

Southeastern Antique Radio Society

Newsletter
www.sarsradio.com

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Caution: Performing repairs on radios can be dangerous. SARS assumes no responsibility for accidents resulting from any information contained in its website or newsletters.

Presidents Message

JIM POWEL

How Did I End Up Here?

In retrospect as to how we came into the hobby, I'm sure each of us has a unique story. On occasion I'm asked how I became so passionate about a collection of old tubes, and a dusty old cabinets that now and then will produce sound. Albeit sometimes mixed with pops, cracks, and hisses. Such is the glue that binds us, I see a group of enthusiasts that share this bit of nostalgic history. As we each continue to take on new radio challenges, let's also strive to reach out and share our hobby with young and old alike. You never know who's life can be changed from an seeing a simple oscilloscope signal or an old tube radio being brought back from the broadcast precipice of yesteryear.

As we each continue to take on new radio challenges, let's also strive to reach out and share our hobby with young and old alike.

Join SARS Now:



Go to our Website at www.sarsradio.com for complete information on how to:

- Become a member
- Have fun at monthly dinner meeting
- Attend biannual swap meets for great deals – buy, sell, trade



This is Roger's 1922 Kit Radio found on the streets of Chicago back in the 1960's



Knight Regenerative Radio

Blast from the Past

MARK PALQUIST

Refinishing Wood Cabinets – Part 1 of 3

One of the joys of attending swap meets, garage sales or surfing for radios on Ebay is

finding a radio that is original in all respects. Original finish, tubes and parts under the hood is getting so rare that if you find one it's probably best just to set it on the shelf as is and preserve it for future generations.

Unfortunately, the type of radios I usually bring home have been used as plant stands, step stools for house painting, airplane wheel chocks or mouse maternity wards. These radios have bounced around so many swap meets in the back of pickups that they deserve frequent flyer miles. If the cabinets have been "restored" it's brushed-on polyurethane put directly over the old finish during a dust storm. The guts have been tortured by a 10-year old using a blow torch and acid-core solder. The back of the cabinet has been opened up so many times it has stretch marks. If they have wood cabinets, these radios are good candidates for developing your skills in repairing or restoring the finish. In the first

part of this 3-part series we'll talk about different wood finishes and how to identify the original finish. There are dozens of books about finishing wood. Three that I would recommend are Understanding Wood Finishing, by Bob Flexner[1], Fine Woodworking on Finishing and Refinishing[2], a collection of articles from several years of Fine Woodworking Magazine, and Great Wood Finishes[3], by Jeff Jewitt. These books are available at Highland Hardware on Highland Avenue, at Amazon.com or Barnes & Noble (bn.com). There are hundreds of years of collective knowledge on the subject, and no two craftsmen are likely to agree on the best course of action in restoring a piece.

Types of Wood Finishes

If left unfinished, a piece of wood furniture will gradually fall prey to whatever comes in contact with it. Finger

prints and oils, food stains, moisture, heat and sunlight will eventually discolor and degrade the appearance. Putting a stable film of material between wood and the environment will preserve and beautify the wood and enable one to make choices about the color, look and feel of the wood surface. Jewitt classifies finishes in general as "evaporative" or "reactive". [3]

Shellac, lacquer and water based finishes have some resin mixed with a carrier such as lacquer thinner or water. When applied to the surface, the carrier evaporates, leaving dense, clear film behind that adheres to the wood. Most finishes I have tested on radios from the '30s or '40s probably fall into this category. Lacquer can be sprayed on with good results and it dries very quickly so additional coats can be built up in a short time. This is just the ticket for your depression-era high volume radio cabinet sweat shop.

Spray on some finish and get the product out the door. If touchup is needed, the original solvent can be re-applied and will soften or 'remelt' the original finish so the damaged spot can be blended in. These finishes are thermoplastic, meaning they can be softened by heat.

A reactive finish is one that actually forms a new compound when exposed to air after application. In addition to the resin and the carrier, it has the third part called a "vehicle". When this type of finish is applied, the carrier evaporates, leaving behind a tacky mixture of vehicle and resin. Oxygen from the air (or a catalyst mixed in just before application) reacts with this mixture, forming a new compound that is stable and does not get dissolved when another coat of finish is put on top of the dried finish. Oil-based varnishes, polyurethane varnish and catalyzed lacquers fall into this category. These finishes are

"thermosetting". If you have ever applied polyurethane varnish, the directions usually call for a long drying time and sanding with 220-grit paper between coats.

Sanding increases the surface area and improves the probability of a good mechanical link to the sub surface. Reactive finishes don't bond chemically to the previous coat. If you've made a mess of a project because you didn't wait for the first coat to dry properly before applying the second coat, it was because the first coat was sealed in before it had a chance to properly form the new, stable compound by reacting with oxygen in the air.

Examples of reactive finishes are linseed oil, tung oil, oil/varnish blend, wiping varnish, polyurethane, and "all-in-one" stain, seal and finish (e.g. Minwax). Once applied, these finishes can be more difficult for future generations to remove and refinish. David McDonald, expert

furniture refinisher at Tara Schoolhouse Antiques in Sunnyside, GA advises, "I don't do anything to a piece of furniture that can't be undone later".

Removing the Old Finish

If your radio is a basket case and just repairing the dings is not an option, you need to decide how to remove the old finish.

Mechanical methods include scraping and sanding or heat guns. Chemical methods include stripping or "refinishing".

Mechanical methods can be tricky and tedious, especially if there is fine detail, carving, grillwork etc. to work around.

Most radios have veneered surfaces and it's easy to sand through the veneer at the edges if you are not careful. It's also going to take a lot of elbow grease if the radio is a large console. Flexner states simply "sanding, scraping and removing with a heat gun- are usually too harsh for furniture"[1]. So let's concentrate on

the chemical methods.

Strippers and "Refinishers"

Flexner classifies four types of chemicals used in strippers. The two most popular are described below. All of them sound nasty and it's critical when using strippers to observe safety precautions for eyes, skin and lungs as stated on the product directions.

- Methylene Chloride (MC) is the most popular stripper. A popular example is Zip Strip™. It's non-flammable but its toxic, burns when you get it on your skin, and metabolizes into carbon dioxide when you get it in your bloodstream. But hey, it really gets that old finish off in a hurry! Read ALL the directions and safety precautions on the can and follow them. You will recognize MC as the stuff that you lay on in a thick layer with a brush and then

wait for it to bubble up and soften the finish. You then scrape off the gunk. Wash the wood with a solvent such as mineral spirits, lacquer thinner, naphtha or alcohol to remove all the residue, especially if the stripper contains wax (most home owner strippers do).

- Acetone, Toluene and Methanol (ATM) are the components of lacquer thinner. Stuff like Homer Formby's Furniture Refinisher or Ace Hardware Furniture Refinisher contains these chemicals in varying concentrations. You apply them with steel wool or a ScotchBrite™ pad and keep working and squeezing out and re-applying with clean solvent until the original finish is gone. These work pretty good if the original finish is of the evaporative

kind (like lacquer). Do any kind of stripping outdoors if possible so you don't inhale the evaporating solvents. If the original wood was an open-grain wood like walnut or mahogany (true of most old radios) it may have had a paste wood filler applied prior to the final finish to level the surface. This process may disturb the filler so you may want to re-apply some filler as part of the surface preparation process. More on this in Part 2 next time. We'll talk about surface preparation, staining and applying the final finish part 2 & 3.



This is Richard Rodgers' Wards Airline radio (model unknown) which was stripped with Ace Hardware Furniture Refinisher (ATM), cleaned with a rag soaked in the same stuff, then filled with a dark paste wood filler before final sanding and staining with Minwax Red Mahogany. The top coats are Deft Clear Wood Finish (lacquer) with a final coat of paste wax. This radio had been used as a plant stand and there was a six-inch diameter white water ring along with raised veneer on the top. The detail on the grille makes it look like a little house with fancy windows. It also has a great gold dial. It's an "All- American Six" with the extra tube used as an RF amplifier.