

SOUND WAVES

VRPS Summer 2016



From the President

I write this column while I sit in our nation's capitol. No, I am not here to consult with Congress or something really spiffy like that...my daughter has some Daddy-Do projects at her new home. But, being 1300 miles from home does not keep me from my appointed task (Our editor appointed me to write this). Every year I use this issue of the SoundWaves to remind you there are lots of other radio meets throughout the country that make great vacation spots. Again, this year, I have been invited to conduct the auction that

kicks off the Antique Radio Club of Illinois Radiofest. I really enjoy this gathering of several hundred like-minded radio collectors and the fact that there are lots of great flea markets, antique stores, hamfests, and museums along our vacation route. If the Chicago area meet is not in your plans, then maybe the Michigan or Wisconsin, or even the AWA meet in upstate New York, is more to your liking. Regardless, whether you are new to the hobby or an old timer, I encourage you to expand your knowledge by seeing the hobby in other parts of the country.

Now on to more localized thoughts. Larry Lindsey, our program director, continues to look for (and find) meeting topics that will be both enjoyable and informative. Attendance at these meetings has been running around 30 - 35 each month. Take advantage of these opportunities, not only to enjoy hearing about some special area of collecting, but seeing that you might have a talent or hobby niche that others can benefit from. Contact Larry if you would like to present a program, or even if you have a suggestion on a meeting topic.

One more note before I tie a ribbon around these thoughts. Sadly, I have received notice that long-time member and former board director, Bob Olinger, has succumbed to a lengthy illness. Bob was a television collector and had an extensive collection, including a working model of the first color set. Our thoughts are with Marilyn and the family. Until our September issue, I will leave you with another encouragement to expand your hobby view this summer. Hey, maybe that is a future meeting topic... "How I spent my summer vacation..."

— Jim

April 16, 2016 Meeting Notes

Vice president Randy James conducted our meeting, which was held at the city of Irving Senter East facility. He reminded us of the Les Sims Collection auction, to be held April 30. The meeting then proceeded with our program chairman, Larry Lindsey, who introduced Mike McCarty.

Mike laid the background by providing a time line of important contributors to the invention of the Vacuum Tube. By the end of the 19th century, the understanding of electrical behavior was be-

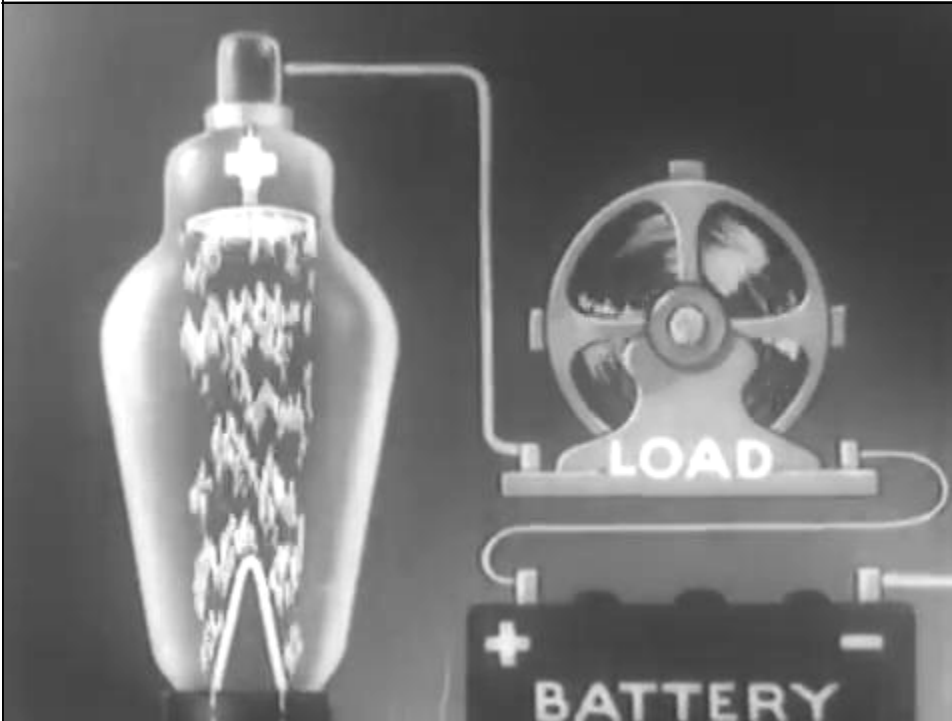
ginning to be well understood and the technical evolution to the vacuum tube. Contributors such as Franklin, Guthrie, Faraday, Edison, Tesla, Maxwell, Hertz, Thomson, Fleming, DeForest, Hull and others had contributed greatly to this understanding.

Here, Mike demonstrated a clever Electroscope that he had built from common household items. With it, positive and negative charge particle effects were explored along with static and electrical fields. An analogy of gravity and orbits facilitated a discussion of electrons' behavior with respect to the atom. With this background, the topic of "Vacuum Tube Theory" introduced the behavior of an electron inside a vacuum tube and the "elements" necessary to control this behavior. Starting with the simple Diode these concepts were explained and illustrated with a demonstration of current flow utilizing "B+ supply" affect on the plate. This associated with the "space charge" from the source (filament or cathode) interacts with the plate in specific ways, Mike explained.

At this point he showed an edited vintage film, "Tube Theory," which again reinforced the discussion of vacuum tubes, tube elements, and types. In addition, the film covered the various applications and uses of this technology. Applications such as rectification, amplification, oscillation, and control made the vacuum tube extremely important to the electronics industry. Following how the Diode, Triode, Tetrode, (pentode), contributed to each of these functions was discussed. An interesting feature of the film was its views of thyratrons lighting up as they became active.

After the film, Mike explained that the "A" supply provides electricity to heat the filament, which either emits electrons or heats a separate cathode for emission. If the plate gets a positive current, it comes from the "B" supply.

We were then shown two types of tube function curves. These curves showed that tubes have two limitations: Space charge limited current, in which the current is limited by the ability of the plate to attract electrons, and emission limited current, where current is limited by the ability of the cathode to provide electrons. We further learned that it is often necessary to provide a "bias" voltage to establish the operating point (the point at which the tube begins amplification or oscillation). The source of this voltage is commonly called the "C" supply.



Mike closed by pointing out that if you calculate the ratio of control grid voltage to plate voltage, you have the μ of the tube. If you divide its current by its voltage, you find its transconductance or gain, which is represented by G_m .

We are indeed fortunate to have Mike McCarty as a member of our group who is willing to make technical presentations with unrelenting enthusiasm and preparation. His clear, concise treatment of this and other subjects have been well received to the benefit of our interests. His paper is available on our Web site (www.vrps.org) "Technical

Center" page. It may be down-loaded and printed. In addition, the edited film "Tube Theory" can also be viewed. Mike also has articles on the Fun With Tubes website.

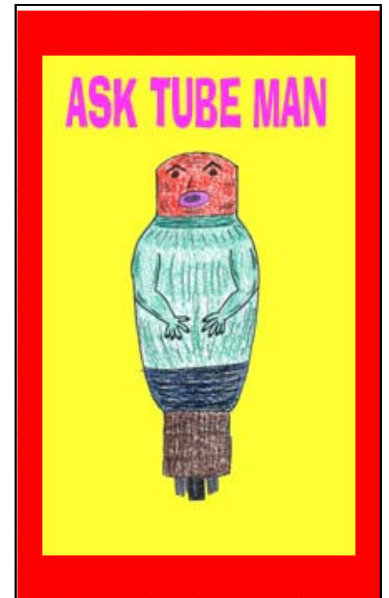
We were also treated to member Crist Rigotti's recent restorations of a 1935 Aetna TRF radio and his 1950 Philco T702 television.

Author's notes: Larry Lindsey also brought a copy of a Star-Telegram article on the Olden Years Musical Museum in Duncanville, and a full page ad from the New York Times offering restored radios at prices that were significantly multiplied from those normally seen for similar radios at club auctions. The New York Times website has a full listing of restored radios for sale.

—Steve Nance & Mike Grimes

Artwork at right used with permission from Fun With Tubes website at:

<http://www.angelfire.com/electronic/funwithtubes/>



Old Equipment Contest Categories for the 2016 Convention

1. Crystal Receivers Pre 1940
2. Battery Receivers Pre 1928
3. AC Table Receivers Pre WWII
4. Transformer-less Tube Radios Pre 1960 (Includes Portable Radios)
5. Foreign Radios
6. Transistor Radios Pre 1965
7. Tube Type Audio Equipment
8. Phonographs and Related Accessories Pre 1928
9. Speakers and Microphones Pre 1960
10. Tube Type Ham Radio or Military Equipment (Includes Any Telegraph Items)
11. Novelty Radios-Tube or Transistor
12. Radio Related Ads, Ephemera, and Accessories
13. Televisions Pre 1970
14. Open Category (Radio Related Items Not Belonging in Other Categories)
15. Art Deco Radios (Including Catalin, Chrome Front, or Others)
16. Vacuum Tubes
17. Homebrew/Kit Radios
18. Theme-Edison (Includes Any Edison Items)

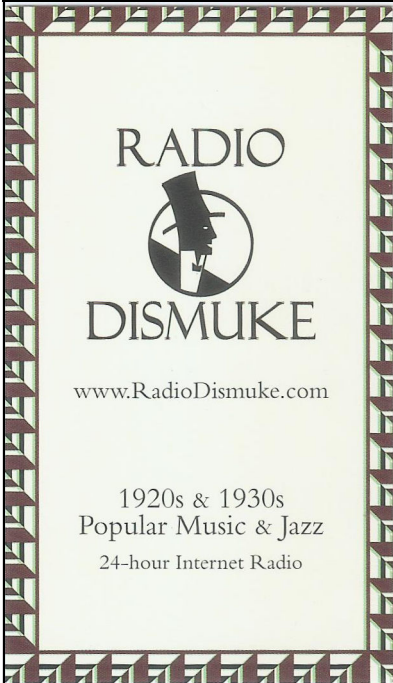
Photos from the May 21st Swap Meet

Heidi Thompson

Rita Muir

Sold for \$1

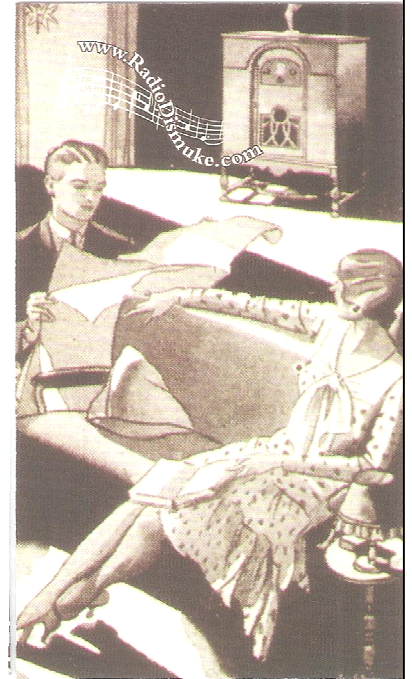




From the Radio Dismuke website:

24 hour Internet Radio
Vintage Popular Music and Jazz
1925-1935

Discover the exciting music from one of the most vibrant decades in popular culture and entertainment. From the boom times of the "Roaring '20s" to the hard times of the Great Depression...from frantic Charlestons danced to by a generation of flappers to sentimental ballads performed by the early crooners...from the hot jazz bands of the top Harlem nightclubs to the popular dance bands of the formative years of the swing and big band eras, the great music of the 1920s & 1930s lives on and is entertaining



a new generation of enthusiastic listeners. Radio Dismuke features original 78 rpm era recordings from the 1925 - 1935 decade and can be heard at no cost from anyplace in the world where there is an Internet connection.

—Eric Kirst contributed this gem (he occasionally DJs the live broadcasts)

Enjoy Vintage Radio on Your Vintage Radio— Turn an old junk AA-5 radio into an AM broadcast band transmitter (topic covered during August 2012 meeting) information on

<https://www.youtube.com/watch?v=6bdqagtuu1s>

Randy James's Reminder: Please check renewal dates on the SoundWaves mailing label. Dues are \$20.00 a year and are always due on November 1 of the current year.
Randy James (817)881-0974.

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Repairing a Damaged Bakelite Radio Case (Two Pictures)

Prepared by Gary Swymeler, OKVRC Member 1/12/16

Extensive damage from the left rear to the mid front and then up to the dial face! Several different items were used in the repair of this case.

- Flightline Hobby Insta-Cure Super Thin 1-3 second Cyanoacrylate glue to piece the pieces back together. (Available through Amazon)
- Milliput Superfine two-part epoxy putty for filling in any voids and blending the broken case back to original contours. (Available through Amazon)
- A Scotchbrite pad to break the glaze on the Bakelite for better adhesion of the Milliput. (Available most supermarkets)
- 220, 320 and 400 grit wet-or-dry sandpaper along with a 3"x 3/4" or so long wooden block to sand the excess off and ensure smooth, straight, even case walls. (Available most hardware stores or Amazon)
- Lacquer Primer Filler in the rattle can, I use black. (Available at Amazon or automotive parts store)
- Clear Lacquer in the rattle can. (Available at Amazon or automotive parts store. I use this to coat the interior of the case after priming to give an even color and somewhat original color back to the Bakelite.

Procedure for Bakelite Case Damage Repair

The first step in the repair is to ensure there are no small pieces of Bakelite adhering to the broken pieces that would impair the broken pieces from fitting tightly back together. I do a test fit of broken pieces ensuring they will fit back together. Sometimes there is a certain order necessary to reassemble the parts, remember that order. Once comfortable with the fit reassemble the parts and apply the Cyanoacrylate glue to the broken joints and hold until set. (This only takes a few seconds; the better you fit these, the less work you will have when finishing.) Set aside and allow the glue to cure. You may need to give several applications of the Cyanoacrylate ensuring the cracks are thoroughly filled with the glue. Once cured take your Scotchbrite pad and thoroughly scrub the Bakelite at all breaks ensuring the original Bakelite shiny finish has been dulled. At this point you can mix up a small portion of the Milliput epoxy paste and using a small scraper, I use a single edge razor blade, and apply it over the broken pieces in a thin layer. After this has set you can take the sanding block and the coarser of the sandpaper and remove all that is necessary to achieve a matching flat smooth surface. Continue with thin coats of the Milliput until the damaged area matches the original contours of the case. Once satisfied with the contours and evenness use the primer filler, coating the repaired area with several coats. The combination of the Cyanoacrylate and Milliput epoxy paste makes a durable repair I have found to be every bit as strong as the origi-

nal unbroken Bakelite. After this has dried use the 400 grit sandpaper to bring the area back to a blemish free (no pits or chips) surface. This may require several primer coats to achieve the desired finish. Once satisfied with the primed and sanded damage repair I use the Scotchbrite pad going over the entire case. This gives a good surface for whatever paint you are going to use in the final finish. The case is now ready for the final color coat.

Case Repair Completed Ready for Final Color Finish (Four Pictures)

Inside of case at repaired area



Outside of case at repaired area



Bottom of case at repaired area



Backside of case at repaired area



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MONTHLY MEETING PROGRAMS 2016

NOTE: Programs will be held at various locations in Irving, Texas. Make note of the location as they may change from time to time. Senter East, 228 Chamberlain St.; or Garden and Arts, 906 S Senter Rd. Maps are located on the WEB site, www.VRPS.org EVENTS page. Programs start at 2pm. unless otherwise noted. Call us on the cell tellie if you get lost: 972-898-7251 or 972-742-8085.

- June 18, Program 2 pm: "Audio Systems" with Kurt Ehrlich. Senter East, Irving, TX
- July 16, Annual Repair Session 8am to noon. Bring your troublesome radios & phonos. Senter East, Irving TX
- August 20, Program 2 pm: Reading Schematic Diagrams with Mike McCarty. Senter East, Irving, TX
- September 17, About 7 am 'til noon. Tail-gate Swap meet. Senter East, Irving, TX
- October 15, Program 2 pm: Radio components & where they came from. George Potter. Arts Building; Irving TX

Programs are subject to change, contingent on scheduling conflicts. As always, your suggestions for programs/ content are welcome. If the programs do not fit your needs and you want something different, let me know. I need volunteers to organize other programs, so consider presenting a program yourself. Call anytime or send an email: Larry Lindsey email: pipilindsey@tx.rr.com telephone: 817-312-8761.