The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

November 2018 Volume 24 Issue 11

MEETING/ ACTIVITY NOTES

Reported by
Marv Beeferman

MEETING NOTICE

The next NJARC meeting will take place on Friday, November 9th, at 7:30 PM at InfoAge. Directions may be found at the club's website (http:www.njarc.org). This month, we're tentatively scheduled to hear a talk from member John Ruccolo on communication receivers and transmitters. If there is a change of plans, we'll publish it on the website.

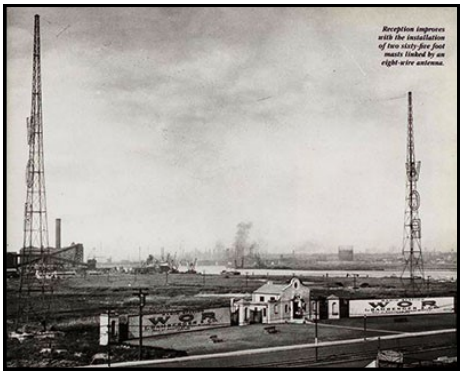
The ON-LINE Broadcaster

The *Jersey Broadcaster* is now on-line. Over 160 of your fellow NJARC members have already subscribed, saving the club a significant amount of money and your editor extra work. Interested? Send your e-mail address to mbeeferman@verizon.net. Be sure to include your full name.

Thanks go out to Mike Molnar for his talk on Jack Poppele at the October meeting. Mr. Poppele, who launched radio broadcasting in New Jersey, was noted for, among other things, being a director of the Voice of America and the "father" of WOR, developing a long range directional antenna, advancing the acceptance of FM radio and making stereo available on AM radio.

Poppele started his career as a wireless and radio operator on passenger freighters. In 1922, he was asked by Louis Bamberger to set up one of the nation's first radio stations. The original transmitter was a 250 watt unit constructed by DeForest and it was allocated the congested 833 kHz channel. Soon afterwards, Poppele had a 500 watt Western Electric transmitter installed on Bamberger's roof and the channel moved to 740 kHz. It was the first New York station to carry CBS programming. Five years later, a 5 kW station was built in Kearney and the frequency changed to 710kHz. Following twelve years after WOR came on line, the 5 kW transmitter was moved to Carteret and it shared the site with a new 50 kW unit.

Mike talked about the first directional station conceived by Poppele and Western Electric with pattern lobes that directed the signal NE/SW, amplified in those directions by a unique, tower-supported, center-fed antenna. Mike also said that Poppele was among the earliest advocates of frequency modulation. WOR bought one of REL's first 1kW FM transmitters, initially placed in service in 1940 as W2XOR. Major Edwin H. Armstrong, who worked closely with Poppele, threw the key that put the station on the air. Poppele was also an optimistic supporter of facsimile (receiving printed material over radio). He maintained a twice-a-day schedule of facsimile transmission alternately using RCA and Finch equipment.



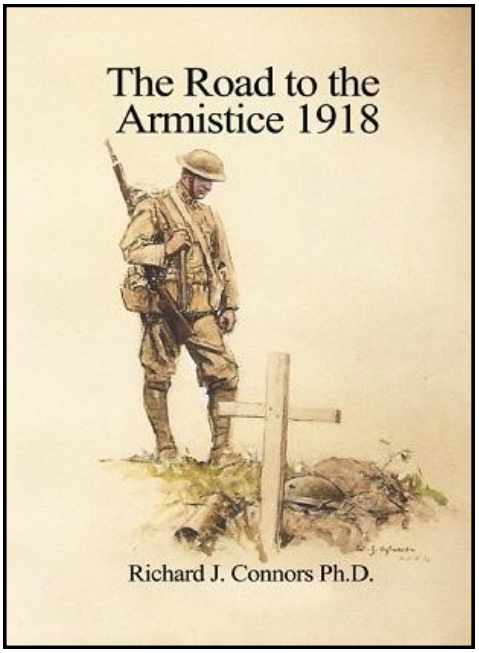
WOR site as it appeared at Carteret, NJ in 1935. The two towers were 350' high and the system was an array of 3 vertical antennas consisting of the towers and the center wire.

Bob Bennet discovered a rare "WOR" 3-dialer at the Fall 2018 Kutztown swapmeet. See it at about the 4:00 minute mark on his You Tube "Radiowild" segment at the following link: https://bit.ly/2yI9us3.

President Richard Lee announced that InfoAge will be paying tribute to veteran's service and sacrifice by offering the purchase of a full-color commemorative tile. Included is the option of it being displayed at the Veterans Hall of Honor, a 200' main passageway at InfoAge (a WWII living memorial). All US Armed Forces personnel, living or deceased, retired, active or reserve are eligible.

You supply the photos and text and an 8" by 10" full color ceramic tile will be created with your pictures and your story. Cost is $250 with additional copies for $100 each. Your NJARC board has voted that it would be most fitting to honor Major Armstrong with a tile. For more information, contact the InfoAge website or call 732-280-3000.

Regarding the same subject, InfoAge will be celebrating the 100th anniversary of Armistice Day on November 11 from 1PM until 5PM. Among a series of presentations, the event will include WWI artifacts, expanded WWI dioramas, lectures on the role of NJ and Monmouth County in the road to victory, and a signing of the book "The Road to the Armistice, 1918" by Richard J. Connors. Admission is $5 (tax deductible) with additional donations welcome.



THE JERSEY BROADCASTER is the newsletter of the New Jersey Antique Radio Club (NJARC) which is dedicated to preserving the history and enhancing the knowledge of radio and related disciplines. Dues are $25 per year and meetings are held the second Friday of each month at InfoAge or Princeton University. The Editor or NJARC is not liable for any other use of the contents of this publication other than information.

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Member Dr. Alex Magoun, Outreach Historian for the IEEE History Center, recommends the TSC exhibition "Mr. Fix -It: The Tools of the RCA Repair Trade" in the lobby of the Roscoe West Building. The exhibit is also available online at:

https://bit.ly/2zloewa

"The Radio Corporation of America (RCA) was formed in 1919 and soon went into the business of creating and selling consumer electronics. However, these devices often required operators to run them, and technicians to fix them, so RCA created two new branches to deal with this need: The RCA Service Company and RCA Institutes. This exhibit showcases the history behind these two institutions, and brings to light the once thriving industry of 20th century electronics repair."

"Dr. Alex" also recommends signing up for the Sarnoff Collection newsletter, which appears periodically...just email: sarnoff@tcnj.edu. To sign up for the electronic version of the IEEE History Center newsletter, which comes out tri-annually, email ieee-history@ieee.org.

To get an early start on planning for our Holiday Party, a reservation response form is included in this month's *Broadcaster*. It cannot be stressed enough that you send in your response as early as possible since only 70 slots are available and club membership is climbing, reaching the 210 point just this month. It might also be a good time to start considering your entry in our Mystery Grab Bag instead of wrapping up, at the last minute, whatever is lying around. Please remember that a value of around $25 is suggested and it is hoped that all entrants take this recommendation seriously. We'll be reminding you by email later in the month.

Upcoming Events

November 9 - Monthly meeting at InfoAge; Show & Tell and Hints & Kinks
November 17 - Fall Repair Clinic at InfoAge
December 15 - Holiday Party at West

GERNSBACK VS. RIDER

By
Ray Chase

Most of us who repair radios rely heavily on Riders service manuals. But early on, there was competition from the original publicist and prolific writer and publisher Hugo Gernsback. What peaked my interest in this competition resulted from my recent efforts to bring my radio library under some form of control. I have several early Gernsback repair manuals and when moving them from one spot to another, I took a gander at one of them. This was the "1932 Official Radio Service Manual," a complete directory of all 1931 to 1932 radio receivers, or as so claimed, by Hugo Gernsback, editor.

The volume was a little over two inches thick and had 580 pages. The first 125 pages contained theory and general service information and many tube specification curves that most radio repairmen would not understand. Also included was 3 phase power rectifiers - what do these have to do with radio? There was information on auto radios with floorboard steel cases to house their B and C batteries, information on sound movie projectors, and details of other esoteric equipment that most radio repairmen would never see.

Radio data listings followed that were supposed to be in alphabetical order, but often were not. The information was mostly directly copied from manufacturer's literature so its readability depended on the original quality. It was humorous to see so many variations of schematic component representations, there seemingly being no standards for schematic circuitry at the time. There were quite a few Canadian companies listed. Some manufacturer data popped up completely out of sequence.

I was intrigued by an Electrical Research Laboratory (ERL) battery powered console radio that had the following tube line up: 222 RF amp, 222 RF amp, 222 RF amp, 112A det., 112A audio amp, and

a pair of 171A's push-pull audio amps. (The 222's were the first screen grid tubes released but were for battery sets, while, at the time, everyone was going to AC powered radios so 222's were not often used and are hard to find today). It took a console full of batteries to power this set - an automobile size 6-volt wet cell, four 45 -volt B batteries and two 22.5-volt batteries. It even had an electrodynamic loud speaker and a phono input for a phonograph with an electro-magnetic pickup. The cost of keeping it supplied with battery power must have been enormous. Probably meant for a prosperous farmer who was not on the grid.

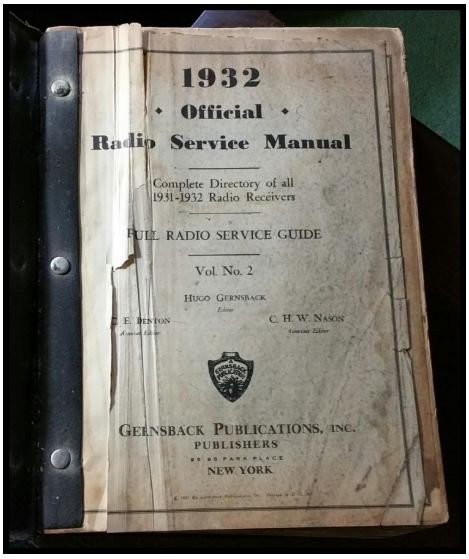
Of course, there was the Philco Radio & Television Company. In the RCA section, there was a model ER-1240 Centralized Radio System (for a building or a large house) and many pages devoted to a massive AF-6100 radio system with many speakers. Also, an auditorium Radiola Phonograph and a model RF-5100 (DC) central antenna system. Another bunch of pages described an RCA-Photophone, Inc. system for movie sound systems.

There was a good section on various period test equipment. If one is a collector of early test sets, this could be very valuable. There was a special fairly complete section on "television" receivers of the day. Even a page or two on motor/ generator sets for farm homes or areas with only DC power available. Ad pages were also scattered throughout the volume.

An index at the end of the volume that was added as a supplement had a good listing and cross reference of all companies contained in the publication. I counted 135 manufacturers of radios, many I had never heard of or seen any example of. This cross reference and listing might be very valuable if one is searching for information on an obscure radio set. Below listed are just some examples; how many of you have seen any of them?

Ansley Radio Laboratories
Audiola Radio Company
Aztec Radio Company
Buckingham Radio Corp
Bush & Lane Piano Company
Jesse French & Sons Piano Company
Federated Purchaser
Hatry & Young, Inc.
Horn Radio Company
Charles Hoodwin Company
Keller-Fuller Manufacturing Company Ltd.
Lang Radio Company
Pierce Airo Incorporated
Samson Electric Company
Studebaker Laboratories
United Air Cleaner Company
Webster Electrical Corporation
Wholesale Radio Service Corp.

Editor's Note: Rider accumulated a lot of his radio knowledge through his military and engineering experience which enabled him to work for Gernsback as editor of *Radio Craft* magazine. He probably gained significant publishing expertise during this time. During the 1920s, with the rise of radio manufacturers came an expansion of the radio servicing business. As a result, the need for radio servicing literature (schematics, parts lists, production changes, etc.) expanded. Gernsback offered his Official Service Manual in eight volumes (Volume 8 is an index) between 1930 and 1936 (available on eBay in DVD/PDF format for $10.00). Rider left Gernsback to start his own company, John F. Rider Publisher, and, in early 1931, his first *John F. Rider's Perpetual Troubleshooting Manual* appeared. There is not much information on why Gernsback discontinued offering his service manual in 1936 but perhaps he felt that its more extensive format could not compete with that of the simpler Rider format. Other possibilities include the depression playing a role, the cost of obtaining service literature - or perhaps Gernsback wanted to concentrate on his other publications.

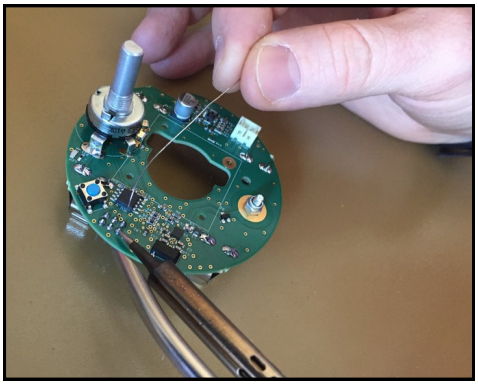


THE MASON JAR RADIO

By
Marv Beeferman

Mason jars have always been popular with the creative set who have embraced them for pickling projects, cake containers and all sorts of craft creations. In 2014, two engineers from Brooklyn decided to turn Mason jars into a radio to play a single, pre-programed FM station. Being partial to their local public radio stations, media and sound technologist Zach Dunham and his childhood friend Spencer Wright, a manufacturing strategist, named their creation "The Public Radio." The radio hardware fits into an 8-ounce Mason jar and has only one knob for volume and power. The creators hoped that the lack of choice would be welcome to our over-cluttered routines. "There aren't any apps, passwords or screens required which is uncommon in the technology and gadgets we own these days."

The first batch of about 30 Public Radios was handmade by Wright and Dunham in their kitchen. In 2014, they were taking an online course from MIT required for all electrical engineering majors. At the end of the course, Dunham wanted to work on a project that would keep him learning about electronics. He decided on making a single station radio because of the overlap with the coursework and his love for radio. Ultimately, he convinced Wright to work on it with him.

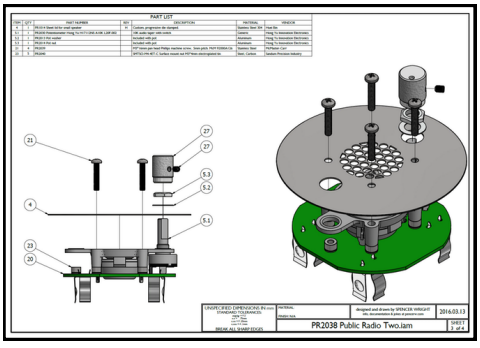


Dunham and Wright knew that the radio's design should be as simple as possible, but the process was not straightforward. The initial design was going to be in a rectangular wooden and metal enclosure. But one evening, while testing speaker samples, an enclosure was needed to place them in. Dunham reached for some cardboard and found a Mason jar nearby. A hole was cut out in the jar's lid for the speaker and it turned out to be perfect, sounding great in the jar.

Among the hurdles that the pair faced was the difficulty to program the radio efficiently. Also, the concept version of the radio originally had a switch to choose between two stations. At the time, it was set to Hot 97 and WNYC. Although the contrast between the two stations was laughable, the pair knew that a single station version would be most popular with NPR (National Public Radio) fans. If you move or change your favorite station loyalty, the default station can be changed in a few simple steps by pressing a button at the edge of the radio's circuit board and advancing to the desired, available FM station.

In late 2014, Wright and Dunham launched a "Kickstarter" campaign and eight months later shipped 2,500 radios in "Maker Kit" and fully-assembled forms (built by the pair and a "generous group of NYC friends" by hand), to backers all over the world. With a Kickstarter Gold campaign in 2017, production was set up in the United States and improvements were added to the radio's internal design and functionality.

The Public Radio is built around a Silicon Labs Si4702 FM receiver chip. It has a 30+ hour battery life on two AA cells, depending on loudness and type of batteries. It is contained in a half-pint Mason jar but if you like more bass, you can swap the radio out for a larger jar. It is available from Uncommon Goods for $60 and is also offered as a "thank you gift" for a donation to National Public Radio.



The Public Radio v2.0's main mechanical assembly.

THE PRESSLEY SUPERHET

PART IV

By
Marv Beeferman

This month, we continue with our investigation into the Pressley superhet, whose portable version was fortuitously recovered by Dave Sica from the Lobosco estate sale. In Part I (May 2018) of this *Broadcaster* series, we traced Pressley's early years and his work with Major Edwin Armstrong at the Signal Corps Laboratory in Paris as the superhet concept was being developed. Following WWI, Pressley eventually joined the radio laboratories at Camp Alfred Vail (ultimately Fort Monmouth) and became its Chief Engineer. In investigating methods for adapting the superheterodyne for aircraft use, the "Pressley Superhet" was born.

In Part II (July 2018), the two salient features of the radio that Pressley carried over from Camp Vail - a bridge-balanced, single-tube oscillating detector circuit (which prevented loop antenna radiation) and the unique design of the IF transformers - were discussed. In Part III, we looked at the features of the portable version using Dave Sica's radio as an example. In Part IV, we'll review other versions of the Pressley Superhet as it morphed into a "super-autodyne" and also continue with Jackson H. Pressley's life story.

A non-portable version of the Pressley Superhet was introduced in the November 1924 issue of *Popular Radio* ("The New Type of Superheterodyne") by Capt. Paul S. Edwards. The article described the unit designed by the Signal Corps for the U.S. Army airplane service and the intention to release plans for a commercial version to the public the following month:

"Mr. Pressley, Chief Engineer of the Radio Laboratories, has built an experimental model of a superheterodyne set which has an entirely novel non-radiating circuit, uses one less tube and does not use the second-harmonic principle. It is marvelous for its ease of operation and tremendous amplification. The set has so much amplification with two stages of audio that the UV201A tube in the second stage will not handle the output when fully tuned in on a local station. This experimental set uses the same intermediate transformer as is used in the aircraft receiver. A small loop is used for the antenna."

A theoretical discussion of Pressley's bridge-balanced oscillating detector circuit by Capt. Edwards appeared in *The New York Herald-Tribune* for November 23, 1924.

The first complete article that provided instructions for building the a non-portable version of the Pressley appeared in the December 1924 issue of *Popular Radio* ("How to Build a Non-Radiating, 7-Tube Superheterodyne Receiver"), again by Capt. Paul S. Edwards. It was very similar to the portable version described last month (which was offered a few months later) with an estimated cost of $65 and an optimistic claim of a 3,000 mile range. It utilized the Sangamo AT-60 and IF-60 IF transformers and Sangamo oscillator coil which were offered as a kit beginning in September, 1924. A seven socket shelf and brackets could also be obtained as a unit with sockets and binding posts already mounted. Initially, the first five recommended tubes were WD-12's operated in series. The audio output tubes could be UV-201A's or C-301A's operated in parallel across the 6-volt filament supply. For greater volume and greater distance, UV-201A or C-301A tubes could replace the five WD-12's with their filaments connected in parallel and 6 or 10-ohm rheostats replacing the original 30-ohm rheostats in the filament supply. Power was provided by a 6-volt car battery, a 3-volt "C" battery, and "B" supplies of 45, 60 and 90 volts.

Compared to the portable version, the radio utilized an individual battery switch in lieu of a filament control phono jack. Two jacks provided access to the audio output stages. Cardwell variable capacitors were used for the "LOOP" and "OSC" controls as opposed to the smoother Remler units. Stromberg-Carlson audio transformers were used in lieu of the Silver-Marshalls of the portable set.

It didn't take long for suppliers to offer individual or complete kits for the Pressley Superhet. The Superadio Co. of New York sold a kit that included a drilled and engraved Bakelite front panel and the Sangamo transformer kit for $79.50. The company also offered a design and parts for a portable set. Other kit suppliers included the Wallace Radio Company and Rossiter and Tyler & McDonell (who supplied Dave Sica's portable version), both from New York.

It also didn't take long for construction articles to appear in other radio magazines of the time. *Radio World* published a three-part series ("The 7-Tube Super-

Heterodyne as Devised by Pressley") by Thomas W. Benson between April and May, 1925. A less detailed construction article appeared in *Radio Review* for May, 1925 ("Data on the New Pressley Super-Heterodyne"). A short construction article appeared in the "Pick-ups and Hook-ups" section of *Radio Age* for March 1925.

A few examples of Pressley "builds" have appeared on the internet. Duanes Radios featured a typical cabinet model that utilized Cardwell tuning capacitors, Thoradson audio transformers and included a Weston panel meter to monitor battery voltage. Russ' Old Radios shows a Pressley with Stromberg Carlson audios, a combination of 201's and Deforest DV3 tubes and an internal hand-wound coil to replace the loop antenna. However, no examples of the portable version were located.

An autodyne may be described as a type of heterodyne circuit containing a vacuum tube (or transistor) that acts simultaneously as a detector or oscillator. The term has roots that go back to Armstrong since any regenerative set can be used for autodyne or "self-heterodyne" reception. Pressley's "balanced autodyne circuit" fit quite nicely into this category and McMurdo Silver utilized the concept in the design of what he called a "super-autodyne."

"Essentially, the receiver is a super-heterodyne, employing an autodyne detector-oscillator, and what the writer believes to be an exceptionally efficient intermediate amplifier. Because of the use of the autodyne frequency-changer, the circuit has been called a *super-autodyne*, which seems to be a more logical name than *super-heterodyne*."

The design for building "A Six Tube Super-Autodyne Receiver" first appeared in the July, 1925 issue of *Radio Age*, seven months after the introduction of the Pressley set. The set used the same balanced-bridge, single-tube detector/oscillator of the Pressley but replaced the four Sangamo IF transformers with two model 210 IF transformers (called "chartered") and a 211 filter transformer. As explained by Marshall and as compared to the Sangamo AT-60/IF-60 transformer combination:

"The intermediate amplifier...employs special laboratory chartered transformers which are a compromise between the extreme selectivity of properly designed air-core coils, and the great stability and amplification of good iron core transformers. But two core laminations are used in each transformer, of 7 mill silicon steel, one in the shape of an "F" and one an "L." The air gap formed, together with other recently developed features of the design, permits the realization of almost an ideal curve - extra-ordinarily high amplification over a 10,000 cycle band, with a sharp cutoff on either side. The amplifier, employing two of these transformers, together with a sharply tuned filter which is provided with a laboratory adjusted tuning capacitor, gives tremendous amplification, for it also employs controlled, adjustable regeneration."

Although marked as 55 KHz, measurements of the Bakelite-cased Silver Marshall transformers by a collector have found them to peak at 60 KHz which is the IF frequency noted in all construction articles.

Another change to the circuit as compared to the Pressley was the use of a Silver Marshall 101B coupling unit consisting of a rotor coil inside the stator coil of the oscillator coupler. It was adjusted to attain oscillation and then never touched again. Also, two independent "balance" capacitors were used in the bridge in lieu of a single, split stator type. It was suggested that the radio use UV-201A tubes throughout but 199's or DeForest DV-3's could also be used. Suggestions were also included in the same article for making the radio portable (after a tube change-out) by adding car battery connections (Lynch Leads, permitting connection to the car battery through the dashboard light socket) for the "A" battery and carrying the "B" and "C" batteries in a canvass bag. For picnic or beach use, it was suggested that a carrying case could be built to hold the batteries and a speaker.

Construction articles by McMurdo Silver similar to that published in *Radio Age* could also be found in *Radio Review* for September, 1925, *Radio Broadcast* for July, 1925 and *Citizens Radio Call Book* for Fall, 1925. However, in Radio News for October 1925, Mr. Silver felt that the Pressley autodyne frequency changer could be further improved via "regenerative amplification." He noted that in the Pressley bridge-balanced detector/oscillator, less than half the signal voltage was applied to the tube, the balance being lost in the bridge. One possibility would be to use an additional tickler in series with the balanced bridge tickler and coupled to the loop antenna coupling coil. "Such an arrangement, carefully carried out, is a tremendous increase in the sensitivity of the receiver as a whole, as well as an increase in selectivity." But Silver decided on a simpler solution - by slightly unbalancing the bridge, a portion of the signal energy fed from the bridge tickler into the bridge circuit itself could get into the loop circuit. Of course, along with this comes a portion of the oscillator energy, but it would be a simple matter to adjust one of the balancing capacitors so that just the required value of unbalance would be obtained. The results in sharpening up the loop tuning capacitor and considerable strengthening of the received signal would only result in a slight, but entirely negligible tendency for the antenna to radiate.

When Sangamo decided to stop manufacturing Pressley-specific components in January 1925 as a result of patent infringement pressure from RCA, the circuit continued to still be in favor with the use of Silver Marshall replacements or Sangamo parts that remained in dealer stock. However, by 1926, other improvements in the superheterodyne took the uniqueness away from Pressley's innovation. Occasionally, the circuit showed up as a novelty as in *Radio-Craft* for September 1935, "Building the Peanut '5' Superhet." It used the Pressley single-tube, detector/oscillator bridge concept but with the addition of regeneration in the second detector.

The Pressley Superhet never recovered the excitement of the introduction it received in the July 4, 1925 issue of *Radio World*. The article "The Pressley as a Portable" sung its praises:

"The receiver was turned on in the general executive offices of Radio World, which are in a heavily shielded district. The volume from the set was load enough to be heard through partitions. The cover of the case, in which the set is installed, was then closed, and the complete receiver was carried into Broadway, still working. One of the members of the staff carried the set as he walked up and down Broadway amid Saturday afternoon crowds. The music could be clearly heard by people in the street 50 feet away from the set. A great crowd stopped to hear the concert and many marveled at the wonderful clarity and volume which was poring forth from the Musicone speaker in the set."

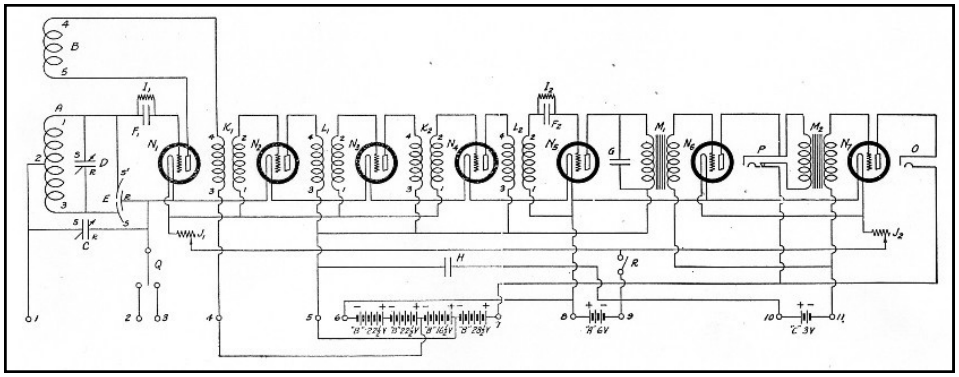
J.H. Pressley - The Later Years

After leaving Fort Monmouth as chief engineer for the U.S. Army's radio laboratory, in 1929. Pressley became chief engineer for the U.S. Radio & Television Company, later becoming vice-president. In 1933 and 1934, he was chief engineer at the Zenith Radio Corporation and then joined Philco as engineer in charge of au-

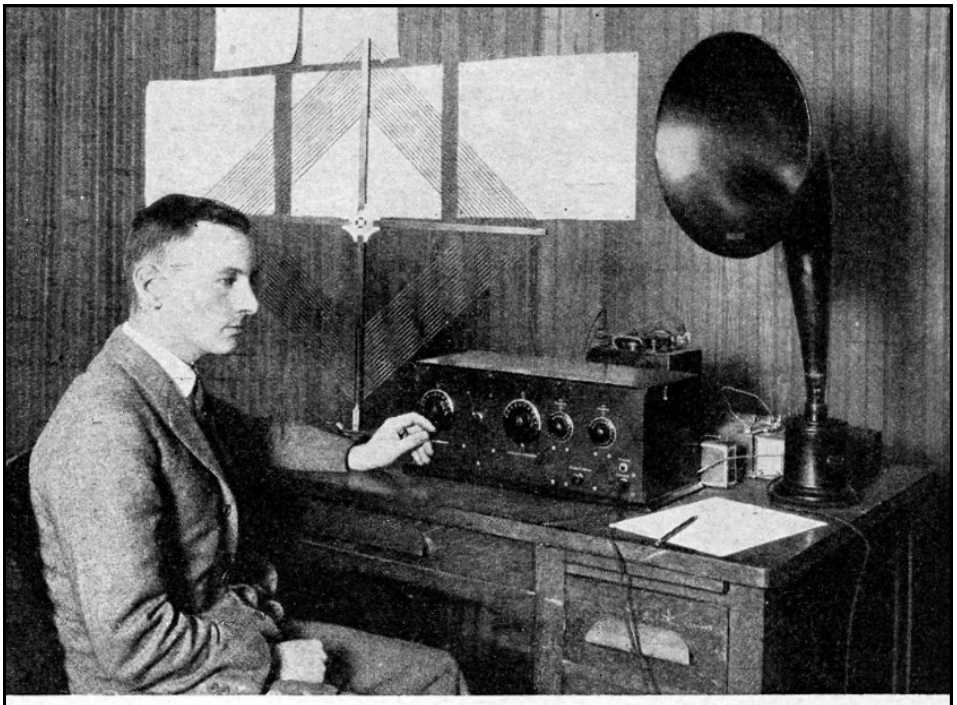
tomobile radio and research. In 1939, Pressley was given the position as chief engineer on receiver design for the Farnsworth Television and Radio Corporation where he was replaced by William H. Meyers in 1946 but retained by as a consultant to the company. After this point, my research on Pressley reaches a roadblock since references to his life story seem to end. But, I'll continue to work on the issue and update you if anything new turns up.

Besides his non-radiating, bridge-based oscillator/detector circuit and specialized IF transformers already mentioned, Pressley was responsible for quite a few additional patents during his lifetime that illustrate his diversity of talent:

- US1677727A (July, 1928) - Vacuum-tube control device: a variable resistance device for controlling the filament current of a thermionic relay.
- US1747262A/1800750A (Feb., 1930, April 1931) - Loop antenna: provides means whereby the directional characteristic of a loop antenna may more nearly approximate the ideal figure 8 diagram.
- US1829058A (Oct. 1931) - High frequency transformer: provides uniform amplification, high efficiency, and neutralizes the effect of grid-to-plate inter-electrode capacity.
- US2211073A (August 1940) - Power supply circuit: secures full-wave rectification without the requirement of a center-tapped secondary winding and with half the number of secondary turns normally employed.
- US2203442A (June 1940) - Antenna circuit for radio receivers and the like: improves operation of motor vehicle radio receivers by increasing the amount of useful signal transferred from the antenna to the loud speaker.
- US2188918A (Feb. 1940) - Automatic position-selecting device: a control apparatus for positioning a radio tuning element.
- US2257022A (Sept. 1941) - Rotary indicating device: a rotary indicating device adapted for use as a tuning indicator for a radio.
- US2313262A (March 1943) - Automatic record-changing apparatus: a mechanism for controlling the movement of a magazine in an automatic record-changing apparatus and controlling the pickup arm so that the stylus of the reproducer engages a record on the turntable with the least possible force.
- US2311596A (Feb. 1943) - Automatic record-changing apparatus: an improved mechanism for changing and reversing records.
- US2345684A (April 1944) - Control mechanism for automatic phonographs: control mechanism for automatic phonographs adapted to be actuated by the variation of the speed of movement of the pickup arm.
- US2386503A (Oct. 1945) - Driving mechanism for phonograph turntables: provides a phonograph in which the driving motor is mounted in such a manner that its mechanical vibrations are not transmitted to the turntable.
- US2436529A (Feb. 1948) - Inertia tripping mechanism: Provides a novel electrical circuit for controlling an automatic phonograph mechanism; provides a novel tone arm switch whereby the wear on the record grooves is reduced to minimum; provides a simple circuit to insure positive control of the record changing cycle.
- US2457106A (Dec. 1948) - Phonograph apparatus: provides a drop-down record changing apparatus having a novel means for supporting a stack of records and for separating and releasing records to the turntable resulting in minimum damage to the records.

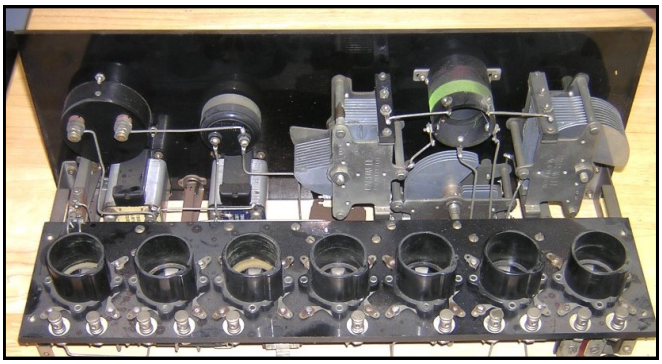


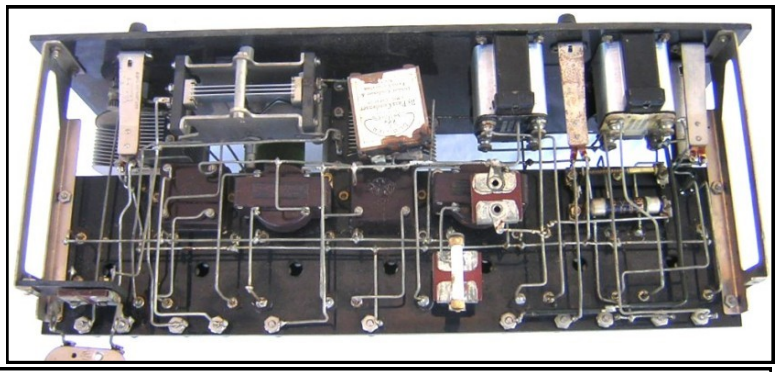
An early schematic of the Pressley Superhet from the December, 1924 edition of *Popular Radio.* Note the single-tube oscillator/detector and noise cancelling bridge to the far left. The bridge balancing capacitor is at "E" and the "longwave" (L) and "shortwave" (S) antenna select switch is at "Q". Compared to Dave Sica's portable version, note a phono plug at the output of each of the two audios and a separate power switch at "R".



MR. PRESSLEY TRIES OUT HIS NEW SUPERHETERODYNE

In appearance, the new receiver resembles many of the simple three-tube outfits that are constructed to fit into a standard seven by eighteen inch cabinet. It is a giant for results, however.

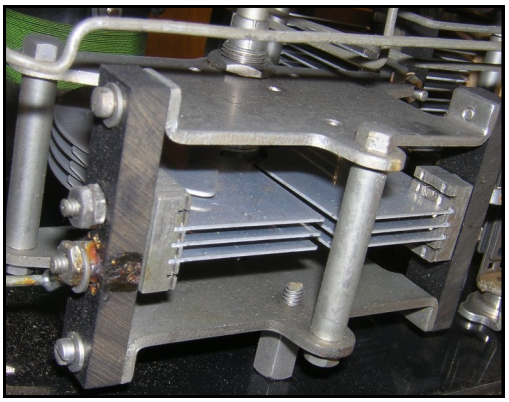




Details of the non-portable Pressley Superhet found at Duane's Radios using 201A's. In the third photo, note the Sangamo oscillator coil between the two main tuning capacitors and the balancing capacitor below the coil. The bottom view shows the two AT-60 and two IF-60 Sangamo IF transformers.

Pressley component advertising from 1925.

Another version of the Pressley Superhet found on Russ' Old Radios. The set used DeForest DV-3 tubes and Stromberg Carlson audios. Note the resemblance of the set to the one being used by Pressley on the previous page.



Closeup of the bridge balancing capacitor. The capacitance of one stator section will increase while the capacitance of the other stator section will decrease if the rotor is rotated in a certain direction and vice versa. (Courtesy of Duane's Radios.)

NJARC Holiday Party

Date: Saturday, December 15th, 2018
Time: 5:00 PM – Cocktail Hour 6:15 PM – Dinner
Place: West Lake Golf & Country Club
1 Pine Lake Circle, Jackson NJ 08527

Members	**$25 each**
Non-Member Adults and Children over 12:	**$25 each**
Children under 12:	**$5 each**

Cocktail Hour, Dinner Buffet, Mystery Grab Bag, Surprises
*******RESERVATIONS REQUIRED *******

If you plan to attend, please fill out the attached coupon, detach it and mail it with a check to:

Marvin Beeferman
2265 Emerald Park Drive
Forked River, NJ 08731
609-693-9430/mbeeferman@verizon.net

by December 9th. Everyone who plans to attend must send back a response form with the full name(s) of attendees. Reservations must be made via the form below; please refrain from telephone or email reservations unless absolutely necessary! Payment must accompany the form.

----------Cut Here ----------

Name(s): _____ _____

_____ _____

_____ _____

Telephone or email: _____

Number of **Members**: _____ X $25 = $_____
Number of **Children** under 12: _____ X $5 = $_____
Number of **Non-Members:** _____ X $25 = $_____

TOTAL: $_____

Make checks out to NJARC, enclose with this form and mail before 12/08/18.