The ON-LINE Broadcaster
The Jersey Broadcaster is now on-line. Over 160 of your fellow NJARC members have already subscribed, saving the club a significant amount of money and your editor extra work. Interested? Send your e-mail address to mbeeferman@verizon.net. Be sure to include your full name.

MEETING/ACTIVITY NOTES

The next NJARC meeting will take place on Friday, March 8th, at 7:30 PM at Princeton's Bowen Hall. Directions may be found at the club's website (http://www.njarc.org). This month, we're scheduled to hear a talk from member Dr. Mike Littman titled "Alexander Graham Bell's Early Experiments: The Harmonic Telegraph and Sound from an Empty Coil." In addition, Al Klase will be presenting awards to the winners of our BCB DX Contest. We'll also continue to collect dues for 2019. Keep an eye on our website for any late additions to the agenda.

FINAL CALL FOR DUES

March 31st is the cutoff date for 2019 dues. Your Board, with the support of a great job by treasurer Harry Klancer, has held the cost at $25 ($30 for a family membership). This still remains quite a bargain in light of the club's benefits:

- Twelve issues of the Jersey Broadcaster.
- An entertaining and informative website.
- The NJARC Communicator - a new and efficient forum for the exchange of club and member information.
- Two convenient and historic meeting locations.
- Unique technical presentations by a highly respected membership.
- Repair clinics and challenging contests.
- Capacitors, tubes resistors and parts at bargain prices.
- Resources for schematics and technical information.
- An award-winning radio museum, a constantly expanding technical library and a vintage radio repair facility for member use.
- Auctions, "PAL" swapmeets and InfoAge tailgates.
- A subsidized Holiday Party, and... much, much more.

At the present time, while our membership secretary Marsha Simkin recovers from vision issues, her duties will be taken over by Ray Chase. There will be a mailing of 34 membership cards to those who have paid in advance and to honorary and lifetime members.

For members receiving the Broadcaster by mail, check the code next to your name on the mailing label. Honorary (H) and Lifetime (L) members are exempt from paying dues. If you're receiving your Broadcaster by email and you're not sure about your membership status, it will be provided when you pay your dues or contact Ray at 908-757-9741 or at raydio862@verizon.net.

Dues will be collected at monthly meetings and other club activities or you can mail a check made out to the "NJARC" to:

Ray Chase
1350 Marlborough Ave.
Plainfield, NJ 07060

Payment via PayPal is also available at the club's website but it will cost the club a fee. While you're at it, you might want to consider a lifetime membership. In any case, please renew early and avoid the membership cutoff date of March 31st.

Thanks go out to member Dr. Alex Magoun for his presentation at the February meeting documenting decades of FBI surveillance of celebrated RCA scientist Vladimir Zworykin. Alex’s talk may be found at the following link courtesy of Dave Sica:

https://you.be/WjRJLKureyA

According to Dave: "It was a meticulously researched, eye-opening look at government surveillance of a foreign-born citizen who, however famous and patriotic, fell under suspicion and ended up with an FBI "tail," regularly spying on him from before World War II until the late nineteen-sixties! And along with all the intrigue, the part I found most interesting was a brief side-note that RCA had developed a self-driving car all the way back in 1953!"
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 at InfoAge or Princeton University. The Editor or NJARC is not liable for any other use of the contents of this publication other than information.

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Volume 25 Issue 03

Ron Hutchinson at our February 2016 meeting.

Member Harry Klancer would like to welcome members to the RTM Café. In his own words:

Most radio and electronics collectors share at least one issue. When you own an interesting artifact and it’s at your home – or worse, in storage - almost nobody gets to see it. Well, I have a shiny Seeburg Wall-O-Matic wallbox, one of those that was a fixture in every restaurant and diner from the 1950’s until...when did they disappear?

Fortunately, over the past year, the RTM has been installing a new section of the museum devoted to recorded music. After all, music has been a mainstay of radio broadcasting even before the inception of broadcasting as we know it. Think of “Victrola Recordings” transmitted from the AT&T Deal Test Site around 1920. The audio section of the RTM displays all manner of playback devices, from Edison players and Victrolas, 45s, 33s, wire recorders, 8-track players, etc. It also houses Al Klase’s exhibit demonstrating the history of loudspeakers from the 1920’s to the present. And it includes Kevin McDermott’s AMI Jukebox and Phil Vourtsis’ "Poor Man’s Jukebox."

I decided that a Wallbox would be extra-neous unless it was housed in its natural environment. So I built a diner booth (half a booth actually - we have limited space) in which the Wallbox is just a normal item, along with a napkin holder, drinking straws (advertising 5¢ Coca Cola) and other items. Club members Robert Forte and Steve Rosenfeld helped by outfitting the booth with these necessary items.

Hidden inside the walls of the booth are the minuscule electronics necessary to operate as if it were 1960. So come to the museum and sit down in the booth. But don’t put in your nickel. Instead, press the large black button and you’ll get two free plays. Flip the cards on the Wallbox to select your music, press the selector buttons, sit back and be transported back in time. But sorry, we don’t serve food.

Upcoming Events

March 16 - NJARC Spring Swapmeet/ Hamfest at Parsippany PAL
April 12 - Monthly meeting at InfoAge;
During WW2, Vatican Radio, like all foreign broadcasts, were banned in Germany and subject to very severe penalties. But Vatican Radio continued to broadcast news of oppression of the Church in Poland and elsewhere. While some critics have said that Pope Pius XII was too quiet regarding the Holocaust, examination of wartime broadcasts exposed Nazi persecution of the Church and opposed collaboration with Nazism. It appealed to Catholics to remain true to their faith's injunction: to defend the sanctity of life and the unity of human-kind. In doing so, the Pope at least pur-sued a policy of spiritual resistance to Nazi ideology and racism.

In 1952, a thousand acre broadcast site eleven miles north of Rome was acquired at Santa Maria di Galeria. The site was operated with two 10KW, three 100KW, one 120KW, one 250KW and a 500KW transmitter (for the East and Latin America). Antennas consisted of one omni-directional and twenty-one directional. By 2009, commercial advertisements started to meet rising costs. In 2016, Vatican Radio had a staff of 355, but was losing between 20-30 million Euros a year. In March 2017, service to Asia was discontinued (but continued online).
much damage and it appeared that the receiver could be easily restored to its original condition.

The Marconi MSL-5 was mainly designed for the ship and coast station reception of shore-based broadcast messages. It was first introduced by the Canadian Marconi Company in 1940 but the Royal Canadian Navy was still reconditioning the receiver as late as 1962. It was a four tube, low/medium frequency regenerative receiver operating in the 15 to 1550 or 15 to 1775 KHz band depending on the variant. The receiver consisted of a 6K7 tuned R.F. stage, a 6K7 untuned R.F. stage, a 6F7 combination detector and "regenerator" and a 38 output pentode. Power was provided by a 6-volt storage battery and two 45-volt heavy duty dry batteries (for 90 volts). For A.C. operation, a type PPR-1 power unit using an 84 tube was available. The battery supply was connected to chassis-mounted binding posts. Since there was no audio output stage, high resistance earphones were required for normal operation but a magnetic type, high resistance loudspeaker could also be used when connected to the "PHONES" output jack.

Stations were tuned in by operating two separate tuning controls ("AERIAL" and "DETECTOR") and two non-ganged range switches ("WAVE RANGE"). Regeneration was provided by a "REACTION" control, "reaction" being the term normally used by the British and Canadians in lieu of "regeneration." Both the detector and reaction "tubes" are enclosed in the same 6F7 glass envelope but act as separate entities. Signals applied to the detector grid are also applied to the grid of the reaction tube. Signals are amplified in the plate circuit of the reaction tube and coupled back into the detector tuning inductance in the correct phase so that regeneration can take place. The "REACTION" knob controls the potential applied to the screen grid of the reaction tube, thus controlling the amplitude of the signals that are fed back to the detector grid. When reaction is turned to zero, the detector then functions as a straight grid leak detector with no regeneration.

An interesting feature of the MSL-5 was a self-contained galena crystal detector. Until the early 1950's, it was a requirement of the British Merchant Shipping (Wireless Telegraphy) Rules that the radio installation aboard a British registered vessel should be capable of "maintaining reception by means of a rectifier of the crystal type." Subsequent modification of these rules required the installation of a separate emergency or reserve receiver. If the MSL-5 or its power source failed, the operator could move the antenna connection from the binding post marked "VAL" (valve) to the receiver's binding post marked "CRYS." (crystal). Crystal headphones could then be plugged into a separate front panel jack marked "CRYS. PHONES." An easily accessible, internally mounted catwhisker galena crystal would then be manipulated until its most sensitive spot was found, exactly the way it was done with early crystal radio sets.

In later MSL-5 models, the cat whisker crystal was replaced with a diode such as a 1N34. In the crystal radio mode, stations were tuned by operating the "AERIAL TUNING" control in conjunction with the band switch mounted directly above it. The frequency range was limited to 274-786 KHz.

For CW operation, a "NOTE FILTER" resonating around 1100 Hz was used and connected between the detector output and the audio input circuits. A "FILAMENTS" on-off switch served to open or close both the heater and high voltage ("high tension") circuits. A "H.T." switch enabled the receiver to be inoperative when transmitting. The "FILAMENTS" switch was not suitable for this purpose due to the time required for the tubes to heat up after being switched on.

Once made operational, the MSL-5 will be a great addition to the museum and I'm looking forward to it as an entrant in our 2020 BCB DX contest.
day, the radio worked over much of its band but "took off" at several frequencies. Further analysis indicated that wiring in the detector and AVC circuits needed to be revised, grounds improved and some shielding was required.

Just before the end of the day, a Grundig-Majestic 2440U AM/FM/SW radio (1964-5) showed up that was completely dead. It seems that Ray grabbed the golden-ring for the day - all it needed was a new fuse. I'm not sure about the cause but some threads on the Internet pointed to the failure of aged slow-blow fuses in these radios.

- **Tom Cawley** and **Chuck Paci** joined forces to work on Tom's RCA 5-C-591 clock radio from 1955. This radio features a dual tuner for automatic change of frequency from nighttime to morning stations. It also has an antenna outlet and phono and tape jacks. Initially, the radio had no depression but its amplifier looked good. Troubleshooting found a problem with the ON/OFF/AUTO switch. As noted, the radio has a separate tuning condenser for the main radio and one for the alarm (to set the wake-up station). The switch that selected either mode was not working and only the alarm mode was enabled.

The switches were cleaned, circuits aligned and the radio came to life. However, the radio was re-wired to work only in the alarm mode for now pending further troubleshooting by Tom in order to return it to full functionality.

- **Phil Vourtsis** tackled a 1957 RCA SHF-9 record player featuring three loudspeakers. It was owned by Bob Becker. "As Found" condition was an out-of-adjustment landing and slow speeds. The motor was rebuilt, a new idler rubber was installed and the winding adjusted to return this unit to working well on all speeds.

- **Your editor** worked on a 1933 Philco 60 owned by Peter Boser. He told me that the radio picked up stations but had significant interference. When the radio was powered up at InfoAge, stations were clear and relatively loud. Upon discussion, Peter's proximity to power lines may have been the culprit. The tuning capacitor was extremely loose because of degraded mounting grommets so it was shimmed and stabilized. A few capacitors had already been replaced but I had Peter replace a wax one and a .05 mfd "brown devil" that looked suspicious. When it was closely examined, a crack and a hole were discovered and it appeared that the capacitor had been "punched-through." Following replacement, the radio seemed to have gained even more volume.

- **Bob Bennet** worked on Andy Vilagi's Fada 1000 ("Bullet"). He found a bad 3Z5 rectifier and poor wiring carried over from previous service. The tube was replaced, the radio rewired and an alignment performed. A good playing (and expensive) radio was the result.

- Bob had an interesting experience with Owen Gerboith's Zenith H500 Trans-Oceanic. The radio had no AC hum when powered by Owen's homebrew battery pack but on AC, the hum was present. It was obvious that a filter recom was in order but interestingly enough, it did not solve the problem. When Bob got the radio home and closely examined the schematic, he learned the difference between chassis ground and floating ground. You can learn about Bob's discovery on YouTube at his "RadioWild" posting. He'll also talk about the use of a 1L6C6 as a 1L6 substitute.

- Joseph Divito noted that our clinic "was indeed a great time! I came away with a happily singing Zenith R511 thanks to Neville." Sometimes called the "Broadway" because of its shape, the 1954 AC/DC, 5-tube R511 was quick work for **Neville Greenough**. Low audio was traced to an open 470 Kohm resistor in the 12AT7 plate circuit. Neville also tackled a Heathkit scope calibration but stopped at a broken AC/DC trigger switch, a Bendix radio with a still unknown hum problem and a TV sound I.F. issue.

- At our December Holiday Party, Neville "stole" a Hallicrafters S-41W Skyrider Junior radio from member Kevin in McDermott. At our repair clinic, Neville surprised Kevin with a "re-gifted," re-capped, fully functional radio. Thanks Neville for a little Christmas in February! Kevin himself replaced a number of capacitors and tubes in a Crosley radio owned by Bob Masterson to get it back to life.

- **Tom Provost** worked on a 37-650 Philco console owned by Jim Doran. The radio was totally inoperative and Tom found that the radio was poorly repaired by the previous owner showing poor workmanship, incorrect part values, bad wiring, failed components and improperly installed electrolytics. Tom replaced components and wiring as required, working both at InfoAge and his home shop. The result was another working radio.

- Jim considered work on his 1938 Silvertone 6125 table radio a "bonus repair." The radio features the standard BC band and one SW (5.9-18.2 MHz) band, a tuning eye and five channel pushbutton station selection. A slipping dial cord and one weak tube was found. The dial cord was replaced and adapted to work around a crumbling rubber dial drive wheel. The radio was working well despite its weak tube.

- **Tommie Snider** tackled a 1955 RCA EY-1DJ 45 player with worn parts and a bad motor capacitor and cartridge. The motor was disassembled and the mechanism cleaned and oiled. All capacitors and the cartridge was replaced. The player is still awaiting further testing.

- A shout out to **John Ruccolo** for his persistence and perseverance in repairing a client's GE console. It's a great reflection on both John and the club (with help and suggestions from Al Klase, Phil Vourtsis, etc.) that this radio could be returned to its owner in working condition. One of the problems that John encountered was that its "Beam-O-Scope" antenna must be connected to troubleshoot the radio since it is part of the input circuit. This confined John to our repair shop for quite a few days. Other problems were found in the I.F. transformers. Jim was able to find the replacement from a 1941 Philco parts chassis which "peaked nicely at 455 KHz." John took some good-natured kidding over this project with one member threatening "no pizza for you until the GE can pull in Radio Cuba!"
A true reflection of the talents of our clinic participants was member Sal Brisindi’s recently restored Oldsmobile Cutlass. As you can see, Sal had a little fender-bender on his way to the clinic. Well, the boys dropped their soldering irons, got out their Bondo and sandpaper and made quick work of a potential disaster.
**Category A - Crystal Radios**

**Winner:** Nevell Greenough 2,564 pts. 1922 Audiola Crystal Set using galena crystal or 1N34A diode, w/Klase PGXS passive pre-selector, sound powered phones using 70’dipole antenna connected as flat top, MDS 1530 kHz WCKY Cincinnati, OH 550 mi.

**Category B - Primitive Tube Receivers, 1 or 2 Tube**

No entries

**Category C - 1920's Battery Sets**

**Winner:** Jerry Dowgin 2,083 pts. RCA Radiola III with Radiola Balanced Amplifier and Magnavox speaker, using random wire antenna, MDS 840 kHz WHAS Louisville, KY 630 mi.

**Category D - Other Tube Radios Sold for Home Entertainment**

**Winner:** Tim Walker 11,679 pts. 1938 Philco 38-7 console using DIY Skywaves air core loop, MDS 850 kHz KOA Denver, CO, 1,615 mi.

Irwin Sobelman 7,121 pts. Westinghouse H-126 (refrigerator radio) using longwire ant, MDS 1040 kHz WHO Des Moines, IA 1014 mi. (first time DXer)

Al Klase 6,483 pts. Zenith 12S232 using vampire antenna (on transistor set), MDS 1540 kHz KXEL Waterloo, IA 950 mi.

John Ruccolo 5,828 pts. Silvertone 1002 (AA5) using built in ferrite ant., MDS 1040 kHz WHO Des Moines, IA, 1014 mi.

Rich Skoba 5,297 pts. 1934 Simplex U91T using Grundig 200 tunable loop, MDS 1120 kHz KMOX St. Louis, MO. 860 mi. (first time DXer)

William Coffman 4,993 pts. General Electric H639 table top radio phono using internal ant., MDS 1040 kHz WHO Des Moines, IA 1014 mi. (first time DXer)

**Category E - Amateur, Commercial and Military Tube Type Radios**

**Winner:** John Ruccolo 8,930 pts. National HRO 60R using indoor random wire, MDS 950 kHz Radio Reloj, Havana, CU 1,279 mi.

Al Klase 8,226 pts. Collins 51J4 using Skywaves Shielded Loop, MDS 950 kHz Radio Reloj Havana, CU 1,279 mi.

Mike Shaw 5,328 pts. ICOM-765 transceiver using 125 ft. long wire, MDS 1040 kHz WHO Des Moines, IA 1,014 mi. (first time DXer)

**Category F - Any Radio of Your Choosing**

**Winner:** Aaron Hunter 8,674 pts. Philco T-9 multi-band portable using internal loop, MDS 600 kHz CMKA San German, CU. 1,347 mi. (first time DXer)

Bill Sloma 7,123 pts. C Crane 2E solid state portable using tuned loop ant. MDS 750 kHz WSB Atlanta, GA 717 mi. (first time DXer)

Phil Vourtsis 7,111 pts. Zenith Model MJ1035 using internal loop, radio rotated on lazy-susan, MDS 530 kHz La Habana, Havana, CU 763 mi. (distances calculated from DXer’s location in Myrtle Beach, SC)

Joe Gilberti 4,321 pts. General Electric Super Radio III using internal loop, MDS 750 kHz WSB Atlanta, GA 717 mi. (first time DXer)

Mike Shaw 3,985 pts. 2016 Subaru radio in car using factory window ant., MDS 870 kHz WWL New Orleans, LA 1,128 mi. (first time DXer)

**Category G - Light Weight Any Radio Weighing Less than 1 Pound**

**Winner:** Tim Walker 10,272 pts. Sony ICF-SW100 using internal loop, MDS 670 kHz Radio Rebelde Havana, CU 1,279 mi.

Joseph Serafin 9,459 pts. Kaito KA345 pocket radio ($20) using Terk loop, MDS 600 CMKA San German, CU 1,347 mi.

**Compiled by Tom Provost**

MDS = Most Distant Station

Congratulations to our 2019 NJARC DX Contest first time contestants:

William Coffman
Joe Gilberti
Aaron Hunter
Mike Shaw
Rich Skoba
Bill Sloma
Irwin Sobelman

**2019 BCB DX CONTEST RESULTS**

We had a very nice response to our 2019 Broadcast Band DX Contest. As you can see from the results, there were seven first time contestants. Thanks to Tom Provost for compiling the results; awards will be presented at our March meeting.
New Jersey Antique Radio Club's

Spring Swap Meet

Parsippany PAL Building
33 Baldwin Road
Parsippany, NJ 07054
Just off Route 46,
Adjacent to Smith Field

Saturday March 16th, 2019

Refreshments Available

(70) 8 Foot Tables
$25.00 for members
$30.00 for non-members
Reserve Additional Tables $20.00
At the Door $25.00

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.njare.org
or Mapquest
33 Baldwin Rd Parsippany NJ 07054

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