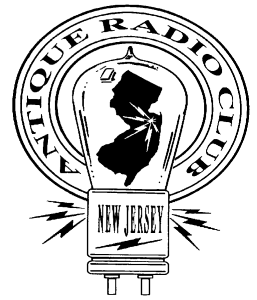


The Jersey Broadcaster



NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

April 2006

Volume 12 Issue 4



Reported by Marv Beeferman

MEETING DATE CHANGE

The **MAY** meeting will be held a week earlier (5/5/06) so as not to conflict with the Kutztown swapmeet.

Our Spring Parsippany swap meet was very successful with over 150 buyers in attendance examining the wares at over 50 tables. Our thanks goes out to Richard Lee for organizing the meet and all those volunteers who gave up those buying opportunities that show up early in the morning for the benefit of the club.

Newspaper coverage appeared in the Sunday edition of the Daily Record, but, as Dave Sica noted, the spin wasn't exactly as we might have preferred. But as a "video guy," Sica found it fascinating to see the extensive amount of footage the Dish Network shot at the event, all in wide screen hi-definition. The club is in the process of getting a copy and we'll show it at an upcoming meeting.

On April 1st, during a beautiful transfer ceremony, 17 acres and 8 historical buildings, including the historic Marconi hotel and the future home of the NJARC Broadcaster's Hall of Fame, was turned over to InfoAge. It has been a long, rough road but the wait was well worth it. Enough cannot be said of all the hard work put in by InfoAge founder and president Fred Carl who has spent many long nights and weekends away from his family to bring this project to a successful conclusion.

Congratulations also goes to Ray Chase, Dave Snellman, Steve Goulart, Phil Vourtsis,



MEETING NOTICE

The next meeting of the New Jersey Antique Radio Club will start at 7:30 on Friday, April 14, at the David Sarnoff Library in Princeton, NJ. Contact President Phil Vourtsis (732-446-2427) for directions. There will be an Executive Board meeting at 6:30 prior to the regular meeting. All Executive Board members are requested to attend. This month's program will be "Radio Troubleshooting Using an Oscilloscope" presented by Rob Flory.

sis, Al Klase and all the others who spent numerous hours getting the displays and cottage ready for the opening. Pictures and a short write-up of the event is included in this month's *Broadcaster*.

The team of Joe Benvotato and Ray Chase gave a "History of Radio" presen-

generally display for one day only but we are invited for two days with the promise of a lockable room. The show is April 22-23, so we have limited time to get ready. With the participation of 4 to 5 members offering a selection of display items, we usually have enough to fill a few tables.

Please contact Steve Goulart at sfg@comcast.net if you're interested.

If you still haven't paid your 2006 dues, please send your \$20 check made out to the NJARC (\$25 for joint membership) to Marsha Simkin, 33 Lakeland Drive, Bamegat NJ, 08005. A "1/06" (dues expiration date) on your mailing label indicates its time to renew. As another reminder, elections will take place in June and we'll be accepting nominations at the April and May meetings. You must be a paid member for 2006 to propose a nomination. As most of you know, Phil Vourtsis will be stepping down as President this year,



The "Old Guard" color guard opens the InfoAge transfer ceremony on April 1st.

tation to the Historical Association of Woodbridge on the evening of February 27th. They received a very nice thank you letter and the club was commended for helping to establish the InfoAge Learning Center. About 25 members attended, there were lots of questions and a \$75 donation was made to InfoAge.

The club has been invited back again to the Trenton Computer Fair. This has always been an enjoyable event which has also provided us with great visibility. We

so we'll be looking for an equally enthusiastic and committed individual to fill this important position.

Vice President Richard Lee has asked me to remind members that club T-shirts and golf shirts are still available. They really look great...black with an embroidered gold logo, 50% cotton/50% poly in most sizes. T-shirts are \$15 and golf shirts are \$20. Pick them up at the next meeting or contact Richard at 845-359-3809.

THE JERSEY BROADCASTER is the newsletter of the New Jersey Antique Radio Club (NJARC) which is dedicated to preserving the history and enhancing the knowledge of radio and related disciplines. Dues are \$20 per year and meetings are held the second Friday of each month.

The Editor or NJARC is not liable for any other use of the contents of this publication.

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UPCOMING EVENTS

- 4/22-4/23: Trenton Computer Fest (sfg@comcast.net)
- 4/28-4/30: Early Television Convention
- 4/29: OMARC Tailgate Hamfest (<http://www.omarc.org>)
- 5/5: (Date Change) NJARC monthly meeting/Mike Hammer auction
- 5/7: Warmister ARC Hamfest (hamfest2006@k3dn.org)

- 5/12-5/13: Kutztown Radio Meet (www.dvhrc.org)
- 5/20: NJARC members-only Repair Clinic, 10am-4pm, Sarnoff Center, Princeton
- 6/3: InfoAge Fund Raising Gala (www.infoage.com)
- 9/22-9/23: Kutztown Radio Meet (www.dvhrc.org)
- 10/6: RF Hill ARC Hamfest (kb3cez@Arri.net)

**YOUR WIRELESS -
THE FUN OF
IT ALL**

**Contributed by
Jerry and Marsha Simkin**

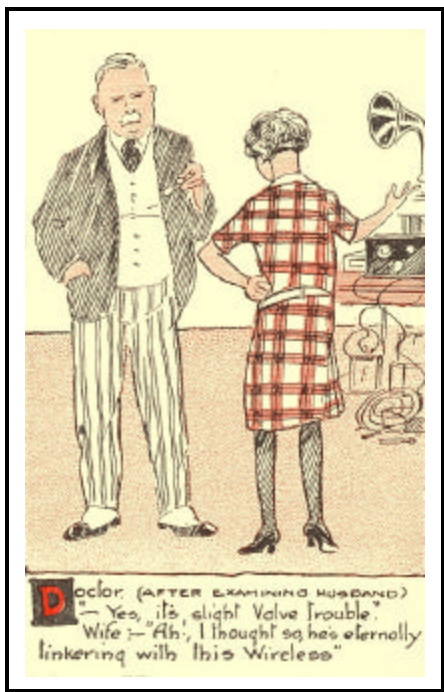
As a relatively new technology, radio was often the butt of many jokes, and no one was better or subtler at it than the Brits. Most of the humor paralleled themes that were also popular in this country. It commonly involved someone (usually the wife) misusing a technical term, the inability to tune in something more appealing than a concert of 17th century choral music, or the trials of stringing a good antenna.

Jerry and Marsha Simkin recently

showed me a notebook calendar published in London titled "Your Wireless - the Fun of it All!!" It is illustrated with cartoons and contains such humorous commentary as how to maintain your set:

"If you have an outdoor aerial remove same on second Tuesday of every month, wash all over with strong soda solution, rub thoroughly with sand paper, and replace. Dismantle set every other Friday, boil condensers in olive oil, test valves by striking thrice with small hammer, soak H. T. battery in luke-warm water for one hour twenty minutes, put things together again - and hope for the best. Portable sets should be kept in a warm place: just above the gas cooker is a favourite spot, but do not actually apply direct heat, nor deposit cigarette ends in loud speaker."

Here are a few examples of the cartoons...
(More cartoons on page 8)



PARSIPPANY SWAPMEET



THE NJARC PRETTY GOOD CRYSTAL SET

By Al Klase

OK! It's time to build a crystal set. This time it's going to be a good one.

Countless millions of crystal radios have been built over the last 100 years, but the performance of most of these leaves a lot to be desired. The design of this radio goes back to about 1990 when I was a den leader for my son's Cub-Scout pack. I wanted the guys to have the experience of listening to a radio they had built with their own hands. However, we were in the deep suburbs of Philadelphia (actually half way to Reading). There were no strong local stations, so an average crystal set combined with the sort of make-shift antenna most families would erect, wasn't going to get the job done. The result was the Den Two Crystal Radio. (See "Crystal Set Projects," The Xtal Set Society, 1997.) This radio was based on a spider-web coil that 10-year-old hands could wind with a little supervision. It was sensitive enough to hear distant sky-wave stations at night, and selective enough that you could usually listen to just one station.

Seven were constructed and at least six of those went into service at home. Everyone was duly impressed. We even had reports of hearing Radio Japan! (That was from Ontario, however.) We'll use the same circuit with a better solenoid-style coil.

First, let's deal with the headset. Look around for a traditional pair of 2000-ohm headphones. That's the DC resistance, they'll have an AC impedance of about 10,000 ohms. Test the phones by putting them on your head, holding on to one of the tips and touching the other to an electrical ground such as a water pipe or the screw on an outlet plate. You should hear a click or maybe a hum. If not, they proba-

bly won't be sensitive enough for our purposes. Check the DC resistance with an ohmmeter; it should be in the range of 1-5 K-ohms. Sometimes the cords are open.

An acceptable alternative to a vintage headset is one of the crystal (ceramic) ear plugs available from Mouser.com for about two bucks. It's best to install a 50-100K resistor in parallel with these phones to provide a DC load for the detector to eliminate audio distortion. I'll organize a club buy if there is sufficient demand.

Modern low-impedance headsets with a matching transformer might work if you have a lot of signal strength, but most are designed to sacrifice sensitivity for flat frequency response.

Next, comes the detector. Stick to a germanium diode or the base-emitter junction of a germanium transistor for openers. A digital voltmeter in the diode position will indicate the forward voltage

water pipe or a connection to the AC safety ground will complete the system.

It's time to build the simplest possible radio: Clip-lead the diode across the headset and then connect one side to the antenna and the other side to ground. You should hear something, quite possibly three stations at once.

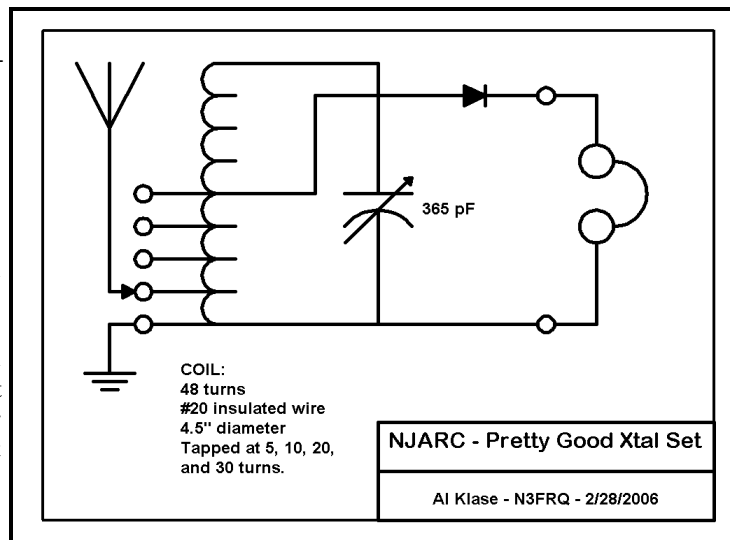
In order to make this kludge into a serviceable radio, we'll add a tuned "tank" circuit consisting of a coil and a variable capacitor. The target value for the cap is 365 pico-farads (mmF or pF), but a 500 pF unit as found in some of the old battery sets will work nearly as well. You could also use the large half of the two-gang cap from a junked all-American five, etc.

The coil is wound on a 4-inch styrene pipe coupling from the hardware store. Wire is generally expensive and hard-to-buy retail. I've specified #20 insulated bell wire, also from the hardware store because it is easily available. The downside is that it's twisted pair that needs to be unwound, and they make you buy 500 feet for about 30 bucks, when you only need 85 feet for the project. Any plastic insulated wire between #26 and #20 will do, but you'll probably need to adjust the total number of turns after you get the radio going to cover both ends of the broadcast band.

The best option, for maximum performance, is silver-plated Teflon-insulated hook-up wire if you have any in the junk box, but even common vinyl-insulated tinned stranded wire will work all

right. Close-wound magnet wire is a bad bet, as eddy currents in the adjacent turns cause considerable loss.

Winding the coil (see page 5): Tie one end of an 85-foot length of wire to a solid support. Drill two small holes 3/8 of an inch from the end of the coil form. Keep the drill and wire cutters handy. Put a strip of thin cardboard about 3/8 inch wide and 3 inches long in your shirt pocket. Lace the end of the wire into one hole and out the other, leaving about a foot protruding from the form. Grasp the coil form firmly and pull the wire taught against the tied off end. Wind 5 turns on the coil keeping the wire close-wound and tight. Place the end of the cardboard



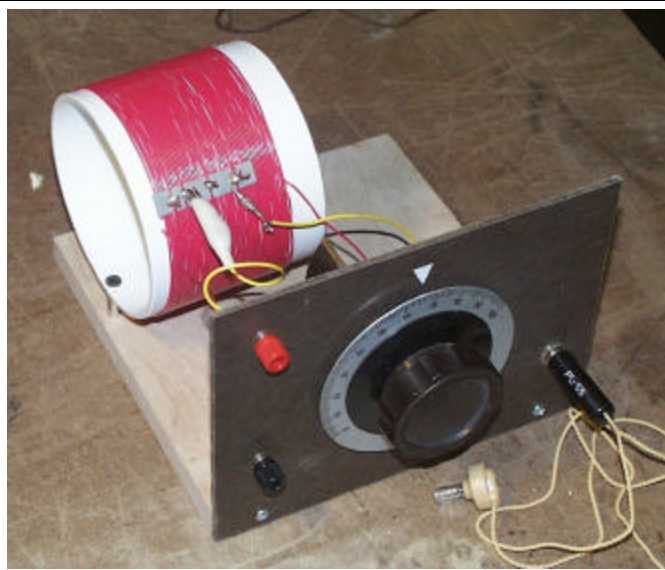
drop. Germanium devices will show 0.2-0.3 while silicon will indicate 0.5-0.7 volts. You can use a modern silicon device, but you'll be giving up a lot of sensitivity. The basic germanium diode is the 1N34A, but the part number doesn't mean much. They vary widely. Dump out the junk box, try them in a radio, and pick the best one. You can move on to mineral detectors and cat's whiskers after you have a working radio.

Now you'll need an antenna - the higher, longer, and more in the open the better. Sixty feet long and forty feet high would be excellent, but wire in the attic will probably suffice, especially if you're a "city mouse." A hose clamp around a

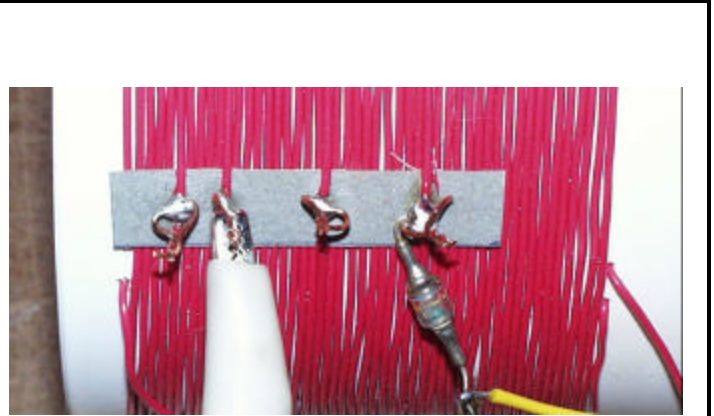
strip under the 5th turn. Wind four more turns, sneaking them under the strip. Wind the 10th turn over the strip. Continue winding placing the 20th and 30th turns on top of the cardboard. Wind 18 more turns for a total of 48. Clip the wire leaving about a foot to terminate the coil. Drill two more holes in the form, and lace the end of the wire through them.

Use a utility knife to whittle away the insulation where the 5th, 10th, 20th, and 30th turns cross the cardboard. Wrap and solder a piece of bare wire at each of these sites for the coil taps.

"Breadboard" the radio with clip leads or tack-solder joints to make sure everything works before committing to a physical design. The radio in the picture is built on an 8-inch square piece of 3/4" plywood with an 8 x 6-inch front panel of tempered hardboard. Layout is not critical, but keep the coil in the approximate orientation shown so it can be coupled to the antenna tuner to be describe in "PGXS - Phase II."



NJARC Pretty Good Crystal Set



Coil Detail

THE MIKE HAMMER RADIO COLLECTION MAY AUCTION

In two months, at the May NJARC meeting, the Mike Hammer radio collection will be auctioned. Mike passed away on April 28th, 2004 and many older members will remember him as the club's first vice president, sitting at the side of founder Tony Flanagan at our Hightstown meetings.

Mike had many interests other than just radios and electronics. By the time he was in his 20s, Mike was racing nitromethane hemi dragsters that would go from zero to 200 mph in less than 10 seconds. It was during one of those races in South Jersey that he set a national record for the quarter-mile race, crossing the finish line in about 7.5 seconds.

Mike eventually parlayed his lifelong

interest in cars into the ownership of dealerships in north and central New Jersey. At the height of his career (1977 through 1981), Mike owned a total of some eight dealerships, always named "Mack" followed by the name of the car being sold, from Jaguar and Cadillac to Honda and Pontiac. One of his dealerships was believed to be the first seller of the legendary DeLorean.

Mike was also a private pilot with an instrument rating for multi-engine aircraft. He owned a Cessna 310 which he flew every three or four days out of Lakewood airport.

We appreciate the decision of Mike's wife Cynthia to offer his collection to NJARC members where it can maintain its New Jersey roots and be appreciated and preserved by future generations.

There will be a reserve on some of the items. All radios have tubes.

- Colonial 31AC early AC console w/ doors, 2 chassis, electrically restored and working.
- Philco 37-610 console, probably work-

ing.

- AK 60 "coffin" with proper speaker.
- Philco table model Predicta, pretty good condition.
- RCA 45 rpm record player, plastic.
- Music Master horn speaker w/wood bell.
- Brandes "Table Talker" paper mache horn speaker.
- Magnovox metal bell & neck for horn speaker (no base).
- Western Electric 518W tall horn speaker.
- Emerson small bakelite table radio w/ white knobs.
- RCA 9X561 "Golden Throat" radio.
- Radiola II w/2 WD-11's, one with a good filament.
- Homebrew slide coil crystal set w/ crystal.
- Two pair of headsets.
- AK 33 w/E2 speaker.
- RCA 47-204 table radio (plastic grill not warped as found in most of these models)

(Continued on page 6)

(Continued from page 5)

- Two Zenith Transoceanics
- Five-tube homebrew 3-dialer, professionally restored and in excellent condition.
- Emerson bakelite (fair to poor)
- Grebe MU-1 w/chains, very good condition.
- AK E (or E2) speaker
- About 6-8 common pieces of test equipment.

INFOAGE TRANSFER COMPLETED

By Marv Beeferman

April 1st, 2006, marked a significant step in the realization of InfoAge founder Fred Carl's vision in "bridging the past with the future" by establishing a science and history museum. At noon on this date, after 12 years of hard and sometimes frustrating work, the Army officially transferred 17 acres and eight historical buildings in the Camp Evans area to Wall Township. One of these buildings will be the new home of the NJARC Broadcasters Hall of Fame.

InfoAge's open house in conjunction with the ceremony included historical artifact exhibits, walking tours, military reenactments and World War II vehicles and equipment. In addition to the NJARC, representatives from the Ocean/Monmouth Amateur Radio Club, the New Jersey Historic Divers Association, the New Jersey Military Technology Museum and the Mid-Atlantic Retro Computing Hobbyists gave demonstrations and fielded questions.

Ray Chase's exhibit of early radar and military equipment was quite impressive. A special note of thanks goes to Steve Goulart who located the exhibit's display cases at the Collingswood flea market.

In addition to the help provided by many NJARC members, special recognition went to the following in the form of a "Royal Order of Marconi Madness" certificate personally presented by Fred Carl for the long hours and work devoted to the InfoAge project: Phil Vourtsis, Ray Chase, Al Klase, Bob Pilcher, Dave Snellman, Marsha Simkin and Steve Goulart.

The club also received a plaque commemorating the transfer.

Referring to all those who supported the war effort overseas and through their work at Camp Evans, Fred said "Sixty years ago, you were willing to sacrifice every single tomorrow...we are grateful; we are humbled."

There is still much work to be accomplished, including transferring equipment from our temporary home at the cottage to our permanent home in one of the "H" buildings. From there begins the development of hands-on, working exhibits to inspire the next generation to take an interest in science and technology and to provide them with a link to New Jersey's contributions to the wireless technology of the past. It's a wonderful way to connect your hobby to a resource for the future rather than a collection of tubes and wires gathering dust on the shelf.

Drop by for a visit and tour, get involved, and at the invitation of Fred Carl "marvel at the work of the volunteers."



NJARC President Phil Vourtsis accepts a special plaque commemorating the transfer on behalf of the club.



Bob Pilcher, Phil Vourtsis and Dave Snellman display their "Royal Order of Marconi Madness" certificates.



InfoAge founder and President Fred Carl.



CONNECTIONS

Free exposure for buyers and sellers! Unless requested otherwise, each ad will run for two months in both the *Jersey Broadcaster* and the *Delaware Valley Oscillator*. All buying and selling transactions are the responsibility of the parties involved.

FOR SALE

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

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

Are you aware that NJARC now has a resistor program which includes many commonly needed replacements? Contact Walt Heskes at any club meeting for details.

YOUR FOR SALE AD HERE!

WANTED

2006 DUES

YOUR WANT AD HERE!



The "Crystal Set" is still very popular



Electrician: "I can assure you Madam, the set is in perfect working order." "I'm afraid I can't agree, you see my husband is rather deaf, and we can't get it to repeat"