



The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

July 2011

Volume 17 Issue 7



MEETING/ ACTIVITY NOTES

Reported by
Marv Beeferman

The ON-LINE Broadcaster

The New Jersey Broadcaster is now on-line. To date, over 100 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. Be sure to include your full name.

Steve Sideroff Passes

The club is sorry to announce the passing of founding NJARC member Steve Sideroff, 86, on June 23rd. Steve was born in Great Meadows and had resided in Marlboro for the last 63 years. He served in the U.S. Air Force during WWII and was held as a Prisoner of War. He was a construction worker before retiring 21 years ago.



Steve was a constant fixture at our swapmeets and could always be depended



MEETING NOTICE

The next NJARC meeting will take place on Friday, June 10th, at 7:30 PM at Princeton's Bowen Hall (70 Prospect Ave.). Directions may be found at the club's website (<http://www.njarc.org>). Scheduled for this month is a presentation by Darren Hoffman on the basic techniques for bringing audio amplifiers (Hi-Fi/Stereo) back to life.

on to add a lot of excitement to our "walk-around-auctions" with a diverse array of vintage electronic items. We'll all miss Steve as a friend and fellow collector.



Steve's entries into our walk-around-auction always sparked interest. Here Steve awaits the final bid on a wooden tabletop solicited by club president Richard Lee.

Member Mark Mittleman knew Steve for some 40 years and Steve started him collecting. In the early 1980s, Mark bought a number of Steve's early radios and led him to concentrate in collecting 1920 battery sets. Mark says that Steve always made him restore his radios to the point that they worked and were as original as could be. "He was packed with the knowledge of early radios since he started collecting them in the early 1950s."

Getting old has its drawbacks. A case of vertigo (hopefully, on the mend) kept me away from last month's meeting and the repair clinic that followed. However, thanks to reporters Harry Klancer and Marty Friedman, we were able to capture some photos and commentary for this

month's *Broadcaster*. It's nice to know that there are a few people out there that I can depend on to capture club events when I'm not able to participate. Now, if I can just get a few article submittals I'll be in editor's heaven.

Sometimes it's not the radio but the story behind it that makes it all worth it. As reported by Kathy Yevchak in the on-line *WallPatch* ("Old Radios Brought Back to Life at InfoAge"), Gerry Kersus' RCA radio had been in the family for more than 60 years. A wedding gift for his parents in 1948, it had seen better days until he pulled it out of the basement to see what "radio magician" Harry Klancer could do with it at our repair clinic. Harry replaced the filter caps and the line cord and cleaned the controls and the radio was brought back to life. Since Gerry is a ham, Harry also suggested paper cap replacement at a future date and introduced him to Novus for cabinet cleaning.

A local resident, Mickey Brewster also had nice things to say about our clinic:

"Not only did they get my husband's radio a little more functional, but it was just what we needed to get us into InfoAge. Just like the Allgor-Barkolow House, another treasure in Wall Twp. that people drive by."

At our June meeting, member Dick Hurff (aka "Mr. Majestic") presented his show-and-tell as an invitation to help rescue a large collection of interesting radios from South Jersey. The lead on this activity is Ray Chase and he can be reached at raydio862@verizon.net or by phone at (908)-472-3329. If you care to participate, contact Ray for details.

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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In celebration of the 66th anniversary of VJ Day, InfoAge has announced its Second Annual WWII Symposium on Sunday, August 21st from 1 to 5 p.m. The symposium will include a display of military vehicles, WWII dioramas and the workings of the Norden bomb sight. The dioramas will feature scale models of men and equipment in realistic scenarios and marks the beginning of new, permanent displays based on WWII battles that will be continually updated. You'll also be able to see what a great job members Ray Chase and Al Klase have done in updating the radar and military communications annexes of our museum.

A series of presentations by technical experts will include the following topics:

1. *The Wizard War: WWII & the Origin of Radar* (by our own Ray Chase)
2. *U-Boat Activity Off the New Jersey Coast*
3. *Electronic Warfare: The "Hidden" Story of the War*
4. *U.S. Army Signal Corps Tactical Communications* (by our own Al Klase)
5. *WWII Vehicles - The Advance to Four Wheel Drive and its Aftermath*

Attendance is secured by a \$20 (adults) or \$10 (veterans and students) donation. Additional information may be found on the InfoAge web page.

Congratulations to member John Dilks for the publication of his article *The Airship America* in one of my favorite publications, "The Antique Wireless Association Review." John pieces together the story of how a Marconi wireless man, Jack Irwin, came to be assigned to fly on a hydrogen-filled airship destined to cross the Atlantic. The flight was unsuccessful and the crew had to be rescued at sea. If you remember, part of John's article formed the basis of a thrilling slide show presented to the club at InfoAge last year.

If you're not familiar with the "AWA Review," you're in for a real treat. Copies may be obtained via <http://www.antiquewireless.org> for a reasonable fee.

The Board has decided to bring back an activity to the August (NOT July) meeting that proved to be a lot of fun many years back. The idea of our "Radio Scavenger Hunt" contest is to come up with oddball items that are not in the typical category of an old equipment

contest but may still be somewhat difficult to find. The items are not necessarily working radios but need to resemble a radio. Entries will be limited to three items per member, each in a different category.

To help you get started, here's a list of categories that are being considered but might be edited next month. We'll publish the final list in August.

- Most unusual item in the shape of a radio that really isn't a radio.
- Most unusual "wearable" radio-related item.
- Most unusual radio-related toiletry, cosmetic or personal care item.
- Most risqué radio-related item.
- Most unusual radio-related game or toy.
- Most unusual radio-related greeting card for a holiday other than Christmas, Valentine's Day or New Years.
- Ugliest or gaudiest commercially produced radio.
- Strangest looking tube.
- Most unusual novelty radio.
- Most unusual radio accessory other than a speaker, headphone or battery.
- Most unusual commercially produced crystal set.
- Smallest item in the shape of a radio.
- Most unusual radio-related item from a foreign country.
- Most unusual edible radio related item.
- Most unusual radio advertising item not made of paper.

Upcoming Events

- July 23rd: Tailgate swapmeet at InfoAge
August 12th: NJARC monthly meeting at Princeton (Radio "scavenger hunt," information in July/August *Broadcaster*)
Sept. 9th: NJARC monthly meeting at Princeton
Sept. 10th: Major auction at InfoAge (tentative)
Sept. 24th: Repair Clinic at InfoAge
Oct. 14th: NJARC monthly meeting at Princeton
Nov. 11th: NJARC monthly meeting at InfoAge (Member's Auction)
Nov. 19th: Fall swapmeet at Parsippany
Dec. 10th: Holiday Party at InfoAge

REPAIR CLINIC - JUNE 2011

(Photos and text courtesy of Marty Friedman and Harry Klancer)



Chuck Paci and Evan Broadbelt repair a Zenith K725 AM/FM radio that just needed a tube. They were not as successful with an RCA 66X1 which was in poor state from some previous "fixes."



If it has audio, we'll give it a try... Darren Hoffman works on an 8mm (Sears) Bell & Howell sound projector with Dan Saporito.



A customer admires Steve Goulart's diagnostic expertise while he examines a GE clock radio. All it needed was a new tube.



Bob Trentacoste brought in an RCA Orthophonic phonograph that required filter cap replacement and turntable servicing ... attended to by Phil Vourtsis.



Matt Reynolds works on an Atwater Kent 70 from our Museum of Radio Technology.

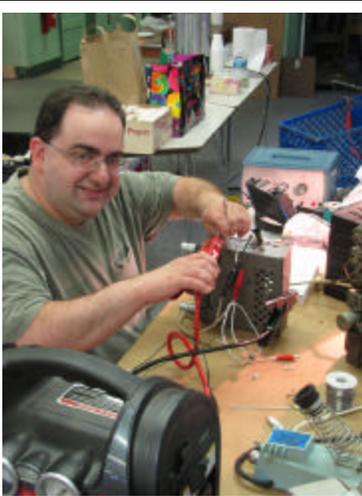


A Crosley "book" radio built with hybrid transistors and pencil tubes. The customer said it was a gift to a deceased friend from infamous mobster Sam Giancana as attested to by an inscription and initials "SMG" on inside cover.



Harry Klancer works on a customer's GE radio while the scene is captured by a reporter from the *Wall Patch*, an on-line newsletter.

REPAIR CLINIC (CONTINUED)



Darren Hoffman helps install satellite radio connections on a car radio for John Tyminski's 1964 Mercury Comet.



John Tyminski evaluates an Atwater Kent tombstone. The customer decided that restoration would be too time/cost prohibitive.



A happy customer with his working Zenith K725.

SHOW & TELL - JUNE 2011



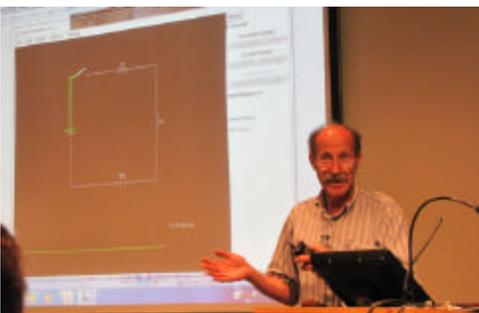
Ray Chase describes a tube tester for a single tube type used in the SCR270 radar.



Phil Vourtsis demonstrates one of only two types of stereo 45 RPM players made by the Arvin company.



Matt Reynolds talks about a cell from a backup battery his uncle found in a renovated hospital.



Dr. Mike Littman discusses a free circuit simulator java applet that demonstrates inductive energy storage without the use of meters or oscilloscopes.

PHILCO SHADOW METER CONVERSION

By
Pete Olin
(Additional text by **Marv
Beeferman**)

A number of factors were responsible for the widespread adoption of different types of radio tuning indicators. Apart from the usefulness of these indicators in reducing distortion and background noise and in simplifying the tuning operation, receiver manufacturers realized that the incorporation of tuning indicators constituted an important item in increasing the attractiveness and sales appeal of their receivers.

One of the more novel indicators, the "Shadow Meter," was introduced by Philco on some of their 1932-33 models. They continued to be offered through 1937 and were discontinued after 1938. Two types were designed; an early model with a screw base lamp prior to 1935 and one with a bayonet base lamp up to 1938.



An older and later version of Philco's shadow meter.

The circuits in which the Philco shadow meter were used are similar to those employing a conventional type of tuning meter indicator. The shadow meter was essentially a meter, but instead of using an ordinary pointer, it used an optical system arranged so that the pointer was represented by the width of a shadow formed on a screen.

When a station was tuned in exactly, the tubes under control received the maximum amount of automatic control voltage and the current flowing through the shadow meter coil was minimum. Under this condition, the deflection of the shadow meter vane was minimum and consequently the shadow cast on the shadow meter screen was at minimum width. Similarly, the plate current of the tubes under control was large when a signal was not tuned in and the shadow width was broad.

Unfortunately, shadow meters become very touchy as they degrade and they are difficult to adjust and repair. For example, to obtain a centered and symmetrical shadow, it is necessary to properly locate and use a bulb with the right (straight) filament. Ordinary bulbs have U type or irregularly formed filaments that can cast double, fuzzy or indistinct shadows. The bulb must also be mounted in its socket so that the incandescent portion of the filament is in the same plane as the shadow meter vane and is centrally located over the shadow hole.

Shadow meters also suffer from open coils, sticky and jammed vanes and weak magnets. All these problems can be corrected (see Reference 1) but require quite a bit of work. However, thanks to member Pete Olin, a replacement can be easily fabricated that is not just limited to the Philco; it also useful as a tuning indicator on many other radios.

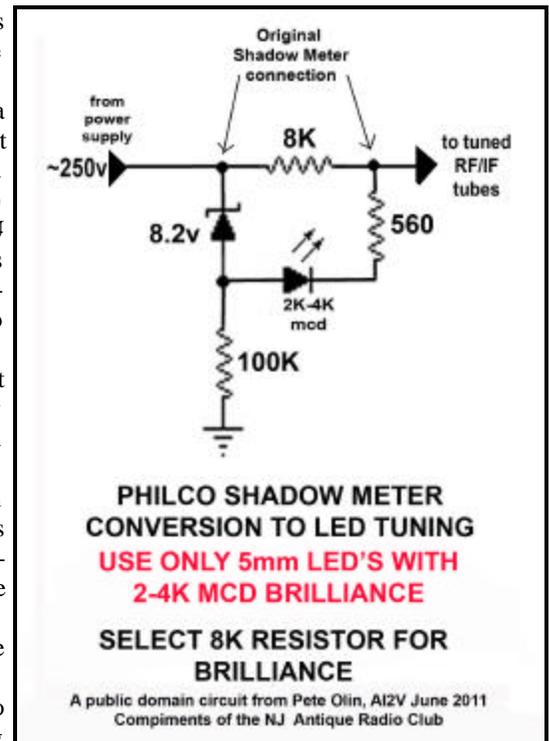
Pete's circuit works as follows:

1. The zener sets a fixed voltage (e1) below the B+.
2. As the receiver is tuned to a station, the voltage at the load end of the 8K resistor (e2) rises and approaches the full B+.
3. This difference (e2 - e1) lights the LED.

None of the circuit component values are critical, not even the 8.2 zener diode.

Any other zener within a volt or two is acceptable. You might want to ask why not just place the LED across the 8K resistor and forget the rest of the circuit? Unfortunately, this will cause the LED to go dark when the station is tuned, just the opposite of what is wanted.

This circuit has worked well in several makes of superhet radios, not just Philcos or Atwater Kents. If you attempt this circuit on radios without shadow meters, you must separate out the B+ connections to the tuned RF amp and IF tubes only and NOT any oscillator, detector, mixer or audio tubes. Although this circuit will not work in a radio with only a two-section tuning capacitor, the concept could be expanded upon. It is also very basic and minimal in cost and parts.



References:

1. Philco Service Hints and Tips Number 1, <http://www.philcorepairbench.com/tips/svctip01.htm>
2. "How it Works," special section of Rider's Manual Volume IX, Meter and Shadow-Type Indicators

ED RASER... A NEW JERSEY WIRELESS PIONEER

Ed Raser was a true New Jersey wireless pioneer. Upon his recent death, a portion of his estate was donated to the InfoAge library and will provide a wealth of material for future Broadcaster articles. The following article is offered to introduce Ed to our membership. This non-copyrighted story was first published in the "Spark Gap Times," a publication of the OOTC (Old Old Timers Association) and was provided by member John Dilks... Ed.

This is the story of one amateur radio operator who has lived through close to a century of wireless and radio. His early interest in wireless soon developed into a lifetime of activity which dominated most of his waking hours, providing a satisfying career as well as rewarding friendships among the amateur fraternity.

Ed was born April 1, 1899. Experimenting with coherer detecting devices as early as 1908 at the age of nine, Ed joined up the next year with Hugo Gernsback's Wireless Association of America, one of the earliest wireless clubs in the world. By 1910, he had worked a distance of ten miles with a quarter-inch spark coil, homemade tuner, a piece of silicon mineral, and a 75-ohm telephone receiver. The call letters were "RE", his initials in reverse!

After the Radio Law of 1912, he made his appearance at the Philadelphia Navy Yard and took the examination for a First Grade license. He recalls that the license was signed by a Lt. S. S. Payne, USN, as the Navy was the only government agency authorized to conduct examinations at that time. His brand new call letters became 3NG. By 1915, he was working stations 400 miles away with a 1/2 KW Packard transformer and homemade rotary gap, using only a galena mineral detector, loose coupler and Brandies phones for receiving.

The impending war in Europe put an

end to his experimenting. So not to be completely frustrated, he enlisted in the Navy as a wireless operator, and served a three-year hitch aboard various ships and at shore stations. During this period, while serving on detached duty at the Cape May Naval Air Station, he installed and test hopped the first E. J. Simon 1/4 KW, 500 cycle spark sets ever to go aloft in an airplane using long trailing wire antennas. Other duty stations were on sub-patrol boats, and, after hostilities ceased, at coast stations NAH, NAI and NSD.

Ed had received his First Grade radiotelegraph license before War I. After his Navy service, he continued as a commercial wireless operator at both land and shipboard stations. In 1919, he was operator aboard the coaster S. S. LAKE

Panama (NAX), there being few stations along the way able to receive the ETRAN ALLEN's arc signals.

During his maritime days he worked for such early operating companies as Kilbourne and Clark, Marconi Co., and Tropical Radio Telegraph Co.

In April 1915, Ed had joined up with the then newly organized American Radio Relay League. He became the 381st member of this organization and immediately became active in long distance relay and traffic handling. In May, 1916, he was assigned to old Trunk Line C, the then very busy line operating between Boston and Washington, D.C. He also was one of the first ORS (Official Relay Station) appointees in 1922, the year when this appointment was created. During his some 47 years of traffic work dedicated to serving the public and amateur radio, Ed held all ARRL field positions and appointments, as well as that of elected Director of the League for a two-year term.

In 1922, Ed received Special Amateur Station License number 9, and with it the call letters 3Z1. This allowed him special wavelengths out of the 200-meter amateur band for long distance relaying of messages. By 1969, he and Irving Vermilya, WIZE, were the only two original east coast "z calls" left on the air as far as it was known - all others were reassignments. Other early two-letter calls were 3NG and 3CS, both well known sparks until 1924.

Amateur radio-wise, having passed through all the various stages of spark transmission from 1/2-inch spark coil to the booming 1 KW sync-spark set in the middle 20's, Ed finally saw the light when a little 7-1/2 watt tube began to run rings around his "Big Bertha." In late 1924, he gave in to the less noisy tweet of the CW signal. Then came the 5 watt "Colpitts" and "TNT" circuits, with basketweave coils and honey-comb tuners, all of which led up to the present pretty desk-top gear of the 1970s.

As a pioneer broadcast engineer in 1922, Ed was to help establish WMAL, Trenton's first station, and later to design and construct the city's first 500 watt station, WOAX, which was considered high-powered at that time. His last participation in commercial radio came in 1935-6, when he returned to sea for the



Ed Raser's 1/2 KW spark transmitter "3CS" located at 931 Edgewood Ave., Trenton, from 1919 to 1922. The equipment was all "home built" except for the United Wireless base key, Thermo-Antenna Ammeter and mica diaphragm "Baldwin" phones. The receiver is a regenerative type, 150-700 meters, with a Moorhead audion detector and 2-stage amplifier.

STRABO (KEBR) on runs between New England and Gulf ports. In 1920, he transferred to the new collier S.S. ETHAN ALLEN (KUJQ) which carried a 2-KW Federal arc set. On its maiden voyage to Balboa and Chile, he maintained contact over most of the trip with Charleston Navy Yard (NAO) and Colon,

Columbian Steamship Co. Plying the banana boat routes, he served aboard the S.S. COLUMBIA (WKEG) and the S.S. PASTORES (KDED). His trips to Haiti, Jamaica, the Canal Zone and Columbia brought him in contact with many a Caribbean wireless station operator.

Ed's interest in military radio stayed with him for many years. In 1926, he enlisted in the 112th Field Artillery, Headquarters Battery, N.J. National Guard, where he became regimental communications sergeant and senior signal instructor. In 1933 he transferred to the 119th Observation Squadron, Army Air Corps 6 Reserve, based at Newark, N.J. He was Communications Chief of the squadron, with supervision over twenty communicators, two ground stations and 13 observation aircraft types 0-46 and 0-47.

During World War II, Ed was engaged in vehicular radio development work as a radio engineer for the Signal Corps Radio Laboratories, Fort Monmouth, N.J. He traveled over most of the eastern United States on various communications missions, for the Army, Air Force and other agencies. One of his most notable assignments was to President Roosevelt's security network, with his headquarters in the White House.

With all his on-the-air activity, and with commercial operating in-between, Ed

found time to be active in radio club work. He served in 1915 as secretary of the very early YMCA Radio Club of Trenton, N.J. He joined the Trenton Radio Assn. in 1920, and was a co-founder of The Delaware Valley Radio Assn., Inc. He was also a member of many other radio organizations: The Radio Club of America (the world's first radio club), Charter Member of The DeForest Pioneers, The Veteran Wireless Operators Assn., Life Member of the Quarter Century Wireless Assn., Morse Telegraph Club of America, Charter Member of the Old Old Timers Club (40 years in radio), The Antique Wireless Assn., and Senior Member of the Institute of Radio Engineers.

Ed also held a Commercial Radiotelegraph License, First Class, and an Amateur Extra Class License of early issue. He has been cited five times for the ARRL Public Service Award Certificate, for the Delaware Valley Radio Association's Silver Cup Award for faithful service, the Achievement Statuette conferred by the Conamaugh Valley Radio Association of Johnstown, Pa., and the AI Operators Certificate.

Ed was probably best known for his Wireless Museum, with its large collection of over 400 pieces of antique radio equipment dating back to 1899,

when Marconi first came to America. His collection of historical books and papers on the art of wireless and radio numbered over 250 volumes, and represented some 35 years of research work. This unique exhibit was open to all visitors by appointment, and was located at 19 Blackwood Drive, Wilburtha section, West Trenton, N.J.

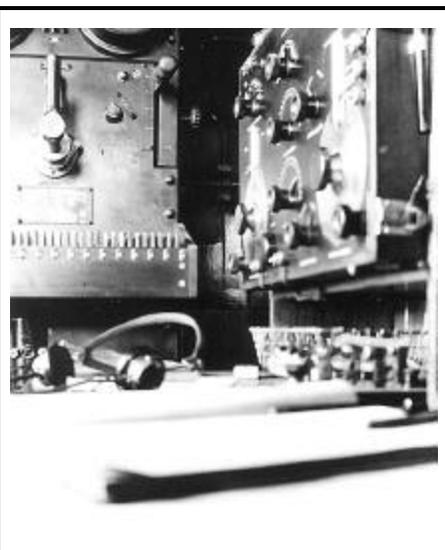
Along with the above activity, Ed found time to run the original Old Timer's Nite Round-Up. His Old Timer's Nite Round-Up idea, which originated in 1945, has been perpetuated in Old Timer's Nite affairs that were run all over the country.

In later years, Ed was employed as Supervising Engineer and Technical Advisor to the N.J. State Police Radio System. He pioneered early FM systems, having installed the second state-wide system in America or elsewhere. After some 22 years in mobile radio work, Ed retired from police radio activity and settled down to enjoy his several hobbies. He noted: "I find that I seem to be busier than ever, with never a dull moment as there are so many facets in ham radio to keep me occupied and happy as a retiree."

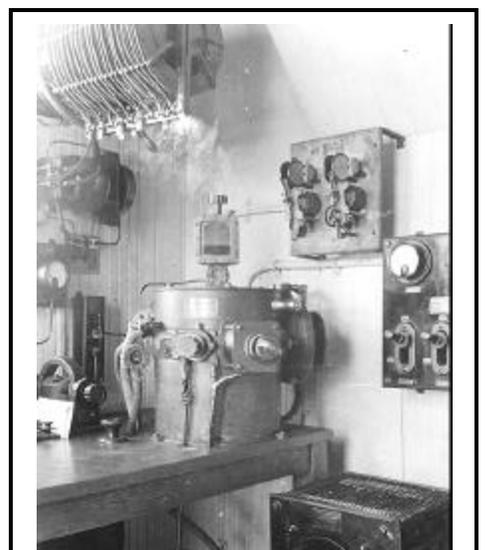
With his death, the saga of a very active wireless man who covered just about all phases of "the wireless game" ended, but we're thankful that we can still appreciate some of his legacy at InfoAge.



Ed Raser aboard the S.S. Lake Strabo, general cargo (1919), running coast-wise between Boston, Philadelphia, Galveston and Houston.



The 1 KW, Navy type 500 cycle quenched spark transmitter, Navy model SE-143 receiver and crystal detector aboard the S.S. Lake Strabo. Ed was the one-man radio operator aboard this ship.



Ed was Chief Operator aboard the S.S. Etan Allen. Shown is a 2 KW Federal arc generator showing an alcohol dropper on top. The tuning coils are above and the chopper, antenna ammeter, variometer and key is on the desk.

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**

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.

For Swap: a) 2 functional 256K memory chips removed from a DELL Latitude D600 laptop for a few like-new/unused ceramic 8-pin sockets for 6146 tubes. b) NARTE training manuals for old ARRL publications containing tube transmitter designs. Ed Papson, papson_e@comcast.net

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/TRADE

For Trade: Heathkit GR-81 tube regen receiver, serial # 550 7704. Physically in fair shape with some dents and scratches; all tubes light up. Receives broadcast and shortwave bands (did not check all SW bands). Looking for a 5V CT filament transformer @ 10 amps min. or a xfmr with a 5V CT, 10 amp min. winding with HV. Need for a project involving 15E triodes. Papson_e@comcast.net

Wanted: A good friend of the NJARC has a Philco model 70 cathedral that is missing a speaker. He has been told that a model 20 or 70 console radio speaker will also do the job. Can anybody help? Ron Gorda, 732-946-7862 or contact Ray Chase at raydio862@verizon.net.

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.

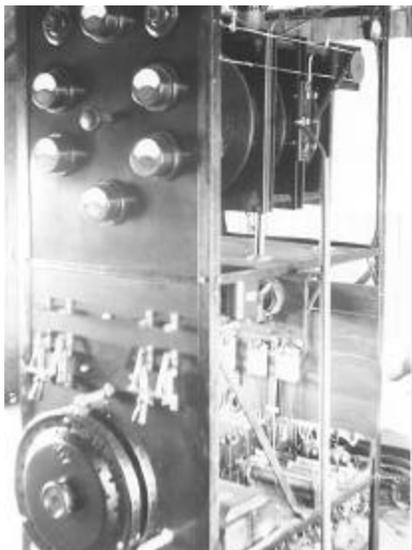
John Tyminski, 609-947-9071, tubeularElectronics@gmail.com

WANTED

RCA 45 RPM record changers. I will buy all amplified models in good, original condition.

John Tyminski, 609-947-9071, tubeularElectronics@gmail.com

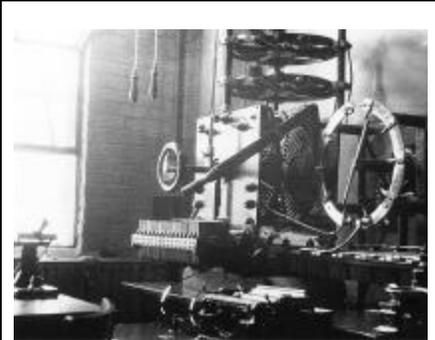
Wanted: Speaker for an AK Model 627, 1932 cathedral. Speaker is 8-1/2" with an outboard coil the size of a pack of cigarettes and 4-pin connector. AK part number 17300 similar to that used on models 80, 82, 84, 90, etc. Jerry Dowing, 732-350-6259.



500 watt transmitter for pioneer station WOAX (Trenton, NJ) designed by Ed in 1923 for the Monument Pottery Co. Ed was Chief Engineer for 9 years. He also put WMAL on the air in 1922 and held the license for that pioneer broadcast station.



One of the towers on top of the Monument Pottery Co. at 600 Ingram Ave. in Trenton. The tower held up the big, flat top 8-wire antenna of B/C station WOAX which eventually became WTNJ.



Radio WNW at pier 98 South, Philadelphia PA. operating a 3 KW Marconi rotary spark transmitter on 600 and 930 meters between 1923 to 1930. This was the last coastal station in the U.S. to go off the air after spark was banned. The station was owned and operated by the Tidewater Wireless Telegraph Co and Ed Raser was one of its operators.