

The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB



April 2018

Volume 24 Issue 4

MEETING NOTICE

The next NJARC meeting will take place on Friday, April 13, at 7:30 PM at InfoAge. Directions may be found at the club's website (http://www.njarc.org). Dust off those unusual or recently acquired pieces in your collection and show them the light of day during our "Radio Show & Tell" scheduled for this month. We're asking you to not only "show" them but "tell" us a short story





Reported by Marv Beeferman

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. Be sure to include your full name.

If any of your fellow members have brought up the question of not receiving the April Broadcaster, it's because they missed the dues cutoff date of March 30th. If you get the opportunity, you might want to tell them they are welcome at the April meeting only if they have dues in-hand.

Although I wasn't able to attend the March meeting, appreciation goes out to Harry Klancer for his wonderful talk about Marconi's presence in Newfoundland. Harry's talk was a follow-up to his October 2017 Broadcaster article "A Visit to Signal Hill." Also, thanks to Bill Zukowski, we were able to capture the presentation of our DX Contest awards by technical coordinator Al Klase.



Nevell Greenough won honors in the "Primitive Tube Receiver" category with his Aeriola Senior using a triode connected 3V4 (no sense in sacrificing a rare WD-11).

behind your selections. Nothing new to talk about? How about participating in a discussion and demonstration of those "hints and kinks" that have simplified your repair and restoration experiences.

First place brought a smile to Tim Walker in the "Other Tube Radios Sold for Home Entertainment" category. Tim earned his win using a Philco 38-7 console and DYI Skywaves air core loop antenna. Tim also won a first place in the "Light Weight" category



Dave Snellman is a tough competitor in the "Any Radio of your Choosing" category. He won with his Panasonic RF-B65. Tom Provost (below) took second place with his 5-tube, regen homebrew.





John Ruccolo took first place in the Amateur radio category with his Hammarlund HQ 129X.

Treasurer Harry Klancer reports that our March Parsippany swapmeet was another winner. We accommodated 41 tables and 101 attendees (in addition to collecting dues from 10 members). The event netted approximately \$750 for the club. Thanks to all who volunteered in making the day a success and especially to president Richard Lee who seems to be constantly in the thick of things in keeping all aspects of the meet well-organized (including setting up tables and brewing the coffee!).

One somber note of the meet was not having deceased member Vince Lobosco at my side manning the canteen...many attendees dropped by to offer their condolences. But in a way, Vince is still with us in the form of his radio collection. His niece, Lisa Reinhardt, recently notified the antique radio community on how she plans to deal with Vince's radios and phonographs:

"I have been approached by people who want to purchase the entire contents of Vin's house. While this likely makes the most financial and logical sense, I would rather invite all his radio club friends to visit Vin's "Ye Olde Radio Shoppe" for a

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private sale. My goal is to get these radios into the hands of those who will care for them, who know their history, and who have a genuine passion for them."

The sale will be held Friday and Saturday, April 6th and 7th from 10AM to 6PM. Cash and credit cards are accepted and all offers will be considered. There's "lots of free items, too." The address is 151 Farley Ave, Fanwood, NJ 07023.



On a similar note, some members might remember being invited to the home of Bob Haworth to help him downsize his collection prior to moving. Bob has since past and an auction is being organized to deal with the remainder of his collection. Last month, Bruce Barkoff, the husband of Bob's daughter Karen, arrived at InfoAge with a truckload of items that he personally loaded. The call had gone out to our membership by Ray Chase to unload and temporarily store the items and Ray wasn't disappointed; turnout was unexpectedly large. With all the helping hands that showed up, the truck was cleaned out in record time and everything was safely stowed away. The auction itself will take place at InfoAge and announced in the future.



A large crew of volunteers showed up at InfoAge to help unload Bob Haworth's collection. Bruce Barkoff is on the far left.

Upcoming Events

May 5 - Spring Repair Clinic at InfoAge May 11-12 - Kutztown Antique Radio Meet

May 18 - Monthly meeting at InfoAge; "Alternate Collections."

June 8 - Monthly meeting at Princeton; talk by Alan Wolke (topic TBA).

July 13 - Monthly meeting at Princeton; topic TBA

July 21 - Summer Tailgate at InfoAge September 21-22 - Kutztown Antique Radio Meet

REBUILDING A CONCENTRIC POTENTIOMETER

By Matt Reynolds

At our most recent repair clinic, I brought in my family's first television set, an Emerson 757D, for repair assistance from the resident experts. Thanks to the help of Neville Greenough, we were able to track down a few issues and correct enough of them to get a working picture on the test CRT. Among the issues discovered, Neville determined that my set had a bad multi-function control on the front of the chassis.



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 other than information.

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The control in question was a concentric power switch and double potentiometer setup. The base of the control was the on-off switch for the set, followed by the volume pot (1 Meg ohm) and the contrast pot (1.5K ohm). Neville was able to track down an issue with the contrast circuitry to this pot. We noticed that when we rotated it, it would get stuck on something, and, at one point, we saw the inside of it arcing. There was not enough time at the repair clinic to tear out the control and replace it, so that had to wait until I got home.

A replacement combination pot was found in our vintage radio workshop. I initially thought it could be used for the repair, but the control shafts were shorter, constructed differently, and it had no power switch. It would take a lot of work to adapt it to work on my set. Ultimately, I decided to try to repair the one I had.

After marking which wires went where, I de-soldered the control from the set and began dissecting it. The top plate of the control had four bent over tabs that attached the top plate to the rest of the stack. After using a razor blade and dental pick to pry them up, the top plate of the control shaft slid off. This exposed a phenol wafer, the outermost brass layer of the control (which has the threads that mount it to the chassis), and the remainder of the carbon track of the 1.5Kohm pot. This had a large missing/burned section on it.



With the cause of the contrast issue revealed, its repair was the next step. While the control was out of the set, I took the rest of it apart to clean it. Each section below the bad pot was mounted together similarly to the level above it metal tabs holding each subsequent level together. After bending them all up, prying each section apart, and cleaning the switch and volume pot (which was in great shape) and reassembling them, I decided to concentrate on fixing the existing control rather than cobbling a new one together. Volume 24 Issue 4



I went through my collection of NOS parts and found an Allen-Bradley branded 1.5Kohm pot and started to dismantle it. Unfortunately, I found that its internal construction was completely different (better) than the original pot, and the parts would not easily transfer into the original contrast pot shell. Back to the cabinets I went, and found that inside of my salvaged parts drawer, I had a 1.5k ohm pot with a construction that was very similar to the original contrast pot.

Disassembly of this pot was similar to the original combination control - bend back the tabs and pull apart. The wafer containing the carbon track was very similar in shape and design to the original burned one, and appeared to be a suitable donor.

The donor part's shaft was easy to remove from the phenol wafer - it was not permanently mounted to the wafer. Unfortunately, the original brass outer control was flared onto the original wafer board, and this would prevent a simple transfer. It appeared to have a plate that locked a brass mounting nut in place. After using a Dremel tool to remove the lock portion of the plate, I found that it was not a nut, but rather a hex shaped flange acting as a stop nut. This combined with the locking plate to keep the shaft from rotating in the phenol plate.

I first tried my luck at drilling out the copper rivets on the original wafer board

with the idea of transferring the two carbon tracks. After trying this on the original damaged wafer, I found this was not feasible as the carbon track and phenol disk were too delicate to try to relocate. The brass collar would need to be transferred.



It was easy enough to remove the brass collar from the old phenol board - I "dremeled" the board in half, and took it out. Of course, with the end being flared, it wouldn't just slide on the new phenol

board. Also, near the base of the collar is the hex-shaped flange, so it wouldn't go on from that direction either. The donor wafet's center hole needed to be bigger. I was able to increase the size of the hole on the donor wafer by using a brass step drill and hand turning it slowly to carve out the hole slightly larger than it used to be. Once the hole was big enough to slide the flanged side in the wafer, I transferred the shaft.



The tabs on the mounting plate moreor-less lined up with the new phenol wafer without significant issue. The retaining plate that was on the original control was no longer going to keep the shaft from spinning, so I added a dab of JB Weld to the brass hex flange and mounting plate.

After letting the JB Weld set for a bit, the new contrast pot could be attached to the rest of the original control pot. The new wafer fit into the original shell of the contrast pot fine, and since the mounting plate was the original one, all the original tabs lined up. The control now rebuilt, was re-installed in the chassis, the components re-attached, and the circuits tested. The contrast circuit was now working. Success!

I understand from conversations with other electronic hobbyists that in the "good old days," there were kits designed to assemble controls of this type from

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scratch, but I did not have access to one. I realize that it was probably possible to source the exact right part for this application, or find a cross reference that may have worked, but as time marches on these types of

parts will continue to become scarcer. I wanted to see how feasible it would be to repair. It turns out that it is a bit tedious, but absolutely possible. I do not recall what the original donor pot was salvaged from, but it was something I am glad was salvaged. Pots, switches, transformers, coils, variable capacitors, etc. are all useful parts to pull from that junk set that you intend to trash. You never know when you'll need them!











Matt's Emerson 757D television and family memory brought back to life.

MARCH SWAPMEET: THROUGH THE CAMERA'S LENS























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SHOP TALK By Marv Beeferman

The club's Vintage Radio Repair Shop at InfoAge continues to hum along with a number of varied activities.

Some months ago, I mentioned that I came across a notice on a 1950 GE 835 TV I was restoring citing that it was important to maintain in place with "a tight fit" the heavy lead shield that completely enclosed the 12AT7 mixer/oscillator tube. Of course, the shield was missing and I decided to do some research on the possibility of leaving it off. There appears to be no specific literature on the purpose of lead shields but most Antique Radio Forum contributors believe that it was used for mechanical stability to reduce microphonics. Apparently, the lead changes the mass of the tube and lowers the frequency at which it mechanically resonates from outside vibration. The source of vibration? - perhaps the nearby speaker. An old trick to stop microphonics is to wrap solder tightly around a tube. The shield is occasionally found on RCA and GE tuner tubes and one individual came across it on the 12BA7 mixer of a 1950 Philco AM/FM radio.

Well, at a Wednesday workday at the shop, I happened to mention the shield in passing. From the other side of the room came a shout from Richard Cordasco who was using a TV of the same vintage for parts...."Hey, I have one of those!" Sure enough, he showed me a tube with the same lead shield. Its funny how certain problems eventually solve themselves.



Member Bruce Williams has been helping out the shop in a number of ways. Ray Chase has been assembling the components for a vintage radar display and a few need some cosmetic restoration. Bruce took on the challenge of a rusted filament transformer (5V, 190A, 15KV!) and did a great job in restoring its condition.



Bruce also mounted and powered up a lighted TV-radio service sign which gives the outside of the shop that nostalgic look of days gone by.



We can always depend on Bruce to help keep the shop stocked with needed supplies from his "secret sources." He also helps keep things organized and occasionally will donate a tool that we should probably have but didn't think of. Case in point - grounding sticks for working safely on high voltage supplies.



Not all restorations are "electronic." We caught Harry Klancer fixing up a cabinet for an upcoming museum display.



START THINKING ABOUT THOSE HOMEBREWS

By Marv Beeferman

"Homebrew" is an amateur radio slang term for home-built, noncommercial radio equipment. In the early years of radio, long before factory-built gear was easily available and affordable, radio enthusiasts built their own receiving and transmitting equipment. Homebrewing differs from kit-building in that it describes the process of constructing equipment using parts and designs gathered from varied and often improvised sources.

Constructing one's own equipment using relatively simple designs and easily obtainable or junk box electronic components can be very rewarding. Homebrew enthusiasts say that building one's own radio equipment is fun and gives them the satisfaction that comes from mastering electronic knowledge. Why don't you help preserve this tradition and have some fun at the same time by entering the NJARC Homebrew Equipment Contest?

To allow for enough time to work on your project, we've withheld final judging until the end of the year (date to be announced) and dedicated the May 5th Repair Clinic at InfoAge to those of you who want help working on contest entries. As space permits, you're also welcome to utilize the club's Vintage Radio Repair Shop at InfoAge as a workspace, parts source and resource for help and inspiration. The simple rules are as follows:

Category 1 - Primitive Receivers

The signal path of the radio may use no more than two tube functions or two discrete transistors. Solid-state diodes may be used for detection as in a crystal set or reflex circuit. Any convenient power supply may be used and may contain additional vacuum tubes or semiconductors.

Category 2 - Beginner

Same rules as Category 1. Contestant has never made a serious attempt at building a radio from scratch.

Category 3 - Open

Any <u>recently</u> constructed homebrew radio receiver or transmitter.

Category 4 - Vintage Reproduction Faithful reproduction of a 1920 to 1939 homebrew radio.

Category 5 - Tube Audio Equipment

General Contest Rules:

1. Entries are limited to "scratch-built" radios as opposed to kits or modified production sets.

2. Entries must have been recently constructed by the contestant. Receivers must be capable of receiving at least one station.

3. Contestants should be prepared to demonstrate their creation and say a few words about the design and construction of the entry.

4. The membership in attendance will vote for the best entries in each category. Prizes and certificates shall be awarded to the winners.

At the February 2018 monthly meeting, Technical Coordinator Al Klase offered some tips that you might want to consider in building your entry:

• Use 1.4-volt vacuum tubes and battery power supplies (one D-cell and four 9-volt cells).

• Use power pentodes for a better headset match (1S4, 3S4, 3V4, 3Q4, etc.).

• Try a regenerative short-wave circuit - coil construction is easy and strong signals are obtainable with a simple antenna.

• If you plan to work with a sheet metal enclosure, make sure your circuit works and you have the right parts before "drilling and blasting."

• 3/4-inch plywood and 1/8-inch tempered hardboard are good choices for mounting components.



Al Klase discusses typical homebrews.

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RADIO AND THE SMART SPEAKER

By Marv Beeferman



In an updated "Smart Audio Report" from NPR and Edison Research, there have been unsurprising purchasing gains for Alexa and her ilk. Presently, 1-in

-6 Americans now owns a voice-activated smart speaker. This prompts the question "Is that good or bad for traditional AM/ FM radio?"

Broadcast radio operators had hoped for some extra distribution of their stations thanks to devices from Amazon and Google and it appears that this is exactly what has happened - 71% of smartspeaker owners are listening to more audio since getting a smart speaker. If radio cooperates, there is a chance for broadcasters to regain more in-home listening.

One question that the NPR/Edison study asked was "Is the time you spend using your smart speaker replacing any time you used to spend with?" (fill in the blank). The #1 answer (39% of responders) was "traditional AM/FM radio." So, if more radio listening is moving to some form of IP delivery, smart speakers could potentially help broadcasters, especially those with signal issues in their market.

In terms of behavior, the NPR/Edison study picks up something already predicted - that smart speakers introduce more of a communal, shared-listening experience in the home. This is akin to the earlier image of family members served by a single radio in the kitchen. 53% of those in the study say that most of the time, they use the smart speaker with others in the household. Again, that's potentially good for local stations.



With the loss of a number of NJARC members over the last two years, a recurring theme is brought to mind. What instructions have you made available to your spouse or family regarding your wishes for the final disposition of your collection? Although it isn't the most pleasant subject, many members have approached the topic head on and have established specific instructions on how loved ones are to deal with one's collection.

Depending on your point of view, but with no attempt to make fun of the situation, on occasion, it can get a little humorous. While I was doing some research on an article, I came across the posting of a note that a collector found inside a radio that he had purchased. Considering the size of some members' collections, it gave me a little chuckle when I read it:

Sell FOR NO Sell FOR NO Less THAN 15.00 TUBES ALONE ARE WORTH 2.00 EACK. PARTS + CABINET Should BE WORTH The other \$5.00 INCLUDING OLD BATTER



THE NUNN-LANDON RADIO COMPANY

Bv **Marv Beeferman**

The following article is based on an a piece from the January 2010 issue of the Wisconsin Antique Radio Club (WARCI) News - "Ewing Nunn - Radio Manufacturer" by Ralph Larsen

At our recent Parsippany swapmeet, I purchased a 1925 "Ed Nunn" Model N-3 TRF receiver manufactured by the Nunn-Landon Co. of Milwaukee, Wisconsin. The cabinet is in excellent condition and it encloses four good 01A's and two good audios. An added bonus was a working Music Master speaker.

To many collectors, most TRF's look the same, but I find that it's still interesting to research the minor differences you find in the numerous sets that were manufactured in the 20s. A visual examination of this N-3 indicates that there are a few features that deserve further investigation. One interesting aspect of the radio is the markings for the nonstandard "B" battery voltages; 20, 60 and something labelled "Primary." (Any ideas about this from the NJARC community?) A schematic would be helpful, but being a "local" set, one has yet to be located.

Nunn-Landon radios were made uniquely in Milwaukee and distributed locally. You won't find any ads or articles for these radios by searching the major, national radio magazines of the time..., "Radio News," "Radio-Craft," "Radio Broadcast," etc. That's why they're somewhat rare outside of the Milwaukee area and why it is more difficult to find information on them. (One wonders the route this radio took through the swapmeet matrix to wind up in the hands of a New Jersey collector?) That's why I'm in contact with the WARCI in hope of adding to my knowledge base.

The Nunn-Landon Company manufactured radios between 1925 and 1931. Its owner. Ewing Nunn, was the son of Henry L. Nunn, the president of Nunn-Bush Shoes, who was also an officer in the radio company. (I still have no information regarding the "Landon" part of the company.) Ewing's formal schooling ended with high school, he earned his first transmitting license at thirteen and was a radio instructor in the Navy. At 23, he became vice president of the Radio Parts Company of Milwaukee. I came across the following reference to Ewing Nunn in a 1923 "Radio News" reference to a meeting of the Milwaukee Radio Amateur's Club:

"Radio-Frequency Amplification Systems" was the title of a paper presented by E. D. Nunn, ex-9FE, a Milwaukee radio engineer, in which stress was laid on the use of radio-frequency amplification with two variometer receptors."

The company successfully made the transition from battery sets to AC power. Included were floor models, large number tube sets, superhets, tombstones and cathedrals

It is possible that Ewing was making radios before the company was formed since early examples were simply marked "ED Nunn" on the front panel and lacked the "Nunn-Landon Co." label. A typical example is the "Special Five." Later models like the my N-3 and the similar N-4A are marked both "ED Nunn" and "Nunn-Landon" on the front panel. The company adopted the trade name "Cascade" around 1926.

In 1927, Nunn-Landon produced the elaborate battery-powered Cascade console model V-27 with a matching piano stool. A similar table model was the V-28. In an ad in the Wisconsin Radio Trade Association magazine for October 1928, the company advertised a group of sets for 1929 under the Cascade name that included the 5-tube Niagara, the 6-tube Victoria for DC or AC operation, the 7-tube AC Yellowstone and the AC console Yosemite

In the "WRTA Broadcaster" for October 1930, the company advertised the 12tube Cascade Sierra AC console for 1931. Interestingly, the ad noted that Nun-Landon was "exclusively manufacturing fine radio instruments since 1922," but this appears to have been an exaggeration. Nunn continued to use the "Cascade" name for sets made in the early 30s but it is possible they were being made in Chicago since he was using a Chicago address for his business.

Nunn sold his radio business in 1931 to join Harley-Davidson where he designed the first motorcycle radio receivers for police departments. He returned to the Milwaukee area and started the famous Audiophile Records in the 1940s, first recording Dixieland music and then folk music and jazz into the 60s. He also owned Northern Signal Company which made light signals for railroads and flashing lights for construction sites.

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TESTING FOR GOOD SOLDER CONNECTIONS ON CIRCUIT BOARDS



Occasionally, I throw a crumb or two out to those members who dip their toes into the waters of solid state. The following tip was posted on the Jameco Electronics website and written by John Mastromoro.

If not caught immediately, a solder connection on a circuit board can turn into a real nightmare, especially if using CMOS components with IC sockets. Here is a very simple, inexpensive and positive good solder connection idea.

On a solid, flat, sturdy surface (acrylic or thin wood panel section) approximately 5-inches square, evenly spread a doublelayered sheet of smoothed-out tin foil.

Place and firmly press down onto the foil the soldered-side of the circuit board you want to check with the component side up. Use common sense for proper pressure to make solder connections with the tin foil.

With one lead of an ohmmeter set at RX1 or RX10 clipped to the tin foil sheet, touch the other lead to one of the top-side connections of the component being tested. If you get a reading, the component connection is soldered correctly. If not, press somewhat firmer to reassure the connection. If there is no reading, you have a bad solder point.

The above method especially pays off when soldering a number of IC sockets to a circuit board.



