

THE 1946 HEALING MODEL 401E KITCHEN RADIO

By GRAHAM PARSLAW



Alfred George Healing was born in Richmond, Victoria, in 1868 [1]. In 1898 Healing obtained the Victorian agency for the English Haddon bicycle and operated as A G Healing and Co. in a small factory and shop in Bridge Road, Richmond. Healing imported the bicycle parts and made up the bicycles and catered to a large market for bicycles. In 1912 the firm became a proprietary company and Alfred Healing's son, Keith joined the firm as an apprentice bicycle maker in 1921. The factory was relocated to the corner of Queensbury and Elizabeth Streets, Melbourne. The staff grew to about 50 and 25,000 bicycles were made per year at the peak of production with sales to all states. Bicycles were the primary business and it was an act of diversification to make radios, learning as they went. The author has a Healing coffin radio that can be dated to 1928 [2] and this would seem to be among the earliest radios from Healing (see picture).

Healing simultaneously imported Atwater-Kent radios, but tariffs and limits on imports saw the company discontinue the US radios.



The Healing model 401E in this article was manufactured immediately post war when Healing resumed civilian manufacture. The absence of an alphabetic character on the ARTS&P label is consistent with this and an advertisement from The Australian Womens Weekly, January 5 1946 confirms this timing.



The advertisement contains the text "Australia's largest wartime manufacturer of radar receivers is now

back on peace-time production and Golden Voiced radios are once again obtainable from all Healing dealers. Never surpassed for quality or clarity of tone the new Golden Voiced radios bring to you the experience gained as number one supplier of radar receivers to the services. In vacuum-pressed veneered consoles and rich plastic mantle cabinets each Golden Voiced Radio is a thing of beauty and joy in every home. Yes they are right back on their perch in popularity.” The use of the description Golden Voice may have been an adaptation of a popular phrase describing singers as having golden voices, however Motorola radios in the US also carried the same labelling. Perhaps a HRSA member can provide more insight into how the Golden Voice descriptor came to be shared.

The 1946 advertisement for the model 401 also promises refrigerators and vacuum cleaners from Healing and these lines were duly developed. A decade later in 1956 Healing formed an alliance with the American Dumont Company to manufacture televisions and washing machines under the brand name Thor and refrigerators under the name of Crosley. In 1959 bicycles were discontinued. In 1969 the company posted a loss of almost \$24 million and went into receivership, recovering to some degree until failing in 1975 as Australia moved away from economic protectionism [3].

The model 401E in this article was purchased for \$30 at a HRSA swap meet in Melbourne. The author had wanted one for some time, but was

reluctant to go beyond \$150 on eBay where this model has shown a consistently high valuation. The “bargain” price is arguable because of the very poor presentation of the radio as acquired. The case was a conventional dark brown Bakelite that was factory-painted cream. It seems that the factory finish had become chipped to show the dark base so a previous owner took some cream enamel paint and applied it liberally with a paint brush. Every corner crevice in the speaker grille was filled with paint and the knobs hardly had the creases evident due to the thickness of paint. The finish overall was rough, but good enough for this “rejuvenated” radio to serve a few more years in the kitchen. It was most likely in a kitchen that the radio acquired a layer of tar-like stain over the components from a combination of cooking vapours and cigarette smoke. The radio must have had a long service life because it had been re-capped with 60s vintage capacitors. At some stage it was dropped with the dramatic effect of breaking off most of the right hand side and less evidently fracturing the internal speaker mounts and a chassis-locating spigot. The radio was jokingly sold as a model with extra ventilation.



The great challenge was to restore the right hand side of the case, so this was where the restoration started. First came some hours spent with paint stripper and a scraper. This initially peeled back the hand-painted layer and left the factory cream coat beneath. The factory layer subsequently succumbed to the paint stripper. Apart from the right hand side, the stripped Bakelite case was seen to be intact.



The initial intention was to build a layer of filler over a support surface fixed inside the case. When fully thought through this was going to be very difficult. So plan-B was to look at the reserve materials collection (i.e. junk box) for inspiration. The metalwork from the top of a

disassembled Akai tape deck commended itself as a superior way to go. The metal would provide an even exterior surface and then filler could integrate the metal with the contours of the case. The metal top cover featured a thin-lip on one edge, closely matching the thickness of the Bakelite, and a right angle return that could create a clean line at the bottom of the reconstructed side. After some careful work with tin-snips the new side was clamped in place and glued with Araldite.



Two-part epoxy car body filler was used to blend the metal to the contours of the case.



The integration was completed by coating with a filler-undercoat that was sanded back finely to achieve continuity of the surface. The double indentations through the side of the original were lost, but this detracted very little from the final appearance, at least in the eye of the author.

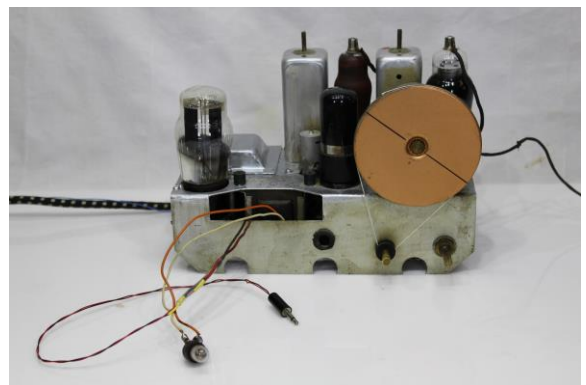


Consulting page 136 of Peter Sheridan and Ritchie Singer's book *Radio Days* showed a collection of various colour combinations for the model 401E. Among the in-house paints the one that offered a best match to an original colour scheme was a spray can of Cherry-Red White Knight paint (a Bunnings brand). By eye the restoration produced a result very close to the original red.

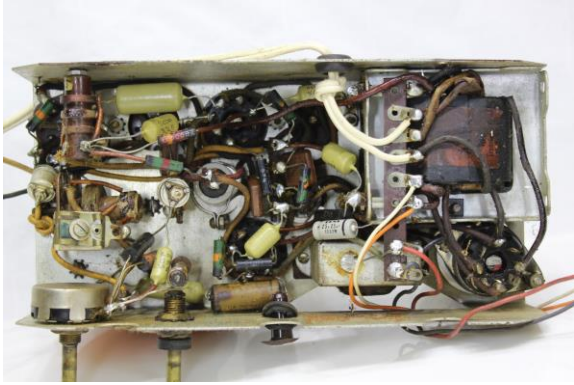
With the case on the way to restoration it was time for the electrical parts to receive attention. Apart from chassis rust and grime the radio was in remarkably good condition. A cleaning by brush using turpentine with a compressed air blow-dry resulted in a clean but still tar covered chassis, notably the stained IF transformer cans. Steel wool removed both the rust and the tar. Rust patches were painted over with chrome-paint.



The dial was operated by kitchen string and this was upgraded to genuine dial cord.



Under the chassis everything looked to be in good order.

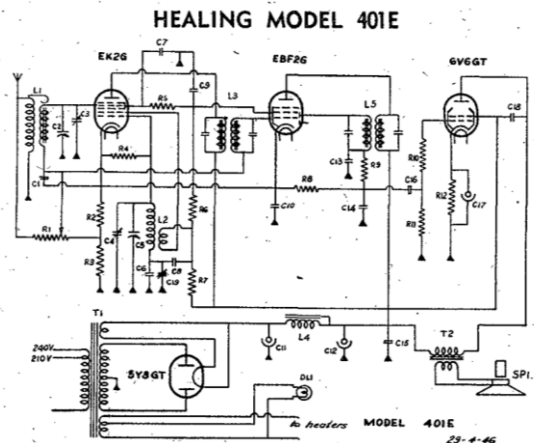


The two-core mains wire was replaced with a three cord lead and this proved to be the only electrical change needed. The mounting studs for the speaker were broken and there was no obvious way to engineer a secure mechanical mounting. Consequently the five inch Rola speaker was rewired to connect to the chassis via a 3.5mm jack and the speaker was glued to the case with Araldite. The speaker and cone were in excellent condition and produced a credible Golden Voiced reproduction. Interestingly the front view of the radio shows a speaker grille larger than the five inch speaker. The rear view of the case moulding shows how this size exaggeration was achieved by adding a solid-fill section to the side of the speaker.



Immediately after the war radio manufacturers went back to their

stocks of valves from 1941 to use whatever they had on hand. For this model the 1946 Australian Official Radio Service Manual describes the use of either a 6A6G or EK2G as the mixer-oscillator. The circuit diagram has an EBF2G as the IF amplifier-detector, but this radio has an EBF35. The 6V6 output pentode and 5Y3 rectifier dissipate most of the 28 Watts of measured power consumption and this may explain the lowering of the mains transformer into the chassis to better ventilate these valves. The case gets quite warm in use, but not blisteringly hot.



In analysing the circuit diagram I was baffled by the lack of a volume control anywhere between the IF and audio stages. It was a surprise to locate the volume control as R1 over with the aerial circuitry. The volume is controlled by adjusting the RF-sensitivity and this has some advantages and some peculiarities. The advantage is undistorted reception of strong signals. Magic 1278 in Melbourne has its transmitter about one km from the author and many radios display RF-overload. The 1278 station was received without

distortion by the 401E because the volume control is an RF gain control. The downside is that almost no other stations could be tuned when the volume was set for 1278. For weak stations the “volume” needs to be turned up full to find them. It is salutary to be reminded of the inconvenience of radios without AGC.

[2] Rod Smith (2001) *More Australian Radios* p87

[3] A.G. Healing
http://en.wikipedia.org/wiki/A.G._Healing



The end result of this project was a radio that brought both aesthetic and listening pleasure.



Notes

[1] 'Healing Yearbook', published by A G Healing Ltd, Melbourne, Australia, 1936
<http://www.powerhousemuseum.com/collecton/database/?irn=341942>