Hallock & Watson Radios

Dan Howard & Richard Howard

2nd Edition

On the cover: Hallock & Watson “Fragile” shipping label
On the title page: Richard has fun with the Hallock & Watson KBPP low-power transmitter ca. 1980.

Hallock & Watson Radios

Prepared by Dan Howard & Richard Howard
for the Northwest Vintage Radio Society, Portland OR

Acknowledgement

We appreciate the generosity of NWVRS charter member Art Redman for granting permission to freely borrow from the many articles he's written about Hallock & Watson. Hanna Pyles provided graphics assistance.

This project was peer-reviewed by members of the NWVRS and approved for publication.

Purpose

Our purpose is to present a complete and accurate picture of the Hallock & Watson company's radio manufacturing story from the 1920's and 1930's.

To stay within scope:

- the partner's rich personal histories are only highlighted.
- except for KGPP, we only touch on their work with commercial broadcasters.

Our Recommended Reading section lists resources that cover both topics.

Synopsis

The partnership of Hallock, Watson and Yonge was in the radio business in Portland, Oregon from 1921 through 1933.

Hallock & Watson:

- manufactured broadcast receivers from 1922 through 1928.
- sold and serviced their own and other brands.
- built Portland's first police radio station.

An illustrated Product Compendium follows the history section.

Over time, Hallock & Watson utilized several business names at multiple locations around Portland. A table of names/dates/locations is provided.

Early History

Much has already been written[1] about the rich personal stories of Joseph H Hallock and Clifton H Watson. They were prominent members of the radio fraternity here in Portland where they grew up. They gained worldwide fame through their work during, and after, World War 1.

Joseph Homer Hallock got his start in radio in 1907 with a William J Murdock crystal set.

Clifton H Watson, born in 1892, got his start in radio at the Multnomah County Library where a wireless club had been formed in 1907. At the library, Clif obtained plans to build a coherer detector, which allowed him to receive signals from spark transmitters. Clif, with a red moustache, was called, by his friends, “the cat's whisker.” His family owned the Smith & Watson Iron Works in Portland.

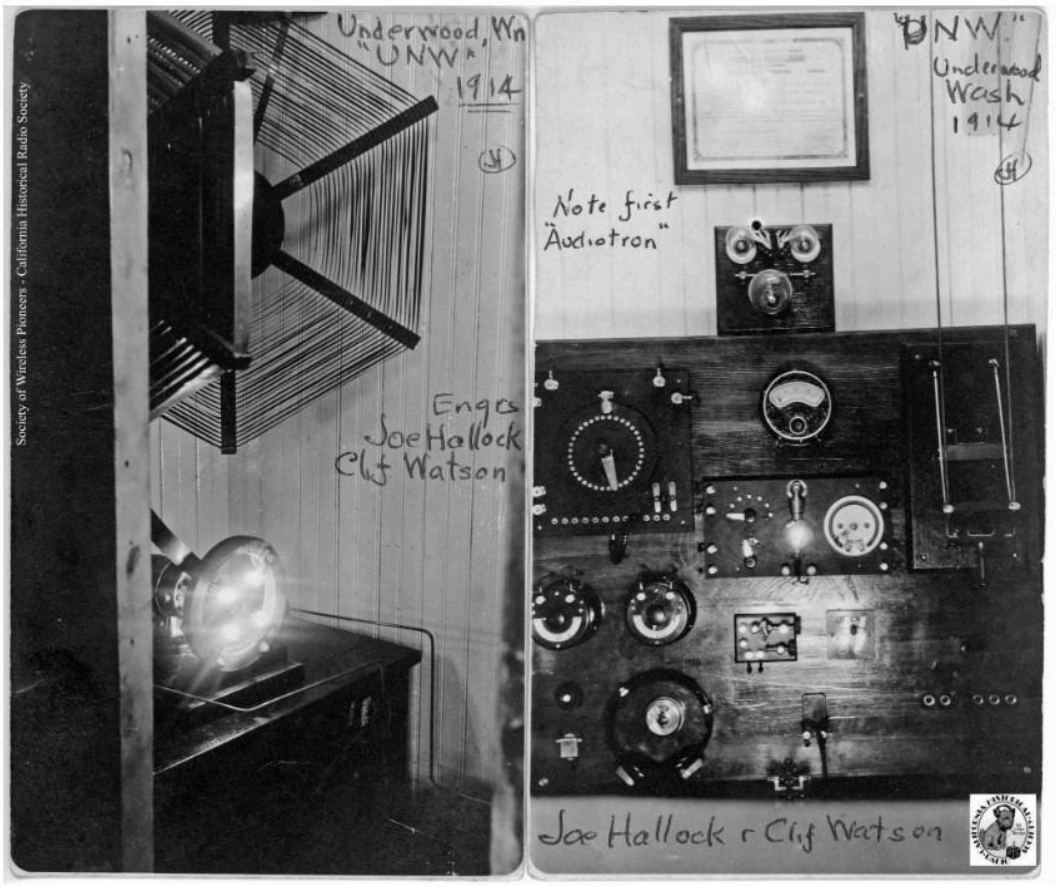


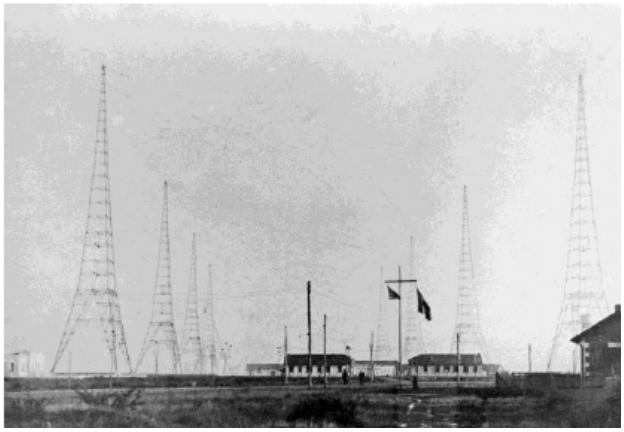
Figure 1 -Two views of station UNW in Underwood, WA. The photo on the left shows the rotary spark gap in action. The photo on the right shows receiving equipment including a DeForest spherical audion. Photos courtesy of CHRS (SOWP)

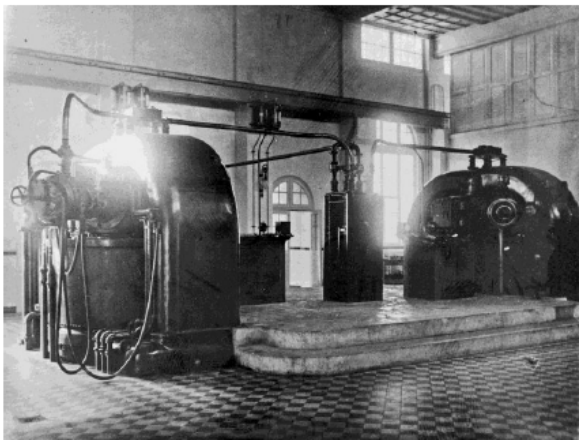
[1] For further details, please consult the resources listed in the Recommended Reading section at the end.

In 1914, Hallock & Watson built and operated a spark station at the Condit hydroelectric plant on the Salmon River near Underwood, Washington. The station started out with a stationary spark gap transmitter, later utilizing a rotary. The electrical utility used the Condit station for load dispatching. The other terminal was at the company offices in the Pittock Block in Portland. The station's call letters, UNW, were later changed to KGO.[2] The company claimed this was the first time a utility had used wireless for this purpose anywhere in the nation.

In the mid-teens, Hallock & Watson separated temporarily. Clif went into the US Navy where he became a Commander in charge of the Naval Radio Laboratory at Mare Island, California. He married Clara Moore in San Francisco in 1918.

[2] Later used in California by the Altadena Radiofone and eventually by a Bay-area broadcaster.





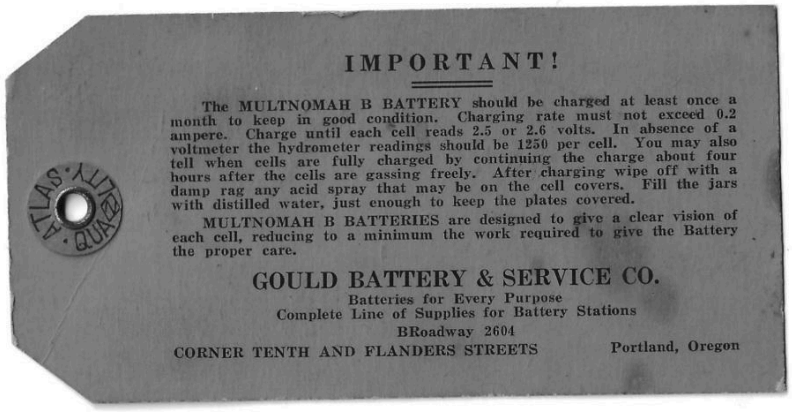
Figures 2 & 3 - The US Navy arc station in Lafayette, France.
Photos courtesy of CHRS (SOWP)

Joe went to France as an engineer at the powerful US Navy arc station in Lafayette. After World War 1, Federal Telegraph sent Joe to China where he supervised the installation of two arc transmitters for the South China Republic. His son, Senator Joseph Theodore “Ted” Hallock, was born in California in1921 while Joe was supervising the construction of a large wireless station at Long Beach.

1921-1923

The Beginnings of Hallock & Watson
Hallock & Watson got back together again in Portland in late 1921 where they formed the Hallock & Watson Radio Service and opened a radio parts store at 192 Park St. Hallock & Watson did design work for Northwestern Radio Manufacturing Company "NORCO," owned by Charles L "Charlie" Austin, and became NORCO's exclusive distributor. Accordingly, the Hallock & Watson ads from this period regularly pictured NORCO radios and components though they were not made by Hallock & Watson.

By April 1922, the company was advertising crystal sets, radio batteries, and other parts. Ads list the Federal Junior and Deforest Everyman crystal sets for $25 each. The store sold kits of parts for building regenerative radios and one-tube amplifiers. Hallock & Watson also sold radio components made by Marshall-Gerken of Toledo, Ohio.


IMPORTANT!

The MULTNOMAH B BATTERY should be charged at least once a month to keep in good condition. Charging rate must not exceed 0.2 ampere. Charge until each cell reads 2.5 or 2.6 volts. In absence of a voltmeter the hydrometer readings should be 1250 per cell. You may also tell when cells are fully charged by continuing the charge about four hours after the cells are gassing freely. After charging wipe off with a damp rag any acid spray that may be on the cell covers. Fill the jars with distilled water, just enough to keep the plates covered.

MULTNOMAH B BATTERIES are designed to give a clear vision of each cell, reducing to a minimum the work required to give the Battery the proper care.

GOULD BATTERY & SERVICE CO.
Batteries for Every Purpose
Complete Line of Supplies for Battery Stations
BRoadway 2604
CORNER TENTH AND FLANDERS STREETS Portland, Oregon

Figure 4 - Gould Multnomah B battery instruction card

The Hallock & Watson store stocked some locally-made radio batteries. Allen Brothers made radio batteries here in Portland. The Gould Battery & Service Company, another Portland manufacturer, produced "Multnomah" brand A and B radio batteries.

The Panel-Style Regenerative Kit
In 1922, "panel sets" were very popular with radio hobbyists. Buying component panels allowed experimenters to purchase radios one component at-a-time as money allowed. They also allowed people to experiment with their own circuits or rearrange their panels to try the latest circuit published in the radio column of the newspaper. Folks were free to mix-and-match between brands to optimize their sets. Some panels contained a single component. Others had multiple parts.

Here are some of the many companies that made them:

- Deforest had their MR-6 Interpanel receivers
- Jewett Manufacturing had its "ABC" Sectional Receiving Units

- Pye had its Unit System
- Remler had their own elaborate panel designs

NORCO produced several types of panel components which were sold by Hallock & Watson.

Figure 5 - Hallock & Watson panel radio ad The Oregon Journal 7/9/1922

In July 1922 Hallock & Watson began advertising their own panel set as a kit for building a regenerative receiver. Their “Single Circuit” one-tube kit included a NORCO variocoupler panel and various other parts available from Hallock & Watson’s store. The radio tube, headphones, and batteries were purchased separately. The base kit could be upgraded with an audio amplifier and horn speaker to allow others to listen in.

The 3/16” thick Mahoganite hard rubber front panel provided with the kit measured just 8” x 15” meaning that the finished product probably looked nothing like the illustration in the ad shown in Figure 5. Instead, the assembled Hallock & Watson panel likely sat alongside the NORCO variocoupler panel with wire jumpers connecting the two components.

The market for panel sets was short-lived. Dedicated experimenters could enjoy greater flexibility and save money by breadboarding their projects from loose parts. Consumers wanting a radio to listen to could save time and money by choosing a prewired and tested home receiver from the many that were coming on the market. The last gasp of the panel radio market occurred in 1923 when RCA/Westinghouse introduced their RA-DA-AR-AT component system.

Inventory Issues?
Several Hallock & Watson newspaper ads from 1922 used phrases like “deliveries are gradually improving.” This leads us to believe that the store may have been having inventory control issues.

A January 1924 note from Joe Hallock to a customer in Longview, Washington hints that the inventory troubles may have been recurring:

> “Shipt[sic] your receiver only this pm by stage…via Ranier [Oregon] – will-call at Rainier. This dope so you will be sure to pick it up. No Rola horn [speaker] but will have one in [a] few days. JH”[3]

A December 14, 1924 Hallock & Watson ad in *The Oregon Journal* says:

> If you are planning on a radio for Christmas, ACT NOW!! The tremendously increased demand of the last two months has brought on such a scarcity of some sorts of radio receivers, loudspeakers, and tubes that not a dealer in the city will be able to give one-half of the deliveries or service he will be called on to do in the next ten days. Therefore, we ask you as a real favor to the radio trade – Select Your Set and Act Now!

Hard to know now, a hundred years later, whether this was just salesmanship or if there was more to the story.

7XI and KGG
The partners were doing experimental broadcasting work in the early 1920’s. Joe Hallock described their first broadcast station:

> "We ordered an Esco motor-generator, applied for a broadcast license, built a five-watt transmitter, and put up a flat top antenna above the building. The station first operated using the experimental call 7XI. The license, KGG, was issued March 11, 1922, and was the first to be issued to Portland. It beat the Oregonian's KGW by just 6 days.[4][5]
>
> "We constructed a studio in the Oregon Journal [Newspaper] Building and ran two wires over the roofs and across Broadway to the little transmitter in our store's window. From here we broadcast Madame Schumann-Heinck, Ray Berganson's Orchestra, The Journal Juniors, and many others. With a 50-watt linear amplifier we were heard in every state, the Hawaiian Islands, and Midway."[6]

[3] Joe Hallock letter January 26, 1924
[4] Tex Sloat confirmed the timing through the official files in Washington DC.
[5] ”The Hallock and Watson Story pg. 8.
[6] ibid

Figure 6 - Hallock & Watson RF 22 ad. Radio July 1924

RF 12 & RF 22

Hallock & Watson began carrying Federal brand receivers and parts in January 1923. Their first complete receivers, the RF 12 and RF 22, were built with Federal transformers and other components.

Hallock & Watson got their start selling NORCO receivers and parts. In 1923, Roy Yonge began manufacturing Hallock & Watson's own brand of five-tube[7] receivers. The RF 12 and the RF 22 sold for $100 and $125 respectively. Since the company was selling Federal-brand parts at the time, Hallock & Watson's RF sets were assembled using Federal transformers, knobs, rheostats, and other parts.

The RF sets used wooden cabinets with beautifully marbleized red and black hard rubber front panels. Unfortunately for collectors and preservationists, the Mahoganite panels tend to become brittle, shrink, and break over time.

Actual production numbers of the RF sets are unknown and they may not have been the company's most popular offerings. Neither set is common today; the RF 12, in particular, is very scarce. A June 1926 Lectro Sales ad lists RF 12s on clearance for just $25.[8] A Hallock & Watson RF 22 ad from January 1924 asserts that they were being enjoyed by "49 satisfied users"[9] – not much of an endorsement.

In 1923, the company was incorporated with Joe Hallock as president and Clif Watson as treasurer. Kay O'Leary, with a reputation as "a very fine mechanic," managed the Hallock & Watson shops.

[7] The RF-22 was advertised several times as a five-tube radio. But, examples exist with only four tubes.
[8] Lectro Mfg and Sales Company ad *The Oregonian* 6/6/26 pg. 68.
[9] Hallock & Watson ad *The Oregonian* 1/13/24 pg. 58.

1924

Camping

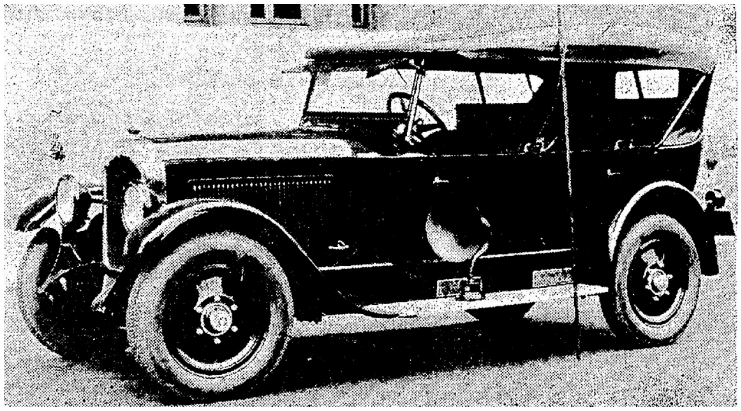


Figure 7 - A new Studebaker touring car with a Hallock & Watson radio installed. Note the horn speaker on the running board and the pole-mounted loop antenna. The Oregonian 6/8/1924

As the 1924 summer vacation season approached, Hallock & Watson joined in a promotion with *The Oregonian* newspaper and two other local merchants. The showroom of the John K Leander Sudebaker dealership at the corner of Broadway and NW Everett St was decorated with complete outdoor scenes and dubbed “Camp Studebaker.” The Meier & Frank department store provided examples of the latest in car camping equipment. Hallock & Watson provided portable radios and accessories.

Figure 8 - The Leander Studebaker showroom became “Camp Studebaker” for the week. A horn speaker sits near the car. The Oregon Journal 6/15/1924

The run, from June 9 to 14, was timed to coincide with the 1924 Portland Rose Festival and was promoted to locals and tourists alike. During the week-long promotion, concerts and special programs from KGW, *The Oregonian’s* radio station, were played in the Studebaker showroom and from a touring car parked in front of the dealership.

After the camping fair, Clif Watson and his family drove one of the Studebakers over the Coast Range to the beach at Seaside, Oregon. From mid-June to the end of July, he entertained beachgoers and residents with nightly concerts from KGW in Portland

seventy-five miles away. This not only demonstrated that Hallock & Watson radios could be used in cars and were adaptable for camping but also showed that they performed well enough to pick up distant stations.

A few weeks later, Roy Yonge made his own "radio visit" to the Oregon coast. At the time, the Cape Mears lighthouse (one-half mile from Oceanside and five miles from Bayocean[10]) had three resident light tenders but had no phone service or mail delivery. Roy approached a keeper about installing a radio. However, the keeper was very doubtful on account of the lighthouse's rocky location, which contained a lot of iron.

Roy returned to the lighthouse, carrying a radio outfit from Oceanside by pack and installed it in the lighthouse. The radio received excellent signals. And beyond the entertainment and news value, it gave the station the ability to receive Western Union time signal broadcasts. Until the Hallock & Watson radio was installed, it had been the keeper's custom to keep track of the time by solar observations!

The Best Superhet

Figure 9 - Hallock & Watson Best Superhet ad. The Oregonian 8/14/1924

Gerald M. Best's design for a superheterodyne receiver was published in the May 1924 issue of *Radio* magazine. On October 12, Hallock & Watson announced that they were assembling four sets a day using Gerald Best's design.

The Best Superhet was *not* a set *manufactured* by Hallock & Watson, but an *assembled* item using mostly Remler brand parts. The Remler parts alone sold separately for about $75 in 1924. Remler sold their own kit based upon the Best design for $200. Perhaps because of the custom-nature of their work, Hallock & Watson's retail price for the assembled superhet was never listed in *The Oregonian.*

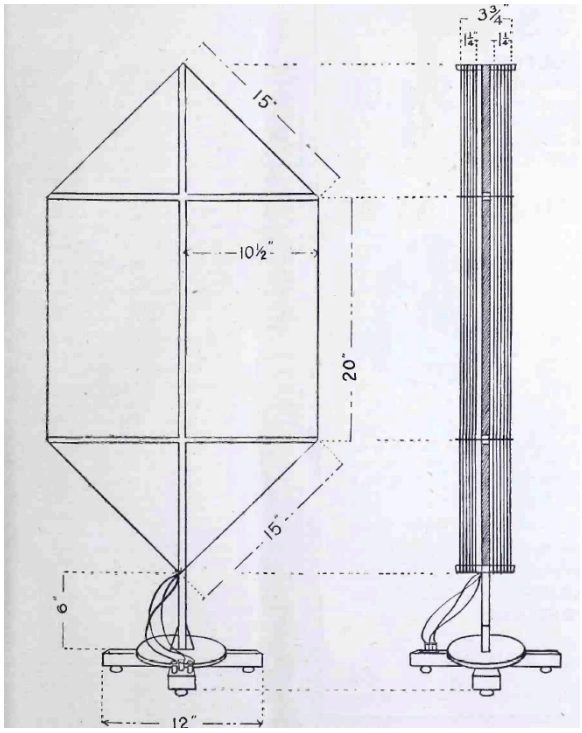
[10] The community of Bayocean, Oregon experienced extreme erosion from the Pacific Ocean and was completely obliterated by 1960.

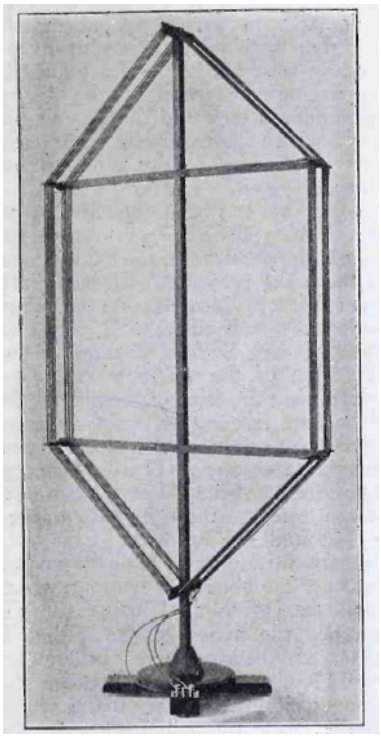
The typical Best Superhet used 199-type tubes, three IF stages, and a loop antenna, needing no other antenna or ground. Some sets were designed to use the earlier, short-pin UV-199 tubes. Other sets used the improved long-pin UX-199 tubes. Where known, the Product Compendium details the tube line-ups of the examples pictured.

Hallock & Watson sold the Best Superhet in several styles of wooden tabletop cabinets and portable cabinets. Production started in 1924 and continued into 1925.

Hallock & Watson wasn't the only local manufacturer that read Gerald Best's 1924 article[11] and recognized the quality of his design. In the last half of 1924, *The Oregonian* carried ads from companies such as Brown's Radio Shop, Langhorne, Lectro, Stubbs Electric Co, and Weed's Radio Shop for their own versions of the Best Superhet. At least in the case of Langhorne, they were making their own transformers and probably didn't use Remler's.

[11] An abbreviated version Best's *Radio* magazine article was reprinted locally in *The Oregon Journal* on September 14, 1924. To the left of the story, there was a feature by Clif Watson extoling the virtues of the superhet. Elsewhere on the page, there were ads for the Best Superhet from Hallock & Watson, Weed's Radio Shop, Stubbs Electric, and other Portland retailers.





Figures 10 & 11 - Gerald Best's loop antenna design. Radio May 1924

The loop antenna was an essential part of the Gerald Best superhet design and his article included plans for building one. Hallock & Watson's loop antenna followed Best's design very closely. The example shown in the Product Compendium came with a Hallock & Watson (Best) superhet but is unmarked.

In addition to selling Best superhet kits and assembled units, Hallock & Watson was also advertising RCA's Radiola III and Radiola-brand superhets at this time.

KGG Signs Off

On May 31, 1924, *The Oregon Journal* newspaper announced that it was leaving the field of radio broadcasting. "After pioneering the field of radio broadcasting news in Oregon for two years, *The Journal* has decided to retire[12] from that activity, the broadcasting Saturday night being the last."[13] "Coincident with the discontinuation of the news broadcast, Hallock & Watson closed down last night their station KGG for the summer months at least."[14]

On June 19, 1924, KFQN signed on using the transmitter that had formerly been KGG's. KFQN, Oregon's first religious station, was licensed to Portland's Third Baptist Church at the corner of N Vancouver Ave and Knott St. "Perhaps Joe Hallock was a member of the congregation, or perhaps he just saw an opportunity to sell the KGG

[12] The Oregon Journal's "retirement" from radio was very short-lived. They quickly affiliated themselves with a serious of other broadcasters.
[13] *The Oregon Journal* 6/1/1924 pg. 1
[14] ibid

equipment to the church. Either way, it was Hallock who signed the May 1924 license application on behalf of the church and apparently maintained the equipment."[15]

As Joe Hallock explained later, "We were too busy" [with other business interests to be broadcasters].

Radio Repair Shop

Hallock & Watson established their retail sales location at 192 Park St in 1922. On July 20, 1924 announcements in *The Oregon Journal* and *The Oregonian* said that Hallock & Watson Radio Service opened a radio repair shop at the same location.

According to the announcements, they were offering radio wiring, repairing, and rebuilding. Sets were also being built to order. All services were performed under the "personal supervision of Mr. RC Yonge."[16]

[15] Pioneer Mikes pg. 68.
[16] *The Oregon Journal* 7/20/1924 pg. 56.

1925-1926

Figure 12 - Hallock & Watson TR-5 ad. The Oregonian 2/15/1925

Prior to 1925, products made by the company were simply identified as “Hallock & Watson.” Two changes occurred in early 1925 when manufacturing formally shifted to Hallock & Watson Radio Corp.

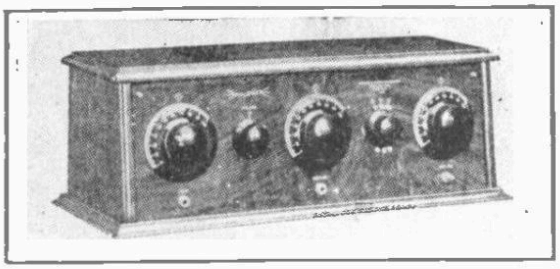
First, products now displayed the full company name: “Hallock & Watson Radio Corp.”

Second, although the “Halowat”[17] brand name had been used in advertising for some time, the 1925 models were the first to actually bear the “Halowat” logo as shown in Figure 13.

For expedience, we may use the names interchangeably except where it is necessary to differentiate for clarity.

Figure 13 - Hallock & Watson’s engraved “Halowat” lightning-bolt logo

[17] The Halowat brand name was derived from the first few letters of the last names of Joe Hallock and Clif Watson.



Five-Tube Receiver

Radio Retailing, May, 1925

A special circuit controlled by a three-position switch is incorporated in this five tube tuned radio frequency receiver, so that its operation on the lower wave lengths will be more satisfactory, explains the Hallock and Watson Radio Corporation, 190-192 Park Street, Portland, Ore., maker of the "Halowat" receiver. The cabinet is hand finished, dark walnut with a sloping, walnut formica panel, 7 in. x 21 in. x $\frac{3}{16}$ in. General radio condensers, low-loss radio frequency coils and "Hedgehog" audio frequency transformers are used. Intended retail price is $90.

Figure 14 - Halowat TR-5 ad. The cut shows an "Early 1926" style set. Radio Retailing 5/1925.

The Hallock & Watson Radio Corp TR-5's

TR-5's were the first Hallock & Watson products to use the tuned radio frequency circuit. As a simple and inexpensive "three-dialer," they were, perhaps, the company's most competitive "mainstream" offering; during their brief heyday in the mid-1920's, "everyone" was making TRFs and they were wildly popular with consumers.

The Hallock & Watson TR-5's were introduced in February 1925. Over the two-year production run, they went through several design changes and at least four distinct versions are known. Collectors have adopted the "1925, 1926 early, and 1926 late" nomenclature to keep the different models straight. However, since an "early 1926" set is shown in the May, 1925 ad in Figure 14, those labels are collector's conventions only.

<u>The 1925 TR-5:</u>

- uses five Type UX-01-A tubes
- uses a rheostat to control filament voltage in the first RF stage
- came with an instruction pamphlet and did not have a station log

<u>The 1926 TR-5 (early version):</u>

- uses four Type 01-A tubes and a Type UX-112 tube in the final amplifier stage
- has a three-tap wavelength selector switch
- has a black Bakelite front panel with no engraved border
- came with an instruction card/station log under the lid

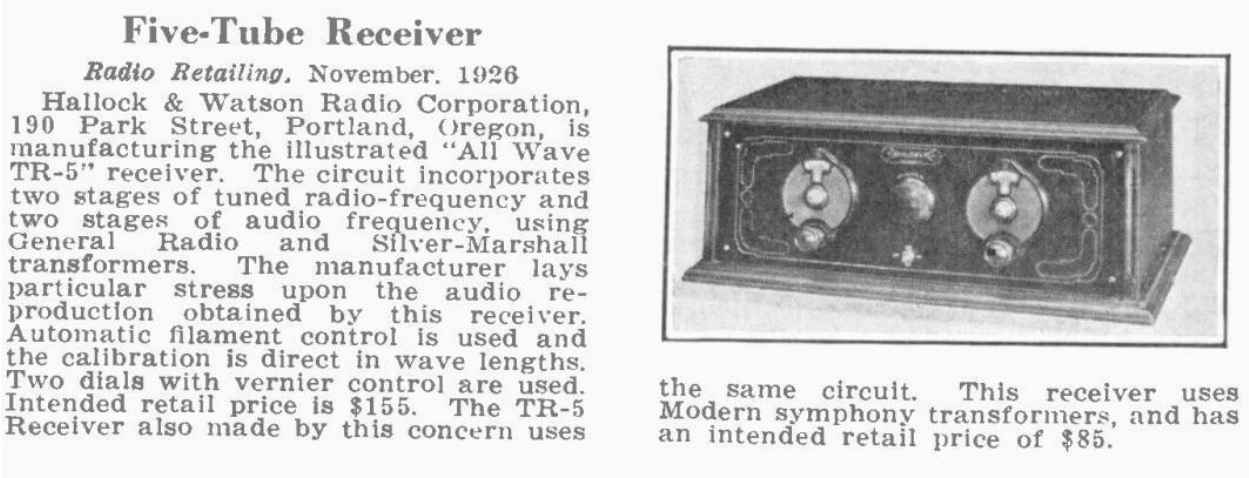
<u>The 1926 TR-5 (later version):</u>

- uses four Type 01-A tubes and a Type UX-112 tube in the final amplifier stage

- has a three-tap wavelength selector switch
- has a brown front panel with an engraved border
- came with an instruction card/station log under the lid that showed their new location in the Wilhelm Building (NW 8th & Everett St).

The “home version” of the TR-5 sold for $75. In June 1925, the company offered the TR-5 for $90 in a portable version for car camping that included an auto loop aerial and provision for operating from a six-volt car battery.

By the summer of 1926, the company began discounting the price of the TR-5 at the same time as it was introducing the All Wave AW-5.



Five-Tube Receiver

Radio Retailing, November, 1926

Hallock & Watson Radio Corporation, 190 Park Street, Portland, Oregon, is manufacturing the illustrated "All Wave TR-5" receiver. The circuit incorporates two stages of tuned radio-frequency and two stages of audio frequency, using General Radio and Silver-Marshall transformers. The manufacturer lays particular stress upon the audio reproduction obtained by this receiver. Automatic filament control is used and the calibration is direct in wave lengths. Two dials with vernier control are used. Intended retail price is $155. The TR-5 Receiver also made by this concern uses the same circuit. This receiver uses Modern symphony transformers, and has an intended retail price of $85.

Figure 15 - Halowat late-style AW-5. This cut shows a set with very elaborate panel engraving. Radio Retailing 11/1926.

The Hallock & Watson All Wave AW-5’s

> “Tone quality, greatest simplicity and increased selectivity – these three most desirable factors in radio receiver construction have been successfully attained in the new Hallock & Watson ‘All Wave’ set which will soon be produced in Portland.”[18]

The Halowat All Wave Type AW-5 receiver was developed in late 1925. Marketing of the early version occurred by February, 1926. Testing continued over the spring and summer of 1926. Prices started at $155.

The AW-5 was available in three cabinets, with and without battery storage compartments.

[18] Oregon Journal 8/15/1926

- Model A is a compact tabletop receiver
- Model B has a larger cabinet that includes storage compartments[19] at both ends for batteries or a “B” battery eliminator.
- Model C is a highboy-style console version of the Model B.

The AW-5 covered 185-570 meters. Two vernier dials controlled the tuning.

We’ve identified both an early and a late version of the AW-5 Model A. As shown in the Product Compendium, the ad for the early version of the Model A pictures a front panel with multiple knobs including a three-position wave switch. This version closely resembles our Model B example.

The later version of the Model A features a greatly simplified front panel. The wave switch in this version sits atop a coil inside on the chassis. The early Model A has its tuning capacitors side-by-side, ganged together by a belt of piano wire. The later version has its tuning capacitors sitting one-behind-the-other and linked with a universal joint. Instead of having tubes in a single row, the later version has them in two rows.

The five-tube AW-5 was designed to use four UX 201A’s and a UX 112 amplifier. Provisions were made to accommodate a UX 200 detector – our late Model A has a switch alongside the detector socket labeled “200A / 201A.” And a 71A tube could be used instead of the UX 112. Whichever tubes the owner selected were a separate purchase, of course.

Ads for the AW-5 tout its improved design and ultra-modern interstage transformers for giving it the “widest frequency range” and the “most marvelous tone.” To this end, the AW-5s used General Radio transformers instead of the Hedgehog brand transformers used in earlier models.

In October, Hallock & Watson displayed the three AW-5 models in their booth at Portland’s 1926 Radio Expo. None of their other Halowat receivers were shown.

Production of the TR-5 and the AW-5 models stopped at the end of 1926.

[19] Though a B eliminator could be stored in one of the battery compartments, it would have sat beside the radio when in use to allow heat to escape.

Figure 16 - Walker-Torgler ad. The Oregonian 12/19/1926

Walker-Torgler

In August 1926, a story in *The Oregonian*, announced that the Walker-Torger Radio Company had acquired Hallock & Watson's retail stock and service business. In a companion piece, Hallock & Watson Radio Corp announced that, going forward, they would only be manufacturing. Their longtime storefront at 192 Park St was accordingly shuttered.

The Walker-Torgler principals, RE Walker and AR Torgler, had previously worked at Hallock & Watson. Ralph Walker did Hallock & Watson's repair work for about five years. At the new company he planned to continue to specialize in servicing, repairing, and constructing new sets. Arthur "Art" Torgler, who had been with Hallock & Watson for two years, planned to handle sales at their store and outside sales work.

Walker-Torgler opened a new store in Portland's Behnke-Walker Building, 226 NW 11th Ave. In what was apparently an amicable business relationship with Hallock & Watson, they planned to stock Halowat radios exclusively and carry the same lines of parts and equipment that had previously been handled.

The Infra-Dyne receiver mentioned in Figure 16 bears a close resemblance to a Hallock & Watson product but was produced under the Walker-Torgler label. Like the Hallock & Watson's Best Superheterodynes, the Infra-Dyne was another radio that was mostly comprised of Remler parts, including Remler's Infra-dyne amplifier.

The history of Walker-Torgler and their products will be reviewed in a separate story.

Regional Reps

In addition to their arrangement with Walker-Torgler, in 1926 Hallock & Watson enlisted several regional representatives and distributors to sell their output.

The Fobes Supply Company, with branches in Portland and Seattle, was granted rights to distribute Halowat receivers in Oregon, and western Washington.

In eastern Washington, Idaho, and Montana, Spokane's Interstate Radio company was named the chief distributor. Ads of the time announced that other territories were available and sought inquiries.

The Electric Appliance Company of San Francisco distributed Halowats in their region.

Brown Radio Shop in Portland became an authorized Halowat dealer in late 1926.

Harue Akiyama[20] and her husband, Ritsuji Roy Akiyama, owned and operated two "R. Kohara Co." Asian-import stores in downtown Portland before World War 2. R Kohara was engaged to export Hallock & Watson radios[21] and likely facilitated the company's sale of 250 Halowats to Japan in 1926.[22]

1927

A House Divided
In 1926, Hallock & Watson announced their intentions to go into radio manufacturing exclusively. They set the process in motion by selling their retail and service operations to Walker-Torgler, shuttering their 192 Park location, and engaging regional representatives to sell their output.

In March 1927, Hallock, Watson, and Yonge, took an additional step and essentially divided the company. And pains were taken to inform the public that there was "no connection" between the two.

Hallock & Watson Radio Corporation was created to run radio manufacturing and Bakelite sales at the Wilhelm Building.

Hallock & Watson Radio Service (a partnership between Hallock, Watson and Yonge) was created to reopen and operate a retail sales and service operation at 192 Park, their previous location.

Hallock & Watson Radio Corporation
Until this time, Halowat radios had been manufactured in a shop building at Roy Yonge's home in Multnomah Village. Anticipating increased sales volume, Hallock & Watson shifted manufacturing to a large space on the third floor of the Wilhelm Building at NW 8th and Everett St. This new 2,100 square foot space was being outfitted for large volume manufacturing in September 1926.

[20] Roy (1891-1955) and Harue Akiyama (1898-1986) were "Issei" (Japanese immigrants).
[21] Radio Retailing 10/1926 pg. 103.
[22] The Oregonian 9/19/1926 pg. 67.

Hard Lessons
Unfortunately, within a short time, the company experienced some hard lessons.

First, in January 1927, Hallock & Watson Radio Corporation began offering "Bakelite and Formica services" at their Wilhelm Building location. Describing themselves as "Portland's Radio Pioneers," the firm announced that they had Bakelite and Formica for sale and could engrave, drill, and machine the same for radio kit builders. However, the days of radios with brown or black Bakelite front panels were rapidly coming to an end. By this time, leading manufacturers were favoring designs with metal panels, all-wood, or all-metal cabinets.

Second, Hallock & Watson were not prepared for the realities of scaling up the volume of their radio manufacturing. Hallock & Watson's line of home receivers was essentially handmade from commercial parts. In this market, they were trying to compete with the low-priced and high-volume manufacturers from the east. Atwater Kent, Crosley, Philco, RCA, Zenith and others had huge factories and massive marketing networks in place. Every new model was well-supported with advertising campaigns, and their sets were selling by the hundreds of thousands. By comparison, Hallock & Watson had an inspired team and could provide personal service. But they were still making radios by hand and had to ask higher prices to cover costs. Consequently, their radios never really enjoyed consistent sales beyond the local area and sales volume never amounted to much.

So, in an effort to save the company, Hallock & Watson again shifted directions. Manufacture of their broadcast receivers was soon curtailed. Their manufacturing arm (Hallock & Watson Radio Corp), focused on serving their broadcasting customers and producing Porta-Pac 8 portables for the commercial market. The Porta-Pac was in-demand and, because of its unique features, did not face as much competition from the larger companies.

Hallock & Watson Radio Service
Hallock and Watson had had only just closed their retail sales and service location in 1926. Bowing to continuing requests for services, Hallock & Watson Radio Service reopened on March 21, 1927, at their former location of 192 SW Park.[23]

Roy Yonge was largely reassigned from manufacturing to managing the new store. Dale Weber, a long-time employee, assisted him. Hallock & Watson sought out franchises from the national makers which allowed them to offer the popular brands and enjoy income without supporting their own manufacturing and marketing infrastructure. They started out selling Fada radios, the remaining stock Halowat TR-5 and AW-5 receivers, parts, and tubes. Soon, Crosley and Atwater-Kent Radios were added to their retail offerings.

[23] A full timeline of the company's complexed and confusing list of moves is documented in "Hallock & Watson Names, Dates, and Locations" which appears at the end of the story.

Of course, there is always a downside. They no longer had Halowats to sell through their newly set up network of jobbers and they were seeing the demand for one-dial and AC powered sets rendering their old lines obsolete. And they were rejoining the already-crowded market of local retailers.

If Hallock & Watson had a competitive edge in the retail market, it would have been their local name familiarity and the strong skills of their small team. However, they had already turned Walker and Torgler loose and were now competing head-to-head with them. While Hallock & Watson hoped for fresh success in the retail and service market, they were counting on sales of the Porta-Pacs, and perhaps developing new product(s), to stay afloat long-term.

Porta-Pac 8 Portables

In June 1927, Hallock & Watson announced their new Porta-Pac 8, an eight-tube portable superheterodyne. The set featured a front cover with a built-in loop antenna. It also had a built-in speaker; the only Hallock & Watson radio to have one. With the provided battery storage, the Porta-Pac was completely portable, needing no accessories or special set up. “Portable” is a relative term, of course. Fully-equipped with batteries, a Porta-Pac weighs over 30 pounds.

Hallock & Watson manufactured two types of Porta-Pac 8: Model A and Model B.

The Porta-Pac 8 Model A included a meter to measure signal intensity. With its built-in directional loop antenna, it was advertised as both a portable receiver and a trouble shooting device for locating sources of radio interference. The Model A sold for $160.00 complete with tubes and batteries.

The Porta-Pac 8 Model B omitted the signal strength meter and sold for $120. At least two versions of the Model B have been found. Both the early and later versions use seven UX-199 tubes and a UX-120 power output tube.

The earlier version of the Porta-Pac Model B:

- is larger (18” wide x 8” deep x 13” high)
- the front cover is attached to the top of the cabinet via a pantograph system that permits opening/closing and swiveling the antenna
- the front panel is not marked with the company name

The later version of the Model B:

- is smaller (13.5” wide x 10.5” deep x 13” high)
- the front cover is not attached to the cabinet. Instead, a metal peg-and-socket system permits swiveling, but not tilting, the antenna
- the front panel is engraved “PortA-Pac 8”

We've heard unverified reports that a Porta-Pac 6 was made about which very little is known.

Unfortunately for Hallock & Watson, patent lawyers from RCA soon threatened legal action over the firm's unlicensed use of the superheterodyne circuit. Though production of the Porta-Pacs apparently continued surreptitiously, advertising for the portables was severely curtailed following the initial June announcement.

Perhaps as a result of RCA's threatened litigation, the front panel of our early Porta-Pac Model B is unlabeled. The panel of our later Model B simply says "PortA-Pac 8." No examples have been found marked with the "Hallock & Watson" name.[24] Though Hallock & Watson stopped advertising the Porta-Pac as a superheterodyne to avoid problems with RCA, they did begin advertising a very similar-sounding "Halowat Portable 8" eight-tube portable.

Halowat Radio Corporation

Following the introduction of the Porta-Pac 8, Hallock & Watson shifted away from manufacturing their own sets and focused on servicing radios and retailing other lines.

The partner's commercial radio activities flourished in the late 1920's as more broadcasters became licensed and were putting up transmitters. Hallock & Watson designed and built at least ten radio broadcast stations in the Pacific Northwest. KOIN's new site at Sylvan was completed in April 1926. Other stations included KFEC (Portland), KFJR (Portland), and KFIF/KBPS (Portland's Benson High School).[25]

In July 1927, Hallock & Watson Radio Corporation announced that the name of their manufacturing arm had been changed to Halowat Radio Corporation. We believe that production of home receivers had stopped by this time and no sets have been found engraved with the name "Halowat Radio Corp."

Figure 17 - Nameplate from the 1931 KGPP low-power transmitter

[24] Our unlabeled Porta-Pac came with an original advertising brochure (shown in the Product Compendium) that confirmed its origins. Later, Joe Hallock examined our Porta-Pac and assured us that it was made by Hallock & Watson. Joe Hallock told us that Hallock & Watson manufactured a total of 377 Porta-Pac 8 portables.

[25] The KBPS station is described in NORCO Radios.

Depending upon how you look at it, the name plate on the 1931 KGPP transmitter *could* be read as either “Hallock & Watson Radio Corporation” or “Halowat Radio Corporation” (or both).

Also in July 1927, the Hallock & Watson retail store that had been operating as a partnership doing business as Hallock & Watson Radio Service, was incorporated as Hallock & Watson Radio Service.

At Portland’s 1927 fall Radio Show, Hallock & Watson Radio Service displayed Halowats[26] and the latest models from Crosley and Fada. The list of the actual models shown has been lost to time. Following the show, the firm added Atwater Kent radios to its other lines.

1928

By 1928, Hallock & Watson no longer ran ads for radio parts for the kit builder because of the decline in the radio kit and assembly market.

Hallock and Watson Radio Service continued as dealers for Atwater Kent radios. The AK battery-operated Model 33 sold for $80.00. The Model 35, the first in AK’s series of metal-cabinet radios, sold for $80.00. The Model 35 was a one-dial receiver but it still required an external power supply and a separate speaker. Soon, other models, such as the AK Model 53 “stove” console, addressed these issues.

Missed Opportunities
By mid-year, consumers in urban areas were seeking the convenience of one-dial, AC-powered radio and the demand for battery-operated radios was declining. The Atwater Kent Model 37 was advertised for $92.00 without tubes. Later, the AK Model 40 sold for $81.00, also without tubes. Hallock & Watson never manufactured ac-powered or one-dial sets, missing those emerging markets.

In 1928, Hallock & Watson Radio Service was advertising that “portable radios” (Porta-Pacs) were available to rent. By this time, the firm was also selling Crosley, Gilfillan, Sparton, and Fada radios. Though they were authorized dealers for these brands, they were not the *exclusive* Portland representatives for these lines. Hallock & Watson was listed as one dealer among Crosley’s six Portland retailers. Sparton’s ads in *The Oregonian* listed Hallock & Watson as one of seventeen Portland dealers for their brand.

1929

In 1929, Hallock & Watson gave up selling Atwater Kent and Fada radios. They continued selling other national brands including American Bosch, Crosley (including Crosley’s novel IcyBall refrigerator), Freed, Gilfillan, Lyric, Philco, Silver, and Sparton.

[26] Most likely Porta-Pacs since they had stopped making home receivers by this time.

Halowat's eastside factory, located at 406 SE Alder St near Grand Ave, was producing Porta-Pac 8 portables at this time.

Figure 18 - Under a headline of "Radio Party Held High Up in Clouds," The Oregonian printed this photo of Roy Yonge (left) and Joe Hallock (middle) loading a Porta-Pac 8 Model B onto Tex Rankin's (right) airplane. The Oregonian 5/26/1929

Famed stunt flier and flight instructor Tex Rankin flew to Portland in his Ryan monoplane to host a radio party on May 26, 1929. The purpose of the party was to demonstrate and generate publicity for Hallock & Watson's Porta-Pac 8 portables.

During his visit, Tex Rankin's plane was used to see if the Porta-Pac could receive stations despite noise from the plane's ignition system. During one trial flight, Portland's KGW came in loud and clear on a Porta-Pac Model B despite the interference. Then, Joe Hallock tuned-in a Seattle station, which also came in clearly during the daytime test, despite the great distance. Test flights were conducted from Rankin Field in North Portland near Delta Park.

Figure 19 - Clif Watson, Joe Hallock, and Roy Yonge. Oregon Journal 9/29/1929

In September 1929, the Hallock & Watson Radio Service store moved across the street from 192 SW Park to 191 SW Park. The new location afforded a larger showroom space to accommodate the eight brands they were selling at the time. Two soundproof booths were created for patrons to enjoy private demonstrations. Each booth was large enough to contain several makes that customers could listen to and compare side-by-side.

The new space included a large L-shaped service area with a test board for troubleshooting problems. N E Folen and J D McAllister (W7AAU) were performing service and repairs at the shop.

1930

In 1930, Hallock-Watson &Yonge[27] began retailing a General Electric superheterodyne along with their existing Brunswick, Crosley, Gilfillan, Rola, and Sparton lines.

Their Porta-Pac portables were offered for rental or sale in the classified sections of local newspapers. As more folks purchased receivers, complaints of interference from

[27] Although they had reportedly incorporated under the name “Hallock & Watson Radio Service,” in late 1929 ads for Hallock & Watson’s retail location were run under the name “Hallock-Watson & Yonge.”

static became commonplace. Locating sources of radio interference, such as trolley wires and power transmission lines, became an increasing priority. Consequently, power companies throughout the Pacific Northwest purchased Porta-Pac Model A's for trouble shooting.

1931-1932

KGPP Portland's Police Radio

Figure 20 - The wooden KGPP sign that hung over the Portland Police dispatcher desk.

In 1921, as the firm was just getting started, Clif Watson shared his vision of a police radio communication system with the Portland Chief of Police Leon V Jenkins. It took over ten years but, in early 1932, his dream was finally realized when the system was dedicated.

On January 8, 1930, Portland Police Chief Leon V Jenkins asked the city council for a broadcast station for fighting crime. An estimated $16,000 would be needed to build the station and several thousand dollars more would be needed annually to staff, operate, and maintain it. Since the Federal Radio Commission "FRC" had a limited number of channels available for police departments, he urged them to apply immediately. Chief Jenkins suggested an additional expenditure to outfit four patrol cars with receivers to start.

On May 20, 1930, the FRC granted authority to build a 200-watt short wave transmitter and operate on 2452 kc. The station's call letters were KGPP (Government Portland Police). In anticipation, short wave receivers were installed in the automobiles of Chief Jenkens and Captain Harry M. Niles. The Eastside Precinct 1 at 7th and SE Alder St was selected for the site of the transmitter. However, funding to actually build and operate KGPP was "not in the budget."

In September 1930, the FRC granted the city the experimental callsign W7XAV on 2452 kc with power limited to 25 watts.

The KGPP license and the city's wavelength assignment were set to lapse by March 1931 if not used. In an effort to protect the license, Joe Hallock offered to build a police transmitter at a cost of about $13,000 to $15,000 depending upon the type of construction and carry the costs until the following year when it could be budgeted for. The city declined the offer.

Determined not to let the project drop, Hallock & Watson proposed conducting tests with a small temporary transmitter that they would build. Following a trip to Los Angeles to

study their communication system, Hallock & Watson built a low-power 20-watt AM transmitter at their own expense and installed it at Portland's East Precinct.[28]

The transmitter (shown in the Product Compendium) began operating in July 1931. Even with low power, and a very limited operating schedule, the temporary station demonstrated its merit. Three Hallock & Watson Porta-Pac portables[29][30] were used in "larger prowl or shotgun squad cars"[31] to receive the W7XAV broadcasts.

Console radios with short wave tuners, such as the Sparton Model 16 All Wave, were used as monitors at police stations.

Figure 21 - 1931 Sparton Model 16 AW console radio with short wave tuning. Hallock & Watson were authorized dealers for Sparton.

In September 1931, the FRC gave the city formal authority for operation of a police emergency broadcasting service of 25 watts under a construction permit extended to December 31st. Elated with the results from their 10-watt transmitter, Chief Jenkins sought approval for a permanent station in the city's 1932 budget.

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[28] Precinct 1 was at SE 7th and Alder from 1927 until 1972 when it moved to the Penumbra Kelly Building at 47th and E Burnside St.

[29] *Call Letter* 9/2008. The directionality of their loop antennas seems like it would have been a disadvantage when using Porta-Pacs in a moving vehicle.

[30] At this time, police cars only had receivers, not transmitters. When a radio call was received, police call boxes with telephones were used to communicate back to the dispatcher. In 1928, Sgt Drapeau compiled a book with the location of all call boxes, police signal lights, and fire alarm boxes in Portland. The book lists 294 call boxes. The one-way system was used until 1939 at which time two-way radios were installed in cars.

[31] Clif Watson undated testimony before the Portland City Council (ca. July 1934).

At the end of January, the city opened bids for a 500-watt station. Hallock & Watson won the bid for building the station for $11,450. They also bid to supply eight monitoring sets for an additional $1,050. The Western Auto Supply company won the bid to supply and install 20 six-tube Motorola receivers and dynamotors for $1,600.[32]

Once the contract was signed, transmitter construction continued through the winter and spring at Hallock & Watson's shop on Grand Ave.

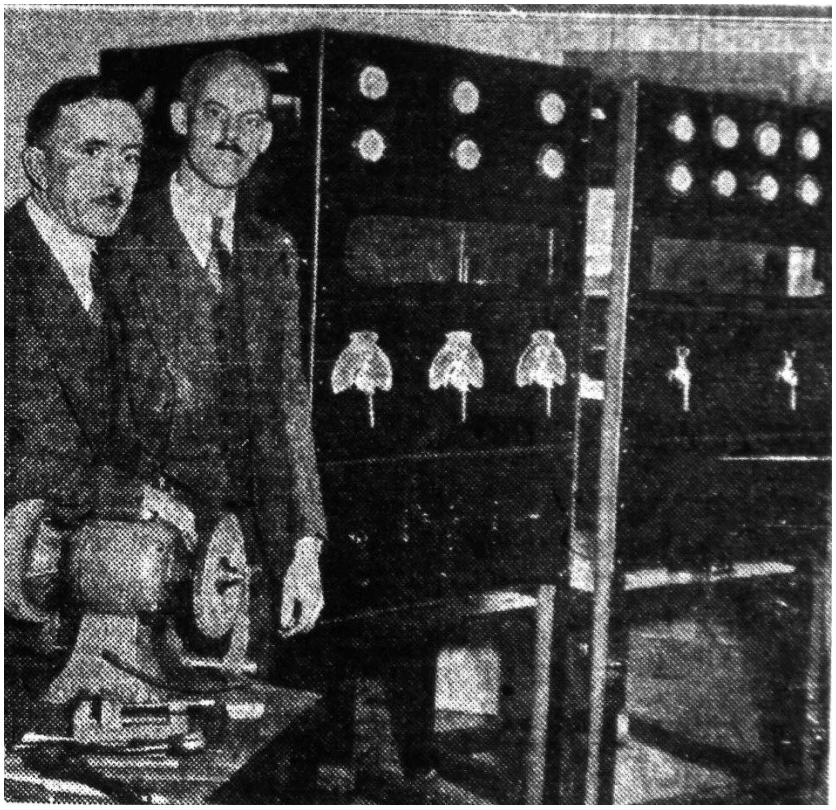
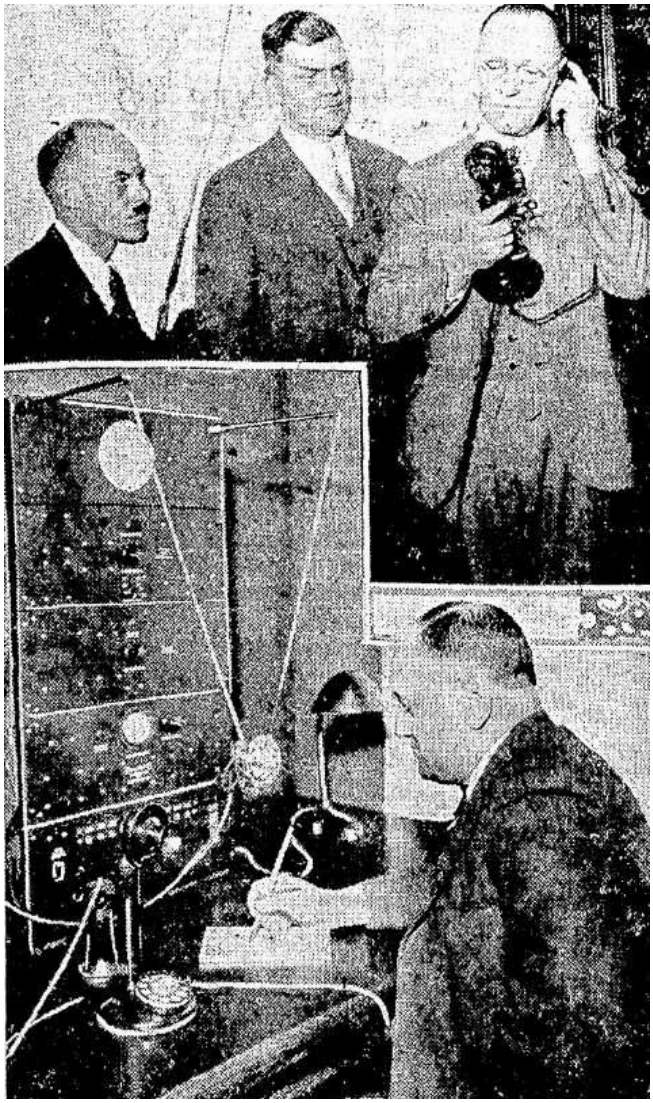


Figure 22 - Joe Hallock (left) and Clif Watson (right) pose with the 500-watt Portland Police transmitter under construction at Hallock & Watson's workshop. The rack with the rectifier and oscillator is on the left. The amplifier and tuning units are on the right. The Oregonian 3/2/1932

The gatehouse at the Portland Water Bureau's Reservoir 5 was selected as the site of the 500-watt transmitter. Reservoir 5 sits on the westerly slope of Mount Tabor[33] near 60th and SE Hawthorne Blvd. The transmitter would be housed inside the gatehouse and an 80' steel lattice tower[34][35] would be erected on the roof. This location was very

[32] Radio Bids Win Favor *The Oregonian* 1/31/1932 pg. 13
[33] Mount Tabor is a city park and the site of an extinct volcano.
[34] 500-Watt Station for Police Fended *The Oregonian* 3/1/1932 pg. 7
[35] We are certain that a second tower was eventually installed. Contemporary accounts only mention one tower. However, when the transmitter was decommissioned, two towers were removed. One went to Temple Ehmsen's (W7VS) home in SW Portland and was later moved to Chehalem Mountain. The

close to the home of Charlie Austin who was chosen to install and maintain the transmitter. He was the station's engineer until his retirement in 1955.



Figures 23 & 24 – [upper] Clif Watson (left), William Fetters (center), John Schum (right) assembled in the broadcasting room. [lower] Sergeant William Drapeau at the KGPP microphone. The Oregonian 4/10/1932

The transmitter at Mount Tabor was controlled by a leased telephone line from police headquarters at 2nd and SW Oak St. The microphone was placed in the detective department in a room that was "well-equipped with telephones."[36] Detective Sergeant John Schum and Sergeant William Drapeau had been operating the temporary transmitter and were selected as announcers for the permanent station.

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second was moved to Portland Police Detective Bob Wiskoff's (K7UCH) station near 111th and NE Fremont St.

[36] Multiple lines were needed to: 1) accommodate incoming requests for service, 2) coordinate police response, 3) receive calls from patrol officers who didn't have radio transmitters at the time, 4) coordinate with other agencies, 5) conduct other business.

The new transmitter control panel was activated at police headquarters on March 30th. The dispatchers, Schum and Drapeau, were transferred from Precinct 1 and began announcing from the detective room. The low-power transmitter remained in operation at Precinct 1, being controlled from downtown by a phone line.

In May, transmitter operations were expanded from eight hours per day to 16 hours, running from noon to 4 am each day. A third announcer, Detective William Fetters, was added to better cover the expanded schedule.

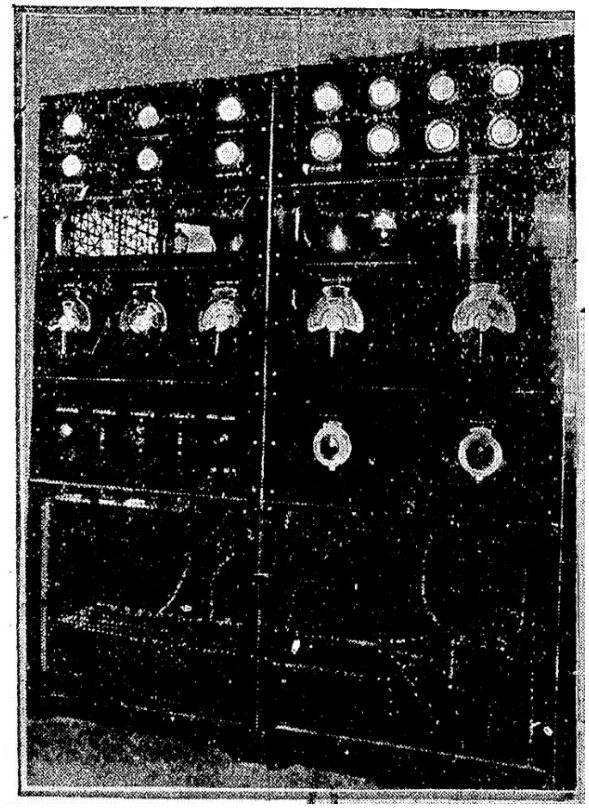


Figure 25 – The finished 500-watt transmitter. The Oregonian 6/5/1932

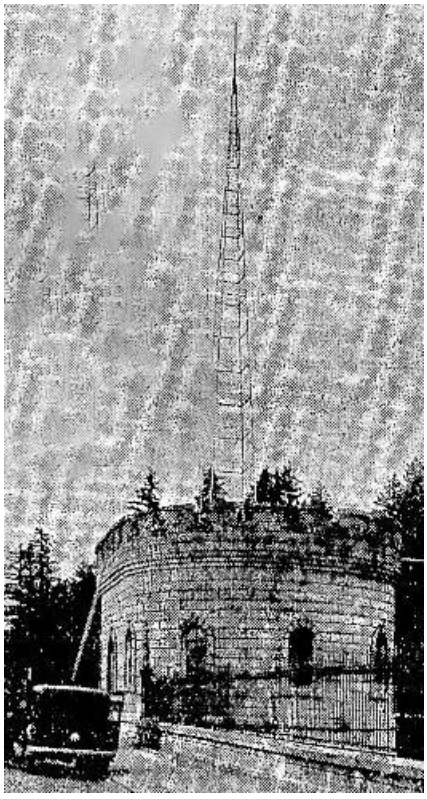


Figure 26 - 80' transmission tower at the Reservoir 5 gate house on Mt Tabor. The Oregonian 6/5/1932

The new KGPP transmitter went into service at the beginning of June 1932 with 200 watts output. In addition to doing their own testing, the police bureau solicited listener reports to help gauge their coverage.

On June 6th, Chief Jenkins and Police Inspector announced the appointment of KGPP's operating staff:

- Charles L "Charlie" Austin
- Temple V Ehmsen (W7VS)

- Harvey L Lockhart
- Lee Wright

The dispatchers were:

- DA Bell
- CR Crisp
- Sergeant William A Drapeau
- Detective William Fetters
- Sergeant John H Schum

On July 20, 1932, KGPP was formally dedicated during a brief meeting at the Oregonian Building featuring speeches from Mayor Baker, Chief Jenkins, and Captain Thatcher.

Multnomah County Sheriff Martin T Pratt was interested in the city's efforts with an eye toward using radio, as well. He evaluated KGPP's coverage by conducting a road tour in a radio-equipped car on August 26, 1932. He found that reception of KGPP's 300-watt AM signals was excellent on his radio as far away as Salem.

In October 1932, KGPP was granted authority to move from operating at 300 watts under its temporary license to running 500 watts.

KGPP Portland Police!

Before every KGPP transmission, the mic was opened and a gong sounded. Then, the dispatcher said "KGPP Portland Police" before proceeding with the announcement. This served two important purposes.

First, the loud peal was an alert signal to patrol officers who might be chatting or contending with engine and traffic noise.

Second, due to the limited number of available channels, KGPP shared its frequency with over a dozen other police departments, including KGPX (Denver), KGZH (Klamath Falls), and KGZR (Salem, OR). On occasion, officers in each city might overhear, and respond to, a broadcast other than their own. The gong and the station ID helped keep the signals straight.

"Mystery Call Brings Radio Police Car on Jump" (*The Oregonian* 3/8/1932 pg. 26) tells the story of one such mix up.

Portland's Short Wave Boom
Once KGPP went on the air, Portlanders had an interest in listening-in on the police broadcasts. About the same time, United States Air Lines began broadcasting weather reports for pilots from the airport on Swan Island. These events generated interest in "short wave" listening. Though the police and airline broadcasts were using AM, their signals were beyond the receiving range[37] of standard broadcast band sets. In order to pick them up, would-be listeners had the option to purchase a set with a built-in shortwave tuner or they could purchase a far-cheaper short wave adapter that would expand the range of their existing receiver.

The Shorty Short Wave Adapter was made here in Portland and many were sold. In 1932, Hallock & Watson prototyped a short wave adapter using a 24A tube. This was near the time that the company closed and we don't believe that their short wave adapter went into production. The Hallock & Watson prototype Short Wave Adapter is pictured in the Product Compendium.

Consolidating on the East Side
In April 1932, Hallock, Watson and Yonge moved their retail store out of downtown Portland. The retail operation that had been at 191 SW Park was combined with their manufacturing location at 153[38] Grand Ave. The firm continued as official dealers for Brunswick, General Electric, Gilfillan, and Rola. In addition to retail sales, they continued manufacturing Porta-Pacs and doing special radio shop work at the combined location.

1933

The address of Hallock & Watson Radio Corporation's combined location was changed from 153 Grand Ave to 831 SE Grand Ave as part of the City of Portland's address mass renumbering effort. An ad from July 1933 says that their "convenient East-Side location offers easy parking." This is likely true compared to their previous downtown locations on Park. At the time of the ad, they were offering in-shop servicing and house calls. They were also offering tube sales.

Ads from 1933 began mentioning that they were selling car radios in addition to receivers for home use. Both Majestic and Zenith were included in their retail lines.

The contract to build KGPP was a financial lifeline for the company. According to Joe Hallock, the company was "hanging on the ropes" following the stock market crash of 1929. The Police contract enabled them to get out of debt.

The store closed and the company's assets were liquidated in late 1933.[39]

[37] KGPP was broadcasting on 2.442 MHZ, just beyond the top of the broadcast band.
[38] Under the current numbering-system, this location is now known as 833 SE Grand Ave.
[39] The Joe Hallock Story pg. 8.

By the end of the year, the partners went their own ways, and Hallock-Watson and Yonge was no more.

Epilog

According to Joe Hallock, “The Halowat radios were well-built and good performers. We have no account of the number produced but they were sold over a wide area.”

“We made a lot of money in the 11 years we were in business,” said Hallock in a newspaper interview, “but the Depression wiped us out.”

During the early 1930’s, Hallock was an announcer and actor for several radio stations appearing live on dramatic programs. Joe had been a radio inspector with the Commerce Department in 1916-1917. So, he applied for work with the Federal Communication Commission in 1935 and stayed for 25 years. Joe Hallock became the inspector in charge of the Portland office in 1952 following stints in Galveston, San Francisco, and Seattle.

Figure 27 - This photo was staged at the Multnomah Hotel on the occasion of Joe Hallock’s retirement from the FCC on July 7th, 1960. With his wife Mary (née Peninger) in the background, Joe is costumed in an old-time Portland Police uniform. The original

KGPP low-power Hallock & Watson transmitter sits to Joe's left. In the foreground, an Atwater Kent Model E speaker sits atop an SE-1420 US Navy receiver.

Joe Hallock's ham callsign was W7YA (ex FU). Joe was an active ham, participating in many amateur radio networks. He was a member of the Portland Amateur Radio Club, Society of Wireless Pioneers, and other prominent radio fraternities. Joe's station logs show that he kept a regular schedule with Clif Watson following his following his move to San Diego. Joe Hallock died at Lake Oswego, Oregon, in 1976 at the age of 85.

Clif Watson (ex RM and ex CZ) operated amateur radio station W7ANO and worked as radio engineer for the Portland Police Department until World War II when he went on active duty with the US Navy. After the war, he was appointed radio engineer at the Electronic Laboratory of Naval Radio at San Diego. He died in San Diego, California, in 1973 at the age of 81.

An Ode to Roy Yonge

Yonge is a chap from West Texas
Whose work seldom greatly affects us.
But at Multnomah Station
He beats all creation
At fixing car ailments that vex us.
Oregon Journal 2/22/1920

Roy Chandler Yonge Sr. was born in Toyah, Texas on August 22, 1889. He moved to Portland before World War 1 and lived here for the rest of his life. Roy and his wife Marie settled in the Multnomah Village neighborhood in SW Portland where he operated the Multnomah Garage, a car repair shop.

In 1921, Roy sold the Multnomah Garage business and built a new home in Multnomah. Looking for a fresh opportunity, he began working with Hallock & Watson, eventually becoming a partner in the business. Although he was a skilled mechanic and manufacturer, we don't know where he acquired his knowledge of radio.

Hallock & Watson's design and manufacturing work was done at the Yonge's Multnomah home until the company leased space in the Wilhelm Building in 1926.

Following his partnership with Hallock & Watson, Roy Yonge was a machinist for Amadco Associated Manufacturers. He passed in December 1959.

Hallock & Watson Product Compendium

(products are presented in production order)

Compendium Index

Hallock & Watson Regenerative Panel Radio Kit (1922)

Hallock & Watson kit ad
Oregon Journal 7/9/1922

Hallock & Watson ad
for the NORCO Variocoupler Panel
Radio June, 1922)

Hallock & Watson RF 12 (1923)

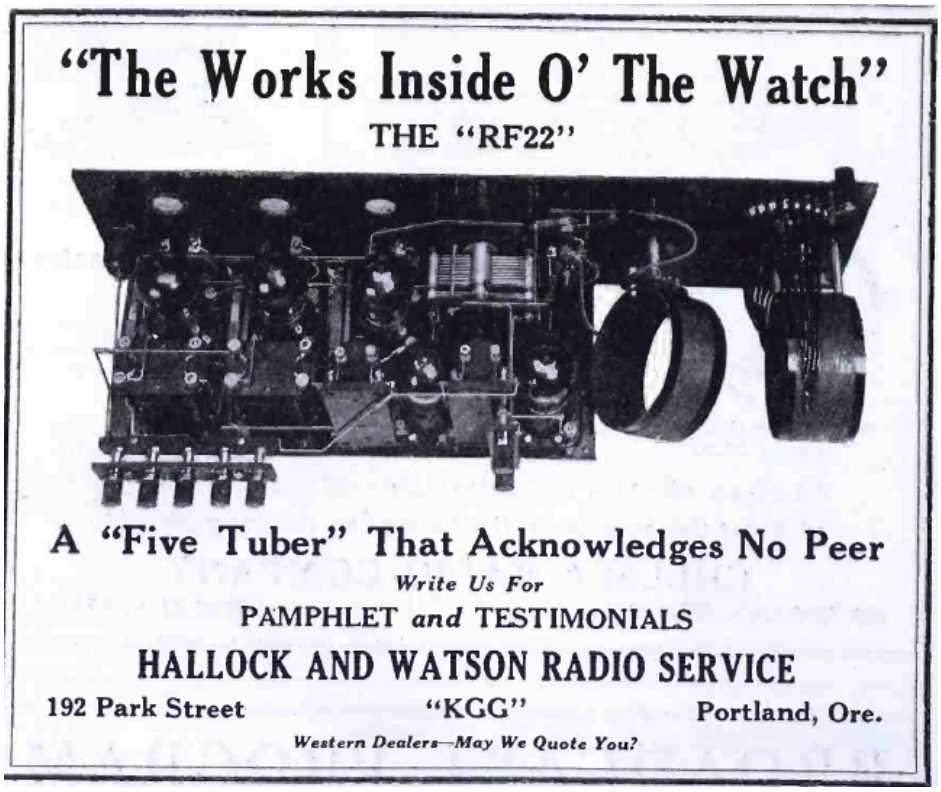
Front view (Sonny Clutter photo)

Hallock & Watson RF 22 (1923)

RF 22 front view (after restoration including a replacement panel)
Purchased from the Ed Charman estate and restored by the authors.

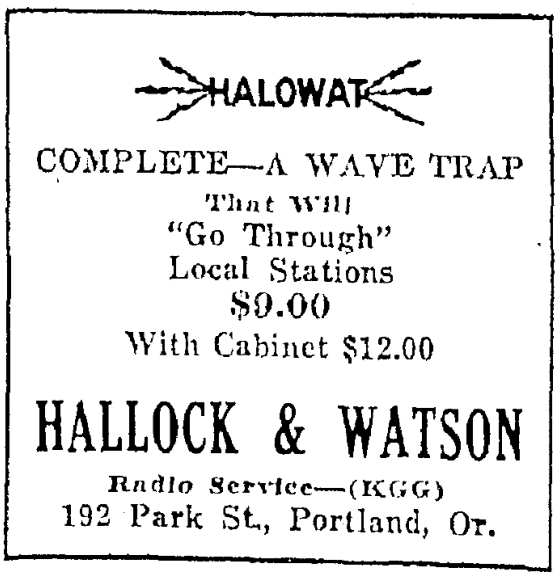
RF 22 interior view

RF 22 interior illustration showing a five-tube chassis



Hallock & Watson ad *Radio* April, 1924

Hallock & Watson Wave Trap (1924)

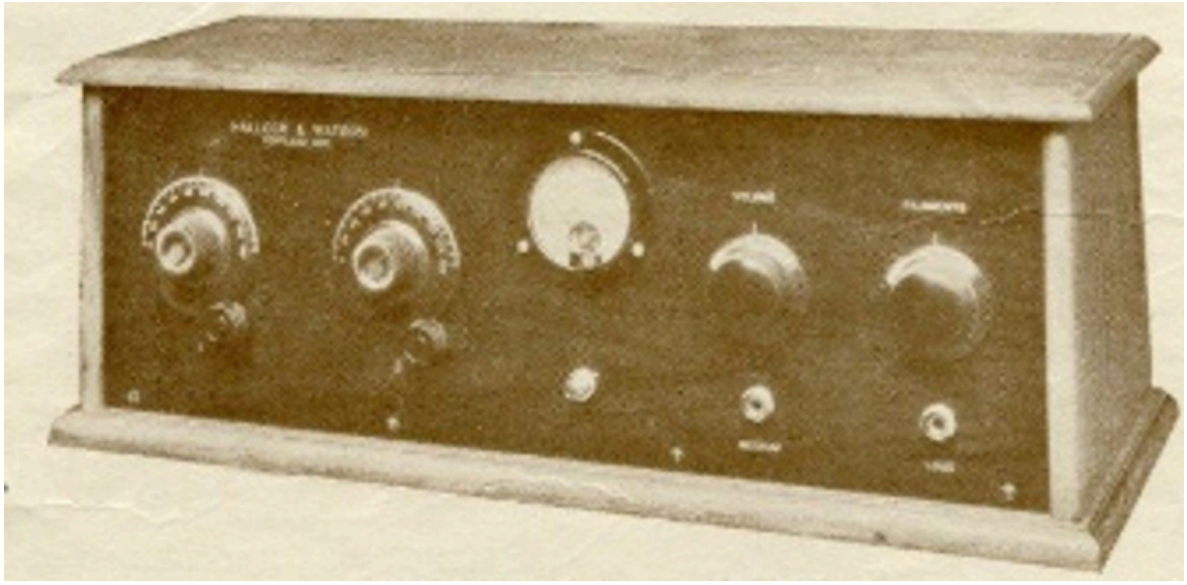


Hallock & Watson Wave Trap ad *The Oregonian* 1/20/1924
(Courtesy of Art Redman)

Superheterodyne Table Radios – Gerald Best Design (1924)

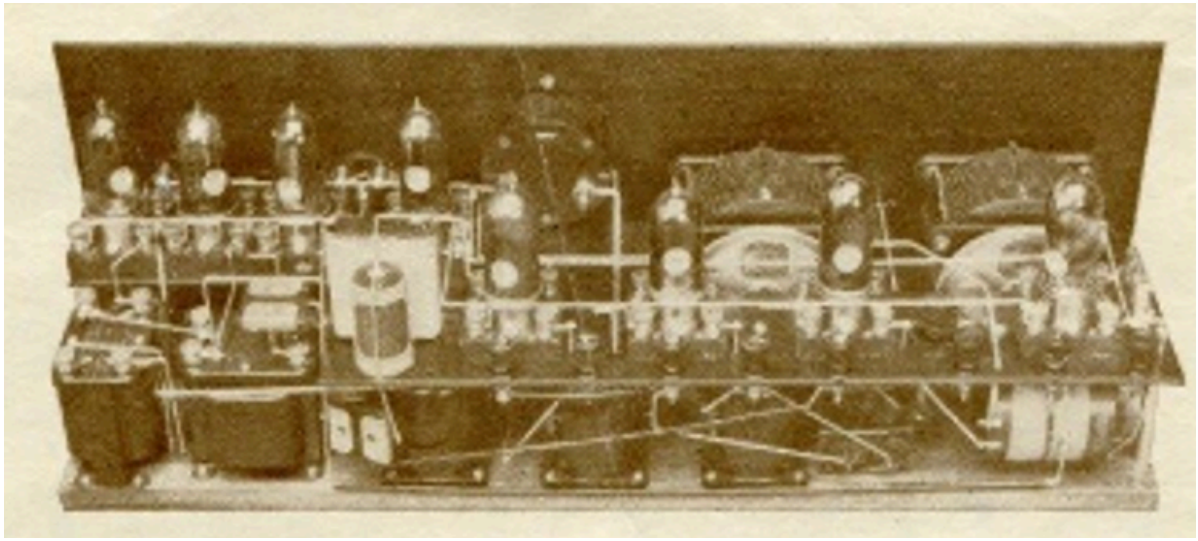
"We are building up this receiver in many styles and sizes. However, [we have found] the type shown [below] to be by far the most popular. This particular size is 7x21 inches, using walnut or mahogany finished Formica panel (or black if desired) and with the receiver encased in the finest quality cabinet of solid hand finished walnut. We are prepared to furnish this same cabinet with extra space in the rear for batteries or a separate cabinet to go underneath." Hallock & Watson Service Bulletin No. 11.

Hallock & Watson (Best) Superheterodyne - front view



(Hallock & Watson Service Bulletin No. 11)

Hallock & Watson (Best) Superheterodyne - interior view
"Tip-Top" UV-199 tubes are shown in this photo.



(Hallock & Watson Service Bulletin No. 11)

Hallock & Watson (Best) Superheterodyne - front view

(John Cushing photo)

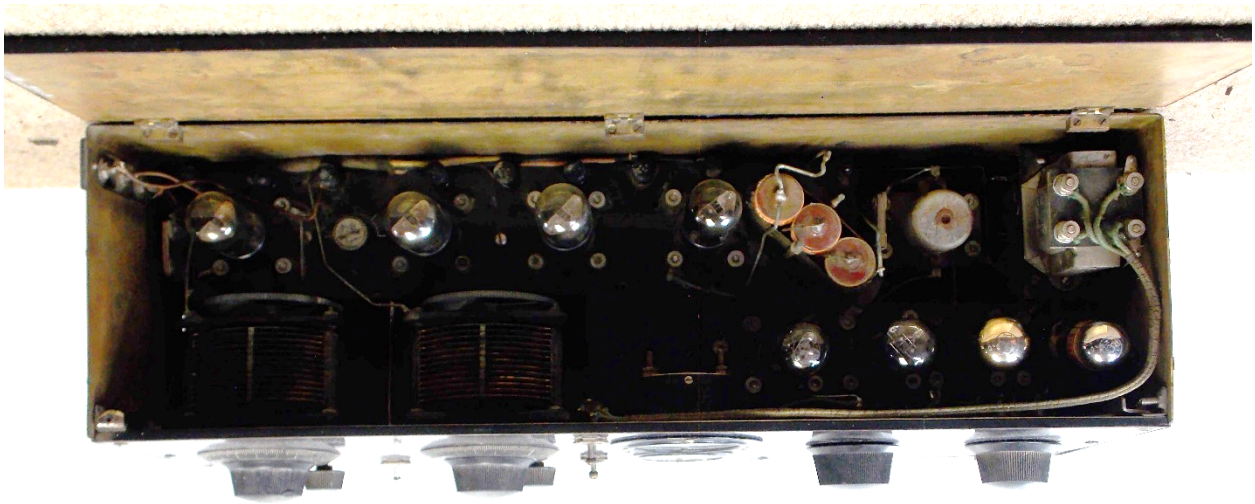
Hallock & Watson (Best) Superheterodyne - interior view

(John Cushing photo)

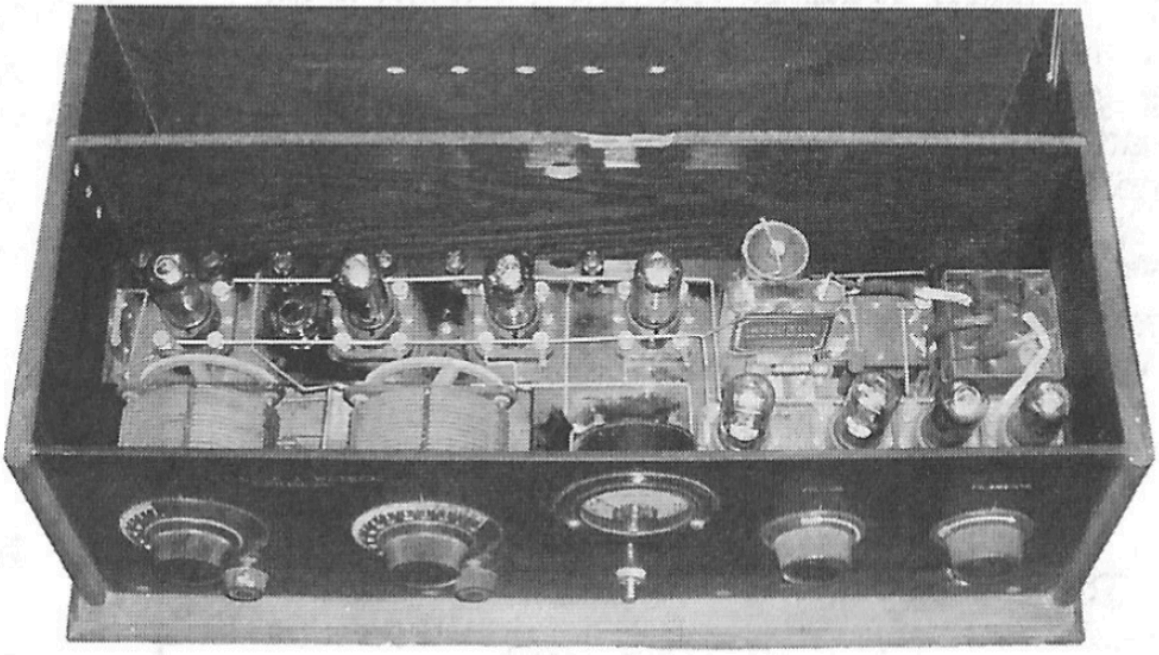
Hallock & Watson (Best) Superheterodyne - brass version
This version of the Hallock & Watson (Best) Superhet has a brass cabinet and provisions for carrying straps. In addition to the usual filament voltage meter, it also has a current meter. This example uses eight UX-199 tubes. (from the Stewart collection).

Brass version - front view

Brass version - interior view



Hallock & Watson (Best) eight-tube Superhet with battery compartment



(Sonny Clutter photo)

Hallock & Watson (Best) seven-tube Superhet with battery compartment

This version of the Hallock & Watson (Best) Superhet has seven UV-199 tubes instead of the usual eight. It has an extra-deep cabinet that provides battery storage behind the chassis. (from the Merz collection – purchased from the Jim Mason estate)

Seven-tube version with battery compartment – front view

Seven-tube version with battery compartment – interior view

Hallock & Watson (Best) Superhet loop antenna
Although unmarked, this loop antenna was purchased from the same source and at the same time as the Hallock & Watson seven-tube superhet shown on the preceding page. It was built according to the plans from Gerald Best's story except that this one never had binding post connections on its base. The original Litz wire was too poor to salvage so, the windings were replaced with new wire.

Hallock & Watson Radio Corp Superheterodyne Table Radio – Gerald Best Design (1925)

The use of the full “Hallock & Watson Radio Corp” name and the Halowat logo dates this table radio to 1925. This example uses eight UX-199 tubes.

Hallock & Watson Radio Corp Superheterodyne Portable Radio – Gerald Best Design (1925)

"…black Pantasote[40] suitcase approximately 9x11x22 inches, which encloses the receiver and all batteries." Hallock & Watson Service Bulletin Number 11

Best Super Portable ad *The Oregonian* 11/16/1924

Hallock & Watson Radio Corp (Best) Portable Superhet - front view
Though portables may have been produced in late 1924, we can date this example to 1925 by the use of the full "Hallock & Watson Radio Corp" name and the Halowat logo. This example uses eight UV-199 tubes.

(Russ Webb photo)

[40] Pantasote is an imitation leather material that was produced by the Pantasote Company beginning in 1891. It was known for its durability, affordability, and waterproof, non-flammable, and germ-proof properties. (Wikipedia)

Hallock & Watson Radio Corp (Best) Portable Superhet - inside view

(Russ Webb photo)

Hallock & Watson Radio Corp (Best) Portable Superhet - exterior view
Note the jacks on top left for connecting an external speaker and antenna.

(Russ Webb photo)

Hallock & Watson Radio Corp TR-5

The 1925 version of the TR-5 Tuned Radio Frequency receiver uses five type 01-A tubes and does not have the 3-range wave control.

Hallock & Watson Radio Corp TR-5 1925 version - front view s/n 41

(John Cushing photo – purchased from the Mike Parker collection)

Hallock & Watson Radio Corp TR-5 1925 version - interior view s/n 41

(John Cushing photo – purchased from the Mike Parker collection)

Hallock & Watson Radio Corp TR-5 1925 version - front view s/n 42

Hallock & Watson Radio Corp TR-5 1925 version - interior view s/n 42

Hallock & Watson Radio Corp TR-5 1926 early version – front view s/n 394

Hallock & Watson Radio Corp TR-5 1926 early version – interior view s/n 394

Hallock & Watson Radio Corp TR-5 1926 – later version s/n 456 – front view
The later 1926 version of the Halowat TR-5 uses four type 01-A tubes and a type UX-112 as the audio amplifier. The front panel is enhanced with an engraved border.

(Russ Webb photo – purchased from the Mike Parker collection)

Hallock & Watson Radio Corp TR-5 1926 – later version s/n 456 – interior view

(Russ Webb photo – purchased from the Mike Parker collection)

Hallock & Watson Radio Corp TR-5 1926 – later version s/n 518 – front view

Hallock & Watson Radio Corp TR-5 1926 – later version s/n 518 – interior view

Hallock & Watson Radio Corp All-Wave Type AW-5 TRF (1926)

Hallock & Watson AW-5 Model A early version

AW-5 Model A early version ad *The Portland Telegram* 9/27/1926

The early version of the AW5 Model A closely resembles our example of the Model B, differing only by the cabinet design. The later version of the AW-5 is was significantly redesigned inside and out and features a much simpler front panel layout.

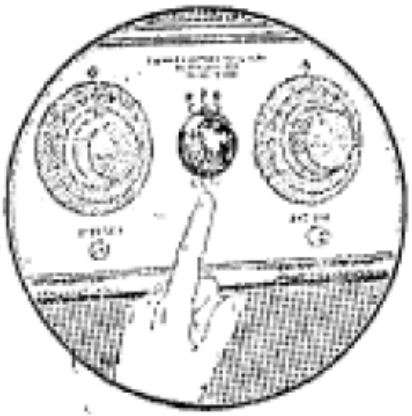
Hallock & Watson Radio Corp AW-5 Model A late version s/n A653 – front view

Hallock & Watson Radio Corp AW-5 Model A late version s/n A653 – interior view

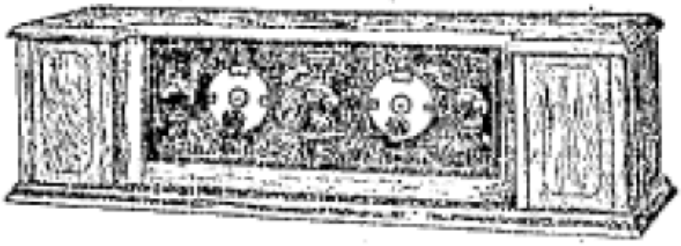
Hallock & Watson Radio Corp AW-5 Model A late version s/n A653 – back

Hallock & Watson Radio Corp AW-5 Model B

The HALOWAT 3-Range Wave Control embodies new principles in selectivity and audibility.



A special circuit of short, medium or long wave greatly simplifies "tuning in" for the uninitiated. At the same time the set is synchronized much more readily with the broadcasting station -- and enables one to reach a finer and sharper adjustment without unnecessary moving of the dials, resulting in clear volume reception without any distortion. The average receiver is quite satisfactory on medium waves, but is very critical on shorter waves---and lacks sensitivity and strength on longer wave lengths. This has been entirely overcome in our 3-range wave control, and is an exclusive Halowat feature.



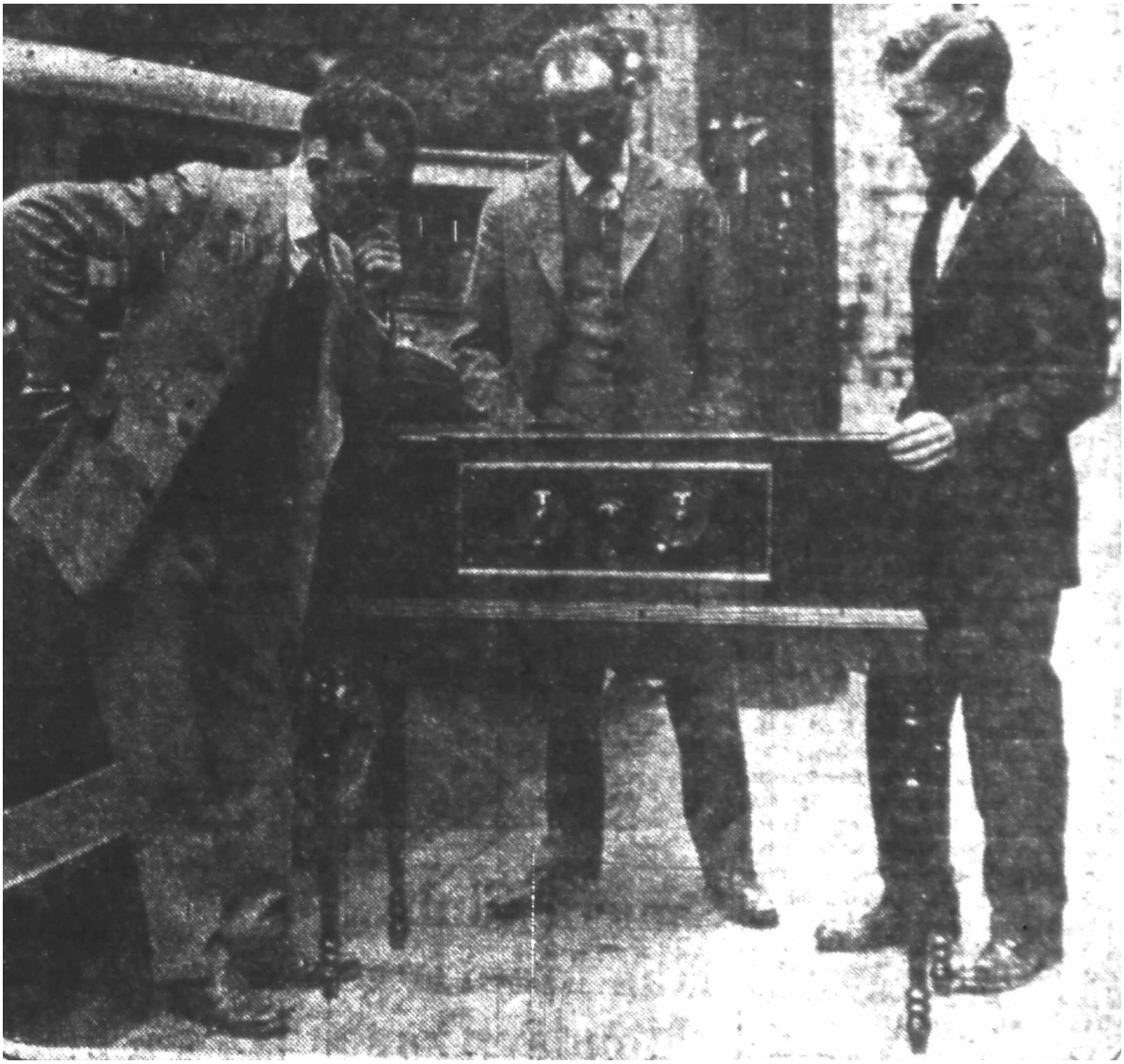
All-Wave Type B Model (125 to 550 meters)

A beautiful solid walnut cabinet, hand finished in genuine Duco. Genuine Formica panel with Marco Vernier (gearless) dials. A 5 tube tuned Radio frequency set . . 2 dial control. The hook-up entirely eliminates body capacity and permits sharp tuning on short or long waves---a feature not to be had in other receivers. Space is provided in the dials for writing in call letters of broadcasting stations. Owing to its advanced design it is far ahead of any other receiver and, should legislation ever be enacted, limiting wave lengths of broadcasting stations, it will not become obsolete! Price $160.00. Tubes, Batteries, Loud Speaker, additional. This same set may be had in a Console model, our Type C.

Hallock & Watson Radio Corp AW-5 Model B s/n A592 – front view
Compartments are provided on both ends to store batteries or a battery eliminator.

Hallock & Watson Radio Corp AW-5 Model B s/n A592 – inside view

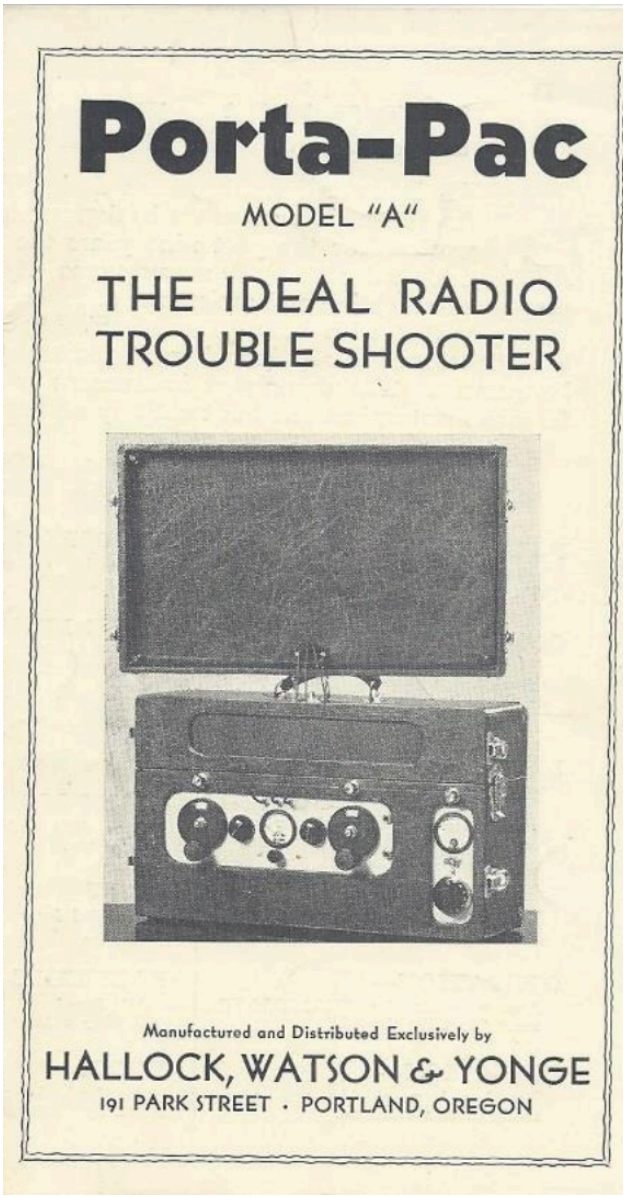
Hallock & Watson Radio Corp AW-5 Model C highboy-style console
Long legs were added to the AW-5 Model B to create the Model C.



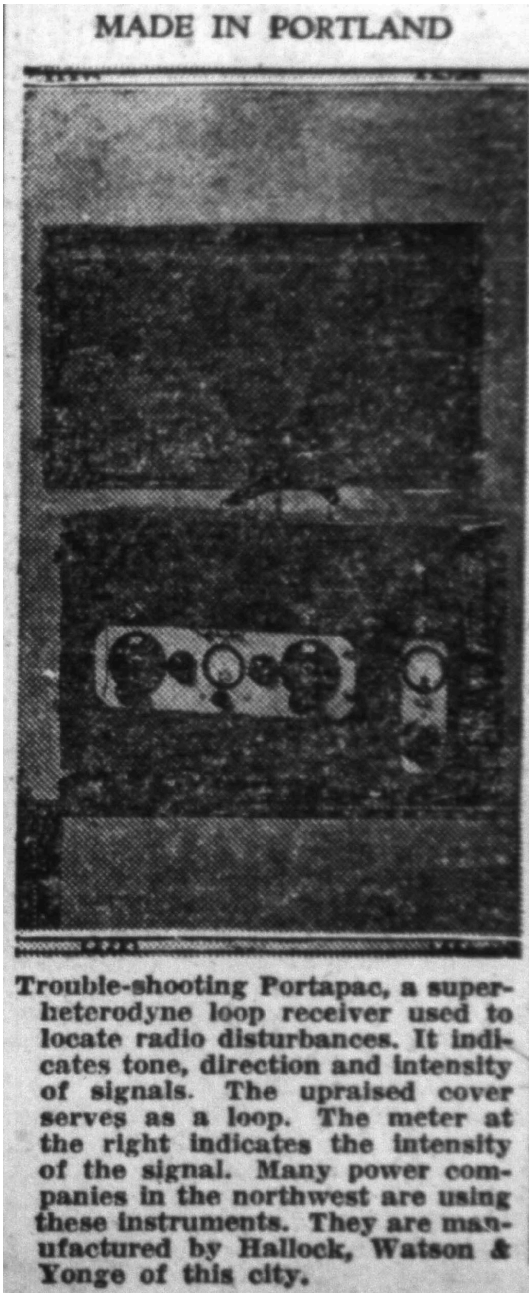
"New Type of Radio Out – Product of many years' thought and summer's labors this new radio receiver has won the admiration of its builders who are (from left) CH Watson, JH Hallock, owners of the firm Hallock & Watson and RC Yonge, factory foreman who is responsible for a great deal of fine mechanical design of these receivers."
Oregon Journal 8/15/1926

Hallock & Watson Radio Corp Porta-Pac 8 (1927)

Hallock & Watson Radio Corp Porta-Pac 8 Model A



Hallock & Watson brocuhre ca. 1929



The Oregonian 5/11/1930

PORTA-PAC MODEL "A"

THE PORTA-PAC has been designed and constructed by technical and practical Radio Engineers with a background of twenty years active association with radio work. For the past nine years the firm of Hallock, Watson and Yonge have designed and built many types of Radio Interference Locators. Through the co-operation and assistance of several Power Company Engineers, actively connected with radio "Trouble Shooting" work in the field, our PORTA-PAC has been developed to a point where it possesses features not to be had in any other one instrument. The completed instrument is not just a radio receiver offered as an interference locator, but one built entirely around this idea as a nucleus.

FEATURES OF THE PORTA-PAC MODEL "A"

PORTABILITY—
Easily carried by ONE man. Weight, COMPLETE, 35 pounds.

COMPACTNESS—
Small enough to be set up and operated in any standard auto, while driving. Length, 21 inches. Width, 8 inches. Height, 13 inches.

SENSITIVITY—
Will readily pick up (on loudspeaker) broadcast stations 1500 miles away. Noise pick-up hence very marked.

SELECTIVITY—
Ten kilocycle separation, through local stations.

OPERATION—
Always ready for IMMEDIATE use. "Just lift the lid."

DIRECTION—
Rotating loop quickly and accurately locates direction.

LOUDSPEAKER—
Built in, no extra equipment or wires needed.

NOISE LEVEL—
Built in VISUAL "VOLUME INDICATOR," using tube rectifier, always in adjustment. Registers VOLUME LEVEL directly on sensitive meter, right before you. No need to depend on operator's ear to detect changes in noise level.

NIGHT LIGHTS—
Over dials and volume meter, for night use.

JACKS—
Provided for use of headfones when desired.

BATTERIES—
All Standard, Dry, Self-contained. Readily obtainable.

TUBES—
Standard, latest two volt. Protected by filament voltmeter.

MATERIALS—
All high grade. Carrying case finished in genuine heavy, water proof pantasote. Quality parts in radio set.

"PORTA-PAC"
Gets that "hard to find" interference; cleans up those customer complaints quickly (on foot or in the car). Now in use by many power companies to whom we will glady refer on your request.

PORTA-PAC
MODEL "A"

COMPLETE with tubes and batteries. PRICE

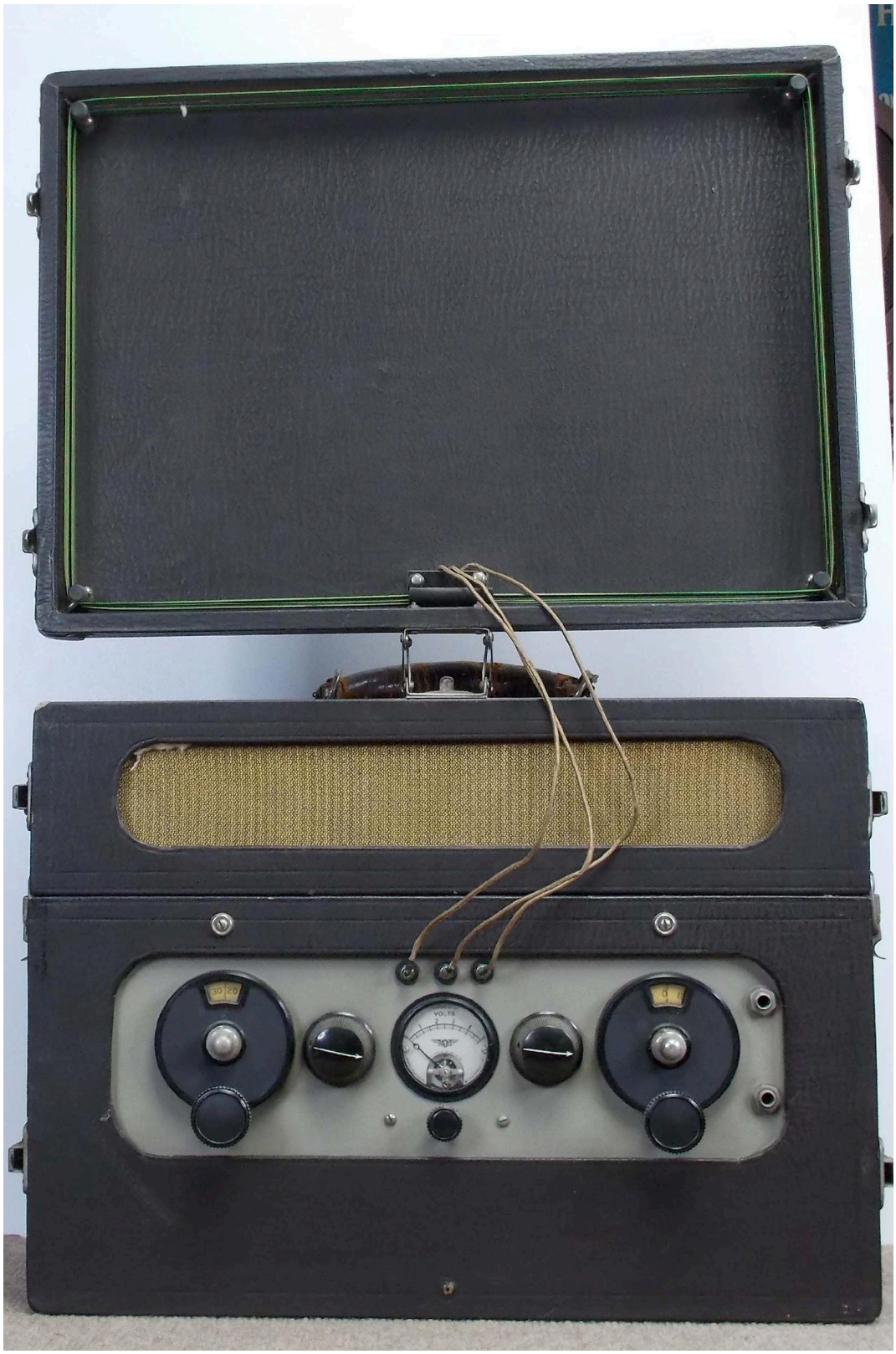
$160

Hallock & Watson brocuhre ca. 1929

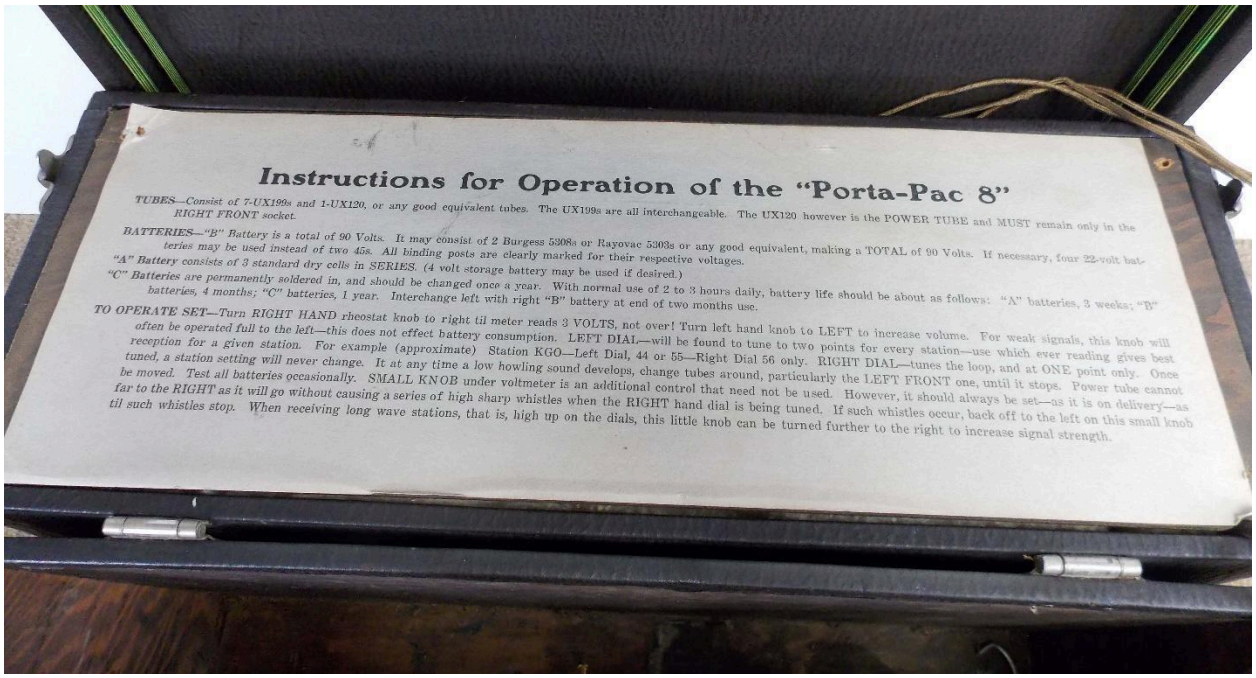
Hallock & Watson Radio Corp Porta-Pac 8 Model B (early version)

Hallock & Watson brocuhre ca. 1929

Hallock & Watson Radio Corp Porta-Pac 8 Model B early version – front view



Hallock & Watson Radio Corp Porta-Pac 8 Model B early version – instructions



Instructions for Operation of the "Porta-Pac 8"

TUBES—Consist of 7-UX199s and 1-UX120, or any good equivalent tubes. The UX199s are all interchangeable. The UX120 however is the POWER TUBE and MUST remain only in the RIGHT FRONT socket.

BATTERIES—"B" Battery is a total of 90 Volts. It may consist of 2 Burgess 5308s or Rayovac 5303s or any good equivalent, making a TOTAL of 90 Volts. If necessary, four 22-volt batteries may be used instead of two 45s. All binding posts are clearly marked for their respective voltages.

"A" Battery consists of 3 standard dry cells in SERIES. (4 volt storage battery may be used if desired.)

"C" Batteries are permanently soldered in, and should be changed once a year. With normal use of 2 to 3 hours daily, battery life should be about as follows: "A" batteries, 3 weeks; "B" batteries, 4 months; "C" batteries, 1 year. Interchange left with right "B" battery at end of two months use.

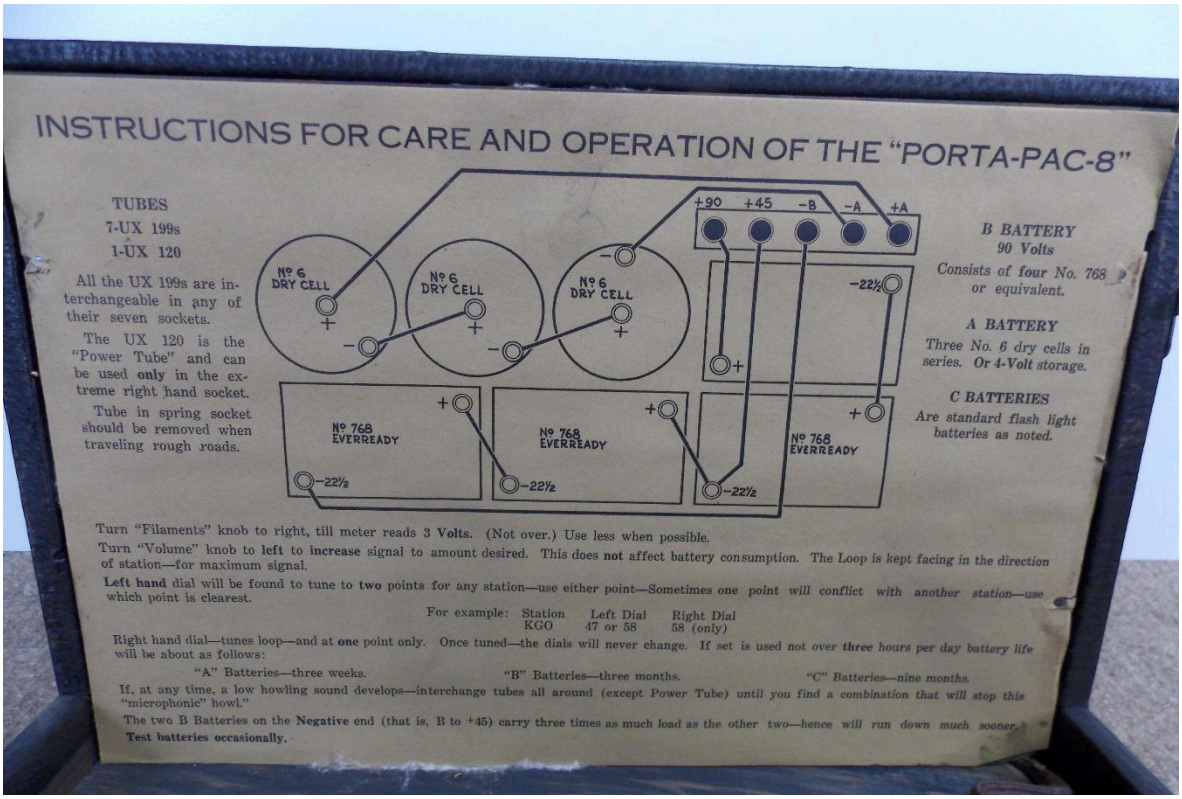
TO OPERATE SET—Turn RIGHT HAND rheostat knob to right til meter reads 3 VOLTS, not over! Turn left hand knob to LEFT to increase volume. For weak signals, this knob will often be operated full to the left—this does not effect battery consumption. LEFT DIAL—will be found to tune to two points for every station—use which ever reading gives best reception for a given station. For example (approximate) Station KGO—Left Dial, 44 or 55—Right Dial 56 only. RIGHT DIAL—tunes the loop, and at ONE point only. Once tuned, a station setting will never change. It at any time a low howling sound develops, change tubes around, particularly the LEFT FRONT one, until it stops. Power tube cannot be moved. Test all batteries occasionally. SMALL KNOB under voltmeter is an additional control that need not be used. However, it should always be set—as it is on delivery—as far to the RIGHT as it will go without causing a series of high sharp whistles when the RIGHT hand dial is being tuned. If such whistles occur, back off to the left on this small knob til such whistles stop. When receiving long wave stations, that is, high up on the dials, this little knob can be turned further to the right to increase signal strength.

Hallock & Watson Radio Corp Porta-Pac 8 Model B early version – interior view

Hallock & Watson Radio Corp Porta-Pac 8 Model B early version – exterior

Hallock & Watson Radio Corp Porta-Pac 8 Model B late version – front view

Hallock & Watson Radio Corp Porta-Pac 8 Model B late version – instructions



INSTRUCTIONS FOR CARE AND OPERATION OF THE "PORTA-PAC-8"

TUBES
7-UX 199s
1-UX 120

All the UX 199s are interchangeable in any of their seven sockets.

The UX 120 is the "Power Tube" and can be used **only** in the extreme right hand socket.

Tube in spring socket should be removed when traveling rough roads.

B BATTERY
90 Volts
Consists of four No. 768 or equivalent.

A BATTERY
Three No. 6 dry cells in series. Or 4-Volt storage.

C BATTERIES
Are standard flash light batteries as noted.

Turn "Filaments" knob to right, till meter reads 3 **Volts.** (Not over.) Use less when possible.

Turn "Volume" knob to **left** to **increase** signal to amount desired. This does **not** affect battery consumption. The Loop is kept facing in the direction of station—for maximum signal.

Left hand dial will be found to tune to **two** points for any station—use either point—Sometimes one point will conflict with another station—use which point is clearest.

For example: Station KGO — Left Dial 47 or 58 — Right Dial 58 (only)

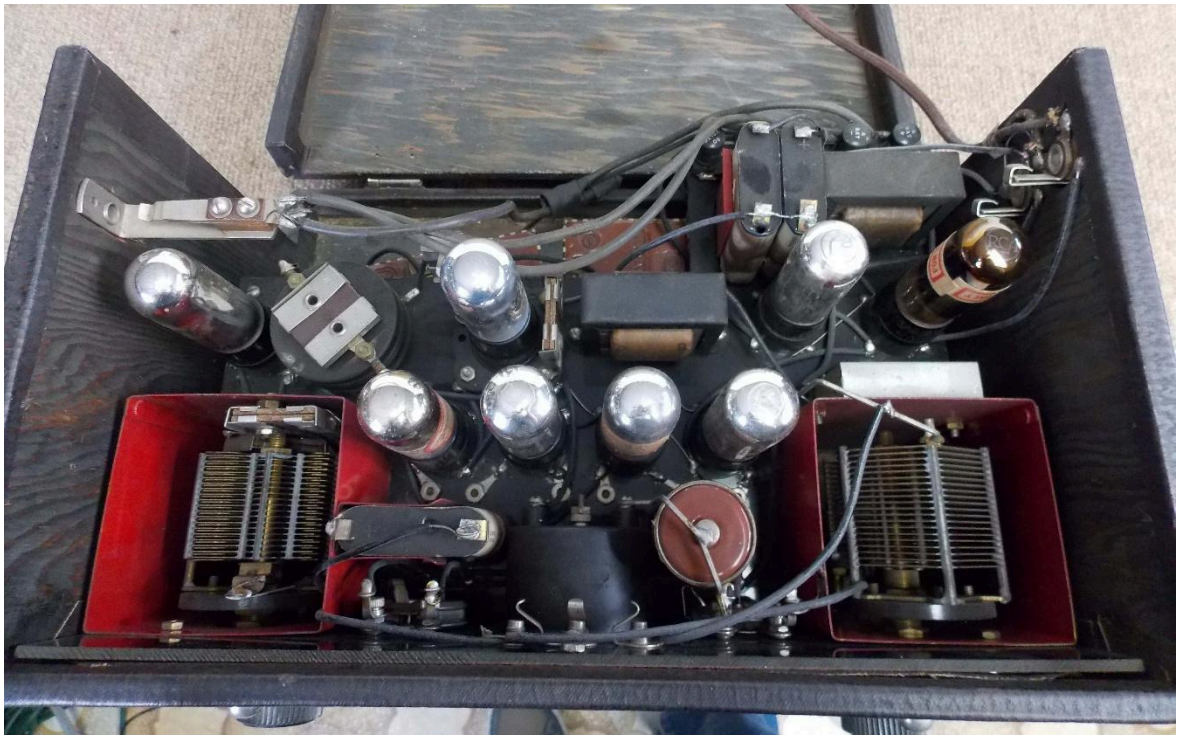
Right hand dial—tunes loop—and at **one** point only. Once tuned—the dials will never change. If set is used not over **three** hours per day battery life will be about as follows:

"A" Batteries—three weeks. "B" Batteries—three months. "C" Batteries—nine months.

If, at any time, a low howling sound develops—interchange tubes all around (except Power Tube) until you find a combination that will stop this "microphonic" howl."

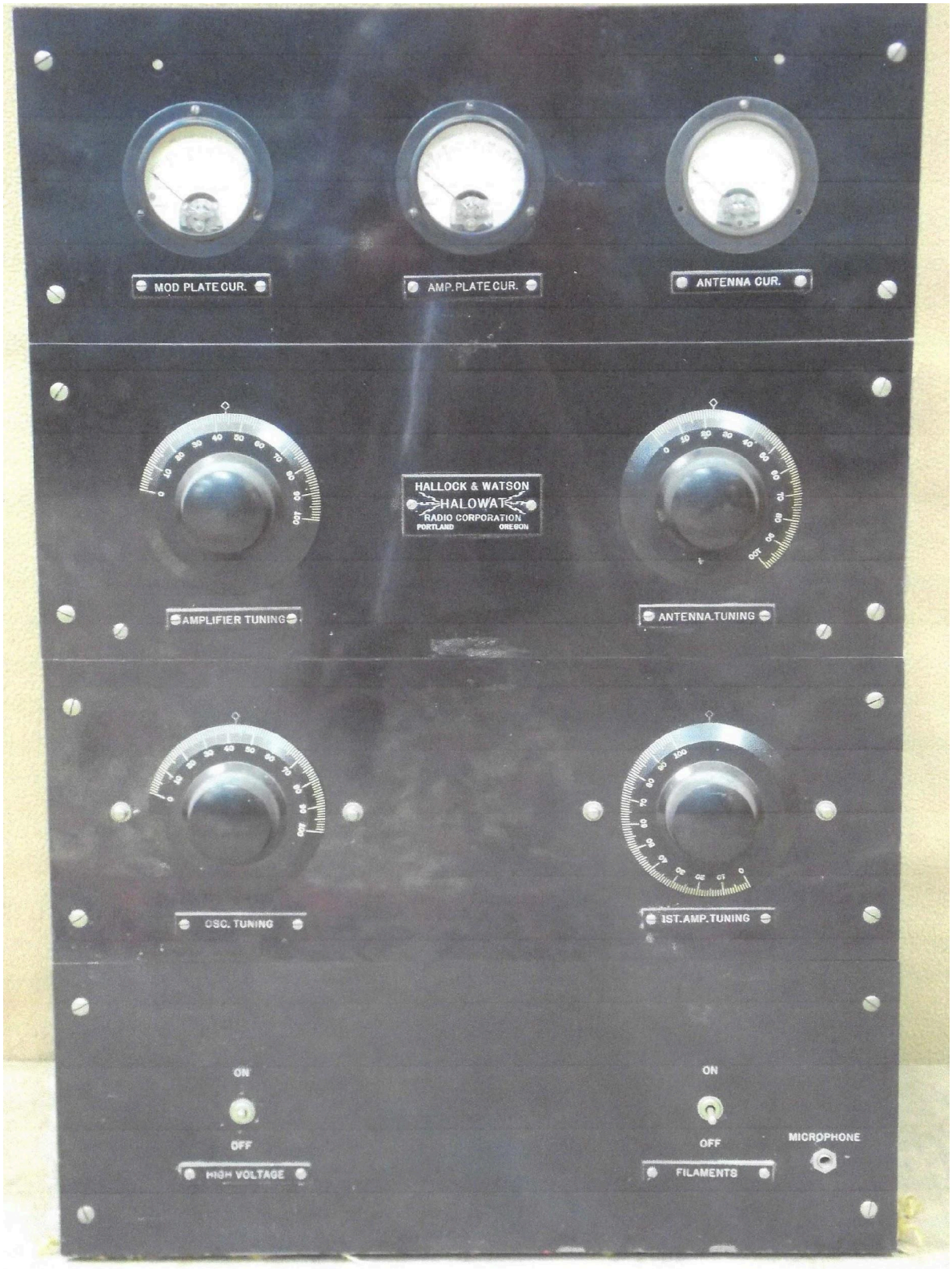
The two B Batteries on the **Negative** end (that is, B to +45) carry three times as much load as the other two—hence will run down much sooner. **Test batteries occasionally.**

Hallock & Watson Radio Corp Porta-Pac 8 Model B late version – interior view



Hallock & Watson Radio Corp Porta-Pac 8 Model B late version – exterior view

Hallock & Watson Radio Corp KGPP Transmitter – front view



Hallock & Watson Radio Corp KGPP Transmitter - rear view

Hallock & Watson Short Wave Adapter (prototype) (ca. 1931)

This short wave adapter was a Hallock & Watson prototype that may not have gone into general production. It was produced about the time that the Portland Police radio went on the air. The tube is a 24A,

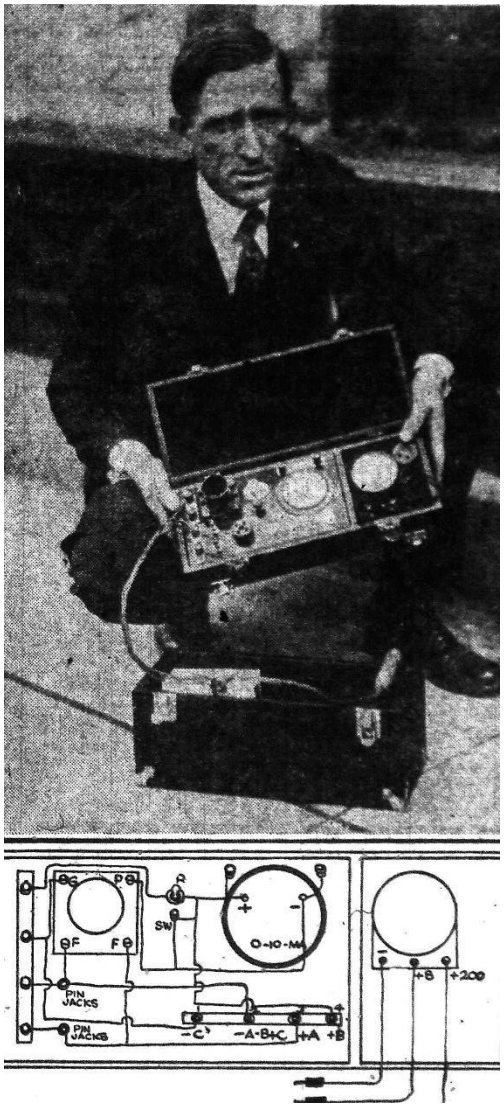
Short Wave Adapter – front view

Short Wave Adapter - back view

Roy Yonge Crystal Set and Portable Tester

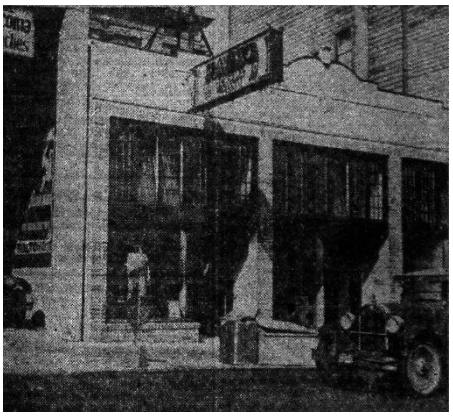
These products were built by Roy Yonge personally and may not have been manufactured under Hallock & Watson's brand. Nonetheless they certainly warrant inclusion in the Hallock & Watson Product Compendium.

This crystal set is small enough to stow away in a pocket. The panel has two knobs, one for primary tuning, and the other for secondary. The detector is mounted between the controls, while the coils are behind the panel. It is one of the prettiest and most finished small sets that has ever been seen in the city. It is now on exhibit at the Hallock & Watson station on Park between Yamhill and Taylor. *Oregon Journal* 7/9/1922



A portable test outfit only 14.5" x 5.75" x 10.5" was designed by RC Yonge, store manager of Hallock & Watson Radio Service. Yonge made the instrument to test filament voltage, plate voltage, C bias, plate current, hookup of wiring as to polarity, coils for opens and for tube checking. The tester attaches to a lower box of the same size for tools.
Oregon Journal 4/10/1927

Hallock & Watson Names, Dates, and Locations



191 SW Park St
The Oregonian 9/29/1929

Oregon Journal 9/29/1929

RETAIL

Hallock & Watson Radio Service
192 SW Park St
MAin 5677
1922 – August 1926

192 SW Park St
ATwater 2515
March 21 1927 – September 1929

191 SW Park St
ATwater 2515
September 1929

Hallock-Watson & Yonge[41]
191 SW Park St
ATwater 2515
Late 1929 – April 1932

When 191 SW Park St closed in April 1932, Hallock & Watson's retail activities were consolidated with their manufacturing functions at 153 SE Grand Ave.

MANUFACTURING

Hallock & Watson Radio Service
Multnomah Village (Roy Yonge's home)
1921 - 1926

Hallock & Watson Radio Corporation
Wilhelm Building 3rd floor
355 Everett St (NE corner of NW 8th & Everett St)
1926 - July 1927

Halowat Radio Corporation
Wilhelm Building 3rd floor
355 Everett St (NE corner of NW 8th & Everett St)
July 1927- mid 1929

406 E Alder St
EAst 5941
November 1929 – June 1930

153 Grand Ave
EAst 5941
June 1930 – April 1932

[41] Although they had reportedly incorporated under the name Hallock & Watson Radio Service, starting in late 1929 ads and brochures for Hallock & Watson's retail location were under the name "Hallock-Watson & Yonge."

COMBINED RETAIL & MANUFACTURING LOCATION

Hallock & Watson Radio Corporation
153 Grand Ave (831 SE Grand Ave)
EAst 5941
April 1932 – fall 1933

After the retail and manufacturing functions were consolidated at 153 Grand Ave in 1932, the combined companies began using the name “Hallock & Watson Radio Corp.”

Their Grand Ave location was very close to Precinct 1 (7th & SE Alder St) where the KGPP low-power transmitter was in operation.

In 1933, the address of the Grand Ave store was renumbered from 153 Grand Ave to 831 SE Grand Ave as part of the City of Portland’s mass address renumbering initiative.

The Hallock & Watson store and factory closed, and the remaining assets were liquidated, in late 1933.

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Unless otherwise noted, all photos were taken by, or are from the files of, the authors.

NWVRS charter member Art Redman generously granted permission for us to utilize his many articles in developing this document. We appreciate it.

Recommended Reading

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About the Authors

Father and son team Richard and Dan Howard are charter members of the Northwest Vintage Radio Society. They have a life-long interest in Portland radio and enjoy preserving and sharing its history.

Both are native Portlanders and licensed amateur radio operators.