

From the Workbench

By Chris Ratcliff

Restoration of the F.M. compatible HMV C23A mantle radio



This is the HMV C23A. Fully restored, and FM compatible. The valve line up is:

1. Frequency converter 6J8
2. Intermediate Frequency amplifier, Demodulator & A.G.C. EBF35
3. Audio preamplifier 6U7G
4. Power Amplifier 6V6G/GT
5. Full wave rectifier 5Y3G/GT

Rear view of the HMV Model C23A

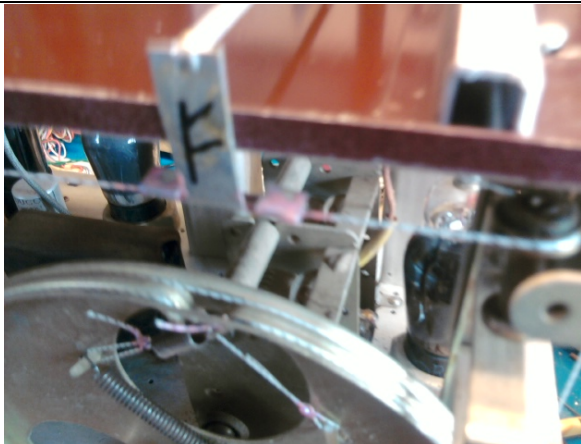
Note provision for a FM tuner





Without glass and knobs – ready for restoration

The two, front dial-cord pulleys are adjustable for height.
This is so that the front of the dial pointer can be raised or lowered to stop the pointer from scraping on the dial scale



The dial pointer rests on both sides of the dial cord.

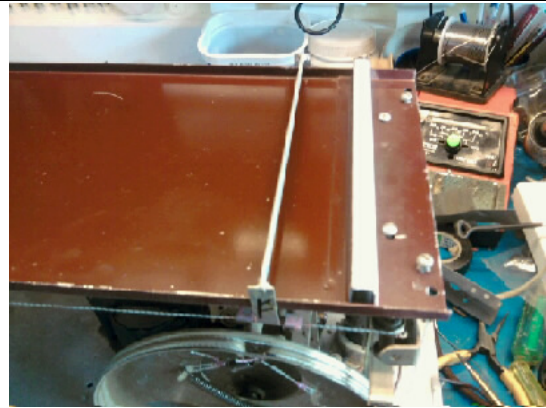
Before removal mark the front of the pointer.

Important: If the dial pointer is reversed when it is put back the front will be higher than the back and will scrape the dial scale causing damage.

Make sure the pointer is square with the dial travel.

Where the dial scale rests on the dial glass, cover the glass with masking tape and cut to size.

This stops the dial scale from scratching or cracking the glass – do the same where any metal parts eg/ clamps hold the dial scale.



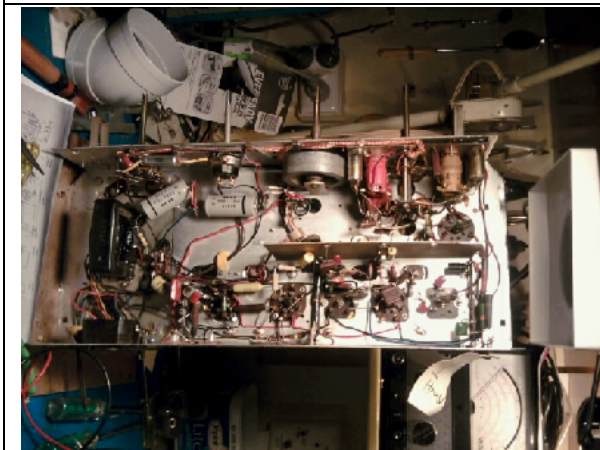
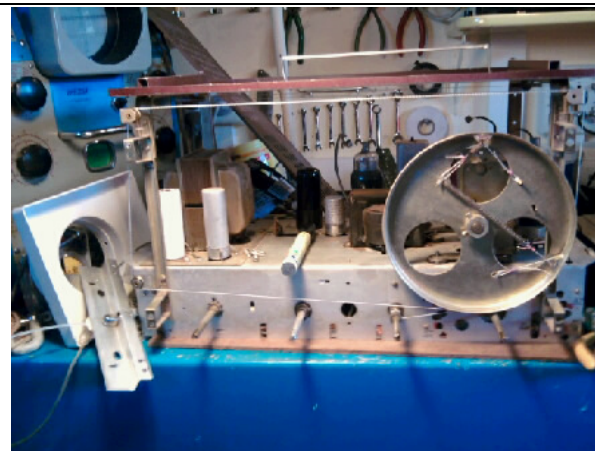
Place heat-shrink tubing over the cotton covered mains cable then heat shrink it.

This holds the cotton together & stops it fraying.

I have used a period plug

There are 2 dial cords. The pointer cord is about 2.5metres long!

The tuning drive cord is a separate cord and has a separate track on the drum.



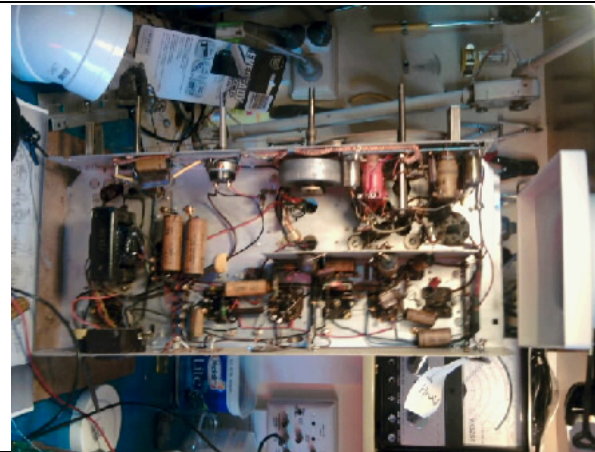
All paper wax and electrolytic capacitors have been replaced.

The chassis mounted electrolytic capacitors were left on chassis but were disconnected.

The resistors were checked, and replaced when too far out of tolerance

Before component replacement.

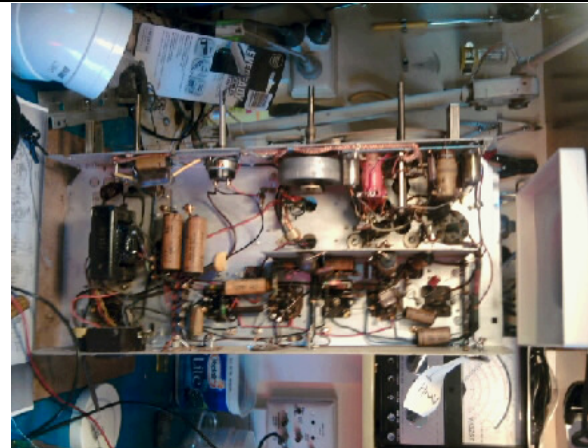
Note the size difference between the old and new parts.



The chassis before component replacement.

Note the size difference between the old and new parts.

The new parts are much better, than the old parts when they were new



The chassis before its wash and clean.

Place the chassis upright, power transformer at the top so that any cleaning solutions don't drain into the power transformer!

Use a blower to blow the dust & dirt out.
USE A MASK TO PROTECT YOUR LUNGS.

Use 2 spray bottles. One with a 50/50 mix of Handy Andy & water - the other bottle with plain water for rinsing.

Spray the chassis and the gangs in fully open position. With a small long-bristle brush, clean in between the vanes and the chassis. Use an old toothbrush for the hard to get areas.

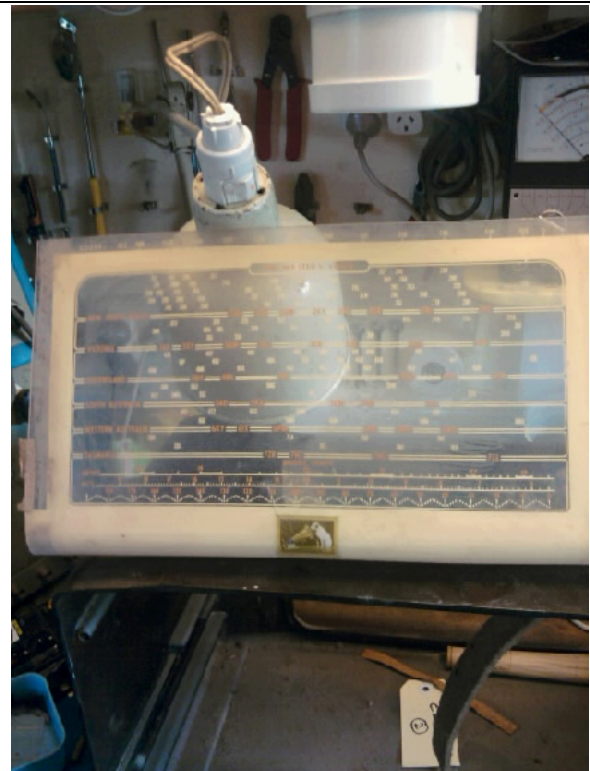
Do this job outside, on a hot day. Put the washed chassis in the sun to dry.



Carefully clean the dial scale to remove dust and loose dirt.

Be careful not to rub off the printing.
(Many radio dials are printed using water-transfers so do NOT use anything wet on these)

Check by doing a small unseen area of the dial first.



Wash the bakelite case inside & outside using hand-soap and water. Do not use any chemical cleaners or things that are abrasive or corrosive.

Once the surface of the bakelite has been stripped it may polish again. Use Kitten brand car polish (cut & polish no. 2.) Using the sponge provide polish as per instructions.

Use a micro fibre cloth to wipe & polish to a high lustre.

Both of these products are available, from most car stores such as Autobarn or Repco.