

# Vintage Radio

By Associate Professor Graham Parslow



## A “vintage” radio from just a front panel



**It's not really an authentic vintage radio but this resurrected radio could almost pass for the real thing. It all started with a front panel from the 1930s but it now hides transistors, not valves.**

**T**HERE'S A WAY to win vintage radios at an auction – you simply pay more than anyone else is prepared to. At first, that's exactly what I did, by making liberal bids on eBay. So in 2007, I won the lot of radios shown in the photo above for \$385. The 1938 STC model 500-1 (middle radio) was a must-have and I would be quite happy to pay \$300 for one of these in good condition.

The radios were on a farm 200km out of Melbourne. Bob, who sold me the radios, turned out to be a typical affable country person and offered to bring the lot down in his ute on the next trip to Melbourne. We hit it off

rather well when he made the delivery and we chatted quite bit.

The radios were in appalling condition and after Bob left I had a quiet moment of reflection on the value of my purchase. In marketing terms, this is known as “buyer's remorse”.

### Relieving the remorse

Some of my despondency was quickly relieved by simply getting a hose out and washing the chicken droppings off the 1946 Breville (the righthand-side radio in the photo). This was a radio that I did not personally value highly, so I was prepared to be a bit cavalier about how I treated

it. But there are a number of reasons why hosing down a plywood radio from the 1940s is a bad idea, including delamination of the ply and staining.

In this case I was luckier than I deserved to be and that Breville still remains reasonably intact on a shelf waiting for me to restore it. That's the thing about projects; they get done when you make time.

There is no great ledger saying you have free time and this is what you will do; projects get chosen by your motivation at the time and my highest initial motivation was to restore the STC. That restoration had a great outcome and when I subsequently showed Bob pictures of that STC radio, he called it wizardry.

One of the great things about restorations is that they are not only personally satisfying but also a means of sharing an interest with other people. Bob told me that the radios I bought



This L-shaped timber piece consisting of an ornate front panel (complete with metal escutcheon) and baseboard was the starting point for the project. It was probably made around the early 1930s.

The baseboard was in quite poor condition, due to delamination of the plywood and was subsequently discarded, leaving only the front panel and the escutcheon.

attracted quite a few questions during the auction, mostly about the facade panel (top of the pile in the photo). It subsequently spent a couple of years in my storage shed in a prominent place that I constantly walked past.

One day, it attracted my attention and the decision was made to make this the next project. This was appropriate since by that time my knowledge of the history and technology had become better honed, along with my technical restoration skills.

### Personal background

I was born in 1948 and raised in a small country town in South Australia. As a boy, I made crystal sets, tinkered with simple electronic circuits and avidly read *Radio, Television & Hobbies*. I brought home radios scavenged from the local tip (mostly from the 1940s) and took them to pieces.

When I began collecting radios in my 50s, they were mainly the radios of my early years, both valve and transistor. As my collection grew, I became more systematic in reading the history of radio. This took me back to the 1920s and the dawn of commercial radio transmissions, encouraging the acquisition of some 1920s sets, both commercial and hand-made.

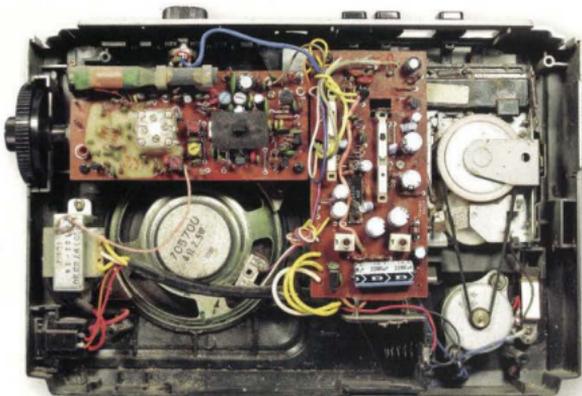
These 1920s radios universally conform to the coffin style: a rectangular

box (wood or metal) with knobs and connections for batteries, aerial and speakers or headphones. The commercial radios of the 1920s made a great feature of the tuning indicator escutcheon. These were typically made of brass and sometimes included an enamel badge, as does the mantel radio featured in this article.

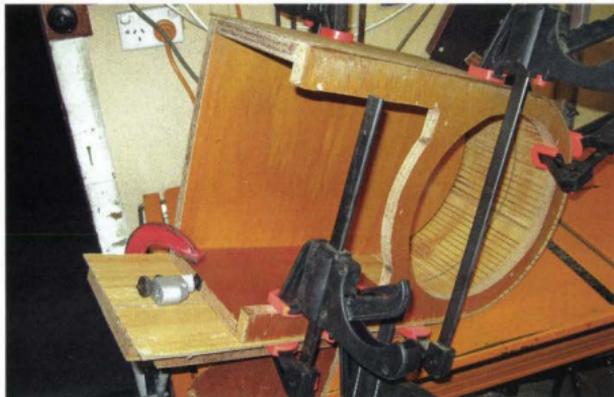
The calibrated tuning dial was usually graduated from 0-100 and listen-

ers would write down the numbers for their favourite stations. As more stations became available and manufacturers were better able to align their radios consistently, they printed the station call-signs on the dial, a feature much preferred by buyers.

By the end of the 1920s, it was evident that headphones were no longer suited to a family radio and the speakers were routinely incorporated in the radio cabinet, rather than independently standing on top of it. The



The tuner, audio amplifier and power supply modules were transplanted into the vintage cabinet from this old Sanyo radio-cassette player.



The 3-ply outer sheath was shaped by making multiple kerfs into the reverse side of the ply, so it could be formed to the semicircular dome shape required.

natural outcome of this evolution was the cathedral style of radio, spanning roughly 1928-1935.

### The starting point

As shown in the photos, the remarkably sparse starting point for this particular project was an L-shape of two wooden panels (face and base), with some moulding around the base. Most restorers would place this fragment of a once proud radio in a corner of the shed or even throw it out but I saw it as an inspiring cornerstone to a unique project.

Ideally, every bit of the original material would be incorporated into the

final product, although that was not the outcome here. Step one was simply to put it on the bench and engage the power of imagination. The constraints were to produce a radio that not only looked original but which also used what was already on hand in my salvage bins if at all possible.

It was apparent the knobs had to remain where the four holes were but nothing I had in my salvage shelves lined up at all well with those holes. However, the project eventually came to fruition after I made a large acquisition of 1980s boom-boxes and cassette-radios. As an aside, I hope that these icons of the 80s become collectable

sometime soon because then I will have a valuable asset rather than what my wife insists they are, ie, junk.

Be that as it may, an old Sanyo radio-cassette player which no longer functioned on the FM band was not going to be missed. It was effectively constructed using three separate modules: power supply (with mains transformer), tuner and audio amplifier.

Immediately, the possibilities were evident, especially as the tuning capacitor was driven by a simple pulley-wheel and the discrete volume pot was separate from the circuit boards.

### Putting it together

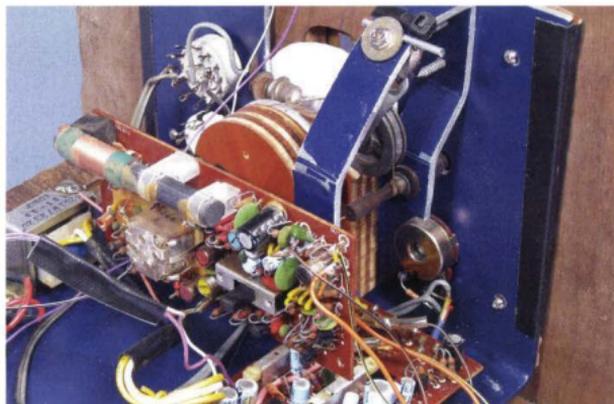
So the project was conceived as a dedicated AM receiver with four knobs controlling On-Off, Volume, Tuning and Tone (top-cut). My metal-bits box contained the case of what was once an LKB electrophoresis power supply and it provided a heavy-gauge aluminium bracket to anchor the electricals. The aim was to anchor the frame only to the front panel and this was simply done by using wood screws from the back.

Once the four holes were in place for the knobs and a cut-out provided so that the tuning dial could be viewed through the escutcheon, the project rapidly progressed to the point of functioning. My knobs box had only one radially-calibrated dial that I could use as the tuning indicator and this was scanned and reproduced onto this cardboard that would allow back-illumination by a dial globe.

My knobs bin didn't include a set of four matching knobs that were genuine 1930s, so four instrument knobs with pointers from the 1950s were selected, initially to see what it would look like. It looked modestly acceptable so the pointers were removed from the knobs and they remained part of the project.

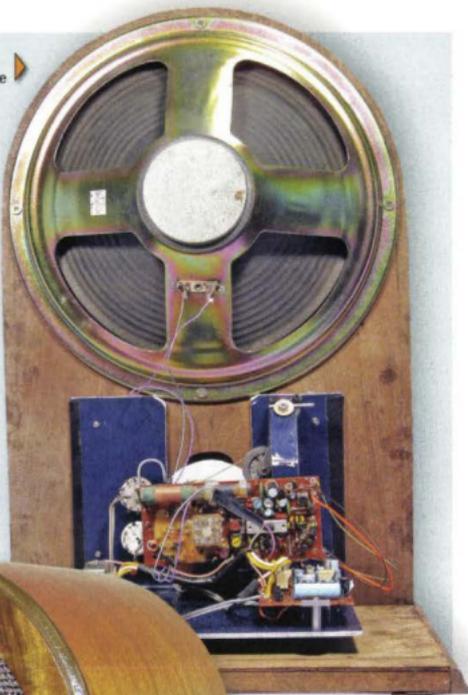
Happily, a 12-inch (300mm) Mag-navox speaker I bought in the 1970s fitted snugly into the cathedral speaker space.

At this stage, apart from some screw holes at the rear, no physical alteration had been made to the casing. The original radio was manufactured by A. J. Veall Pty Ltd who were located at 243 Swanston Street, Melbourne, until they relocated to Bridge St, Richmond in 1954. They traded in a range of electrical goods and in this respect they were comparable to retailers like Myers and Malvern Star, who sub-



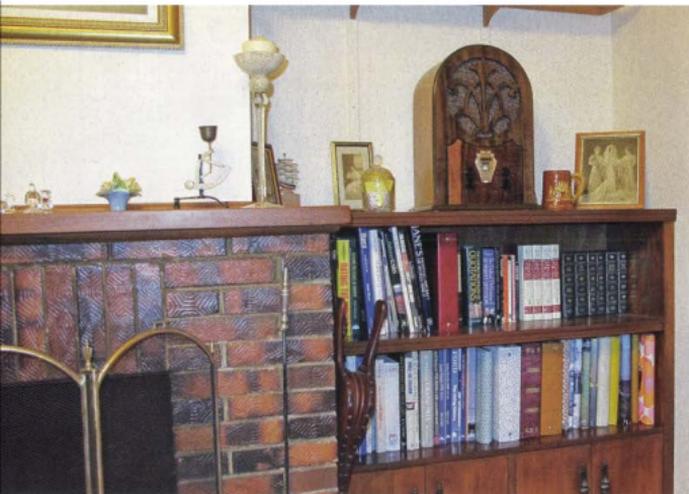
The power supply, tuner and audio amplifier modules from a old Sanyo radio-cassette player form the heart of the resurrected "vintage" radio.

This view shows the general assembly. The electronic modules were mounted on an L-shaped aluminium bracket, while a 300mm Magnavox loudspeaker from the 1970s fitted snugly into the cathedral speaker space.



The completed radio looks just like the 1930s original but there are no valves inside the cabinet – just a solid-state transplant that's not only more reliable than the original but sounds better as well.





The refurbished "vintage" radio now looks quite at home in the lounge room, where it is once again serving as a family radio.

contracted out for radios to be made to sell as a house brand.

In fact, it's likely that this mantel radio was a house brand with limited production, because a web search failed to find any reference to the brand.

### The radio boom

Radio was a new boom in the 1930s, driven locally by the resolution of royalties for patents so that all comers could use the superior superhet design through the ARTS&P system in Australia. This meant that small

companies could make their own radios, free from prosecution for design infringements, by sub-contracting to a cabinet maker and a radio chassis fabricator.

This cottage industry was destroyed by World War 2, for a number of reasons. When a mantel radio sold for around 30 pounds, it became the pride of the lounge-room as it probably cost six months of hard-earned savings in the era of the Great Depression.

For a manufacturer, it was worth paying a pound extra to the cabinet maker to use mixed veneers, inlay some ebony and perform some fine fret-work to incorporate a "fleur de lys" design into the speaker opening.

After 80 years, many of them in a country shed, my object of 1930s craftsmanship displayed many cracks in the aged veneer. However it did remain largely intact due to the good coat of shellac it started with.

So what to do with the wood-work? Some hard decisions were needed and the result was to discard the two lengths of damaged moulding around the base, because it was easy to purchase a new length of similar moulding. The baseboard was also quite poor, due to delamination of the plywood, so this too was discarded, leaving only the front panel and the escutcheon to become part of the end result.

Veneered 5-ply was adequate for replacing the base and for making a frame to hold a 3-ply outer sheath. The professional way to mould plywood is by using steam but I set up my saw bench to make multiple kerfs into the reverse side of the ply, so it could be formed to the semicircular dome shape required. With suitable gluing and screwing, the case was made ready for the finishing touches.

Remarkable results with timber finishing have been achieved for centuries using natural products. By luck more than design, Bayer in Germany were looking for a Nylon-like polymer to avoid DuPont patents when they discovered polyurethanes which they patented in 1937.

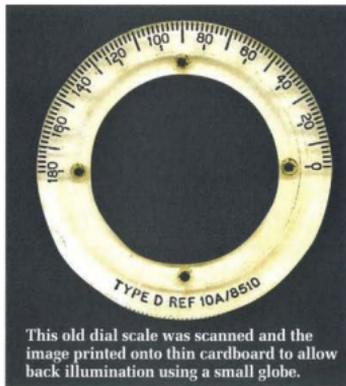
Purists may revel in using original finishes but I am happy to use modern finishes with all their advantages of hardness, transparency and lustre. However, I quickly learned from previous restorations that the old finishes react badly with polyurethanes and the first step must be to reach for the paint stripper and meticulously clean the cabinet back to the bare timber.

The first finishing step for the Mantel was to paint over the exposed edge surfaces with a brown acrylic paint that matched the original paint. The face and case were separately painted with polyurethane, so that the junctions did not fill. The first coat was applied using solvent-diluted polyurethane with a brush to ensure that the raw wood was adequately wetted and penetrated.

This was followed by eight or so applications of Wattyl Estapol from spray cans. For a job of this size, it's inefficient to set up a compressor and spray gun, however a brush used for finishing coats is counter-productive, with marks inevitably remaining obvious in the hardened surface. So multiple thin coats were carefully sprayed on and sanded back.

Patience is essential at this stage to allow each sparsely applied coat to thoroughly dry before sanding back. The very last addition to the mantel was some speaker grille cloth. Then with some satisfaction it was taken to the lounge room and is now again serving as a family radio.

The bass is rich and speech is clear. What's more, the authentic 1932 characteristics of 50Hz background hum and delayed warm-up are features that I am happy to forego. **SC**



This old dial scale was scanned and the image printed onto thin cardboard to allow back illumination using a small globe.