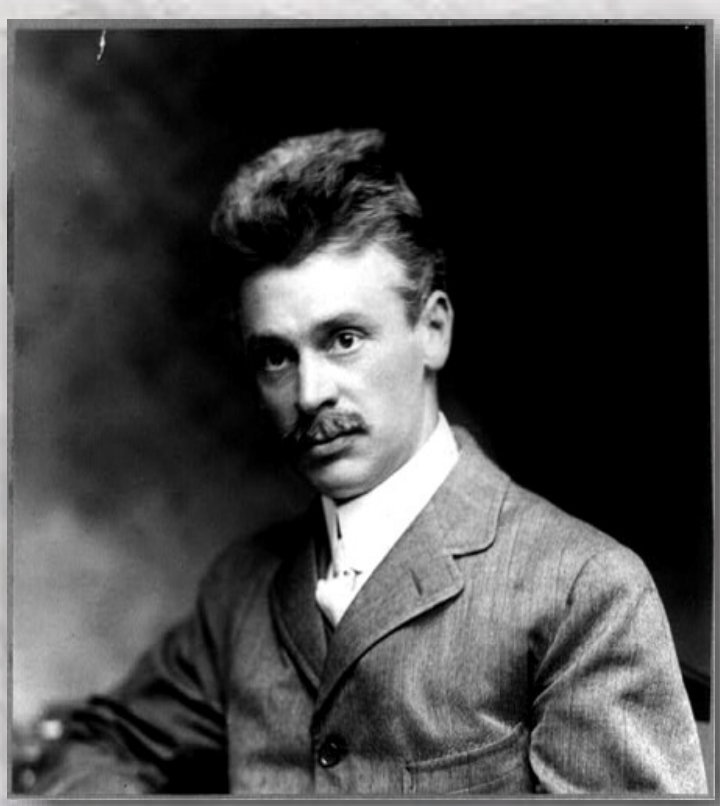
Hidden Object Contest

This month's hidden object is the same as the hidden word: The Arduino Uno—find this picture and tell me the page—and win STICKERS!

Famous Ham September Birthdays

Born September 2, 1869, Hiram Percy Maxim became a true radio pioneer and inventor. Along with the seldom-mentioned Clarence D. Tuska, Maxim co-founded the American Radio Relay League (ARRL) in 1914 to create a network of organized "relay stations" for relaying messages from the public via amateur radio. With his wild "Eraser Head" shock of hair and piercing eyes, he's pretty hard to miss in any old shot of early ARRL convention photo lineups. Happy 156th birthday, Hiram!

-Dave W7UUU



Hiram Percy Maxim ca. 1914—1AW/W1AW (SK)—photo: Library of Congress, Prints and Photographs Division

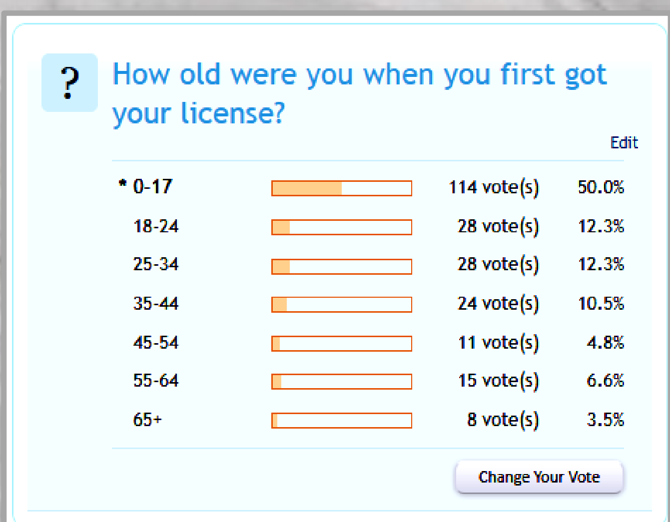
STRAY TOPICS OF INTEREST

Survey Center & QSL of the Month

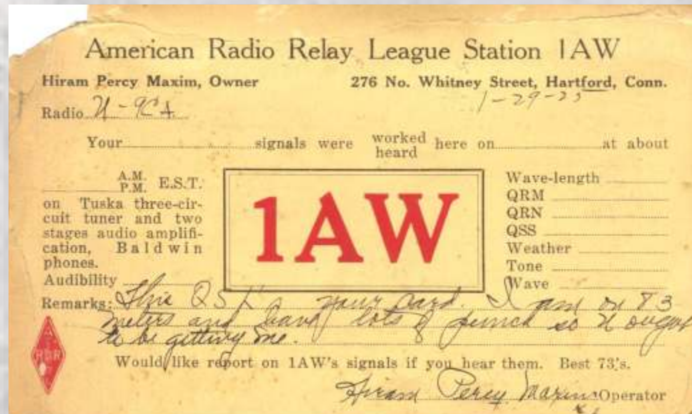
W7UUU

Survey Center!

This month's survey (from QRZ.com) dates back to August of 2023 and is entitled "How old were you when you first got your license?". From the many comments in the thread, most participants began their ham radio journeys in their youth, by far most often in their teens, with ages ranging from 11 to the late 20s (I was 13). Many recall the multi-step license structure of earlier decades, where passing a proficiency exam led to an operator's license, followed by a separate *station* license (a system that's long gone in the U.S.). The thread touches on international licensing practices, like India's requirement for parental consent under age 18. A common theme is nostalgia for a time when young hams were plentiful—something that changed in the 1990s as computers and the internet became dominant. Several commenters observed that today's newcomers are often older—tech-savvy adults rediscovering radio. Despite changing times, the shared sentiment is one of appreciation: whether young or old, getting licensed remains a meaningful and rewarding milestone. *-Dave W7UUU*



QSL Card of the Month



In relation to this being HPM's birthday month, I'm featuring his QSL card for his call 1AW (which of course later became W1AW, and ultimately the call sign of the ARRL station). Note his reference to a "Tuska three-circuit tuner" - this refers to ARRL co-founder Clarence Tuska who founded the Tuska Radio Company in 1920. The "three circuit tuner" most likely refers to his 1-tube *Superdyne* design which used three separate tuned coil circuits with variable capacitors to improve selectivity and signal strength. Note too how Maxim signs his card "Best 73's" - an expression that is considered taboo today, to not only make it plural, but adding a possessive apostrophe! Ye Gads! The station he worked on "83 meters" was George W. Bergman 9CA of Dwight, Illinois. Near as I can tell, this is his house below although it's now numbered for the cross-street of Lincoln, but at the corner of W. Chippewa which would have been house number 400. *-Dave W7UUU*

Since no shack photos came in this month (or in any month really—*no one has ever actually sent me one* LOL!) I thought I'd run this one: it's my WB7AWK shack from November, 2004—eight years before I became W7UUU. It was in a corner of the garage, and got really cold in winter and hot in summer. The main radio was a Kenwood TS-440SAT and I also had a Kenwood R-5000 general coverage receiver for shortwave (that's the radio on the right). For the old rigs I had a HW-16 with HG-10 VFO (that I eventually worked and confirmed all 50 states using). Top right was a 4-watt 40m homebrew transmitter (built in an old audio amplifier chassis) that I paired with a Drake 2B receiver for QRP CW fun in the late evenings. Right behind the laptop screen is a 40m regen receiver I built in the 80s. Below the HW-16 is a Heathkit HR-1680 but at the time, it didn't work and I never got around to troubleshooting it. The laptop ran WinXP and I used it only for logging and using QRZ.com to look up call signs. My sole HF antenna was a 150 foot random wire, 50 feet of which ran through the attic of the house. Despite the fact I kept much of this gear for years, the Kenwood rigs, the Conar Twins (on top on the left), the 2B receiver and homebrew transmitter and many of the other items in this photo all died 16 years later in my October 2020 shack fire. *-Dave W7UUU*

W7OS DOC SPIKE MUSEUM

Featured Gear from the Museum

Photos & Text by Dave W7UUU

THIS IS ANOTHER ONE OF THE AMAZING PIECES of radio history housed in the W7DK—W7OS Doctor Clifford J. "Doc" Spike Memorial Museum, located in the west room on the upper floor of the clubhouse. It's a pretty unassuming box—clearly a transmitter—but if not for a detailed sheet of notes tucked carefully inside the plywood cabinet, we'd likely have no idea what role it played in a very historical event: the 1936 Winter Olympics, held in Garmisch-Partenkirchen, Germany, from February 6 to 16.

That, of course, was just the opening act to the better-known Summer Games later that year, where Jesse Owens famously shattered barriers—and, in doing so, dealt a public blow to Adolf Hitler's dreams of Olympic superiority.

Built by three engineers from two major local AM radio stations—CBS affiliates KOL in Seattle and KVI in Tacoma—it was designed to relay live audio from the ski slopes of Mt. Rainier at the Paradise Lodge down to the two stations, 5400 feet below in the Puget Sound, for broadcast across much of the region. A feed was most assuredly sent over phone lines to CBS stations around the country. And what was the audio that mattered so much? It was the live broadcast of the time trials for the downhill ski competition in the upcoming 1936 Winter Olympics. These trials were held over most of January 1935, a full year and a month before the U.S. ski team would travel by sea to the big event.

The three broadcast engineers behind the transmitter—Herb Auckland W7AUK, Clyde Bond W7RB, and Jim Wallace W7DB—were *not* members of the Radio Club of Tacoma. How this transmitter came to be in the club's museum is a mystery we'll likely never solve.

The design is very straightforward: two #19 tubes are used in the low-level RF section, one as the crystal oscillator and the second as the driver. The final tube is a #31, good for about 2 watts of AM RF output. The final was amplitude modulated by a push-pull pair of #30 triodes. The frequency was crystal-controlled.

Therein lies another mystery. The large "Link Radio" crystal in the rig is cut for 1222.375 KHz—within the AM broadcast band, but in between standard broadcast channels. It's a big crystal. Link Radio (formerly the Fred M. Link Co.) specialized in AM broadcast and commercial radio crystals, and later, FM broadcast. Given the builders' background in AM broadcasting, it wouldn't be surprising if they chose an off-channel AM frequency for the relay transmitter.

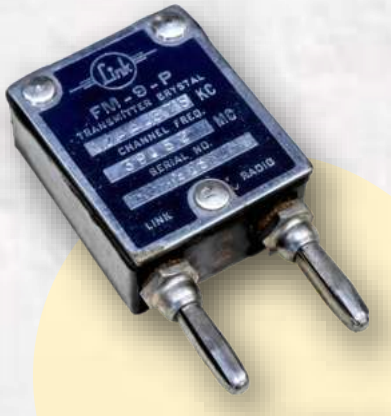
W70S DOC SPIKE MUSEUM

Featured Gear from the Museum

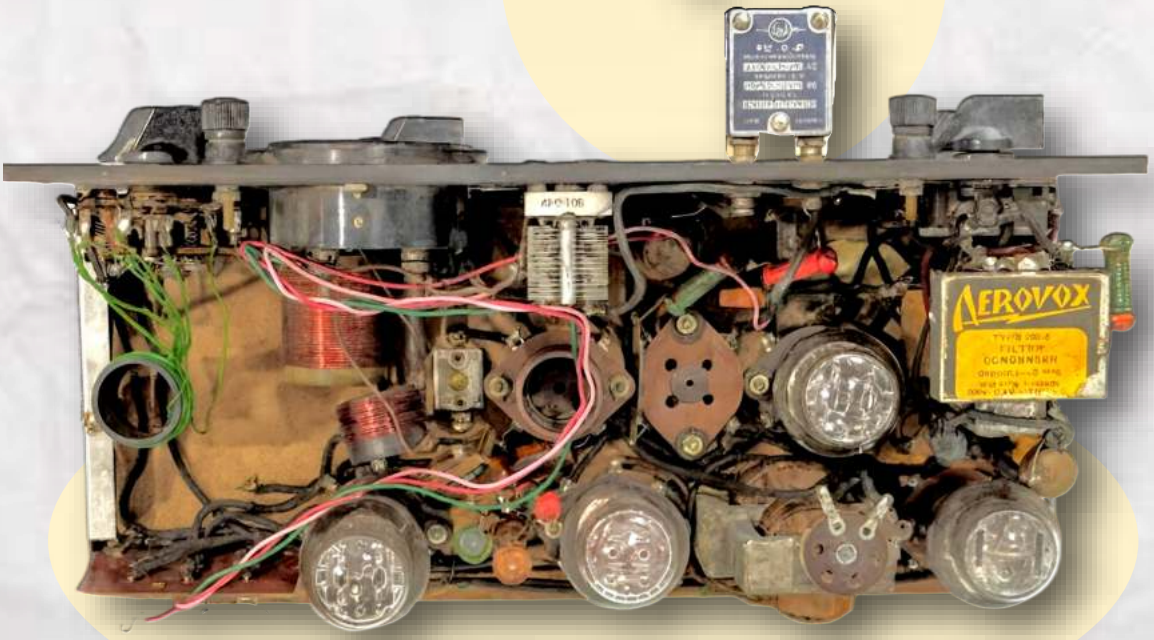
Photos & Text by Dave W7UUU

However, the design notes suggest something different: that the rig was actually set up to operate somewhere between 1800 KHz (the bottom of the 160-meter ham band) and 4000 KHz (the top of the 80-meter band). From an FCC and licensing standpoint, that seems more likely—and it certainly would have made for a more compact antenna.

I didn't have the chance to grid-dip the tuned circuits, but just eyeballing them, my gut says this is an 80-meter transmitter—not something set up for 1224 KHz. That Link Radio crystal may well just be a placeholder, there to fill the socket and look the part. Maybe one of us from the club will eventually spend a few minutes with a grid-dip meter and find out exactly where it resonates.



Crystal *possibly* used was for 1224.375 KHz… in the AM broadcast band (no record exists of what frequency was used)—but this crystal was found in-situ in the transmitter XTAL socket
Photos by Dave W7UUU



Topside view of the transmitter chassis. The antenna tuning section is at the left, with the green wires being taps off the tank coil. In the center, one tube is missing: the transmitter used push-pull audio for the modulator. Somewhere along the line over the years, one of the type-45 direct-heated triodes got robbed for some other use. The modulation transformer can be seen below the remaining modulator tube.
From the W7DK collection—Photo by Dave W7UUU

As for the antenna, the notes describe a dipole laid out directly on the snow, with the transmitter centered between the legs. All of the tubes are 2-volt filament types, so this was clearly meant for battery-only operation. There's no indication of how many hours it ran during the time trials, but no matter how you slice it, a ton of batteries must have been consumed.

Despite the lingering mystery of how this transmitter wound up in our museum, the fact remains—it's there. And what a really amazing piece of radio history it is.

-Dave W7UUU

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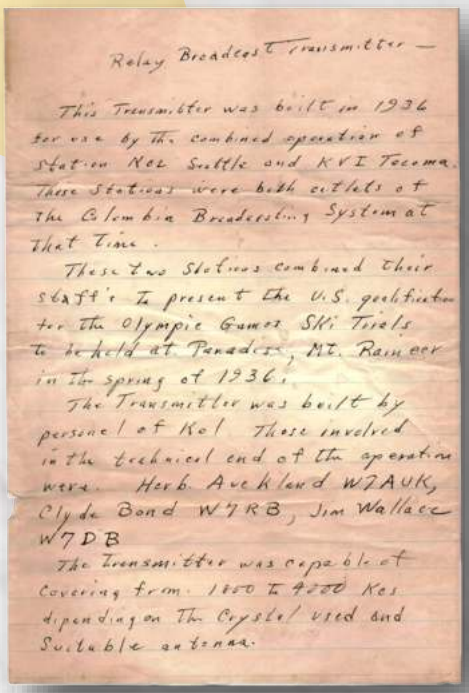
W70S DOC SPIKE MUSEUM

Featured Gear from the Museum



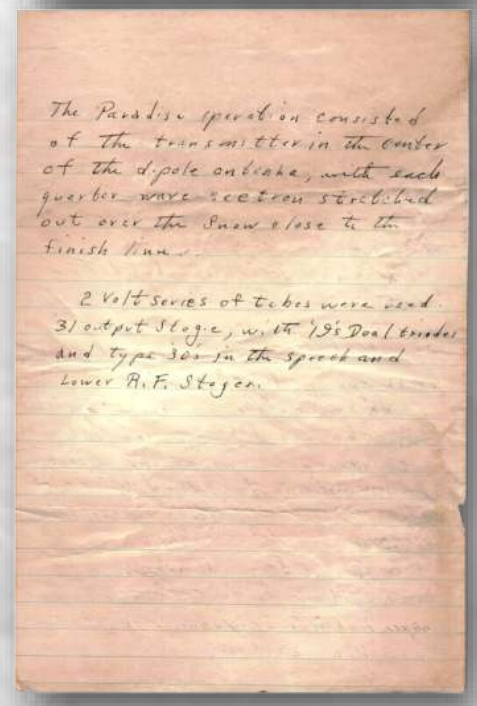
Relay Broadcast Transmitter —

This Transmitter was built in 1936 for use by the combined operation of Station KOL Seattle and KVI Tacoma. These Stations were both outlets of the Columbia Broadcasting System at that time.

These two Stations combined their staff's to present the U.S. qualification for the Olympic Games Ski Trials to be held at Paradise, Mt. Rainier in the spring of 1936.

The Transmitter was built by personnel of KOL. These involved in the technical end of the operation were. Herb Aukland W7AUK, Clyde Bond W7RB, Jim Wallace W7DB

The Transmitter was capable of covering from 1800 to 4000 Kcs depending on the Crystal used and Suitable antenna.



The Paradise operation consisted of the transmitter in the center of the dipole antenna, with each quarter wave section stretched out over the snow close to the finish line.

2 Volt series of tubes were used. 31 output stage, with 19s Dual triodes and type 30s in the speech and Lower R.F. Stages.

Notes found inside the transmitter (transcribed on the right). Note that the date is not correct. See text for details. Photos by Dave W7UUU

Transcription of the notes: Relay Broadcast Transmitter

"This transmitter was built in 1936 for use by the combined operation of station KOL Seattle and KVI Tacoma. These stations were both outlets of The Columbia Broadcasting System [*CBS*] at that time.

These two stations combined their staff's to present the U.S. qualification for The Olympic Games Ski Trials to be held at Paradise, Mt. Rainier in the spring of 1936. [*errata: the ski trials on Mt. Rainier were actually held in January 1935. The 1936 Winter Olympics were held from February 6 to 16 in Garmisch-Partenkirchen, Germany*].

The transmitter was built by personnel of KOL. Those involved in the technical end of the operation were Herb Aukland W7AUK, Clyde Bond W7RB, Jim Wallace W7DB.

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2 volt series of tubes were used. 31 output stage, with 19s dual triodes and type 30s in the speech and lower R.F. stages". ■ *-editor*

Right: *Paradise Lodge on Mt. Rainier, at the location of the 1935 time trials, at about the same time. I could not find any public domain photos of the actual time trials but this gives you an idea... the snow is so deep the entire front of the lodge is buried. The entrances are 15 feet below where the roof ends. Photo: Tacoma Public Library Archive*

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ANTENNA TIME

A Cautionary Tale

Cornelius DO1FER

LIGHTNING NEVER STRIKES INDOORS… RIGHT?

A cautionary tale of a high-gain antenna, a passing storm, and a lesson learned the hard way.

I've had my share of oddball technical mysteries, but this one still sticks with me. A few weeks ago, I fired up my handheld and tried to hit a local repeater — nothing. No kerchunk, no courtesy tone, no joy. Tried another. Same thing. Normally these machines respond to a whisper, but this time it was like I'd vanished off the air.

I'd been using a Diamond RH-770 high-gain whip, positioned on my window sill and connected to my handheld via a short feedline to a homemade BNC switching box — a little black plastic case I'd put together a few years ago. It's not fancy, but it's worked well and never given me a reason to upgrade. A metal enclosure might be quieter, but the local noise level has never been bad enough to justify the extra effort.

That antenna and switch box had seen plenty of use. With the help of the local repeater network, I've crossed much of Germany from my modest setup, and in the past, signals were clean and reliable. But this time… nothing. Just *silence*.

I didn't think much of it at first. It was summertime — plenty of construction in the area, and sometimes repeaters go off-air for maintenance. Still, something didn't feel right. I double-checked my coax and swapped in a small indoor quad antenna. Immediately, things came alive again. Signals were weaker, sure — but repeaters opened, traffic came in, and the world returned.

That confirmed it: the RH-770 had gone deaf.

I knew this antenna could be sensitive. I'd overloaded one in the past by pushing more power than the manual allowed. But this time, I hadn't even been on the air. In fact, I hadn't used VHF/UHF for days.

So what happened?

Then I remembered the storm.

It wasn't a big one — just one of those brief flashes in the sky that come and go without warning. I'd unplugged the antenna as a precaution, stretched it out by the window, and left it disconnected. I thought that was enough. Apparently *not*.

I started searching for answers. Most sources talked about outdoor antennas and grounding. But mine was indoors. *Unplugged*. Still, it had clearly suffered damage. It wasn't until I came across a few obscure online discussions — including one about basement heating systems and sensor failures — that I began to see the pattern.

Modern gear, especially compact high-gain antennas and SDRs, is very sensitive. A nearby lightning strike, even without a direct hit, can unleash a burst of electromagnetic energy strong enough to induce voltage in nearby conductors — like a whip antenna, even if it's not connected to anything. In rare cases, that energy is enough to fry sensitive components.

AI-based search finally gave me the most satisfying (and unsettling) explanation: even indoor antennas and disconnected gear aren't always safe from nature's electromagnetic outbursts. It's not common, but it happens — and it happened to me.

ANTENNA TIME

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Since then, I've considered moving to a metal enclosure for the BNC switch box, bonding it properly to reduce noise and improve shielding. But honestly, my noise floor here has never been bad, and I'm not chasing perfection. Some operators want it all to be super clean and lab-grade — that's fine, but not always necessary.

For those curious about my setup or conditions in my part of Germany, you can actually listen in yourself. Try this WebSDR operated near PTB Braunschweig. It's not always online, and there won't be many surprises — but you'll get a sense of the local airwaves: [LINK]

That link points to their SSTV image port — an interesting window into the European scene, sometimes even relaying images from Australia via repeater linkups. When it's online, follow the "Funk & Technik / OpenWebRX - SDR" path and take a listen.

As for my future plans, I had been working on adding another SDR to the shack. That project's on ice for now — I had to buy a new computer, and with the latest Linux Mint release, the GQRX software I rely on is having trouble with the updated Qt libraries. The issue is known, but there's no fix yet. If any fellow Linux users out there have suggestions for good SDR software that works with current Mint builds, I'm all ears.

So, what's the takeaway from all this?

Even if you're *careful* — even if you unplug your gear and stow your antennas indoors — lightning still has a way of reminding you who's in charge. In our ever-smaller, ever-more-sensitive radio world, it only takes one surge, one storm, one unlucky arc… and suddenly your reliable old antenna is nothing but a silent stick of plastic and metal.

-Cornelius DO1FER, Guest Contributor
Braunschweig, Germany

COOL GEAR!

Interesting Bits of Gear Any Ham Can Use

By W7UUU

THIS MONTH'S COOL GEAR COLUMN ISN'T ACTUALLY about a piece of ham gear—but I consider it essential in my shack, and you just might, too. What is it, you ask? It's a small but powerful rechargeable desk fan with surprising airflow for its size. "It's *cool* gear"!

Now, I'll admit–my shack is fully air-conditioned. But with electricity prices being what they are these days, every little bit helps. This summer, I've been much more mindful about how often I run the AC, and how low I set it, especially on those too-frequent 80s to 90 -degree days.

I've found that 68 to 70 degrees is the sweet spot for keeping the room comfortable. But when I'm operating—especially during a contest—I really like having a bit of that cooler air directed right at me.

I tried a few of the usual mini desk fans we've all got collecting dust in a closet or out in the garage. But they all suffer from the same two issues: they're too bulky, and they require a nearby 120V outlet. That was a dealbreaker for me.

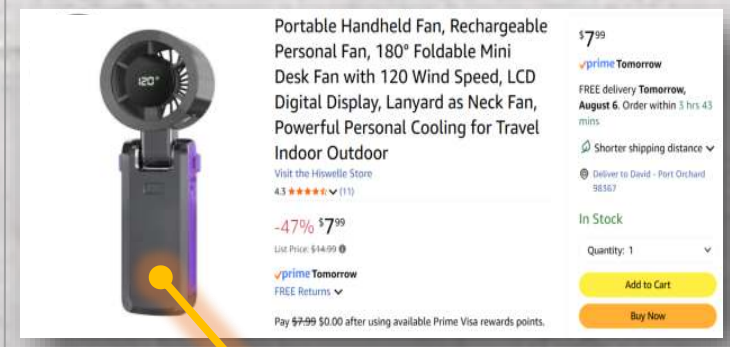
Then last month, I stumbled on this little gem: an $8 rechargeable fan on Amazon that's compact, has a wide speed range, and really moves air exactly where you want it. You can dial it in to the "just right" setting and forget it's even there.

The best part? It's ultra-portable—about the size of my Putikeeg straight key (the one on the left in the shack photo). I can move it from one operating position to another in seconds, without fussing with outlets or cords. On the "30" setting, I get over 10 hours on a single charge from the 3800mAh battery. Even cranked up to the "120" max setting, it'll run for more than three hours. Recharging is easy with a standard USB-C cable (which they include).

I've even found it handy on the workbench for blowing solder fumes away while I'm tinkering. And for portable use, it comes with a neck lanyard—perfect for walking around the Xenia Hamvention while keeping your face cool!

Every shack should have one of these. At $8, it's a no-brainer. Click the Amazon image below to check it out (and as always, I have zero affiliation—no sponsorships, no paid endorsements, just sharing what works in my own shack).

—Dave W7UUU



In operation at the W7UUU Main Operating Position

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STRAY TOPICS OF INTEREST:

Top Ten & Hamfests

Dave W7UUU

10 Top Recommendations for 2025 Contests

This is just my own list of the top-10 ham radio contesting events for 2025… we're quickly approaching the beginning of the ham radio contest season, when all the big ones start happening. These are ***my*** top-ten faves (not in a particular order). And if you HATE contesting, please just scroll the page! *-Dave W7UUU*

1	CQ WWDX CW & SSB
2	NAQP CW & SSB
3	Stew Perry Top-band 160m
4	ARRL 160m CW contest
5	CQ 160m CW & SSB
6	WAQP "Salmon Run"
7	Bigfoot Appreciation Day
8	CQ WPX CW and SSB
9	ARRL Sweeps SSB
10	7th Area QSO Party

Upcoming Ham Fests in the Area

Data published with permission from Lynn at N7CFO.com

September 6. Star/GMRS Swapmeet. Star Riverwalk Park, 979 S. Main St. Star ID. https://docs.google.com/forms/d/e/1FAIpQLSfGKLuWh8T9Y6FpXiDPgX6lZHrFlzzH64WuVyVXGXWD6AFgQg/viewform?pli=1

September 8-12 2025 GNU Radio Conference. Everett, WA. https://www.gnuradio.org/.

September 13th Zero Retries Digital Conference. Everett, Washington. *This is an ARRL Sanctioned Event.* *Flyer in PDF.* *Registration Form.* *7/3 Press Release.*

October 5. Delta Com Fest, Tsawwassen, BC. https://hambone.ca/rac/events/detail.php?event_ID=2434

October 10 & 11. Pacific Northwest VHF Society Conference. http://www.pnwvhfs.org/

October 11. Kitsap County ARC Hamfest. Bremerton, WA. https://kcarc.org/hamfest/

October 18. Swaptoberfest. Rickreall, OR. www.swaptoberfest.com Flyer in PDF.

Radio Club of Tacoma Ham Fair 1970

HAM TECH 101

By Jim AF5NP

Useful tech info for newer hams and old

About HF Ham Gear Brands for Beginners

A DISCUSSION OF RADIO BRANDS *for beginners*

This column is reprinted with permission of AF5NP from his blog www.NEWHAMS.info

By Jim Peisker, AF5NP

Any ham new or old has many choices for radios and radio gear available. We don't want to tell radio amateurs what to buy or not to buy but will try to give some guidance here.

The modern natural progression for new hams today is to start with a handheld VHF/UHF transceiver, then move on to a mobile VHF /UHF unit, then a full-on desktop HF rig. These all have different characteristics which must be considered. So the first question is what type of radio are we buying?

Beyond the basic type there are several factors in selecting a radio brand. It usually comes down to the buyer's top three or four priorities from this list of characteristics:

- Features—Functionality
- Performance
- Quality
- Reliability
- Durability
- Ease of use/programmability
- Memory capacity
- Familiarity
- Style/Appearance
- Portability
- Price

Unless you are looking for a specialty radio (i.e., low-power portable CW operation), size isn't much of a factor these days as within a general family all radios have similar weights and dimensions.

YAESU

From this list the top consideration should be features and functionality (what it does, exactly) as that is most relevant. Say you want a dual-band FM HT to work the local repeaters or for EmComm deployment. You have more than a dozen choices available.

Refining further by features for things like APRS, power levels, battery type, weather resistance, and other features will narrow your selection, but you still have many to choose from. At this point you're likely to think about price and here is where things get fuzzy. You could choose the nice name brand $350 HT but there's actually several that do mostly the same things for under around $50!

Sounds like a slam dunk decision to go with the cheaper one, but you should carefully consider this. Beyond functionality and features, other important characteristics may suffer. With that low price you often get ques-

ICOM

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tionable performance, low quality, poor reliability, and lack of durability, not to mention fewer features. As the saying goes, you get what you pay for.

KENWOOD

Now that doesn't mean you should never buy a cheap radio, but you should really give it careful thought before you do.

Some HTs are so inexpensive they can be considered disposable. If you lose or break one, you're out only $30-50. This may be a good candidate for backup or one you might take boating or on a camping trip or loan to a prospective ham to listen on. You can find favorable reviews on some of these cheap radios (mainly HTs and mobile rigs).

But you will also find many negative reviews on the same radios, mainly for reliability and durability. Some of the really cheap Chinese radios also have poor RF characteristics, possibly lack FCC certification, and may not be strictly legal for use in the USA. So it's a crap shoot if you do want to buy a cheap radio. Make sure above all you only purchase a radio that is clearly marked as having FCC acceptance.

There are five well-known name brands that have reputations for high quality and reliability: Icom, Kenwood, Elecraft, Flex Radio and Yaesu for desktop radio equipment. (HT radios are predominantly from Icom and Yaesu). ALL of these will cost considerably more but will give many

ELECRAFT

years of service and are worth repairing should one fail or be broken. The "big three" Icom Yaesu and Kenwood originate in Japan, but have service centers all over the U.S. Elecraft and Flex Radio are made in the U.S. with central service centers at the factory.

American companies Elecraft and FlexRadio make some pretty awesome HF rigs but they do not try to compete in the hand-held (HT) or mobile radio segments. They only produce large desktop rigs that are considered extreme performers.

Pre-owned equipment will be less expensive than new, of course, but the price between used reputable brands vs. unreputable will be proportional. With used radios you also can find older HF brands with excellent reputations.

The author's own sad experience with an off-brand mobile radio has led him to this topic and a determination to never again buy a low-end cheap transceiver. He purchased a well-known low-end cross-band mobile rig that worked for several months.

But after that, people could no longer hear him when he was talking into the mic. The watt meter reported a full 50W output and the repeater was keying reliably. Supposing it to be a microphone failure, he replaced the mic but the problem persisted.

Evidently something failed in the modulation circuitry so that it barely deviates (how FM works); if he screams

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into the mic a little sound comes through the radio. The factory in China would repair it but they require a very specific shipping method that costs almost what the radio is worth. No repair facilities for this brand outside of China and no schematics available for troubleshooting; it's now a paperweight. That's the moral of this story: you truly get what you pay for just as in so many other aspects of life.

This author's recommendation is to buy one of the Big 5 (the brands mentioned earlier in this article), or at the bare minimum, thoroughly check reviews specific to the model you're considering before buying low-cost radios. If you go off-brand or low-end, make sure that domestic repair is available.

Generally speaking, most of the really low-end radios from the big Chinese manufacturers such as Baofeng, Wouxun, Tytera, and many others simply are considered to be throw-away radios for all but the simplest of problems.

Do your own research on radio brands before jumping in. There are many resources on the web, including the radios review section at eHam.net—one of the most comprehensive collections of reviews out there (albeit not without its detractors and occasional oddball review).

You can also post on QRZ.com in the Amateur Radio Equipment Reviews sub-forum and usually get helpful input on radio models that you might be considering. Nowhere near as elaborate as the eHam reviews, but it's a discussion forum so you can get good input from other users.

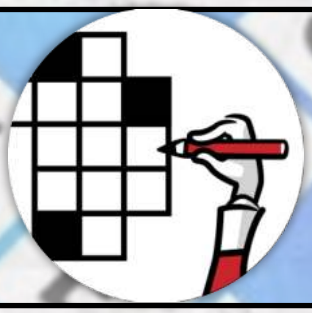
73, Jim Peisker, AF5NP
(*with additional input from Dave W7UUU*)

For some new hams, a Ham Fest may seem the ideal place to find a recent model used HF radio at a great price. And that surely can *be the case! But buying here is fraught with two significant risks: cash deal only to a stranger and no way to test before buying. Unless you can bring an expert ham with you, this is not recommended for new hams.* ■ *-editor*

Sea-Pac Ham Fest—Photo by Dave W7UUU

FUN AND GAMES!

Crosswords, Word Search, etc.



"Antenna Word Search" Print this page to play!

M	R	E	A	C	T	A	N	C	E	V	O	Y	I	I	H	D
I	B	I	J	C	E	Y	V	H	N	P	T	G	O	S	O	I
I	D	I	P	O	L	E	L	C	B	V	A	F	I	T	G	R
A	A	A	Y	G	G	R	A	O	A	Y	I	D	M	W	N	E
M	O	Q	U	U	M	B	C	M	L	L	Q	S	P	D	I	C
C	L	A	D	D	E	R	E	X	U	S	C	T	E	O	D	T
Y	U	G	A	M	M	A	Y	V	N	Y	Q	B	D	H	N	O
B	S	S	U	R	Z	A	T	L	E	D	R	C	A	H	A	R
N	L	U	H	V	O	S	A	E	S	R	P	M	N	G	T	S
D	A	F	J	C	M	T	M	O	D	N	A	R	C	O	S	V
E	I	I	V	I	R	B	A	D	T	X	Z	G	E	I	D	S
T	D	Y	T	I	A	A	A	T	E	A	F	P	E	G	F	T
A	A	H	E	J	N	Z	F	H	O	Y	Z	B	A	A	Z	E
I	R	E	A	M	V	T	S	T	U	R	M	B	Z	U	K	P
D	R	B	F	I	O	N	O	S	P	H	E	R	E	Q	K	P
A	S	B	N	H	L	N	R	E	S	O	N	A	N	C	E	I
R	P	C	F	H	W	E	R	D	N	A	K	F	Z	A	T	R

Impedance
Radiate
Quagi
Radials
VNA
Gamma
Reactance
Random
Cushcraft
Beverage
Standing
Director
Smith
Ladder
Andrew
Delta
EFHW
Yagi
ugly
Balun
Rotator
Dish
Dipole
ionosphere
Hex
NVIS
Resonance
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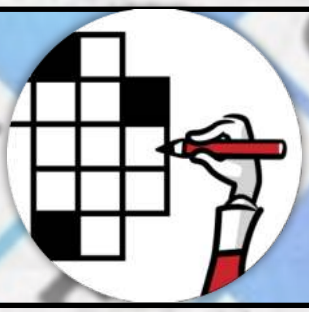
FUN AND GAMES!

Crosswords, Word Search, etc.



Answer Key… but don't cheat!

M	R	E	A	C	T	A	N	C	E	V	O	Y	I	I	H	D
I	B	I	J	C	E	Y	V	H	N	P	T	G	O	S	O	I
I	D	I	P	O	L	E	L	C	B	V	A	F	I	T	G	R
A	A	A	Y	G	G	R	A	O	A	Y	I	D	M	W	N	E
M	O	Q	U	U	M	B	C	M	L	L	Q	S	P	D	I	C
C	L	A	D	D	E	R	E	X	U	S	C	T	E	O	D	T
Y	U	G	A	M	M	A	Y	V	N	Y	Q	B	D	H	N	O
B	S	S	U	R	Z	A	T	L	E	D	R	C	A	H	A	R
N	L	U	H	V	O	S	A	E	S	R	P	M	N	G	T	S
D	A	F	J	C	M	T	M	O	D	N	A	R	C	O	S	V
E	I	I	V	I	R	B	A	D	T	X	Z	G	E	I	D	S
T	D	Y	T	I	A	A	A	T	E	A	F	P	E	G	F	T
A	A	H	E	J	N	Z	F	H	O	Y	Z	B	A	A	Z	E
I	R	E	A	M	V	T	S	T	U	R	M	B	Z	U	K	P
D	R	B	F	I	O	N	O	S	P	H	E	R	E	Q	K	P
A	S	B	N	H	L	N	R	E	S	O	N	A	N	C	E	I
R	P	C	F	H	W	E	R	D	N	A	K	F	Z	A	T	R

About this Publication

The Logger's Bark is the official publication of the Radio Club of Tacoma and is published by RCT, PO Box 11188, Tacoma, WA 98411. The Radio Club of Tacoma is a non-profit corporation as defined by law. All proceeds will be used exclusively for charitable and educational purposes. The Radio Club of Tacoma's Club House is located at 1249 Washington St, Tacoma, WA 98405, phone: 253-759-2040.

Emailing Officers

To contact any club officer, simply send an email to their call sign @W7DK.org

Contributions of Articles & photos

We WELCOME contributions of articles, guest editorials, blurbs, Hints-and-Kinks, shack photos, QSL cards, memorable contacts, anything of interest to your fellow members. Submit your materials via email to: loggersbark@gmail.com or via US mail to PO Box 11188, Tacoma, WA 98411 Nichrome

Radio Club of Tacoma Repeaters

Central Tacoma 2m:	**147.28 + PL Tone 103.5**
Central Tacoma 70cm:	**440.625 + PL Tone 103.5**
Crawford Mountain:	**147.380 + PL Tone 103.5**
North Tacoma:	**145.21 - PL Tone 141.3**

The Loggers Bark ***does not*** accept AI / ChatGPT submissions

Membership Information

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- Fees are applicable for the calendar year: January to December
- Lifetime membership is 20 times the yearly fee you are eligible for. Lifetime memberships are calculated based on the FULL and ASSOCIATE rates.
- Visit www.w7dk.org For the latest and most current information on events and activities

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Have a submission for our next issue?

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