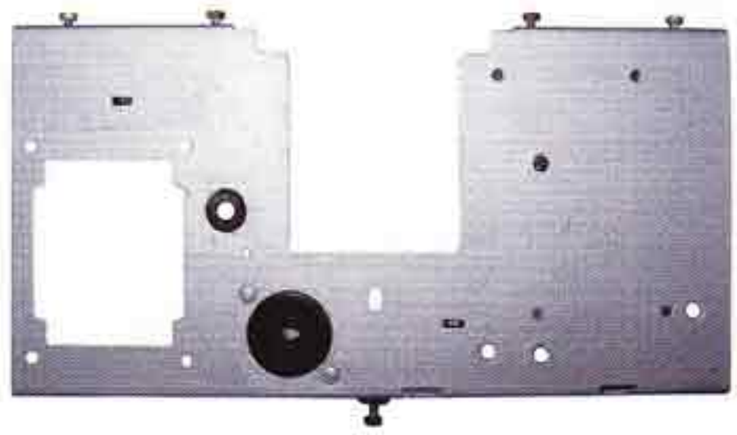
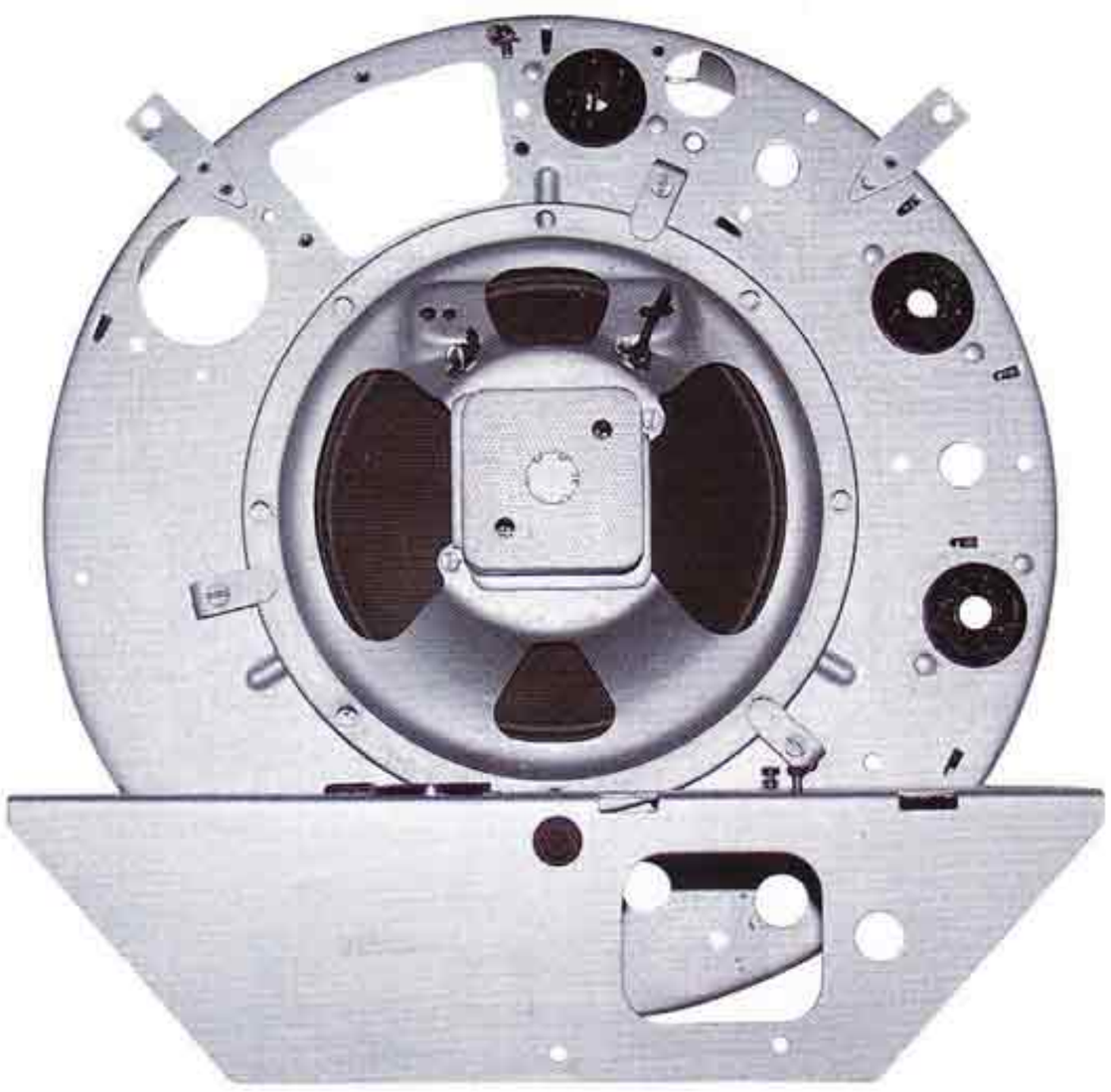
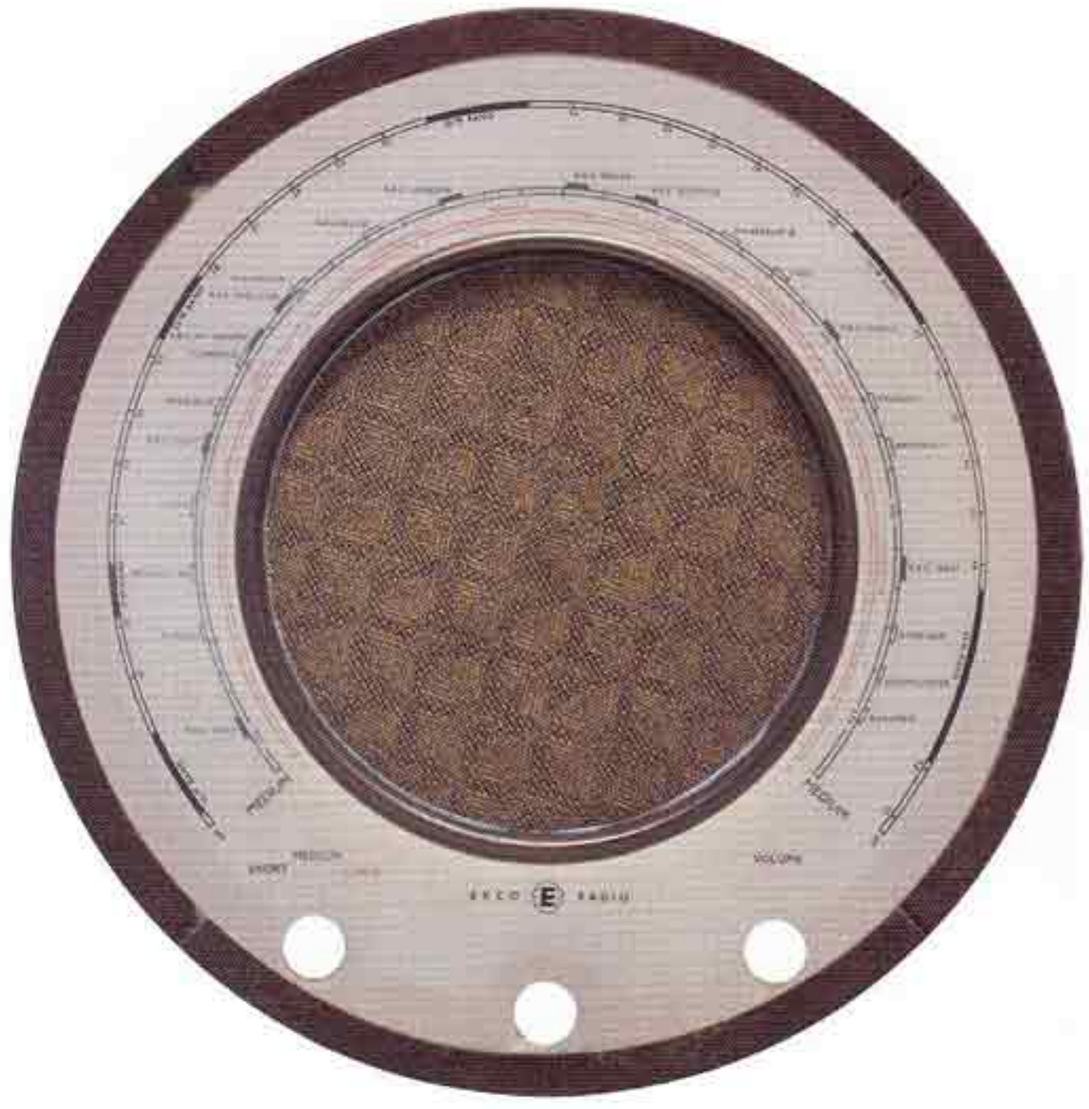
Ekco A22 rebuild

by Robert Darwent (robert.g0uhf@gmail.com)

A few years ago now, I was fortunate enough to find locally an empty walnut brown Ekco A22 bakelite case. It was in excellent condition, no scratches or cracks, and I immediately bought it. My intention was then to look out for an A22 chassis or a complete set with a damaged case that I could pick up at a hopefully much reduced price and combine. For several months that looked very unlikely to happen and I did serious work instead using parts from scrap Ekco A23 and A28 sets to construct a reproduction chassis to fit my empty case. Then unexpectedly the real thing turned up!





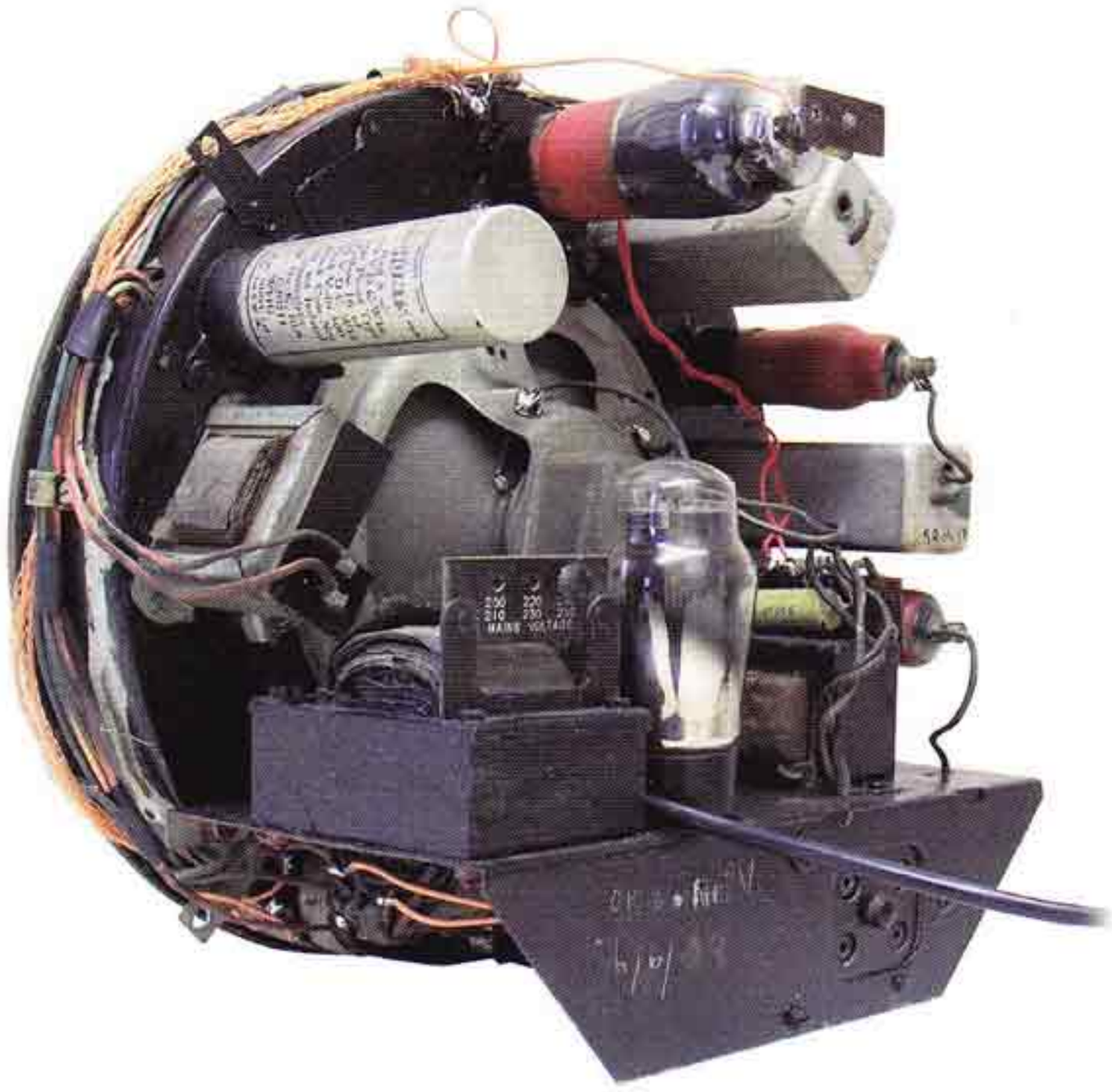


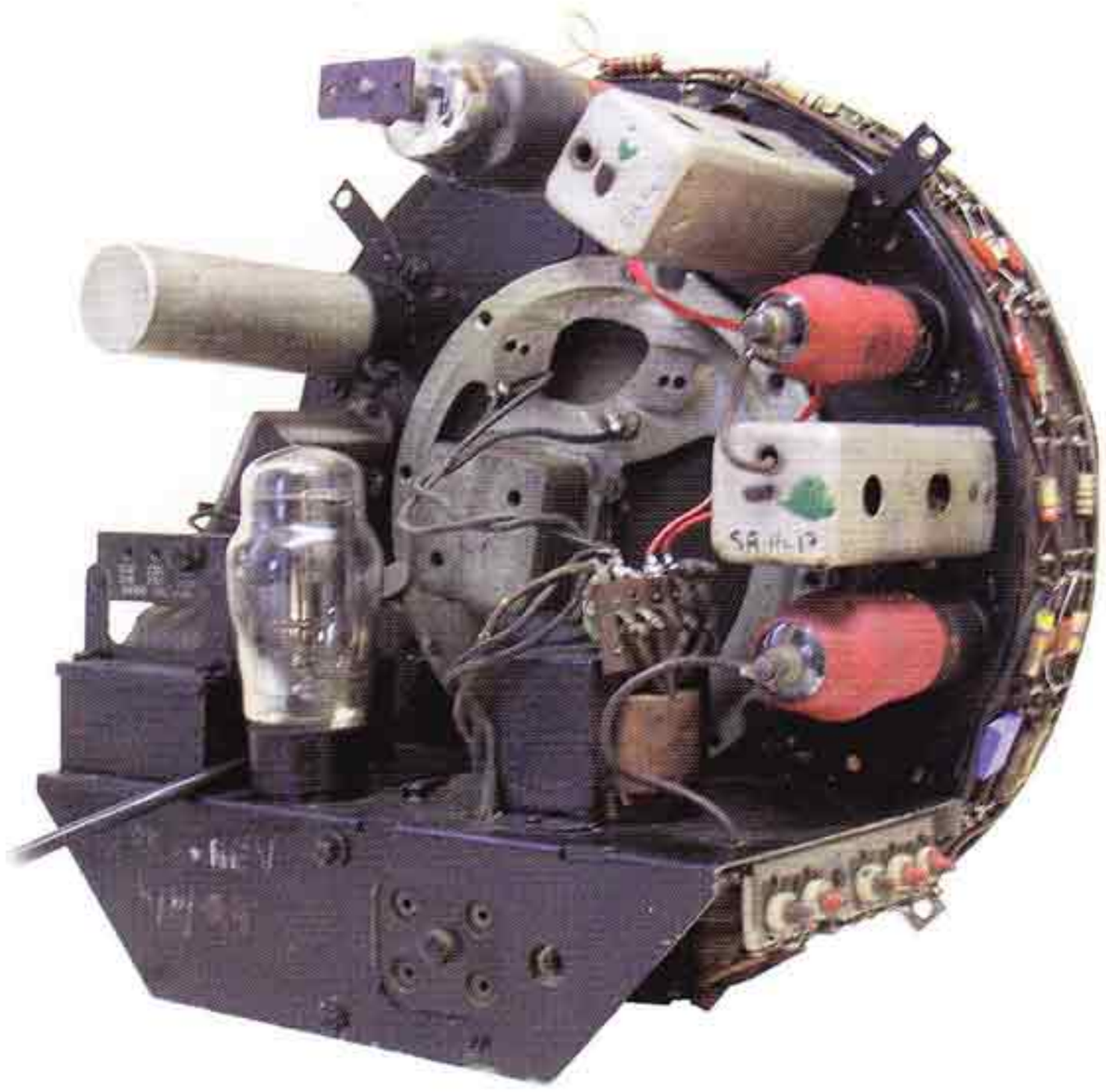
When I collected the set the seller told me that when he had purchased it himself it had been damaged whilst being delivered and he had repaired the resulting broken case with Araldite. Apparently he had also "comprehensively overhauled" the chassis and it was in "superb working order". A quick look at the damage to the case showed it to be not as bad as I had first assumed and I thought I could much improve on the copious amounts of glue that had been used. But since I had always intended to transfer the chassis to my unblemished case it was not a real issue for me. I also noticed the set had a rough board as a replacement back cover, the original obviously having gone missing at some point.

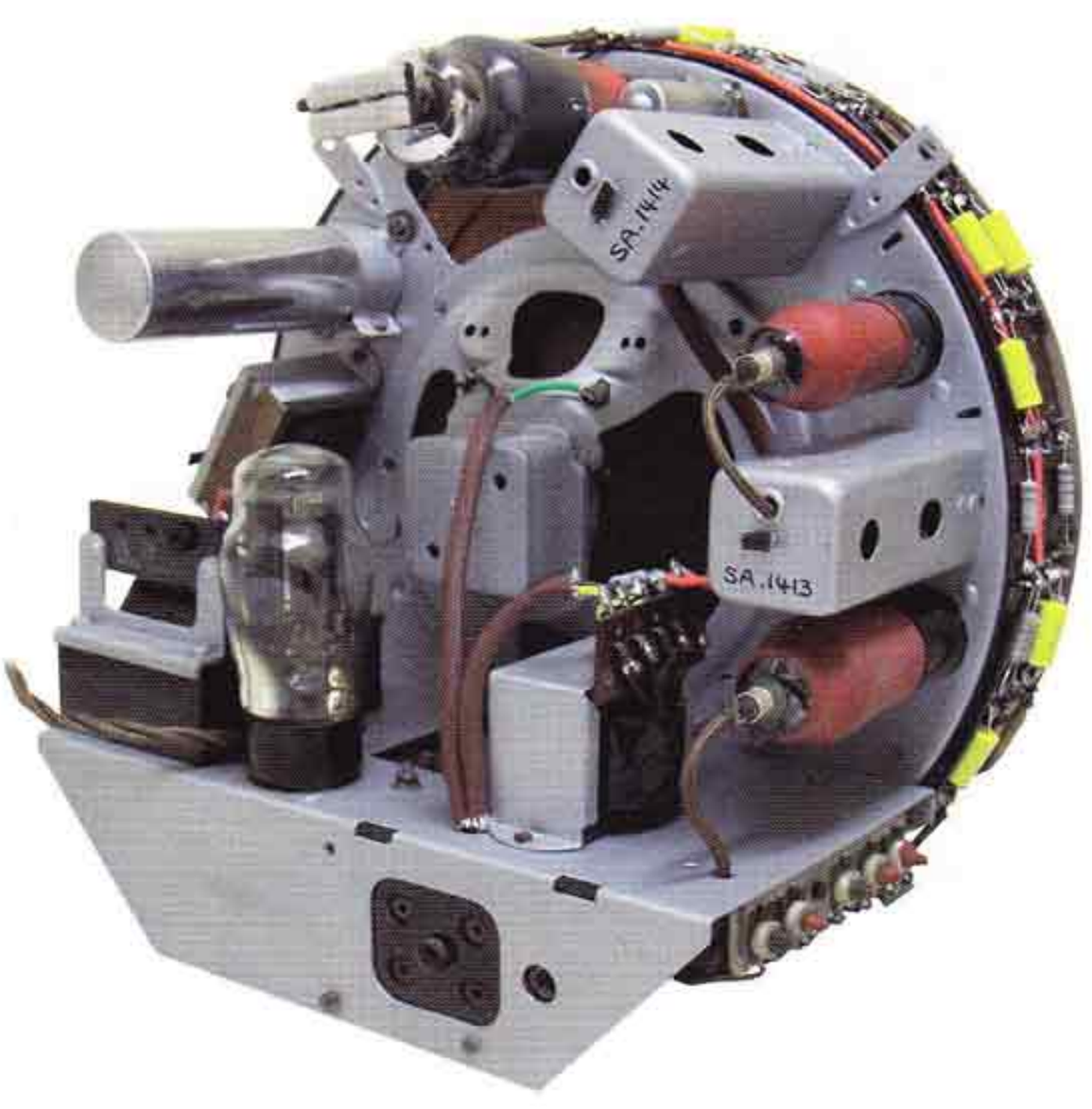
Upon getting the set home I plugged it in to try out. After a bit of a warm-up the medium wave range brought in the local station loud and clear even without an aerial connected, but little else. The addition of a few metres of wire as a temporary antenna and the medium waves were much more lively. The short wave range too was very good with stations all over the dial. But ominously the long waves were just a steady background hiss.

At this point I unplugged the set and removed the back cover. What a sight! Virtually the entire chassis had been daubed with black paint that looked more like hardened black treacle in places. I removed the chassis and was again shocked by what I saw. The state of the wiring was terrible! A few wires had obviously been renewed by modern red and orange, but most was original, hard, brittle and flaking, showing exposed wire. If I'd have known this beforehand I would have never applied power. So much for the comprehensive overhaul! I was really surprised the set worked as well as it did in this condition.

Further investigation showed the 'overhaul' to have included replacement of all but one of the wax capacitors with





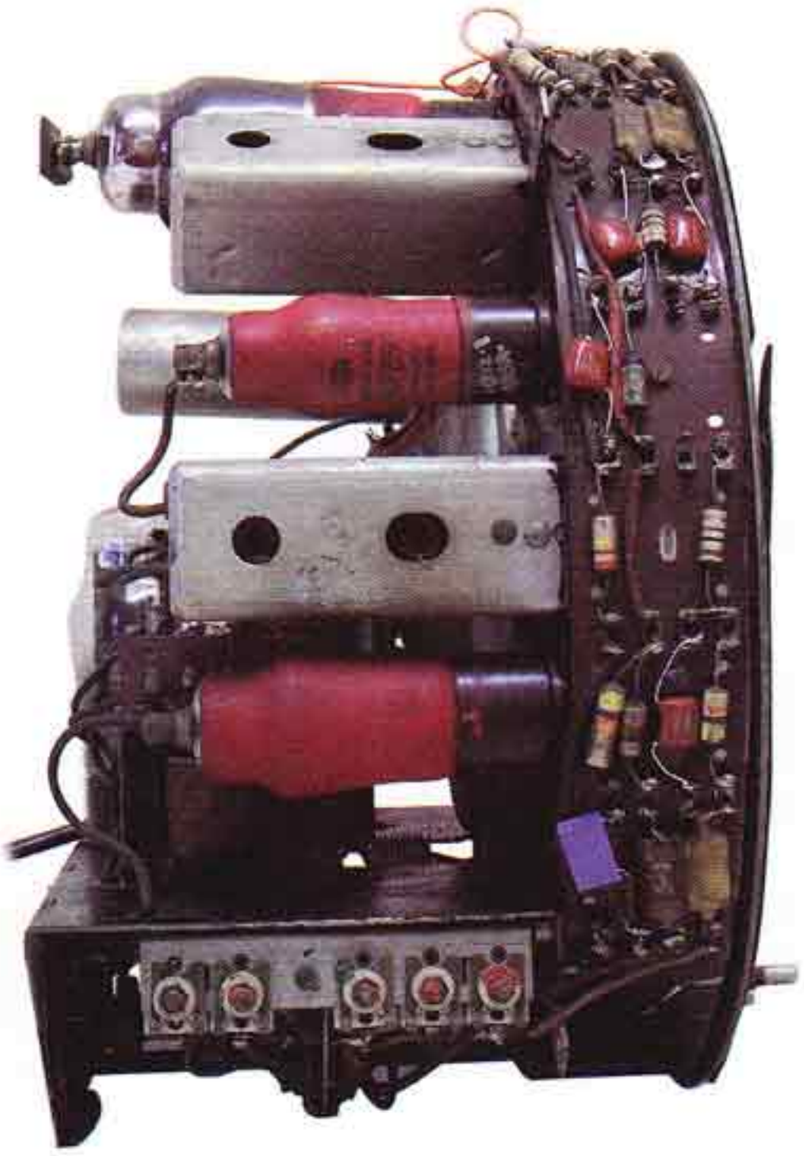


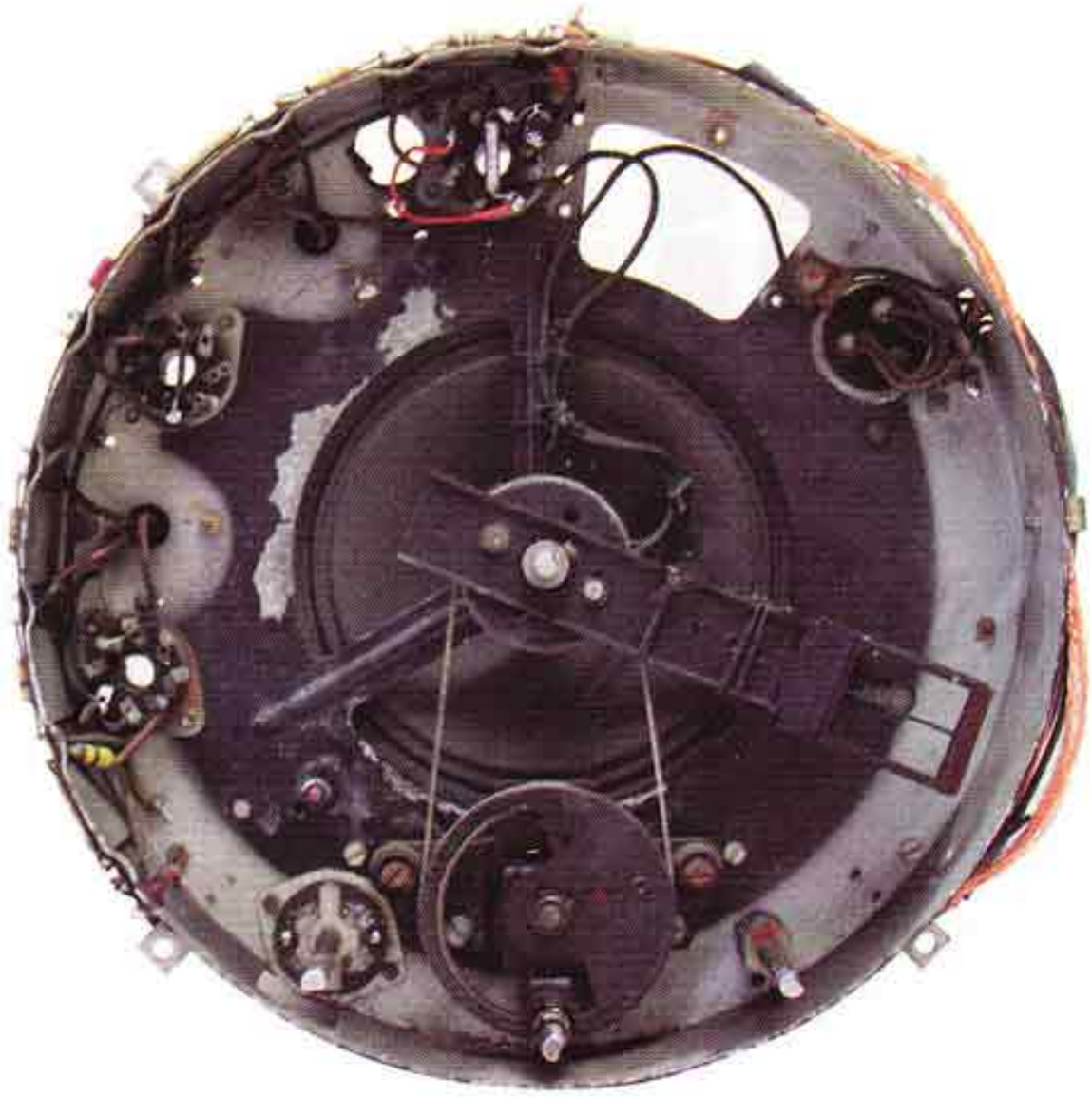
apparently whatever type and value was to hand at the time. Some of the resistors had been changed as well, again seemingly with whatever was to hand. But the 'new' wiring really was something! Most obvious a crude screening braid made from what I assume was the outer layer of a piece of co-axial cable. I'll leave the 'before' and 'after' images to illustrate in detail and speak for themselves here.

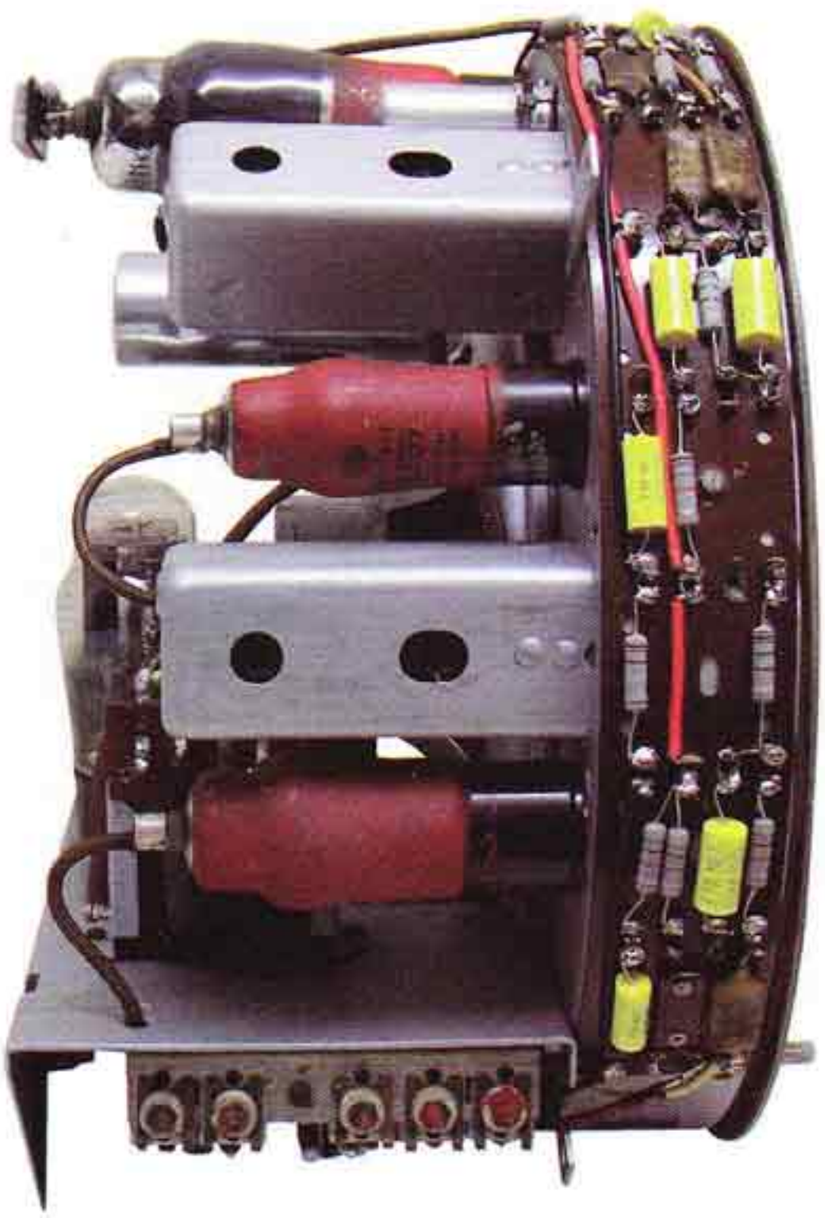
Well there was nothing for it really but a complete restoration. My thoughts were that since I had already been deprived of the preferred option of carrying out a sympathetic restoration by the previous owner, I would instead restore the set to be as reliable as possible. I needed to get rid of that horrible black paint and I could only do that properly by completely stripping the chassis. Obviously all the wiring needed replacing too, it was just downright dangerous.

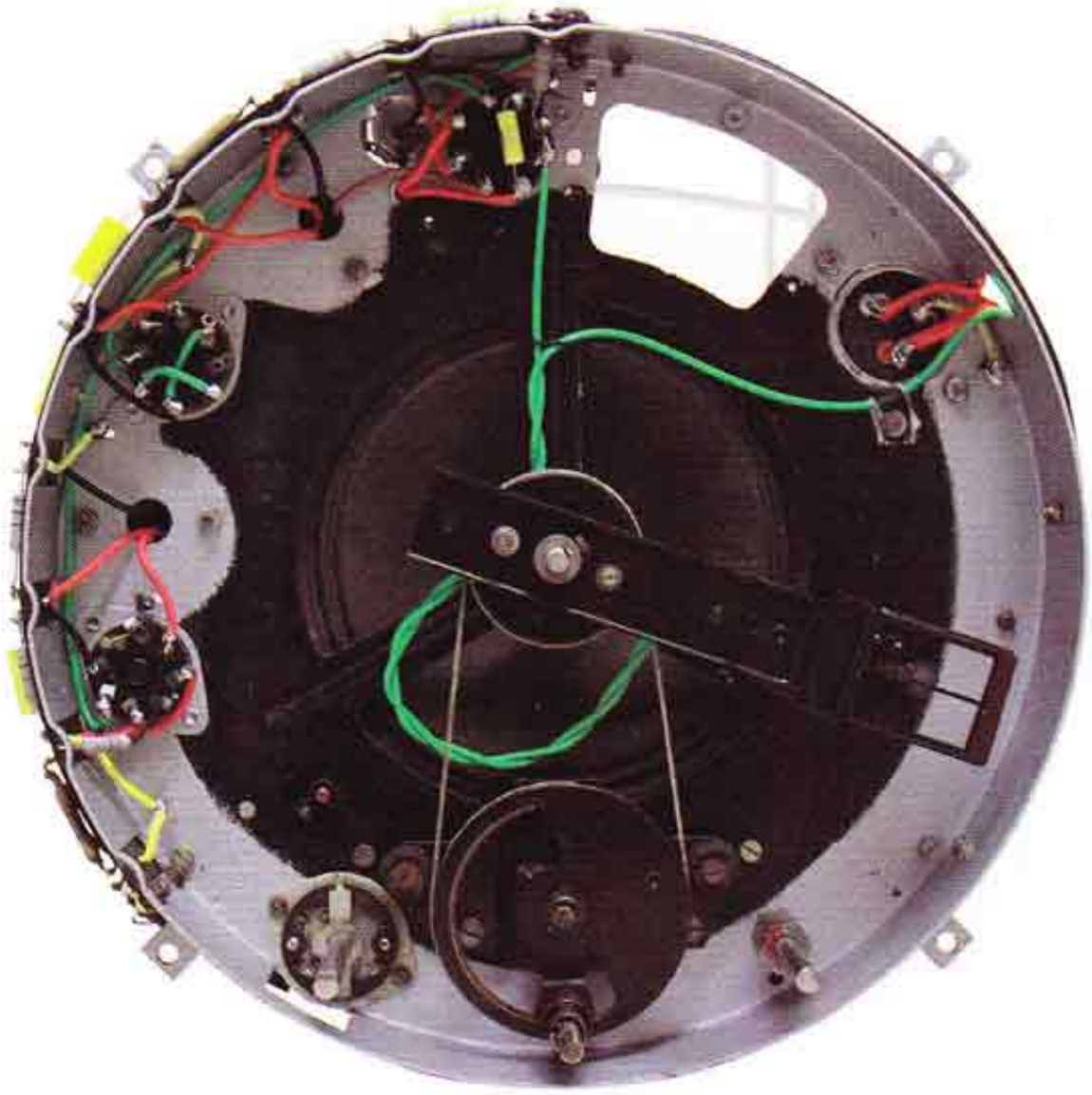
I spent quite a while carefully dismantling and stripping down the metalwork. Once I had a bare chassis, I removed the black paint quite easily thankfully with a jelly-type paint stripper applied to small areas at a time. The chassis was quite discoloured underneath due to light rusting in places and was the reason for the coat of black paint I assume. I repainted with silver Smoothrite for most of the metalwork, with black Smoothrite on the underside, as per the original finish.

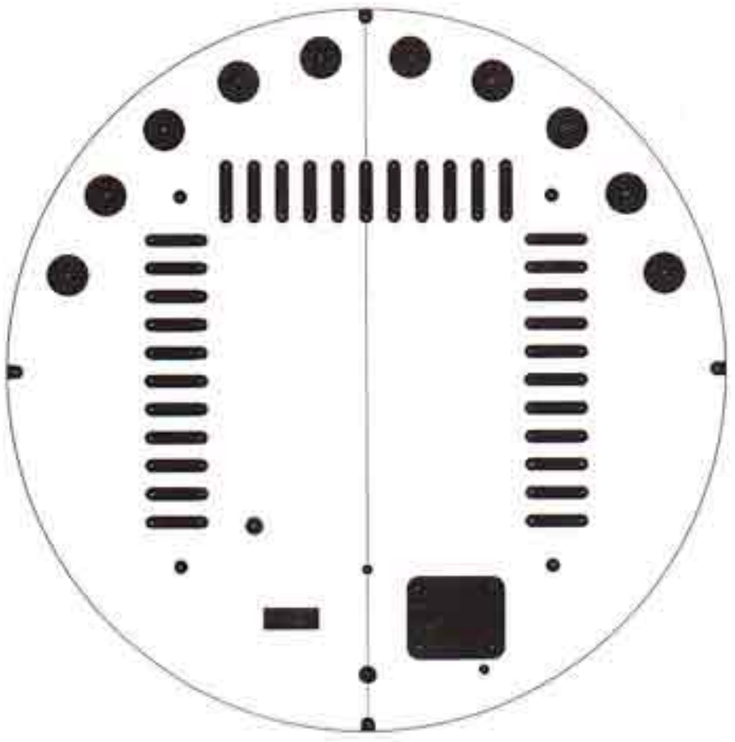
As for replacement capacitors, I would have liked to have restuffed the original wax components with modern versions if they were in a good enough condition to do so. But as they had already been removed and were no longer an option, I replaced with 630V rated yellow polypropylene types instead. I decided I may as well change all the resistors as well, since several needed changing anyway or had been caught with that horrid paint. I replaced with modern 2W metal film types because of their similar dimensions to the originals. The two can-type electrolytics were both

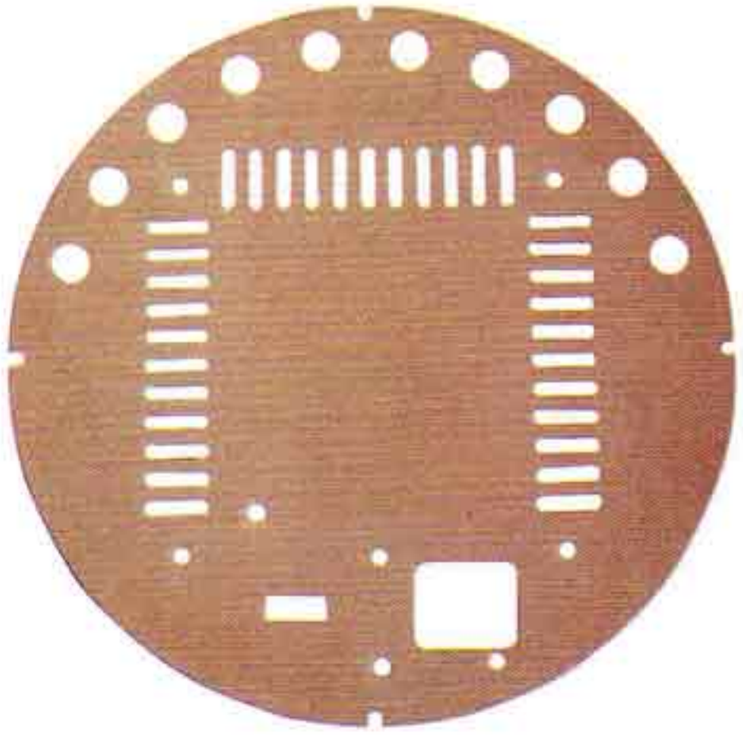













EKCO
ALL-ELECTRIC
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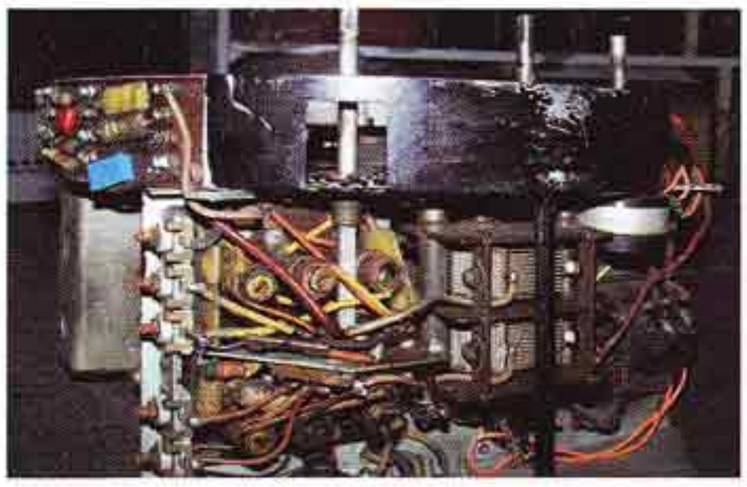

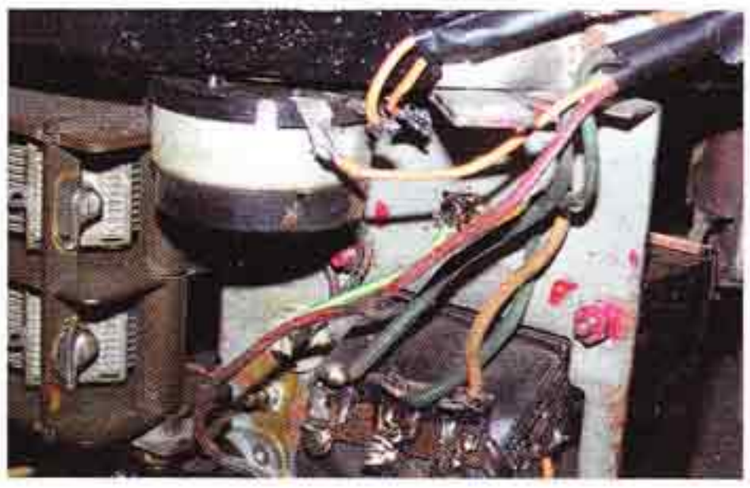

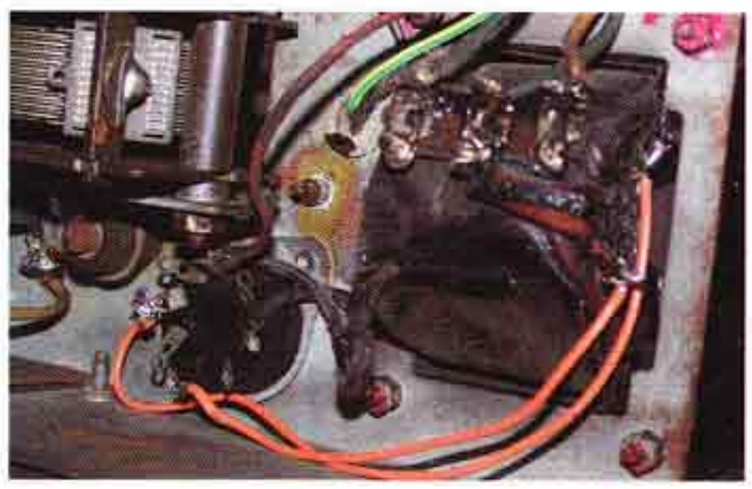

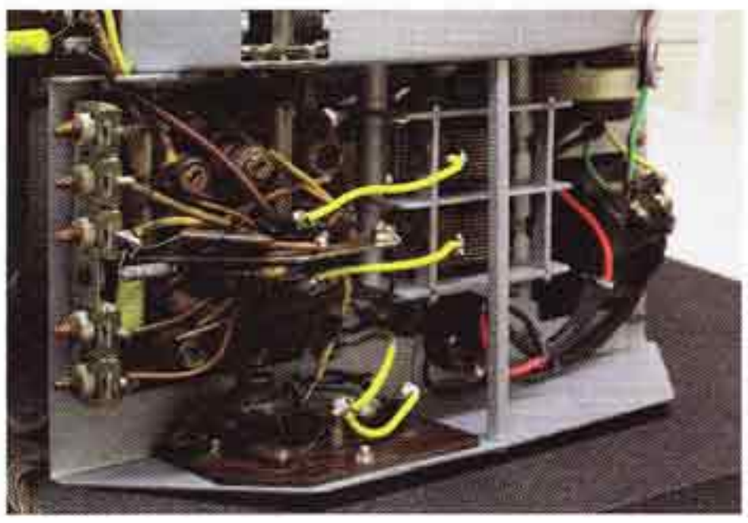

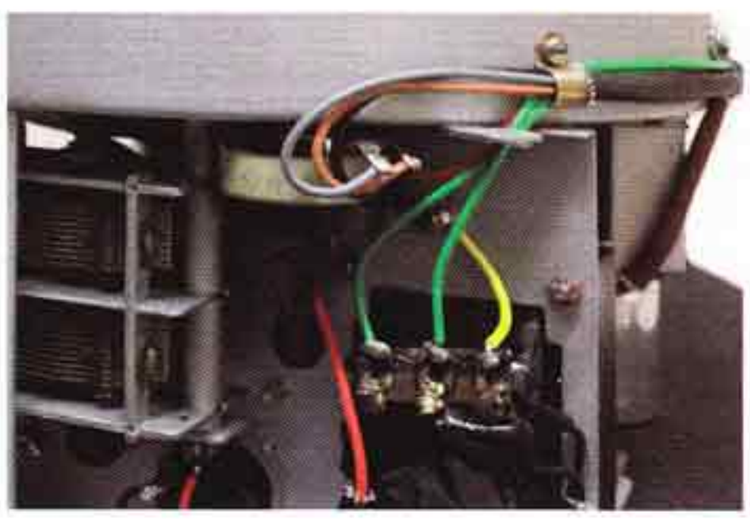

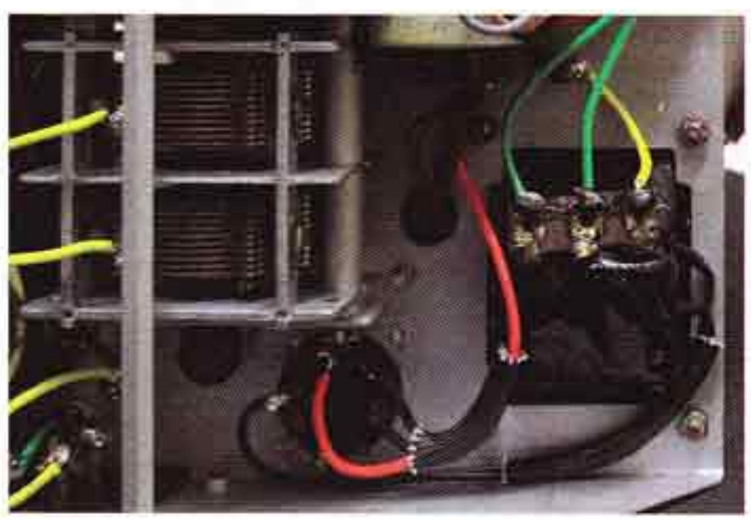

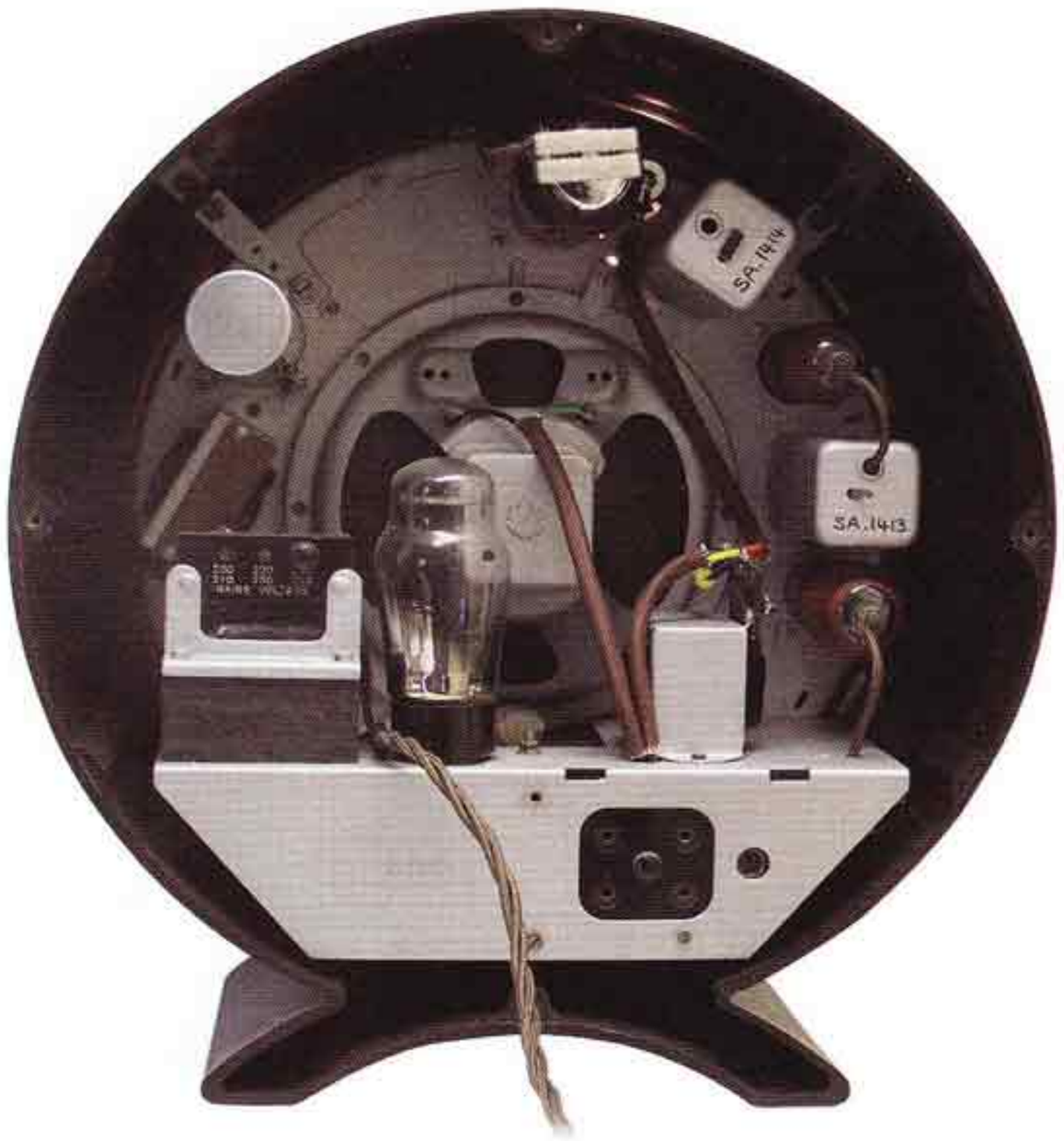

restuffed with modern components and refitted at this time also. At least the set now had a consistent type of capacitor and resistor fitted of the correct values and in my opinion looked much better for it even if a little more of the remaining originality had been lost by doing so.

I now turned my attention to making a reproduction back cover for the set. Using measurements taken from the case and appropriate images of original A22 backs, I arrived at a full sized paper template for marking out some 3/16" mdf board. This was cut, drilled and smoothed until I was happy with the finish, then given a coat of acrylic matt black paint. I made up some graphics again from images of original A22 backs, carefully cut them out, and glued them on in the correct places. The entire back was then given a couple of coats of acrylic clear satin lacquer. This sealed the graphics and gave the back a similar textured finish to that of an original A22 back cover.

I eventually got to the bottom of the long wave problem when I noticed in both the antenna and oscillator coil cores for that band, what I had originally took to be just sealing wax, was actually Araldite. After careful removal of the glue I discovered the two original slugs were missing and broken pieces of ferrite rod substituted in their place. I can only assume the originals were knocked out and lost in the delivery accident that damaged the case. Fortunately I had several of the correct type of slug to hand, fitted two, realigned the band, and was rewarded with excellent reception.

I envisaged having to carry out very little work on this set after being informed that the chassis had already been overhauled. I assumed it would largely be a simple switch of the chassis to my unblemished case. As it transpired I couldn't have been more wrong. This was a good example of the well known Latin phrase 'caveat emptor' (let the buyer beware) and a lesson not to blindly accept the word, or indeed the standard of workmanship, of others as satisfactory. However, that same poor standard gave me the opportunity to virtually rebuild an A22 from scratch. Something which I enjoyed enormously at the time and still continue to get a sense of great satisfaction from every time I use or even look at this particular set in my collection.