

Winter 2009- 2010 Newsletter

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Caution: Performing repairs on radios could be dangerous. SARS assumes no responsibility for accidents resulting from any information contained in this web site or newsletters.

General Info

Southeast Antique Radio Society
113 Laurel Ridge Drive
Alpharetta, GA 30004
<http://www.sarsradio.com>

Club Officers

President: Rich Rodgers
Vice President: Gary Beale
Secretary: James C DelPrincipe
Publicity & Membership: Gordon Hunter
Treasurer: Tom Knutson
Newsletter Editor: Mark Palmquist
Webmaster: Rich Rodgers

Support Your Club

The Southeastern Antique Radio Society meets on the second Monday of each month at RYANS Restaurant, 7045 Jimmy Carter Blvd. Norcross, GA 30093. Meetings start at approximately 6:30 PM. Most attendees arrive early and eat before the meeting. In addition to club business, meetings have a "Show and Tell" session where members bring in items to display and discuss. All are encouraged to participate in this activity. See the monthly schedule elsewhere in the newsletter and the map below.

Next Swap Meet

Saturday February 20, 2010 at 8 AM
DoubleTree Hotel - Barrington Ballroom
1075 Holcomb Bridge Road
Roswell, GA 30076
See <http://www.sarsradio.com> for more details

**IN TEST
EQUIPMENT
Successful Service Men**

Stick to fundamentals

Successful servicemen stick to test equipment which measures in fundamental quantities. The reasons are obvious:

Fundamental test equipment *never* grows obsolete . . . eliminates those frequent, costly equipment replacements due to circuit changes. The pointer on a good instrument tells, *exactly*, the true condition in the circuit under test . . . leaving nothing to chance or guesswork. In addition, *it's simple for any serviceman to check a fundamental instrument for accuracy.*

Remember, when buying your next equipment, that all WESTON test units measure in radio fundamentals. That's why WESTON radio instruments remain serviceable for years . . . *never discarded, never idle*, because of changes in receiver circuits. Remember, too, that WESTON instruments are used by practically all leading manufacturers because of their greater dependability . . . greater economy. This name also is *your* best assurance of dependability and satisfaction in radio test instruments. The coupon will bring you complete data.

**WESTON
Radio Instruments**

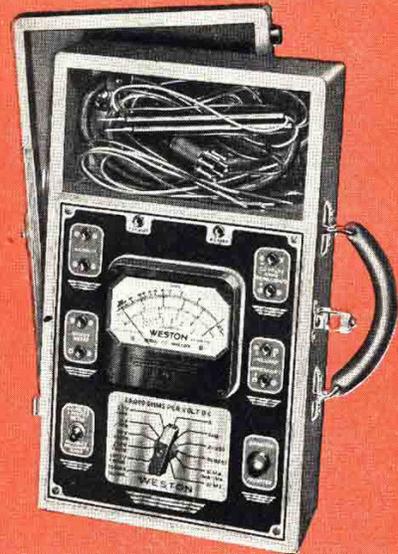
WESTON ELECTRICAL INSTRUMENT CORPORATION
581 Frelinghuysen Avenue, Newark, N. J.

Send full information on WESTON fundamental test instruments and WESTON tube checkers.

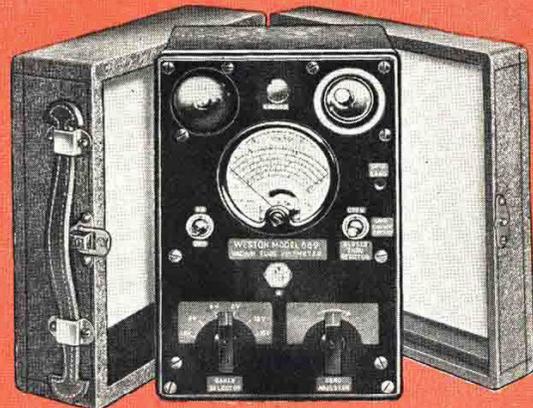
Name.....

Address.....

City..... State.....



WESTON Model 772 Super-Sensitive Analyzer (sensitivity 20,000 ohms-per-volt). Big, dependable 50 microampere WESTON meter. Broad ranges meet every test requirement for receivers, transmitters, auto testing, television, sensitive relay circuits, etc.



WESTON Model 669 Vacuum Tube Voltmeter. Direct reading, measures gain per stage—r.f. amplitude in oscillator circuit of superhets—all test on AVC circuits, PA systems, and all measurements where high frequency is a factor.



**WESTON 773 "quick-test"
Tube Seller**

Like WESTON fundamental instruments, this attractive counter tube checker has been designed for speed, simplicity and dependability. Minimum number of proved switches assures long, trouble-free operation. Rotator tube chart simplifies test procedure. Makes all tests on all tubes. Impressive looking, in polished wood case. Also available in portable carrying case.

My Dog at my Radio! (A primer on how to install grill cloth) By Mark Palmquist

The quiet of a Wednesday morning in December is broken by a phone call from a panic-stricken lady who needs her radio fixed before lunchtime. Most radios have been waiting about 30 years to be repaired so this seems very unusual. She explains that she was cleaning house and temporarily removed her husband's prized Philco cathedral from atop his desk in the office and moved it to the den where they keep their child's new puppy.

The puppy had attacked the radio and chewed through the grill cloth, leaving a hole in the front. She wants it fixed before hubby comes home from work. This seems more like something a cat would do. I quickly go on-line to radioatticarchives.com and find a photo of the radio and it appears to have Sam Mashburn's (the grill cloth man) pattern number 3 (also used on Philco 90's). Fortunately I still have about a yard of this pattern in stock.

I said "Sure, come on over and we'll have a look and see what we can do". 45 minutes later she arrives from Kennesaw with the radio in tow. The original grill cloth had been replaced before with a piece of tan burlap. Behind the hole was the speaker cone, which had been repaired before and stuck in the glue the repaired speaker cone were bits of ...cat hair? No wonder the dog had gone nuts when the radio appeared. She had a pile of books with her so I asked her to have a seat in one of the rocking chairs in the "Radio Room" and I went to the shop to go to work. This one was fairly easy. After removing the chassis and speaker, the grill cloth cardboard came out in one piece after removing some tape and a few staples.

One of my favorite radio restoration books is *Antique Radio Restoration Guide* by David Johnson (2nd edition, 1992 Krause Publications). There is a section on grill cloth repair that I have found most useful. Mr. Johnson suggests that putting a backing of "fusible interfacing" on the grill cloth before mounting helps to set the threads in the cloth, makes it flat and smooth, and enables mounting it nice and tight. Fusible interfacing is sold at fabric shops and is a non-woven textile backed with a heat-activated adhesive.

Warning: Audiophiles may be traumatized by what is to follow so they should stop reading now and skip to the next article:



I cut a piece of grill cloth slightly larger in all dimensions and a matching piece of the fusible backing. I set the iron on the “wool setting” about 1/3 below the max heat setting. Previously I had built a special ironing “board” out of a 2-by-3 foot piece of one-half inch thick plywood, which I sanded and then ironed on a piece of fusible interfacing to make a clean cloth ironing surface. The large size allows preparing a big cloth for a console without moving anything.

Here are the steps to prepare and mount the grill cloth: Note: The photos show mounting grill cloth on a console speaker board – a different radio than the one the dog ate

- 1. I plug the iron into a spring-wound “Alzheimer’s timer” and set it for about 15 minutes. That way the iron will shut off by itself and I won’t forget and leave it on. The timer is nothing more than a home-improvement store timer used as a wall switch in place of a snap-on-off wall switch. I mounted the timer in an outlet box. See photo below. I also have my soldering iron plugged into one of these.**
- 2. With the back side of the grill cloth facing up, spray it with water from a spray-bottle (like an old Windex bottle) and iron out the wrinkles.**
- 3. Arrange the grill cloth so that the pattern is straight and square with the edge of the board. Any wiggles or curves in the pattern will become permanent after the following steps, so now is a good time to make sure the pattern is straight and square.**
- 4. Cut a piece of clean cotton (an old sheet or pillowcase works well) to use as a press cloth.**
- 5. Put the fusible interfacing on top of the wrinkle-free grill cloth and place the press cloth on top of this.**
- 6. Dampen the press cloth with the spray bottle.**
- 7. Place the iron (still on the “wool” setting) on the press cloth for 12 seconds and apply light pressure. Move the iron over and repeat. Continue this until all of the grill cloth/backing has been “heat treated”.**
- 8. Lightly move the iron around on the press cloth to fuse any spots that you might have missed before.**
- 9. Turn off the iron and remove the press cloth and grill cloth from the ironing board. You will now have a nice flat and straight piece of grill cloth with the threads at the edges fused and non-fray-able.**
- 10. Clean any gunk, staples, tape or glue off of the original grill cloth board.**

11. Mark the center of the grill cloth board at top and bottom and align the center of the grill cloth pattern to the center of the board
12. Using “tacky glue”, clear drying fabric glue also sold at the fabric store, apply a thin bead of glue around two sides of the grill cloth board, in an area that is masked by the cabinet when the grill cloth board is installed.
13. Carefully align the grill cloth with the “show side” facing the front of the radio and glue it to the bead of glue on the grill cloth board. Pull and stretch the two sides so the pattern is square with the edge of the board, then find something else to do until the tacky glue sets.
14. Come back and apply glue to the other 2 sides of the backing board along the edges. Pull and stretch the grill cloth so it is tight and allow it to set up.
15. Trim the excess cloth from the edges of the board and carefully trim the cloth away from any openings used for control shafts or dial windows.
16. There will probably be three to six small holes where the screws went through the front panel and grill cloth board to hold the speaker board or speaker in place. These are now covered by the new grill cloth. I use a warm soldering iron tip to “melt” the holes in the new grill cloth, working from the back. This cauterizes the edges around the holes and helps to prevent snagging the fabric when the screws are inserted and tightened. Once you have the holes located from the back you can clean things up by melting from the front. This step requires a small tapered soldering iron tip. A big soldering iron or soldering gun should not be used (see photo).
17. Mount the grill cloth assembly with holes aligned to the holes in the cabinet. If there is a good fit you can now screw, staple or tape the grill cloth/speaker board assembly back in place, install the speaker board screws and speaker and reassemble the radio.

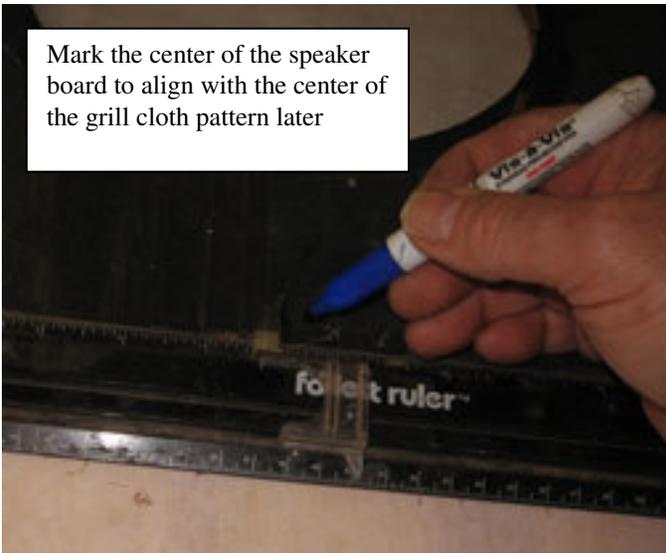




Iron is set to the "Wool" setting



Cut the grill cloth and fusible interfacing slightly larger than the speaker board



Mark the center of the speaker board to align with the center of the grill cloth pattern later



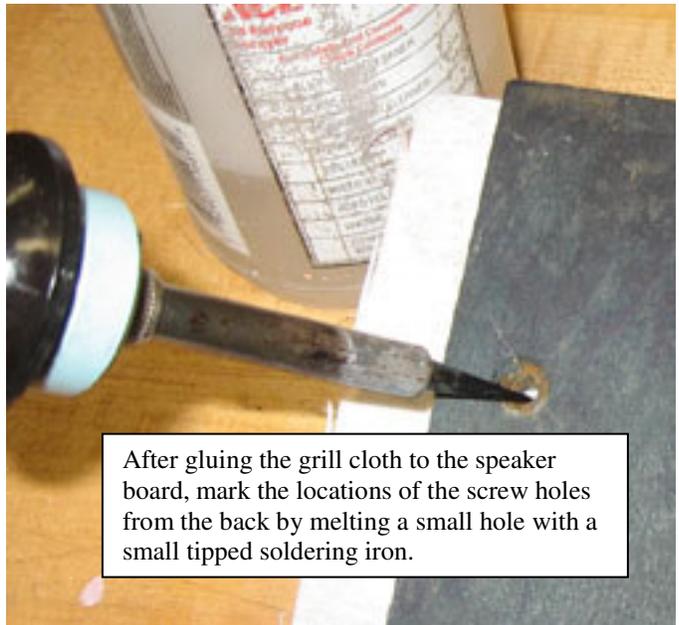
Marking the center of the grill cloth pattern after fusing the pellon to the grill cloth.



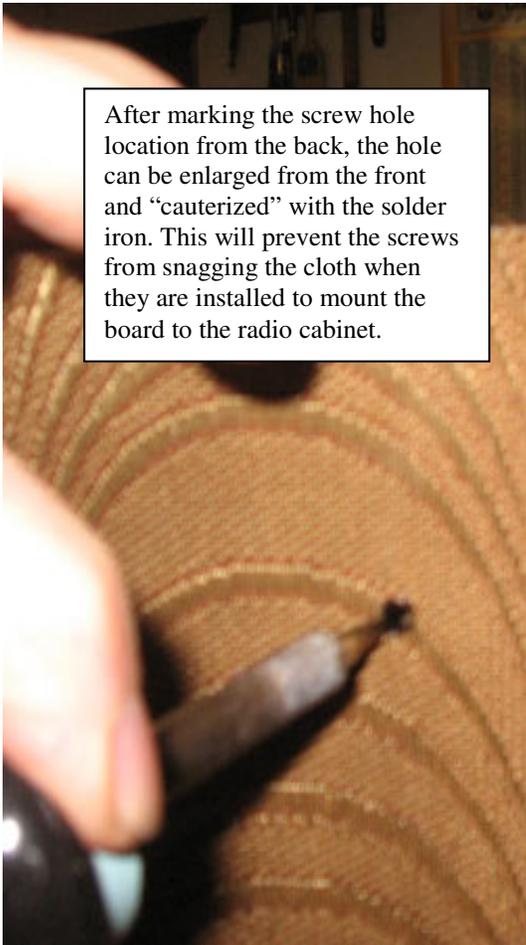
Ironing the fusible interfacing onto the back side of the grill cloth using a dampened press cloth



Glue the two adjacent sides of the grill cloth to the board, be sure to align the center of the pattern to the center of the board.



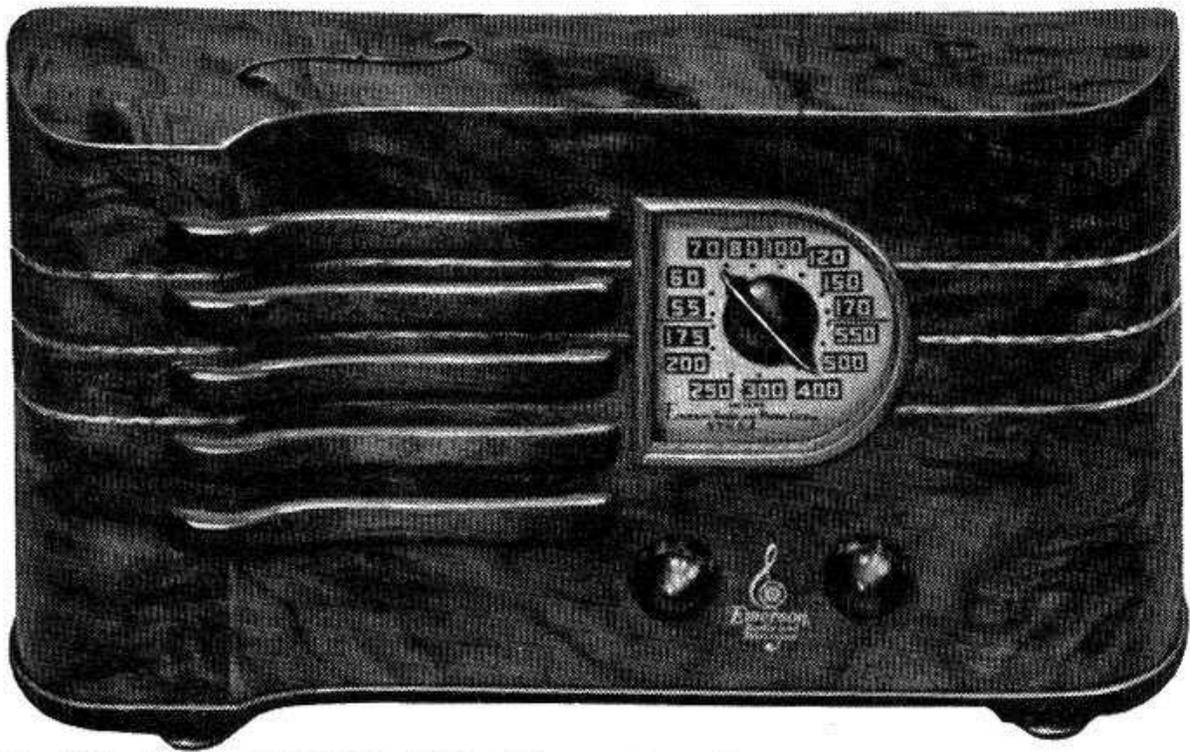
After gluing the grill cloth to the speaker board, mark the locations of the screw holes from the back by melting a small hole with a small tipped soldering iron.



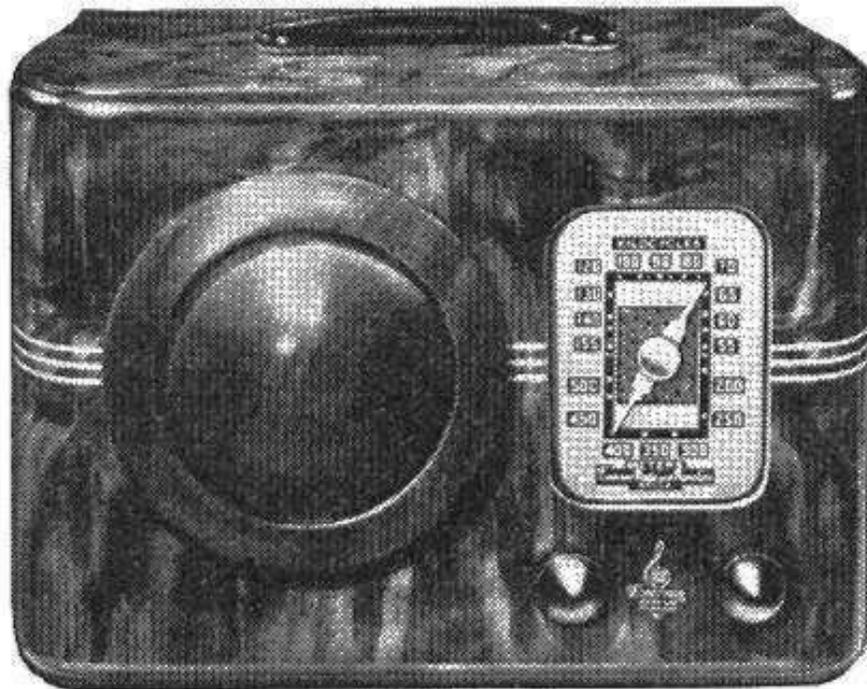
After marking the screw hole location from the back, the hole can be enlarged from the front and "cauterized" with the soldering iron. This will prevent the screws from snagging the cloth when they are installed to mount the board to the radio cabinet.



The completed project!



The "Strad" Model CH-256 With "Miracle Tone Chamber", 5-Tube AC-DC Super-heterodyne—7-Tube Performance. American Broadcasts and Police Calls. Electro Dynamic Speaker. Automatic Volume Control. Beam Power Tube. Built-in Antenna. Staybent hand-rubbed walnut cabinet —with the beauty of the Stradivarius. **\$19.95**



Model DB-315—Deluxe Cabinet with "Re-Flex Miracle Tone Chamber"

Standard Broadcasts • 5-Tube AC-DC Super-heterodyne • "Inner-Ceptor" Loop Antenna • Electro Dynamic Speaker • Cabinet **\$19.95** of selected matched butt walnut.

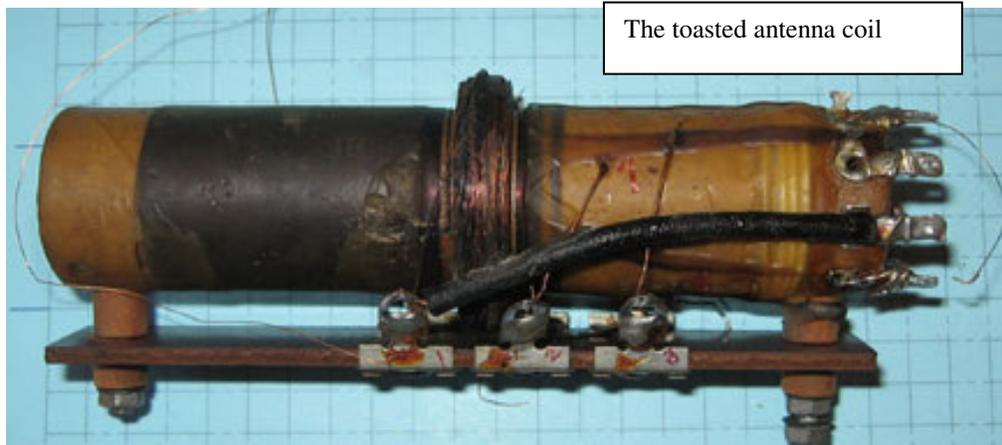
My Radio IS a DOG! (Adventures in restoring a radio apparently hit by lightning) By Mark Palmquist

The opportunity to acquire a Fairbanks Morse 58T art deco table radio came up and I couldn't resist that colorful dial, even though it was wrinkled up like one of those sea scallops around the edges. This radio had possibilities. The previous owner had never plugged it in and wanted to know what it would do before he parted with it. I said this was probably not a good idea but I let him do it anyway. Ah! The smell of burning transformer windings in the morning! Smells like – Defeat! Since I have a drawer with about 300 pounds of mystery transformers in my shop, I took a chance and decided to give this one a go to get it working again.

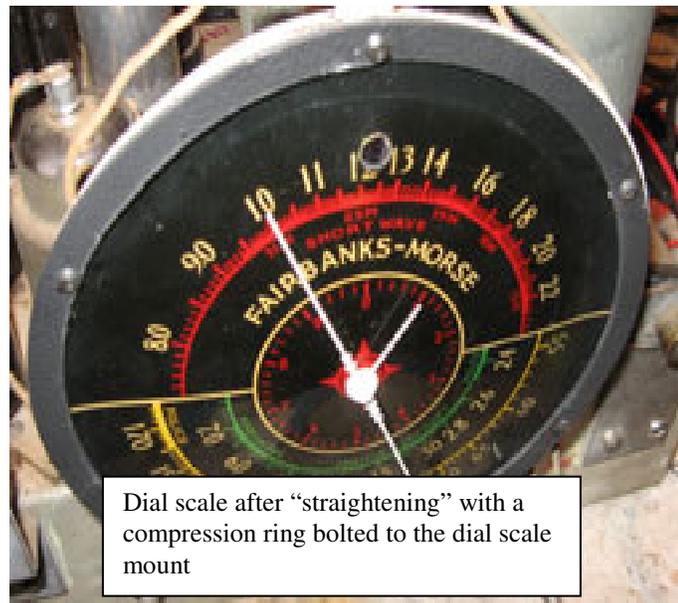
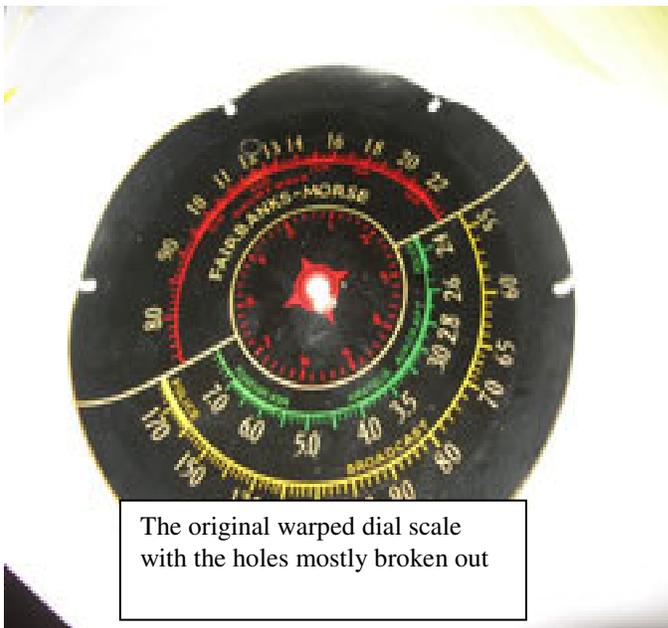
Back in the shop, I plugged it into my metered variac and slowly brought up the voltage – at about 5 volts the current meter pegged at 1 amp so I knew immediately that I probably was looking at a shorted power tranny primary. The old transformer had a very small form factor and the only thing I had that would fit did not have a 5-volt winding to power the rectifier tube (It did have a six-volt winding to operate the other tubes in the radio). I decided to replace the 5Y3 rectifier tube with a pair of 1N4007 diodes and go with the six-volt + center-tapped secondary transformer. After replacing all the caps we are ready to fire it up and hear some music. Sound but no music (or even talk radio!) To my chagrin I discovered that both IF transformers and the Antenna coil primary were open. I had some spare IF transformers which were no problem to install but the antenna coil primary would require a major coil-ectomy and rewind.

I spent at least an hour photographing and carefully diagramming the wiring to the antenna coil before removing it (not neat but it makes sense to me). I know better than to trust my memory on something like this and the schematic appeared to have been drawn by one of the inventors of the Enigma machine, with some key components (like the tuning capacitors) missing.

Once the coil was out I could see that the primary was toasted. It was neatly wound with a criss-cross pattern to reduce capacitance. I tried to unwind the wire and count the turns. The wire was broken in several places and during the unwinding process at least six people decided they needed to talk to me on the phone. I took to writing down the turn count every time the phone rang and concluded about 210 turns were originally present. I decided to make it a little easier on myself replace the winding so I machined a bobbin that would fit over the old coil and wound the new coil on the bobbin with the aid of my REA coil winding machine, which I seldom get to use. You just set the counter for the number of turns (divided by 3) and press the button (after setting up for the traverse and pitch) and a few seconds later I had a neat, tight coil with 210 turns. Below is a “before” photo of the coil assembly: To see a short **G-rated movie** of the **coil winder in action** go to http://jmpalmquist.home.comcast.net/~jmpalmquist/MVI_2476.AVI. Sounds a little like a sewing machine.



Fixing the warped plastic dial scale required machining a “compression ring” out of a piece of 1/16 inch thick aluminum and drilling a set of holes to match the six mounting holes that were used to affix the dial scale to the illuminated dial scale mounting plate. The ring was placed over the dial scale and gently bolted to the mounting plate, using 6-32 black oxide plated button-head socket head cap screws. When it was done it looked a bit like the front of a boiler on a Fairbanks Morse locomotive engine.

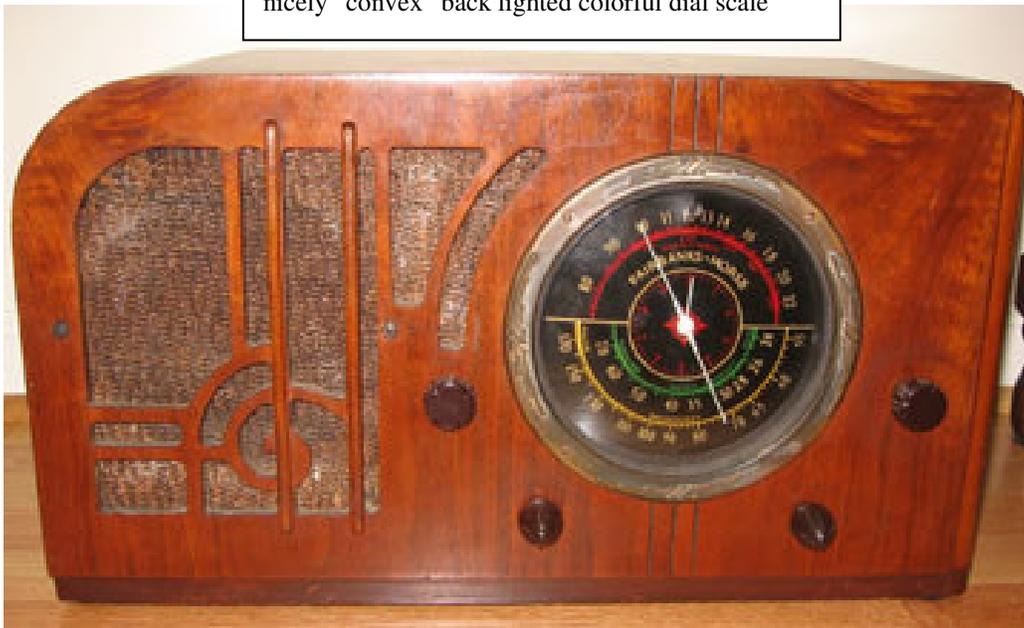


Straightening out the dial scale had the unintended consequence of “popping out”: the center of the dial so that the dial pointers could not be re-mounted onto the concentric shafts – note that there is a inside logging scale dial with a short dial pointer that moves fast while the longer dial pointer points at the station frequency. I had to engineer a way to lengthen both shafts a bit – the machinist’s lathe that I use to make round dial cover molds was perfect for making the two concentric brass sleeves needed to extend the dial pointer shafts. While I had the dial pointers off, it was a good time to give them a fresh coat of almond white spray paint.

In its former life the warpage of the dial scale had brought it too close to the dial lamp near the “12” at the top, burning a hole in the plastic. Mark Oppat sells some lamp shields that help to prevent lamps from burning holes in dial scales. I cobbled a repair to the dial cover with some tape and the printer and some dial cover plastic. Not perfect, but definitely worth doing.

After installing the power transformer, IF transformers, and antenna coil the radio fired up and plays really well. I am proud to display it in the “radio room”.

The Fairbanks Morse 58T back together with a nicely "convex" back lighted colorful dial scale



SWAP MEET Schedule of Events

Friday, February 19

Dinner (spouses welcome) at 6:30 PM
Red Lobster
1050 Holcomb Bridge Rd
Roswell, GA 30076

Saturday, February 20

06:30	Doors Open for Dealer Set Up and Registration
07:15	Coffee Available
08:00	Selling Begins
09:30	Items Brought to Auction Table (Limit of 30 items or lots)
09:45	No Additional Items Accepted at the Auction Table
10:00	Auction begins
11:00	Auction ends
11:00	Final Chance to Purchase 50/50 Raffle Ticket
11:00	Judges Contest Review Begins
11:15	Table tear-down is suspended
11:15	Judges announce winner of the Pre-1930's Contest
11:15	50/50 Raffle Winner Announced
11:15	John Jenkin's Presentation Begins
12:15	Book signing event by John Jenkins
12:30	Swap Meet Ends
01:00	Gather at nearby restaurant (TBD)
01:00	Vacate DoubleTree Hotel

SARS Events for 2010

~ Mark Your Calendars ~

Date	Event	Meeting Topic	Show & Tell
02/08/10	SARS Monthly Meeting- Ryan's Restaurant	New Paint Textures for Radio Restoration	Philco Radios
02/20/10	SARS Annual Swap Meet- Roswell DoubleTree Hotel	Pre-1930's Radios & Communications	John Jenkins, Guest Speaker
03/13/10	Saturday Meeting at Roddy Pearce's Home	Decatur, GA	Event begins at 11 AM
03/25/10 - 03/27/10	CC-AWA Charlotte Swap Meet & Auction	Charlotte, NC	http://charlottearc2010.homestead.com/index.html
04/12/10	SARS Monthly Meeting- Ryan's Restaurant	TBD	TBD
05/15/10	Saturday Meeting at Member's Home	TBD	Event begins at 11 AM
06/xx/10	SARS Spring Swap Meet	Alpharetta, GA- Fairfield Inn	Event begins at 8 AM
06/14/10	SARS Monthly Meeting- Ryan's Restaurant	TBD	TBD
07/17/10	Saturday Meeting at Member's Home	TBD	TBD
08/09/10	SARS Monthly Meeting- Ryan's Restaurant	TBD	TBD
09/xx/10	SARS Fall Swap Meet	Alpharetta, GA- Fairfield Inn	Event begins at 8 AM
09/13/10	SARS Monthly Meeting- Ryan's Restaurant	TBD	TBD
10/16/10	Saturday Meeting at Member's Home	TBD	TBD
11/08/10	SARS Monthly Meeting- Ryan's Restaurant	TBD	TBD
12/04/10	Christmas Party	Alpharetta, GA	TBD