*ANTIQUE RADIO COLLECTORS & HISTORIANS (ARCH) OF GREATER ST. LOUIS*

# ARCH CLUB NEWSLETTER

NOVEMBER 2025

## Special points of interest:


- Meeting Notes, Old & New Business Page #1
- Event Announcements Page #2
- Radio News Page #3
- August Show & Tell Page #6
- Raffle Table Page #13
- Jackie Gleason Page #14
- Novelty Radios Page #17
- Did You Know? & Question and Answer Page #21


*Join us for our next meeting:*

**Tuesday December 9th, 2025 at 7:30 PM**

*Kirkwood Community Center*
111 S Geyer Road,
Saint Louis, MO
63122

## Meeting Notes:

Meeting was held in our "old" room, on the 2nd floor, of Kirkwood Community Center The room is nicer for sure but is smaller. The room is now known as "Community Room #1". The room notably has a sink, microwave, and a small refrigerator.

26 Members were present at the ARCH November Meeting! One of the largest member turnouts this year! Cookies brought in by an ARCH member were again enjoyed by everyone.

Bill Petty spoke about his friend's radio collection. (Discussed within October newsletter.) It was stated club members will be notified when we can visit his friend's warehouse. (Will occur sometime after Christmas.)

## Old & New Business

The Annual Halloween Hamfest was a slight disappointment. Member's stated there was about 3/4th the number of tables than past years. The breakfast everyone loved was not served. It was discussed next year may be better. It is simply unknown, to the extent, how the recent remodel of the Community Center impacted the event.

**Christmas (December) Meeting:** Club members are asked to bring in a side dish for the December Meeting. There will be no Show & Tell. Bring in a wrapped gift if you would like to partake in the *Rob Your Neighbor* gift exchange. The gift should be somewhat radio related. If you need to buy something, the gift should not exceed $20.

Officer Election for 2026 will be occurring at the Christmas meeting.
Volunteer to support the club!

**Financial Report:** The club is currently doing okay financially. Returning to Kirkwood has reduce cost for the club.

*ARCH Members are asked to pay 2025 and/or 2026 club dues. $20.00 per calendar year. If you never attend, please consider still paying to promote the club. Checks can be sent to Mr. Roger Cole. Make checks payable to "ARCH". (Address on back of this newsletter.)*

## Event Announcements (Ham Fest & Club Events)

### Winterfest Hamfest (36th year!)




January 23-24, 2026
Collinsville Gateway Center
One Gateway Drive
Collinsville, IL 62234
8:00 AM—1:00 PM
https://wintergest.slsrc.org

This is a 2-day event!
23 January—The W9DYV Symposium & Winterfest Mesh social & dinner.
24 January—The Hamfest main event! Doors open at 8:00 AM.
Forums and Speakers will occur throughout the day.

**NOTE: The ARCH Club will reserve 1 or 2 tables for club members to sell, display, or trade personally owned radio related items.**

### ARCH Officer Elections

ARCH Radio Club officer positions have a duration of one-year. Officers are voted for next year during the annual ARCH Christmas Dinner. (NOTE: It is hard for those elected to vocalize an audible rejection while eating.) If you would like to be more involved or assist with promoting the club, please consider an officer position within the club.






## Local and National Radio News—Kind of….

### *Anniversary of Saint Louis first commercial radio broadcast.*

On Nov. 2, 1920, William E. Woods notched a historic first: He made St. Louis' first radio broadcast, announcing election results from his home on De Tonty Street out to the airwaves.

From there, Lester A. Benson, Woods' friend and fellow St. Louis radio enthusiast, picked up the broadcast and beamed it out over a 2,000-mile radius. The bulletins reached Little Rock, Arkansas; Ellendale, North Dakota; and "other outside towns," as the St. Louis Post-Dispatch reported the next day.

The news also reached Woods' wife in her St. Louis hospital bed. "A wireless telephone receiving station has been set up in her room so that she will hear the election returns," the Post-Dispatch reported on Election Day.

The technology was so novel that the paper struggled to find the vocabulary to describe it. It only once deployed the word "radio" in its report, calling Woods a "radio expert," even as it described his device as a "wireless telegraph sending apparatus." (Proving that everything old is new again, its headline proclaimed "Wireless Telephone to Carry Vote Returns.")

"You've got to remember how much of a treat and an oddity it was to hear voices coming over the airwaves," Frank Absher, executive director of the St. Louis Media History Foundation, explained on St. Louis on the Air. "Back then, it didn't happen. For people to hear this, in earphones or anything else, was such a revelation. It was a form of communication that had never been done before." Before broadcasts like Woods' on election night, radios were used solely to transmit Morse code.

The year 1920 proved a watershed year for the new technology, Absher said. A radio station in Detroit had recently started playing music over the airwaves. And St. Louis' election result broadcast was one of a few that night, with enthusiasts taking to their devices in cities including Detroit and Buffalo. (Pittsburgh station KDKA grabbed all the glory, Absher said, thanks to the publicity managers at Westinghouse, who made sure the station was credited for its broadcast.)

"They were all being done by people experimenting," he said of the 1920 broadcasts.

But after that night, things took off quickly. WEW signed on the air with its first regular broadcast on April 21, 1921. KST followed just 11 months later, Absher said.

CONTINUED….

## Local and National Radio News—Kind of…. (continued)

"They weren't radio stations like we think of today," he added. "They would come on the air and they'd be on for three or four hours and then they'd sign off, because they didn't have anything else to broadcast."

In November 1920, though, the technology seemed new and wonderful. And for no one more so than the ailing Dorothy Crabb Woods. She was a suffragist, her grandson Dr. William Woods Batterson recalled to St. Louis on the Air, and thanks in part to her work, women had the right to vote in the 1920 presidential election for the first time.

She was herself a radio enthusiast. Batterson recalled that she met her husband by chatting in Morse code. "When they got married, they called each other Dot and Dash," he said.

That election night, Dorothy Crabb Woods was likely in the hospital after an asthma attack, her grandson recalled. She suffered from them frequently.



Unfortunately for the hospital patient, the news relayed by that radio bulletin wasn't good. Warren G. Harding was declared the winner that night, and the Woodses were staunch Democrats, Batterson recalled. They likely backed Harding's opponent.

Source:
"STL on the Air via National Public Radio"

## Local and National Radio News—Kind of…. (continued)

*"So this is how KDHX ends — not with a bang but with dead air?*

After a month of radio silence on 88.1 FM, the community radio station's leaders announced this week that the 38-year old station "has ceased operations."

Former DJs and volunteers announced Friday they will launch an online-only station from space at Lindenwood Park Place, the former Emmanuel Congregation church. A post on online blogging platform Substack from activist group LOVE of Community Radio STL — formerly the League of Volunteer Enthusiasts of KDHX — said the group hopes to launch its station in December.

KDHX 88.1 FM had been broadcasting music from its library since ending live programming in January, before the music ended abruptly in September.

Fans of the eclectic radio station will have to wait to hear anything from the online reincarnation promised by the board of Double Helix, the nonprofit corporation that owns the station's remaining assets.

"Double Helix plans to take time between now and the closing sale of the FM license to solicit advice and feedback for the next set of programs that we seek to bring to life in late 2026 or 2027," the statement reads. The nonprofit corporation continues to operate the station's building and studio in Grand Center, the statement says.




Source:
"STL National Public Radio"

# Show and Tell - November 2025 Club Meeting

## Joe Tauser — Various Portable Radios



Joe has recently increased his collection of portable personal radios. He brought a few to the meeting and briefly discussed each one. A 67.5 volt "B" battery is used in all. The A-Battery is comprised of D-cell batteries. How long did batteries usually last for radios of this era? D-Cells lasted approximately 4-5 hours. The "B" battery would last approx. 40 hours. Each radio is also turned on by opening the lid. The lid switch disconnects the negative of the batteries. During research and looking for repair hints, service guides stated that tweezers and reading glasses are a required tool for servicing these radios. Tweezers are not needed due to the small size but how tight the radio is populated with components. Many radios also contains a loop antenna built into the lid. The existence of the antenna embedded in the lid protects the antenna from damage but also, due to being a loop, provides directionality. Simply moving, turning, or not fully raising the lid, may impact or enhance signal reception.

## RCA BP-10— 1940 Model Year

This portable was announced during the 1939 World's fair for $19.95. ($19.95 is equivalent to ~$400.00 dollars today. Notably, a place on the front case housing is where an owner could write his/her initials onto the radio. (With the radio being so expensive, I am sure many owners took this action.)




This is a image of a PB-10 found online. Picture taken at the club meeting did not come out well. Note the square in the middle. This is where an owner's initials or name would be written (engraved) into the radio.



1940 Advertisement of the BP-10. Advertisement encourages owners to take the radio everywhere.
Editor's Note: I do not believe the radio could be easily heard over the sound of waves and people at the beech.

## Joe Tauser — Various Portable radios (Continued)

### RCA 54B2—1945 Model Year

This radio came out after World War 2. This is smaller than the BP-10. This radio works very well and has great sound. Improvements found in this radio over the prior RCA BP-10 consist of a mechanical arm on the door. The arm simply holds the lid open.

Joe spent a great amount of time working on this radio. An individual Joe knows 3-D printed a battery case to hold multiple batteries to form a custom "B" battery. Due to confined space, Joe utilized 12-volt batteries instead of the 9-volt batteries traditionally used. Small 12-volt batteries, such as the "A23", are used in garage door openers and some security systems. Joe decided to try the use of these 12-volt batteries. A 72 volt pack was created from six batteries. When the radio was turned on, the voltage dropped. 72 volts became 50 volts due to the continual ~10mA draw. The 12 volt batteries, Joe discussed, are really comprised of coin cell batteries stacked on top of each other. The high internal impedance (resistance) of the batteries caused the voltage drop.

1R5—1st Detector Oscillator
1T4—I.F.
1U5—2nd Detector A.F & AVC
3S4—Audio Output




Image shows the back open of the RCA 54B2. The B-Cell battery, not in the radio, would be physically and visually covering up the 4 tubes.

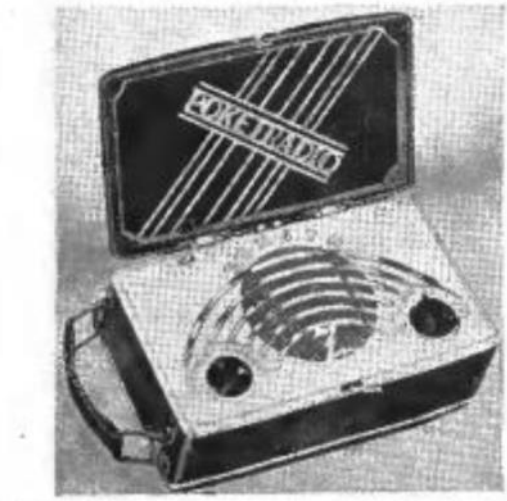


Stock image of the RCA 54B2.

## Joe Tauser — Various Portable radios (Continued)

### 1941 Zenith 4K600— aka "Poketradio"

This is the radio Joe brought to the ARCH October meeting. Joe stated, at the time, this radio is hard to find. This was found to be selected as the "set of the month" within a Radio Service Dealer publication. Joe recapped the radio. While recapping, he discovered all the carbon resistors were "spot on" their resistance values. (Shocking Discovery!)




**ZENITH 4K600** *Pocketradio* has 4 tubes, 3½-inch speaker, weighs 4 lbs. 9 oz. complete with batteries. Measures 3⅞ x 4¼ x 7⅞ inches. Radio turns on automatically when cover is opened. Encased in bakelite and leather. List price $19.95 f.o.b. factory. Zenith Radio Corp., Chicago, Ill.






## Joe Tauser — Various Portable radios (Continued)

### Emerson 508—1946 Model Year

$25.00 when new in 1946. (~$500.00 in 2025 dollars.) Two D-batteries are in parallel to provide required 1.5-volt filament voltage. This makes the filament battery last longer. (Possibly also due to carbon battery's internal resistance increasing while the battery is electrically depleted?)

Joe had two of these radios. The 2nd one, brought to the meeting, has an oscillator issue. Comically, the radio worked really well. While discussing the oscillator issue, the radio failed. Joe stated he will not be spending much time on this radio.




Stock image of the RCA 54B2 with its original box.



## Dave Kunkle — "Tales from his bench…"

Has been working on a 1959 RCA Stereo. While working on the stereo, thought he would bring in his vintage resistor file card sets.

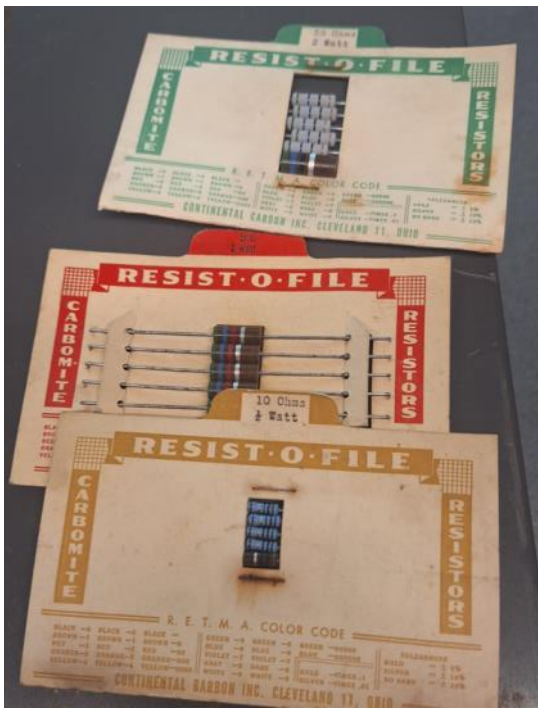
The Resist-O-File cabinet, on the right, is made by Continental Carbon Inc out of Cleveland Ohio. The second, on the left, was brought to the market by Motorola. Many individuals, as Dave stated, may have seen the resistor cards for sale online (E-Bay) and at radio related sales events Dave stated he almost never sees the associated filing cabinets for sale. While Dave does not utilize the old carbon resistors with his restorations, he does routinely use the developed filing system. Dave explained he simply re-populates the internal cards with new resistors. (The cards open and reveal resistors stacked inside.) The positive aspects of using this system permits Dave to rapidly acquire a specific value of resistor. Notably, the cards are also color coded with respect to the wattage of the resistor. (1/2 watt, 1 watt, and 2-watt). These cabinets are equivalent in size to Dewey Decimal library card cabinets.

Note: Acquiring proper value of components quickly greatly speeds up any restoration!
(And also reduces stress!)









## Steve Gropp — 1923 German Crystal Radio—Atlantik I

Steve brought in a crystal radio. (The club rarely sees a crystal radio brought in.) Crystal based radio receivers, while simple, are credited with bringing broadcast radio to the general public. Crystal radio's get their name from their most important component… the crystal detector.

Steve obtained this receiver, and it's matching headset, from E-Bay. He believes, from documentation, this receiver was sold as a kit. In the 1920s and earlier, a great deal of research was going into crystal based receivers. Different naturally occurring minerals were being evaluated to improve the ability to receive signals. Research into different minerals slowed greatly with the development of vacuum tubes. Had vacuum tubes not been invented, Steve believes crystal based radios would have had been greatly advanced. The advancement and study of crystals slowed greatly when radio tubes were created. Steve explained that it is possible LED's and transistors would have been discovered sooner had crystals been researched more. He is unsure if the enclosed crystal detector, black cylinder on the top, is galena or carborundum (silicon carbide). The two red knobs permit the user to move/probe at different locations on the face of the crystal.

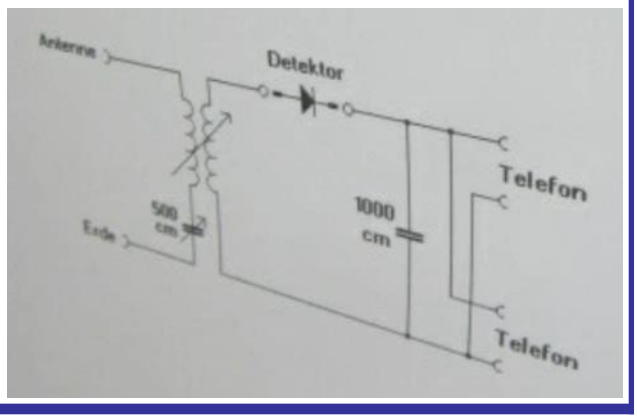



The documentation of this radio is entirely in German. Taking a picture of the documentation and submitting to an Artificial Intelligence (AI) website resulted with a translation into English.

Notably, at the end of his presentation, Steve stated that in Germany an individual had to buy a license to use a radio. The ability to receive a radio signal cost the listener $$!

Editor's Note: Many naturally occurring crystals have similar electrical properties as a diode. Some better than others.

Schematic of receiver



## Carl Kleinsorge— 1940s Military AN/ARC 5 Transmitter

Carl introduced this WW-II era transmitter by explaining this was part of a set comprising both a receiver and a transmitter. This transmitter was made by Stromberg-Carlson for the Army (A) and Navy (N). This transmitter was built for the Navy. The name "AN/ARC-5" designation represents the 5th design of an Army-Navy Airborne electronic device for Radio Communication equipment.

Carl has the matching receiver. Did not bring it in because it is the heaviest of the two units. Found this radio at an auction in South Saint Louis. It, was never used, and still in the original box! While crystal controlled, an eye tube with an oscillator, permitted tunning accuracy within a frequency range.

Carl discussed these military radios were expensive. He has a receipt for the purchase of just the transmitter in 1945. The transmitter cost $2,296. ($41,430.00 in 2025 dollars.) With an airplane possibly having multiple transmitters, these were not cheap!

These radio sets provided AM voice communication along with Continuous Wave (Morse Code) ability. Output power was ~8 watts. While not high power, these units performed well while on the open sea or airborne.




*Editor's Note:* Many of these transmitters, when procured at military surplus sales, have been modified by Amateur Radio Operators for use on Amateur HF frequency bands. Procurement of these radios was an inexpensive way to get "on air".

These units are installed into trays on aircraft and boats. This modular installation permits rapid replacement when issues occur. Carl stated he has the associated rack for the matching receiver.

# Raffle Table

The raffle table was full of great items! Radios, record players, and vintage items. Something on this table would appeal to someone.




There were also various books and small radios. The multimeter was a nice one!

# Jackie Gleason



Jackie Gleason was one of television's original "larger than life" characters whose innovations and inspirations helped shape the medium that still pays homage to his creations.

Herbert John Gleason was born in Brooklyn in 1916. Abandoned by his father, he dropped out of school and made money hustling pool and boxing. At 15 he won a talent contest that started him in show business as a vaudeville master of ceremonies, nightclub comic and disc jockey. In 1940 he was signed by Warner Bros, and had small parts in five films. He returned to New York, appearing in nightclubs, on radio (he starred with Les Tremayne in a comedy-variety show on NBC in 1944) and on Broadway before being offered the part of Chester Riley in 1949 in NBC's new television version of its radio hit, The Life of Riley. William Bendix, the star of the radio version, couldn't appear in the TV version. Gleason didn't work out and the show was canceled after 26 weeks (NBC revived it in 1953 with Bendix and it ran until 1958). Gleason moved to DuMont in 1950 as a regular on the Cavalcade of Stars variety show where he portrayed many characters that would become regulars in his repertoire: Joe the Bartender, Reggie Van Gleason III, the Poor Soul and Ralph Kramden. It was at Cavalcade that he met Art Carney, who would figure so prominently in Gleason's career. In 1951, Carney joined Gleason in a Cavalcade sketch about Ralph Kramden, a bus driver from Brooklyn, and Pert Kelton played Alice, his long-suffering wife. In the first sketch, Carney played a cop; he would later be written into the role of Kramden's buddy and neighbor, Ed Norton.

Impressed with Gleason's work, CBS hired him away from DuMont in 1952 with an offer of $8,000 a week (DuMont was paying him $1,600). With a bigger budget, The Jackie Gleason Show debuted in September with Carney, Audrey Meadows and Joyce Randolph as regular cast members, plus the June Taylor Dancers and Ray Bloch's Orchestra. Meadows replaced Kelton as Alice and Randolph was added as Trixie, Ed Norton's wife and Alice's best friend, in the sketches of what is now known as The Honeymooners.

These battles of will between Ralph and Alice and Ralph and Ed's various get-rich-quick schemes were a highlight of the show's second half hour. In 1953 and '54, the Honeymooners sketches became longer and in 1955 The Honeymooners was produced as a stand-alone half-hour sitcom, replacing The Jackie Gleason Show. This season's episodes — "the classic 39" — form the core of the Honeymooners canon because the next season, 1956-57, Gleason returned to the hour-long variety format (and the Jackie Gleason Show title) because the ratings for The Honeymooners were far below that of his variety show in 1953-55. The Honeymooners remained as a sketch until Carney left the show in 1957. There was no show in 1957 and when Gleason returned in 1958 it was with a half-hour program with a totally new cast that lasted only three months.

But the Great One was back in 1962 with Jackie Gleason and His American Scene Magazine, featuring comedy sketches and musical numbers. In 1966 CBS agreed to his demand to produce the show from Miami Beach so Gleason could play golf all year and the program returned to the Jackie Gleason Show title. Carney returned and the Honeymooners sketches were revived, with Sheila MacRae and Jane Kean now playing Alice and Trixie. For the next four years, more than half of the shows were really hour-long Honeymooners sketches, with the foursome often leaving Brooklyn and traveling around the world, sometimes with guest stars.

The Jackie Gleason Show ended its run in September 1970 but he appeared in several CBS Honeymooners specials in the late 1970s. In 1985 Gleason appeared on NBC's Honeymooners Reunion that promoted the "discovery" of the so-called lost episodes, actually kinescopes of sketches from 1952-57. These were aired on Showtime, then sold in video stores.

Gleason also performed in films over the years, receiving an Academy Award nomination for his work in 1961's The Hustler and he was a hit in the late 1970s and early '80s playing the sheriff in the Smokey and the Bandit movie series. He also composed, arranged, conducted and recorded numerous record albums, several of which have been reissued on CD.

---

*Editor's Note:*

Jackie Gleason being known as "The Great One" was not because of being famous on television. Orson Welles bestowed this nickname to him. Orson was simply astonished how much partying and drinking Jackie could handle each day.

The Flintstones, created by Hanna-Barber, premiered on September 30th, 1960. At the time, "The Honeymooners" was the a popular show many knew and enjoyed. The cartoons male figure, Fred, was modeled after Jackie Gleason according to Hanna. Jackie was not happy he was never credited nor compensation of Fred's likeness to him. Jackie revealed in the 1980s that his lawyers spoke to him about suing.

Jackie's lawyers told him he could probably have The Flintstones pulled right off the air," according to his friend, voice actor Henry Corden. "But they also told him, 'Do you want to be known as the guy who yanked Fred Flintstone off the air? The guy who took away a show so many kids love and so many parents love, too?'"

The Honeymooners were also the basis of an even more flagrant rip-off, the Warner Brothers cartoon The Honey-Mousers, featuring "Ralph Crumden" and "Ned Morton" as scheming rodents.

**Notable Quotes attributed to Jackie Gleason:**

*“How sweet it is!"* - This catchphrase became synonymous with Gleason and was frequently used in his television show, "The Jackie Gleason Show."

"Drinking removes warts and pimples. Not from me. But from those I look at." - A humorous take on drinking and its effects.

“One of these days... One of these days... Pow! Right in the kisser!”

*"I'm no alcoholic. I'm a drunkard. There's a difference. A drunkard doesn't like to go to meetings."*

*"Thin people are beautiful, but fat people are adorable."*

*"The second day of a diet is always easier than the first. By the second day, you're off it."*

*"Golf and women are a lot alike. You know you are not going to wind up with anything but grief, but you can't resist the impulse."*

*"If you have it and you know you have it, then you have it. If you have it and don't know you have it, you don't have it. If you don't have it but you think you have it, then you have it."*

*"The worst thing you can do with money is save it."*

*"Does God have a sense of humor? He must have if He created us."*

*"The most important thing in my life is my work, and the second most important thing is maintaining my personal life."*



# Novelty Radios - Fox Hole Radios

Editor's Note: Many radios have been built out of desperation. This radio while not a "novelty radio", was a form of home to others. Creations of radios illustrate how ingenious soldiers and specifically POWs were during WW2 and Vietnams. Since Veteran's day was this month, this is a great story to have within the newsletter.

---

During WWI, WWII and later conflicts, many GI's built "Fox Hole Radios" to listen to news, music, Tokyo Rose, Axis Sally, Lord Haw Haw and probably Hanoi Hannah too. Although the enemy propaganda was laughable, those stations attracted GI's with their popular music pumped out by powerful radio transmitters.

The foxhole radio was a crude crystal radio which used a safety razor blade as a radio wave detector with the blade acting as the crystal, and a wire, safety pin, or, later, a graphite pencil lead serving as the cat's whisker.

The BBC, Radio Australia and US Armed Forces Radio Stations would carry news from home, music and the all-important sports scores. These Fox Hole radios did not require batteries – they were powered by the signal from the distant radio station as collected by the receiver antenna. They were built and used during the time spent in the "Wait" part of "Hurry up and Wait". Often in a fox hole. If you were there, you know.

The radio could be built from basic scrap, with the exception of the earplug or earphones; those could be liberated from that enemy tank or aircraft wreckage. That perforated Messerschmidt or Betty could also be a source for the necessary wire for the antenna tuning coil and antenna.

The radios were built by the young GI's who just knew how to make such things. They were the equivalent of today's techno-geeks and computer hackers (but not the modern kid who thinks "communications technology" is poking their finger at the screen of a Chinese-made iPhone. I'm not interested in those things, but I digress).

This was early 20th century technology and any self-respecting GI was up on it. The omnipresent Ham Radio operators in the Signal Corps probably helped, applying their skills of the day.

I built the Fox Hole Radio described below after a friend produced a WWII Red Cross package containing razor blades among other common items. These were the "Blue Blade" type that had a blue oxide finish, and that finish, in contact with an ordinary pencil "lead", made a point-contact rectifier.

This served the purpose of the "crystal" and "cats whisker" of early crystal radios; it permitted current coming in from the antenna to flow in only one direction. This served to "build up" the antenna signal to a level that could be heard in the earphones by a process known as "detection".

# Novelty Radios - Fox Hole Radio (Continued)

An attached coil of enamel-insulated wire wound on a piece of bamboo acted along with the antenna wire capacitance to produce a tuned circuit, tuned approximately to the radio frequency band of interest. Experiment with the circuit – you can "short out" coil turns with the paper clip tuning tap; better yet, you can just connect the tap to the razor blade/ earphone circuit instead, a more common configuration. This one is REAL basic – but impedance matching and having a healthy signal are the keys to performance.

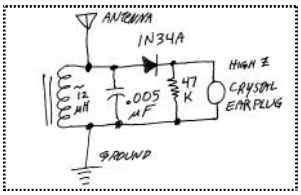
All that was then required was a long piece of wire for an antenna (that barbed wire fence with wooden posts or a length of infantry telephone "commo wire" was perfect). Plus a ground connection consisting of a metal tent stake or bayonet stuck into the moist soil.

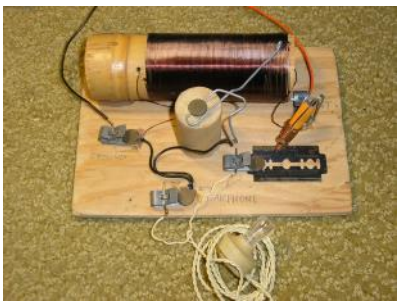
A few other bits such as a safety pin, a piece of bamboo, plastic water bottle, glass bottle or toilet paper cardboard tube for the tuning coil form. Then a piece of wood from that ammo crate for a chassis, a few screws, thumbtacks or nails and a paper clip to make a "tuner". In the presence of a strong signal and/or a good antenna it is hard to make this type of circuit *not* work! The below photos illustrate the basic idea.

The radio is adjusted for best signal by moving the pencil point to different spots on the razor blade to find the "sweet spot" where rectification takes place. (The signal will sound louder). Then adjust the paper clip tuner along the coil turns (put on as many turns as you can – 100 +) to tune and optimize the signal you want to hear.

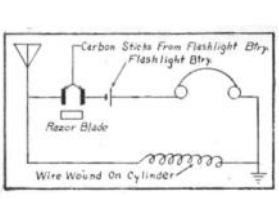
It's a bit trial-and-error to produce a good signal and it depends a lot upon the height and length of your antenna, the quality of your ground connection, the frequency and local strength of your target station. Or by just getting lucky. ("Chance favors only the prepared mind" – L. Pasteur)

You can also tune the radio by changing the inductance of the coil – make its inductance bigger for lower frequencies by inserting an iron bolt into the bamboo coil form. Or make it tune higher frequencies by reducing the coil inductance by inserting a piece of brass – that .50 Cal machine gun cartridge works just fine. Improvise, adapt, overcome.










# Novelty Radios - Fox Hole Radio (Continued)

An American amateur radio operator named Captain Russell Hutchison. He built a fairly complex single tube regenerative receiver into a standard GI canteen while interned by the Japanese in the Cabanutuan concentration camp in the Philippines.

Hutchison had the relative good fortune to be tapped as the fix-it guy for the camp; even the Japanese relied on him to repair their gear. Radios looted by Japanese soldiers made it to Hutchison for repair, and pilfered parts began to accumulate. Eventually Capt. Hutchison had enough parts to build his radio, which was sensitive enough to copy shortwave transmissions from as far away as San Francisco using a covert antenna of fine wire woven into a clothesline.

Hutchison's radio was a matter of life and death in more than one way. The most pressing concern was being discovered with the set, which would result in an immediate execution. To avoid that fate, Hutchison took elaborate measures beyond the canteen subterfuge to ensure that as few men in the camp as possible knew about his hack.

Despite several near-misses, the radio was never discovered and Hutchison eventually made it out of the camp alive. But the radio served another life and death role. Far from being just an amusement to pass idle hours, the radio was used to monitor the progress of the expected invasion of Japan. The POWs realistically feared their captors would execute them and destroy the evidence of their atrocities as soon as Allied boots hit the Japanese Home Islands; the radio kept the POWs one step ahead so that they could try to escape before the bullets started flying.

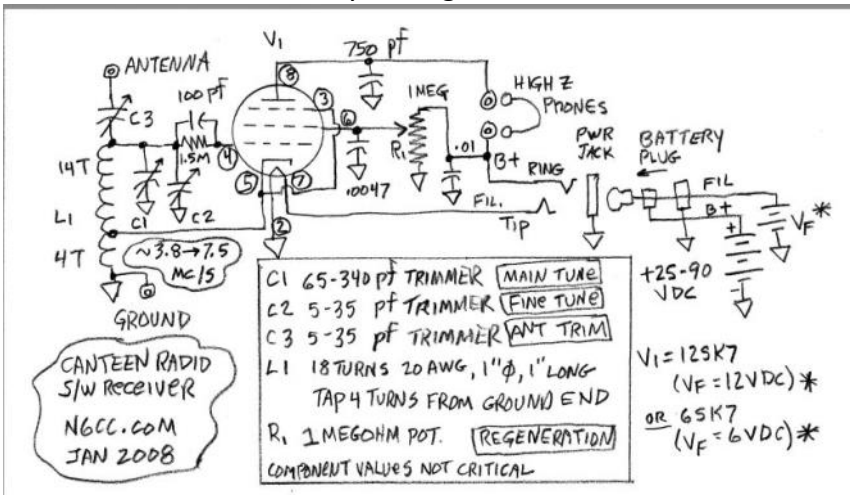


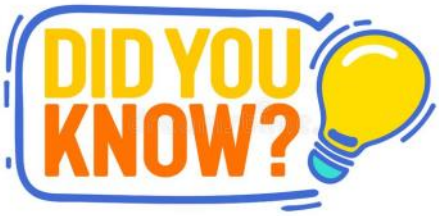
*Something from Nothing*

As impressive as Hutchison's hack was, at least he had manufactured components to work with. There were other POW hackers that weren't so fortunate, but still needed the connection to the outside world that radio provided. With the same mortal stakes at play, these hackers built radios from almost nothing. Take the case of one Lt. Colonel R.G. Wells, a British officer interned in a Japanese concentration camp in Borneo. In 1942, he created almost every component of a super-heterodyne receiver from found objects. Capacitors were made from the foil lining of a tea chest and the few precious scraps of newspaper that weren't horded for alternate duty in the latrines. Resistors were pieces of string impregnated with burnt cinnamon bark. Bare wire was insulated by rubbing flour nicked from the mess into palm oil and caking it onto the wire. A chromic acid wet cell was concocted of potassium dichromate "donated" by the camp pharmacy and zinc trouser fly buttons. When that proved insufficient to power the radio, Wells built a chemical cell that both rectified the camp's AC supply and dropped the voltage to a usable level.

The only components Wells couldn't conjure out of thin air were the vacuum tube and the headset. Wells' detailed oral history of the radio doesn't say much about where the tube came from, but it does record that the headset was smuggled into the camp. Given enough time, the resourceful Col. Wells no doubt could have manufactured a headset; indeed, a Vietnam POW named Richard Lucas built the headset for his foxhole radio using a core of nails wrapped with wax-insulated wire in a bamboo resonator with a tin can lid for a diaphragm. He reported that it worked well enough to hear several stations, but that the headset would have worked better with a magnet to bias the coil.

As impressive as these hacks are, more amazing still is the fact that all of it was done from memory. These POWs came into camp with nothing but their dog tags and the clothes on their backs, and sometimes not even the latter. There were no reference books or cheat sheets. The circuits these men built under impossible conditions, often with only the rawest materials, were committed to memory, probably from days and nights of experiments in the pre-war years. Their hobby paid off in a big way and allowed them to hack their way through a more difficult time than any of us can likely imagine.






*Music on Hold is a commonly used today on large telephone systems. Did you know this feature started by an accident? Music on hold was created by Alfred Levy, an inventor, factory owner, and entrepreneur. In 1962, Levy discovered a problem with the phone lines at his factory: a loose wire was touching a metal girder on the building. This made the building a giant antenna. The audio broadcast signal from an AM radio station next door would transmit through a loose wire touching the buildings metal frame.. Music, from the AM radio station, could be heard when calls were put on hold. An accidental discovery is a mainstream feature today.*




---

***Question:*** *Very early radio stations were built within a common "business" building. What was this building?*

***Answer:*** Early AM radio stations existed within a hotel room or the top floor of a hotel. In the early 1900's a hotels had a restaurant and ballroom. Musicians would perform weekly. Being is the same location permitted the ability of having a weekly local live show. This postcard of the Broadview Hotel in East Saint Louis shows the AM station antenna for WIL and then WTMV.
*(Antenna is visible on rear roof of hotel.)*




***Question for the January Newsletter:***

*The use of many transistors in one package becomes an Integrated Circuit (IC).*
*The use of many vacuum tubes in one package becomes a ??????*

---

## Radio Quote Of The Month:

**"Radio is not just a piece of furniture.**
**It is a friend in the corner of the room.**

*- Unknown.*

www.archradioclub.com

***President***
Joe Tauser (KE0ZCM)
314-616-0745
2012 Oaktimber Ct,
St. Louis, MO 63122
joe@jtauser.com

***Vice President***
James Richter (KD0BXU)
Crestwood MO 63126
jmsconcept@sbcglobal.net

***Treasurer***
Roger Cole (AD0TR)
608 W. Washington
St. Louis, MO 63122
Roger.b.cole@gmail.com

***Secretary/Newsletter***
Anthony Rossetti (KB8TFW)
304-629-9016
1221 Lakeview Lane
O'Fallon, IL
WVUgeek@yahoo.com


Antique Radios
Collected—Restored—Repaired
For You or For Me



Don Ferguson
3501Huntington Lane
St. Charles, MO 63303
Phone: 636.441.9487
Cell: 314.616.4294

donfergy@att.net

Joe's Capacitor Stand
- Metalized Polyester Axial Lead &
- Electrolytic Capacitors
- Custom Battery Eliminators
- Schematics—Riders & Sam's

Joe Tauser (314) 616-0745