

The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

January 2006

Volume 12 Issue 1



MEETING/ ACTIVITY NOTES

Reported by Marv Beeferman

Happy New Year! 2005, under the leadership of President Phil Vourtsis and your club officers, was another banner year for the New Jersey Antique Radio Club. Here are a few of the highlights:

- We ended the year with close to 220 members.
- The *Jersey Broadcaster* kept members informed, on a monthly basis, of upcoming activities and local radio events with a few restoration, technical and historical comments thrown in for good measure.
- The club's web page, with Dave Sica at the helm and supported by Dave Snellman, continues to grow as a valuable source of information and club events.
- The NJARC Reflector was always there to quickly canvass the membership for their input and answers to technical questions.
- InfoAge and the National Broadcaster's Hall of fame have become a reality.
- The club sponsored a broadcast band DX contest and homebrew radio receiver contest.
- Members were treated to lectures and demonstrations on such diverse topics as a history of the 45 RPM record and phono, an Armstrong commemorative broadcast and the development of record pressing, hi-fi and stereo.
- The club furnished the IEEE History Center with a full year radio exhibit and, in turn, obtained a very important piece of radio history - the Washington Receiver. We also supported the War of the Worlds recreation at the Sarnoff Library.
- Three repair clinics were hosted at the



MEETING NOTICE

The next meeting of the New Jersey Antique Radio Club will take place on Friday, January 13th, at the David Sarnoff Library in Princeton, NJ. Contact President Phil Vourtsis (732-446-2427) for directions. Our January meeting will include a "Members Only Auction" with all details included in this month's issue. This meeting will also provide the opportunity to save postage and follow-up requests by paying dues for 2006. A \$20 check made out to NJARC or exact cash would be appreciated. Honorary members (with an "H" on your mailing label) are not required to pay dues.

Sarnoff Library.

- The club sponsored swapmeets in March, July and October, including a tailgate at InfoAge.



Broadcaster editor Marv Beeferman responds to complaints of empty stomachs at our holiday party at the Sarnoff Library with the admonition "Let them eat cake!"

- Mini-auctions, member-only auctions and show-and-tell sessions kept our meeting attendance strong throughout the year. Our meetings averaged greater than 1/4 of the membership - a statistic to be proud of!
- Our tube, capacitor and resistor programs maintained their bargain prices.
- Our holiday party was a great success, attracting over 80 members.

I'm sure that many more items can be added to the list, since each person seems to find their own individualized benefit from being a member of the NJARC. But what is probably a common thread for all of us is the fellowship of sharing a mutual interest with good friends. Is it worth \$20 (\$25 for joint membership)? If you think it is, then please renew at the next meeting or take a few minutes to send this year's dues (make out checks to NJARC) to our membership secretary at the address below. We've got a great 2006 planned for you!

**MARSHA SIMKIN
33 LAKELAND DRIVE
BARNEGAT, NJ 08005**

NOTE: Your mailing label reflects your dues expiration date (i.e., "1/05"). An "H" designates an honorary member with no payment due.

Our holiday party provided another enjoyable evening with major credit going to Marsha and Jerry Simkin. Thanks also to Sarnoff Library Director Alex Magoun for his generosity in allowing use of the auditorium. Additional contributors included Marv Beeferman, Daniela & Sal Brisindi, Mark Bizuga, Edith & Ray Chase, Matt & Mike Cornell, John Dilks, Jerry Dowgin, Owen Gerboth, Joan & Randy Gill, Aaron & Max Heskes, Aaron & Janet Hunter, Dick Hurff, Florence &

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.

PRESIDENT:

Phil Vourtsis
13 Cornell Place
Manalapan, N.J. 07726
(732)-446-2427

VICE PRESIDENT:

Richard Lee
154 Hudson Terrace
Piermont, N.Y. 10968-1014
(845)-359-3809

SECRETARY/EDITOR:

Marv Beeferman
2265 Emerald Park Drive
Forked River, N.J. 08731
(609)-693-9430

TREASURER:

Sal Brisindi
203 Cannon Road
Freehold, N.J. 07728
(732)-308-1748

SERGEANT-AT-ARMS:

Dave Snellman
Box 5113
New Britain, PA 18091
(215)-345-4248

TRUSTEES:

Ray Chase
Gary D'Amico (732)-271-0421
John Ruccolo (609)-426-4568

TECHNICAL COORDINATOR:

Al Klase
22 Cherryville-Stanton Road
Flemington, N.J. 08822
(908)-782-4829

TUBE PROGRAM:

Gary D'Amico
84 Noble Street
South Bound Brook, N.J. 08880
(732)-271-0421

SCHEMATIC PROGRAM:

Aaron Hunter
23 Lenape Trail
Southampton, N.J. 08088
(609)-267-3065

CAPACITOR PROGRAM:

John Ruccolo
335 Butcher Rd.
Hightstown, N.J. 08520
(609)-426-4568

WEB COORDINATOR:

Dave Sica
(732)-382-0618
<http://www.njarc.org>

MEMBERSHIP SECRETARY:

Marsha Simkin
33 Lakeland Drive
Barnegat, N.J. 08005
(609)-660-8160

Harry Klancer, Lynn & Joe Kajewski, John Ruccolo, Dave Sica, Dave Snellman, John Sr & John Jr Tyminski, Phil Vourtsis, John Winans and Rick Weingarten (hope we got everyone!).

Ray Chase and Joe Bentrovato have recently picked up a vintage 1960, ham "moon bounce" rig from Basking Ridge and delivered it to InfoAge. The 1296 Mhz rig was donated by Mark Morrison who saved it from his father's house (SK W2CXY) after his father died. Walter Morrison was a very active ham in the over 50 MHz area and blazed many trails in meteor scatter, passive balloon work and moon bounce activity. The moon bounce rig will be on display at the Diana site and eventually at InfoAge's main site. Mark also donated some radios and radio parts and will donate more when we get better established.

By the time you receive this newsletter, InfoAge will have celebrated the 60th anniversary commemoration of Project Diana on January 7th, the US Army radar moon bounce. As part of the event, Ray Chase will be exhibiting the ham rig described above. OMARC will be taking the lead on this event but the NJARC will be included to provide more public exposure. We'll be exhibiting some playing radios, battery sets, displays, etc.

Ray Chase recently received the following "thank you" from the IEEE History Center where the club is sponsoring a display for the next year:

"On behalf of the IEEE History Center and the staff at the IEEE Operations Center, I wish to extend a warm thank you for the "Lunch and Learn" you conducted on 27 October 2005. It was very informative, and the staff truly appreciated the class. The way you faced the challenge of condensing the amount of information on such a vast topic was wonderful. The staff now has more appreciation for the exhibit that was provided by the New Jersey Antique Radio Club.

Please extend my appreciation to the members of the Club for being so generous with the loans of the antique radios, and I know Mary Ann Hoffmann is particularly grateful for all your help and support."

David Sarnoff Library Director Alex Magoun has just published an article in the December issue of New Jersey TechNews

describing five Princeton inventions that changed the world. They were all developed by the David Sarnoff Research Center. Information for downloading a PDF copy is available at www.njtc.org/publications/reprint.asp - it's a 16MB file that includes a color picture of Alex and the CT100 TV. A hardcopy issue might be available from any local member company of the NJ Technology Council (1,200 in the state).

With the holidays over, we'll be re-opening the Broadcaster's Hall of Fame cottage on Sunday afternoons from 1 pm to 4 pm. The schedule is slowly being filled, but we could use some volunteers further out in 2006. We already have volunteers for January 8, 15, 22, 29 and February 5, 19, and 26. With over 100 local members, the donation of a few hours on just one Sunday per member should complete the club's commitment for the rest of the year. Why not take the family to keep you company and then treat them to a tour of the local sites and eateries? To sign up, contact Harry Klancer at klancer2@comcast.net. Harry is doing a great job in coordinating this effort and will be providing improved signs and handouts to make your stay a breeze.

Some really good links showed up on the NJARC reflector this month and they come highly recommended:

Refinishing: <http://radioatticarchives.com/features/stenberg/refinish1.htm>

Restoration: <http://antiqueradio.org/restoration.htm>

A Freed-Eisemann FE-15 restoration with help from NJARC members: <http://home.att.net/~a.schapira/FE15/index.html>

A history of early broadcasting in Newark: <http://www.oldnewark.com/memories/broadcast/bodianradio.htm>

Upcoming Events:

01/13/2006: Members-only auction.

01/20-29/2006: NJARC Broadcast Band DX Contest

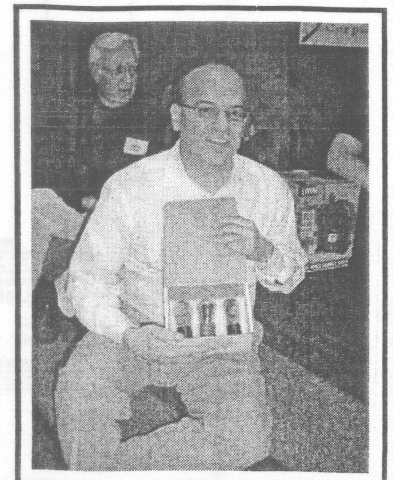
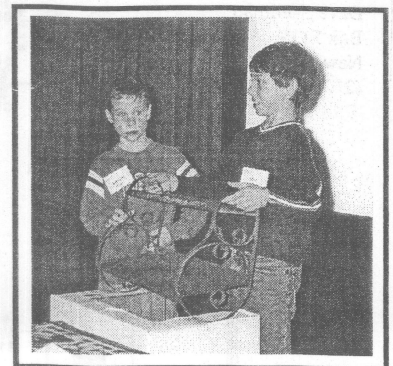
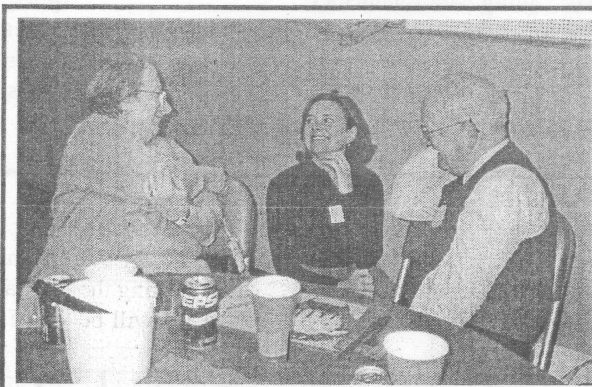
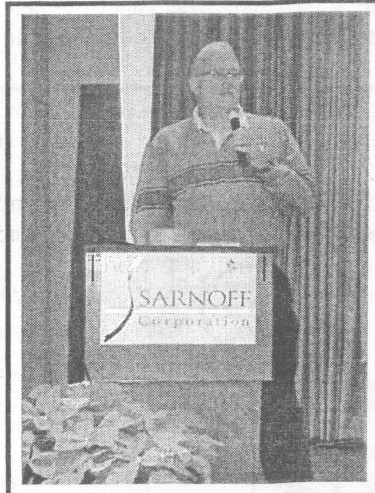
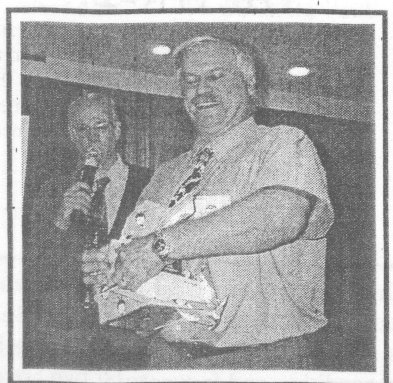
01/28/2006: Repair clinic at Sarnoff Library.

02/10/2006: NJARC Homebrew AM Receiver Contest judging.

03/18/2006: NJARC Spring Swapmeet, Parsippany NJ

04/01/2006: InfoAge dedication ceremony.

HOLIDAY PARTY



THE PPN-2: AN INTERESTING WWII FIND

By Ray Chase

InfoAge recently received a donation of three WWII vintage AN/PPN-2 Beacon sets. These rare pieces all appear to be in new condition and fortunately two are complete in canvas bags with documentation. So what's a PPN-2 and what's so great about it? PPN-2 is a small electronic beacon, part of the Rebecca-Eureka system, also called Pathfinder that was taken into combat by the advance guard paratroopers and set up in enemy territory to provide aircraft guidance to the following waves of main attack

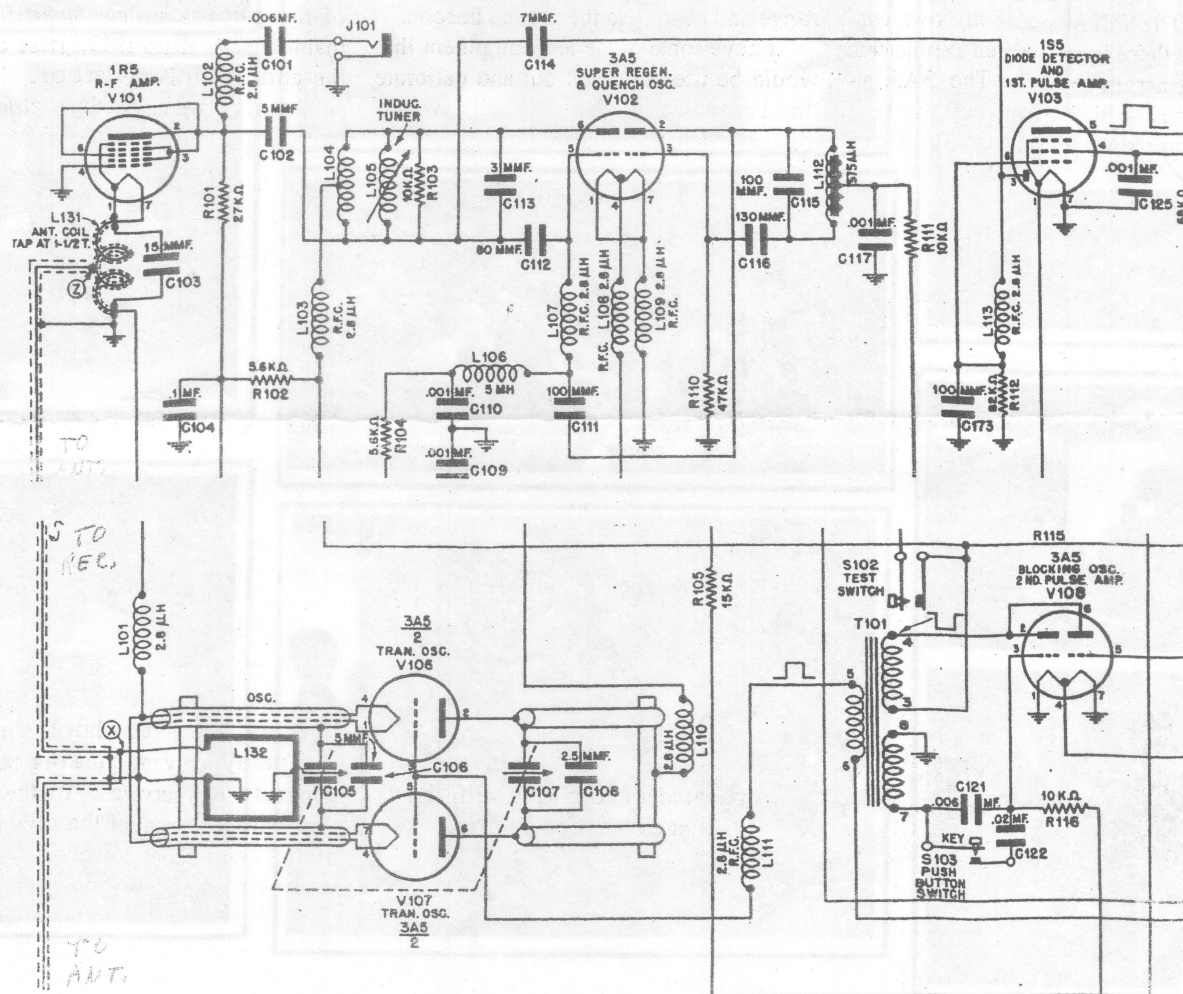
forces. It was also used to guide clandestine resupply parachute drops to agents already on spy missions. The PPN-2 was probably designed at Camp Evans and played a major roll in the D-day invasion of Europe.

The system operates over the frequency range of 214 to 234 Mhz. It responds with reply pulses when interrogated by airborne equipment that guide the aircraft to the spot where the beacon is set up. To allow it to be carried into combat and set up by a single paratrooper, it had to be light, compact and simple to use and this involved the creation of some unusual and creative circuit designs. Manual TM 11-1145, that came with the set, gives a complete description of its operation along with schematics.

The PPN-2 electronics package size is about 13" x 10" x 5" or less than half a cubic foot and weighs 18 pounds. It has nine miniature tubes and two synchronous

vibrators to step up the battery voltage. The total package, including wet storage battery, antenna and cables in a padded canvas carrying bag, weighs 33 pounds. Output transmitter RF pulse power is at least 8 watts. The unit in combat would come equipped with a self-contained destructor explosive charge. The tech manual says: "To operate destructor, unscrew the red cap and jerk the wire attached to it, Then Run!" Obviously this would be done if capture or abandonment were imminent. The devices at InfoAge are minus their explosive charges.

The receiver portion of the Beacon contains only three tubes in a superregenerative circuit. Superregenerative circuits do not show up very often as they are quirky and not prone to good fidelity or selective tuning, but they do provide a lot of gain with few tubes. Of all of Major Armstrong's inventions, the superregenerative patent turned out to be one of the



least useful, yet David Sarnoff paid more for it than any other of the Armstrong patents that RCA acquired. Armstrong received close to half a million for it in 1922 when Sarnoff became concerned that it might overshadow the Armstrong super-heterodyne patent that he recently acquired through Westinghouse. Shown is a portion of the schematic with the three basic receiver tubes. One is a dual triode, one half of which functions as the superregenerative amplifier, while the other half functions as the quench oscillator. Since a common antenna is used for receiving and transmitting, a RF amplifier is used both to isolate the receiver from the transmitted pulse and to also keep down radiation from the receiver which is always a problem with regenerative circuits. There is a separate AGC circuit as well.

The transmitter circuit is also unique consisting of a pair of 3A5 high frequency dual triodes connected in a push-pull configuration. Only one half of each of the tubes is connected; one could then ask why not use only one tube or use both sections of each tube? The following is my own conjecture, since there is no written explanation for this odd arrangement. The 3A5, although listed as a high frequency triode, is probably being pushed beyond its design limits at 230 Mhz. Remember, this is the early 1940's and 200 Mhz and higher was pretty much unknown territory with few available tubes that were designed to operate in this area. If the two triodes in one tube were paralleled, the combined inter-electrode capacity would probably be too high for operation at this frequency. If one tube were used, the coupling between the elements and leads in one envelope would also probably preclude reliable push-pull function. Hence, the use of two tubes would yield the lowest individual interelectrode capacitance and the coupling between the tubes could be best minimized. One

positive aspect of this scheme is that the tubes are wired such that if the transmitter power gets weak because of tube emission falling off, the two tubes can be simply interchanged and the previously unused section of each tube is now in the circuit. Hence, twice the tube life... ingenious!

A check of tube specs indicates that this tube was designed for 90 volts plate voltage, i.e. what would normally be found in portable battery radios of the period. In the PPN-2, the plate voltage is 470 volts! Now this is pulse service, so the tubes are cut-off except when they are responding to an interrogation, but this is still pretty severe stress. Remember, these two miniature tubes (actually only one full tube) are producing 8 watts peak power. Fortunately, long service life was not a criterion. The transmitter circuit is shown in the accompanying schematic.

The airborne equipment that would be used with this beacon would be the AN/APN-2 that could observe the return signals on a display scope and enable the interrogating aircraft to determine the range and bearing to the ground beacon.

I have some of the test equipment that would be used to check out and calibrate this beacon so together they will eventually make a nice display at InfoAge.

Some of the electronic equipment developed and produced during WWII was warmed over brute force designs of the mid 1930's while many were innovative and unique inventions based on the best minds working in select laboratories. The PPN-2 is in the latter class.

References:

1. "Radar Beacons," Vol. 3, MIT Radiation Lab Series
2. "Empire Of The Air", Tom Lewis
3. <pages.cthome.net/fwc>, F. W. Chesson, Waterbury, CT

CAMPEVANS AND THE SCR-271

By Fred Carl

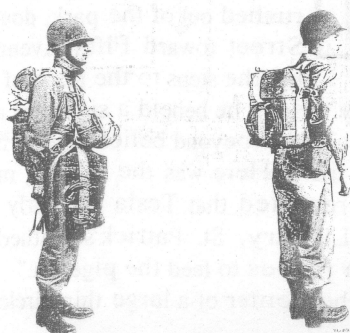
During WWII, Camp Evans was the home of Army radar development. One would expect that all work was done inside the security fence. Surprisingly, the north edge of the parking lot, now a favorite gathering spot for local utility workers on coffee break and dog walkers, once was the location for at least three giant radar towers and five to six buildings, all outside the security fence.

Photos in a now declassified technical manual show this section of Camp Evans some 63 years ago. The manual was provided by NJARC member Ray Chase, a collector and expert in WWII radar equipment. For security reasons, the location of the photos was not specified but the manual was dated 1942, just a year after the attack on Pearl Harbor. The towers were early warning radars that could detect enemy planes up to 150 miles away. They had obscure names like SCR-271-D (Signal Corps Radio number 271, Model D). A model D and a model A were located near the intersection of Monmouth Blvd. and Watson Road. They were just a few feet from a massive concrete guy wire anchor remaining from one of the six 400 foot tall 1912 Marconi wireless towers. These towers ran from Marconi Road along Monmouth Blvd. to near Hurley Pond Road.

Close examination of the photos reveals that the buildings are painted with a camouflage pattern. At this point in the war, there was a concern that enemy planes would target the Wall Township radar site for bombing. A sign on the SCR-271-D reads "SCRL I&M School." The purpose of the school is unknown.

Today, only the building constructed of concrete has survived. In the grass on either side, one can see the concrete footings of the old radar towers. All the other wood buildings are long gone.

Other SCR-271 radar units once protected major U.S. cities and Army bases around the world. The first ones were put in service to protect both ends of the

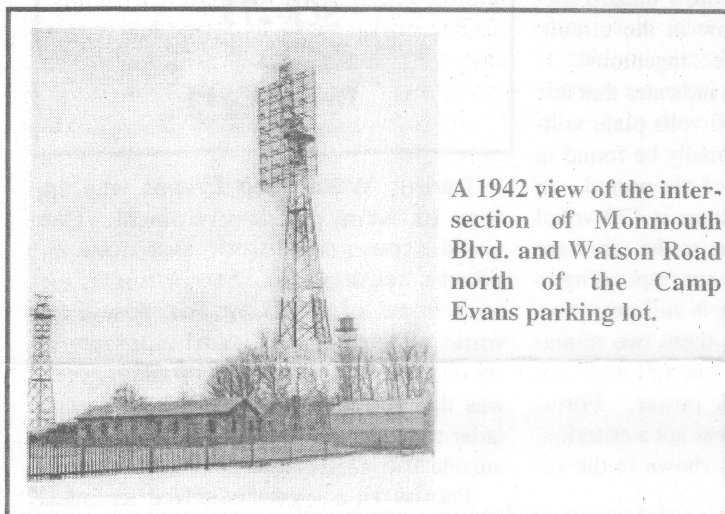


A paratrooper outfitted with the beacon ready for a jump.

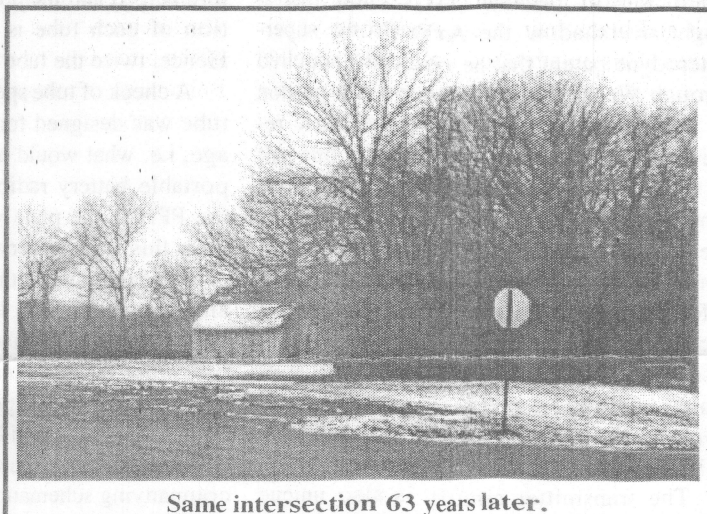
Panama Canal. Throughout the war, Camp Evans personnel were responsible for upgrading the SCR-217 radar around the world with advanced components and making sure that they were hard to jam by enemy equipment.

Although the radar towers were outside of the security fence, they were well protected. Armed military police with guard dogs patrolled the grounds and Monmouth Blvd. was closed to civilian traffic north of Taft Street.

Thanks to Ray Chase, a concrete building of unknown origin takes its place in WWII history.



A 1942 view of the intersection of Monmouth Blvd. and Watson Road north of the Camp Evans parking lot.



Same intersection 63 years later.

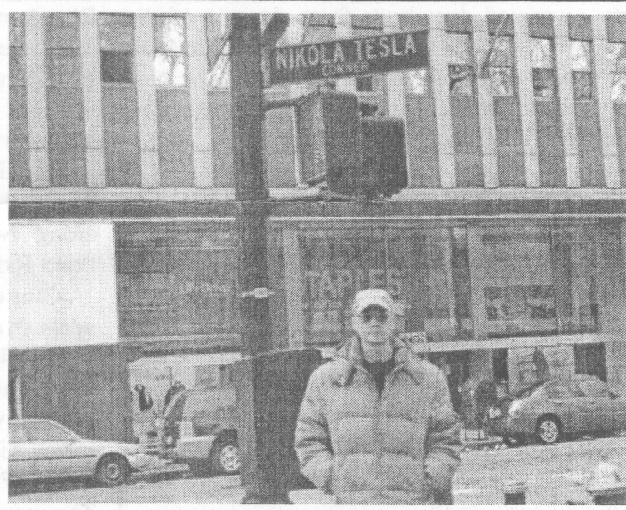
THE PRODIGAL GENIUS OF BRYANT PARK

Bryant Park is located between 5th and 6th Avenues and 40th and 42nd Streets and occupies the site of NYC's former foremost water source, the Cronton Distributing Reservoir. When the NY Public Library rose in 1911, Bryant Park stood atop its vast reservoirs of books. Bryant Park also contains a large concentration of statues and plaques honoring such luminaries as William Cullen Bryant, Gertrude Stein, William Earl Dodge, Jose Bonifacio De Andrada Silva, Johann Wolfgang Von Goethe and Wendell Wilkie. But the only tribute to an individual who many considered a giant of his time is a street sign. NJARC VP Richard Lee was on a recent trip to the new skating rink in the park when his daughter captured the moment.

In his later years, Nikola Tesla was an integral part of the ambience of Bryant Park, regularly feeding the pigeons that gathered there. Perhaps one of the most colorful descriptions of this passion is described in the book *Prodigal Genius* (Ives

Washburn, NY 1944/reprinted in the U.S. in 1973) where Bernard A. Behrend, Vice President of the Institute of Electrical Engineers, tracks down the missing recipient of the 1917 Edison Medal:

"None but Behrend knew of Tesla's aversion to accepting the Edison Medal, yet even he had not the slightest knowledge of what had become of the famous inventor.



He recalled noting the shadowy walks of Bryant Park opposite the Club as he and Tesla stepped from the taxicab earlier in the evening, and he wondered if Tesla had retreated there for some quiet meditation before the ceremony. He hurried out of the Club."

"As Behrend stepped into Bryant Park, the

last faint glimmerings of dusk were visible in the high sky; but in the park the shades of night were gathering and here and there could be heard the faint twitterings of birds. The twittering of the birds brought, like a flash, to Behrend's mind the scene he had observed in Tesla's apartment at the Hotel St. Regis. In the room which Tesla had arranged as a reading room and office was a roll-top desk, and on top of this were four neat circular baskets, in two of which pigeons were nestled. Before they left the apartment Tesla went to the window, which was kept open at all times, whistled softly, and two more pigeons quickly flew into the room. Just before leaving for the dinner Tesla fed the pigeons, and having done so slipped a paper bag filled with something into his pocket. The possible significance of this latter act did not occur to Behrend until he heard the twittering of the birds in the park."

"With all possible speed Behrend rushed out of the park, down 40th Street toward Fifth Avenue, and up the steps to the plaza of the Library. Here he beheld a sight that amazed him almost beyond belief in what his eyes told him. Here was the missing man. He had recalled that Tesla regularly visited the Library, St. Patrick's Cathedral, or other places to feed the pigeons."

"In the center of a large thin circle of ob-

servers stood the imposing figure of Tesla, wearing a crown of two pigeons on his head, his shoulders and arms festooned with a dozen more, their white or pale-blue bodies making strong contrast with his black suit and black hair, even in the dusk. On either of his outstretched hands was another bird, while seemingly hundreds more made a living carpet on the ground in front of him, hopping about and pecking at the bird seed he had been scattering."

"It was Behrend's impulse to rush in, shoo the birds away and, seizing the missing man, rush him back to the auditorium. Something caused him to halt. Such an

abrupt action seemed almost sacrilegious. As he hesitated momentarily, Tesla caught sight of him and slowly shifted the position of one hand to raise a warning finger. As he did so, however, he moved slowly toward Behrend; and as he came close, some of the birds flew from Tesla's shoulders to Behrend's. Apparently sensing a disturbing situation, though, all the birds flew to the ground."

"Appealing to Tesla not to let him down, nor to embarrass those who were waiting at the meeting, Behrend prevailed upon the inventor to return to the auditorium. Little did Behrend know how much more the pi-

geons meant to Tesla than did the Edison Medal; and little could anyone have suspected the fantastic secret in Tesla's life, of which the outer manifestation was his faithful feeding of his feathered friends. To Behrend it was just another, and in this case very embarrassing, manifestation of the nonconformity of genius."

"Returning to the auditorium, Behrend explained in a quick aside to the president that Tesla had been temporarily ill, but that his condition was now quite satisfactory. The opening of the meeting had been delayed about twenty minutes."

NJARC Member Auction

As the title implies, these instructions cover auctions to be held by the New Jersey Antique Radio Club for the benefit of club members and the club. Buyers and sellers must be members of the club. The club will charge the seller a 10% commission on the auction sell price (seller's commission) to a maximum of \$10.00 per item sold.

Example: A radio is sold for \$20.00 - the commission is \$2.00. Another item sells for \$125.00 - the commission is \$10.00. The seller pays commissions to the club. Although the club conducts the auction, payment transactions are conducted between the buyer and the seller.

Sellers:

1. Bring your goods early so that prospective buyers will have plenty of time to inspect them.
2. This is a good time to reduce your collection of radios that are duplicates or that you have lost interest in.
3. You may put a reserve price on any item that is a minimum price below which you do not wish to sell the item.
4. Parts and lower value goods should be grouped into box lots; each auction item should be worth at least a \$5.00 opening bid.
5. There is no limit to the number of items you can bring but please be reasonable. The club reserves the right to limit items if the member response is overwhelming. Ten to fifteen items would seem to be a reasonable maximum.
6. You will be provided with a form to list all the items in your lot and to indicate a reserve price if any. Bring your own list of all items in your lot so you can keep track of the sell price and the buyer as the auction proceeds.
7. Bring small bills so that you can make change with buyers. The club Treasurer will assist in making change but he is not part of the buyer/seller transaction.
8. Group your items together in the display area so they are not commingled with other seller's goods.
9. Remain in the area of your goods while they are being auctioned so that questions of reserve amounts can be clarified if necessary.
10. You must stay until the end of the auction so that you can settle up your commission payments to the Treasurer.
11. At the end of the auction you must remove any of your goods that were not sold. Anything left unclaimed will be candidates for the dumpster. Unsold items are not charged commission.
12. Finally, bring some good stuff!!

Buyers:

1. If you intend to bid on any of the items, you must use a numbered bidding card. A sign-up sheet will be provided where you can obtain a bidding card.
2. Inspect the auction items carefully; all goods are sold "as-is, where-is".
3. Search out the seller if you want to discuss the condition of any item before the auction commences. Once under way, there will be no time to discuss the merits of an item.
4. Raise your bid card to get the auctioneer's attention; we cannot rely on eyewinks or nose twitches to signal your intention to bid.
5. The seller may have placed a reserve price on some items below which he does not wish to sell the item. If bidding has stalled below the reserve price, the auctioneer will announce the reserve price and ask the high bidder if he or she is willing to pay the reserve price. If not, the seller will be asked if he or she is willing to reduce the reserve. If not, the item is not sold.
6. Once the item is sold, it is your possession and you are responsible for it. Try to move it to your area so that it does not get mixed with other goods. At the same time, you are responsible to make payment to the seller.
7. Bring plenty of money (smaller bills are nice); you may be able to pick up some bargains or goodies that you've been looking for. (And do not forget to turn in your bidder card before you leave the meeting).

Auction Etiquette

Although an auction can get a little energetic, it can progress quite swiftly and smoothly with the cooperation of everyone. If you do not plan to actively participate, try to keep sideline conversations to a minimum and at a low volume. Respect the bidders, but most of all, have fun!

The 2006 NJARC BCB DX Contest

In the 1920's and 1930's, some radio listeners would compete with each other for the reception of the most distant stations using the same receivers that that we now restore and cherish. We can recapture some of the excitement that the early DXers experienced in our own contest.

Official Contest Rules

THE OBJECT: To use vintage radios receivers to receive broadcast-band signals from the greatest possible distance. Performance will be judged by the total mileage for your ten best loggings during a 24-hour session. You will be competing against competitors using similar receivers.

ELIGIBILITY: The contest is open only to members in good standing of the New Jersey Antique Radio Club.

CONTEST PERIOD: The contest period will be from 12:00 Noon, local time at receiving location, Friday, January 20, 2006 through 12:00 Noon, Sunday, January 29th, 2006.

SESSIONS: Contestants may submit logs for any two 24-consecutive-hour sessions (noon to noon) during the contest period. You may use only one receiver during a session. That means you may not "bird dog" the simple radio with a more complex radio. You may submit logs for two different receivers. They need not be in the same category.

FREQUENCIES: The Broadcast Band, as defined for the contest, will be from 530 to 1600 kilocycles. No stations on the new extended band, 1610 to 1710 kilocycles, will be counted since many early radios did not cover those frequencies.

RECEIVER CATEGORIES:

- A - Crystal radios
- B - Primitive tube receivers (homebrew also) - 1 to 2 tubes plus power supply
- C - 1920's Battery sets (homebrew also) - batteries or modern power supply is OK
- D - Other tube radios sold for home entertainment.
- E - Amateur, commercial, and military tube-type communications receivers.
- F - Transistor radios introduced before 1970.

ANTENNAS: Anything you like.

LOGS: Submit a log for each of your contest sessions (maximum of two). Each log header should include contestant's name, address, phone number, category, and description of receiver and antenna. Please include you listening address if it is different from you mailing address.

Make a log entry for each station you claim to have heard. Stations must be positively identified. (This is being done on the honor system, and is a somewhat variable concept. If you hear Boston weather on what you know is 1030KC, then go ahead and log WBZ. However, just because you heard a signal on 1160KHz doesn't mean you heard KSL in Salt Lake City.) The contest committee reserves the right to disallow what it feels are outrageous claims. Each entry should include time, frequency, call letters, location, and optional comments. Although we're only judging your ten most distant loggings, submit as complete a log as possible. The committee may make special awards for most stations, most interesting log, etc. as it sees fit.

A log sheet has been provided for convenience. You may reproduce it or generate a similar one of your own.

Logs must be postmarked not later than midnight February 6, 2006.

DISTANCES: Distances to stations will be calculated by the committee and will be based on great circle distances from Freehold, New Jersey for listening posts within a 100-mile radius of Freehold. We will calculate mileage for other entries based on actual listening location. In all cases, please indicate your ten best loggings to make our job easier.

Submit logs to: Tom Provost, 19 Ivanhoe Dr., Robbinsville, NJ 08691

Questions: Al Klase - 908-782-4829, Tom Provost - 609-243-2508