The Bald Letter

FREE FOR THE DURATION

September 15, 2020

Federal Model 110

A "technical-looking black box with frightening arrays of knobs and dials. . ." *Alan Douglas*

Photo courtesy of The Radiolaguy

www.radiolaguy.com/Showcase/Battery-20s/Federal110.htm

End of Summer - Edition #8

2020 Virus Edition #8

Table of Contents

This is the eighth issue of a fun history hobby e-letter. Share it and pass it around. It's free. It's for fun.

Go to www.relivingradio.com for past issues of the **Bald Letter**. Help yourself and forward them to others. They're FREE.

The **Bald Letter** is the work of Dick Karman who is solely responsible for its content. He would welcome your comments, complaints and corrections. dick@karmans.net

Summer is changing to Fall and many of our normal activities have changed from years past. Even something as enjoyable as going out to dinner isn't as enjoyable any more. So while we're home, read about vintage radios and remember the way radio (and life) was.

Many thanks to Brian Belanger of MAARC, The California Historic Radio Society, The National Capitol Radio and Television Museum, The Colorado Radio Collectors, and The Puget Sound Antique Radio Society.

We think the ***Bald Letter*** will come out on the 15th of each month, but we don't know what the future holds. However, we know who holds the future. Hebrews 13:8

REQUESTS FEDERAL FINANCING FOR RADIO [1935]

Further financing of radio sales under the Federal Housing Administration law has been applied for by Bond Geddes, vice-president of the Radio Manufacturers Association, with the active support of several large companies. The new proposal to the Federal Housing Administration is that the FHA financing privileges be extended to receiving sets selling at $75 or more. In the past the federal agency has declined to extend its financing privileges to such radio sets and many other "movables". The FHA rules have specifically excluded radios, unless built in, from its financing benefits. Built-in radio is eligible for FHA financing and it is now hoped to extend the federal financing system to the more expensive type of radio sets, similar to the financing privileges available in sales of refrigerators and recently extended by the FHA to washing machines.

Sears ad from 1921

Quarantine Show and Tell

From Brian Belanger as told to Dick Karman

For your enjoyment is a Crosley Reado. This device would provide printed copy from a radio signal. The radio facsimile signal that fed this device was broadcast from WLW, Powel Crosley's 500,000 watt power house and used the Finch system of image reproduction (as opposed to the RCA system).

It was truly facsimile providing text, pictures, and even handwriting. The system was introduced in the Crosley Pavilion at the 1939 New York World's Fair, and was offered to the public for only $60 (in comparison to RCA's $260). WWII came along and the idea died.

This and many more marvels of the golden age of radio are on display at the National Capitol Radio and Television Museum in Bowie, Maryland. Mr. Belanger is a Bald Letter reader and is the curator of the museum, having retired in 2000 from several levels of management at the National Institute of Standards and Technology, or what used be known as the National Bureau of Standards. You can meet Mr. Belanger on page 15.

The Museum is free, open Friday, Saturday and Sunday. The facility has a warehouse of historical artifacts so the décor is always changing and "new history" is always on display.

The organization is supported by membership and the building is part of a partnership with the city of Bowie, so the covid crisis is not jeopardizing the future of the endeavor. We wish it well.

Zenith Radio

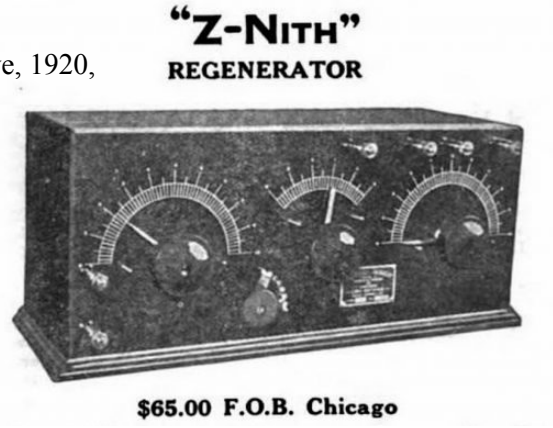
For a small publication like this to cover the history of something as large as Zenith the story would go on forever. Instead, you can do the legwork. To read history and information on the "earliest years" see www.antiqueradio.com/zenithcrl_12-97.html and buy the book: *"Zenith Radio: The Early Years, 1919-1935."* And don't forget to see the excellent history at the Radio Museum.org.

With the permission of the author Padgett Petersen we will look at the model number and years of Zenith radios from the beginning through 1934:

In the beginning there were two friends: R.H.G. Mathews of Chicago and Karl Hassel of Pennsylvania who had met at the Great Lakes Training Center while in the Navy during WWI. Following discharge they opened the Chicago Radio Laboratory to follow their passion for wireless.

Not a garage industry for they had no garage at first, early radios were assembled on Mathews kitchen table. Their station name - 9ZN - led to the name Z-Nith. Their receivers and transmitters had one major difference to separate them from others produced on kitchen tables around the world in those years, they were extremely well made, partly a result of their military training and partly an innate desire for quality.

In 1920, the friends made one very important acquisition that would set them apart from the bulk of the other would-be manufacturers: a license to utilize the patent on Regeneration granted to Major Edwin Armstrong that was a quantum improvement in wireless.



Enter Commander Eugene MacDonald. On New Year's Eve, 1920, he was at a garage to pick up his car. He was already wealthy for automotive dealings before WWI. Hearing a radio playing in the shop, he became interested which lead to the discovery of the boys in their transmitter shack. And their possession of an Armstrong license (the fact that the license was for amateur use only did not slow the Commander down, little did).

In short order Z-Nith became Zenith and all everyone could do was to try to keep up with the Commander.

The early period (1920-1924) were primarily devoted to manufacturing radios as fast as they could. With names like "Amplifigon" and "Paragon" model numbers were descriptive of function and were essentially built to order.

Representative of the 1920-21 period were identifiers such as PR-1 ("Portable" Receiver), MBR-2 (Motor Boat Receiver), and TR-1 (Time Receiver - for setting clocks). Several had "Audion" in their name to demonstrate their use of DeForest's Audion tubes (much like the "Intel Inside" logos of today). For 1921, the MacDonald influence began to show as "Z-Nith Long Distance Radio Apparatus".

For 1922, concentration on receivers as "Apparatus" was dropped and the mainstay Zenith began with the 1-R and presumably superior 2-R (at least it cost a third more) "Zenith Long Distance Radio Receiver" and the 1-M, 2-M, and 3-M amplifiers being most promoted.

This continued for 1923-1924 with the introduction of the 3-R and 4-R receives, the higher numbers obviously indication superiority over the earlier models.

1924 was significant in that it also offered what Zenith called "The World's First Portable Radio", ignoring the "OperaRadio" of 1923 and others. There is some basis to the claim since the Zenith was wholly self-contained and could be carried while operating - no assembly

necessary. What is not mentioned is that according to contemporary accounts, more than half of these first portables were returned as "unsatisfactory."

With the Roman numerals of 1925, Zenith started on a ten-year-long search for a meaningful set of model numbers that would permit its salesmen to be able to assist customers without making it too obvious that there was a Plan. Gone were the regeneratives as all chassis were now "NOT Regenerative". The consumer market was attacked with a vengeance as styled cabinets were promoted equally with technical specifications.

"Deluxe" models with a price tag to match were not the right stuff even for the Roaring Twenties as a consumer items and so the model VII was to be the sole profitable carryover from a line that included the first "Chinese" model. Notable is that these were the first of the one dial radios and that the "Spanish" model listed for two thousand five hundred 1925 dollars (they were bigger).

More reasonably priced were the "Super-Zenith" models VII, VIII, and X all on the same two-dial, six tube TRF chassis.

Zenith Super VII

For the 1926 season, Roman numerals became Arabic again as the "Super-Zenith" Model VII became the mainstay model 7. Battery sets were supplanted by line powered ones through use of the Zenith battery eliminator option. In addition, the 7 could be ordered as the model 27 which included AC power supply and 2 gas rectifier.

"Deluxe" ten tube models were continued to be offered though it is likely that these were mainly unsold 1925 chassis.

Optional accessories for the two dial model 7 included a sonnet base, a console base for the model 7 with loudspeaker and battery compartment, or a console base for the 27 having two loudspeakers.

"No Batteries" was a major selling point though contingency plans were expressed with a bracketed notice that "Where no electric current is available super Zeniths may be purchased for use with storage batteries." and the sales of the 27 proved the public was ready. Good thing because Zenith in 1926 nearly went bankrupt.

In 1927, Zenith stuck with the same proven models (27, 28, 29) and with the signing of a patent agreement with RCA, "NOT Regenerative" was admitted to mean "Tuned Radio Frequency"

Probably a good thing since Judge Bodine was inclined to be very favorable to RCA - one manufacturer was found to infringe on the patent simply because their circuit could fail in a manner that would cause oscillation even though it would never do so in designed use.

Following the buying trends of the public, the 1927 mainstay was the model 17 and where previous "7"s had been designed for use as either battery or mains powered, the 17 was solely AC.

For late 1927-1928 (model years had not yet officially appeared so listings were for year manufactured despite the fact that new models were typically offered in the August-November timeframe - later these would be called "1928's"), numerical model numbers began to make some sense: Models 11 & 12 shared the basic chassis and the addition of a loudspeaker created the model 14. Model 15 was a plain box having 8 tubes with a loop antenna and companion 16 had an ornate cabinet. Adding an E suffix meant that the set could be operated with ac instead of batteries and the 16EP was ac with a powered speaker. Model 17E included a gas rectifier but the spinet base was $20 additional. Big news for the 18E was calibration in both kc and meters (but the tuning range was expressed as 105-550 meters - essentially 545 kc-2.8 Mc).

Altogether, mixing and matching suffixes on the 11, 12, 14, 15, 16,17 & 18 resulted in sixteen "different" models for 1927-1928. 11-14 shared a common six tube (all working) battery chassis. Models 15 & 16 were eight tube while 17 & 18 reverted to a six tube chassis but were AC only

Single knob tuning was further perfected as Zenith boasted of "four Zenith condensers permanently balanced on one shaft". Non-console models were basically variations on a coffin theme (model 11 boasted a 6 inch longer cabinet than the model 12). Styling for the masses was definitely coming as the $180 model 14 claimed "When (doors are) closed, there is no indication that the cabinet contains a radio set."

Having used the 20s in 1927, teens in 1928, Zenith skipped to the "30"s for the six tube chassis of 1929 with models 31-35 suffixes ‘A’ (mechanical remote tuner), ‘P’ (powered speaker), and ‘X’ (seven tube chassis). Model 39 came in mid-year as was common in those days and was the top-of-the-line.

Running out of 30s, Zenith moved to the 40s while still in 1929 with the midyear introduction of the 41 & 42 (June). As a result, models for the 1930 lineup would begin with the fifties.

Zenith Model 41

Thus in the space of 1926-1929 Zeniths went from multi-dial regenerative battery sets to two knobs to one knob tuning TRFs that pretended not to be radios & preferred not to use batteries.

Still at the Iron Street Plant, and farming out cabinet work, the move to the Dickens St. plant and "The Big Black Dial" was soon to come.

The years from 1930 to 1935 saw the emergence of Zenith as a dominant market force and a revolution in the technology involved.

The thirties also marked an explosion in models and variants plus a bit of sanity in the numbering schemes that would reach fruition in 1936. Model numbers were specific to years and from 1934 on the chassis type (number of tubes) could be identified in the chassis number

But back in 1930, the big news was screen grid UX and UY tubes as model numbers counted off the fifties and sixties. Some confusion often occurs here because of Zenith's use of numerical suffixes to the model number for various power supply options. For instance a nine tube model 64 became a model 642 if equipped for 110v 25 cycle operation in the Northeast. Similarly a 563 was designed for direct current neighborhoods (often in inner cities).

The difference between the fifties and the sixties seems to be the loop antennas used in the latter as both were entering the tube-count-race with "double push-pull audio amplification". Manual automatic tuning

similar to the pushbutton tuning in automotive radios was a selling point of the upper level models.

Chassis numbers from 1930-1934 all were in the 20xx series and were assigned in order of development. During the four year period, less than 60 chassis number were assigned so it was adequate

The basic nine tube chassis was continued for 1931 in the 70 series with new electric remote control replacing the mechanical unit of the previous year for the model 74 only. The big news was a new, less expensive Zenette or Zeneth line of six tube chassis cathedral tabletops. To mark the difference, these were known as models A, B, C, a "richer appearing" D, L, M, and W. The Spinet base was optional. Models often were suffixed with "H" which indicated the first use of Superhetrodyne circuits instead of TRF.


Zenette Mod B

1932 marked a real change: Zeniths were now sold "complete with Zenith Quality Tubes" and all radios had super-heterodyne circuits of ten tubes. The new line consisting of models 82, 822, 89, 892 (Hypermetrons) and 90, 91,& 92 (with automatic tuning) plus the continued (and still lettered ZENETTEs in superhet form only). There was also a 1932 model 103 "Ultra"

1933 marked an explosion of models and chassis that demonstrated to Zenith that they should never do that again.

Zenettes were no longer a separate line but were combined with the lesser models in tabletop and free-standing consoles represented by model numbers in the 200's. Experimentation was done in band selection with regular broadcast being combined with Long Wave (-5 suffix to the model number as in 210-5) or short wave (to 18 Mc). Most were 7 tube chassis though a few like the 288 which claimed to be able to tune to 25 Mc had eight tube chassis.

The pitch for 1933 "All Star Line" was the new 7-prong "Cathode Type" tube that "so far can be had only in a Zenith radio".

Top of the line were the ten tubed chassis in the 400 series that featured variable tone control with visual volume and tone indicators plus Shadowgraph tuning, the forerunner of the yet to come tuning eyes.

1933 also was a high-water-mark of diversity with about 140 models based on 19 different chassis. This also marked the introduction of the even lower priced "Interocean" line with model numbers in 500 and 600 series.

For 1934, the "little7" news was the revision of chassis numbers to an ordered sequence of four digits indicating the number of tubes and the model line number. If there were less than ten tubes, the first digit would be a 5 and the second the tube count, if more than ten, then the first two were the tube count and the second two were the model line. Model numbers were assigned in sequence but by tube count so each year the count got higher.

In 1934, Zenith models were briefly called "Challengers." Model numbers skipped from the 400s to the 700s since the 500s and 600s had been used for the Interoceans, though there may have been two models used in the 600 series (616 and 618).


Zenith 715 Challenger

Models with 5, 6 ,7, 8, & 9 tube chassis were available which is probably what prompted the change to sane chassis numbers.

As a footnote: Dates refer to Zenith model years. Typically Zenith brought out new models by Thanksgiving to be available for the holiday sales. As such the 1935 line was announced and on sale in late 1934. This has confused a number of people about exactly when various models were introduced.

[Padgett has been chasing radios for more than 2 decades and has a love for Trans-Oceanics. He hails out of Florida and has several articles on his site. Visit performanceresearch.us/padgett to see his other interests. Your editor appreciates his willingness to share.]

Radio Facsimile circa 1939

First Daily Newspaper by Radio Facsimile

From Radio Craft Magazine (March 1939)

[The following article describes the RCA system of radio facsimile which was the competition to the Finch system, used by Crosley (see page 3). RCA's system was substantially more expensive and was originally designed for commercial use.]

STATION W9XZY, the experimental radio facsimile broadcasting station operated by the St. Louis Post - Dispatch, last month inaugurated the world's first regular broadcast on ultra -high frequencies of specially-prepared facsimile newspapers. The broadcasts will be continued daily and Sunday at 2 p. m.

For more than a month experimental laboratory broadcasts of printed matter, photographs and cartoons have been in progress and results have been studied by engineers of KSD, commercial broadcasting station of the Post-Dispatch. During the last few weeks (or about the time this story was written) they have been recorded on 15 receiving sets placed in the homes of members of the station's staff.

These sets, manufactured by the Radio Corporation of America, are the first capable of receiving high-frequency facsimile broadcasts, permitting station operation at any hour of the day. Experimental equipment recently in use by a few other stations employed standard broadcast wavelengths, restricting the period of their use to the early morning hours when regular commercial broadcasting stations were quiet.

Within the next month the manufacturer expects to be able to supply receivers at a cost of about $260. Several will be placed in public places for demonstration. The range of Station W9XZY, broadcasting on 31,600 kilocycles, is from 20 to 30 miles.

[Promotion read] "On the first page of this "radio newspaper," now being received in every home in the St. Louis service area of W9XZY equipped with a facsimile receiver, are the leading news articles of the day. Then followed by sports news, several pages of pictures, Fitzpatrick's editorial cartoon, a summary of radio

programs and radio gossip, and a page of financial news and stock market quotations."

The original copy of the facsimile newspaper printed by regular processes, was placed one page at a time on the cylinder of the sending apparatus. As the cylinder revolves at the rate of

75 times a minute a tiny beam of light (no larger than a pin point), and a photoelectric cell (commonly known as an "electric eye "), move across the page. The amount of reflected light reaching the "electric eye" varies with the black and white of pages of type and with the depth of shading in the photographs. These light variations control the amount of electric current flowing through the "electric eye."

The varying electrical current is amplified by the transmitter and the outgoing radio waves change in intensity in proportion to the amount of light reflected from the copy into the "electric eye."

RECEIVER OPERATION

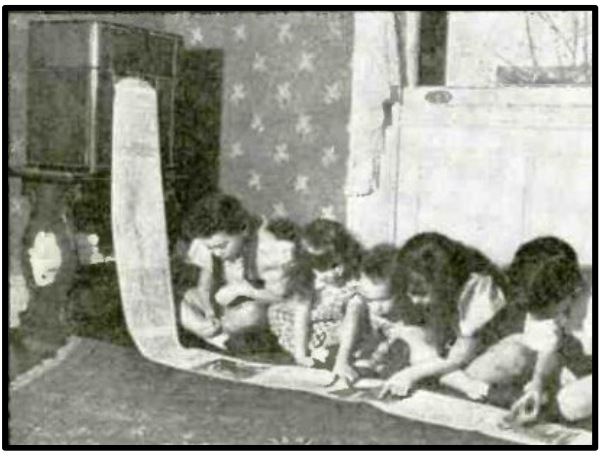
The antenna of the receiver set in the home picks up these waves. The receiver, a closed cabinet with no dials to be operated or adjustments to be made by the owner, contains continuously-feeding rolls of paper and carbon paper which pass over a revolving metal cylinder from which a small stylus projects.

Pressure, varying with the intensity of the radio waves, is exerted on a metal bar, parallel to the axis of the cylinder,

beneath which the paper and carbon is fed. Thus the black and white of the original copy scanned by the "electric eye" is duplicated on the paper passing over the cylinder of the receiving set which is synchronized with that of the sending mechanism.

Printed on only one side, the copy may be cut or folded to make pages of the facsimile newspaper. It is unnecessary for the reader to be on hand when a broadcast begins since a clock, set for the scheduled time, will automatically start the receiving set and stop it at conclusion of broadcasting. It requires 15 minutes to transmit one page.

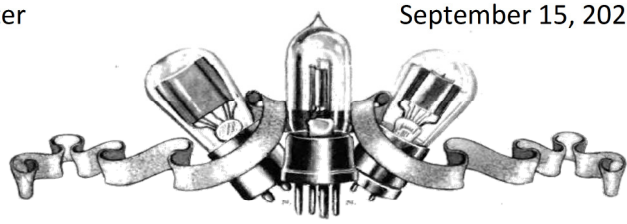
One of the receivers has been set up in the engineering department at Washington University, which is cooperating with station W9XZY in a study of problems incident to actual broadcasting outside a manufacturer's laboratory.



Eager readers enjoy the arrival of the afternoon newspaper by radio facsimile (1938)

Station KSD's engineers have closely followed developments of radio facsimile broadcasting since 1934. Last April, RCA agreed to supply equipment necessary for an experimental program.

[This article and a few additional illustrations appeared in the March 1939 edition of Radio Craft Magazine. When Brian Belanger of the National Capitol Radio and Television Museum sent a photo of a radio facsimile device for the Quarantine Show and Tell this story came to mind. *Your editor*.]



EDITORIALLY SPEAKING

From Dick Karman, Bald Letter Editor

Your editor overheard a conversation recently. One young person was explain to another "we thought the covid-thing would be gone by now." Well, looking back over the last six months, we all hoped the 'covid-thing' would be gone by now, but it isn't.

In the "senior citizen" category as this writer is and so many older radio collectors are, we have quite a bit to be thankful for. First we are not raising youngsters. Second, most of us have some sort of retirement income, and we are not dependent on government hand-outs to pay our rent or buy groceries. Third, we have a work ethic that has been nurtured over the past 60 years that says "let's go out and find something useful to do."

That's how the ***Bald Letter*** was born. It was something that your editor wanted to do to help others. Many collector's clubs were going to miss their monthly meetings. Most, not all, had a good newsletter. The ***Bald Letter*** was not news, but was meant to be historical reading through print, and became a nation-wide email magazine to encourage and inform (thanks to readers like you).

Others folks, like the president of the club in Portland, started to help widows liquidate collections, getting the vintage equipment into the hands of new collectors. (I think president Pat Kagi has helped out with 4 different estates in 7 months.)

Others folks have learned a 'new skill' and began ZOOM meetings and online discussion groups. Some have even tried online auctions. Your editor would encourage all of us to find something that would benefit others and (as Nike would say) just do it. Don't be like the person hides his light under a bushel. Let your light so shine before men that they may see your good works and glorify your father who is in Heaven. (Matt 5:16)

If you don't know your father in Heaven try reading the book of Romans in the Bible.

The Readers Write

Thanks for the Bald Letter. Very Enjoyable.
R.Q. Seattle

I enjoy reading the Bald Letter. It contains lots of interesting information. Thanks for offering it!
Brian Belanger, Maryland

Meet Brian Belanger

Mr. Belanger is a Bald Letter reader, is on the board of Mid-Atlantic Antique Radio Club, MAARC, and is a co-editor of *Radio Age*, the club's journal. After Brian wrote to the editor (see above) he has been gracious enough to provide the quarantine show-and-tell, as well gave your editor some great information about the National Capitol Radio and Television Museum.

From a collector's point of view, Brian has been involved with radio since he got his HAM license in the 1950s. His collecting interests became more serious in the 1980s, during which time he was a founding member of MAARC. He has held several offices in the organization and edited and written for the MAARC publications for forty years.

Brian was also one of the founders of the Radio History Society Inc. It was formed with the sole purpose of establishing and maintaining a radio museum (1993). In 1998 the physical museum became a reality.

Brian has a Ph.D. from University of Southern California. He is the recipient of AWA's Houck Award for Documentation and has been elected fellow of that organization. He also received the National Capital Radio and Television Museum's Broadcast History Legend Award.