

# Vintage Radio

## The year that was — 1926

**1926 was an exciting year for radio, especially in Australia. There were innovations on the technical side, but probably more dramatic were the changes in the way 'wireless' was being seen by the average person. Broadcasting had also become a fully-fledged industry, and various snippets of information suggest that within the media industry, 'there is nothing new under the sun'...**

First, let's look at the radios themselves. In appearance, circuits and loudspeakers there was not a lot of dramatic change from the previous year, although of course there were changes.

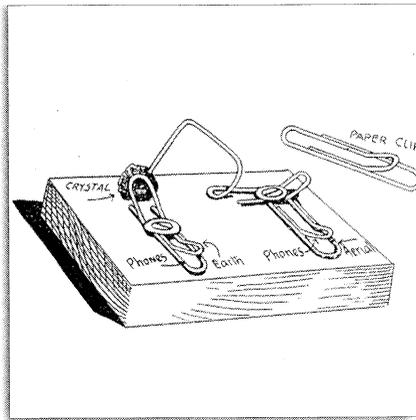
The one thing that can be said for 1926 is that there were some conventional circuits being adapted into novel 'sets'. One such circuit, described in *South Australian Wireless and Radio Weekly* for August 18th, was 'A crystal set for 7d' (six cents). The circuit, if you can call it that, is shown in Fig.1. Actually it is a bit of a ruse, because there is no tuning circuit save the length of the aerial wire, and station 5DN with its modest 300 watts, could only be heard when 5CL (with 5000 watts) was off the air!

The article went on to add that the 'chap who requires maximum selectivity out of a set

that costs him 7d to 2/6 (25 cents) is very hard to please'.

Another radio described for a specialist location was described in *Wireless Weekly* for October 8th. It was dubbed the 'Flat-Dwellers Receiver' and was unusual in that the accompanying photo showed a woman working the controls. The very idea!

Actually, this photo provides rather an interesting commentary. Firstly, there is recognition that people in flats are unlikely to be



**Fig.1: The seven-penny Crystal Set. It's more of a gimmick than a radio, of course.**

able to construct large outside antennas; secondly, there is recognition (grudgingly?) that women can actually operate a radio and thirdly, that women live in flats. The sociologists may muse upon this at their leisure.

The circuit for the flat dweller's four is shown in Fig.2. As can be seen, it operates from a loop antenna, and regeneration is curiously applied via inductive coupling from the untuned RF transformer to the secondary. The secondary is then fed back into the cold end of the only tuned circuit. It appears that this was done in order to eliminate one of the controls, thereby to simplify its operation.

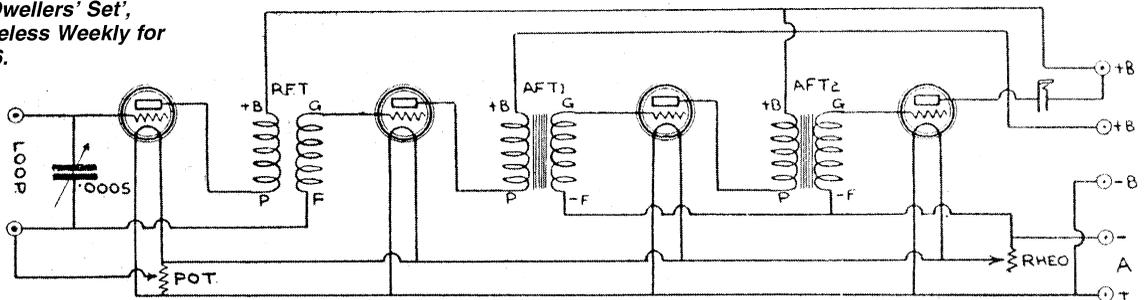
Having studied this circuit, one wonders how it actually works. How is detection achieved? There were no clues in the text. It could not have been anode bend detection, because the bias would be quite incorrect for the second valve.

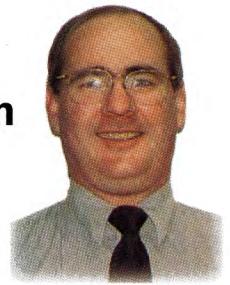
Actually, it's grid leak detection. The grid capacitor in parallel with the resistor are shown in the wiring diagram and the photo. It seems that the draughtsman left them out of the circuit!

### Neurodynes

Probably the most salient circuit promotion of 1926 was that for the neurodyne. There was a very good reason for this. By 1926 there were quite a few radio stations on the air. There was 2FC, 2BL, 2KY, 2GB, 2UE, 2UW, 3LO, 3AR (possibly 3DB and 3UZ as well), 4QG, 5CL, 5DN, 5KA, 6WF (with other 'B' class stations?) 7ZL and the four broadcasting stations of Radio Broadcasting Co of New Zealand. The New Zealanders were easily receivable on the eastern seaboard. With the high, long wire antennas still being advocated for sets of the day, typically 30 feet high and 60 feet long, reception

**Fig.2: The 'Flat Dwellers' Set', presented in *Wireless Weekly* for October 8th 1926.**





**Fig.5: A selection of speakers released in 1926. From left to right they are an Amplion Radiolux, an Amplion AR38 and a Brown H2.**

were the types 112, 210, 171, 250 and 120. Although the type 226 was supposedly released in 1926, there was no mention of it in the material available for research of this article. The big departure here is the release of the 171, 250 and 210, which are directly heated valves suitable for AC supply.

### Other equipment

Radios were definitely coming down in price. The top-of-the-range models such as the Gilfillan Neutrodyne were being offered complete with all accessories for £59/17/9 (\$119.78). However Farmers Stores, Mick Simmons Limited and Colville-Moore Wireless Supplies, with no doubt Melbourne firms such as Harringtons, Lewis Coen and Hartleys as well, were offering two valve sets complete from about £16/- (\$32). David Jones were offering their two valve set 'complete', but not including speaker for £12/- (\$24).

It is still interesting to note that when a radio was advertised, valves, batteries and speaker were regarded as 'accessories'! (Which seems like offering a car with the wheels as optional extras...)

The Brandes 'Table Talker' speaker started the year at 63/- (\$6.30) and ended the year at 45/- (\$4.50). A Western Electric loudspeaker was being offered for as low as 25/- (\$2.50).

Amongst the more highly priced speakers was the 'Radiolux Amplion' shown in Fig.5, with a fairly consistent asking price of £11/- (\$22). The other two horn speak-

with only a single tuned circuit was now becoming a problem.

The usual trick had been a 'three coil tuner', by which the aerial coil and reaction coils could be variably coupled to the tuning coil. However this was proving inadequate. The

capacitor, about the size of a postage stamp, was called a 'neutralising capacitor'. There were several methods of achieving this, and 'neutrodyne's' almost deserve an article of their own. Once the stage was neutralised, it was much easier to control.

However in 1926, such sets were still three-diallers with filament rheostats, and care and experience were needed to drive them. Despite this, they seemed to work quite well, with many readers claiming good results. To this day such a set of 1926 vintage and using the original valve types can still separate the AM band stations.

A brand new-in-box set of 'Radiokes' brand neutrodyne coils is shown in Fig.3. Because of the difficulties involved, component parts manufacturers began offering them as a complete set, as the advertisement from WW for September 3rd indicates (Fig.4.)

### Valves & valve prices

Perusing the literature of the day reveals that type 201-A's started the year at 17/6d (\$1.75) and finished, depending upon the brand chosen, for as little as 6/6d (65 cents). Philips B406's went from 17/6d to 13/6d (\$1.75 to \$1.35) and Philips bright emitters, types D2 and D3 were being offered for as little as 2/- (20 cents). Of course their real value would be much higher in today's money.

Other valves released during the year were the Mullard PM3 and PM4, PM5 and PM6, PM2, PM1HF and PM1LF, as well as newer Cossor types. Osram released their DEL and DEP series. 'GeCo', 'Radex' and 'Radiotechnique' all produced a valve which had remarkable similarities to the 201-A and 199!

Among the newer types released in 1926



**Fig.3: Remarkably, this 'Radiokes' coil kit has survived untouched for over 70 years. The third coil is still in its wrapping paper inside the box!**

answer was to improve selectivity, by one or more tuned RF stages.

Unfortunately, it is a fact of life that the valves of the day — triodes — did not make good RF amplifiers. They tended to become tuned grid-tuned plate oscillators. One answer was to 'neutralise' the stage. This involved feeding a small amount of signal from the anode, 180° out of phase with the incoming signal, back to the grid circuit of the valve.

The means by which this was done was via a very small value adjustable capacitor, equal to the grid-plate capacitance so that it would cancel out or 'neutralise' the actual grid-plate capacitance of the valve and effectively stop the valve from oscillating. The small

# Vintage Radio



ers shown in the same photo are the Brown H2 and an Amplion AR38 at £3/-/-.

Of considerable interest is that battery chargers and 'B' battery eliminators went on sale with Balkite, Homecharger and Philips offering a version of each.

1926 saw the introduction of the cone speaker. Sferavox, Magnavox and Crosley Musicone were the most prominent, with Amplion introducing some of their range towards the end of the year. Another important piece of equipment which had a distinguished career and was introduced in 1926 was the Ferranti interstage and output transformers. There were none like them, and they were by far the best audio transformers available at the time.

The locally produced Radiola IVB and IVC went on sale in 1926, marking the introduction of a dynasty of domestic production.

A departure from mere set construction was an article in *Wireless Weekly* for April 9th in which was described a 'useful instrument for the B.C. listener or experimenter'. There is no circuit as such, rather a wiring diagram. The instrument can be used as a wavemeter, a crystal set, a wave trap and an absorption meter. The various connections are described in the text, and of course there is the customary column space devoted to building the box — plus a lesson on French Polishing!

## Other changes

Apart from the neutrodyne, the advances in 'radio' were more sociological than technical. Radio was now an industry in every sense of the word, and we can see the genesis of many aspects of modern day media plays.

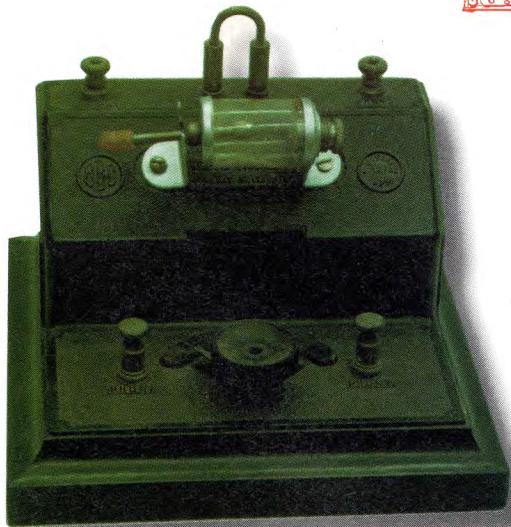
*Wireless Weekly* itself became far more professional in its appearance and content. By about mid-year, it had increased in size to about A4 size and 56 pages, not including the cover. As well as the technical articles and the run of advertised products, it contained an informative and sometimes quite witty editorial, together with quite lucid accounts of games of contract bridge played during a radio tournament, and some rather interesting travelogues about how radio saved the day when so-and-so was on his trip to the Spice Islands and the South Seas. It really is stuff straight out of *Boys' Own!*

The descriptions of the games of contract bridge are very good indeed, and some of the bids and plays were clever. Obviously they were players of a high calibre.

Amongst other topics which may raise an eyebrow were 'Women's influence on radio'. Talk about patronising; the feminists would have a field day!

Such was the perceived popularity of

**Fig.6: One of the commercially made crystal sets of 1926, the Brownie No.2.**



radio that throughout the year there were several articles in the popular journals about operating costs of radios. Such articles contained the various economies of battery care, battery consumption, valve types and choosing value for money. There were sets described that were heralded as being cheap to build, but with satisfactory results. Therein begins a trend which has endured.

In a rather witty editorial in *WW* for 10th September, is written *Our aim is to place a copy of 'Wireless Weekly' in the hands of every listener-in.* For those unfamiliar with radio magazines of the 1920's, *Listener In* was a Melbourne-based magazine in direct competition to *Wireless Weekly!*

## Nothing new...

Finally we come to realise that there is considerable *deja-vu* within the electronic entertainment industry of today. In 1926, we see the emergence and the promotion of 'personalities'. These individuals are sometimes given copious column space, and were given front page billing.

Then we have the rather sumptuous prizes, worth over £500 (the price of a Buick car) for a bride who was willing to be married and have the ceremony broadcast live. Now where have we seen that before? Another promotion with lavish prizes was the 'Miss 3LO' competition; and so forth...

The editorial referred to above was referring to a prize to Java on a Burns Philp steamer, with spending money, for the person who could enlist the most new subscribers to *Wireless Weekly* (Are you listening, Mr Rowe?) This is another example of subscriptions promotion with prizes, which has endured to this day.

In summary, 1926 can be summarised as a milestone year in radio, but more for its sociological advances than the technical developments.

## Society benefits

Before closing this month, I'd like to suggest that if you're really interested in vintage radio, you consider joining the Historical Radio Society of Australia (HRSA). Membership will cost you only \$20 per year, and brings many benefits to anyone with an interest in the subject — not the least of which is a well presented quarterly publication, which carries many helpful classified advertisements.

If you'd like to join the HRSA, which I can recommend, you can contact them via PO Box 2283, Mount Waverley 3149. ♦

The New  
**Radiokes**  
COIL KIT  
For Use in the Famous  
Neutrodyne Circuit

The Coils you will eventually buy  
At all leading Radio Dealers.  
**32/6 per set**  
Wholesale only  
**Metropolitan Electric Co., Ltd.**  
27-9 King Street, SYDNEY.  
Lato  
Keith Stokes Pty., Ltd.

**Fig.4: Advertisements for Radiokes coils in *Wireless Weekly* for September 3, 1926.**