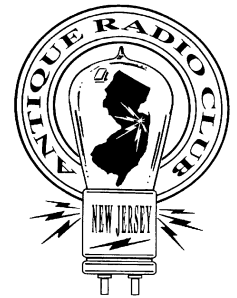


The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

July 2006

Volume 12 Issue 7



**MEETING/
ACTIVITY
NOTES**

Reported by Marv Beeferman

THE ON-LINE BROADCASTER

The New Jersey Broadcaster is now on line. To date, 55 of your fellow members have subscribed, saving the club some \$990 per year. Interested? Contact Marv at mbeeferman@cs.com

No new nominations were received for this year's slate of club officers so, by a unanimous show of hands, all 2004 officers will continue to serve in their previous positions. The club also welcomes Rick Weingarten in his office as Sergeant at Arms/East (InfoAge) while Dave Snellman continues to perform the same duties in the West (Sarnoff Library). The evening's activities also included an Early Television Convention update by Dave Sica with lots of big-screen visuals highlighting this fabulous get-together (see the June Broadcaster). We also watched a screening of "Top 20 Tips for Collecting Antique Radios" which appeared on Cablevision's "Collective Intelligence" program and included footage from interviews at our Parsippany swapmeet. A number of free copies of the DVD were distributed to NJARC members and I'm sure a loaner copy is available from the club library.

Vice President Richard Lee updated the club on a benefit concert on May 12th at the historic Baker Theater in Dover, N.J. The concert was organized to raise money for a planned New Jersey Radio Museum and hosted by "Uncle" Floyd Vivino whose funny suits, funny stories and fun music



MEETING NOTICE

NOTE REVISED DATE

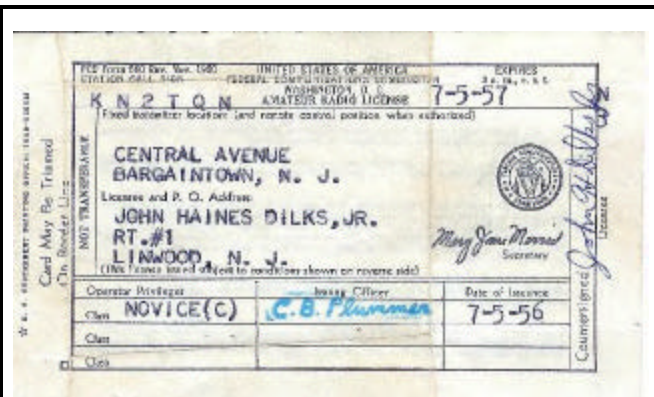
The next meeting of the New Jersey Antique Radio Club will start at 7:30 on Friday, July 14th, at the David Sarnoff Library in Princeton, NJ. Contact President Phil Vourtsis (732-446-2427) for directions. This month we're asking members to amaze or amuse their fellow collectors with something from their collection, a recent acquisition or a recent restoration. Yes, it's another installment of our ever popular "Show and Tell" meetings.

have made him a cult favorite on radio and TV for many years.

The fledgling museum is planned for the third floor of the Conduit Building in Dover. It is hoped that the museum will eventually include, among other things,

old immigrant started work as an office boy for the Marconi Wireless Telegraph Company of America, and the world changed because of it. Dr. Alex Magoun, who has hosted the NJARC at the David Sarnoff Library for a number of years, reports that the library has honored its namesake with three illustrated lectures and two exhibits on Sarnoff's career and New Jersey innovations that changed the world.

The June lectures, attended by a few NJARC members, included a discussion on the geographic, economic and human aspects that made the Garden State such an attractive location for Edison, the world's greatest inventor, and his research and development activities in the late 19th and early 20th centuries. A second lectured explained why AT&T moved Bell Laboratories across the Hudson River from Manhattan, and covered some of the innovations that



NJARC member John Dilks celebrates the 50th Anniversary of KN2TQN. Congratulations John! For more congratulatory wishes, see the NJARC Reflector (which, by the way, John was instrumental in establishing).

an exhibition room, a historic archive and a listening area for airchecks. While New Jersey's radio stations often have operated in the shadow of New York and Philadelphia, like most New Jersey media, the state has a rich radio history, from the startup of WOR in Newark to the influential WKXW (101.5 FM) today. Hundreds of former well-known radio personalities have started in or passed through New Jersey stations.

One hundred years ago, a fifteen-year-

emerged from them, from the transistor to satellite communications to digital networks. The final lecture, presented by Dr. Magoun, traced how Sarnoff's career paralleled the rise and relative decline of his adopted country, from his arrival from Russia in 1900 to the demise of the company he defined, RCA, in 1986.

The two library exhibits supporting the anniversary are titled "David Sarnoff and the Innovative Spirit" and "Six Innovations that Changed the World." These

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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offer visitors opportunities to understand and appreciate the electronic technologies that make modern life possible, and the people who brought them to life. Included are color television, liquid-crystal displays, video cameras, low-power and high-frequency transistors, computers and memory technologies, and electron microscopy.

Happy 50th Anniversary to member John Dilks who, on 7/5/56 was issued license KN2TQN. John said that "back then, I never considered that I would be a ham for 50 years, but at the same time I revered those old timers who were. Now, I guess I am one." You can also see a photo of John's original license at www.k2tqn.com.

MORE ON "THE FIRST CLOCK RADIO"

By Marv Beeferman

Last month's *Broadcaster* featured an article on what many collectors consider to be "the first clock radio." It was built by the India Ivory Company of Providence, R.I. It was constructed using one of the company's typical miniature celluloid table clocks and a Beaver Baby

The NJARC Summer swapmeet will be held on July 29th at Infoage. Pricing will be similar to that of the Parsippany meet but it will be a bring your own table type affair. For more details, see page 8 of this month's *Broadcaster*. The Fall swapmeet is back at Parsippany on November 18th and the next Kutztown radio meet is scheduled for 9/22-9/23 (go to www.dvhrc.org for details).

In the upcoming weeks, the club will be sending out final renewal notices for 2006 dues. Please try to reduce this mailing by sending a \$20 check to Marsha Simkin at the address at the left. If a "1/06" appears on your *Broadcaster* mailing label, our records show that your dues have still not been paid.

Grand crystal radio.

While I was doing research on the radio, I came across offerings for two clocks which were very similar to the design of the clock radio and made by the same company. You can see by the photos that the clocks are distinguished by their "classic" design using pillars and columns and their ivory look, sometimes referred to as "French ivory" or "ivoryine".

Since the prices were very reasonable, I purchased them with the thought that they might make a great basis for an AWA contest entry. Talk about portability! Even so, the clocks do make an interesting and inexpensive collectable that take up little space.



The original "clock radio" fitted with a 1923 Beaver Baby Grand crystal set.

INFOAGE GALA

By Marv Beeferman

On Saturday, June 3rd, NJARC members attended InfoAge's first annual award gala and fundraiser. Honorees included George Brucker, Stanley Kronenberg and Dr. Walter McAfee, with family members accepting the awards for these important figures in Camp Evans history. Director Fred Carl received a special award for being the driving force behind making InfoAge a reality. The event was held at the beautifully restored Marconi Hotel dining room and wonderful food and music added to the festivities. A gift auction was also included, with the NJARC contributing a restored Atwater Kent table model radio.

Dr. Stanley Kronenberg began his work at Camp Evans in 1953 and worked for 46 years with Dr. George Brucker, who started at Evans some 3 years earlier. They both worked in the Nucleonics Branch working on instrumentation to measure radiation in the field including that emitted from atomic bomb testing in the Pacific.

Part of their work included an understanding of explosion parameters, developing the necessary formulae to implement this understanding and the ability to characterize the output of the electromagnetic pulses emitted by a nuclear weapon. Kronenberg constructed the secondary electron mixed radiation dosimetry instrumentation which was used in all early nuclear testing and constructed in the Evans shops.

George Brucker left the Evans labs in 1962 to work at RCA's David Sarnoff Labs. He helped to design radiation sensors in space and electronics to help in space survival. He returned to Evans to work with Dr. Kronenberg as a consultant, but also worked with NASA at the Goddard Space Center. He was involved in the design of a radiation sensor that could estimate the intensity of a low-level radiation source hidden by thick concrete walls such as a warhead.

The type of relationship these two men had is illustrated by a humorous anecdote related by Dr. Kronenberg. It appears that Stan asked George to find a suitable can for one of his experiments. After rummaging through many possible sources, he came across one in a Chinese restaurant filled with fried noodles. The men ate and enjoyed the noodles and the

can provided a light-tight enclosure of the exact dimensions required for the experiment.

Dr. Walter McAfee was a member of the U.S. Army Signal Corp Engineering Laboratories during World War II. There he distinguished himself in electromagnetism and radar. He was a member of the Project Diana team that was responsible for the first lunar radar echo experiments. For this, an accurate computation of the velocity of a position on the moon relative to a position on the earth was needed. Dr. McAfee performed the calculations, and on January 10th, 1946, the experiment was successfully conducted. Unfortunately, McAfee's contributions to Project Diana, including his name, were not mentioned in any news reports. It wasn't until McAfee received the Rosenwald Fellowship to Cornell in June of 1946 that he received credit for his accomplishments.

Dr. McAfee was a scientific advisor to the U.S. Army Electronics Research and Development Command. For 42 years, he worked for the government at New Jersey's Fort Monmouth including service as director of a NATO study on surveillance and target acquisition. He concurrently lectured on atomic and nuclear physics and solid-state electronics at Monmouth College from 1958 to 1975.



Guess who won the NJARC gift auction donation?



NJARC member Bob Pilcher and his band provided the music.



Dave Snellman gets an explanation of war memorabilia won in the gift auction.

**MORE PHOTOS
ON PAGE 4**



Accepting awards for Brucker, Kronenberg and McAfee; InfoAge Director Fred Carl received a special award.

THE SPLITDORFF ABBEY

By Marv Beeferman

Some of the photos in this article will not appear clearly on some screens due to the nature of the copy. However, when printed, they will look fine...Ed..

I purchased my 1928 Splitdorf Abbey from the recently advertised sale of the Clay Seidel collection; it had won a second-place ribbon in 1987 at the Antique Wireless Association convention. Seeing this radio for the first time, my initial research took me to Bunis where a battery version was described. However, closer investigation revealed an 80 rectifier tube hidden at the bottom of the radio, indicating that this was the more interesting AC version (also named the "Abbey Junior").

This radio is interesting for two reasons. First, it represents the beginning of "all-electric" radio receivers using an AC rectifier, and studying its schematic gives the collector a general idea of the circuitry which guided their introduction in 1927. Second, it marks the transition from the early box-like character of radios to those designed for a more aesthetic look, with an emphasis on cabinet design rather than technical specifications. This can be seen in how the Abbey was advertised:

"A new conception in radio cabinets.

Patterned after an Old World jewel case, the Abbey departs completely from the common type of table radio cabinets. Here is once instance in which a cabinet has been designed first - in which a receiver has been built to fit inside. In this way, no sacrifice in beauty has been made to satisfy mechanical requirements. The Abbey is therefore an example of perfect proportioning. Finished in rich, deep antique walnut, a complete absence of metal distinguishes the outside of the cabinet. Its control knobs are of wood, the deep carved rosette around the control knob leading to a final touch to the beautifully beveled front. The dial is



translucent, illuminated from the inside and is lighted automatically while the set is in use. Designed under the personal direction of Mr. Noel S. Dunbar. Specifications: 13" high, 19" wide, 13" deep."

The Splitdorf Radio Corporation has an interesting history. Its roots originate with Henry Splitdorf who was an active patentee of telegraphic apparatus after

1865. By 1895, Charles F. Splitdorf was advertising induction coils and electromagnets, and within a few years, was specializing in spark coils and ignition coils. His business was re-incorporated as the Splitdorf Electric Co. in 1912. In 1924, it was absorbed by the Bethlehem Spark Plug Co., which changed its name shortly afterwards to the Splitdorf-Bethlehem Electrical Co.

Splitdorf radios were produced under the Splitdorf Electrical Co. name in plants in Newark, New Jersey (392 High Street) and Toronto, Canada. In June 1926, Splitdorf was sued by RCA for infringement of the Alexanderson TRF patent. This episode would profoundly affect the future course of radio development. If infringement could be shown, every radio manufacturer who was using tuned, cascaded, vacuum tube amplifier circuits for selective tuning would have to pay license fees. As was customary in such cases and unfortunate for Splitdorf, the suit was first brought against this relatively small manufacturer.

Following a negotiated settlement with RCA but with growing losses, Splitdorf began an association with the Edison Company, at first manufacturing radios under the Edison name. But by January 1929, the two companies had practically merged, the acquisition being a route to quickly providing Edison with radio licenses. (The AC Splitdorf Abbey Jr. and battery-operated Abbey may be found under "Edison" in Riders). Radio production was moved to Edison's West Orange plant with the introduction of models R1, R2 and C2. These were essentially Splitdorf designs, placed in production to ex-

pedite getting radios with the Edison name into public hands.

In 1931, a superheterodyne was designed and prototypes made, but due to the declining economy and Edison's avowed intent to save the company and the jobs of its employees, a decision was made to discontinue the radio division. Splitdorf (or Edison-Splitdorf after September, 1932) was eventually combined with the other Edison companies.

The Abbey is based on three stages of tuned RF amplification, a non-regenerative detector and two stages of audio amplification. A half-wave rectifier supplies plate and grid power and filament current is supplied by special windings on the plate transformer. The radio has an interesting two-deck, copper plate construction feature. A four-gang tuning capacitor and the six tube sockets of the receiver circuit are mounted above the top deck of the chassis and all power equipment, including the rectifier tube, are mounted below the lower deck. This was used in an attempt to shield the receiver circuits from AC interference. In addition, a black, nickel-plated cover plate with an elaborate silver filigree design caps the top plate.

The tube complement is as follows:

RF Amplifiers (V1, V2, V3): 226

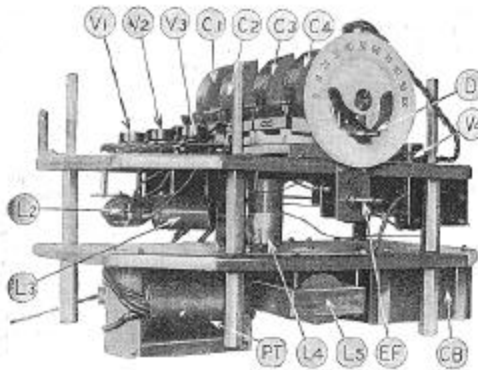
Detector (V4): 227

First stage audio (V5): 226

Power audio (V6): 171

Power rectifier (V7): 80

Direct coupling in the antenna circuit is used to provide maximum sensitivity and a



The Abbey's elaborate tube cover plate and two-deck construction.

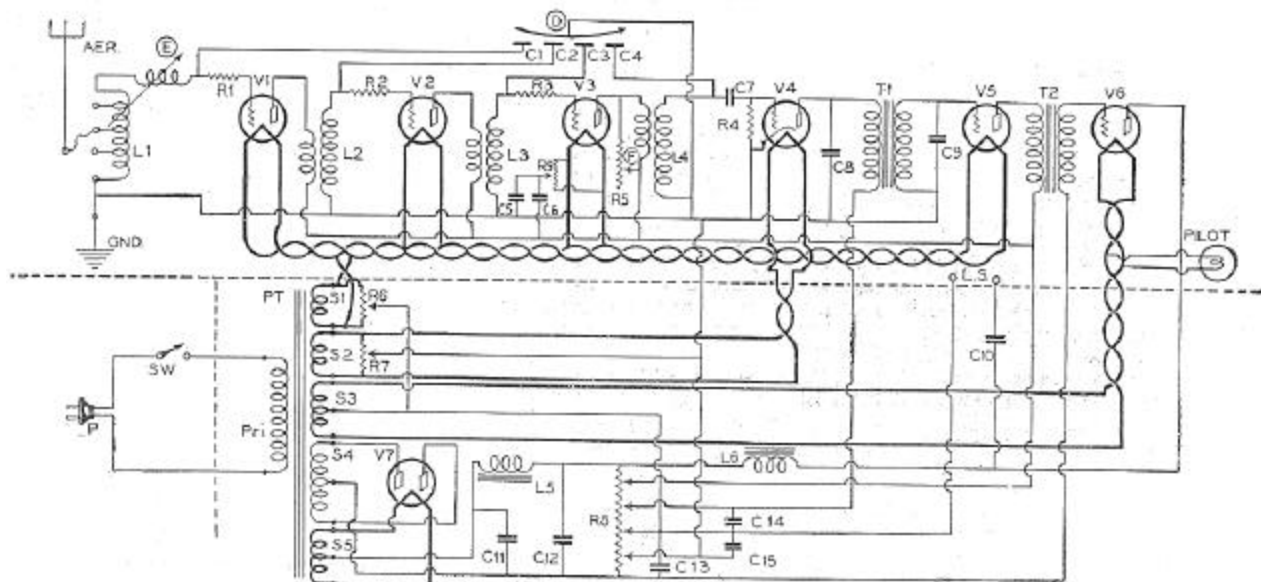
small variometer compensates for changes in circuit capacity from the use of different antennas. L1, the antenna coil, is equipped with three binding posts for finding the best combination of selectivity

and sensitivity.

Single-dial tuning is accomplished by use of a quadruple variable capacitor unit (C1, C2, C3 and C4) and coils L1, L2, L3 and L4. The four capacitor sections are connected in the grid circuits of the 3 RF stages and the detector. Oscillation in the RF stages is prevented by 600-ohm resistors R1, R2 and R3, which are connected in series with the grids of the tubes. Volume is also controlled in the RF circuits with variable resistor R5 connected in shunt with the primary of RF transformer L4. This type of connection reduces distortion by preventing the detector from being overloaded by powerful local stations.

In the detector circuit, "grid rectification" is provided by grid capacitor C7. However, grid leak resistor R4 is connected between the grid and the cathode of V4 rather than in shunt with C7, increasing the power-handling capacity of the circuit. The grid capacitor has a value of .00025 ufd and the grid leak resistor has a value of 2 megohms.

The AF amplifier is transformer-coupled. In the first stage, a small fixed capacitor (C9) is connected across the secondary winding of transformer T1 to improve frequency response. Capacitor C8, connected in the primary circuit of the



transformer, bypasses RF signals. Transformer T2 in the second audio stage is connected in the usual manner. In the output circuit of the last stage, a filter consisting of choke L6 and a 1 ufd capacitor (C10) protects the speaker windings from the heavy plate current of the last amplifier tube.

As can be noted on the schematic, a dotted line separates the power circuit from the receiver circuit. The windings of power transformer PT provide required AC voltages as follows: S1 supplies 1.5 volts for the 226 tubes; S2 provides 2.5 volts for the 227 detector; S3 delivers 5 volts for the dial light and 171 tube; S4 delivers plate power to the 80 rectifier (V7) and S5 heats its filament.

The filter circuit of the power circuit consists of a single choke (L5) and two capacitors, 4 ufd C11 and 6 ufd C12. The voltage divider R8 is a wire-wound fixed resistor with a total value of 13,200 ohms with taps at 650, 800, 5,300 and 10,700 ohms. Connected as shown, it provides the following positive potentials for the plate circuits: 180 volts, 110 volts, and 45 volts, as well as negative potentials of 6 volts for the 226 tubes and 40 volts for the 171 tubes.

Five 1 ufd bypass capacitors are used in the plate supply circuit; C5, C6, C13, C14 and C15. Two low-resistance potentiometers (R6 and R7) and one center-tapped fixed resistor (R9) are used in the filament-supply circuits. These resistors are used to obtain a point of zero potential and reduce the effect of AC hum.

Based on an initial inspection, it appears that the radio was electronically restored. However, I did find a wire disconnected from one of the tubes. Since the



A 1921 Splitdorf crystal set.



The Splitdorf-Bethlehem Electrical Company was a venture between Bethlehem Steel and the Splitdorf Electrical Company. Bethlehem Steel was run by Charles Schwab (Senior) at the time this certificate was issued; the certificate was issued to Edward H. Schwab.

power transformer is very difficult to find, I plan to take a few vital measurements before firing up this beauty.



Besides radios, the Splitdorf Company also manufactured magnetos, lighting systems, spark plugs (above) and at least 12 motorcycle generators at the Newark plant.

THE \$10,000 RADIO AND FRANKE AUCTION

In mid-May, Phil Vourtsis, Steve Goulart and Ray Chase picked up a sizable radio collection from Victoria Franke of Teaneck, N.J. There were some 60 items, including many radios from the 1920s. The collection is now at the cottage at Camp Evans and the owner has agreed to have the club auction it for 50 percent of the proceeds. The auction has been tentatively planned for August, with the possibility that it will be carried over to September to accommodate all the items. The full list is published in this month's Broadcaster to help you plan accordingly and the actual items going on the block will be published a month before the auction. If space allows, photos of some of the more interesting radios will also be included.

Many members have been following a very humorous aspect of this collection on the Reflector and the club's web site (www.njarc.org); its been headlined as "The \$10,000 Radio." (Dave Sica has posted a streaming video of an interview on the subject with Phil Vourtsis that appeared on CBS news.) For those members who do not have access to either of these resources, here's how the story was carried in the Asbury Park Press for June 13th (by Carol Gorga Williams of the Coastal Monmouth Bureau):

Phil Vourtsis of the New Jersey An-

tique Radio Club says it is not unusual to find a little something left behind in an old radio, but usually it's a dead rodent curled up in an old nest. But, said the Manalapan resident, on May 24, tucked under the lid of a donated old Crawford three-dialer from the 1920s, fellow club member Ray Chase of Plainfield found \$10,000. The money was mostly 20s and 50s.

Vourtsis said three club members had driven to the female donor's house to pick up her brother's collection of antique radios, which the club was going to auction off for her. The club maintains a museum and headquarters at the InfoAge science/history learning center at 2201 Marconi Road.

The donor's brother, who had recently died, was known for keeping money around the house. But he apparently stopped keeping money inside a dresser drawer after a robbery, Chase said. "She said it didn't surprise her too awfully much," Chase said about the discovery of the money, which he returned the next day to the woman, whom the club would not identify.

All three members who worked with the collection that day held the envelope just to feel what it was like to hold that much cash, Vourtsis said. "Great," said Chase when asked how it felt.

- ADF tuning dial
- Ambassador receiver
- American Bosch 515 receiver
- Arc 5, T21 transmitter
- Arc 5, T18 transmitter
- AK 46 receiver
- AK 37 receiver (3)
- AK 35 receiver (2)
- AK 30 receiver
- AK 20 receiver (4)
- AK 40 receiver (2)
- AK model M speaker
- AK model F speaker
- AK model E speaker
- BC 625A transmitter
- Beede tube and set tester
- Berg 2-dialer receiver (peanut tubes)
- Crawford 3-dialer receiver
- Crosley model 1121 Trirdyn receiver
- Crosley model 51 receiver
- David Grimes "Baby Grand" Simplex receiver; no tubes
- Day Fan OEM7 type 5042 receiver
- Delta work light
- Edison cylinder phonograph
- Edison cylinders (3)
- Emerson CT275 portable; Rhein RT on

- front
- Emerson 558 receiver
- Freed Eisemann NR-6 receiver
- Freshman Masterpiece A70676
- Freshman Masterpiece power supply
- GE 826 receiver
- GE gun action trigger
- GE P710A transistor radio
- Grebe Synchrophase receiver (WSRN)
- Halicrafters S-28 receiver
- Heraldyne 2-dialer receiver (no tubes)
- Hickok tube tester (WE)
- Hickok 532 tube tester
- Homebrew crystal set
- Homebrew 1-dialer receiver
- Homebrew 2-dialer receiver (4)
- Homebrew 3-dialer receiver (2)
- Homebrew VOM
- Kellog 22409 power supply
- King Buffalo 3-dialer, model 61
- Kolster TRF receiver, model 6D
- Lot, globe tubes
- Lot, headsets/variometers
- Majestic model 50 receiver
- Marlodyne 3-dialer receiver (Asbury Park)
- Me model 26 VTVM
- Military model DAV2 transceiver
- Military (Canadian) model 1954 rec/xmitr
- Military R174 (new, in box)
- Mohawk model 1925 receiver (hacked up)
- Motorola 67L11 portable
- Motorola 78 rpm phonograph
- Music Master model 100 receiver
- Music Master speaker
- Peerless speaker
- Philco model 71 cathedral
- Philco model 42-853 portable
- Philco model 513 (metal, painted)
- Radiola 100 speaker
- Radiola 18 receiver (2, one with hood)
- Radiola III
- RCA windup Victrola (2)
- RCA model W091B scope
- Remler variometer
- Silvertone model 1915 chassis
- Simpson VOM
- Skyrover model P71E cathedral
- Stewart Warner model 300 receiver
- Stewart Warner model 13-68 receiver
- Trimm speaker
- Vibraplex key
- Wesco radio/phonograph
- WE 37F relay tester
- Western Union signal set (in original box)
- Westinghouse Aeriola Sr receiver
- Weston 519 radio tester
- Zenith 5G500 portable
- Zenith R814771 receiver (2)
- Zenith portable (sailboat)

- Zenith G503Y portable
- Zenith 6G601D receiver
- Zenith 6G005Yt Transoceanic
- Zenith B600 Transoceanic
- Zenith H500 Transoceanic
- Model BC312 receiver

JUNE MEETING SNAPSHOTS



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.

FOR SALE

Check out NJARC's capacitor program for those most commonly needed replacements. Contact John Ruccolo at any club meeting or call him at home (609)-426-4568 to find out what's available. All proceeds go to the club.

The NJARC tube program offers clean, tested, boxed tubes at very reasonable prices with availability at any club meeting (no dealers, please...not for resale). Proceeds go to the club. Of course, donations of radio-type tubes in any condition are welcome. See Gary D'Amico at the next meeting.

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.

Howard Sams volumes 1 thru 674 inclusive. All volumes from 1 thru 670 are in Howard Sams 3-ring hardback black binders — a total of 67 binders of 10 volumes per binder. All for \$99, local pickup only.
John Okolowicz, Ambler PA 19002.
Phone 215-542-1597 or email: john@grillecloth.com

WANTED

2006 DUES

Pushbutton assembly for a Stromberg Calson model 340 (1939). Nick Senker, 908-874-3611, n.senker@worldnet.att.net.

YOUR WANT AD HERE!

**NEW JERSEY ANTIQUE RADIO CLUB
SUMMER SWAP MEET**

**InfoAge Science-History Center - 2201 Marconi Road, Wall, New Jersey
SATURDAY, JULY 29th**

8:00 AM to 1:00 PM (or later) - Open to the Public - Vendor Set-up at 7:00 AM

A great old fashioned tailgate swap meet at what was once the 1914 Marconi Belmar Wireless station. Bring your own table, food and radios and relax in the picnic-like setting of this historic site. Take a tour of the Marconi "hotel" where the ghosts of the former age of wireless still roam the halls. Visit NJARC's Broadcaster's Hall of Fame radio exhibition at a cottage that once housed the station's chief engineer. Visit the site of Project Diana where its antenna was the first to capture radar signals bounced off the moon. And much, much more...

A single space is \$20 for members and \$25 for non-members. Additional reserved spaces are \$15 (\$20 non-members). There is a \$5 club donation entrance fee for buyers. For directions, visit www.infoage.org, our club website at www.njarc.org or "mapquest" 2201 Marconi Road.

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