The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

July 2014 **Volume 20 Issue 7**

MEETING/ ACTIVITY NOTES

MEETING NOTICE

The next NJARC meeting will take place on Friday, July 11th, 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). This month we'll hold judging for the homebrew equipment contest and basket case restoration contest so please remember to bring in your entries and associated documentation.

Reported by
Marv Beeferman

The ON-LINE Broadcaster

The New Jersey Broadcaster is now on -line. To date, over 120 of your fellow NJARC members have subscribed, saving the club and your editor a significant amount of money and work. Interested? Send your e-mail address to mbeeferman@verizon.net. Be sure to include your full name.

At the June meeting, members enjoyed a talk by Mike Molnar which traced the history and accomplishments of Hazeltine and the Hazeltine Corporation. Mike noted how this New Jersey native began the theoretical study of the vacuum tube before he even possessed one.

Hazeltine's design of the Navy model SE 1420 receiver ("the first receiver designed on paper") introduced such innovations as copper shielded compartments, isolated primary and secondary tuning, grounded dial shafts, etc. But he noticed a problem caused by capacitive coupling in the triode tube and devised a plan to eliminate the problem by feeding back some signal through a reverse coil to cancel the unwanted signal. The solution was not used in the final design but ultimately evolved into the Neutrodyne receiver.

Hazeltine established a long time relationship with Harold Wheeler after discovering that he had been working on the same problem. One of the solutions was a distinctive coil mounting angle of 54.74 degrees which reduced coil coupling to zero. Mike noted that weaknesses in the radio market in 1922 (regenerative sets were difficult to operate, superheterodynes were not ready to leave the lab, etc.) made it ripe for the Neutrodyne. A nice feature was that the same dial settings for a station could be used again to obtain the same station days later.

Mike went on to describe Hazeltine and Wheeler's work on a second generation of Neutrodynes and patent litigation with RCA until screen grid tubes made Neutrodynes obsolete. He also talked about Wheeler's invention of AVC (Automatic Volume Control) in 1925 and his assignment of the discovery's rights to the Hazeltine Corp. without remuneration. (The Philco 95 was the first commercial set to include AVC.)

Mike went on to describe the Hazeltine Corporation in the depression and post war years, closing with the following statement: "Their methods (Hazeltine and Wheeler) as taught by Professor Hazeltine influenced the evolution of electronics from the early days of cut and try design to a modern mathematical and scientific approach."

Mike has also authored the article "Patent Battle - Armstrong v. DeForest" which appears in the 2014 issue of *The Antique Wireless Association Review*. The article follows the battle for the patent on regeneration which spanned parts of three decades. Mike's collection can be viewed at www.electronicfossil.com.

One Sunday, June 8th, member Ray Chase and InfoAge director Fred Carl attended the annual meeting and luncheon of the Veteran Wireless Operators Association at the Don Pepe restaurant in Newark. Fred gave a presentation on the Saving of Camp Evans and was presented with their Historic Preservation Award honoring the restoration and preservation of the Camp Evans site. Ray noted that the ranks of this organization are slowly being depleted with age and a possible future collaboration with this group is being considered.

In May, Ray also presented a program on "Radar at Pearl Harbor" to a luncheon meeting of about 25 members of the Bell Labs Old Timers Group. In the same month, Ray and Al Klase set up four tables of displays of military communications and radar equipment at the Monmouth County Armed Forces Day event in Freehold.

Upcoming Events

July 26th - Tailgate swapmeet at InfoAge
August 8th - Monthly meeting at Princeton's Bowen Hall; Dave Sica talks on microphone museum in Milwaukee
Sept. 12th - Monthly meeting at InfoAge
Sept. 13th - Repair Clinic
Sept. 19-20: Kutztown radio swapmeet
Oct. 10th - Monthly meeting at Princeton's Bowen Hall; Marv Beeferman talk on "Capacitors and More"
Nov. 14th - Monthly meeting at InfoAge; Al Klase talks about the history of SW
Nov. 22nd - Fall Swapmeet in Parsippany
Dec. 6th or 13th (TBD) - Holiday Party

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 $25 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.

GRANTS AND INFOAGE

Membership fees and individual contributions pay only a small portion of the money needed to support such a huge undertaking as InfoAge. However, through the hard work of a few members, grants have been awarded and anticipated that will play an important role in picking up the financial slack. To give you an idea of the nature of some of these grants and what they mean for InfoAge, the following "Partnerships for Progress: Academic Grants and InfoAge" by Beth Ritter-Guth has been reprinted from ***The InfoAge Marconigraph****, the newsletter of InfoAge.*

Luckily, the NJARC has been holding its own at the Radio Technology Museum (RTM). However, this cannot be expected to continue forever. Out of a membership of nearly 200, there must be a few individuals that have some familiarity with the grant process or experience in approaching corporate donors. New Jersey, with its rich history of technology and many related industries still in existence, offers a potentially rewarding source of donations to the RTM and its vision. If you're out there and have the experience, we would definitely appreciate your help in approaching these sources...Ed

Funding museums is never an easy task. Grant partnerships help us to raise the funds we need to impact progressive change. Recently, we have applied for two more grants. The 1776 Historic Preservation grant bid, if funded, will help us restore 75 windows on campus. Another grant through Buckminster Fuller will restore one of the DDUs on campus.

Looking ahead, we have a National Science Foundation (NSF) grant partnership developing between InfoAge, Princeton University, Union County College, and the Ocean-Monmouth Amateur Radio Club. This grant partnership will provide funding to restore the TIROS dish to working order and will provide funding for student scholarships, research assistantships, and access to this technology to underserved school children.

Another NSF partnership is brewing between InfoAge, Rutgers and Brookdale Community College. This will help fund a solar classroom to teach children about the future of solar energy and sustainability.

The National Endowment for the Humanities (NEH) also offers some grants that will help restore the Marconi Hotel and other campus structures. The National Endowment for the Arts (NEA) will help support resident artists. Most importantly, we will be working with the Department of Education in NJ to help create grant bids that support teachers and students in Wall Township.

As we look toward sustainable grant funding partnerships, we are also looking to connect with larger museums for support. We are applying to become a Smithsonian partner and a NASA lending site. All of these activities will help InfoAge reach a wider audience, and will provide the necessary support to sustain our mission.

JUNE REPAIR CLINIC AT INFOAGE

By
Marv Beeferman

If you've never attended any of our repair clinics, you should really try to get to at least one of the three that are scheduled throughout the year. I'm sure you'll find that your first experience will convert you to a "regular." It's all about atmosphere. Working through a tough repair problem on your own can get pretty frustrating, but having the cumulative experience of your fellow NJARC members and access to all manner of test equipment and hard to find parts and materials at your fingertips can be very rewarding and just plain fun. Free morning "radio bagels" and coffee, a $5 pizza lunch and a little good-natured kibitzing are also provided to take the edge off those little lapses in concentration that cause you to pick up your soldering iron from the wrong end!

Here's a short summary of the activities of June 28th:

• Phil Vourtsis worked on recapping an RCA Model 4T radio, replacing a bad 41 tube and fixing a wiring error. He also repaired two bad solder connections on a Sentinel Model 312-P portable and replaced the 1R5 tube, but could not get the oscillator to work.

• Ray Ayling continued his restoration of an RP-190 record player by recapping the amplifier and disassembling and lubricating the mechanism. He also assisted Harry Klancer in recapping and adjusting a Crosley model 21 radio.

• Aaron Hunter worked with Richard Hurff (aka "Mr. Majestic") in repairing Richard's Majestic Model 70B. A grid leak resistor was replaced on the detector stage, the TRF stages were aligned and the antenna wire was moved from its ground connection to the radio's antenna terminal, bringing in major, local stations. Aaron also replaced the line cord and replaced potentially degraded capacitors on his Silverton 9000 table radio.

• Richard Hurff had lost the FM from his 1961 "Galaxy Masterwork" German, solid-state AM/FM/SW portable radio. With the help of Al Klase, a loose wire was located and reconnected which brought the FM back to life. Richard plans to give the radio to his brother who turns 70 on July 11th. It's the same radio his brother had as a teenager!

• Harry Klancer and Don Irish found numerous problems with a Crosley Model 21 radio including three bad solder joints, loose tube socket contacts and a grounded oscillator grid. With the audio working, Harry went on to solve IF/RF problems.

• Matt Reynolds found a bad trace on his Philco D-665-124 "music box" radio and got it to power up and play. A bad hum suggested filter cap replacement.

• Rob Reifenheiser worked on bringing a 1936, Majestic 1250 back to life. Once the power supply was proved functional and some movement was restored to the variable tuning capacitor, a station or two could be picked up at low volume. Unfortunately, after the replacement of about 15 capacitors was completed, filament voltage was lost. An open in the tube filament string was suspected.

• Bill Zukowski worked on a Zenith 10S669 radio. It was noisy when first turned on but cleared after about 30 minutes. Bill replaced 5 capacitors in the audio section and a leaky AC bypass capacitor and cleaned the band selector and volume control switches. Remaining work includes the replacement of additional paper capacitors and the cabling to the tone control panel.

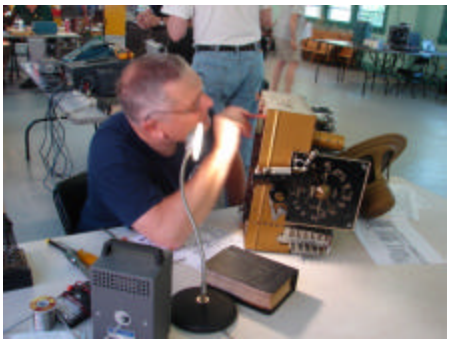
• Nevell Greenough determined that the proper operation of the meter movement on a TV-7 tube tester could only be obtained with the unit in a vertical position. No signal from a Zenith TO-H500 was traced to a shorted variable capacitor; filter caps were also replaced. A "hum modulated" signal on an RCA 4T was also corrected by re-routing an incorrectly wired filter capacitor. In the "you'll never know what you'll find inside an old radio" department, while working on replacing the line cord on Ron Snyder's Korting radio, the following clipping dropped out. Looks like it might be Elizabeth Taylor and Richard Burton; I wonder what the story is behind this photo and why hide it in a radio?

• Chuck Paci worked on a dead Philco 90 and finally could get it to amplify but not produce an output. Chuck was joined by Al Klase and, after an effort that lasted the rest of the afternoon, discovered that there was a screw in the tuning condenser that was shorting out the signal. "It looked like a factory mistake, but it didn't get passed Al!" The screw was removed and the radio came to life.

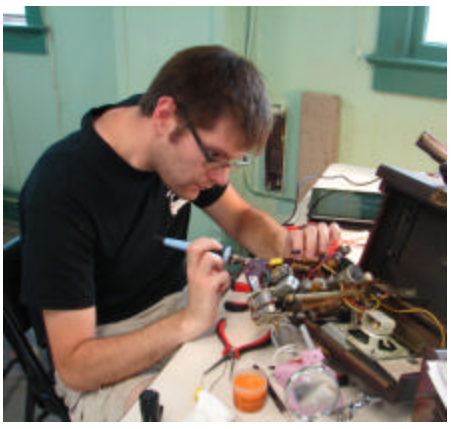
The above example just goes to prove what can be accomplished by having a second set of eyes analyze a problem. A similar situation was discovered at a previous repair clinic where Richard Hurff and Aaron Hunter, working together, brought a Majestic back to life by backing off on a screw that was shorting to the chassis. So try to make it to our next clinic; you'll find a great group of guys with a lot of repair experience ready to offer a helping hand.

Al Klase and Chuck Paci

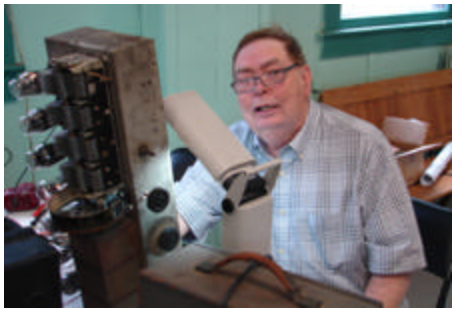
Harry Klancer and Ray Ayling



Bill Zukowski

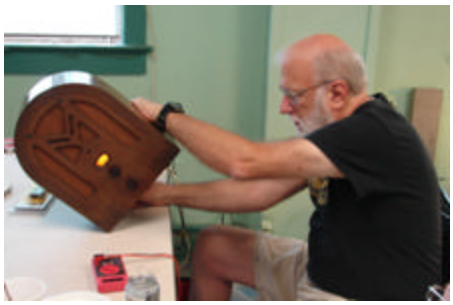


Matt Reynolds

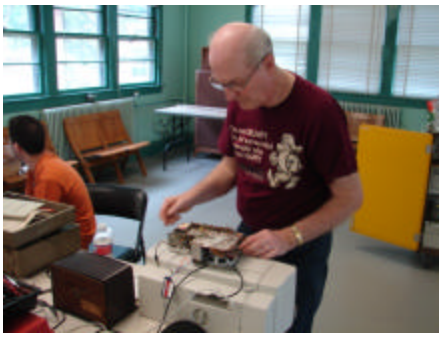


Richard Hurff

Sal Brisindi

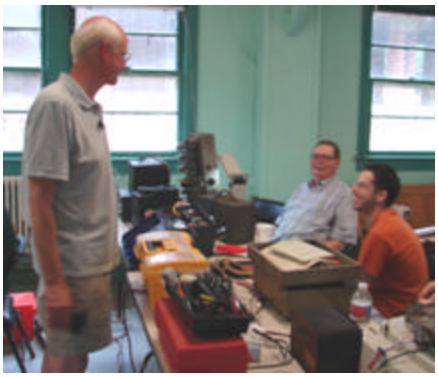


Phil Vourtsis

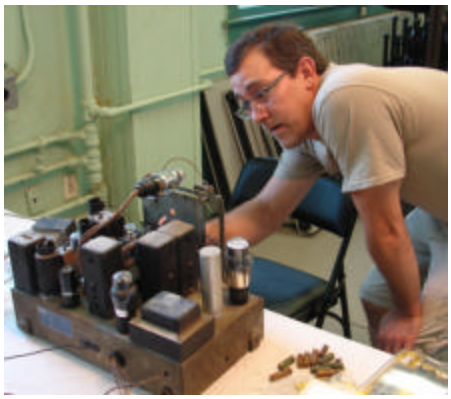


Aaron Hunter

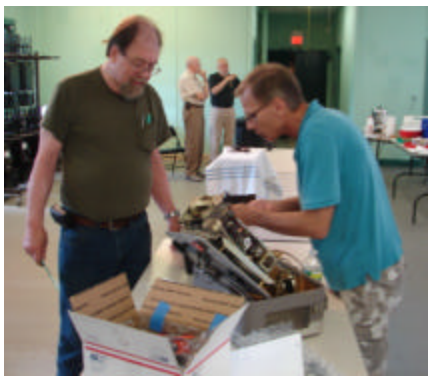
Nevell Greenough



President Richard Lee



Rob Reifenheiser



Al Klase offers a helping hand.

A PRINCESS AT INFOAGE

By
Marv Beeferman

On Monday, June 30th, Princess (a title acquired through marriage) Elettra Marconi Giovanelli, daughter of Marchese Guglielmo Marconi, the "Father of Radio" who received the 1909 Nobel Prize in Physics for his pioneering work in wireless communication, paid a memorable visit to InfoAge and NJARC's Radio Technology Museum. Fortunately, your editor was able to take on the job as video assistant to member Dave Sica who accompanied the princess and documented her entire visit.

The princess witnessed many of Marconi's experiments aboard his floating laboratory, the *Elettra*, for which she was named, and has dedicated her life to commemorating his achievements. With an interest in science, she enjoys telling young people stories about her father to inspire them to pursue work that would help people save lives.

The princess explained that the purpose of her North American tour (with the NJARC as one of the many collaborating sponsors), was to raise funds for the restoration of Guglielmo Marconi's "palazzo" in Bologna, Italy:

"Although we lived in Rome, my parents would bring me to visit the palace often. I remember my father taking me by the hand and encouraging me to play inside. He wanted me to love the palace. The decoration was beautiful, especially in the ballroom, where I would envision the grand parties that were held there."

The 16th-century palace covers a 9,500-square-meter-area, about two-thirds the floor space of the White House, in the heart of Bologna, close to the city's iconic Two Towers and its university, the world's oldest. Created from two buildings joined in the 1500s by renowned architect Antonio Morandi, the palace is adorned with 18th-century sculptures and 18th-and 19th-century frescos.

Her wish has always been that the Palazzo Marconi might become a symbol

of encouragement and stimulus for young people and, in particular, for young talent studying and working in the technology sector. The princess is on a mission to restore the palace and convert it to an academic center for students studying science, technology, engineering or medicine as a tribute to her father. This would involve adding classrooms, work spaces, dormitories and a small museum dedicated to her father:

"I want to bring the building to life with students from America who can continue my father's work. He loved America because he said it was a young country full of ideas. He himself was young and optimistic when he made his inventions - a wonderful example for young people."
"My father found talking to young people very stimulating. I am sure that when the palace is restored to its glory and filled with students, he would be as enthusiastic as I am about its new life."

She inherited the Palazzo Marconi in 1936 when she was 6, upon the death of her uncle, Alfonso, one year before her father's death on her 7th birthday.

The Marconi Palazzo.

Besides InfoAge, other stops on the princess's visit included The Sarnoff Collection at the College of New Jersey, Rutgers University, MIT, Cape Cod National Seashore, the Chatham Marconi Maritime Center, the University of Ontario, and Princeton, NJ. This is the princess's third visit to New Jersey. Her most recent, in 2001, marked the centennial of her father's first radio transmission across the Atlantic. Marconi, who came to New Jersey in 1899 and did much of his pioneering work in radio communications here, has strong ties to both InfoAge and the New Brunswick Area where, from the Easton Avenue station, President Woodrow Wilson delivered his "Fourteen Points" speech in 1918.

Members Marsha and Jerry Simkin had the pleasure of attending princess Elletra's visit to a conference at Rutgers University on June 28th where the theme was "NJ: State of Invention." Marsha first made contact, of all things, in the Ladies Room where the princess's friendly and personable character shined through. Later on, in the exhibit area, she slowly perused and was "thrilled" with Marsha's album of postage stamps from all the countries that have issued stamps in honor of Marconi and his accomplishments. Princess Elettra also showed interest in a 1903 copy of a signed menu from the Savage Club for a dinner that honored her father.

The relationship between princess Elettra's visit to InfoAge and the restoration of the Palazzo Marconi is obvious - both in the concept of "restoration" of a historical treasure and in the mission to promote an interest in science and technology for young people. As noted above, the princess is very personable and in a short talk I had with her (hopefully caught on film by Dave Sica), I emphasized how the superior construction of the Marconi hotel has maintained it for over 100 years and would probably keep it structurally sound for at least 100 more. She seemed delighted that one of her father's many accomplishment continued to be preserved.

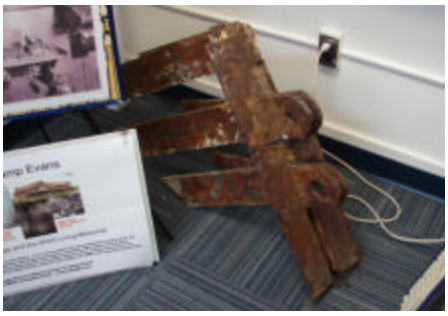
The princess spent a significant amount of time at our Radio Technology Museum with some friendly and historically significant exchanges between guides Al Klase, Harry Klancer, Dave Snellman and Ray Chase. She appeared excited about all she observed, including a trip to the Diana site. She was so impressed by the site's antenna that she insisted on returning following lunch for some photos. Luckily, I was able to get an individual photo with the princess with the antenna in the background.

There is much more to talk about the visit and hopefully a few of the 200 photos I took will fill in the blanks. At some future date, we'll all get a chance to view Dave Sica's video of the entire visit which includes many personal and historical insights. One includes the princess's penchant for talking about her father's lost experiments in an attempt to extract gold from sea water.

The princess meets some of her admirers.

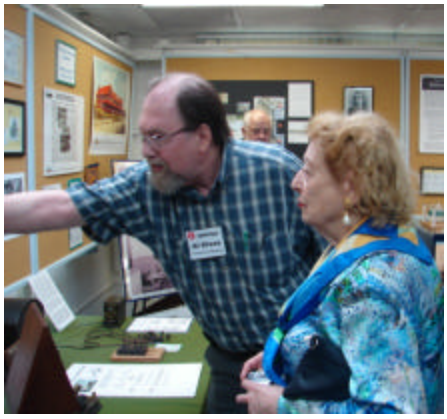
The princess is greeted by InfoAge chairman Michael Ruane and InfoAge founder/director Fred Carl.

A visit to OMARC.

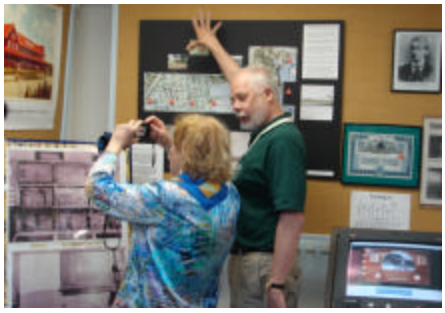


Princess Elettra insisted on a stop to photograph one of the last remaining antenna supports on InfoAge property. She was able to make the connection to the support in the RTM.

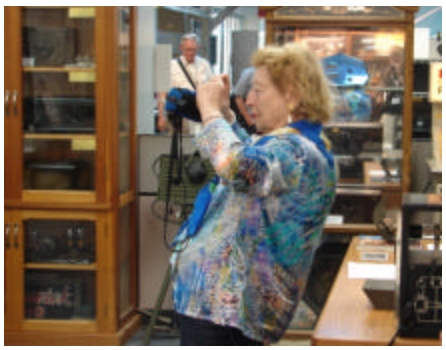
A stop at the RTM prior to lunch.



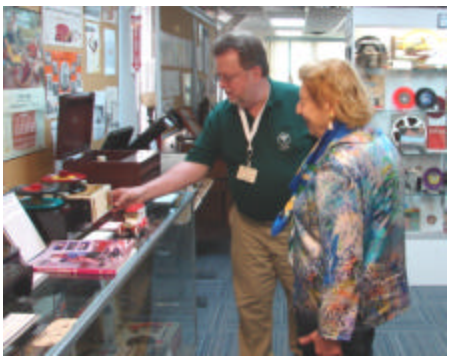
NJARC member Al Klase points to Marconi's place in the communications timeline.



NJARC member Harry Klancer describes the original Marconi site.



The princess is quite a shutter bug and found a polite interest in all she saw.



NJARC member Dave Snellman spins a 45 for the princess.

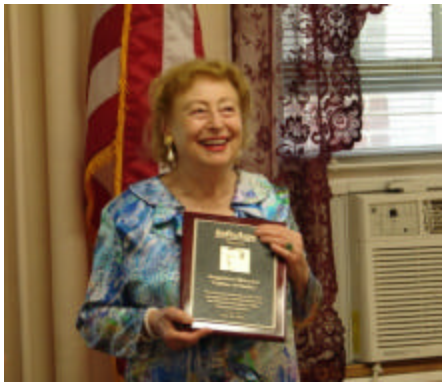
The princess admired her dad's portrait in the "Marconi hotel."

The princess admires a wooden shackle that supported the antenna at South Wellfleet.

NJARC members Ray and Edith Chase and Jules Bellisio at the honorary luncheon.

A talk with Edith Chase.

A proclamation from Monmouth County.



A plaque that adds Guglielmo Marconi to InfoAge's Wall of Honor.

Your editor and Dave Sica at the Diana site.

HUGO PICCIANI DONATION MOVED FROM STORAGE

By Marv Beeferman

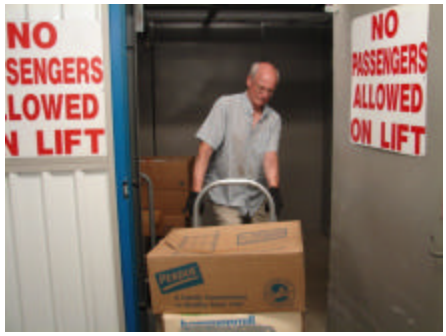
Over the last month, NJARC members have moved a collection of nearly 100 historic radio artifacts from a temporary, local storage unit to InfoAge to await future display. The items were donated to our Radio Technology Museum by a long-time Brooklyn collector, Hugo Picciani, in October. Originally, the club did not have a safe, climate-controlled location for the artifacts, but an appropriate area was recently established in the Marconi hotel.

Member Ray Chase recently described the acquisition to Shannon Connelly of the Star News Group (*The Coast Star* and *The Ocean Star*). Ray told Shannon that many of the artifacts were used during World War I and the early 1920s and some of the equipment is similar to what was used by the U.S. Navy when it operated the Marconi Belmar Station during World War I. A few of the items will be available for display this summer. Ray said that "we need to expand our radio technology museum to make full use of all the equipment that was donated, and that is part of our long range plan." In the meantime, the club will be researching the items in preparation for display and to determine their true significance.

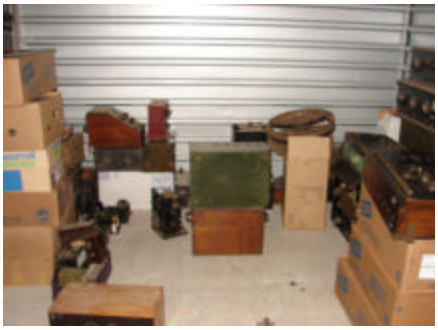
Thanks goes out to Mr. Picciani for his generous donation and his help in promoting the historic significance of the site.

Part of the donation was this Navy SE-143 receiver.

The crew starts the day with a photo op. President Richard Lee did the honors.



A tight fit.



Making good progress.

Harry Klancer and Dave Snellman helped unload on the InfoAge end and prepared storage units.

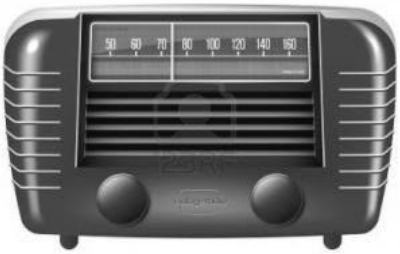
Ray Chase prepares an inventory of the stored items.

New Jersey Antique Radio Club's

Summer Tailgate Swap Meet

InfoAge Science History
Learning Center and Museum
2201 Marconi Road
Wall, New Jersey 07719

Saturday July 26th, 2014



Refreshments Available

40 spaces available
$25.00 for members
$30.00 for non-members
Bring your own tables

Open to the Public
8am to 12 noon
Vendor setup at 7:15 AM
$5.00 Entrance Fee
Club Donation

For Directions
Visit our website: www.njarc.org
or Mapquest
2201 Marconi Road, Wall NJ 07719

Vendors Make Your Reservations Now!
Contacts:

President	Vice President	Secretary
Richard Lee	Sal Brisindi	Marv Beeferman
(914) 589-3751	(732-857-7250)	(609) 693-9430
radiorich@prodigy.net	salb203@aol.com	mbeeferman@cs.com