

# Ivory Bush DAC90a Restoration

The first radio I successfully restored was a brown DAC90a. A few weeks later I managed to get an ivory one off e-Bay. Obviously I hadn't seen it and could have proved to be a write-off but it was cheap enough to risk as at least I should still have been able to get some useful spares off it.

When it did arrive the case proved to be in disappointingly good condition which ruled out ideas I'd been having about customisation

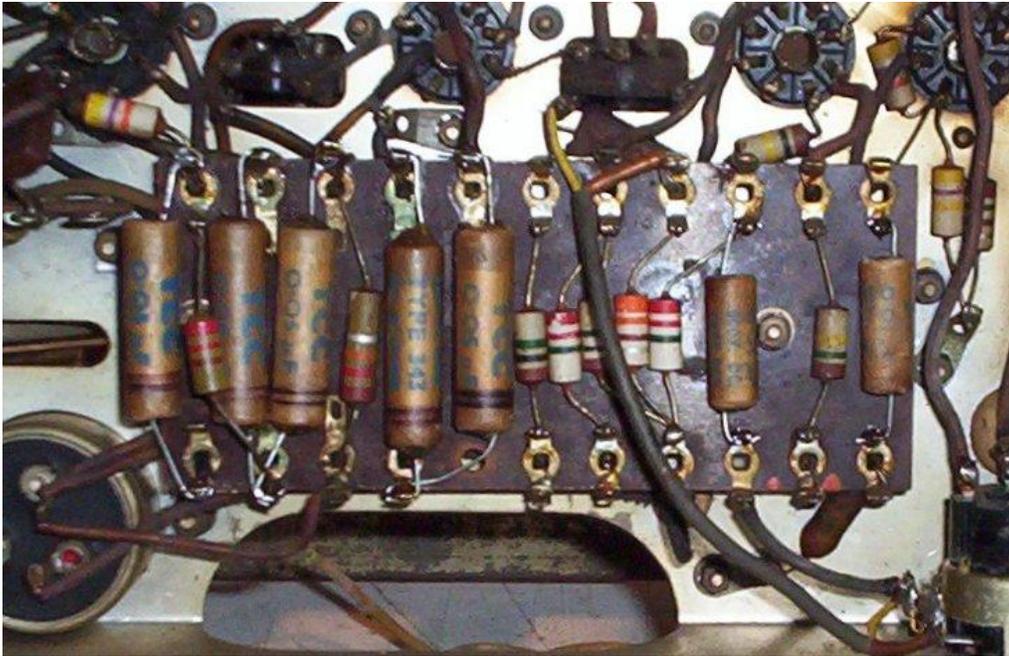


When I first tried it through my lamp-limiter it started to get very bright very quickly. I gave it five minutes through a 15W lamp but that had no effect. Chopping out the filter capacitor brought the current down to a sensible level but it didn't work.

I quickly found that the 10K $\Omega$  HT smoothing resistor is down to 7K $\Omega$  which may not be unconnected to my finding the voltage selector was on 210v.

I also noted that the power connector pins were connected the opposite way to others I've seen which proves the importance of checking this before connecting.

I then got on and re-capped it and went the whole hog by re-stuffing the old ones. This is something I've never seen the point of but found it quite enjoyable.



When next I tried it it still wasn't anywhere near as good as the brown one. I discovered that the HT was down (150v against 205v, and that was on a DMM).

While I was checking voltages I found that the UL41 was leaking. When I recapped it I'd disconnected the wires going to pin 4 so it was obviously the valve itself. At least I could borrow the good one out of the other set.

I then left off the electronics for a while and get 'round the case with Ajax and it came up very well. Bleach reduced the appearance of the worst stress cracks but as they are part of its character I wasn't very worried about them.

I now decided it was time to fit a proper mains lead. This was going well until the MW coil started to slip off the former. I managed to get it back and then gave it a coat of heavy shellac and had no further problems.



After fitting the lead I made some LED dial lights up for it and, as I could put it off no longer, started to investigate the low HT.

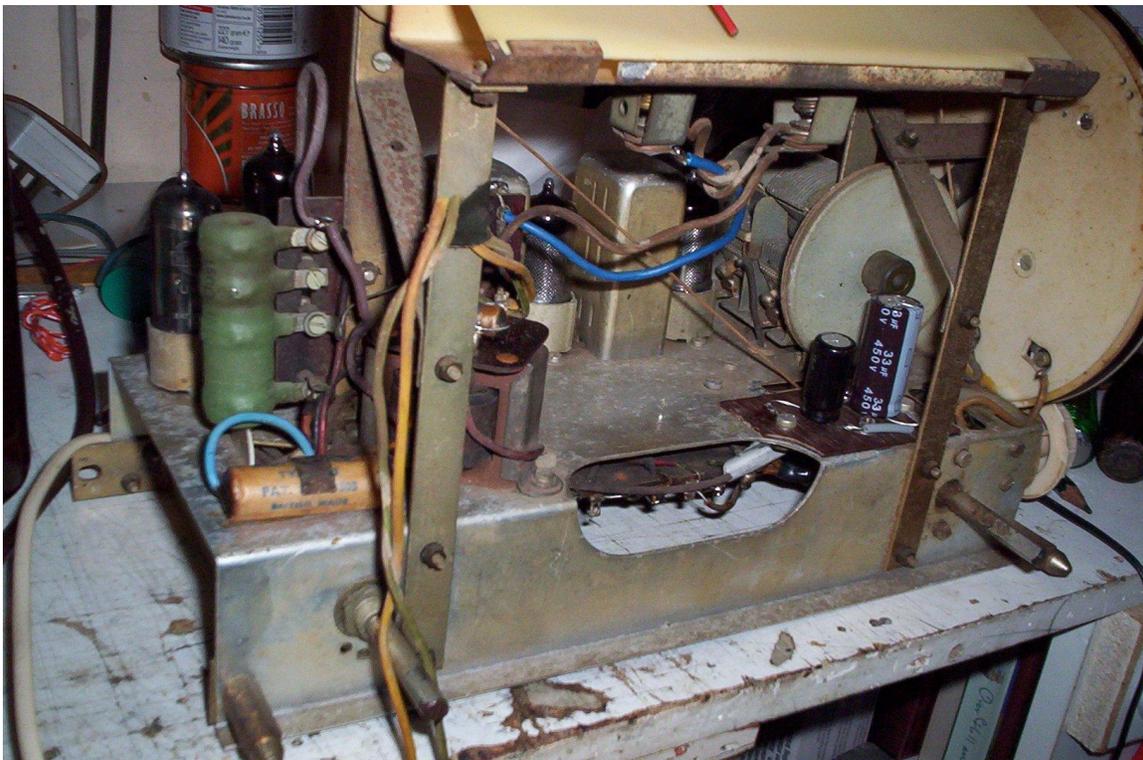
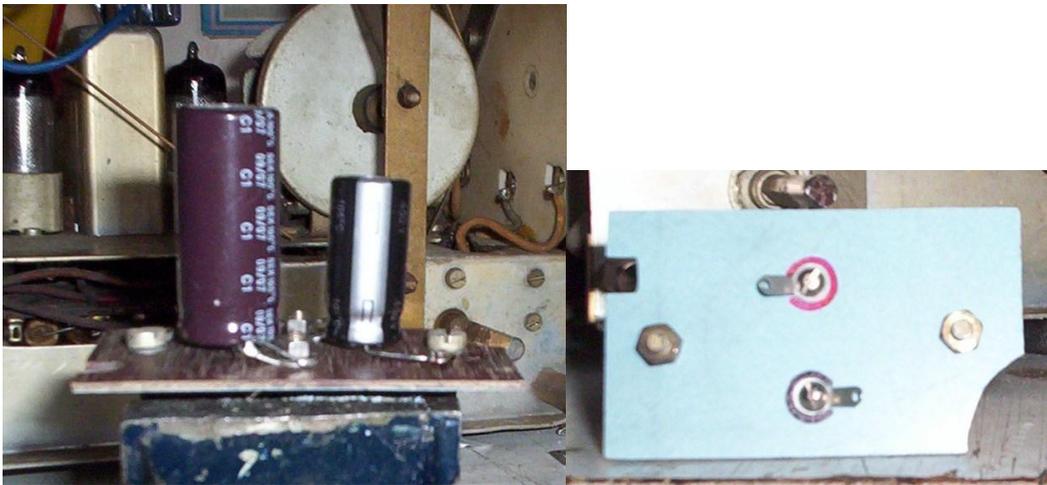
I put my trusty continuity tester across the smoothing cap and didn't like the sound of it. I

de-soldered it and tacked a new one in place and with that the HT was up to 190v, which was close enough for rock 'n' roll.

I connected the old one up via a 15W lamp and diode to see just what it was up to. It leaked about 7mA and the voltage across it never exceeded 280v. I left it for a bit to see if it would reform any better but after a while the leakage started to rise. It still felt cold but there was obviously something amiss with it. I also thought that it discharged rather quickly considering it was only connected to a DMM on volts.

Just for comparison I repeated this test with the new one. That leaked 0.5 am and the voltage went up to 345v (it was rated at 450v) and took far longer to discharge.

While I was at it I changed the reservoir too. I was still inexperienced enough to wonder if the original smoothing could be saved so I fitted the new ones on a piece of formica rather than restuffing it.



It wouldn't have been nearly as interesting or educational if it had worked first try. In fact I was quickly coming to the conclusion that this radio was fond of me and was making sure I spent so much on it that there'd be no point my thinking of selling it. This had initially crossed my mind as the repairing is what I enjoy and it would have been a way of making a few bob to fund the next one.

I changed the RF bypass capacitor to 390pF, which is supposed to improve the sound quality but couldn't tell a lot of difference — not that I'd thought there was anything wrong with it in the first place.

It wasn't long until I managed to get a pair of NOS UL41s for good price so that was it finished.



I did later have a proper go at reforming the original electrolytic can but it didn't want to play so I re-stuffed it.



That still left the dial outstanding.

A lot of people print replacements on water-slide transfer paper but I didn't have a colour printer. I then had the idea of getting it printed on acetate and then sandwiching that between two pieces of thin glass held together with gaffer tape as this would fit where the original rubber mounting channels had been.

I enquired at a few local printers but they either couldn't do it or lost interest when I said it was a one-off job.

My next attempt was at Staples. They said they did it at 50p a sheet plus a three quid "File Handling Charge" for accessing the USB stick.

The printed result looked excellent; far better than it had on the computer screen.

With no light behind it the new dial looked rather dark and, sadly, did so when lit as well — and this set had LEDs so was brighter than most DAC90as.

I got a mate with a colour printer to print out the dial artwork on paper in various colour schemes. The best looking was nothing like 'correct' but was far better than the old dial. I cut out the clear slots with the wave-lengths on and then put this paper in front of the acetate so the numbers on that showed through the paper. This arrangement worked fine.



I had a friend who was an antique dealer and as I'd got three DAC90as, of which this was the best, I sold it through her. It didn't get top dollar but certainly a price I was very happy with. The moral seems to be that normal people don't give a flying fig about 'authenticity,' that Holy Grail that the more extreme vintage radio fans drive themselves mad seeking.