

The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

September 2005

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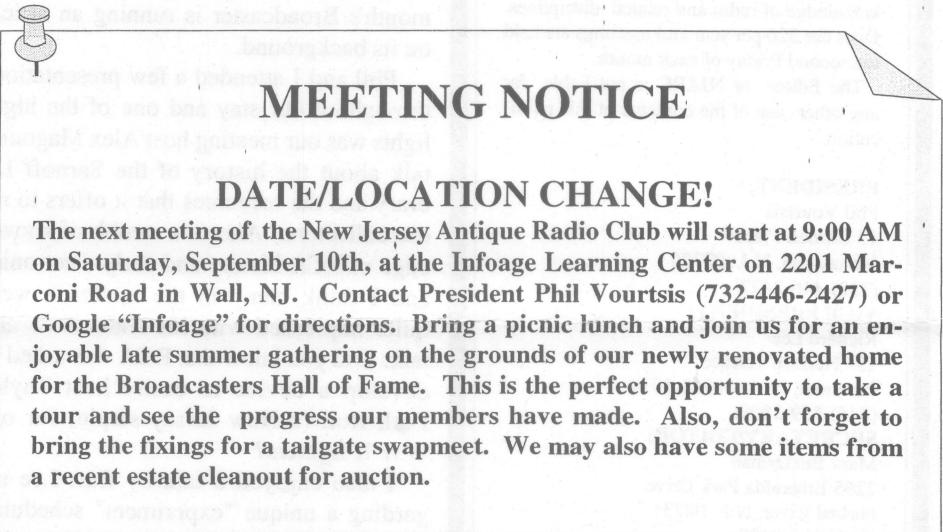


Reported by Marv Beeferman

At the August meeting, Treasurer Sal Brisindi reported that the proceeds from our first swapmeet in Parsippany at the PAL Center left the club in the black. Positive comments also continued at the AWA Conference in Rochester (more on this later), particularly with regard to location, comfort and spaciousness. It looks like one or more meets at this location will become a permanent part of our schedule with the potential to be one of the premier swapmeets in the tri-state area.

The meeting also featured our second members-only auction, supplemented by some early items from a local family, and some very nice pieces were hammered down. The auction went very smoothly, guided by the able hands of auctioneers Al Klase and Richard Lee. Included was an Eagle Neutrodyne, an Arvin 16 metal set, a Hallicrafters SX-17, an early Atwater Kent variometer, a Garard 2-dialer, a Bristol 1-tube amplifier, a Tuska 305 "Superdyne," a Transoceanic 600, a Jenkins "Radiovision" receiver box (no parts) and a radio station WSCR sign. Everyone seemed pleased with the selection and prices; we promise to start a little earlier next time so people can get home at a respectable hour.

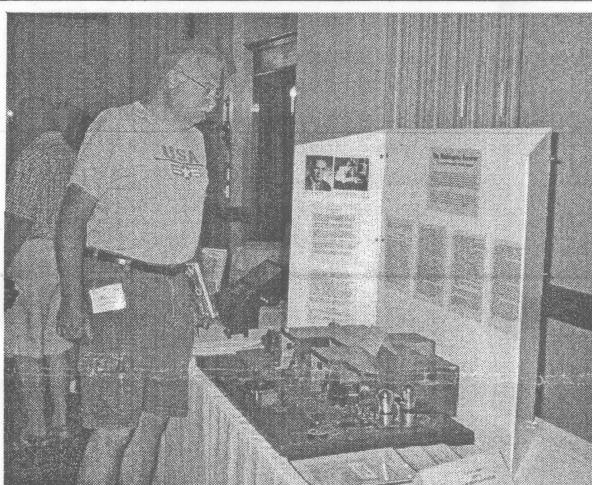
NJARC President Phil Vourtsis and I attended this year's Antique Wireless Association's conference in Rochester, New York and both of us had a very nice time. Attendance was again down; it looks like there were some 600 people signed up and I counted some 100 vendors in the flea market - but not bad for today's e-bay environment. However, there's talk of going to a three day format with a full day of activity on Saturday...this makes a lot of sense.



The next meeting of the New Jersey Antique Radio Club will start at 9:00 AM on Saturday, September 10th, at the Infoage Learning Center on 2201 Marconi Road in Wall, NJ. Contact President Phil Vourtsis (732-446-2427) or Google "Infoage" for directions. Bring a picnic lunch and join us for an enjoyable late summer gathering on the grounds of our newly renovated home for the Broadcasters Hall of Fame. This is the perfect opportunity to take a tour and see the progress our members have made. Also, don't forget to bring the fixings for a tailgate swapmeet. We may also have some items from a recent estate cleanout for auction.

Also, the town of Henrietta may be convinced to modify their event rules to allow access to the general public.

and phonographs. There were also plenty of opportunities to stock up on restoration parts, tubes and supplies.



NJARC President Phil Vourtsis admires Ray Chase's "Washington Receiver" entry in the AWA's Old Equipment Contest.

I really didn't hear too many complaints about the variety in the flea market; in fact, some extremely clean early battery sets showed up that were a little pricey but their "TLC-required" brothers were also available if you were quick enough to find them. Although not too much vintage amateur gear, there was generally a nice representation of wooden consoles and table models, battery sets, catalins and plastics, transistor portables, hi-fi gear, speakers

Auction volume was not that great but quantity was easily made up for by quality (Phil and I only attended the auction preview). With NJARC member Ray Chase keeping a running tab, the following five items accounted for over \$20,000 of the \$68,000 total: one of three known 1914 Marconi model 2843 receivers (\$11,000); Kennedy 220 receiver (\$1350)-525 amp (\$900); M/1885 WW I field telegraph (\$4000); 1912 Murdock/Heinz/Mesco spark gap transmitter (\$2500); McMurdo Silver Masterpiece VI (\$2000 for three pieces). Also sold was an Adams Morgan Paragon for \$2,000, a Kennedy 110 receiver for \$1200, a DeForest spherical audion for \$1500 and two ARRL convention badges (1924 and 1927) for \$1,000 and \$1050 respectively. I left a \$300 bid with Ray for some interesting slides of RCA's Harrison plant (over 40 in all) and Alex Magoun kicked in another \$150; unfortunately, they went for \$475.

The theme of the old equipment contest was Western Electric and some terrific hardware examples were entered. Some Canadian collectors showed an extensive collection of Northern Electric broadcast

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.

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receivers and Peter Yanczer's homebrew rotating spiral-mirror mechanical television was a delight to see again. Ray Chase's Washington receiver display won top prize in the superhet category and this month's Broadcaster is running an article on its background.

Phil and I attended a few presentations throughout our stay and one of the highlights was our meeting host Alex Magoun's talk about the history of the Sarnoff Library and the resources that it offers to radio collectors. Alex is a wealth of knowledge of RCA history and early electronics and I think many in the audience were quite impressed with his slide show and talk. Did you know that RCA was asked to develop a device to easily heat Taylor Pork Roll (a New Jersey staple) for our WW II fighters?

I also enjoyed a talk by Bart Lee regarding a unique "experiment" scheduled for 2006. Unknown to me, some say that the three clicks (letter "S") that Marconi heard during his 1901 Atlantic test was that of electrical machinery. Others say that the clicks were actually lightning-generated. During the winter of 2006-2007, the Poldhu Amateur Radio Club is considering broadcasting from a 160-meter beacon. The year is unique in the sense that cyclical sunspot numbers and intensities of related radiation will duplicate the conditions of 1901. This will give amateur radio operators to take part in a unique experiment in the history of wireless.

Phil told me to keep quiet about what he came home with in case his wife gets a peek at the *Broadcaster*, but, not burdened with this problem, I can say that I went a little overboard. I loaded the van with a very nice first edition of Maloff and Epstein's 1938 "Electron Optics in Television," an inductively-tuned Magnavox TRF-50 with all paperwork, a Hallicrafters TV, a Radiola Grand fix-up and a Philco 49-1401 receiver/"slide-in" 78 player.

Our next swapmeet is at Hazelet on the 23rd of October and details are in this month's *Broadcaster*. Also, note that our September meeting is at Infoage...bring a picnic lunch, a few things to sell a see how nicely the Broadcaster's Hall of Fame is coming along. We might also be auctioning a few items from a recent estate sale.

**INFOAGE HOSTS
WW II LIVING
MEMORIAL**

**Reported by
Marv Beeferman**

Some of the following material is based on an article written by Jane Zhang appearing in the August 14, 2005 edition of the Asbury Park Press; it is used by permission..Ed.

For more than two decades, except for four years with the Air Force in North Africa during World War II, Peter Kennedy of Sea Girt tested radar and satellite systems at Camp Evans. For 40 years, Harold Fulton of Wall, a paratrooper during World War II, worked at the camp's shops, helping make everything the engineers ordered.

As the US Army's radar development center during World War II, the camp produced a radar unit that detected Japanese planes attacking Pearl Harbor, according to Fred Carl of Wall, a computer programmer and former science teacher. "Sixty years ago, you were willing to sacrifice every single tomorrow," said Carl, addressing almost 150 veterans and visitors at the dedication of the World War II Living Memorial at Camp Evans. "We are grateful. We are humbled."

The camp, which also served as headquarters of the Marconi Wireless Telegraph Co. of America and was closed in 1993 by the U.S. Army to cut costs, is being transformed into the Infoage Science-History Center that is led by Carl. Linking the site's history to its future, Carl said, the museum will teach visitors about the sacrifices by older generations through technology and interactive science exhibits.

The dedication drew veterans such as Kennedy and Fulton, their families and the general public. "It reminds everybody of the involvement of Camp Evans here," said David Goodwin, 81, a World War II veteran of Middletown. "Their involvement in the war effort probably got me home a lot sooner." A highlight of the ceremony was the awarding of symbolic

Camp Evans service pins to veterans who formerly worked at the site.

Assemblyman Steve Corodemos (R-Monmouth), arriving in a World War II command car and escorted by guards in vintage dress, praised Fred Carl as "the sole force behind Infoage" who has worked hard to make a vision come true. In the dozen years since the Army closed Camp Evans, Fred has worked to build the science/history learning center. About 30 volunteers have worked together to repair the buildings at the site.

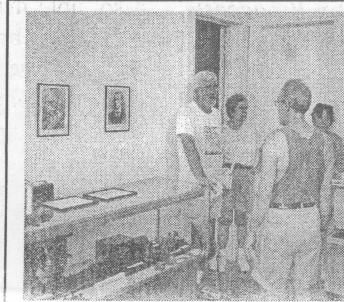
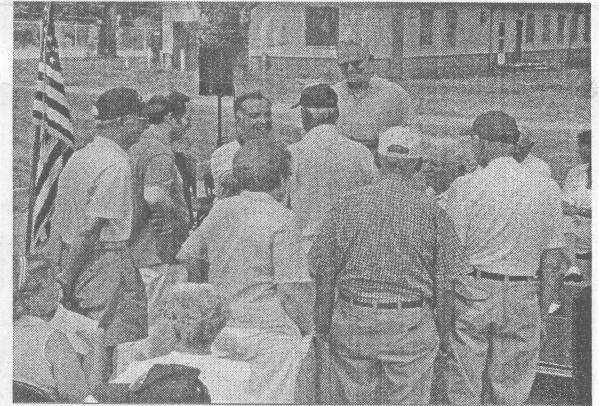
During the dedication, many visitors lingered through the hallways of the former Marconi hotel and viewed some 100 posters of the camp's rich heritage and history. They were created from Camp Evans photos donated over the years and from *Radio News* issues provided by Ray Chase. "It certainly brought back memories," said Cicely Fulton, Harold's wife. "I'm glad that we have it here." Some visitors stopped by

the club's vintage radio exhibit in the former Marconi Chief Engineer cottage, but the heat got to be too much without air conditioning...a definite fix that must be addressed.

Following the dedication, Fred praised all the volunteers who helped make the previous day so successful. Everything from new air conditioners (which made the 92 year old building very comfortable), food and refreshments, the sound system, display cases and WW II artifacts were all donated. The New Jersey Technology Museum and Learning Center provided vintage WW II vehicles like a jeep and amphibious "duck." A fully decked out Civil War color guard was posted by the "Past Musters" organization. Fred noted that Warren Cochran, a WW II vet who landed on Iwo Jima, was fixing lights and anything he could put a pipe wrench on or reach from a ladder up to the last minute.

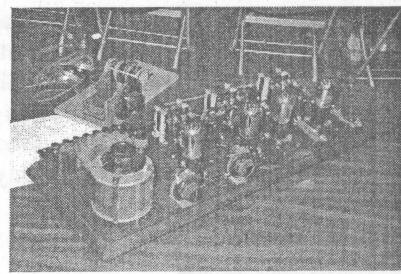
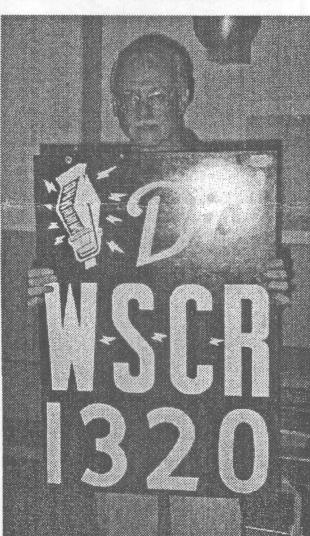
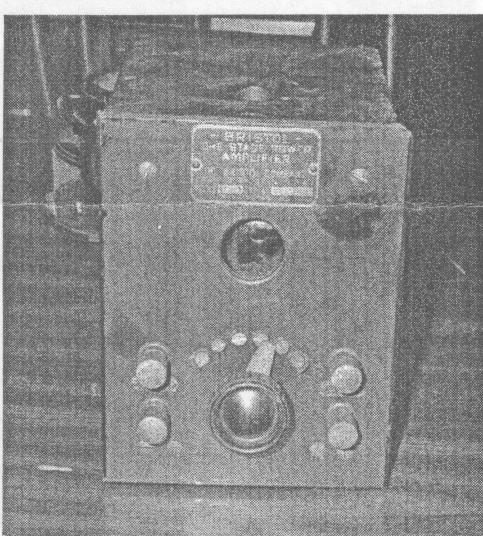
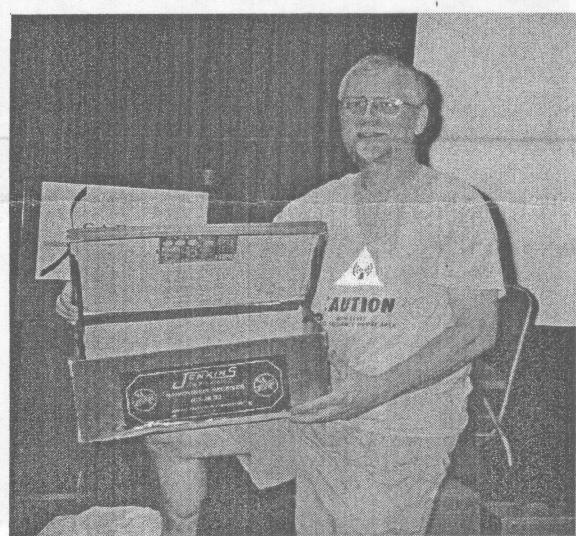
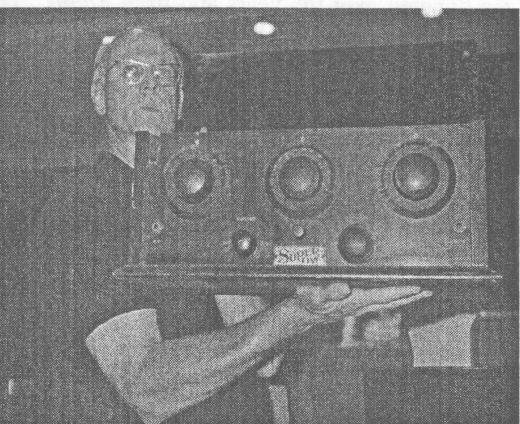
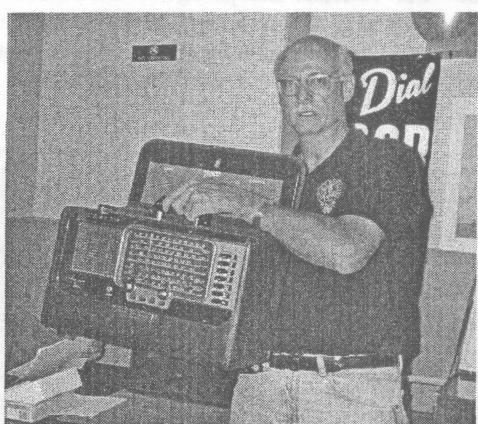
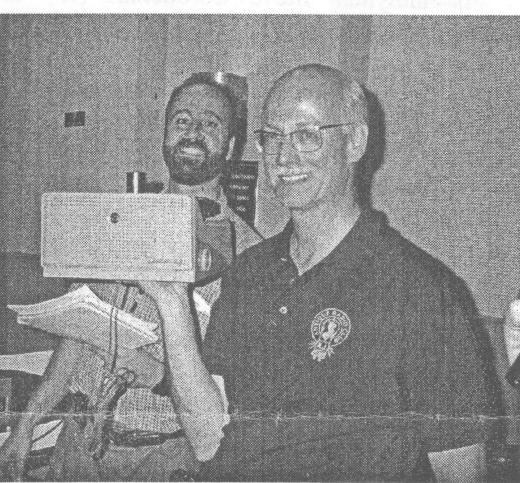
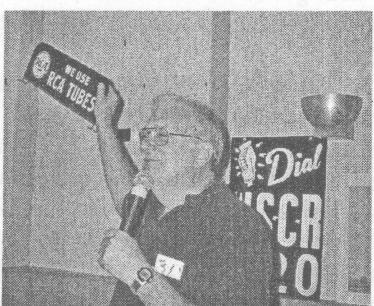
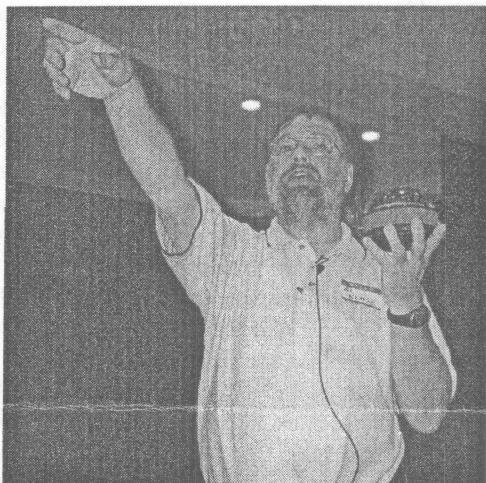
Fred also gave credit to the Wall Township DPW, the Fort Monmouth DPW and the Wall BOE. They provided a stage and flag, swept the parking lot and street, mowed the grass, removed piles of dirt, delivered 100 folding chairs and put a new rope on the Camp Evans flag pole. Camp Evans has a flag flying over it for the first time in nearly 10 years. Mark Casner of C&H Plumbing made sure that the site had working men's and lady's restrooms. This was quite a feat since, if you might remember from past reports, the heat was off in the hotel during the winter causing pipes and fixtures to split.

Thanks to all club members who helped prepare Infoage for the dedication. As Fred said, "we had a chance to thank our veterans and pledge to them that we will save Camp Evans as a memorial to their deeds, ingenuity and sacrifices. They were touched. It was the right thing to do."



The cottage was open to guests but lack of air conditioning closed it down early in the day.

NJARC MEMBERS-ONLY AUCTION



THE WASHINGTON RECEIVER AND THE BIRTH OF AUTOMATIC VOLUME CONTROL

By Ray Chase

Most of us take for granted the operation of Automatic Volume Control (AVC) or, if you prefer, AGC. We also restore and use early radios without AVC and recognize the problems of tuning stations while trying to keep the volume and sensitivity in check and not having enough hands to manipulate all the controls. Without AVC, radios in motor vehicles would never be practical due to periodic fading of the signal. When did AVC first appear and how did it develop?

The year was 1925. A young student by the name of Harold A. Wheeler, originally from South Dakota and currently attending George Washington University in Washington, had worked with Professor Hazeltine for three summers in Hoboken, NJ. Wheeler had dabbled in radio as a teenager and was impressed with the gain available with the new shielded neutrodyne receiver with three RF stages instead of two. However, while tuning to different stations, continual adjustment of the volume control was necessary. It was also difficult to operate the individual tuning controls while constantly having to adjust the volume to prevent "blasting" by strong stations. He decided that some sort of automatic control was needed such as that used by a heating system thermostat or the mechanical governor on a stationary steam engine. His initial studies indicated that the gain of the RF stages could be reduced by the introduction of a negative bias developed from the rectified amplified carrier signal.

In December 1925, he furthered his studies and laid out the design of a superheterodyne receiver with neutralized fixed tuned IF amplifiers. Over the Christmas holidays, he obtained the parts and built the receiver in the basement workshop of his residence in Washington, DC and called it his "Washington Receiver." In January 1926, he perfected the radio and demonstrated it to several friends, receiving sta-

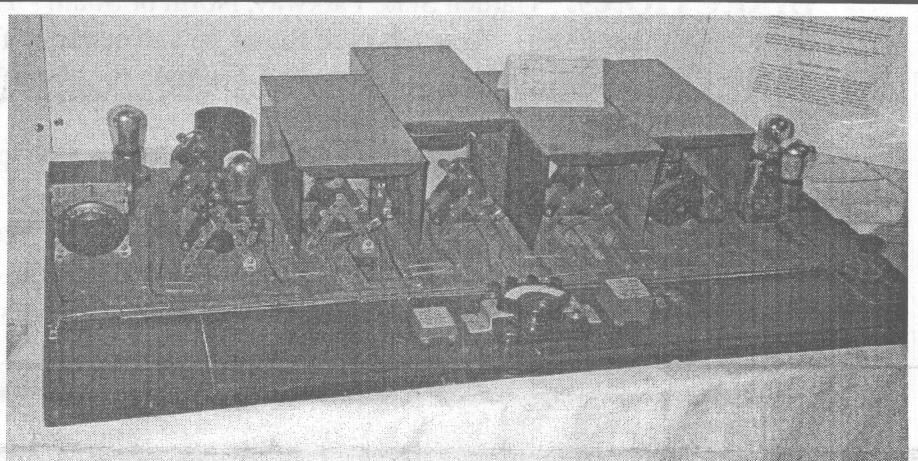
tions from California as well as local stations without having to make volume or sensitivity control adjustments. He also added a small meter in the plate circuit of the IF stages to aid in tuning and monitor the effects of AVC during signal fading. This later became another invention recognized as the tuning meter or "S" meter.

When Wheeler returned to Hoboken in the summer of 1926, the Hazeltine Co. discovered that they had not put him under contract to assign patents to the company. However, Wheeler agreed to sign over his inventions, much to the relief of the patent attorneys.

Wheeler designed the receiver for the Philco 95, the first with the AVC feature. This was the late 20's when the advent of screen grid tubes spelled the death knell for neutralized triodes and a severe loss of patent royalties for Hazeltine. Just in time, the AVC and tuning meter patent royalties sustained the company through the depression. Curiously, appeals to the Supreme

started his own company in 1946. This company was later merged into Hazeltine and he became a Director and Vice President.

InfoAge received the original Washington Receiver from the IEEE Operations Center in Piscataway where it languished unidentified in an archival storage room for some time. When NJARC was asked to supply a radio history exhibit at the Piscataway center, I was shown this device and immediately identified it as an early homemade superheterodyne radio of probably some significance. A little further research by the IEEE historian and myself brought forth its true provenance. This August, I brought the receiver to the Antique Wireless Association convention at Rochester, NY and entered it in their annual contest in the early superheterodyne category. The receiver was backed up with display boards telling the story of the radio, the invention of AVC and a resume of Harold A. Wheeler. The display gar-



Wheeler's Washington Receiver shown here at the AWA Old Equipment Contest.

Court in the late 30's resulted in a ruling that AVC could not be a patented device, but by then, Hazeltine had prospered and the invention of AVC had accomplished its task of helping to keep the company solvent. Interestingly, the patents, which we have copies of, do not show the AVC circuit applied to a superheterodyne but rather show neutralized TRF circuits. One could speculate that it would not be prudent to be experimenting with superhets when Hazeltine probably did not have an RCA license to do so.

Harold Wheeler went on to increasingly important jobs at Hazeltine and then

earned first prize in its category and prompted a good deal of discussion. InfoAge and NJARC are proud to be custodians of this important historical artifact.

A future goal would be to trace the circuit out and bring the receiver to an operating state (none of the documentation found to date shows the schematic). The circuit appears to be a fairly standard eight-tube superhet of the period with three IF stages at 300 KC. Tubes are all 201A's. It is very rugged and well-made and is in surprisingly near to original condition.

NEW JERSEY ANTIQUE RADIO CLUB



ANTIQUE RADIO SWAPMEET

SUNDAY, October 23rd, 8:00 AM - 1 PM*

North Centerville Vol. Fire Co. - Hazlet, NJ

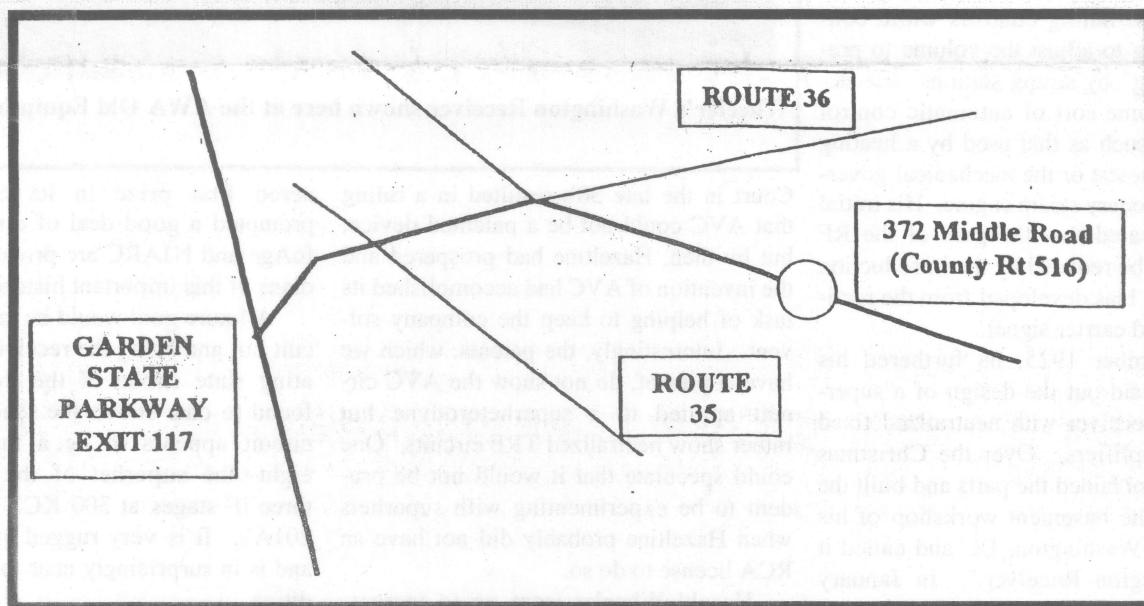
The NJARC presents its Fall swapmeet at the spacious North Centerville Fire Co. banquet hall in Hazlet, NJ. The first 15 reservations receive an 8-foot table at no extra cost. A \$5.00 club donation from buyers is suggested.

* Vendor setup at 7:30 AM (no early admittance); the meet may extend beyond 1:00 PM.

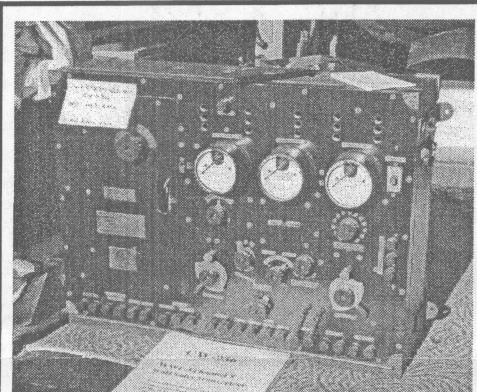
DIRECTIONS: Garden State Parkway, North or South - Take exit 117 (towards Hazlet (Rt 35)/Keyport/Aberdeen). Bear left onto Route 36 and continue for about 1/2 mile. Turn right on Middle Road (County Route 516 East) and continue for about 1.5 miles. The Fire Co. banquet hall is on the right.

RATES: NJARC members \$15/space; non-members \$20/space. **Note:** Free tables are only available to first 15 registered vendors.

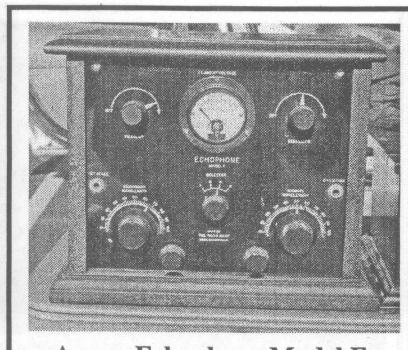
CONTACTS/RESERVATIONS: Marv Beeferman, 2265 Emeralda Park Drive, Forked River, NJ 08731 (609-693-9430). E-mail: mbeeferman@cs.com Phil Vourtsis, 13 Cornell Place, Manalapan NJ 07726 (732-446-2427). E-mail: pvourtsis@att.com



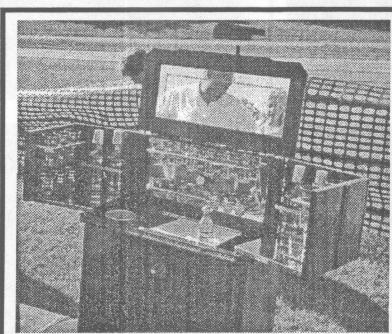
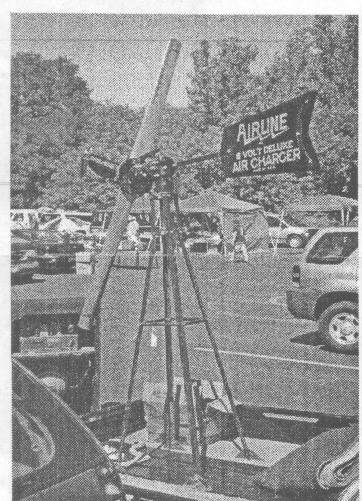
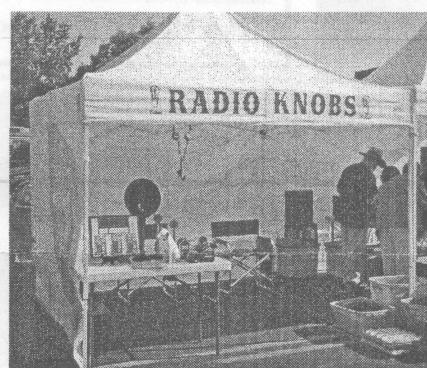
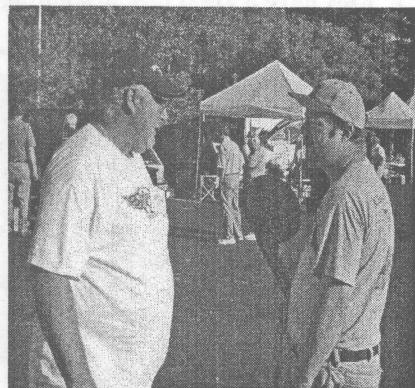
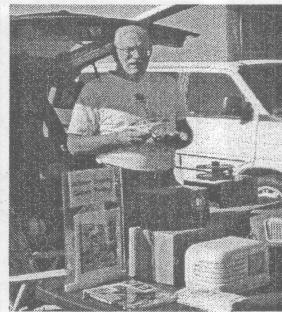
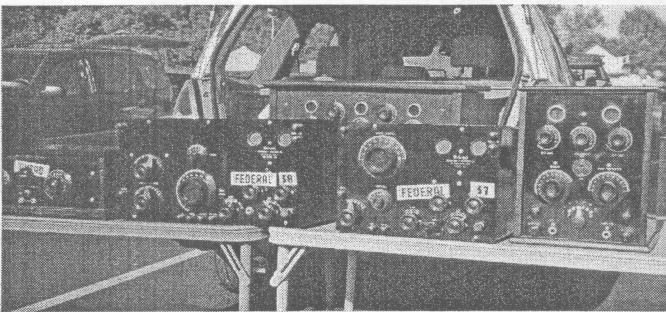
AWA CONFERENCE - 2005 (In the Flea Market)



A WW I CW-936 3-channel/5-watt voice transmitter



A rare Echophone Model F



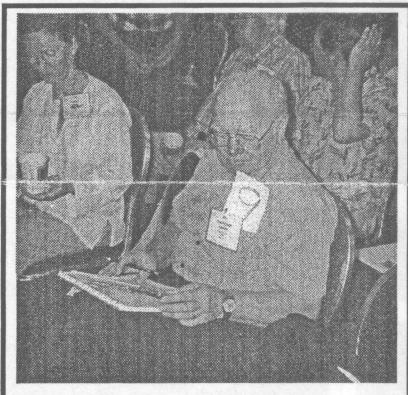
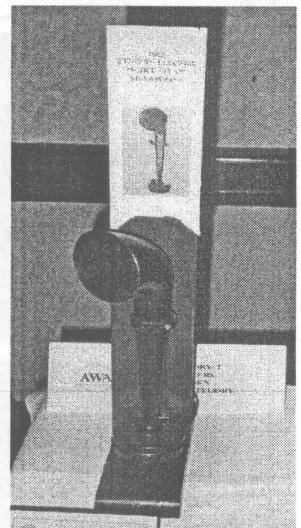
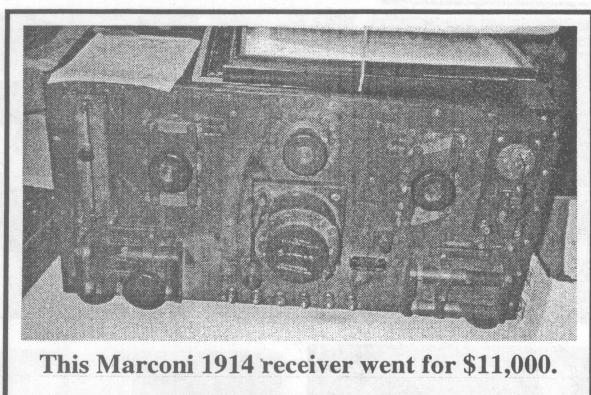
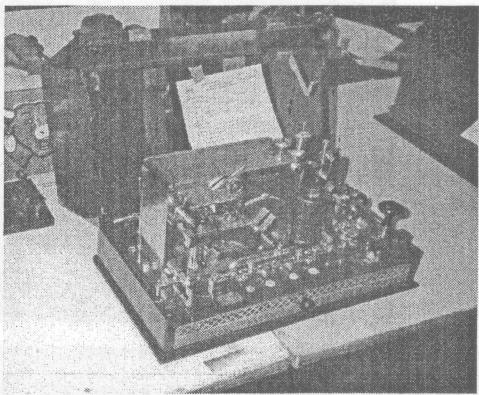
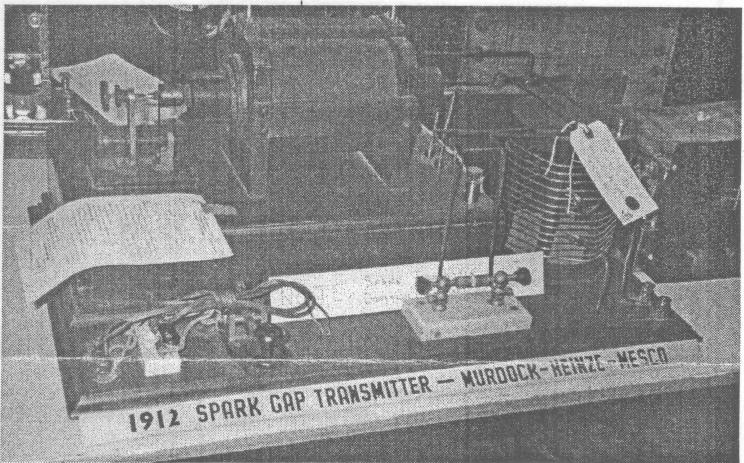
A Philco bar radio with all glass-ware and in excellent condition...it was still there when we left on Friday.



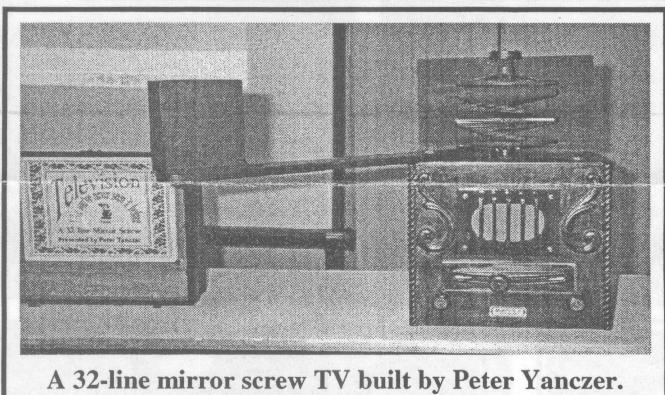
AWA CONFERENCE - 2005 (Auction/Old Equipment Contest)



Alex gave a great talk promoting the Sarnoff Library



Ray! Drop the crossword puzzle -
they're auctioning the Marconi!



A 32-line mirror screw TV built by Peter Yanczer.

