

The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

November 2003

Volume 9 Issue 11



MEETING/ACTIVITY NOTES

Reported by Marv Beeferman

The October meeting of NJARC featured a show-and-tell with a Zenith theme. Here are some of the offerings:

• **Steve Collandra** found his Zenith model J665 "Zebra Cobra-Matic" radio/phono "new and in-the box." This 1953 find uses a "Cobra" tone arm and special cartridge with the same needle for both 78 and 45 RPM records (no flipping required). In addition, the phono uses a continuous, variable speed drive between 16 and 78 RPM with no stops between speeds.

• You'll just have to ask **Darren Hoffmann** more about this one, but while "dumpster diving in the shadow of Armstrong's Alpine FM antenna," he came up with a black and rare coral-colored Zenith Royal Philharmonic transistor radio, both in original boxes.

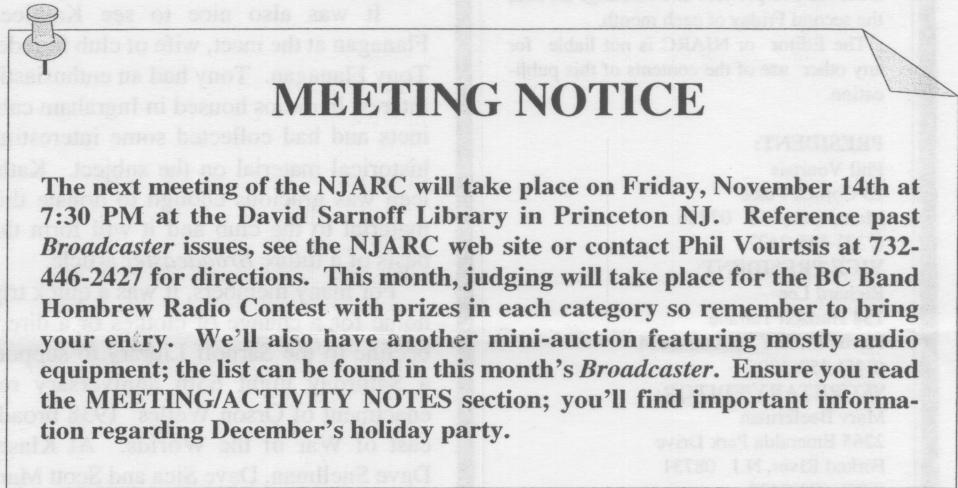
• In keeping with our Zenith theme, **Marty Friedman** showed his "Teeny-Zeenie" beanie baby.

• **Walt Heskes** "liked the look" of his K401, 1953 portable which uses a 1L6 converter. It has a hi-lo switch to reduce filament current through the tube's filament and save battery life.

• **Joe O'Neal** showed his 1946 8H034 with 2 FM bands which Zenith tagged "The Major." Joe wondered about the two bands until his question was answered in the October 2003 *Broadcaster* - the 44-50 MHz band was moved to 88-106 MHz in 1945 and Zenith marketed "two band FM" radios until the end of 1948 to pick up both frequency ranges.

• **John Winans** talked about his early 60's Zenith Royal 500 transistor radio.

• **Phil Vourtsis** showed a quartet of Zenith products, including a Royal 1000 Trans-

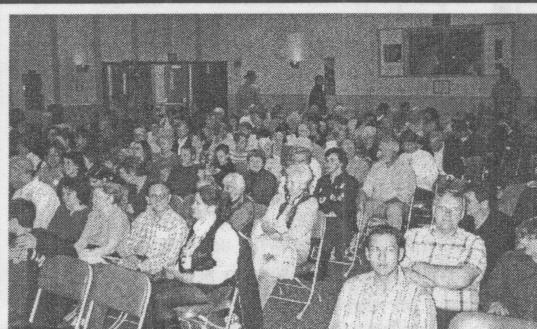


MEETING NOTICE

The next meeting of the NJARC will take place on Friday, November 14th at 7:30 PM at the David Sarnoff Library in Princeton NJ. Reference past *Broadcaster* issues, see the NJARC web site or contact Phil Vourtsis at 732-446-2427 for directions. This month, judging will take place for the BC Band Hombrew Radio Contest with prizes in each category so remember to bring your entry. We'll also have another mini-auction featuring mostly audio equipment; the list can be found in this month's *Broadcaster*. Ensure you read the MEETING/ACTIVITY NOTES section; you'll find important information regarding December's holiday party.

oceanic, a 1940 5G438 wood radio and two early 50s radio/phono units. The one to the right in the photo was called a "Twin-Seven" which played 33 and 45 RPM records on two separate turntables which spun at the same time. Although the

Zenith's partial return to the CRL "laboratory" look with a boxy cabinet and engraved, black bakelite panel. It sold for about \$85.



A full house awaits the 65th anniversary radio broadcast of *The War of the Worlds* at the David Sarnoff Library on Saturday, November 1st.

unit used the famous "Cobra" tone arm, it sold poorly and was marketed for only one year.

• **John Ruccolo** displayed two Zenith hearing aids from the late 40s using subminiature tubes whose technology was utilized for WW II proximity fuses.

• **Owen Gerboth's** 1946 Zenith 6G004Y is better known as the "Global" portable. This all-loctal radio was produced in very low numbers and considered somewhat rare.

• **Marv Beeferman** showed a later version 1923 Zenith 4R. This radio represented

Our November 1st swapmeet in Hazelet went very smoothly with over 100 visitors having their choice of a diversity of radiowares spread over 45 tables. All the help of our volunteer members was much appreciated with special thanks to the Marsha and Jerry Simkin for making check-in such a breeze. Thanks also to Dave Snellman for taking care of the "coffee shop" duties, Sal Brisindi and Richard Lee for conducting a great walk-around auction and President Phil Vourtsis for attending to all the administrative tasks and behind-the-scene headaches.

The club received a very nice letter from a family who brought their father's collection to sell at the meet. In part:

"Thanks for the help members and friends of the NJARC provided my family in finding homes for my father's collection. That is exactly what we set out to do on Saturday - sell the radios to individuals like my Dad who had a love and passion for collecting old radios. It would have been much easier for us to call someone in and have them buy the lot - but we wanted them to go to other collectors just like him. We met wonderful people at your swapmeet and, for a few hours, we were able to

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

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imagine him smoozing around with everyone (as almost everyone appears to know one another) and talking radios....It gave us more pleasure to see your fellow collectors thrilled to get a bargain then making more money."

It was also nice to see Kathleen Flanagan at the meet, wife of club founder Tony Flanagan. Tony had an enthusiastic interest in radios housed in Ingraham cabinets and had collected some interesting historical material on the subject. Kathleen was gracious enough to donate this material to the club and it will form the basis of a future *Broadcaster* article.

For many members, it was a quick trip home for a change of clothes or a direct beeline to the Sarnoff Library to support a Saturday night 65th anniversary re-enactment of Orson Welles' 1938 broadcast of War of the Worlds. Al Klase, Dave Snellman, Dave Sica and Scott Marshall had already done most of the up-front technical work between Friday and Saturday morning, integrating microphones and sound effects into a coordinated whole without the usual squeals, pops and crackles. According to Al Klase, "I didn't know we'd have to set up a complete radio station, but the fun in doing it was well worth it." The crew also set up the transmitters that would beam the broadcast to over twenty working vintage radios distributed throughout the auditorium, nicely framed by posters provided by Marsha and Jerry Simkin.

A nice vintage touch was provided by Darren Hoffman who used his 1952 Rek-O-Kut record cutter to record the broadcast on real vinyl. I personally got a kick out of Al Klase's use of an actual WW I field phone to simulate radio transmissions from bombers and artillery positions...very convincing!

The program was also broadcast to radios located in an overflow "waiting room" adjacent to the auditorium should some "no-show" seats become available for this completely sold-out event. All of the radios were supplied by NJARC members with a large donation (and the associated "schlepping") of consoles by Ray Chase and Joe Bentrovato. The event also had some nice touches like a costume contest, a robot rover display and information booth from the Mars Society and some historical information provided by historian William Hart. The cast, provided by the Institute for Arts and Hu-

manities Education under the direction of Claudio Mir did a great job in providing a real "feel" for a radio broadcast.

But most of the credit has to go to Alex Magoun, Director of the Sarnoff Library, for pulling it all together. In contrast to the "Real Fact" that was under my Snapple cap, consumed an hour prior to the performance...."The first MTV video was 'Video Killed the Radio Star,' by the Buggles...", the radio star was still shining quite brightly that Saturday night.

IMPORTANT NOTE!!!

By now, all members should have received their holiday party invitation for Saturday, December 13th. If you have not, please call Membership Secretary Marsha Simkin at 609-660-8160. It is very important that you return your reply no later than November 17th (or bring it to the next meeting). We must have an accurate head count to purchase the appropriate amount of food and beverages. Unlike last year, there will be no old equipment contest and you don't need to bring a dessert, but you'll still need a wrapped, radio-related gift (new or used/\$15-\$20) to participate in our Mystery Grab Bag.

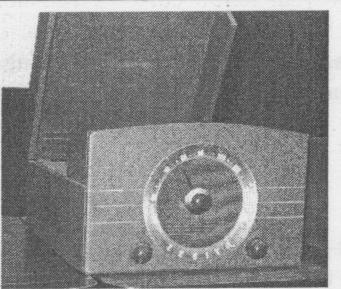
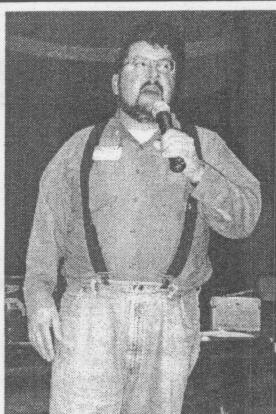
There are also two remaining volunteer positions that need filling. First, we need someone to purchase and setup cold beverages, including ice. Second, we need someone to purchase paper goods. In both cases, the club will reimburse all costs. If you care to help out, please contact Marsha and she'll provide all the details.

DATES TO REMEMBER

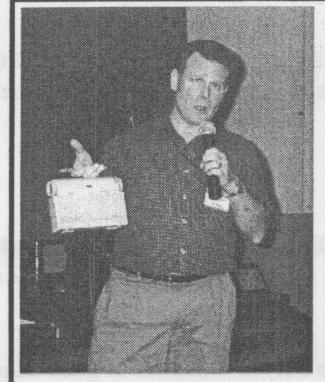
- Friday, November 14th (next meeting): Homebrew BC Receiver Contest - Don't forget your entry.
- Saturday, December 13th: Holiday Party - Return your reservation by November 17; don't forget your Mystery Grab Bag gift. Do not bring an old equipment contest entry or dessert.
- Saturday, January 17th (2004) - Repair clinic/hands-on workshop.
- January 23 - February 1 (2004) - BCB DX Contest (rules in this month's *Broadcaster*).

Congratulations to our 200th members, Peter & Nicoletta Wraight of Skillman, NJ.

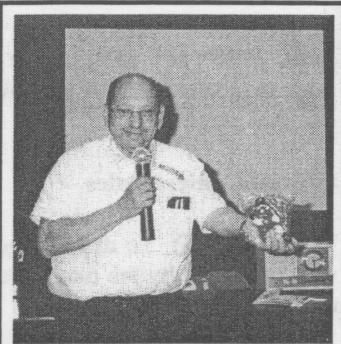
SHOW-AND-TELL



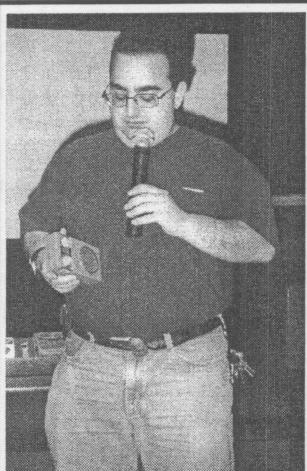
Steve Collandra



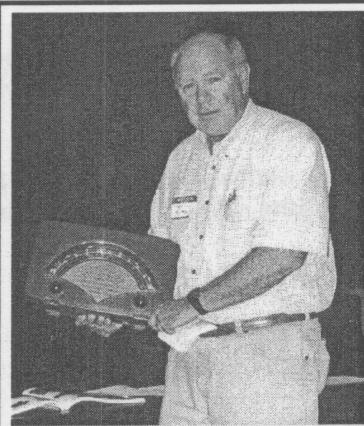
Walt Heskes



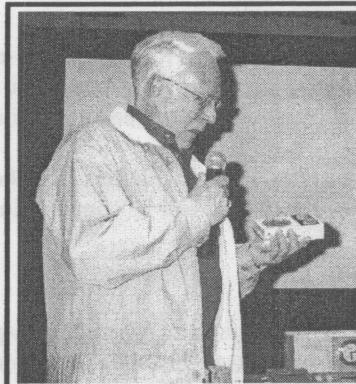
Marty Friedman



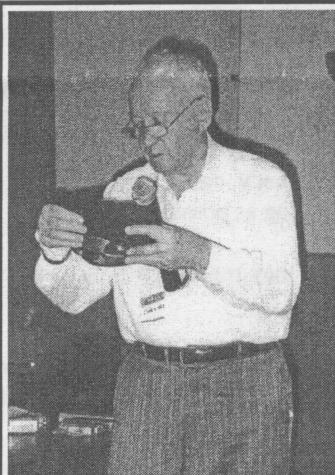
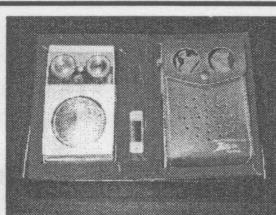
Darren Hoffman



Joe O'Neal



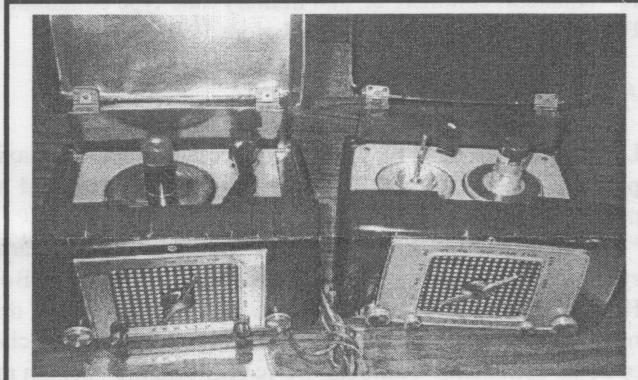
John Winans



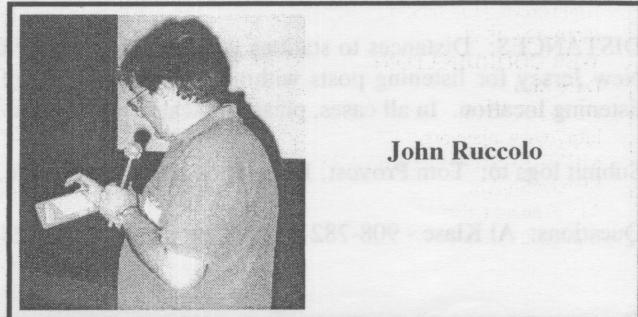
Issac Blonder



Owen Gerboth



Phil Vourtsis' "Twin-Seven" is on the right.



John Ruccolo

The 2004 NJARC BCB DX Contest

In the 1920's and 1930's some radio listeners would compete with each other for the reception of the most distant stations using the same receivers that 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 receiving location, Friday, January 23, 2004 through 12:00 Noon, Sunday, February 1, 2004..

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

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

RECEIVER CATEGORIES:

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

ANTENNAS: Anything you like.

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

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

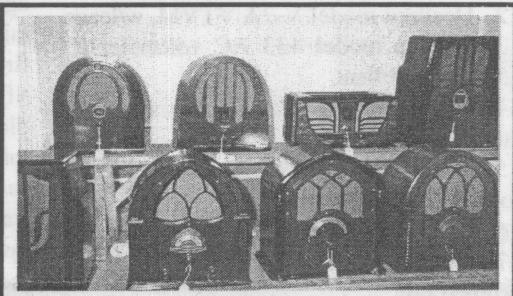
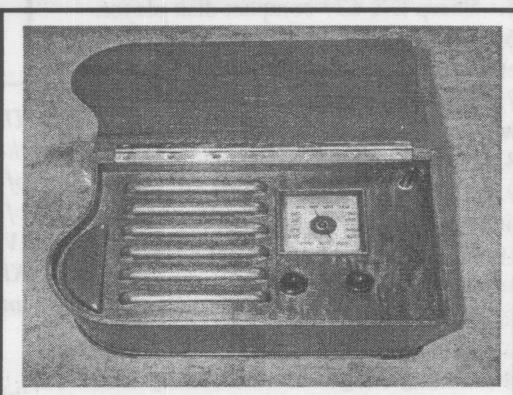
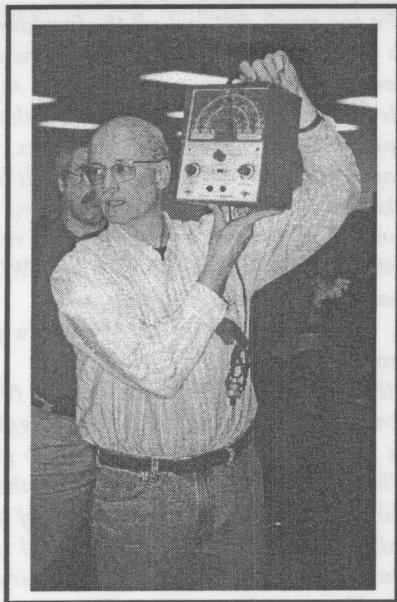
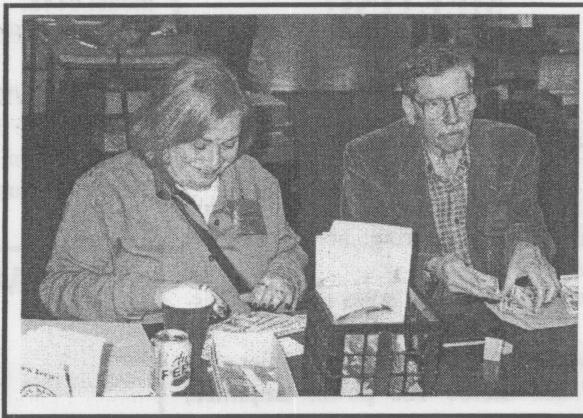
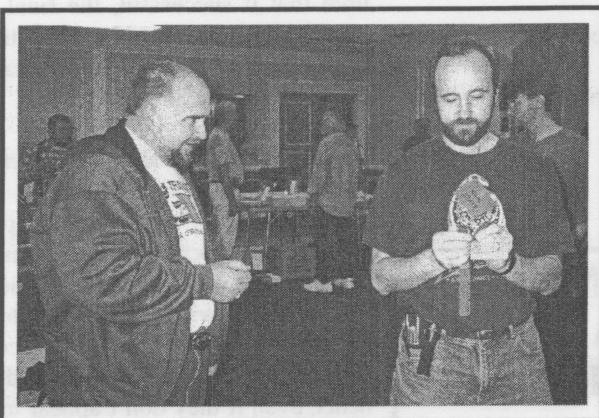
A log sheet can also be obtained at the next meeting or from Al Klase (see address below). You may reproduce it or generate a similar one of your own. Logs must be postmarked not later than midnight February 7, 2003.

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

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

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

WINTER SWAPMEET



NOVEMBER'S MEETING MINI-AUCTION

1. KLH model 21 AM/FM radio; missing speaker section covering; no power light when energized.
2. DBX II model 122 noise reduction system.
3. Dynaco PAT-4 stereo preamplifier.
4. Dynaco Stereo 120 power amplifier; w/assembly instructions.
5. Sharp DX-677 compact disk player.
6. Technics RS-TR535 stereo double cassette deck.
7. Tandberg 3000X transistorized tape deck w/manual.
8. Heathkit model AV-3 audio VTVM
9. Micronta model 22-201U 18-range multimeter; in box, w/leads.
10. Micronta 21-range model 22-210 multimeter; in box, w/leads.
11. Two "homebrew" 1933/1934 ammeter (.5A-20A)/voltmeters (1V -500V) w/leads; (interesting - signed and dated by builder; excellent construction)
12. Heathkit model V-7A VTVM, w/leads.
13. Weston model 433 AC voltmeter (0-150V) - excellent.
14. Weston model 433 AC ammeter (0-1 amp) - excellent.
15. Weston model 1528 current transformer, 1 - 200 amps.
16. Various meters in nice metal cases.
17. Shure "Hi-Track" phono cartridge in original box.
18. Heathkit model TC-2 tube tester.
19. Lafayette model "Stereo 20" stereo amp., transistorized.
20. Lafayette model FS-91 9-transistor radio.
21. Adcom model GF-3 speaker selector.
22. KLH model 18 stereo tuner, with manual.
23. BSR model 1100 graphic equalizer.
24. Lafayette stereo level indicators in its original box.
25. Holman model 2 stereo preamp.
26. Dbx model 200 noise reduction system.
27. Dbx II model 224X noise reduction system.
28. Sansui model P-M70 linear turntable; does not operate properly.

29. Jackson model 652 audio frequency oscillator.
30. Pair of Alpine 4 inch speakers (auto), model 6148.
31. Pair of Bozak stereo speakers, model B-312.
32. Harmon/Kardon model CD-191 wideband cassette deck.
33. 3 Weston meters.
34. A few surprises.

POWERING UP AN AC RADIO

Edited by Marv Beeferman

The following article is based on a piece that appeared in the October 2003 edition of "Sound Waves," the monthly newsletter of the Vintage Radio and Phono Society (VRPS). The original was written by Rich Klarr with technical help from Cliff Huff and is edited with permission...Ed.

Powering up an AC-powered radio for the first time can result in substantial damage to an otherwise working set unless certain precautions are taken. Many restorers first perform a cursory inspection to identify any obvious problems and then immediately begin to replace all paper capacitors. The power-up is usually done with a fused, variable AC source and isolation transformer. Power is normally brought up slowly, stopping at reasonable increments, to ensure the radio survives the smoke test at each stage without causing any catastrophic failures.

The following method may take a little longer, but it offers what I believe is a more structured attack for new converts and perhaps a safer result by verifying the integrity of the power circuitry. It helps identify many of the radio's power-related problems so they may be corrected without damage prior to further troubleshooting and re-capping. The assumption is, unless you have a lot of experience at circuit tracing, that a schematic is available. But if you can find the power tube, you may not need one.

I decided to use this method to attack a 1938 Zenith 6S229 table radio which I had

purchased some 15 years ago. The chassis looked relatively clean on the outside and the cabinet was in good condition. I figured that if successful, the final product would serve as a good candidate for the upcoming War of the Worlds broadcast re-enactment at the Sarnoff Library.

1. Remove the chassis (and if necessary the speaker) and inspect for the obvious. Correct any dirt and corrosion problems that might directly affect operation, but now is not the time for a meticulous cleaning. Replace wiring that has deteriorated insulation (don't forget the line cord) and any obviously burned or damaged components, even if they don't appear to be part of the power circuit.

Not too much dirt and all the insulation is in good shape but it looks like someone's been in here already - the power supply electrolytics have been replaced with what appears to be 50s vintage substitutes. Two paper caps are in such bad shape it looks like they'll need immediate attention. The tuner is also extremely difficult to rotate, with the drive belt slipping; a little WD-40 may be in order to free it up.

2. Remove all the tubes. (Now is a good time to test them.)

All tubes tested good except the 6H6G (2nd Det./AVC) which I had to wiggle in its test socket to get the filaments to glow. When I first removed this tube from the radio, it was done with quite a bit of difficulty. Perhaps the effort separated some pin leads? A touch of the soldering iron to the filament pins confirmed my suspicion and the tube was returned to service.

3. **ENERGIZE** the radio using an isolation transformer. Check for high voltage across the rectifier plates (standard value is 700-800 VAC).

Let's add a variac to that and bring it up slowly. 730 p-p...looks good for a 5Y4 rectifier.

4. Check each plate to ground - you should have the same amount of AC voltage on each plate. If not, you might have a partial short in the power transformer.

Same voltage - no partial shorts.

5. Check across the filaments. AC voltage will read 10% to 20% high because of no load on the supply. On four pin tubes, the large holes in the tube socket are the filament connections.

5.7 VAC seems a little low - well, let's continue.

6. **DE-ENERGIZE** the radio. Plug in the rectifier tube. Take a resistance measurement from cathode to ground to check for shorted filter capacitors. This measurement will protect the tubes when power is re-applied. If there is no cathode connection, check from filament to ground. The reading should be several hundred to several thousand ohms.

0.6 Megohms from filament to ground...we're getting close.

7. **ENERGIZE** the radio. Check for B+ (vdc) at the input to the power supply (cathode/filament of the rectifier tube). The reading should be at least 250 vdc.

Let's bring power up slowly again with the variac. An unloaded 450 VDC looks good.

8. **DE-ENERGIZE** the radio. Insert the output tube.

Let's check the speaker field resistance at this point - the schematic calls for 1250 ohms; a 1230 ohms measurement confirmed continuity.

9. **ENERGIZE** the radio. The power supply is now loaded; generally, the output tube pulls more current than all the other tubes.

10. Measure the plate voltage of the output tube - it should read around 200-300 vdc. This is supplied from the output transformer which is usually mounted on the speaker but may also be found on the chassis.

230 VDC...we're almost there!

11. Measure the bias between the control grid (+) and cathode (-) of the output tube. The proper negative voltage may be found on the radio's schematic or a tube manual. If the value is not correct, check for the following:

a) The coupling capacitor from the prior audio tube may be bad.

b) The grid of the output tube may be drawing current. (You can check this by removing the output tube and checking the bias.)

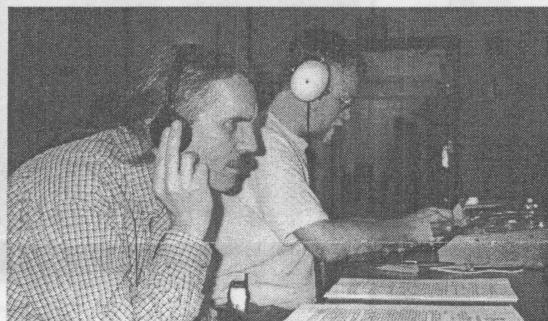
c) There are problems in the biasing network.

We'll check for actual pin voltages per Riders...-3.5 and -2.

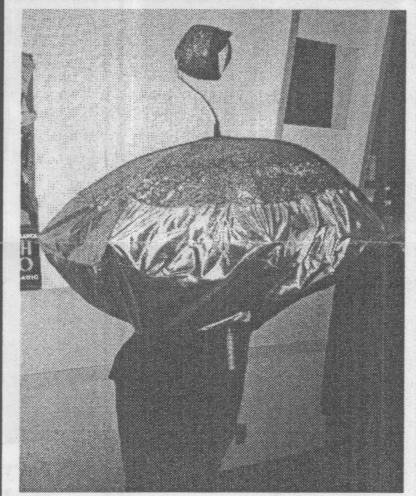
12. If the output tube is OK, you can now **de-energize** the radio and install the remaining tubes. You can now power up the radio safely. Other things may be wrong, but troubleshooting can commence without damaging the radio.

With all tubes in and the speaker connected, let's do another slow power-up with the variac. With a 100 foot long wire, reception is great and the tone control is effective. In fact, volume seems a little excessive at 1/4 maximum...we'll have to look into that. Tuning is only 2 KHz off and the short-wave bands come in fine. It appears that even with electrolytics that hadn't seen the light of day for at least 15 years, the radio should do well at Sarnoff. We can wait for a later date to replace them and the remaining paper caps...this radio has a date with Orson Welles thanks to another safe and successful power-up!

WAR OF THE WORLDS



Our technical crew - Scott Marshall, Dave Sica, Darren Hoffman and Al Klase



My Favorite Martian



Al Klase and Dave Snellman make some final adjustments.

More pictures on
page 8.

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.

13" Zenith color TV (1987) - \$30
12" GE color TV (1985) - \$20
Tom Musacchio, 609-448-0787

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.

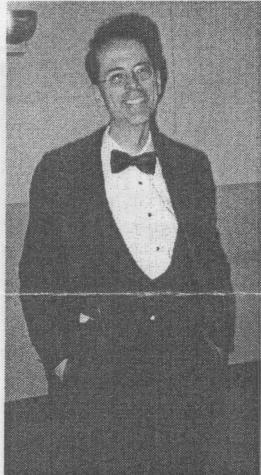
Blaupunkt "Arkansas 59" type 532/4533 for sale in the Red Bank, NJ area. Radio was shipped from Europe and never used in US. Best offer ... (732) 530-9832, jwattvo@email.com

RCA Radiola model 80/82, 1929, working with good tubes but needs capacitors, value \$170-\$190, asking \$100. George Argila, 15 Bayberry Rd, Princeton, NJ, (609) 818-9595, czandga@aol.com

WANTED

Magnavox Sportsman model AW-24, all wave, 7 transistor, 2-band portable, in good condition and working. Joe Bentrovato, 84 E. Munson Ave., Dover, NJ 07801. (973) 361-7392 JBentrovat @ msn.com

"Radio in the Home" magazine, December 1925. Other issues also considered. Also looking for Sparton radio ads from 1928-1929 Liberty magazines. John Okolowicz, 624 Cedar Hill Rd., Ambler, PA 19002, john@grillecloth.com

YOUR AD HERE...FREE TO 200 MEMBERS

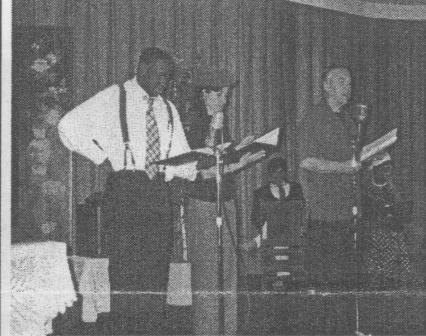
A very dapper Alex Magoun



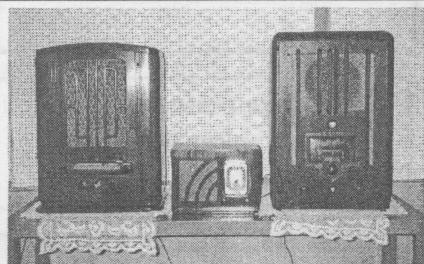
A very un-dapper mad scientist.



Jerry and Marsha Simkin provided the posters.



A great cast from the Institute for Arts and Humanities Education directed by Claudio Mir



One of six radio groupings surrounding the auditorium and carrying the broadcast to the Sarnoff audience.

