Guide to Recapping the Zenith Royal 7000 Trans-Oceanic

Article and Photos by Ed Morris

The parts references and values are those listed in the Zenith Service Manual for chassis 18ZT40Z3. For the Royal 7000-1, chassis 18ZT40Z, you will need Zenith Service Manual RA-19. If you are recap ing a Royal D7000 radio, chassis 500MDR70, you will need Zenith Service Manual RA-43 or RA-79. Parts references and values for chassis 18ZT40Z and 500MDR70 may differ from those shown in this guide.

In the photos that follow I have labeled them all in case someone else would find this information useful. For C106, I used a 470uF cap in place of the 500uF, and for C107, I used a 330uF cap in place of the 300uF.

At first, it seems like it's going to be an easy job, replacing C112, C107, and C106. But the other eight caps will be a little more difficult. There are eleven in all to be replaced.
Three hidden behind the panel where the various controls are mounted. Luckily, that panel can be loosened and propped up, allowing just enough room to replace C101, C103, and C108. For C108, I used a 220uF cap in place of the 200uF cap. Note the nail used to prop up the panel.

The remaining four caps, C38, C46, C98, and C100 are at the top of the chassis, behind the dial drum. C38 and C98 are not particularly hard to get at, but the two 5uF caps are buried
deep and dangerously close to the dial drum. I used a folded strip of wet paper towel over the drum while soldering to prevent any damage to the drum. C46 is the most difficult, and it probably took 20 minutes to replace that one cap, mainly trying to get the leads of the new cap attached to the old leads so I could solder them. For C38, I used a 22uF cap in place of the 20uF, and I replaced the two 5uF caps with 6.8uF caps, the closest I had in value. I probably should have used 4.7uF caps, but I didn't have any.

The final cap is mounted in the rear cover. I used a 470uF cap in place of the original 500uF.
Removing the Dial Drum (Tips from Brett Buck, ARF)

It's very easy/safe to remove the drum, instead of working that close to it with the whole thing assembled. Easy access once you get the drum off, just have to get it indexed right way around when you put it back on the shaft and gear that turns it.

Another thing I found was that if the plastic gear on the right end of the drum wears out, you can remove both ends and swap them because the ends of the drum are the same part, even though you don’t need the gear on the left end.

It's very easy, remove the screws holding the left end plate, push it over the dial light cable, slip the guide string and dial string off, and just pull. The only trick is getting it back in the right orientation, so twist the bandswitch to Weather Band and make an alignment mark on the drum end before you pull it apart.