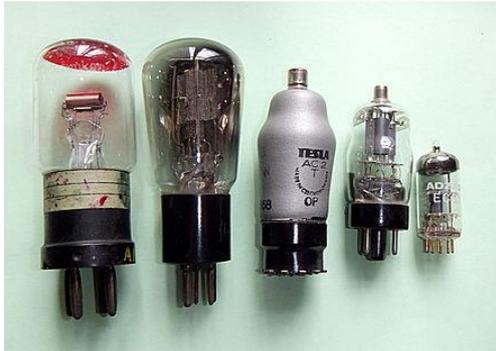


# RADIO AND DESIGN

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## The valve radio

The first type of radio to become widely available was the crystal set, and these were produced in large quantities in the 1920s. Crystal sets had no means of amplification, and headphones had to be used to hear the weak signals. Amplification was made possible by the invention of the thermionic valve (or vacuum tube as it is called in America). Valves are able to pick up the tiny energies in radio waves and to amplify them to drive a loudspeaker.



Valve radios for domestic use first became available around 1922. Early sets were powered by expensive high-voltage batteries, and mains-powered sets became common in the early 1930s. The circuits were of the TRF (tuned radio frequency) type, until around 1932 when the superheterodyne ("superhet") type of circuit with its superior performance began to take over. The more upmarket sets included a "magic eye" tuning indicator, a special type of valve.

The arrival of the transistor in the early 1960s led to the demise of valves in radio sets. Valves are still used in some guitar and audio amplifiers because of the particular valve sound which is preferred by some.

## Cabinet design

In the 1920s, most cabinets were functional rectangular boxes of wood or metal, with a separate horn speaker. They were finely crafted, and were expensive by today's standards. Because of the expense, home radio construction became a popular hobby.

The incorporation of both the radio chassis and the speaker in a single wooden cabinet became widespread in the early 1930s, and that decade became the heyday of radio cabinet design. The "cathedral" type of cabinet appeared in 1930, with its rounded top, influenced both by the art nouveau style and by traditional furniture styling. In those days the wireless set was seen very much as a piece of furniture, its quality to be admired as a symbol of social status as well as serving its functions of news dissemination and entertainment.



From around 1934 the cathedral cabinet began to look old-fashioned. The "tombstone" or "skyscraper" cabinet came into vogue, with geometrical lines and clean curved shapes characteristic of the art deco style. Some of the cabinet designs were deliberate reflections of skyscraper buildings such as the Empire State building.

The 1930s, 40s and 50s were the golden age of radio, and every household had at least one. Radio was a medium for conveying information on a mass

scale never seen before. At the same time, jazz emerged as the popular music of the day and most people heard it on the radio.

Bakelite was the first type of plastic suitable for radio cabinets, and could be moulded into exciting new art deco inspired designs, in a variety of colours, sometimes featuring chrome trim. The revolutionary circular designs used by the British firm Ekco and the "Empire State" Radiolas produced by AWA in Australia are examples of the most admired designs, and examples of these radios are highly sought-after. This use of plastic transformed the radio; no longer disguised as a piece of furniture, it was able to express its own identity as a modern object with visual appeal and a machine for electronic communication.



However, the wooden valve radio held its own and remained popular from the 1930s to the 1950s. Many customers were conservative in taste and preferred a wooden cabinet, which they considered to be more real, tasteful and durable, as well as believing that wood gave a better tone than plastic. The decorative use of veneers makes some of these cabinets very attractive.

The tuning dial was invariably a small "keyhole" type until the early 1930s, when semicircular dials, and later large circular "aircraft" dials, took over. The dials themselves became important design elements. Some dials incorporated pictures of aeroplanes, skyscrapers, and ocean liners, reflecting the optimistic belief in scientific progress of the time. Rectangular "slide rule" dials were increasingly used from the 1940s onwards.

During WW2 and the immediate postwar years, radio cabinets were mostly box-like and as simple as possible, reflecting the austerity of the period. The 1950s saw the widespread use of plastic cabinets, the designs echoing the flashy automobile styling of the time, and radios became smaller in size due to the use of miniature valves.

### **Radio manufacturing in New Zealand**

Radios were manufactured in NZ from 1923 to the 1960s and the quality of the NZ-made sets were comparable to imported radios. The big 4 manufacturers were Radio (1936) Ltd. (Auckland), Radio Corporation of NZ (Wellington), Collier & Beale (Wellington) and AKRAD Radio Corporation (Waihi). There were also many smaller radio manufacturing firms in NZ. During the 1930s, radio chassis made overseas were often fitted into locally made cabinets, to avoid the import duty on complete radios. A full history of NZ radio manufacturing has been chronicled in the two books by John Stokes (founder of the NZVRS).

### **Further reading**

"The Golden Age of Radio in the Home" by John Stokes

"More Golden Age of Radio" by John Stokes

"Radio Art" by Robert Hawes

"Deco Radio" by Peter Sheridan