

The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB



January 2015

Volume 21 Issue 1

MEETING NOTICE

The next NJARC meeting will take place on Friday, January 9th at 7:30 PM at InfoAge. Directions may be found at the club's website (http://njarc.org). This month's program will include our annual DX-pedition, a members-only auction (no "junk" please) and a continuation of the auction of radios from the Harry



MEETING/ ACTIVITY NOTES

Reported by Marv Beeferman

The ON-LINE Broadcaster

The New Jersey Broadcaster is now on -line. To date, over 120 of your fellow NJARC members have subscribed, saving the club and your editor a significant amount of money and work. Interested? Send your e-mail address to mbeeferman@verizon.net. Be sure to include your full name.

Happy New Year and welcome to the 21st edition of the NJARC Broadcaster. Although the initial planning of our Holiday Party at its new location began with a little trepidation, the result turned out to be a great evening of good friends, good food and good fun. Special thanks go out to Sal Brisindi for arranging the rental of the Freehold Elks hall, providing a luscious buffet (you certainly outdid yourself this year, Sal) and music setup, Al and Peggy Klase for serving a savory cocktail hour (love that pâté!), the Klancers and Lees for providing paper goods and soda and helping with setup and cleanup, Ray Ayling for his 45 record player cake (see attached photo) and Dave Sica, Darren Hoffman and your editor for the evening's entertainment. Thanks also to all members who pitched in helping with cleanup.

I normally include a page or so of photos of the night's activities in the Broadcaster, but this month I was overwhelmed with material (a nice Hannukah gift) so I'll have to defer them to next month. However, you can view nearly 15 minutes of our Mystery Grab Bag game on Bob Bennett's "Radiowild" website on Just click on "NJARC 2014 voutube. Holiday Party Gift Exchange Game." While on the Christmas theme, hats off to NJARC member Vince Lobosco who filled in for Santa Claus (aka John Dilks) at the InfoAge train show on the Saturday before Christmas.



Goehner estate. We'll also be collecting dues for 2015.

CALL FOR DUES

With the new year comes our call for dues for 2015. Your Board feels that the \$25 annual cost (\$30 for a family membership) still remains quite a bargain in light of the club's benefits:

• Twelve issues of the NJARC *Broad*-caster.

• An entertaining and informative web site.

- Meetings broadcast on the web.
- Two convenient meeting locations.
- Technical presentations and contests.

• Capacitors, tubes and parts at bargain prices.

• A constantly expanding and improving radio museum.

• Meeting auctions, estate auctions, member-only auctions, "PAL" swapmeets and our yearly InfoAge tailgate.

• Repair clinics

• Our Holiday Party ... and much, much more!

Check the code next to your name on your *Broadcaster* mailing label. Honorary (H) and Lifetime (L) members are exempt from paying dues. For the rest, including family (F) memberships, dues will be collected at monthly meetings and club activities or you may send a check made out to "NJARC" to our membership secretary:

Marsha Simkin 33 Lakeland Drive Barnegat, NJ 08005

Payment via PayPal is also available at the club's website but it will cost the club a fee. Please renew early and avoid the membership cutoff date of March 31st.

We're kicking off the 2015 collecting year with a DX-pedition, a small estate auction and a members-only auction. The "members" theme implies that you have already paid your 2015 dues or will pay them at the January meeting. All proceeds go directly to the auction item owner and you're asked to offer quality items ... no "junque" please.

Upcoming Events

January 16th - January 25th: BCB DX Contest.

February 13th: Monthly meeting at Princeton; Dick Hurff discusses Tesla.

February 21st: Winter Repair Clinic at InfoAge.

March 13th: Monthly meeting at Princeton; Mike Molnar discusses Edward Weston.

March 21st: Spring swapmeet at Parsippany PAL.

April 10th: Monthly meeting at InfoAge; Dave Sica and Al Klase talk on the NJARC website and Reflector.

May 1st: Monthly meeting at InfoAge; Homebrew and Basket Case Restoration Contest (tentative).

May 8-9th: Kutztown swapmeet.

June 6th: Spring Repair Clinic at InfoAge.

June 12th: Monthly meeting at Princeton; Show & Tell.

Sept. 18-19th: Kutztown swapmeet.

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THE JERSEY BROADCASTER is the newsletter of the New Jersey Antique Radio Club (NJARC) which is dedicated to preserving the history and enhancing the knowledge of radio and related disciplines. Dues are \$25 per year and meetings are held the second Friday of each month at InfoAge or Princeton University.

The Editor or NJARC is not liable for any other use of the contents of this publication.

PRESIDENT: Richard Lee (914)-589-3751

VICE PRESIDENT: Sal Brisindi (732)-308–1748

SECRETARY/NEWSLETTER EDITOR: Marv Beeferman (609)-693-9430

TREASURER: Harry Klancer (732)-238-1083

SERGEANT-AT-ARMS (WEST): Darren Hoffman (732)-928-0594

SERGEANT-AT-ARMS (EAST): Rotating

TRUSTEES: Ray Chase (908)-757-9741 Phil Vourtsis (732)-446-2427

TECHNICAL COORDINATOR: Al Klase (908)-892-5465

TUBE PROGRAM CHAIRMAN: Al Klase tubes@njarc.org

SCHEMATIC PROGRAM: Aaron Hunter (609)-267-3065

CAPACITOR PROGRAM: Matt Reynolds (567)-204-3850

RESISTOR PROGRAM: Walt Heskes (732)-205-9143

WEB COORDINATOR: Dave Sica (732)-382-0618 http://www.njarc.org

MEMBERSHIP SECRETARY:

Marsha Simkin 33 Lakeland Drive Barnegat, N.J. 08005 (609)-660-8160

THE APPLEBY MODEL 60: A REAL "LOSSER"

By Marv Beeferman

About a year ago, I purchased an Appleby Model 60 battery set from NJARC member John Dilks. John had traced the fascinating life of the set's manufacturer, Tom Appleby, in three QST articles - "The First Ham in Philadelphia" (September 2005), "3ZO and Mr Horace A. Beale Jr" (May 2008) and "3ZO and Mr Horace A. Beale Jr - Part 2" (June 2008). If you're able to gain access to these articles on the web, they come highly recommended.

As John points out, Tom Appleby's formation of the Appleby Manufacturing Company began with his relationship with Horace A. Beale Jr. who was born into a well-connected family that owned the Parkesburg Iron Company in Parkesburg, Pennsylvania. With a passion for Amateur Radio, Beale built a station that would rival any amateur station at the time. He recruited Tom Appleby, W3AX, to design and build most of the equipment for what Appleby described as "the first high powered radio broadcasting station in the United States." In his autobiography, Appleby noted that he designed and constructed at least eleven radio transmitters operating on different commercial, experimental and amateur frequencies. Assigned call letters were WQAA for regular broadcasting, 3XW for experimental broadcasting and testing, 3OI for a mobile station installed in a closed truck with a complete radio room and 3ZO for communications with other amateur stations.

In 1924, ill health forced Horace Beale Jr. to give up his radio experiments and Tom Appleby formed the Appleby Radio Manufacturing Company, opening up a small factory at 1134 South Cecil Street in Philadelphia. In 1926, the company moved to 250 North Juniper Street.

In his autobiography, Appleby notes that he "designed and put on the market the first radiophone receiver with a single tuning dial. All other receivers at that time employed at least three tuning dials." This might have been an exaggeration on the part of Appleby since he is not given any credit in any of my references for the early establishment of one-knob control. In fact, all of the Appleby models that are referenced on the "Radiomuseum" web site (models V, X and XV), my model 60 and a later model 70 (posted on the Antique Radio Technical Form) reference two-dial tuning. It is possible that, as noted on my Model 60, by ganging the two RF variable capacitors on a single shaft (and adding a small, adjustable capacitor to improve tracking), Appleby considered this arrangement "single-dial" tuning. However, a second variable capacitor and tuning dial used to tune the antenna circuit may not have been considered by Appleby as part of actual "station tuning."

The Appleby Manufacturing Company did not last long. In Tom Appleby's words: "My receiver was soon copied by others and in those hectic days of 'obsoleteness over night' it was impossible for us to keep up with the competition of the larger companies and I sold the business to J. H. McCullough & Co., on north Broad Street who, in the days of the horse were in the harness business, and then the automotive business and finally radio sales, service, and manufacturing."

The term "losser" as applied to my Appleby Model 60 was created by the editors of the amateur magazine QST and was associated with a proliferation of receivers produced between 1923 and 1927 with tuned radio frequency amplifiers that did <u>not</u> use the Neutrodyne circuit to prevent oscillations. To avoid payment for Hazeltine's patent license, some very stable receivers with few internal adjustments were developed.

The Neutrodyne was a particular type of TRF radio receiver in which the plateto-grid capacitance of the triode RF tubes was cancelled out or "neutralized" to prevent oscillations which caused "squealing" or "howling" noises in the speakers of early radio sets. In most designs, a small extra winding on each of the RF amplifiers' tuned anode coils was used to generate a small antiphase signal, which could be adjusted by special variable trim capacitors to cancel out the stray signal coupled to the grid via plate-to-grid capacitance.

In "losser" radios, Hazeltine's circuit was used but hidden from view. First, neutralization was accomplished by arranging the tuned RF circuits so that stray capacities provided the required neutralizing capacity. This method worked even better if the amplification or gain of the amplifier stage was reduced. The reduction in gain was obtained either by using inefficient coils (or not following the RF design principles laid down by Browning -Drake), placing resistors across the tuned RF circuits or coupling the coils to a resistive circuit (and thus reducing coil "O").

As a result of these design changes, amplification remained sufficiently high for ordinary radio listeners although the resulting radios were not as sensitive as a well-designed Neutrodyne. Notable in this group were the Atwater Kents. A positive feature of the "lossers" was that they were easily aligned as there were no neutralizing capacitors to adjust. Savings in labor and the cost of the neutralizing capacitors and the savings in license fees (which could amount to as much as 7.5% of gross sales) made these sets inexpensive to manufacture. However, the result was a set that gave trouble free performance to a great many customers.

Some of the "lossers" used other interesting ways to reduce gain and prevent oscillation. In the 1923 Freshman "Masterpiece", the frames for the tuning capacitors were made from steel with the tuning coils mounted on them from behind. As conductors of electricity, eddy currents induced in the frames made each act as a continuous shorted turn coupled to its respective coil. Since steel is a poor conductor, the effect was the same as placing a resistor in series with the coil, creating the same effect as a grid resistor but without its expense.

The 1926 Pfanstiel Model 10 in my collection uses "doped" spider-web coils to introduce losses. The spider-web coils are wound in a flat spiral and coated with some sort of high loss coating or cement. In its instruction booklet, Pfanstiehl hides the fact that neutralization is really taking place:

" The vast majority of radio sets, particularly of the regenerative type, produce loud squeals and whistles and other noises, especially when a station is being tuned in. The Pfanstiehl Model 10 Overtone Receiver is not regenerative. A large percentage of the objectionable noises that are common heard in radio sets have been eliminated in this receiver. The new principles upon which this set is designed do away with the usual internal disturbances, characteristic of radio-frequency, at the source. No neutralizing is necessary there are no disturbing forces to neutralize."

My Appleby Model 60 uses many of the techniques described above to provide neutralization without resulting in a "direct" violation of the Hazeltine patent. These techniques are illustrated in the attached photos.

1. Two of the RF transformers are attached directly to the steel frames that mount the antenna and ganged RF variable tuning capacitors.

2. One of the RF transformers and the two RF amplifier tube sockets are mounted on a steel plate sub-panel with the audio amplifier sockets mounted on a separate steel sub-panel

3. Two of the RF transformers are mounted vertically and one horizontally. Their primaries are wound in the middle of their secondaries, in contrast to the recommendations of Browning-Drake who proved that they should be wound at the bottom to minimize losses.

4. The plate potential of the RF amplifiers is fed through the primary coils to the first and second stage RF transformers from the grid end of the secondaries

In a short article in Radio News for May, 1926, the author rejects the possibility that the above design features of the Appleby Model 60 were somehow the result of prolonged mathematical calculations:

"...losses are produced by the proper placing of the second radio frequency transformer in relation to the metal shielding. It is not possible to arrive at this position mathematically but only through experimentation."

Erring on the side of poor selectivity and low amplification, designers of "losser" radios still provided the public with a stable radio that accounted for a large proportion of 1920's offerings. They provided a reasonable competition for their more elegant brothers, the Neutrodynes. My Appleby Model 60 is just one example. However, there were also many other "special TRF's" in which engineers used ingenious ways to neutralize their old nemesis, the triode. Perhaps we'll talk about these in a future Broad*caster* article.

References:

John Dilks, "The First Ham in Philadelphia," QST, September 2005
John Dilks, "3ZO and Mr Horace A. Beale Jr," QST, May 2008
John Dilks, "27O and Mr Horace Matter and Matt

3. John Dilks, "3ZO and Mr Horace A. Beale Jr - Part 2," **QST**, June 2008

4. David Rutland, "Behind the Front Panel - The Design and Development of 1920's Radios," California Historical Radio Society

5. Radio News, May 1926, pg. 1545

6. "Book of Instructions for Pfanstiehl Overtone Receiver - Model 10 and Model 10S"



The Appleby Model 60.



Note the relationship of the 3 RF transformers, the mounting of the first on the antenna tuning capacitor steel frame and the second on a separate steel sub-panel - all done to reduce gain and prevent oscillations.



The internal layout of the Appleby Model 60. Note that the two RF amps and three audio amps are located on separate steel sub-panels. Also note that the third RF transformer is directly mounted to the ganged RF tuning capacitor's steel frame.



"Doped" spider-web coils on my Pfanstiehl Model 10 "Overtone" receiver.

A CHRISTMAS PRESENT FROM COLORADO

By Ray Chase

Mark and Wendy Kuligowski were active NJARC members a few years back before moving to Colorado. Wendy called me a couple of weeks ago and asked if the club would like a Philco radio that the couple would be willing to bring to New Jersey when they drove East for Christmas visits. Since we hardly turn down any radios (although a large console), this one was all the more appealing since it was a Model 39-55, the famous set that used a wireless "Mystery Control" remote unit. Wendy and Mark first offered to deliver it to the museum, but after

MARKETING HYPE IN THE GOLDEN AGE OF RADIO

By Ray Chase

A few weeks ago, a nice console radio was delivered to the NJARC Radio Technology Museum as a donation to InfoAge. This GE Model J-105 is a rather large radio in relatively nice condition except that someone had installed an awful yellow grill cloth over the original grill. The donor said that it was a very nice sounding radio in its day.

We do not turn down the majority of museum donations, but many consoles are a "drag" to deal with and do not have much auction value. However, the more the NJARC crew looked at it, the more we leaned towards keeping the radio as a "keeper" for museum display.

The GE J-105 with a 1940/1941 vintage is a 10-tube broadcast set with two short wave bands. It features pushbutton tuning, two large loudspeakers but no tuning eye and originally sold for \$93. "High fidelity" radio was coming into vogue at this time and a review of the radio's circuitry indicates a design that employed good frequency response engineering principles such as negative feedback. The tube compliment includes four 6J5's, one as the detector and the rest in a few coordinating phone calls, arrangements were made for me to pick up the radio at an address they were to visit in Spotswood, New Jersey on the day after Christmas.

Attached is a picture of Mark and Wendy with the radio before it was transferred to my van. The donation included the "Mystery Control" box with its original batteries that good storage had prevented from corroding. Also included was a spare chassis without tubes. Mark told me that the speaker voice coil was open but the field winding was still good. The cabinet needs some minor repairs but no other restoration work had been attempted. They were considerate enough to remove the panel and dial glass and pack them separately to prevent damage during the radio's trip East.

Mark and Wendy got a tour of the museum before they returned to Colorado and were duly impressed. They are members of the Colorado Radio Collectors Club, an organization similar to the



the phase inverter and driver stages. The audio output stage uses a pair of 6L6G's feeding a 14-inch ("Dynapower") and 6inch speaker in parallel. Marketing hyped these features as GE's "Golden Tone."

For the front end, the antenna coil is housed in a large cardboard cylinder inside the cabinet that functions as the BC and SW antenna as well as the input coil for the untuned RF amp. The marketing guys loved this and branded it the "Beam -A-Scope" antenna system similar to the Zenith "WaveMagnet." It was advertised as eliminating the requirement for aerial and ground wires.

The Beam-A-Scope came with many variations; often the loop was shielded with a wire cage or foil. Sometimes, an external antenna coupler was built in. Some could be turned for directionality, others could not. Some were very big as NJARC. We promised to keep in touch so our clubs might help each other in the future.

Now all we need is someone to take on this radio as a restoration project. Its significance as a radio with the first truly wireless remote control would be a fine addition to the museum.



on the J-105 and others were small. In all cases, the antenna had to be matched to the RF circuit.

This donation has the usual maladies of a 75 year-old radio; sticking pushbuttons, a reluctant tuning knob and numerous paper capacitors. Physically, the radio has aged well and was not stored in a damp basement so the cabinet will need little work except for installing a more appropriate grill cloth. Let's hope there's someone out there who is willing to take this orphan under his wing and see if it sounds as good as its former owner claimed.



The GE Model J-105 - "no aerial, no ground" required. GE recommended "Golden Tone Preferred Type Tubes" as replacements.

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An example of the GE "Beam-A-Scope." Note the 14-inch speaker.

NJARC 2015

DX-PEDITION

"DX-pedition" at InfoAge on January 9th

As a prelude to our 2015 Broadcast

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6. Transistor radios

Various antennas will be provided and you're welcome to bring your own tuned loops for the broadcast band. We might consider playing into the wee hours if enough interest exists.

TESTING FOR TUBE SHORTS

Part II

By **Mary Beeferman**

uary 16th and January 25th (see page 8). We're going to take advantage of the great facilities and hopefully quiet listening environment available to us at InfoAge. The primary theme will be broadcast band DX and battery-operated sets, but antenna facilities will also support short-wave and long-wave operation as well.

We'll attempt to maintain log books for each receiver so that both stations heard and user comments may be recorded. These might be published, with pictures, on the NJARC website and Broadcaster for future reference. We also might try to shoot some video of each set in operation and post it on our website.

If you plan to attend the January meeting, please try to come with sets in good working order that you don't mind having other club members operate. If you could bring a length of coax that can be connected to your radio, with a BNC connector on one end, it would be helpful. We'll try to supply additional cables and adapters, but your help would be appreciated.

We'll try to coordinate the different types of radios that show up so we don't end up with mostly All-American-Fives. Please contact Al Klase at (908)-892-5465 or ark@ar88.net with the type of radio you plan to bring. It would be nice to have representative receivers in the following categories:

1. Crystal sets

2. Battery sets: Regens, TRF-regens, TRF's, Superhets

3. 1930's and 40's AC sets: TRF's and Superhets

4. Other entertainment sets

TRF Au-5. Communication receivers: todynes, single conversion, multiple conversion.

Much of the following information is based on the article "The Problems of Tube Short Testing" by A. Overstrom found in the January 1963 issue of Electronics World.

Last month, in Part I, we discussed the meaning of the sensitivity of a tube tester's short check and the operation of A.C. short detectors. This month, we'll continue with D.C. short detectors and how sensitivity is determined.

D.C. Short Detectors

The use of direct voltage short detection is most commonly found in the service-type tube testers we are all familiar with. The typical configuration is simplified in Figure 1A. Only one side of the neon bulb can glow under any condition. That will occur when a short exists. Indications for this and other conditions are shown to the right of Figure 2. Note that, for an open element (no continuity), the indication is the same as for the normal indication of no short.

Determining Sensitivity

How reliable is a given tube tester in revealing shorting and leakage? This depends on its sensitivity, i.e., on the maximum resistance up to which it will give indication. This resistance can be determined by using the circuit of Figure 1B. Variable resistor R must be a calibrated unit whose maximum value should be at least several megohms. The leads from the 6AL5 and the variable resistor are connected to two appropriate points in one of the sockets of the tube tester, depending on which short test (i.e., between

what two electrodes) one wishes to check the sensitivity of. Starting with its maximum value, R is then adjusted until the same indication is obtained on the neon lamp that occurs with a typical tube short. The value noted on R is the value of the resistance sensitivity.

If testing a d.c. short tester, the 6AL5 diode may be omitted. Its purpose is to provide a clear-cut comparison of indications where an a.c. short test is used. With the diode passing current on onehalf of each cycle, one side of the neon bulb will be permitted to glow (no short) before the value of R is reduced; then, both sides will glow when the value of R is equal to the resistance sensitivity.

Excessive Sensitivity

Does a higher sensitivity mean a more reliable short test? Not necessarily. If it is too high, it may indicate a short when there is a slight leakage path that will not cause trouble in normal use. This might mislead the user as to the tube's actual condition. On the other hand, too low a resistance sensitivity is not likely to expose such significant conditions as flicker shorts.

The problem here is that there is no standardization on sensitivity. It may vary from 0.5 to 5 megohms from one tester to another depending on the manufacturer and model. With regard to most tube manufacturers in the 1960's, sensitivity was usually held to 1 megohm. The important consideration was to keep the tube user happy. A carefully chosen average sensitivity will detect bad tubes without causing others to be replaced.

(A)

1/2 6AL5

TO SOCKET

be omitted.

OF SHORT DEVICE

For my TV-7D/U tube tester, the short circuitry is tested such that the SHORTS lamp should glow using a test resistor between 100,000 and 510,000 ohms. For my Hickok Model 752 tube tester, tubes having inter-element shorts and leakage paths will cause its test meter pointer to move upscale in various positions of the LEAKAGE switch. A leakage resistance of 10 megohms will cause the meter pointer to begin to indicate. A complete inter-element short will cause the pointer to deflect full scale to give a zero ohms reading. The top scale of the test meter is the LEAKAGE scale and is calibrated in ohms such that the resistance of leakage paths up to 10 megohms can be read directly from the scale.

Another factor involved in sensitivity is a function of the test voltage applied to the tube. The higher the voltage used, the greater the sensitivity. However, not all electrodes in all tubes are made to withstand great stress. Consider a short test or leakage test with voltage applied between the grid and cathode of the tube. The grid will act as a rectifier plate, drawing considerable current. It was never designed for such duty. The higher the voltage applied (or the longer the duration of the test period), the more likely is a tube that was good to begin with to arc over and become damaged.

In addition, as neon short test bulbs age, more voltage will be dropped across them, leaving less for the tube electrodes. In other words, the test becomes less responsive with time.

A periodic recheck of short/leakage sensitivity using the recommendations of this article or the tube tester's manual

A.C. SHORT DEVICE

D.C. SHORT DEVICE

may prove enlightening. Accurate knowledge of your tube tester's sensitivity is a distinct advantage if you want to evaluate test results properly.

Short/Leakage Test Basics

1. Disregard momentary flashes when you change test switch positions. These flashes are usually caused by the discharge of inter-electrode and stray circuit capacitances.

2. It's a good idea to gently tap the tube under test with your finger throughout the test; this will reveal and loose elements which might short out under vibration.

3. A very weak test bulb glow, if continuous, can indicate a high-resistance leakage path, even though no short exists. Some AM radios and amplifiers operate unimpaired with a leaky tube, but sensitive FM and TV circuits generally act adversely to even the slightest leakage. In these cases, you might want to consider a more sensitive tube tester like the Hickok 752.

4. Shorts will of course show up across filament or heater terminals and in cases where single tube elements are connected internally to more than one pin. This is perfectly normal and the tube tester chart will indicate where these "normal" shorts should appear.

5. Tubes should always be tested for shorts first and discarded if shorted. A shorted tube, under certain conditions, can damage a tube tester if the tube is tested for emission or mutual conductance.

6. Many testers provide a circuit for testing potentially noisy tubes and this is a logical test to make next. Loose tube elements tend to vibrate, changing interelectrode spacing and hence capacitance and other circuit constants.

(B) Figure 1A - A d.c. short detection system in basic form. Figure 1B - A simple circuit for determining sensitivity of the short test. For d.c. short testers, the 6AL5 diode may leakage.

TUBE

UNDER

([])

NEON BULB



Figure 2 - D.C. short detection lamps (right); white area indicates glow. Some tube testers, like the Hickok Model 752, use a meter to provide a quantitative value for



A KUTZTOWN LANDMARK IS SOLD

By Marv Beeferman

If you ever attended a Kutztown radio swapmeet and approached from the East on Route 222, no doubt you probably passed by the former home of Pauley's Electric Shop and noticed its iconic Philco sign. The building where the sign was located is now a private residence and rumor has it that the sign was initially posted on Craigslist for \$4300 a few years ago.

The sign has recently been sold and again, rumor has it that the original asking price was not paid. A recent posting noted that "the pole it was mounted on is in poor shape, but the sign itself cleaned up pretty well and still works!" Some collectors think that they have seen a similar sign in a Philco dealer catalog of the late 1930s and, if true, it would make it some 75 years old!

If you're interested in seeing the sign in real time, go to NJARC member Bob Bennett's "RadioWild" website on youtube and click on "Going to the Kutztown Swapmeet."



FATHAUER PASS

By Marv Beeferman

We sadly report the passing of two highly regarded antique radio enthusiasts, Lauren Peckham and George H. Fathauer, and the NJARC offers deep condolences to family and friends.

Lauren Peckham was an early collector of vintage radios, music players and vacuum tubes. He was a contemporary of other major tube collectors such as Ludwell Sibley, Bro. Patrick Dowd, John Stokes, Gerry Tyne and Howard Schrader. He was the third recipient of the AWA's (Antique Wireless Association) Tyne Tube Award. Along with his son David, he owned and operated the LA Peckham and Son Pipe Organ Service operating in the Breesport, NY area since 1971.

Peckham helped found the Antique Radio Club of America in 1972 and served on its board until absorption by the AWA in 1994. He was the first "non-ham" president of the AWA and held a place on its board for decades, promoting and growing the organization. Peckham was a major contributor to the tube column for the AWA's *Old Timer's Bulletin* and organized the AWA Tube Collector Group.



Lauren Peckham at the 2013 AWA conference in Rochester, NY. His early wireless equipment seminar was quite popular.

George H. Fathauer founded a number of companies in the electronics business and held 76 U.S. patents. In the late 40s, after a short time working for RCA, he worked for Industrial Design Engineering Associates and developed what would become the Regency TV booster which greatly improved TV reception in fringe areas and the "Bearcat" line of VHF radio scanners. In a May, 2013 interview, Fathauer considered the Bearcat his "best invention."

Later, Fathauer founded the Dage Electronics Corporation to develop and manufacture television cameras and related equipment aimed at the industrial market. In 1954, he developed a color monitor that is in the collection of the Early Television Museum.

Fathauer moved to Mesa, Arizona in 1973, set up a new development laboratory and eventually formed Antique Electronic Supply with his son, George A. Fathauer. The firm was sold to its present operators in 1994 and continues to be a major source of tubes, parts and books for the electronics and antique radio enthusiast.

Fathauer co-wrote, with the late Robert E. Grinder, *The Radio Collector's Directory and Price Guide* (1986) and supervised the compilation of the *Electron Tube Locator* in 1994.



George H. Fathauer during a May 21, 2013 interview.

Editor's Note: Some of the material used in the above article was provided by Ludwell Sibley.

BITS AND PIECES

Over the years, we have tried to document the huge effort that NJARC member Ray Chase has made in preserving the history of radar. In the September 2014 *Broadcaster*, we carried an article on his saving InfoAge Building 9115 from the wrecking ball, the shelter and antenna base for the SCR-271 long range air search radar. I recently came across a cartoon that I just couldn't resist. I've included a picture of the original SCR-271 and building...I hope you'll see the connection.





The 2015 NJARC BCB DX Contest - January 16 to January 25

In the 1920's and 1930's, some radio listeners would compete with each other for the reception of the most distant stations using the same receivers that we now restore and cherish. We can recapture some of the excitement that the early DX'ers experienced in our own contest.

Official Contest Rules

THE OBJECT: To use vintage radio receivers to receive broadcast-band (BCB) signals from the greatest possible distance. Performance will be judged by the total mileage for your ten best loggings during a 24-hour session. You will be competing against other NJARC members using similar receivers.

ELIGIBILITY: The contest is open only to members in good standing of the New Jersey Antique Radio Club.

CONTEST PERIOD: The contest period will be from 12:00 Noon, local time at the receiving location, Friday, January 16th through 12:00 Noon, Sunday, January 25th.

SESSIONS: Contestants may submit logs for any two, 24-consecutive-hour sessions (Noon to Noon) during the contest period. You may use only one receiver during a session. That means you may not "bird dog" a simple radio with a more complex radio. You may submit logs for two different receivers. They need not be in the same category.

FREQUENCIES: The broadcast band, as defined for this contest, will be from 530 to 1600 kilocycles. No stations on the new extended band, 1610 to 1710 kilocycles, will be counted since many early radios did not over those frequencies.

RECEIVER CATEGORIES:

- A Crystal radios.
- B Primitive tube or transistor receivers, including homebrews 1 to 2 tubes or transistors, plus power supply.
- C 1920's battery sets, including homebrews batteries or modern power supply are OK.
- D Other tube radios sold for home entertainment.
- E Amateur, commercial or military tube-type communication receivers.
- F Any radio of your choosing.
- G "Light-weight" Any radio weighing less than one pound (454 grams).

SPECIAL AWARDS: Best performances by first-time contestant (please note this status on your log sheet).

ANTENNAS: Anything you like.

LOGS: Submit a log for each of your contest sessions (maximum of two). Each log header should include contestant's name, address, e-mail address if applicable, phone number, category, and description of receiver and antenna. Please include your listening address if it is different from your mailing address.

Make a log entry for each station you claim to have heard. Stations must be positively identified. (This is being done on the honor system, and is somewhat a variable concept. If you hear Boston weather on what you know is 1030 KC, then go ahead and log WBZ. However, just because you heard a signal on 1160 KC doesn't mean you heard KSL in Salt Lake City.) The contest committee reserves the right to disallow what it feels are outrageous claims. Each entry should include time, frequency, call letters, location and optional comments. Although we're only judging your ten most distant loggings, submit as complete a log as possible. The committee may make special awards for most stations, most interesting log, etc. as it sees fit. Logs must be postmarked no later than midnight Monday, February 2nd, 2015. Logs may also be submitted as email attachments.

SCORING: Distances to stations will be calculated by the committee and will be based on great circle distances from Freehold, New Jersey for listening posts within a 100-mile radius of Freehold. We will calculate mileage for other entries based on actual listening location. In all cases, please note your ten best loggings to make our job easier.

Special Rule #1: A contestant may claim only one of the Cuban time stations, Radio Reloj, regardless of how many are actually heard. All will be scored as 1279 miles (Havana).

SUBMIT LOGS TO: Tom Provost, 19 Ivanhoe Dr., Robertsville, NJ, 08691, tprovost@ppl.gov

QUESTIONS?: Al Kase 908-892-5465, ark@ar88.net Tom Provost 609-243-2508