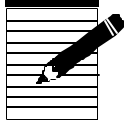


# The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

December 2013

Volume 19 Issue 12



## MEETING NOTICE

There was no meeting in December as members celebrated the season and the club's 21st year at our annual Holiday Party. Regular meetings continue in January; information will be available in the upcoming January Broadcaster.

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](mailto:mbeeferman@verizon.net). Be sure to include your full name.

Hope you all had a great Chanukah and Thanksgiving. As the snow falls and I place the finishing touches on the December *Broadcaster*, I am thankful to Mr. Marconi for holding off on the bad weather until all our members were safe and sound following a wonderful Holiday Party at InfoAge. President Richard Lee offered the following:

"Great thanks to all those who participated in making our 21st year's Holiday Party such a nice evening together! Special thanks goes out to Peg and Al Klase for hosting the pre-dinner reception, Marsha Simkin for those yummy Holiday candies, Dave Sica and Marv Beeferman for the "historic photo montage," Ray Ayling for his "Bakelite" radio cake, and Sal Brisindi and family for providing the delicious food and holiday music. The Mystery Grab Bag game was full of good gifts and entertainment, especially for our new members. As we like to see, it got nasty and vicious at the end but it was all in good fun. However, I will never speak to Dave Sica again for "stealing" my Tecsun SW radio.

Let me add my own thanks to Richard and Sandra for providing all the party extras (tablecloths, plates, cups, utensils,

soda, etc.) and coming early for party setup. And finally, thanks to all those who stayed late to help with cleanup.

Look for some photos in the January Broadcaster. If you can't wait, go to Bob Benetts "Radiowild" on YouTube for some fun highlights of the gift exchange.

In this issue of the *Broadcaster*, you'll find a review of our Show & Tell from the November meeting and our latest Repair Clinic and our BCB DX Contest rules. Room constraints prevented some photo ops from our very successful winter swapmeet at the PAL but we'll try to include them in our January issue.



**Member Bill Zukowski gets ready to unveil his contribution to our recent Show & Tell. Curious? See page 4.**

It's good to see member John Dilks on the mend following back surgery in November. John reports that "my future looks so much better now" and he is even gearing up to attend the Charlotte radio convention. We missed you as Santa at our Holiday Party, John, but are looking forward to 2014 when we can again have someone to convey our Christmas wishes to the North Pole.

Finally, it's that time of the year to renew your NJARC membership for 2014. Dues are \$25 for a single membership and \$30 for the family ("F" on your mailing label). Lifetime members (L) need not respond. You can bring your payment to the January meeting or send a check, made out to "NJARC", to our membership secretary:

**Marsha Simkin**  
33 Lakeland Drive  
Barnegat, NJ 08005

### Upcoming Events

January 25th, 26th - Armstrong Day at InfoAge's Marconi Hotel  
February 14th - Monthly meeting at Princeton's Bowen Hall; History of RCA by Dr. Alex Magoun (tentative)  
February 22nd - Winter Repair Clinic at InfoAge building 9032A  
March 14th - Monthly meeting at InfoAge building 9032A; Professor Joe Taylor's Moon Bounce talk (tentative)  
March 22nd - Spring swapmeet at Parsippany PAL  
April 11th - Monthly meeting at Princeton's Bowen Hall; Al Klase "History of Short Wave"  
May 2nd - Monthly meeting at InfoAge building 9032A; homebrew and "basket case" contest judging  
May 8 to 10th - Kutztown radio swapmeet  
June 13th - Monthly meeting at Princeton's Bowen Hall; Show & Tell  
June 21st - Spring Repair Clinic at InfoAge building 9032A  
July 11th - Monthly meeting at Princeton's Bowen Hall (program TBA)  
July 26th - Annual tailgate swapmeet at InfoAge

**SHOW AND TELL**

**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.

**PRESIDENT:**  
Richard Lee  
(914)-589-3751

**VICE PRESIDENT:**  
Sal Brisindi  
(732)-308-1748

**SECRETARY/EDITOR:**  
Marv Beeferman  
(609)-693-9430

**TREASURER:**  
Harry Klancer  
(732)-238-1083

**SERGEANT-AT-ARMS (WEST):**  
Darren Hoffman  
(732)-928-0594

**SERGEANT-AT-ARMS (EAST):**  
Rotating

**TRUSTEES:**  
Ray Chase (908)-757-9741  
Phil Vourtsis (732)-446-2427  
Walt Heskes (732)-205-9143

**TECHNICAL COORDINATOR:**  
Al Klase  
(908)-892-5465

**TUBE PROGRAM CHAIRMAN:**  
Al Klase  
tubes@njarc.org

**SCHEMATIC PROGRAM:**  
Aaron Hunter  
(609)-267-3065

**CAPACITOR PROGRAM:**  
Matt Reynolds  
(567)-204-3850

**RESISTOR PROGRAM:**  
Walt Heskes  
(732)-205-9143

**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



Guest Rebecca Mercuri (KA3IAX) found these 50's RCA and GE radios in "sort of working condition" while cleaning out her parent's house. The GE had the markings for local Philadelphia stations still penned in and, when turned on, Frank Sinatra (from the show "Friday with Frank") came in loud and clear. "Creepy!"



Guest Kevin Meredith found this 1940, RCA BP-10 at a local hamfest. After replacing the electrolytics, fixing a few broken connections and installing \$30 worth of 9 volt batteries, it plays as good as new. The radio turns on when its lid is opened.



Jerry Dowgin found this 8-transistor radio at a Crestwood Village flea market. It is one of a famous line of patriotic Emerson radios with a "Jet Age" theme. This red, 1958 Emerson model 888 "Vanguard" is named after the Vanguard-1 satellite. Jerry cleaned up the circuit board by removing excess flux and found a battery lead disconnected. Jerry tells us that the rarest of the series is the dark, grayish-blue model.



Pete Olin showed this "angry face" dial radio made by the Climax company out of Chicago. The "eyes" are the tone and volume dials and the mouth shows the bandswitch position. This radio seems to be very scarce since there is very little information posted on the internet. When Pete requested information via the Antique Radio Forum, he received numerous requests from people wanting to buy his find.



Dave Snellman described his WD-40 FM "can radio" that was packaged with a can of the real stuff in 2000 from NAPA dealers. He also showed a 1951 RCA battery fact finder from a dealer in Fort Dodge, Iowa.



Your editor talked about this Jewell "Pattern No. 90" wavemeter with a range of 150 to 625 meters. The unit is placed next to the oscillating circuit being measured and the handle rotated for maximum brilliance of an ordinary flashlight lamp. For greater accuracy, a current squared thermocouple galvanometer may also be connected to the wavemeter. The wavemeter can also generate damped oscillations by connecting a buzzer and battery to the unit.



Richard Lee thanked Richard Brewster for helping him obtain his "People's Choice" award that he won at the 2012 AWA Convention...a year later! His Scott Special entry was the talk of the convention (also winning in the Communications category) and now owned by a Pittsburg collector.



Paul Hart talked about a homebrew ham receiver that was built from a 1938 QST article by a "farmer" from the Chesterfield area. It was rescued from a barn prior to its demolition and will be maintained "as is" to maintain the receiver's originality.



Guest Jeff Griesemer decided to "get back in radio" after hearing this year's War of the Worlds broadcast. His Spartan radio belonged to his grandfather who bought it brand new. It was given to him and used for shortwave listening after Jeff got interested in radio in Junior High School. He is considering it a good candidate for our radio repair clinic.



Ray Chase took us back to a time before digital-based computers when electro-mechanical analog computing did the work. Ray called this equipment "masterpieces of cramming wheels, synchros, gears and resolvers into small spaces" and a good machinist was like a watchmaker. Shown was a Bendix dead reckoning piece used in British aircraft and an air data computer that was a museum donation.



Phil Vourtsis shows a "framed" Delco car radio which was used as a car dealership promotion. He found it in one of the "free" piles at one of our meetings and it works. Phil also described a 1958 Firestone 4-speed "stereo" phonograph where "you needed to put your nose in the center of the unit to get true stereo." Luckily, there's a trap door on the bottom of the unit to remove one of the speakers for better separation.



Bill Zukowski "unveiled" a 7-foot Electrovoice model 643 super-directional microphone. Bill obtained the microphone about 15 years ago after he saw it on e-bay. It was used in 1960's presidential press conferences to take questions from reporters up to 50 feet away. The microphone was also used at football games and parades and was advertised to be able to pick up marching bands two city blocks away. The microphone is missing its foam cover which had deteriorated some time ago. It has a frequency response of 30-10,000 cps, has a sharp cut-off, high-pass filter to eliminate frequencies below 100 cps and an impedance selector of 50/150/250 ohms to match the filter.

## NJARC 2014 DX-PEDITION

In support of our 2014 Broadcast Band (BCB) DX contest, Technical Coordinator Al Klase will host our extremely popular "DX-pedition" at InfoAge on January 10th as part of the monthly meeting.

The basic concept of the DX-pedition is to gather together a working collection of radios representing the various eras of receiver design in an environment that will allow each NJARC member an opportunity to operate each set. Hopefully, inspiration will be provided for greater participation in the BCB DX contest to be held from January 17 to January 26 (see page 8).

We're going to take advantage of the great facilities and hopefully quiet listening environment available to us at InfoAge. The primary theme will be broadcast band DX and battery-operated sets, but antenna facilities will also support short-wave and long-wave operation as well.

We'll attempt to maintain log books for each receiver so that both stations heard and user comments may be recorded. These might be published, with pictures, on the NJARC website and *Broadcaster* for further reference. We also might try to shoot some video of each set in operation and post them on our website.

If you plan to attend the January meeting, please come with sets in good working condition that you don't mind having other club members operate. If you could bring a length of coax that can be connected to your radio, with a BNC connector on one end, it might be helpful. We'll try to supply additional cables and adapters, but your help would be appreciated.

We'll try to coordinate the different types of radios that show up so we don't end up with mostly All-American Fives. Contact Al Klase at (908)-892-5465 or ark@ar88.net with the type of radio you plan to bring. It would be nice to have representative receivers from the following categories:

1. Crystal sets

2. Battery sets: Regen, TRF-regen, TRF, Superhet
3. 1930's and 40's AC sets: TRF, Superhet
4. Other entertainment sets
5. Communication receivers: TRF-Autodyne, single conversion, multiple conversion
6. Transistor radios

Various antennas will be provided and you're welcome to bring your own tuned loops for the broadcast band. We might consider playing into the wee hours if enough interest exists.

## WINTER REPAIR CLINIC

By  
Marv Beeferman

Our Winter Repair Clinic was held on November 2nd at InfoAge. Turnout was good with the usual suspects and some new faces showing up. "Radio bagels" and "radio pizza" provided the needed energy to work through some of those more elusive problems.



The team of Chuck Paci, Tom Cawley, and Marty Friedman worked on this beautiful Bendix 526C catalin. It didn't require much; the power supply capacitor was found grounded as a result of incorrect wiring following replacement, and the radio's alignment was slightly out. With its elegant lines and bold, contrasting tones of ebony and marbled green, the 526C sold well in 1946 and is a staunch favorite of collectors today (including the one owned by your editor). It's one of the few catalins that can still be bought for a reasonable price.



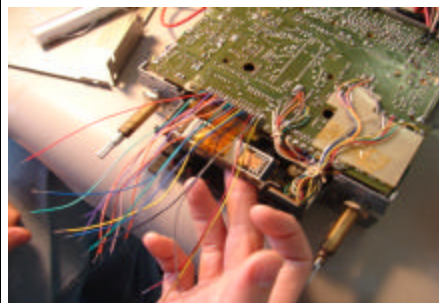
Considered a major high point in the history of NJARC repair clinics, I am happy to announce that Dick Hurff's model 21 Majestic is now operable! It took some work and a lot of patience on the part of friend Aaron Hunter; all capacitors, the driver and output transformers, shorted resistors and burned out power resistors were replaced. Still no results. The culprit? The screw holding one of the IF transformer covers was too tight, shorting the coil between the IF amp and second detector.



Bill Zukowski worked on an Atwater Kent 70 where he discovered an open plate resistor in the detector circuit and an intermittent local/distant switch. He also did some troubleshooting on a Zenith 7N04 where the volume of the FM function varied as the radio heated up. The AM portion seemed to work satisfactorily and the problem was never located.



Walt Heskes tackled a Zenith 5G401 but after checking all tubes and doing some recapping, it was determined that further work was required. He also worked on a Wells-Gardner Truetone A24 that produced only noise. Tubes were OK and Walt suspected an intermittent or bandswitch problem.



Matt Reynolds discovered a bad display flex cable on an original Craig W460 DeLorean tape deck. He decided that the easiest fix was to hard wire the contacts to the connector.



Dave Sica and Phil Vourtsis work on a Dual 622 turntable where a filter capacitor in the power supply was the cause of trouble.



Ray Ayling and Phil Vourtsis recondition a 1949, RP-168 45 player. Phil is our resident 45 player expert and author of the book "The Fabulous Victrola 45." The RP-168 typically suffers from a flat spot on its idler wheel when the player is not used for a period of time. Phil suggests using a piece of foam rubber to separate the wheel from the motor during these periods.



Al Klase works on an APN-1 VHF intercept receiver.



Steve Calandra works on a Telex, 12-cartridge 8-track player; very retro Steve!



Your editor continues work on restoring an Atwater Kent 145.



I have no idea what Ray Chase is doing (forgot to ask him) but it sure looks interesting!



Dick Hurff's Majestic 21 nemesis...the long screw that caused a short.

## GREAT PROFITS DURING THE GREAT WAR?

By  
Elizabeth Burton

*Bill Zukowski and a few other NJARC members recently attended a lecture by Dr. Elizabeth Bruton of England's University of Leeds. Bill found the lecture so interesting he asked to receive permission for its publication in the "Broadcaster." You'll notice that many of the article's points, even with their focus on wireless, may still relate to issues of today.*

*Dr. Bruton's interests have focused on the history of communications, including wireless history, and she has participated in cataloguing and researching the Marconi Collection, now held by the Museum of the History of Science. Much of this work was included in the 2006 exhibition "Wireless World: Marconi & the making of radio" and the permanent display of the collection. She has also given a number of public lectures on the collection at the museum and has worked as a researcher for the Marconi Foundation, Bologna...Ed.*

Should innovators profit from warfare? Is it reasonable instead to ask scientists and engineers to act from pure patriotism alone? As Scientists for Global Responsibility has recently voiced alarm about UK science's reliance on military funding, it is revealing to look back to a time before science entered a Faustian pact with armed conflict.

Prior to World War One, Britain did not have a military-industrial complex in which scientists routinely participated with industry to facilitate ever more warfare. Even in the first year of the war, rather than safely researching in a laboratory, a brilliant scientist such as Henry Moseley *(one of the foremost English physicists of the early 20th century...Ed)* could die at Gallipoli, shot by a sniper while serving as a signals engineer. Reflecting on such tales, we think we know about the Great War: the patriotism and

sacrifice of those in the armed forces and the terrible and pointless loss of life, especially on the Western Front, throughout the four long years of war.

But numerous historians have recently rethought these stereotypes. How was it that the war continued for four years, with 16 million dying while millions more of pounds and dollars were spent on armaments and the routine expense of war? Who was manufacturing such weaponry and ammunition, and who developed the infrastructure of scientific research that helped to win the "Great War?" More importantly, what were their motives: patriotic altruism, private profit - or an uneasy mixture of both?

In light of the impending centenary of this global catastrophe, we find that patriotism was not always the sole or indeed the main rationale for industrial activity in wartime. Indeed, afterwards the financial rewards for war-winning innovation were treated somewhat differently to equivalent creative acts during peacetime.

When Britain entered the war on 4 August 1914, the Marconi Company, with evident patriotic fervour, offered its wireless operators and training to facilitate the armed services' use of wireless communications. It did so without any initial upfront demand for payment. The Company also allowed government "censors" to monitor all communications through their long-distance wireless stations. Suspicious communications were intercepted and passed onto code-breakers in the Admiralty's secret "Room 40." During the war, the Company apparently received no compensation or out-of-pocket expenses for this work: in the summer of 1915, Marconi's General Manager complained that "not one penny-piece has yet been refunded to us."

By now, it was clear that the German model of state investment in research could win wars more decisively than uncoordinated private industry, laissez-faire invention, and British heroism. Stung into action by German innovations in poison gas warfare and devastatingly effective interception of French and British telecommunications, in 1915, the UK government established its own national Department of Scientific Industrial Research (DSIR).

Supported initially by the 'Million Fund' - approximately £45 million today - the DSIR both hired scientists for laboratory research and encouraged private in-

dustrial firms to establish co-operative industrial research associations. Unlike the Marconi Company, however, many companies did not willingly offer their services to the state. This is evident from the 1915 extension to the Defence of the Realm Act (1914): now key British industries were compelled to prioritize government and military orders.

The production of armaments and industrial infrastructure was thereby raised to a level that, when combined with American input from 1917, could support a military force capable of winning the war. By then, increased state support for science and industry was having a noticeable effect. For example, the aeroplane, invented just over a decade previously, was adapted dexterously to the purposes of aerial combat and the "tank" changed the nature of battle when first introduced in France in 1916.

Soon after the so-called "Great War" was concluded in November 1918, a Royal Commission on Awards to Inventors rewarded hundreds such wartime innovations. It eventually handed out £1.5 million (about £75 million today) in a Britain nearly bankrupted by the cost of conflict. The distribution indicates just how much the British establishment acknowledged national inventiveness, crediting tanks and aeroplanes as crucial to the recent victory. The Commission rejected claims about other inventions it deemed to lack genuine novelty or life-saving significance.



Telecommunications had been of great importance during wartime, especially when threatened by interception. The catastrophic interception of British and French forward communication by Germans early in the war resulted in the development and widespread deployment of an interception-proof alternative. This was the so-called Fullerphone, invented and patented by a serving military officer Captain Algernon Clement Fuller in 1916. When Fuller took his device to the Commission soon after the war ended, however he was offered much less than he requested: not only did his device rely heavily on the work of others, his patent rights would reap him further international rewards. Fuller perhaps took comfort from his post-war promotion eventually reaching the rank of Major-General.

In contrast, the Marconi Company's wartime contribution was more richly rewarded than that of Fuller. This was due in part to the eventual recognition of the Company's important role in supporting the British government and the Admiralty. Not only had Marconi intercepted hostile communications, but its "direction finders" had tracked German navy and airships in the open sea.

Despite this, the Marconi Company entered into an extraordinary post-war dispute with the British government, demanding large rewards for its wartime contributions. Marconi's lawyers actually accused the government of infringing the Company's wireless patents: exploiting its intellectual property without due payment. So difficult did the discussions become on the six-figure royalty claims that the matter was devolved to a private adjudication. Although the final amount paid was never publicized, the Marconi Company was soon able to buy up telegraph companies to fulfill its long-held ambition to become a telecommunications giant - later known as Cable and Wireless.

So how then shall we commemorate Fuller and Marconi and indeed their industrial production teams for their wartime innovations? Were they like Moseley nobly donating their all to the cause, seeking only recompense to endure the hardships of war? Or to rephrase Clausewitz's old dictum, was warfare for them just profit by other means...?

## THE LIBRARY AT INFOAGE

Ever since the establishment of InfoAge, there has been an ongoing project to archive and maintain the many technical materials that are part of Camp Evans history and the development of the electrical and electronic aspects of civilian and military communications. NJARC members Marsha and Jerry Simkin and Steve Rosenfeld have been instrumental in this effort, with Steve handling the majority of work in organizing and protecting this asset as donations of material continue to grow.

Library material includes books on radio, radio history, repair, broadcasting, television, wireless, radar, the telegraph and numerous other subjects. Also maintained are magazines and journals (RCA Review, IRE & AIEEE journals, Radio News, etc.), QSL cards, radio-related catalogs and brochures, radio and television equipment manuals, military manuals and original Marconi equipment drawings.

Because of a limited staff of one and the large workload that Steve has to contend with, material to be viewed must be requested in advance and will require at least four weeks notice to schedule a visit and prepare requested material. However, Steve is at the library (2nd floor of the Marconi hotel) most Wednesdays and I'm sure if you contact him in advance (oceangate@comcast.net) he will allow you to just browse or help you find a specific resource. However, nothing can be removed (this is a reference, not lending library) but copies can be provided for a fee. For full information, go to the InfoAge website and look under Exhibits/Library/Library Collection - Library Process.



**Steve Rosenfeld catalogs some new acquisitions. You can download the Marconi drawing list and RCA equipment manual inventory at <http://www.infoage.org/library-documents>.**

## The 2014 NJARC BCB DX Contest - Jan 17 to Jan 26

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 we now restore and cherish. We can recapture some of the excitement that the early DX'ers 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 the receiving location, Friday, January 17, 2014 through 12:00 Noon, Sunday, January 26, 2014.

**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 or transistor receivers (homebrew also) - 1 to 2 tubes or transistors, plus power supply.
- C - 1920's Battery sets (homebrew also) -batteries or modern power supply are OK.
- D - Other tube radios sold for home entertainment.
- E - Amateur, commercial, and military tube-type communications receivers.
- F - Any radio of your choosing.
- G - "Light-Weight": Any radio weighing less than one pound (454 grams).

**SPECIAL AWARDS** will be given for the best performances by first-time contestants.

**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, e-mail address if applicable, phone number, category, and description of receiver and antenna. Please include your 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.

Logs must be postmarked not later than midnight Monday, February 3, 2014. Logs may be submitted as email attachments.

**SCORING:** 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.

**Special Rule #1:** A contestant may claim only one of the Cuban time stations, Radio Reloj, regardless of how many are actually heard. All will be scored as 1279 miles (Havana).

Submit logs to: Tom Provost, 19 Ivanhoe Dr., Robbinsville, NJ 08691, tprovost@pppl.gov  
Questions: Al Klase - 908-892-5465 - ark@ar88.net, Tom Provost - 609-243-2508