

The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB



August 2016

Volume 22 Issue 8





Reported by Marv Beeferman

The ON-LINE Broadcaster

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It's unfortunate that the site for last month's NJARC tailgate swapmeet at InfoAge is not as well known as it could be. Despite the warm weather and humidity, an umbrella of shade trees and proximity to the Shark River provided a comfortable and breeze-swept environment for being outdoors, selling and buying radios and generally exchanging radio "war stories." Although buyer turnout could have been better (probably tempered by forecasts of a sweltering Armageddon), it appeared that all attendees had a very pleasant day.

In addition to the usual suspects, president Richard Lee would like to offer a special thanks to treasurer Harry Klancer who, although recovering from hip replacement surgery, still managed to lay out the vendor parking area. Thanks also goes out to member Max Theis for volunteering to man the buyer check-in tent. We would also like to thank member Bob Bennett for capturing a six-minute video of the event. It can be found at his "RadioWild" site on YouTube or at https://www.youtube.com/watch?v=rZrdn oOZOU.

Associated with the swapmeet was a mini MRCA meet sponsored by our technical coordinator Al Klase. Some very kind words were offered by attendee B. Smith with regard to the meet and InfoAge in general:

"A fantastic event. Many thanks to Al and the New Jersey Antique Radio Club



MEETING NOTICE

The next NJARC meeting will take place on Friday, August 12th at 7:30 PM at Princeton's Bowen Hall (70 Prospect Ave.). Directions may be found at the club's website (http://njarc.org). The presentation for this month is Reginald Fessenden - The Father of Modern Radio. Fessenden laid the groundwork for much of modern radio communications prior to the end of 1906. This included continuous-wave (CW) telegraphy, heterodyne detection and amplitude modulation. We'll also continue with the auction of items donated by Pete Olin; see page 3-4 for this month's offerings.

and especially InfoAge for allowing us to rest over night in the Marconi College. We of course spent a lot of time in the NJARC Radio Technology Museum which had many displays and several which Al had personally crafted. A lot of hands on material for visitors; an attentive visit could easily fill up a day."

"The swapmeet was great and our location was right across from it under shade trees. A 2-6 knot breeze was welcome...So much to see between the different displays and museums but my biggest mistake was waiting until late Saturday to visit the Military Vehicle Museum as it could easily take a day to digest it all. A great event and well organized with too much to do."



Commo1, a vehicle with 12 different military radio sets, all working.



Technical coordinator Al Klase does some field repairs.



A little military radio humor. Tag reads "Very rare NOS first generation radio transceiver set PRC-1 or VRC-1 (with extra string). Tested and working - \$1500."

At the July meeting, Alan Wolke (W2AEW), RF Field Application Engineer for Tetronix, incorporated the All American Five demonstrator from the RTM to illustrate radio troubleshooting using the oscilloscope. Alan covered the basics such as adjusting the display, using the vertical and horizontal triggers, probe use and safety (especially with tube gear). He went on to show us how to evaluate signals in the power supply, mixer/ converter, IF, detector and AF stages. Some important notes included:

• Probe capacitance <u>will</u> de-tune circuits (move the local oscillator frequency, affect alignment, etc.) anywhere that the circuit relies on 10s of pF for operation.

- Use lus/div. to see the sinusoid on IF and local oscillator signals.
- Trigger on "Line" to keep ripple stable.

August 2016

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.

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33 Lakeland Drive Barnegat, N.J. 08005 (609)-660-8160 Watching the NJARC webcast on vacation in Mexico provided by Matt Reynolds in his absence, Dave Sica made the following comment:

"Tonight I learned several things about 'scopes: 1) I heard the most understandable explanation of probe compensation ever. I think I actually finally understand it. 2) I heard the best explanation ever of 'scope triggering ever."

"I've watched Alan's original "Scopes for Dopes" presentation several times, but either I keep forgetting some of the details, or tonight's presentation just made some points clearer for this particular 'dope.' For those of us (the ones I like to call "real engineers") like Al Klase and Alan Wolke, who understand all this stuff intimately, my heartfelt thanks for slogging through basic material again and again for the benefit of us 'shade tree engineers' who continually struggle with so many of the fine points!"





From his vantage point in Mexico, Dave also made some comments in sympathy with those members who find occasional frustration with our meeting webcasts:

"Watching via web cast was a bit frustrating at times, as many of you have mentioned in the past. Tonight I got first -hand experience with freezing video, commercial interruptions, suboptimal audio and all the rest of the stuff that makes the webcast only the next-best thing to attending the meeting. Still, it's way better than missing it completely. And I did get a few ideas on how to make things better, so we'll see how that goes."

"I greatly enjoyed attending the July NJARC meeting from several thousand miles away. That's at least two reasons ya gotta love this club!"

Finally, if you haven't heard about it already, session one of the auction of the John Terrey collection will take place on September 18th in Carlisle Mass. with a preview and BBQ reception on September 17th. If you're not familiar with John's collection of mostly early and unique sets, all that can be said is that the auction has been called by some as the "radio auction of the decade." Besides the regular offering of approximately 300 lots, uncataloged box lots and a tag sale of lower valued items will be available before and after the main auction. For further details, go to TerreyAuction.com. If anyone is planning to attend and wants to share expenses (and prevent you from spending too much money), I'd like to tag along. Please contact me at 609-693-9430 or mbeeferman@verizon.net.

Upcoming Events

August 6: Summer Repair Clinic at InfoAge

August 17-20: AWA Convention

September 9th: Monthly meeting at InfoAge; topic TBA

Sept. 16-17: Kutztown Antique Radio Meet

October 14: Monthly meeting at Princeton; Mike Molnar talk on Cooley Ray Photo TV kit

October 22: Fall Repair Clinic at InfoAge November 5th: Fall swapmeet at Parsippany PAL

November 11th: Monthly meeting at InfoAge; Show & Tell

December 10th: Holiday Party, West Lake Country Club, Jackson NJ

MUSEUM MUSINGS

By Ray Chase



This is the first of a column that will appear on a monthly basis in your Jersey Broadcaster. It will be mostly written by members of the Radio Technology Museum (RTM) board but other museum staff members and your editor may provide contributions. Its purpose is too keep the membership informed of museum activities, comments from our visitors, contributions, new displays and other important developments. If you would like to comment on the column or any other activities, we welcome your input and will be happy to include it in the column...Ed.

A Gaggle of Giggling Girls

On Wednesday, June 29th, a group of 26 kids, ages 6 to 11, visited InfoAge from Camp In Motion, Ringwood NJ. That's a long trip for a school bus of kids and they could only stay for a limited number of hours so we had to adhere to a tight schedule to make the most of the visit. It turned out that there were more girls than boys and more were on the younger end of the age grouping.

On arrival, the group was split in two and only 20 minutes were allocated to the RTM for each group of twelve. We split this group again in half so that six could be in the Hands-On Room while the rest were guided through the other radio displays. Al Klase, Jules Bellisio, Vince Lobosco and myself were tour guides. Because of their young age, not too much science learning was accomplished but the kids had a good time, especially in the Hands-On Room. Too bad they could not stay longer, but reports from the kids indicated it was a pleasant visit. Unfortunately, pictures were not allowed.

Donations Large and Small

It is not uncommon that visitors to the RTM offer donations as a result of a HAM becoming a silent key. On July 10th, a woman from South Salem, NY brought in a small box of parts and test equipment resulting from the cleanout of her dad's (K2HMQ) home in Bradley Beach. The items did not have that much value but she wrote me a very nice letter about what her late father did and closed with the following comment:

"I greatly enjoyed my visit to the museum today! The items in the radio/TV section are beautifully displayed and clearly show the care and attention you and others have invested in the history of these electronics. Thanks to all for your efforts in conservation."



I attended the Mid-Atlantic Antique Radio Club (MAARC) annual meet in Timonium, MD on June 24th and 25th. Honorary NJARC member and vacuum tube expert Ludwell Sibley, President of the Tube Collectors Association (TCA), was in attendance, holding his annual TCA meeting in conjunction with the MAARC meet. At the meeting, Lud presented his report on the status of the association which is healthy and very active both in the U.S. and internationally. A show-and-tell period followed and a tube auction was held as part of the main auction at the end of the meet.

I brought along a mystery that I have been unable to resolve. The first Army radar, the SCR-268, employed a "ring oscillator" transmitter using 16 VT-127 triode tubes (modified Eimac 100TS's). There were initial reliability problems with these tubes sometimes referred to in service reports as "grid contamination." An improved VT-127A was then introduced. The specification sheet for the VT-127A specifically warns that the grid shall not be tested for grid contamination nor subjected to "grid cleaning." Tube cartons and insert sheets for many NOS VT-127A's warn that "grid testing and cleaning" shall not be employed.

A few years ago, at an Estes auction, I obtained a military "Test Unit BC-673-A (TUBE)" that was designed and produced by the Signal Corps specifically for the VT-127A tube to perform grid emission testing and to subject the tube to a grid "baking" process. I have never been able to locate any technical information on this test set nor any further information on the mystery of the production of a test set for a prohibited process.

Anyway, it was nice to spend the weekend with Lud, a great contributor to the club while he lived in New Jersey and the first *Jersey Broadcaster* editor. I invited him to make a detour to New Jersey as part of his trip but he and his wife Marilyn had planned a visit to the AWA museum along with other stops.

The theme for this year's MAARC meet was Western Electric. A friend of mine, Paul Hart (not club member Paul Hart) had been asked to make a presentation on Western Electric in WWII. Since this would include significant information on radar, Paul asked me if I could bring some Western Electric radar tubes for display. I had recently completed an inventory of my tube collection so I was in a position to lay my hands on quite a few appropriate tubes. It actually got a little out of control and I ended up making mounts for 22 different types of WWII radar tubes and created a formal display that I entered in the MAARC old equipment contest. I was fortunate to win first prize in the category of Western Electric tubes.



The MAARC old equipment contest is a sight to behold. Entries are outstanding in rarity and depth of restoration and in such numbers that display room is sometimes overwhelmed. It is a highlight of the meet.

The flea market was well attended and active although interrupted by a shower or two. At the end of the meet was a $4\frac{1}{2}$ hour auction including several estates that offered many choice items and some good bargains. Good thing I am not in the acquisition mode.

The MAARC meet crams a lot of activity into two days but does suffer from tight quarters at its present location. The club is looking to move it to a place with more space.

PETE OLIN AUCTION CONTINUES

As noted in last month's *Broadcaster*, member Pete Olin has donated a portion of his radio collection to be auctioned or displayed at the RTM. Prices realized last month are as follows:

Grebe Synchrophase - \$95 Philco 91A - \$250 Atwater Kent 30 - \$25 American Bosch - \$45

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At the August meeting, the following will be offered:

Westinghouse RA/DA - not working, probably has new transformers Atwater Kent 145 - fantastic sound! Philco 70 - works fine



TAILGATE UNDER THE TREES A Photo Journal of the July InfoAge Swapmeet

> By Marv Beeferman











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DX'ING BARNEGAT BAY

PART II

By Marv Beeferman

In part I of this article in the July *Broadcaster*, we talked about the early days of marine radio offered for America's pleasure boats. We also discussed the problems of a seagoing set which included ignition interference, "fading" as the boat rolled, corrosion of metal parts, loss of signal strength due to the condensation of moisture on coils and other sensitive parts, tube microphonics caused by vibration and failure of cabinet integrity.

Later in the article, we traced some of the history of the Malone-Lemmon company and their marine receiver. The Malone-Lemmon marine receiver, perhaps the first of its type, attempted to address the above problems with a cabinet built from solid, seasoned walnut (no veneer) and rabbeted joints (no glue), a lid fitted with a rubber gasket, watertight joints, coils impregnated with a moisture proof compound, watertight plug connectors, and aluminum cantilever supports and sponge rubber tube socket supports to minimize tube vibration.

On April 27th and 28th, 1925, a crew headed by "Mac" McClary, father of Robert McClary, headed out on Barnegat Bay to test the receiver. The results of the test were subsequently published in an article in *Motor Boat* magazine (May 25, 1925) and the original, type-written report (and original photographs) were passed on to Mr. McClary's son and loaned to NJARC member Rich Skoba for this article.

As stated in Part I, it was immediately noticed that it was impossible to receive anything while the boat's engine was in operation due to interference from the ignition system. Thus, the radio was only useful while the boat, the Elbeejay, was adrift or at anchor. To observe the effect of rolling, pitching and vibration, the radio cabinet was removed and a comparison set, built with the same circuit but with no sponge rubber shock absorbers, was placed alongside the set under test. It was reported that the signal strength of the vibration-proofed set was not affected by the boat's position or course nor did the tubes show any vibration effect. The set without the shock absorbers exhibited tube vibration to such an extent that reception was "materially impaired."

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Inside the cabin of the Elbeejay during the test cruise of the Malone-Lemmon marine receiver. From left to right: Simpson Jr. (in bunk), "Mac" McClary and two others identified as "Has" and "Walt" who could be either a Mr. Levy, a Mr. Simpson or a Mr. Matthews. Note that the radio has been removed from its cabinet. The speaker is a Western Electric 10-D.

A 45-foot boat does not permit the use of a long antenna, but since the Malone-Lemmon receiver was designed for use with a short antenna, the size of the boat was not a disadvantage. A number of lengths and locations for the antenna and ground were used in the tests. It was noted that that small changes in the position, length and height of the antenna and leadin made significant differences in reception. Differences were also caused by changes in the length and type of the ground connection. It was reported thatmany stations came in so loudly that they caused the diaphragm of the Western Electric 10-D speaker to chatter.

"At 4:15 P.M., while station W.E.A.F. was giving its afternoon program, Mr. Mathews, Mr. Simpson and Mr. McClary took a small boat and rowed south towards Barnegat Light to what the Captain judged was approximately three quarters of a mile. We could still hear plainly all the selections and announcements very distinctly. While still in the small boat, Mr. Levy tuned in station W.P.G., Atlantic City. The announcements and program from that station were also heard distinctly."

A summary of some of the stations received follows - which ones are you familiar with?

9 P.M. - WGY, Schnectady, NY. Musical program, volume 85%, tone excellent.

9:12 P.M. - WAHG, Richmond Hill, Long Island. Volume 100%, it was necessary to reduce volume.

9:34 P.M. - WBZ, Springfield, Mass. Experiments were made while this station was broadcasting, the final arrangement



The Elbeejay at anchor with one type of its experimental antennas. The first antenna used was only 25 feet long.

being a 2 ft. piece of wire used as an antenna. Even with this short antenna, the music was heard distinctly on deck with 25% volume.

9:46 P.M. - WHAR, Atlantic City, NJ. Volume 100%

10:20 P.M. - WPG, Atlantic City, NJ. Volume excellent

10:34 P.M. - WOO, Philadelphia, Pa. Volume 80%; at this time the wind increased and the Bay became rough with the boat rolling but signal strength was unaffected.

10:43 P.M. - WHAZ, Troy, NY. Volume 80%

The log continues with reports for stations WAHG, WLW, KDKA, WMHA, WGH, WSB, WCAE, and WFBH. Throughout the trip, it was reported that "the weather was fine for cruising, with a light wind and a blue sky, the evening being clear and warm." It was also noted that during part of the tests, there was considerable static interference which later lessened.

Some specific technical issues were addressed in the report that were not noted in the *Motor Boat* article:

• "It was noted that better ground system could be obtained by placing approximately 12 ft. of bare wires under water."

• "Parallel tests were made with two sets. One using UV-199 tubes, and the other test, using 201-A. While the quality of the 199 tubes was all that could be expected, the general working qualities of the 201-A were far superior. So the balance of tests were made with 201-A tubes." (Note: The advertisement in the July *Broadcaster* shows 199's.)

• "An experiment was then tried by reversing the leads from the second stage R.F. A slight improvement was noted. It was also noted that by compressing the coils, the tuning point (of station WBZ)

could be either raised or lowered in accord with the amount of compression."

• "It was noted that when the by-pass condenser was taken off, the increase in signal strength was noted, also an increase in static in comparison. On some stations, in later tests, the set was noticed to oscillate to some degree (when the by-pass condenser was removed)."

At times, the report had more of an unexpected, playful leaning not found in most dry, technical documents of the day:

"While returning to cruiser, Mr. Simpson volunteered to show us some stunts in rowing. Mr. Matthews was in the bow and Mr. McClary in the stern. Mr. Matthews, being handy with the anchor, quietly dropped it overboard, and while all good anchors will drag at times if pulled hard enough, this one was seemingly being used as an oyster dredge, all unknown to Mr. Simpson. After approximately twenty minutes of hard rowing, while Mr. Matthews timed his stroke to thirty-five per minute, he began to tire, so we took pity on him and pulled up the anchor."

"The captain devised a scheme to get the crew up by going to a port hole and announcing that he thought he saw a case of scotch floating outside. Everyone was on deck immediately."

The story of the Malone-Lemmon marine receiver still has some loose ends that need resolution. For one, the only advertisements for this radio that were located were found in *Motor Boat* magazine; none came up in a search on the American Radio History website. Was the company only directing its sales campaign to the boating public or was the life of this radio short-lived? Among the photos that Mr. McClary provided was the same radio installed on the yacht Cinnibar owned by a Mr. Arthur Weeler at the American Yacht Club in Rye, NY. Was this an installation purchased by Mr. Weeler or another test radio? The missing pieces are probably out there and I'm depending on the collector community to help fill in the blanks.

THE ZENITH 6G038R: A "STRANGE ANIMAL" By Marv Beeferman

That's what one contributor to the Antique Radio Forum called the 6G038R; "a strange animal - it's a 1946 model that appears to have been made from leftover model parts." I purchased this Zenith at our July swapmeet at InfoAge and the seller seemed to have the same opinion. The price was right, it was in fairly good condition and I wondered why it wasn't selling. At first sight, what was immediately obvious was an extendable whip antenna similar to that found on the Transoceanic coming out of the top of a traditional cabinet; "modified" immediately came to mind. But on further investigation, the way that the antenna was supported by the cabinet and connected to the chassis indicated that it was definitely original. It was also noticed that a battery - pack plug and conventional ac plug indicated that this was a "farm" radio.

Although possibly manufactured in 1946 when Zenith resumed civilian radio production, the set wasn't advertised until May 1947 (Radio & Television Retailing -"New Sets for 1947"). It was described as "an appropriate circuit for areas where rural electrification approaches." Broadcast reception covers 535 to 1820 kHz; marine, aircraft, weather and police is in the 1780 to 5750 kHz range; shortwave ranges from 5650 to 18,400 kHz covering the 16, 19, 25, 31, 38, 42 and 49-meter bands. The radio sports a six-button Radiogran tone control, tuned r-f and 8" Alnico speaker. The cabinet is mahogany. Except for the speaker enclosure, the front of the radio appears to be an exact duplicate of the 1942 model 6S632. This further supports the fact that it was produced from "leftover" parts.

The radio uses 1.5 volt battery tubes although it can operate on 117 volts AC or DC. A larger than normal cabinet accommodates a battery supplying 9 volts for the tube filaments and 90 volts for B+. The circuit is similar to the Zenith Transoceanic and suitcase style portable radios but instead of a Wavemagnet loop antenna, it uses an extendable whip antenna (Waverod) for local stations and a long wire for distant and shortwave stations. The circuit is quite complex because all the filaments are in series, complicating proper biasing and AVC operation. Also, lots of bypass capacitors are needed to prevent tube interaction and feedback.

Zenith received permission to resume limited commercial radio production on July 27, 1945. The problem, however, was procurement of materials. With no priorities on materials for civilian manufacture available, the company was faced with the problem of finding materials not scheduled for war work and available on short order. When peace came in late August 1945, Zenith searched in earnest for radio building materials. Zenith turned to left over inventory from the war, other manufacturers and began manufacturing its own speakers, coils, etc. Zenith civilian radio production resumed in March, 1946.

Examination of the model 6G038R appears to reinforce the above information:

• As stated previously, the front panel, escutcheon, and knobs are exact duplicates of the 1942 model 6S632.

• The military version of the Transoceanic was still in production during the war and many parts were probably still available.

• Collectors have found that original paper capacitors in this radio were Aerovox and Solar branded without Zenith part numbers. All later Zenith radios have either Zenith-branded capacitors or other brands with Zenith part numbers.

• Collectors have found no or few Zenith -branded tubes. All the tubes in my radio are Sylvania.

• In preparation for restuffing the filter capacitors for this radio, a restorer removed the cardboard cover from a Zenith 22-1047C (10+20+30 mfd @ 150 volts). Underneath, the metal can was labeled Philco 61-0089, which was a 15+10 @ 350, 20 @ 25. It can only be assumed that Zenith's capacitor supplier (who also supplied Philco) had a surplus of these aluminum cans and used them to make the needed Zenith part. (This might have been typical during the restart of manufacturing in 1946 when supplies were scarce.)

A "strange animal?" Perhaps not when one considers how manufacturers had to scramble for parts to resume production right after the war ended.





As noted in the Meeting/Activity Notes, members of the Military Radio Collectors Association (MRCA) participated in the recent NJARC swapmeet, setting up a demonstration of military radios for InfoAge afternoon visitors. Radios in operation included:

• WWII BC-611 handi-talkies

• A B1306 transmitter-receiver powered by a hand-crank generator. These operated on the HF frequency of 3885 kHz.

• A Vietnam-era PRC-71 and a later PRC -104. The PRC-104 was used to check into the Northeastern region Moose and Squirrel Cold-War Clandestine and Long-Range-Reconnaissance Net.

• A PRC-77 VHF backpack set stood by on 51 MHz, the MRCA calling frequency.

We had a couple of kids eagerly crank

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the generator of the BC-1306 while we talked to their dad who was on the BC-611 HT. We also successfully trouble-shot a PRC-77 owned by one of the swapmeet visitors.

A good time was had by all. We'll be back!





WHAT'S IN YOUR COLLECTION?

A New Monthly Column

You've all probably seen the advertisement for the Capitol credit card with the theme "What's in your wallet?" This month begins the introduction of the monthly column "What's In Your Collection?" But you'll notice that there is no author credit in the title box. The reason? Hopefully, future article submittals will be by members of the NJARC!

Realizing that there is a vast amount of items out there that have never seen the light of day, we'll be soliciting members to provide a short write-up of an item (or items) in their collection that they feel might strike the interest of the membership. Of course, one or two photos should accompany the article.

We're not limiting the emphasis of the column to just radios. Phonographs, speakers, test equipment, books, advertising, tubes, accessories, etc. are all welcome. All we're asking for is about 100 to 250 words, stating why you find the item interesting and perhaps some particulars about its history, construction, application or uniqueness.

Many of you have told me that you are a little shy about writing. No problem! Google or the American Radio History website are great sources of background information and I promise to edit your piece, if needed, to make it shine.

Send your articles and photos to mbeeferman@verizon.net. If you can swing it, I would prefer ".doc" formats instead of ".docx" formats. I expect initially to get input from a number of volunteers. However, in the future, expect me to lean on you to do your part. It may be via an email, at our monthly meeting, at a swapmeet or at one of our other events. If you have a collection, I will find you...you can't hide!

Here's an example of what I'm looking for:

The RCA ER-753A Crystal Receiver

I obtained my 1922 RCA ER-753A crystal receiver from the Richard Hurff estate sale. I selected it for my contribution to this column because it represents the transition to RCA's "Radiola" name brand.

The ER-753A was introduced in mid-1922 for \$25, including earphones, (or \$32.50 with an antenna kit) as a replacement for the ER-753. It was manufactured by GE for RCA. The radio "opened like a book" to expose the front panel and had a handle on top so it could be "carried like a satchel." The cabinet opened to the rear to access a compartment for storing headphones. It used a Perikon detector found on all early broadcast crystal sets manufactured by GE for RCA. Tuning was accomplished via a variometer.

The earliest ER-753A had an instruction card dated July 1922 and was manufactured with an engraved-style print on the front panel filled with either white ink or a combination of both red and white ink. My radio, with an instruction card dated August 1922, was a second production run and manufactured with blockstyle print on the front panel without any ink fill.

Many collectors believe that the ER-753A was the Radiola I, but that is not the case, at least not at the time that it was first produced. Early sets like mine were identified as the ER-753A on the instruction sheet and on a gold seal in the rear compartment, both without reference to "Radiola I." It was not until the late summer of 1922 that RCA decided to change the name of the ER-753A to Radiola I, well after production began, and it was not until May 1923 that sets were actually manufactured with the Radiola I name engraved in the front panel. By this time, RCA made the decision to change the name of all of its receivers to include the Radiola trade name.

As stated, the ER-753A used a variometer that replaced the flat coil in the earlier ER-753. As a result, its upper operating range was reduced from 700 meters to 525 meters, still sufficient to cover the broadcast band as it existed then. The labeling on the two antenna binding posts was changed accordingly to "above 300 meters" and "below 300 meters."

In addition to variations in front panels, instruction sheets and gold seals, there are other minor variations to ER-753A sets. For example, two different types of door clasps have been observed. The radio I own has the more common form with one straight edge seen in most advertisements and publications. The rarer one has an oval shape.

Eric P. Wenaas in his book "Radiola the Golden Age of RCA" from which much of the above information has been obtained, notes that it has often been stated or implied that the Radiola I was the first production receiver marketed by RCA with the Radiola name. However, this is not the case. This distinction belongs to the AR-1375 Radio Concert Receiver manufactured by Wireless Specialty Apparatus. This appeared in the RCA catalog dated June 1, 1922, well before the appearance of the ER-753A or Radiola I. While the Radiola name does not appear in the text of the June 1922 catalog, it clearly appears on the AR-1375 receiver itself.



The ER-753A crystal receiver.