RESTORATION TOPICS

Fisher Custom Electra II Restoration

BY A.R.C. STAFF

This article will discuss the restoration of a 1958 Fisher Custom Electra II Console Radio Phonograph (figure 1).

Figure 1. Full front photograph (February 2011 cover photo)

I've collected and repaired/restored antique radios and televisions for many years and in recently have become interested in vintage tube audio equipment.

Normally I don't collect consoles (due to my small house) but here is the quick story of how I acquired this unit. About 3-years ago my I was helping my friend Sandy clean out her storage room at the local storage facility. She had been storing many items since moving and down sizing where she lived. Buried under the usual furniture and boxes of books, dishes, photographs, and other things people accumulate was the console. At first I thought "Oh, another 100-pound monster to move." But then I noticed the Fisher name and some interesting tubes on the chassis. I took it home.

How did Sandy end up with a 53-year old console? It originally belonged to her father's cousin. When the cousin passed away in the early 1990s, Sandy's mother claimed the console and gave it to her as a present. The turntable never worked but she occasionally played the radio. It was in the foyer of her home until she moved and then kept in storage until I found it.

When I got it home I placed it – where many of us place large items that come into their possession – in the garage. A few months later I sold the 1929 console in my office and moved in the Fisher.

RESTORATION

The first time I powered it up was on a variac. It worked, but barely. I wasn't surprised. The controls needed cleaning and the tuning eye tube wasn't working. The turntable was very dead.

It was finally time to remove the chassis and fully investigate the console. To get at the chassis bolts I had to unscrew the back panel covering the speaker compartment.

The chassis had plenty of dust and dirt. My first surprise was that the console had three speakers: a 15" woofer facing down, an 8" midrange and tweeter facing front. The insulation needed to be reattached (figure 2).

Oh, did I mention this was a mono unit?

Figure 2. Speaker compartment

Figure 3. Normandy advertisement

The console is Fisher model number NK-100 (figure 3). In 1958 it came in two cabinet versions – Provincial and Mahogany. Fisher also sold the Custom Electra II in 1957 but with 4 cabinet variations – The Chatham, The Ebony, The Gotham, and The Normandy. My model is the 1958 Normandy. It measures 36" w x 38" h x 21" d. The cabinet uses plywood with a veneer. Even the wood piece covering the speaker compartment is 3/4" plywood! The chassis is a Fisher model K-100 with 15 tubes (similar to the Fisher 500 mono chassis of the 1950s.) There are five main controls on the chassis and two secondary controls on the faceplate. The controls are AC Power on/off; station selector; tone – bass & treble; volume/loudness (three position loudness control); and the selector control with AM, FM, AES, RIAA, LP, NAB, Tape, Aux 1, and Aux 2. (Figures 4 & 5). The secondary controls are Presence and Brilliance. The secondary controls are two wire wound pots connected to the console faceplate (figure 6 & 7). The outputs tubes are EL37s. Very expensive if you drop one!

The turntable is a Garrard RC-88/4 record changer (figure 8).

I took the chassis down to the work bench to start the restoration.

Now, let's stop for a second. Everyone I know who works on vintage radios, TVs, etc. has a different method of repair/restoration. My own personal opinion is that with audio equipment you want the best fidelity and I replace most of the electrolytic, bumble bee, and wax capacitors. The capacitor values have changed after 50 years. I especially do this in TVs of the late 1940s when most of the capacitors are out of their value range and you can see the effects on the CRT images. For a simple "All American Five" I wouldn't do this type of replacement. Also, some people will open up the electrolytic cans and hide the new caps. I disconnect the cans and place new electrolytic capacitors under the chassis.

When I work on a chassis where many parts need to be replaced, I check the unit after each part is changed. I had a speaker system connected to the chassis as I worked on it. Also, I checked voltages before and after each replacement. You can get to learn much about circuits and how they operate by seeing how the voltages change with the new parts.

I ended up replacing 26 capacitors, some lamps, a few resistors, and a couple of tubes. This chassis uses six mini indicator lamps for AM, FM, Phone, Tape, Aux 1, and Aux 2. It also uses two #47 lamps to illuminate the dial. All controls and tube sockets were cleaned. The chassis was

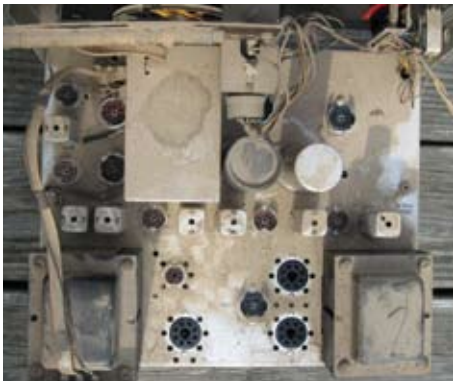

Figure 4. Top chassis – before

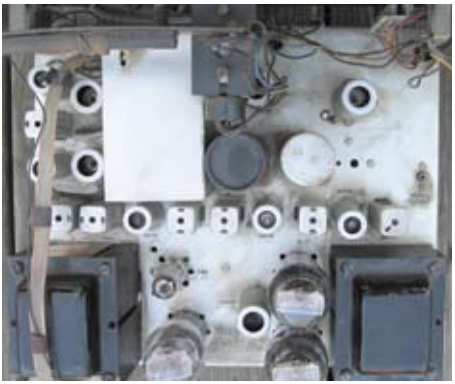

Figure 5. Top chassis – after

Figure 6. Chassis front panel

Figure 7. Chassis – rear view in cabinet

partially cleaned with care to avoid removing labels (figures 9, 10 & 11).

Fortunately, I was able to obtain a service manual for the K-100 chassis that had all the necessary information about the chassis including voltage readings and alignment instructions.

THE TURNTABLE

Now what to do with the Garrard RC-88/4 record changer. Since I'm not very good at repairing turntables I did the best thing possible – I gave it to my friend Chris who knows what he's doing. It works fine now after he cleaned out the 50-years of hardened grease and lubricated it. It probably can use a new idler wheel but I'm satisfied with its performance. In the near future there will be an article on repairing this turntable.

In the turntable compartment there was a lamp

Figure 8. Phonograph

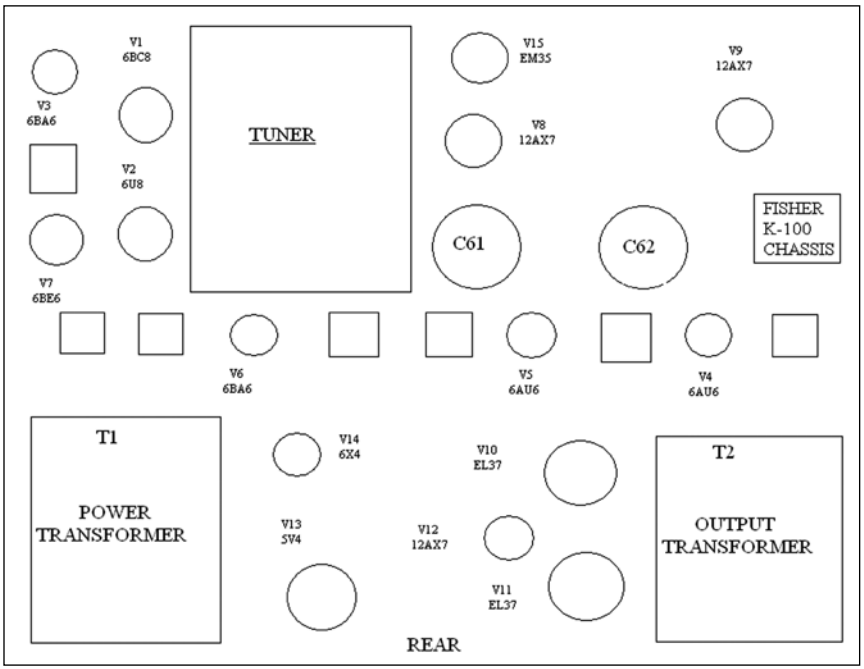

Figure 9. Chassis – diagram top view

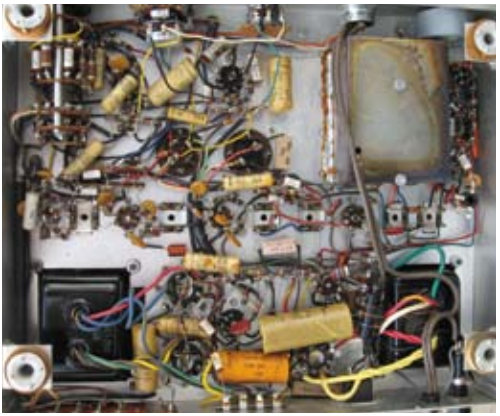

Figure 10. Chassis bottom – before

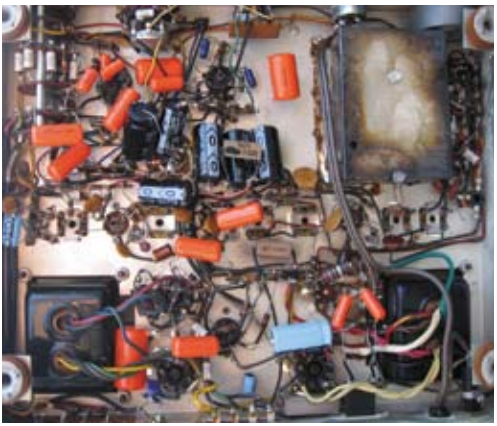

Figure 11. Chassis bottom – after

Figure 12. Phonograph compartment 1

that wasn't working. There was no voltage at the lamp socket. The wires from the socket to the chassis were hidden by a piece of wood. At the chassis was 6.3 vac going to the lamp. I figured that maybe the wires were broken at some point under the wood. When I removed the turntable for servicing I was surprised to find the lamp is activated by a switch. Moving the turntable drawer in and out opens and closes the switch. Cleaning the switch contacts fixed the problem (figure 12).

BACK IN THE CABINET

The chassis was returned to the cabinet. At the same time I replaced the capacitors in the speaker network.

It was powered up and I am happy to report it sounds very nice. The tuning eye now works. Even though it is not stereo, the console sounds good and is certainly a conversation piece. I like that it has both AM and FM because I often listen to FM radio.

FISHER HISTORY

Avery Fisher, founder of the company, was born in 1906 and died in 1994. In 1937 he founded his first company, Philharmonic Radio. In 1945 the company was sold and he founded The Fisher Radio Corporation. Fisher sold the company to Sanyo in 1969.

The Custom Electra II sold for $595 – a huge amount of money in 1958. The most expensive Fisher console model in that year was the Fisher President which sold for $2495! The Custom Electra line was sold through the late 1960s. More information on Fisher consoles can be found at www.fisherconsoles.com.

Sometime in the next few months there will be a more detailed article on the history of the Fisher Corporation.

CONCLUSION

Recently a friend came over to pick up a repair. He saw the Fisher and wanted to hear it. By the way, this person views himself as an "audiophile." My friend was very impressed with the sound and commented "the stereo separation is very good for something this old." I didn't have the heart to tell him it was mono.

Warning: This article involved restoration of a chassis. There are high voltages in this and many pieces of equipment on which you may be working. Do not attempt to work on any equipment where high voltage may be be present unless you are familiar with electronic circuits. These voltages can cause injury and possibly be lethal. Always practice caution in your work.