



# The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

April 2011

Volume 17 Issue 4



Reported by  
Marv Beeferman

## The ON-LINE Broadcaster

The New Jersey Broadcaster is now on-line. To date, close to 120 of your fellow NJARC members have subscribed, saving the club nearly \$2000 a year and a significant amount of work for your editor. Interested? To subscribe, send your e-mail address to [mbeeferman@verizon.net](mailto:mbeeferman@verizon.net). Be sure to include your full name.

## Final Call for Dues

By this time, if you haven't paid your 2011 dues yet, you should have received a final notice from our membership secretary Marsha Simkin. May 31st is the cut-off date for payment or you will be deleted from the club roles. If you feel that your payment may not make it in time (you may also renew on our web site via PayPal), you might want to contact Marsha directly at the following address: [mhsimkin@comcast.net](mailto:mhsimkin@comcast.net).

There was a very positive response to our first Oscilloscope School and we covered the event and a few member comments in this month's *Broadcaster*. Our thanks go out to Al Klase, Alan Wolke (Tektronix FAE), Dave Snellman, Harry Klancer, Steve Goulart, Richard Lee, Ray Chase, Sal Brisindi and all others who helped in making the event such a success. Thanks also goes out to Ray Chase and all those who helped organize the Klinker auction for our March meeting. A very nice assortment of items was offered and Al Klase's auctioneering skills moved the evening along very quickly and efficiently.

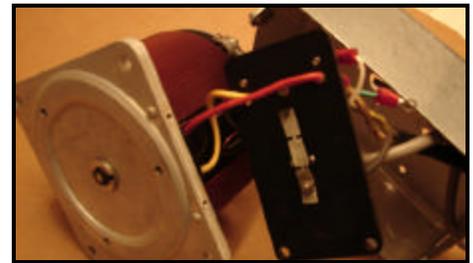


## MEETING NOTICE

### NOTE: EARLY MEETING DATE - APRIL 1st

The next NJARC meeting will take place on Friday, April 1st, at 7:30 PM at InfoAge. Directions may be found at the club's website (<http://www.njarc.org>). Our technical coordinator, Al Klase, will offer a presentation he has titled "The Mysteries of FM" which will concentrate on a basic understanding of frequency modulation.

There are still tables available for our upcoming Spring swapmeet on April 9th; a flyer in this issue provides all the details. Kutztown XXIV is also getting close (May 13, 14) with the first pavilion already sold out. As an added attraction, on Friday afternoon or evening, a revised version of the AMT-3000 AM transmitter will be unveiled by Phil Bolyn. Among other improvements, the unit features a built-in toroid so as not to require the hand-wound external coil for extended range.



A fellow NJARC member was watching the proceedings and, noting that the variac was manufactured by General Radio, made the following comment: "That company made a quality product...there's probably a fuse inside."

I took apart the unit and sure enough, it was protected by a fusible link with enough room available to replace it with a cartridge fuse holder. I really liked this unit and was happy to have it back in service with an easier way to correct any future mistakes.

## Upcoming Events

April 1st: NJARC monthly meeting at InfoAge

April 9th: Spring swapmeet, Parsippany

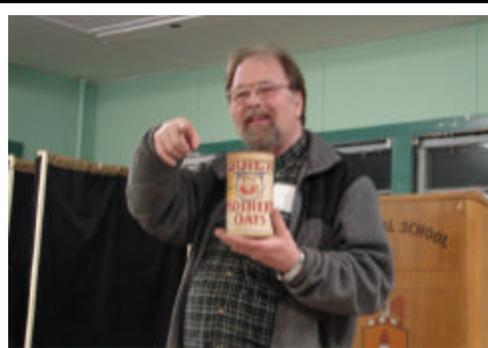
May 13-14: Kutztown XXIV, Renni-ger's Antique and Farmers Market, Kutztown, PA

May 14-15: Vintage Computer Fest at InfoAge

May 13: NJARC monthly meeting at InfoAge

June 10: NJARC monthly meeting at Princeton

July 23 (tentative): Tailgate swapmeet at InfoAge.



**Technical Coordinator Al Klase accepts bids for a Mother's Oats container (makes a great crystal set project). It sold for \$4.**

During our last repair clinic at InfoAge, your editor learned a little more about variacs. I was using a 7 amp unit to slowly power up a radio I was working on and decided to monitor its output. The connections to a multimeter that I was not familiar with were incorrect and I immediately heard a loud "pop." After that, the variac was completely dead.

**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 \$20 per year and meetings are held the second Friday of each month. The Editor or NJARC is not liable for any other use of the contents of this publication.

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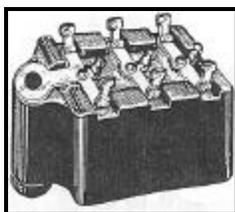
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## PHILCO BLOCK CAPACITOR REPLACEMENT... ANOTHER LOOK

Edited from an article by  
Brian Belanger

"Restoring a Philco 118" by Brian Belanger was the cover article of the February 2011 *Radio Age* (Journal of the Mid-Atlantic Antique Radio Club). Brian can always be depended upon for a very thorough and comprehensive treatment of any topic he undertakes and this restoration was no different. If you get the chance, I suggest you read the entire article, but his take on rebuilding Philco Bakelite block capacitors deserves passing on.

Philco block capacitors (or "condensers") were introduced in 1930 and phased out late in the same decade. They consist of a black Bakelite case in



which one or two capacitors (and sometimes a resistor) are installed. The capacitors are wired to the case's solder terminals and sealed in place with a tar mixture.

The block is fastened to the radio chassis by a single, self-tapping screw. Often, extra solder terminals with no internal connections serve as tie-points for other connections or as supports for other external components.

I'm well aware that some club members remove the block capacitors entirely and substitute the appropriate number of modern replacements. However, there are probably still some "purists" out there who will still appreciate Brian's method that is described as follows:

"When one restores a Philco of this vintage, one chore is rebuilding the Bakelite block units that hold capacitors potted in tar. There are various schools of thought about how to rebuild them. Some recommend putting them into the freezer for a few days and then chipping at the frozen tar with a chisel, like a sculptor. Another approach is to plunge

the unit into a pan of boiling water and melt out the tar.

Personally, I like to bolt a metal strip to the capacitor housing, grasp the strip with vise grips and clip off the leads to the solder lugs on top. Then, I play a heat gun on the unit to soften the tar and pry out the capacitors with a narrow knife point. (Editor's Note: Observe caution when using a heat gun; it might splatter the tar and excessive temperatures can blister the Bakelite shell. Gloves, eye protection and protective clothing is recommended. The inside of the case does not have to be "squeaky clean.") Be sure to pry out the old caps by leveraging against the solid end of the block where the bolt hole is. The sides of the Bakelite block are thin and fragile, and if you pry against the side, it will break. (See page 3 for photos.)

I don't bother to re-pot the capacitors. When the Bakelite blocks are reattached to the chassis, the capacitors do not show, even from the underside of the chassis." (Editor's Note: The leads of the replacement capacitor(s) will provide necessary support; no tar is needed.)

If you work on vintage Philcos, Brian states that *Philco Condensers and More* by Ray Bintliff is a book that you *must* have. It is available from *Antique Radio Classified* and other antique radio book suppliers. The book describes Philco Bakelite block capacitors, metal-cased condensers and tone controls with detailed data on part numbers and their construction as well as additional rebuilding information.

I also found an additional aspect of Brian's article relating to resistors worth consideration:

"I found that about 60-70 percent of the resistors in this chassis had increased in value substantially. When I first began working on antique radios about 30 years ago, I seem to recall that the percentage of resistors that were seriously out of spec was smaller than what I have been finding more recently, but I suppose the passage of three decades is sufficient to account for the higher numbers we see today. (Perhaps years ago I was less likely to check resistor values as carefully as I do today.)"

\*\*\*



A metal strip is bolted to the capacitor's housing and grasped with a vise grip. Then, the tar is carefully softened with a heat gun. When the tar is soft, the old capacitor(s) is pried out with the tip of a sturdy, sharp knife. Note that leverage is applied against the solid end of the block where the bolt hole is.

(Photos courtesy of Brian Belanger.)

## ANTIQUING

By John Dilks  
(K2TQN)

You've probably figured out by now that I'm not into transistor radios like I am into the older tube radios. True. But this month I made an exception to my norm; I went antiquing recently and found a real treasure for my collection.

Every once in a while, antique shops will have something interesting and sometimes very affordable. It depends a lot on luck and your past history with the dealer. In my case I have done business with this dealer several times a year for the past few years. He's local and he knows I collect radios and local history items. But I have also taken my wife there and we have bought some nice furniture for our home, so he knows about every other time I come in, I spend money.

This relationship has worked out well for me, as one time he alerted me to some historic papers he had just picked up in a "house cleanout." (This is when the dealer buys everything in a home because the seller is only interested in having an empty home to sell.) The historic papers were three ledger books from a general store, dating back to 1824. These were really interesting, historically. But the amazing thing is it turned out that the 1824 general store owner was one of my

great-great-grandparents.

On some of the pages were some pencil and pen drawings of schooners which were done by my great grandfather when he was a boy. Of course, when he saw how excited I became, he priced the books accordingly, and I paid. (I'm not good at poker either.) But since it was family - I figured I should pick them up. I'll never know how they became separated from my family, but they're back now. He's made it up to me in other ways though. Several times, after that, I got rock bottom prices. In the big picture, it has equaled out.

The lesson here is to cultivate a relationship with the dealer. Send him some business if you can. Buy things off and on so he knows you will spend money. And don't expect him to call you when something comes in; he may, but probably will not. The reason is that people tend to not want that color, or they already have one, or are short of cash that week.

Speaking of cash - dealers prefer it. You should be able to negotiate a better price using cash. (The advice given here is for dealer-owned shops that buy their inventory from individuals and home cleanouts. Multi-dealer shops have different rules and cash doesn't seem to work as well with them.)

My last trip turned up a classic 1957 Philmore transistor radio and a rare Art-Deco speaker dating from 1923 through the 1930s, made by Western Electric.

### My First Transistor Radio

I remember it was around September 1956, I think, that I spotted an article and advertisement in an electronics magazine about a one-transistor radio. The kit was \$4.95 for the basic radio (a crystal set) and an additional \$4.95 for a Raytheon CK-722 transistor. It all fit in a cigarette-pack sized plastic box and came with a small earphone, not much bigger than a hearing aid type. I promised the world to my father to get him to write the check and send for the kit. In a short time it came and I built my first receiver, and it worked quite well. It had a loopstick coil for tuning and a single battery. I was pretty excited.

Later, during the World Series, I took it to school. Sitting near the window during English class, I was following the game and passing notes with the scores to my friends. The teacher almost caught me when she asked, "What is that thing in your ear?"

For the only time in my life, I lied. (Wink.) I told her it was a hearing aid, as I pulled the radio out of my shirt pocket to show her. For some reason, she bought that and I didn't get sent to the Principal. He knew me well, and would have seen through my scheme because he was an ex-ham. Relieved, I put the radio away and didn't take it to school after that. But all my friends thought that it was great.

### Philmore TR22

My dealer friend had this radio sitting

on the floor, in a pile of newly received items. I picked it up and it went home with me for \$5. It had a broken hinge, but looked OK inside. I also bought the Art-Deco speaker that was sitting next to it.

Doing some research on the radio, I found an on-line article written by Herb Parsons, a radio collector from Massachusetts. He called his a model TR201; the TR22 appears to be the same radio. He had built one as a kid in 1957, and over the years it had been lost. He found a replacement by running a "want ad" for two years in Antique Radio Classified magazine. (www.antiqueradio.com/). It came with the original instruction manual which he was kind enough to share with me.

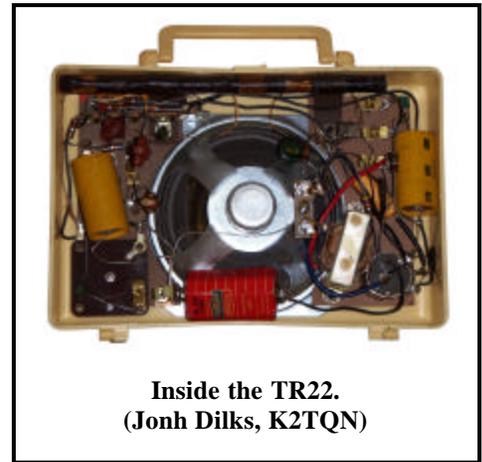
Herb was delighted with the radio and of it said, "To my delight, this TR201 is performing just as mine did many years ago. This set still amazes me today. The reflex circuit allows the first transistor to act as two by assigning double duty to it. The circuit used is quite unique. This radio tunes in most of the strong local stations with ample speaker volume and requires no external antenna!"

Mine still needs a good cleaning and part checking before I put in a new 9-volt battery and try it out. How I would have loved to have had one of these back then. In 1956 and 1957, if you had a transistor radio, especially if you built it yourself, you were elevated to some super-genius level by all your friends.

I'm attaching the schematic and a photo of the insides so you can see what makes it work. I will have the entire 1957, 8-page set of instructions on my web site (<http://eht.com/oldradio/arri/2008-10/antiquing.htm>) and a link to Herb Parson's article. I think you'll enjoy reading that too.



Philmore TR22 two-transistor radio. (John Dilks, K2TQN)



Inside the TR22. (Jonh Dilks, K2TQN)

**TR22A PORTABLE TRANSISTOR RADIO KIT**

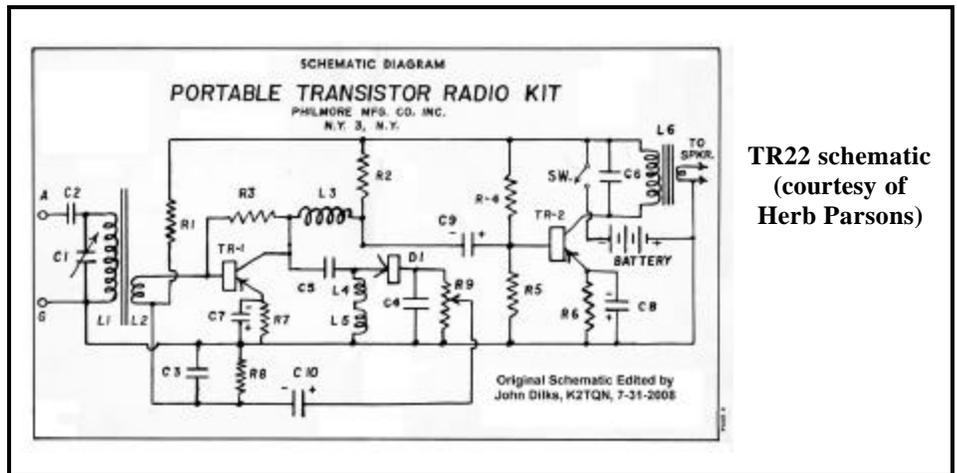


**Features:** Completely transistorized—no tubes; built-in antenna coil; 4" Alnico PM speaker. Covers range of 550 to 2500 kc, including standard broadcast, short-wave, police and marine. Modern circuit employs two transistors and a germanium diode, operated by a single 9 volt "A" battery (RCA VS300 or equal). Sturdy, attractive plastic case is only 7 1/4" x 5" x 2 1/4" overall, with retractable handle; weighs only 22 oz. with battery. Furnished complete with all parts, step-by-step instructions and wiring diagrams, wire and solder.

**Philmore Model TR22A—Net Each ..... \$12<sup>94</sup>+**

**Philmore Model TCC—Leatherette carrying case with adjustable shoulder strap. Net Each.....\$2.04**

**Ad for the Philmore TR22 as it appeared in the 1960 Harvey Radio catalog.**



**SCHOOLING  
IN SCOPES**

**By Marv Beeferman**

On Saturday, March 5th, the club held its first "oscilloscope school" at InfoAge. Sponsored by our Technical Coordinator Al Klase, it was received with quite a bit of enthusiasm and a corresponding large turnout. For those members who were unable to attend (including myself) or who care to review the information, web coordinator Dave Sica has created a video

documentary of the presentation and it should be ready by the time you receive the *Broadcaster*. As Dave noted:

"The scope clinic is something we've been talking about for many years and it has finally come to pass. In fact, the collaboration with Tektronix FAE Alan Wolke resulted in an educational event that most likely eclipsed in quality whatever excellent event might have been put together by our own quite capable members acting alone.

Putting together educational opportunities like this is one of the things that makes us such a world class organization

and I'm looking forward to our club being able to share this knowledge with collectors and electronic hobbyists around the world. It will help raise the level of skill of restorers and will make us look good as an organization - a win/win situation if there ever was one."

In addition to Dave's video, you can find the "textbook" used in the course at the following link:  
[http://njarc.ar88.net/ScopeSchool/XYZs\\_of\\_Using\\_a\\_Scope.pdf](http://njarc.ar88.net/ScopeSchool/XYZs_of_Using_a_Scope.pdf)

Besides the lecture, the school was set up with a number of activity stations with

scopes, associated equipment and instructors. The "faculty" consisted of Al Klase, Alan Wolke, Dave Snellman, Harry Klancer, Steve Goulart, Richard Lee, Ray Chase and Sal Brisindi. Students were given a "dance card" listing the stations and check-off blocks. Activities such as measuring amplitude and frequency/period and experimentation with a superheterodyne trainer were provided.

Comments by our members were quite positive; Matt Reynolds wrote:

"For someone with limited but growing technical knowledge in the field of electronics, it was neat to see what a scope to do and what it is used for. The presentation was clear and provided ample amounts of visual aids and hands-on learning experience. I came away from the clinic with more knowledge on

the subject than I did going in. I am very grateful that in addition to the presenter we had people like Harry Klancer and Al Klase who would work with people one-

future."

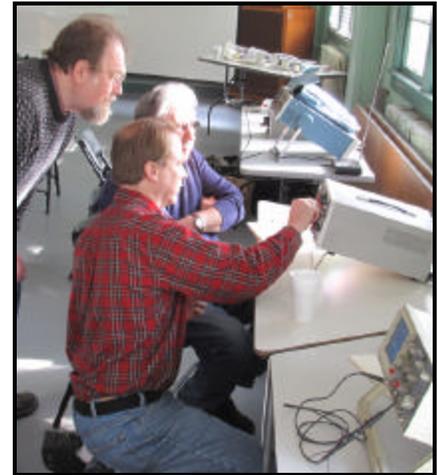
Member Scott Roberts had similar comments:

"I wanted to thank, Al, Alan, and everyone for an EXCELLENT Oscilloscope Clinic at InfoAge this weekend - I feel I learned quite a bit, and now have to start messing about a bit more with the radios, now that I have a little more understanding of the Oscilloscope theory, operation, etc. I am planning to read through the Tektronics information given as the "book" for the class, as well as review the notes I made during the wonderful lecture. Thanks again- It was great! Had a LOT of FUN today!"

I'm sure all who attended had a comparable reaction.



**NJARC SCOPE SCHOOL (Photos courtesy of Harry Klancer)**



**Scope station using the super-heterodyne trainer.**

## A LOVE FOR IMPERFECTION?

By  
Marv Beeferman

Sometimes I wonder what drives the fascination that our club members have with old technology. I'm well aware with all the standard answers - bringing old electronics back from the dead, preserving history, pitting one's wits against some frustrating circuit, the thrill of chasing down some lost childhood, electronic memory; they go on and on. And in the end, we're still willing to put up with the static, crackles, clicks, squeals and relatively poor fidelity of the results of our efforts. But according to an article by Rob Walker (*New York Times Magazine*, July 25, 2009, "Brilliant Mistakes") we don't seem to be alone.

Walker notes (and in the case of many of our members, rightly so) that progress toward perfection has genuine skeptics who insist on sticking with "marginalized tools." "The newer thing may seem less flawed or simply easier, such traditionalists insist, but it sacrifices warmth, soul, depth, personality, chance and the human touch."

As a result, many new products have been introduced with the sole purpose of "perfecting flaws." Some of these prod-

ucts are a little out of our realm. For example, there's a digital camera that produces a soft, out-of-focus feel that brings back the feel of old Super 8mm home movies. An iPhone application is available that filters images made with the device's camera to make them look as though they were taken with an unreliable, plastic camera. Another application converts iPhone videos to resemble 1960s home movies or even a 1920s silent movie. There is also software available that converts color photographs into convincing black-and-white ones or creates high-resolution, Polaroid-like pictures from digital photos.

But closer to heart is iZotope Vinyl's free recording software that lets users create an authentic vinyl simulation, right down to filters that simulate the amount of dust on a record and the degree of warping. The product offers complete control over the following parameters:

- Mechanical noise: The amount of turntable motor rumble and noise.
- Electrical noise: Internally generated electrical noise, such as 60 Hz grounding hum.
- Wear: Controls how worn out the record is, from brand new to played a few thousand times.
- Dust: The amount of the dust on the record.
- Scratch: The number and depth of scratches on the record.
- Warp: The amount of warping and the

warp shape for the record - from no warp to the edges totally melted and warped.

- Record Player Year: The year of the record player - from current linear tracking turntables to 1930 phonographs.
- Stereo/Mono selection
- Input and Output Gain

I guess we're pretty lucky in one sense. Our radios, record players, tape recorders, 8-track players, etc. don't need any of the above "supplements"...they introduce flaws on their own. But why do we put up with them? Perhaps its some kind of link between the flawed and the interesting. A boring, perfect recording of the latest hit (or a restored, "cleaned-up" version of some oldie but goodie), a radio program heard over a computer, or a TV program viewed in high definition doesn't seem to make that much of an impression with some of us. But one marred by pops, clicks, static, snow and all those annoying distractions that a younger generation finds hard to swallow, seems to take on an aesthetic appeal that might suggest a deeper meaning...they take on a significance that distinguishes them from a time long before ten thousand perfect recordings could be found on one's iPod.

There's no doubt that the ranks of the technology of imperfection will always remain small. But whether we choose between the qualities of digital technology or a technology of imperfection (or perhaps a little of both), it's good to know that we're not totally alone.

### BCD DX Contest Awards



1. Pete Olin: Primitive tube receivers.
2. Marv Beeferman: 1920s battery sets.
3. Phil Vourtsis: Tube radios for home entertainment (3rd place).
4. Dave Snellman: Tube radios for home entertainment (1st place).
5. Al Klase (awarded by Richard Lee): Amateur, commercial and military; Light weight
6. Dave Snellman: Transistor radios before 1970

Camera shy: Rich Mueller,



# New Jersey Antique Radio Club's — SPRING SWAP MEET —



Parsippany PAL Building  
Smith Field

Route 46 & 33 Baldwin Road  
Parsippany, New Jersey 07054



## Saturday April 9, 2011

**Walk around auction  
starts at 11:30 am.  
Bring in your attic  
treasures for free  
appraisal!**



**Expert Antique Radio  
Repair Available.  
Refreshments Available.  
Easy ground level access.**

### Open to the Public

8 AM to 12 noon

Vendor setup at 7:15 AM

\$5.00 ENTRANCE FEE

CLUB DONATION

**(70) 8 ft. Tables  
\$20.00 for members  
\$25.00 for non-members**

**Reserved Additional Tables \$15.00**

**At the Door \$20.00**

FOR DIRECTIONS

VISIT OUR WEBSITE: [WWW.NJARC.ORG](http://WWW.NJARC.ORG)

OR MAPQUEST.

(33 Baldwin Rd., Parsippany, NJ 07054)

### Vendors Make Your Reservations Now!

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CONNECTIONS



Free exposure for buyers and sellers! Unless requested otherwise, each ad will run for two months in both the *Jersey Broadcaster* and the *Delaware Valley Oscillator*. All buying and selling transactions are the responsibility of the parties involved. **Send your ad to [mbeeferman@verizon.net](mailto:mbeeferman@verizon.net)**

Are you aware that NJARC now has a resistor program which includes many commonly needed replacements? Contact Walt Heskes at any club meeting for details.

Check out NJARC's capacitor program for those most commonly needed replacements. Contact John Tyminski at any club meeting or call him at home (609)-947-9071 to find out what's available. All proceeds go to the club.

FOR SALE

Novus Polish No. 2 in 8 oz. bottles. \$7 each or \$13 for two.  
Restored RCA 45 record changers; all makes and models; inquire for availability and pricing.  
John Tyminski, 609-947-9071, tubeular Electronics@gmail.com

WANTED

Services offered: I restore 45 RPM record changers, all makes and models. \$95 for RCA 45-J-2, \$125 for 45-EY-2, \$135 for 45-EY-3 & 45-EY-4. Price includes a full changer & amplifier rebuild plus cabinet cleaning and detailing. One year warranty on all replacement parts and work. Inquire for pricing on other models.  
John Tyminski, 609-947-9071, tubeular Electronics@gmail.com

RCA 45 RPM record changers. I will buy all amplified models in good, original condition.  
John Tyminski, 609-947-9071, tubeular Electronics@gmail.com

A SAMPLING OF THE KLINKER AUCTION RESULTS



Motorola de-soldering station: \$30



Ten-Tec Corsair 560 HF Transceiver: \$300



Home diathermy machine: \$20



TV-3C/U tube tester: \$110



Barker & Williamson AC3.5-30 broadband folded dipole antenna (sorry; I didn't catch the bid on this).



Weston 798 tube tester: \$70