BY KENT KING

Restoring a Scott Symphony

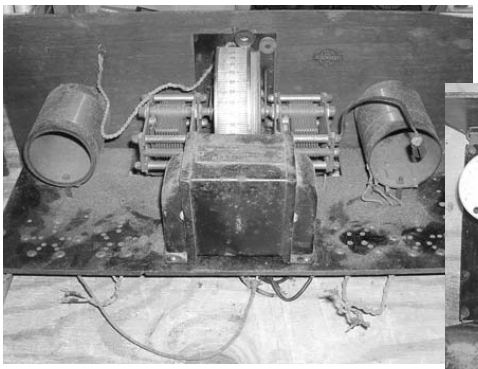
Detail from a 1929 Radio News *Ad that included the Symphony.*

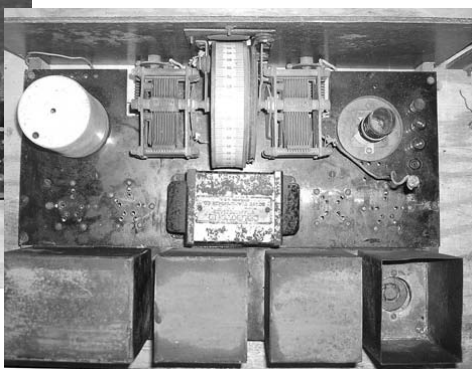
The Scott Symphony is a very rare set built for only a short period of time in 1929. It is unique because it is the only set Scott built that does not use a superheterodyne circuit. For many years, there was only one complete chassis known. Several years ago, I acquired a partial chassis for my collection.

Unfortunately, this set was missing the entire power supply and most of the components under the main chassis. The rather unusual 640-2 dual audio transformer was good. There were no other significant components on the chassis, except the two RF coils and tuning capacitors. In early March of 2008, a mostly complete Symphony appeared on eBay. I was lucky enough to win this set and, when it arrived, a thorough restoration began.

Even though the new chassis was complete with power supply, its two RF coils were quite different from those pictured in Scott sales catalog pictures and likely are replacements. However my partial chassis without power supply had original Symphony coils. Because new holes had been drilled in the e-bay chassis for the replaced coils, it was decided that the original chassis would be used as the foundation for restoration.

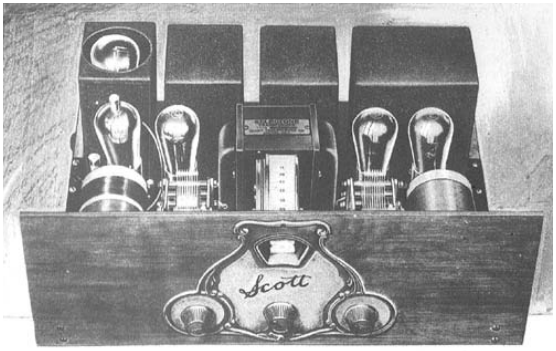
Having no idea how the original RF coil





Author's original partial chassis and the complete chassis later obtained from eBay.

3579 BUTTERMILK HILL RD, RADNOR, OH 43066, KENT3256@HOTMAIL.COM

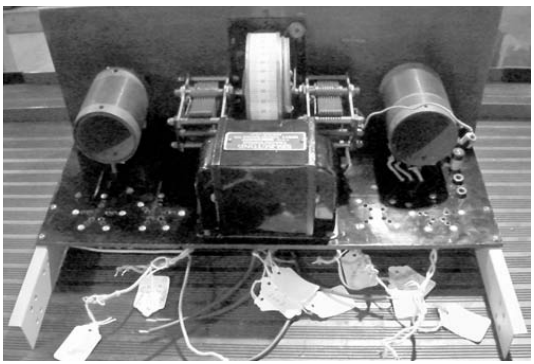


The Scott Shield-Grid Symphony

This catalogue illustration established that the partial chassis coils were original; eBay chassis coils were not.

was connected, the leads were numbered and connected as a "best guess." Next, the 640-2 dual audio transformer was repainted and all the rubber-covered wire leads replaced. At this point, the tuner was mostly finished. Restoration efforts then turned to the power supply. The Rider's schematic for the Symphony does not show a power supply. Therefore, as this supply was taken apart, it had to be documented and a schematic drawn. The unit is similar to the Scott AC-10 supply, although somewhat simplified. It is a fairly generic power supply using a divider resistor network to produce the 180/135/45/GND supply shown in the tuner schematic. Rubber wire was used throughout, and would all have to be replaced. Two filter capacitors had been replaced, but not before the power transformer and the filter chokes were destroyed.

In my picture of the power supply prior to restoration, the rightmost unit is the power transformer; next is the filter choke; the box next to that contains a group of filter caps. The leftmost box, which has an open top, contains the rectifier tube. After the wires were marked and a diagram drawn, the components were removed from the power supply chassis. With the various power supply components off the chassis, I found that the cans were solid metal boxes with the bottom plate soldered to the casing.

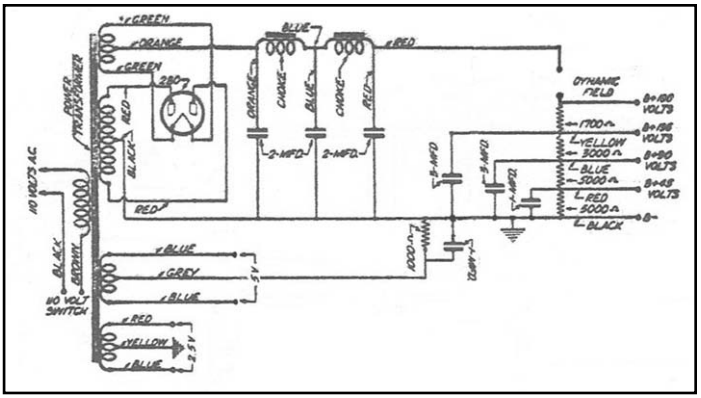


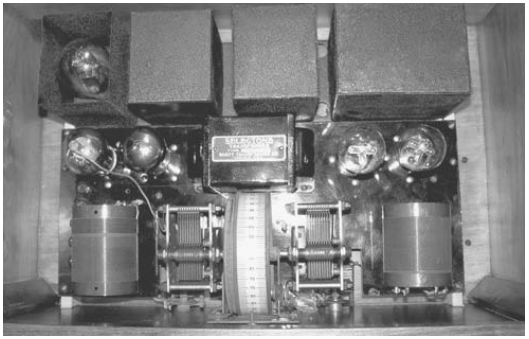
The restored tuner chassis ready for connection to the power supply.

The power transformer and chokes were sent out to be rebuilt. While these were out, the capacitor can was opened, unpotted, cleaned and rebuilt. A schematic was drawn based on the wiring found.

Upon return of the transformer and chokes, all of the cans and the chassis

The power supply and tuner schematics.





Looking down at the restored power supply and tuner—now housed in a cabinet.

base were repainted with black crinkle paint. The supply was then reassembled. The power supply was tested on a Variac with no load to insure that the voltage divider and major components were working correctly. The final step of the restoration was to reconnect the power supply and the tuner chassis.

Though several checks confirmed that the voltages were within specs, the set would only receive one strong local station near the high end of the AM band. Signal injection showed that the set was operating normally from the detector onward. Attention turned to the two RF coils.

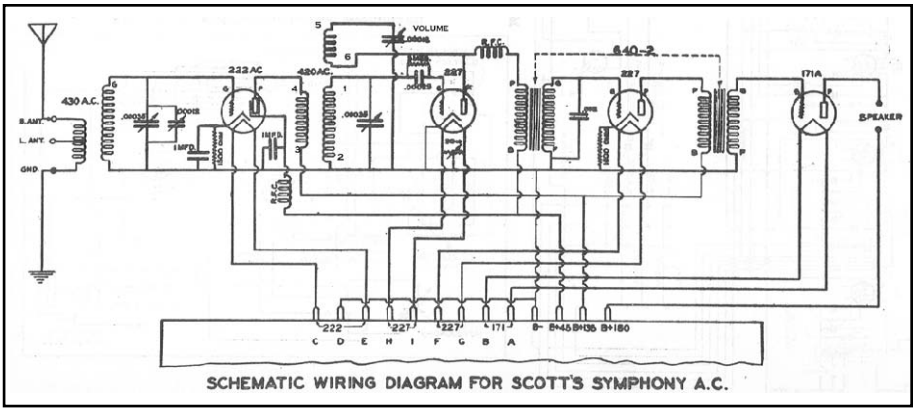
The antenna coil was obviously connected correctly, although the grounding of the primary required that the set be operated with a good earth ground for best reception.

As it happened, fellow Scott collector Norman Braithwaite came to visit during this time and we tested various connections to the RF coils. Following some experimentation, we were able to determine the proper wiring for the primaries, secondaries and regeneration winding.

The completed Symphony was installed in a "Signal" cabinet. Testing the set on a clear, crisp evening with a relatively short, low antenna produced very acceptable results. The regeneration control acts as a volume control (right knob). The trimmer on the left is connected in parallel to the main tuning control and is used for fine tuning. Because no owner's manual has ever been found for a Symphony, we do not know how Scott referred to this control.

The set showed good sensitivity, and was able to separate stations at almost every 10 KHz break. From my central Ohio location, stations throughout the eastern half of the U.S. were heard from New Jersey to Missouri. Tone quality from the Scott D-90 speaker was acceptable for a 1929 set. Overall performance was on a par with comparable sets of the period. Considering that this set represents Scott's only departure from the superheterodyne, it is a truly unique collector's item.

The result: a rare and handsome piece ready to take its place in the author's collection.



SCHEMATIC WIRING DIAGRAM FOR SCOTT'S SYMPHONY A.C.