



# The Oscillator



*"All the Electrons that are Fit to Flow . . . "*

The Official Newsletter of the DVHRC

February 2010

## The Saga of the 143

*The Saga of the 143 is a joint article by Mike Koste and Lowell Schultz. It has all the hallmarks of a great novel: anticipation, despair, mystery, redemption and, of course, a happy ending. - Ed.*

### **Part I – by Mike Koste**

It's a sure bet that everyone involved in this hobby maintains a "want" list of some kind, whether it be for an elusive part, obsolete documentation, or perhaps a particular radio to add to their collection. Hard to believe that nearly two decades has passed since I finally landed the one that had been avoiding me for so long.

I was first introduced to the RCA 143 from a grainy black and white photo in Morgan McMahon's book *A Flick of the Switch*. Many years passed before I actually met up with a live example of this set. Once I saw it, and heard it play, I knew it was one I absolutely had to have. Was it the unusual marriage of the cathedral and tombstone cabinet styles? The nearly continuous coverage over four bands? Eight tubes including a pair of 42's driving a push-pull class A output stage? Double vernier tuning? And hey, if you believed RCA's sales pitch, a radio

with a "Magic Brain" had to be state of the art for 1934. To a collector's eyes, this radio was just flat-out sexy

Two or three available 143's crossed my path at a few Kutztowns and elsewhere. But sadly, they were always priced far beyond my means. So when an opportunity arose to purchase the 143's little brother, the model 128, I jumped at the opportunity. A somewhat similarly styled shouldered tombstone, the RCA 128 had two less tubes and didn't have longwave capability. But it looked good, worked well and the price was right.

Fast forward to June, 2007. One day while surfing eBay, a familiar image presented itself. There was only one picture, was poorly lit and not very well detailed. The item was listed as "old RCA radio" and offered little in the way of a description. But there was no doubt about it. This was the set I've lusted over for nearly twenty years. Without giving it any further thought, I entered my one and only bid and waited....

Can you imagine my surprise a couple of days later when I received a private message from the seller who informed me that he decided to end

the auction early and when he pulled the plug, I was the highest bidder. "How would you like to pay for it?" My jaw dropped. His feedback was spotless, but just to be safe, informed him I'd include an extra \$20 if he'd purposely over-package my purchase to assure safe passage from California to Pennsylvania. So, for the bargain basement price of \$110, I finally bagged my personal Holy Grail.

At this point, I probably should have kept my mouth shut. But like a kid with a new toy, I was anxious to spread the news of what I felt was a monumental score. While awaiting shipment, the Antique Radio Forum provided the vehicle of communication. Following a couple of "wows" and "good scores", my enthusiasm was suddenly deflated when a forum member posted:

*Mike,*

*You'll find that the cabinet has been sawed off in the back. You didn't do very well. There is a reason why he showed only one side of the cabinet. I am not joking either.*

*Benny*

Now I have no idea who Benny is, if he had personal history with the



## Delaware Valley Historic Radio Club

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*The Oscillator* is the monthly newsletter of the Delaware Valley Historic Radio Club.

We welcome information relating to radio and television history and collecting. Submissions should be sent by the 25th of the prior month to [saegers@ptd.net](mailto:saegers@ptd.net). Personal views, opinions and technical advice do not necessarily reflect those of members, officers or Board of Directors of the DVHRC, nor is the DVHRC responsible for any buying or selling transactions.

Dues are \$20 per year and can be paid at a meeting or mailed to the above address.

### DVHRC Board of Directors

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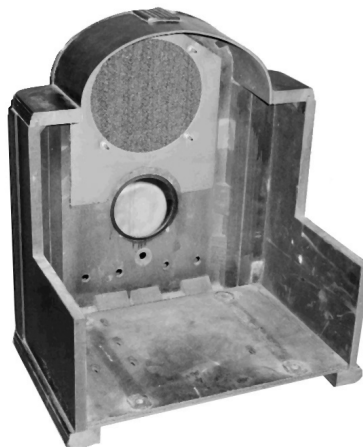
radio I'd just bought, or perhaps had an old axe to grind with the seller.

To what extent was the back sawed? Should I have been a more cautious bidder and asked for more/better illustrations? Would I be out of line suggesting to the seller that I'd heard his radio wasn't all it was cracked up to be? If what the ARF poster suggested was true, it would certainly explain why the auction ended early.

In retrospect, I would guess he was bombarded with questions from other potential bidders and didn't want to deal with coming clean and extending the courtesy of answering.

Question One was answered about ten days later when a large, heavy box was delivered to my back door.

My anticipation instantly morphed into disappointment when I uncrated my new treasure.



Benny was absolutely right. The cabinet indeed had been sawed off in the back. As a matter of fact, about one third of the sides and top

had been sheered off.

It appeared that the 143's cabinet had been modified so the radio could sit on a bookshelf too short to accommodate the set's height. You gotta wonder why the person with the saw didn't just edit the shelf on the bookcase instead cutting into the radio.

So after twenty years of waiting and searching, I was back to waiting and searching. But this time, all I needed was a replacement cabinet.

But this past December, I did what I probably should have done all along: I emailed the DVHRC's Lowell Schultz.

### Part II – by Lowell Schultz

When Mike Koste contacted me saying he had a cabinet that had been “trimmed” and did I think I could restore it, my answer was “Very likely.”

When he sent the picture of a cabinet with about two thirds of it missing, my reaction was “Wow! What am I getting myself into now???”

I brought the “trimmed” cabinet home and my first thought was to get out the biscuit joiner. However, after a brief review I realized the biscuit joiner may be a suitable joining method to splice an addition to the side panels but questionable for the shoulder pieces and certainly could not be used on the thin, curved top.

That realization meant “Start from scratch” as our mothers did when

they made biscuits. They did not simply open a box and dump the contents into a mixing bowl. Rather, they carefully selected and measured the ingredients as they combined them into a bowl. The mixture was portioned onto a baking pan and placed into the oven to emerge as tasty biscuits.

And so it was with my situation. I did not find the parts to build an RCA 143 cabinet neatly packed in a box labeled "Some assembly required" at Home Depot (or Lowes for that matter). Therefore, I needed to design and fabricate each of the parts to build the cabinet.

I carefully pried and wiggled the trimmed parts off the cabinet front for my "start from scratch" cabinet project.

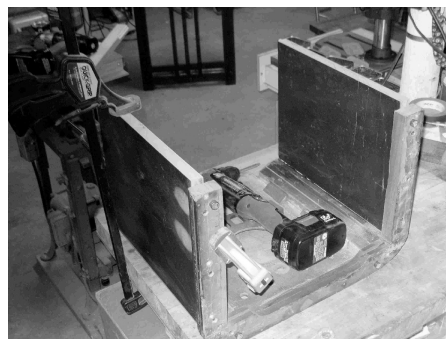


I typically dismantle severely damaged cabinets to serve as a source of cabinet repair material.

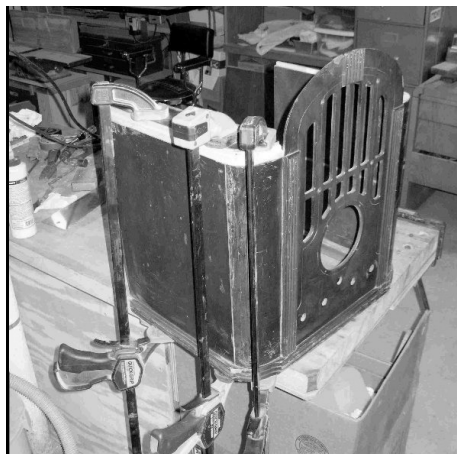
I sorted through that collection of veneer plywood and found two

pieces that were large enough for the sides of the new cabinet. The veneer plywood was sawed to size, allowing for 1/4 inch on the front and top for the tenons that would later be fit into the mortises of the adjoining parts.

The newly sawed sides were then clamped and glued onto the base strips and the original front of the cabinet.



The next step consisted of sawing out the curved ends of the shoulder sections on the band saw and then using a router with an ogee bit to form the curved edge. A mortise was also cut into the bottom of the shoulder strips to accept the tenon that had been formed on the side pieces. Glue was applied to the joining areas of these shoulder pieces which were then clamped to the sides over the tenons.



The bridge to provide the support for the curved top at the back of the cabinet was designed by replicating the radius of the dado that had been cut along the top of the front panel during original manufacture. Extra material was cut from the underside of the rear bridge to make it more dainty and form a graceful arch.

The completed rear arch was attached to the shoulder sections and sides with glue and screws.



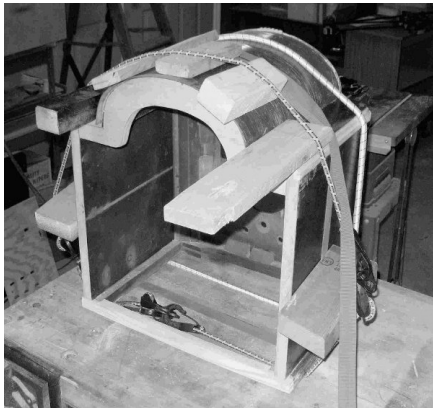
I was now faced with devising a method to form the smooth curve of the cabinet top. An attempt to bend 1/8-inch veneer plywood resulted in a splintered curve that reminded me of a porcupine in a defensive posture.

During another search in my cabinet parts stash, I unearthed two pieces of 1/16 inch thick sheets that had walnut veneer on one side and a wood backing on the other.

Rather than resorting to geometry to calculate the length of the inscribed arc of the circle that was formed by the chord of the bridge, I simply made trial cuts to fit the first thin layer of veneer to the curved

top supports. It was glued and nailed with tiny nails to the rear bridge and the dado along the top of the front panel.

The second piece of veneer was cut to fit and clamped over the first with the veneer side out. I hastily gathered a binding strap, numerous bungee cords and some wood strips to create a clamping method that would press the second veneer layer tightly down onto the first and hold it in place until the glue cured.



After the side molding strips that had been carefully removed from the original cabinet sides were glued in place on the new sides, the RCA 143 cabinet reconstruction was virtually completed.

The next trick was to judiciously apply stain to the exposed bare wood in order to match its tone to the previously tinted areas of the assembled parts. Tinted lacquer was also applied to masked portions of the cabinet to achieve a pleasing overall tone. And then the final all important step..... To apply several coats of clear lacquer to the complete cabinet.

At that point my contribution to the

“Saga of the RCA 143” was complete and the finished cabinet was returned to Mike for the installation of the chassis.



*(No good deed goes unpunished – after seeing pictures of the 143 rebuild by Lowell, I contacted him with another challenge – a Zenith S-829 that sat in a damp basement for many years. Not learning his lesson, Lowell agreed to take a look. - Ed.)*

## Club Dues are Due

Dues for 2010 are payable now at \$20 per year. The year your dues are paid through appears on the address label after your name.

To pay your dues send a check to Dave Snellman, or give it to him at a meeting. If you think the club's records are in error (mistakes can happen), contact Dave as well.

## January 2010 Meeting Notes

The Delaware Valley Historic Radio Club held its first meeting for the year 2010 on January 12th in the Telford Community Center. Every-

one was welcomed to the first meeting of the new year.

Wilbur Gilroy was welcomed as a new member and for driving all the way from Lake Winola, PA to Telford for the meeting.

A couple of announcements followed: The board of directors will have the same lineup as 2009 with Stan Saeger, President, Dave Abramson, VP, and Dave Snellman, Sec/Tres. Dave Dean and Mike Koste will serve as members at large. The Kutztown Radio Show - Spring dates are May 7 and 8, 2009. Details will follow. There will be a large Radio and Electronics Auction on March 6, at InfoAge in Wall, NJ - sponsored by InfoAge and NJARC. The auction will be run by Richard Estes and feature items from various estates, the Radio Technology Museum at InfoAge and item surplussed by infoAge. Check InfoAge or NJARC websites for more details: [www.infoage.org](http://www.infoage.org) or [www.njarc.org](http://www.njarc.org). North Wales Community day is coming up again this year. The day is May 15, time from 10 AM to 4 PM.

Speaking of websites, please remember that the Delaware Valley Historic Radio Club's website is [www.dvhrc.info](http://www.dvhrc.info). If you try to go to the old site “[dvhrc.org](http://dvhrc.org)” you better have you Chinese dictionary ready. We lost the site a while back and someone “bought” it and wants money to release it. That's why we are not using that address anymore.

Frank Krider opened our show and tell section that night. Frank talked about his dad's career with Philco from the WWII era until his dad retired in 1970. He started in crystal grinding during WWII and moved on

to test and maintenance technician and later to working in Philco's radio and TV test signal center. Frank showed the certificate from National Radio Institute (NRI) his father received along with a Philco Service Man award he received.

Chuck Azzalina showed how he is progressing with his Postal Radio Receiver (1935.) The chassis has been re-chromed and is looking first rate. Keep us posted, Chuck, on additional progress.

Walt Peters is looking to create an art deco nouveau cabinet design for a project he is working on with a friend of his. I think that is about it for the month of January. The next meeting will be Tuesday, February 9, 2010, at 7:30

PM at the Telford Community Center. - Dave Snellman

## Thanks . .

. . . to the following club members who donated tubes to the club's inventory: Lowell Schultz, Mike Koste, Stan Saeger and Dave Dean.

## Packard Bell Model 62

After some discussion at the January meeting, some additional progress was made.

First, we're going to swap out the output transformer from the new speaker and replace it with the original transformer.

Second, the field coil is 700 ohms in-

stead of the rated 2200 ohms, so we'll add a 1500 ohm, 10 watt, power resistor in series.

Third, Lew Newhard generously donated a volume control and a tone control.

Hopefully, the radio will make an appearance in working order, sans knobs, at the February or March meeting.

## Looking back

Below is a 1947 chart of suggested service charges for radio repairs. It first appeared in the 1998 issue of the Oscillator and was submitted by Bill Overbeck.

### RADIO SERVICE STANDARD RATE BOOK

#### TABLE MODEL RADIOS

##### Statement of Minimum Service Charge and General Service Performed

All table model radios which have not been serviced by this firm for a period of six months preceding receipt of instrument for repair shall be subject to our minimum service charge and general service procedure before any specific repairs are performed. Any material used in the general service will be charged to the customer in addition to the minimum service charge.

#### MINIMUM SERVICE CHARGE \$2.00

##### General Service Performed

1. CHECK tubes for dead, noise, shorts, loose grid caps, etc.
2. CHECK A.C. cord and plug for frayed, bare, brittle or broken wire.
3. CHECK tuning condenser for bent plates, dirt corrosion, etc.
4. CHECK dial belt or cable for wear, binding, slipping.
5. CHECK dial indicator for accurate setting.
6. CHECK dial drive shaft for binding, slipping, wear.
7. CHECK internal wiring in radio for loose or poor connections.
8. CHECK dial bulbs for dirt, grease, burnouts, loose, incorrect size.
9. CHECK speaker cone for brittleness, proper centering, loose rim.
10. CHECK volume control for noise, intermittent, open.
11. CHECK waveband, push button, phono-radio, tone switches, for noise.
12. CHECK antenna, R.F. and oscillator coils for loose turns of wire.
13. REPLACE defective tubes.
14. REPLACE defective dial lights.
15. REPLACE or repair A.C. cord and plug if defective.
16. CLEAN dial window.
17. CLEAN and lubricate tuning gang, straighten bent plates.
18. CLEAN dirty or greasy dial lights.
19. CLEAN and lubricate sliding contact type switches.
20. REMOVE dirt and grease from chassis.
21. REMOVE dirt and grease from tubes.
22. REMOVE dust from speaker cone and frame.
23. REMOVE dirt and grease from chassis.
24. REMOVE dirt and grease from dial scale.
25. RESET dial indicator accurately.
26. LUBRICATE volume control.
27. LUBRICATE dial drive shaft.
28. CEMENT speaker cone rim if loose from frame.
29. CEMENT loose turns on antenna, R. F. and oscillator coil.
30. SOLDER and loose or poor connections in radio wiring.

### RADIO SERVICE STANDARD RATE BOOK

#### Average Labor Charges For Table Model Radios

These charges are for actual labor time used only in repairing a specific major defect, and do not include the price of any parts used. Testing of tubes and other necessary checks and repairs listed in the General Service Procedure are covered by the minimum service charge and make possible the average times shown below for one major defect only.

These are average labor charges. Our labor charges may be slightly higher or lower than these rates, depending entirely on the amount of time used.

We offer these rates only as a means of comparison.

#### AVERAGE LABOR CHARGES

New Parts Installed	Average Time	Labor Charge
Antenna Coil.....	30 minutes	1.50
Antenna Loop.....	30 minutes	1.50
Audio Grid Coupling Condenser.....	15 minutes	.75
Bias Cells.....	15 minutes	.75
Band Switch.....	30 minutes	1.50
By-Pass Condenser.....	15 minutes	.75
Canohm Resistor.....	30 minutes	1.50
Carbon Resistor.....	15 minutes	.75
Cathode Filter Condenser.....	15 minutes	.75
Dial Belt.....	30 minutes	1.50
Dial Cable.....	30 minutes	1.50
Dial Drive.....	15 minutes	.75
Dial Scale.....	15 minutes	.75
Filter Condensers.....	30 minutes	1.50
Intermediate Frequency Coil.....	15 minutes	.75
Mica Condenser-Oscillator Circuit.....	45 minutes	2.25
Oscillator Coil.....	45 minutes	2.25
Output Transformer.....	15 minutes	.75
Podder Condenser.....	30 minutes	1.50
Permeability Tuning Assembly.....	45 minutes	2.25
Permeability Tuning Slug.....	30 minutes	1.50
Power Transformer.....	30 minutes	1.50
Radio Frequency Coil.....	30 minutes	1.50
Resistance Cord.....	15 minutes	.75
Selenium Rectifier.....	15 minutes	.75
Speaker (new or reconed).....	15 minutes	.75
Tone Control.....	15 minutes	.75
Tone Switch.....	15 minutes	.75
Trimmer Condenser.....	30 minutes	1.50
Tube Socket.....	30 minutes	1.50
Tuning Condenser.....	30 minutes	1.50
Voltage Divider.....	30 minutes	1.50
Volume Control.....	15 minutes	.75