

# The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

December 2017

Volume 23 Issue 12



**MEETING/  
ACTIVITY  
NOTES**

Reported by  
Marv Beeferman



## MEETING NOTICE

**NO MEETING THIS MONTH!**

**HOLIDAY PARTY - DECEMBER 16th  
(MAKE YOU RESERVATIONS NOW!)**

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

Hope everyone had a great Thanksgiving and is looking forward to the upcoming holidays. Have you included our 25th anniversary celebration in your plans for December 16th? If not, it cannot be stressed enough that you send in your reservation immediately; **it is critical in order for us to plan properly!** A reservation response form is included in this month's *Broadcaster*. Or, you can find the form at the club's website (<http://www.njarc.org>). Another way to access our website is to insert "NJARC" into your browser's search box and the link will come right up. As an additional aid, you can sign up at our site using PayPal; full instructions are included - go to (<http://bit.ly/2zC9xbb>).

If you're planning to attend or have already made your reservation, this is a good time to consider your Mystery Grab Bag gift instead of wrapping up whatever you have lying around at the last minute. Guidelines for the game may be also found at the club's website and you might find a gentle reminder during the next week.

November was a busy month for club activities including a swapmeet, show & tell and repair clinic. Photos from two of these events and an article about one of your editor's swapmeet finds are included in this month's *Broadcaster*.

It was a pleasant surprise to host past NJARC president Jim Whartenby and his wife Ruth at our monthly meeting. Jim is

still a constant contributor to our museum's historic inventory and this visit was no different with a contribution that included some rare radar items. Also included was the very rare second prototype for the first pentagrid converter tube developed by RCA; Jim still has the first. (See *AWA Review* Volume 7, "Memories of Early Electron-Tube Development.")



Technical Coordinator Al Klase has announced the dates for our upcoming 2018 Broadcast Band (BCB) DX Contest - January 19th thru January 28th. Picking out those hard-to-find stations from the ether has always been a lot of fun and is a great way to spend a cold January night or two. Details may be found on page 7 and materials may be found at the website [www.njarc.ar88.net/contest.html](http://www.njarc.ar88.net/contest.html).

Al suggests that you might want to consider categories 1, 2 or 3 to increase your chances of winning since not that many members submit entries for these types of receivers. Also, try to keep a camera at the ready and send a photo of you and the rig(s) your are entering to [mbeeferman@verizon.net](mailto:mbeeferman@verizon.net) for inclusion in our newsletter. Including the specifications of your entries and a few words about your listening experience would also be appreciated. Information regarding our DX-pedition which precludes the contest will be included in the January *Broadcaster*.

To add to your holiday activities, you might want to consider the InfoAge Holiday Spectacular (take your picture with Santa) & Christmas Train Display on Dec. 2, 3, 9, 10, 16 & 17 from Noon until 5 PM. An adult donation of \$7 and kids donation of \$3 is suggested. One adult is admitted free on Dec. 2, 3, 9 & 10 with a new, unwrapped toy for "Toys for Tots."

Also, from November 30th to December 31st, the Shakespeare Theatre of New Jersey presents a group of actors and technicians as they gather in a 1940s radio station at holiday time to perform a live broadcast of *It's a Wonderful Life*. It is replete with Foley sound effects, commercials from the era, and sprinkled throughout with a generous dose of music and humor. The theatre is located at 36 Madison Ave., Madison NJ 07940 (973-408-5600).

**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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## REBRANDING THE CHELSEA 122

By  
Marv Beeferman

*Thanks to NJARC members Steve Rosenfeld and Mark Mittleman for their input in preparing this article...Ed*

At the last NJARC Parsippany swapmeet, I purchased a Chelsea model ZR-4 "Transcontinental" radio. The cabinet, external hardware and rear battery connection plate needed a little work, but three good 01A's and two good audios justified the seller's "firm" asking price. When I researched this radio, I found that there were a few missing pieces of information that, when filled in, would give a more complete story of the history of the ZR-4. In general, the radio represents a typical story of many radios of the 1920's that were manufactured by companies to be sold through outlets other than their own.

Information regarding the history of the Chelsea Radio Company is somewhat scarce; it is not even listed as a major company in *Radio Manufacturers of the 1920s* by Alan Douglas. Located in Chelsea Massachusetts, the company started advertising radio parts such as tube sockets, transformers and variable condensers in April 1922. Between 1923 and 1926 (the year that Chelsea apparently stopped radio production), the company produced some 15 models under the Armstrong regenerative patent. Among these was the Chelsea Model 122, a two-dial, "triple circuit" TRF set using three 201A's and two audio transformers. Regeneration was accomplished by a swinging tickler coil controlled by the "Volume" knob on the front, slant panel.

As was the custom of major department stores of the era, Gimbel Brothers and Mays decided to contract with a radio manufacturer to offer a unit that they could sell under each store's brand. But it was important that they advertise the radio as a unique offering, with features and design specifically selected for the Gimbels or Mays buyer. This "uniqueness" is reflected in the introduction to their instruction manual for the ZR-4:

"Long ago we determined to develop a receiving set which would appeal to people of moderate means and yet perform as satisfactorily as the high-price machines...Having determined the type of

set we desired, we looked over the entire field of radio manufacturers and finally picked out one concern who has been making reliable radio apparatus for many years, even before the advent of broadcasting. Our engineers and theirs consulted, and after months of planning, the ZR-4 is the result."

The "reliable" radio company that was chosen was Chelsea. Unfortunately, the rest of the above statement was completely false. The ZR-4 was actually the Chelsea Model 122 which Chelsea was currently selling under its own brand name. The only difference between the ZR-4 and 122 was that the Model 122 mahogany cabinet went from slant front to rectangular, saving a few dollars of production costs. All the other components, layout and design of the two was exactly the same.

Between November and December 1924, Gimbels sold the ZR-4 for \$9.75 although a "few" sets were offered at \$49.75. To hype the demand, advertising stated that "7000 users daily testify to its goodness...The tremendous demand for the ZR-4 has caused delays in delivery. The factory has had to work 24 hours a day to keep up with demand and has been enlarged three times."

The ZR-4 package included a speaker, batteries, tubes, antenna wire, ground wire, connection wire, antenna and ground insulators, lead-in tube, lightning arrestor and ground clamps..."nothing else to buy." It appears that Mays department store also sold the same radio based on an identical instruction book owned by member Steve Rosenfeld with the "Mays" logo on its cover. However, I have yet to locate any ZR-4's directly attributable to Mays in researched radio literature or advertising.

The "ZR-4" designation is interesting. According to Wally Worth (Ref. 2), Chelsea produced a ZR-30 in 1923 that was sold under the "Chelsea" name. Broadcast Mfg. Inc. produced a "Transcontinental ZR-1" neutrodyne in 1924, also built for Gimbels. During this period, the rigid airship USS Shenandoah (better known as a "zeppelin") was constructed at the Lakehurst Naval Air Station, the first of four to use helium. These airships caught the public eye, with the Shenandoah being the first to cross North America. "ZR" stands for "Zepplin, Rigid," and no doubt was the inspiration for the Transcontinental and other radios to use the same "ZR" model designation.

At a time when Neutrodynes were first surfacing and starting to make a major

dent in the radio market, it was important that the TRF regenerative receiver be made to represent a formidable competitor. Therefore, ZR-4 advertising had to hype its abilities accordingly:

"The Transcontinental ZR-4 is long tested and proved. It uses the Armstrong Regenerative Circuit - the circuit used by the United States Army and Navy, Commercial Radio Companies and the armies and navies of the principal countries of the world...We do not guarantee distance of reception - that is beyond the power of any reliable radio store - but letters are on display in our Radio Store, unsolicited, from ZR-4 users, reporting unusual distance - one user reports 111 stations received - another enjoyed music from Aberdeen, Scotland on the loud speaker during the Transatlantic tests."

In his ZR-4 restoration article in *Antique Radio Classified*, Dick Parks (Ref. 1) reported on reception in 2011:

"I'm sorry to say that this receiver did not achieve 'Transcontinental performance,' even with my 200 foot long wire antenna. But the tickler control does act as a volume control after a fashion, the selectivity control makes a small difference in sharpness of tuning, and the two stages of audio amplification can actually drive a loudspeaker on any good local station. Not bad for three tubes and probably quite satisfying in 1924."

Photos of other ZR-4's I have seen all look the same. However, my model (which does not have a Gimbel's logo on the front panel) uses more bus bar connections. Perhaps, direct wiring was used

on later models to cut down on production time.

**References:**

1. *Antique Radio Classified*, Vol. 28, Number 2 (February 2011), Dick Parks, "Troubleshooting a Chelsea Type ZR-4 Transcontinental."
2. *Antique Radio Classified*, Vol. 19, Number 2 (February 2002), Wally Worth, "The Chelsea Radio Company."
3. Gimbel Brothers, Instruction Manual, "The Transcontinental Type ZR-4 Receiving Set."
4. Radiomuseum (internet), Chelsea Radio Corp.
5. Philadelphia Inquirer, Gimbel Ads, Nov. 23, Dec. 4, Dec. 21, 1924.



The ZR-4 "Transcontinental" with Gimbel's logo in the Mark Mittleman collection. Note that, with the exception of the slant front panel cabinet and antenna/ground connections, it duplicates the Chelsea Model 122 (RadioMuseum photo). The interior component arrangement is also exactly the same.



When the interior of Mark Mittleman's Gimbel's radio is compared to that of the author's, bus bar connections replace some direct wiring. In addition, the Chelsea label is located on the lid instead of the interior. (It appears that the original owner of my radio glued an Air King tube label on the inside lid, perhaps as a reminder as to what tube to use?)

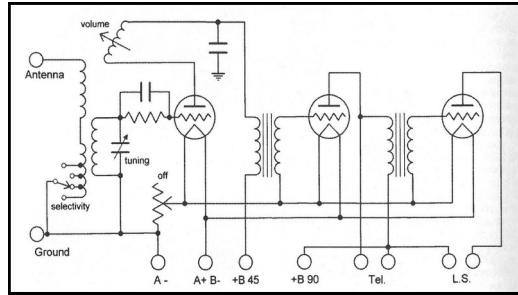


*A "Tip" to the Family's Santa Claus*

Give Them a  
**"Transcontinental"**  
**ZR-4 Radio Receiver**

**\$59.75**  
Complete  
Nothing Else  
to Buy  
**EASY TERMS**

One gift, but enjoyment for every member of your family. Give them a ZR-4, and you give unending enjoyment to all your family. Lectures, recitals, concerts, dance music, brought right to your living room. \$59.75 is all you spend—that buys every needed thing. No radio value in the country to equal this. Never in the history of radio has there been an equal value at the price—\$59.75 is half its worth. A complete 3-tube regenerative receiver, tried and found thoroughly dependable; tubes, a good loud speaker, all batteries and complete antenna equipment, ready for you to install. What other gift, even though it costs twice this price, will give your family nearly as much enjoyment as will a "Transcontinental" ZR-4?  
—Gimbels, Radio, W.F.P., Seventh Door.



**ZR-4 schematic diagram.**

**Below:** The rigid airship USS Los Angeles (ZR-3) was built in Germany between 1923/24. References to the "ZR" designation, standing for Zeppelin, Rigid, was popular to use in radio ads and radio model numbers of the time.

**ZR-3**

**Z R-3 Radio Operator Buys Stromberg-Carlson Receiver**

*See New York City, October 24, 1926*

*John Ruccolo, Radio Operator, New York City.*

*Conclusion: Since my arrival from Germany on the airship ZR-3, I have spent much time studying the progress of radio in the United States. I have been greatly impressed with American radio receiving sets and especially with their arrangement in and especially with their arrangement in the Los Angeles.*

**SHOW & TELL - NOVEMBER 2017**

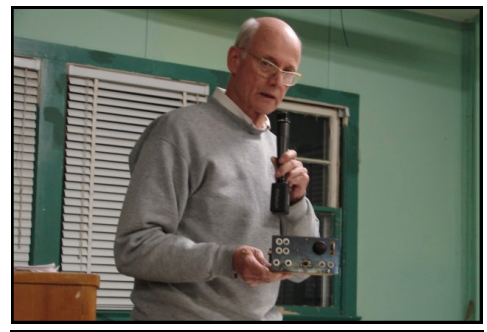


Charles Blanding talked about his collection of Regency radios including a TR-1, TR-4 and TR-6. He also described an Emerson that resembled a pocket radio that he dreamed about owning but whose \$39.95 price was too costly for an 11-year-old. He finally found one on ebay many years later. Charles also noted that while working in a radio shop, he found numerous IF capacitor failures resulting from excessive heat applied in trying to solder too many leads to the IF can.



Richard Phoenix described his 1946 Philco 46-1201 radio/phono. The set has been described by collectors as the "Bing Crosby" Philco because of an ad in which Crosby hawked the unit. The built-in phono is accessed through a drop-down door in front. It plays a single 78 rpm record that is inserted through the opening. When the door is opened, the tone arm is automatically raised and then lowered. The closing action starts the phono motor.

The club has a working model in the RTM. Member John Ruccolo remembers fixing one back in the 80's when he was first getting into vintage radio. He paid \$5 for it and his test record was "Hey Good Lookin" by Hank Williams.



President Richard Lee showed a German, battery-powered oscillator that is thought to have been used for testing telephone lines. It uses an LD408 tube.



Your editor described a lighted advertising piece that was probably part of a storefront display for selling Westinghouse console radios.



Bruce Ingraham went over the particulars of another one of his famous homebrews and the paint bucket bottom and pancake flipper that aided in building it.



Jerry Dowgin showed the club a wooden box that was retrieved outside a bank that had undergone demolition. Inside could be seen a polar relay, galvanometer and terminal board. Jerry wasn't sure what the unit was used for and brought it in to solicit some ideas from the club. There wasn't much forthcoming, but my research found that in the early 1900's, galvanometer circuits were used to indicate the status of bank alarm and fire alarm circuits. The polar relay could have possibly been used to actuate some sort of status indicator or perhaps an audible alarm.



Ray Chase described a 2nd generation quartz delay line (called a "pizza pie"). It was used as a part of radar circuitry used to pick out a moving object in mountainous areas. Ray emphasized that this process was accomplished acoustically since the solid state electronics used today were not available at the time.



Dave Snellman talked about the final and most desirable model of the TransOceanic 7000 series of radios, the R-7000-2. The 7000's were the most powerful and sophisticated TransOceanics of all, employing integrated-circuit technology with modular printed-circuit boards. Unfortunately, they were a commercial flop that was eclipsed by smaller, easier-to-use Japanese imports. Original price was \$379.95, eventually being discounted to \$50.

## HOT SOLDER FLOWS AT NOVEMBER REPAIR CLINIC

By  
Marv Beeferman

Some very interesting projects were undertaken at our repair clinic on November 18th. Although we were temporarily moved to a new location at InfoAge, president Richard Lee made sure that all was in order including tables located next to power sources, an available

roll-around parts cabinet and tube tester and the all-important hot coffee (to take off the morning chill) and pizza (to satisfy the inner radio repairman). Of course, "radio bagels" topped off the day.

**Ray Chase** worked intermittently on a 1930's TRF advertised as a "hi fidelity receiver." Ray thinks it might have been a kit radio and he has no schematic. It uses big-pin tubes such as a 6D6 and 6B& and has no power amp stage. It was recapped previously but does not work as a radio yet. **Charles Blanding** found that a client's Sentinel 293T had an unsafe line cord, weak and distorted audio and a "crackle" during tuning. The radio was brought back to health by replacing an open plate resistor and three leaky capacitors, replacing the line cord, aligning the tuning capacitor plates and peaking the antenna trimmer. Charles also worked on Richard Phoenix's Philco 46-1201 (Bing Crosby) radio/phono which had no sound. He replaced an open capacitor in the power supply and noted a low output (but workable) from the phono cartridge. **Bill Zukowski** and **Len Newman** had significant work to get a Zenith G503 (flip-up dial) radio working. The dead selenium rectifier was replaced with silicone diodes, 6 wax and four electrolytic capacitors were changed and a power resistor was replaced. **Chris Pistilli** continued to troubleshoot and repair a 1940 Philco 40-217 (remote control) - it is still a work in progress. **Phil Vourtsis** worked on a Westinghouse ED-1 "Talking Doll" portable phonograph. The record player is also a wireless transmitter, sending the record sound to a doll named Saranade. Phil lubricated the turntable and repaired its cartridge. His work on an RCA Model SHF-8 phono included restoring a frozen motor and adjusting the leakage to prevent jamming. An RCA Model 8C6L clock radio required correcting bad solder joints on its circuit board and reconnecting the antenna lead. To improve speed, the idler wheel on a Garrard "Auto-Slim" turntable was cleaned. **Chuck Paci** evaluated a client's Philco 38-690. No major problems were found but the radio will need a total recap and check of resistor values. **Bob Bennett** recapped a client's RCA 6-XD-5 but the radio still had a hum that was isolated to a 50C5 cathode resistor having a too high a value. The radio will be taken home to finish the repair. **Kevin McDermott** recapped the amplifier and rebuilt the cartridge of an RCA Model 63E, 78RPM record player. **Your editor** evaluated a client's Radiola 25, warning him of the good possibility of a failed catacomb that is difficult to repair.



## The 2018 NJARC BCB DX Contest - 19-28 Jan 2018

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 radios 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 competitors 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 19, 2018 through 12:00 Noon, Sunday, January 28, 2018.

**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" the 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 the 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 cover those frequencies.

### **RECEIVER CATEGORIES:**

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

**SPECIAL AWARDS** will be given for the best performances by first-time contestants.

**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 you 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 a somewhat variable concept. If you hear Boston weather on what you know is 1030KHz, then go ahead and log WBZ. However, just because you heard a signal on 1160KHz 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.

A log sheet (and additional information) is available at [www.njarc.ar88.net/contest.html](http://www.njarc.ar88.net/contest.html). You may reproduce the log or generate a similar one of your own.

Logs must be postmarked not later than midnight Monday, February 5, 2018.

Logs may 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 indicate 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., Robbinsville, NJ 08691, [tprovost@pppl.gov](mailto:tprovost@pppl.gov)

Questions: Al Klase - 908-892-5465 - [ark@ar88.net](mailto:ark@ar88.net), Tom Provost - 609-243-2508

# NJARC Holiday Party 25th Anniversary Celebration

**Date:** Saturday, December 16th, 2017  
**Time:** 5:00 PM – Cocktail Hour  
 6:15 PM – Dinner  
**Place:** West Lake Golf & Country Club  
 1 Pine Lake Circle, Jackson NJ 08527

<b>Members</b>	<b>\$25 each</b>
<b>Non-Member Adults and Children over 12:</b>	<b>\$25 each</b>
<b>Children under 12:</b>	<b>\$5 each</b>

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

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

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

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

-----Cut here -----

**Name(s):** [Please indicate if member (m), non-member (nm) or child (c).]

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**Telephone or email:** \_\_\_\_\_

Number of <b>Members</b> :	_____	X \$25	= \$	_____
Number of <b>Children</b> under 12:	_____	X \$5	= \$	_____
Number of <b>Non-Members</b> :	_____	X \$25	= \$	_____

**TOTAL:**     \$ \_\_\_\_\_

Make checks out to **NJARC**, enclose with this form and **mail by 12/09/17.**