

# Vintage Radio

## The Year that Was: 1927

Many readers will be familiar with the *EA* publication *The Best of Wireless Weekly* in 1927, published way back in 1985 (and unfortunately now out of print). That publication gave a good idea of the state of radio affairs in 1927, but let's look at what is revealed from other issues of *WW* and its competitors.

IN THE FOREWORD and introduction of the abovementioned publication, the late Mr Neville Williams and current *EA* editor Jim Rowe both mentioned that 1927 was a milestone year for 'radio' because radio was emerging from the realm of the experimenter, the amateur and the entrepreneur, and was evolving into an organised 'big business'.

By 1927, the larger capital cities had three or more stations (Hobart being the exception) from which to choose a programme. Also, local radio dealers and manufacturers were offering ready-made sets, ready to simply take home, connect up, switch on and listen to the amazing tinny, sibilant and distorted sound emanating from a horn speaker, that passed as sheer wonderment!

There is probably no more graphic example of such an offer as the 'DJ Standard 4', offered at £25 less 10% for cash. This time, everything you actually needed was included in the purchase price — equivalent to five weeks' wages. The entire advertisement, which appeared in *Wireless Weekly* for February 11th, 1927 is reproduced in Fig.1 and is quite self explanatory. For those of a mathematical bent, all the information is there to work out the interest rates for the extended purchase plan!

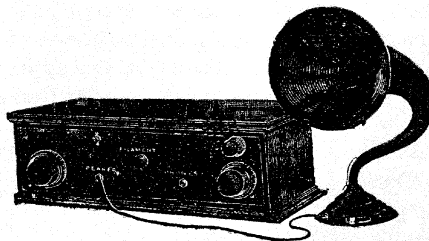
Another economically priced set was the 'AJV' two-valve set, on offer from Arthur J. Veale of Melbourne, complete with a small Brown H4 horn speaker for the very reasonable price of £11/5/- (\$11-50). It was advertised in *The Listener In* for July 21st, 1927 and is illustrated in Fig.2.

Readers may recall from my previous columns of 'The year that was...' that radios were sold at astonishing prices, and equal sums had to be outlaid for valves,

batteries and a speaker. The comparison of buying a new car and being asked to pay extra for the engine, gearbox and tyres has been previously made.

£2/10/- Deposit and 9/6 per week  
buys for you

The "D.J. Standard 4"



£25 less 2/- in the £ for Cash

makes the cash price £22/10/- absolutely complete

This powerful and highly selective Set is simplified to the greatest possible extent, there are no moving coils to change or get out of order—only two dials, so simple that anyone can regulate the tuning. Once tuned in the "D.J. Standard 4" remains stable. There is no difficulty in picking up which ever station you want—and £22/10/- is the first and last cost while the Sale is on.

Here is what you get for your £25

4B406 Mullard PM3 4-volt, 33-amp. Peto-Radford Accumulator, 2 large capacity Winchester "B" Batteries, 1 Trimm Entertainer Speaker, 1 pair Trimm Dependable Phones, 2 Phone Plugs, 100 feet of Aerial Wire, 30 feet of Insulated Lead-in Wire, 4 Insulators, 6 feet Flex Wire for connecting Batteries, 1 Lightning Arrester. The whole encased in handsome cabinet of polished maple.

Buy it on Deferred Payments

You can now have the pleasure of securing the "D.J. Standard 4" delivered into your own home on the deposit of £2/10/-; balance to be paid at the rate of 9/6 per week, to be completed within 12 months.

DAVID JONES' SALE

Less 2/- in the £ for Cash.

Fig.1: An advertisement which appeared in *Wireless Weekly* for 11/2/27, offering the 'DJ Standard 4' complete for 25 pounds, less 10% for cash or at 'generous deferred payments'.

### Speaking of cars...

ALTHOUGH mention was made of automobile radio in this column about six months ago, we find an earlier reference to an automobile radio in *WW* for July 22nd 1927, and by heavens, what a contraption!

It would be nice to reproduce the entire page, but that is not possible. Briefly, the car, a 14hp Park Lane saloon, is equipped with a frame aerial, which must be fully three feet across, enclosed in celluloid (not cellulite), mounted somehow at the back of the front fender. The wireless itself is a fully contained nine valver, with — wait for this — 'concealed wiring', and the reproducer invisibly mounted in the roof. Would such a marvel be beyond the comprehension of the simple mind?

### Loudspeakers

1927 ACTUALLY saw the introduction of the 'cone speaker', which marked the beginning of the transition from horns to the modern day low impedance speaker. As has been previously described on many occasions in this column and also in 'When I Think Back', the horn speaker is basically a very large headphone surmounted by a megaphone. Despite their rather unusual shapes, the megaphones were approximately exponential in shape for reasons of best available frequency response and greatest efficiency. The cone speaker was a euphemism for the balanced armature speaker. With these speakers, no matter which way they were connected, either one or the other of the armature magnets would tend to be de-magnetised by the direct current (DC) flowing through the speaker driver unit. Because of this, output transformers were provided in some of the manufactured sets; electric sets in particular. The RCA model 100, Philips model PCJJ,

Brandes tablecone, Magnavox, Amplion and Sferavox were the popular makes making an appearance.

With the arrival of cone speakers, the horn variety were plummeting in price. Indeed, in *WW* for July 1st 1927 is an advertisement for a Trumusic Junior, 18" high and with adjustable driver unit, for the most reasonable price of 19/9d. Other speakers from the 'Amplion' and 'Brown' ranges were priced from £2/- (\$4-00) onwards.

## Valves

THERE SEEMS to have been no new valve releases of note for 1927, but prices were falling. The UX 171 and UX 112 were coming down in price to 25/-. Various dubious brands of bright emitters were priced from 5/6 onwards and the 201-A were available for 11/- to 12/-, while the UX 199 was available for about 12/6 to 13/6. The De Forest series of DV5 and DV3 were available for similar prices.

The Philips range of B406, A409, A415 and A425, and the less heard-of types A109 and B105, and also A 310 and A 306 were on offer, but no mention was found of their prices. The Mullard range, PM1 HF, PM1 LF, PM2, PM3, PM4 and PM5 were on offer, from the very reasonable price of 13/6 (\$1.35).

Apart from the 171, there appears to be no mention of the new electric types 226 and 227 — although mention was made of imported American all electric sets, particularly later in the year, which would have used those types.

## Interesting snippet

YOU CAN GLEAN a good idea of events in 1927 from the editorials in *Wireless Weekly*, and the page called 'The Safety Valve'. There are any number of issues raised by the readers, all largely concerned with programming content. Too much jazz, not enough jazz; too much classical, not enough classical; too many religious broadcasts, not enough religion; and so the list goes on.

One interesting snippet from the July 1st issue is the fact that the Grand Organ in the Sydney Town Hall was going to be broadcast over 2FC, played by the then city organist, Mr Ernest Truman. Probably not many readers have heard the Sydney Town

Hall organ live. Compact discs and quality stereo amps of the modern era can do this organ justice, but this wouldn't have been easy at the time. It's an enormous pipe organ of immense power and complexity.

To attempt to broadcast such an instrument with the less than adequate microphones, very low performance audio transformers

radio to assist those in convalescence. (*WW* for 11th March, 1927). This is a most interesting commentary, more akin to the student of medical history rather than the student of radio history. For example, the caption under a photo of the Fairlight Private Hospital, Manly, says in part *where the writer was confined for some weeks suffering from a fractured jaw and lacerations and abrasions, as a result of a motor car accident*. One hopes the poor chap recovered, and one shudders to think about how long he might have been confined if there was something seriously wrong!

## Interesting circuits

THE YEAR 1927 saw the introduction of reaction being controlled by a variable capacitor, rather than the variometer or variable coupling of coils. This became the circuit configuration used for one- and two-valvers to the end of the valve era. It was claimed to be the superior form or reaction control; a claim subsequently well justified. The one valver described in *WW* for 11th February describes 'A Throttle-Control One Valve Receiver'.

Why the choice of words 'Throttle-Control'? Perhaps it was a thickly veiled allusion to 'throttling' the meddlesome fools who couldn't keep their hands off the controls!

**£11-5/- Complete**  
**-with all Accessories**

Better Value is impossible — a Two-valve Set operating at loud speaker strength, for 11s. 3.

**A.J.V. 2-Valve Set**

NOW you can enjoy reception without the discomfort of wearing headphones. This new A.J.V. Special 2-Valve Set is economical to use, and remarkably easy to buy.

You can Purchase it for £2 deposit

Call and hear it: pay the deposit, and start using it tonight — it's complete, with batteries, valves, aerial equipment, and a BROWN Hi-Loud Speaker.

**ARTHUR J. VEALL**

249-24B SWANSTON ST. MELBOURNE.  
 302 CHAPEL STREET, SYDNEY  
 Phone: Cent. 2056-91; Wines 1605

**Fig.2: The 'AJV' two-valve set, complete with batteries and speaker, for merely 11 pounds 5 shillings, as advertised in The Listener In for 21/7/27.**

inside the radios and the even less responsive loudspeakers of the day was an ambitious and somewhat unrealistic undertaking.

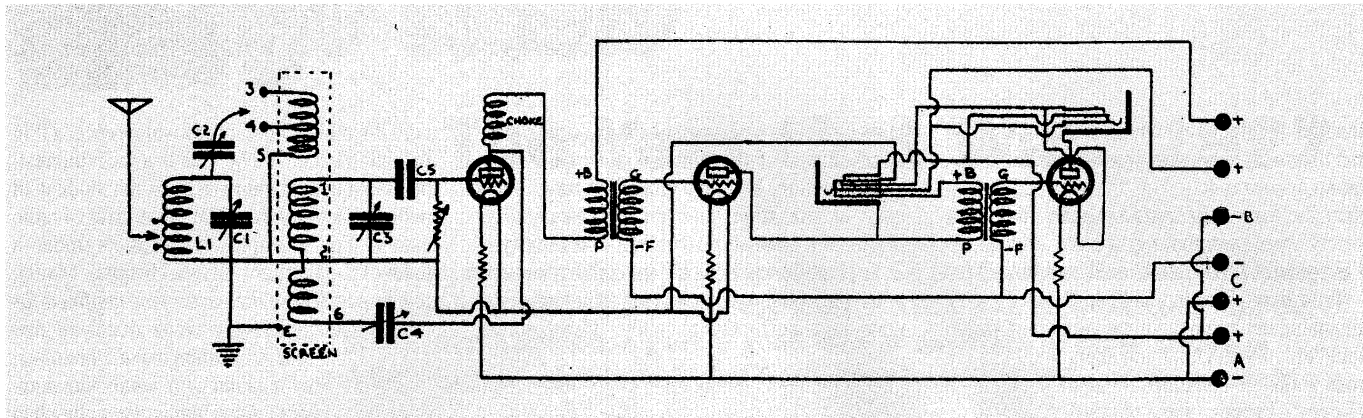
## Uses of radio

AS WELL AS the early attempts at radio installations in motor cars referred to earlier, articles began appearing about the 'extended uses' of radio. For example an article appearing in *WW* for February 11th, 1927 begins:

*This is an age of extensions — extended time payments, extension telephones, and now a method for extending the use of radio, having particularly in mind the use of the farmer and his wife who are deprived of some of the benefit of their radio set by reason of the fact that many of the worthwhile programs (sic) are broadcast just at a time when the evening jobs must be attended to outside...*

The article went on to explain how extension speakers could be placed — but 'best results are obtained with a five-valver with a power valve!'

Yet another feature article, which even commanded front page billing, extolled the use of



**Fig.3: The 'Wave Trap Three' receiver described in *WW* for 18/2/27, and using a novel inbuilt wavetrapp to reduce interference from nearby stations.**

Actually, there were quite a few one valvers described in 1927. Whether these sets began the introduction of the second radio in the home, or were aimed more towards the reluctant constructor, is open to debate. With the new low-consumption valves and the new circuits, all manner of claims were made.

Reproduced in Figs.3 and 4 are two circuits which seemed to have had only a brief period of popularity. They both incorporate only three valves, and also the use of a wave trap to tune out any overpowering local station.

The circuit in Fig.3 (from *WW* for February 18) shows the antenna being coupled via a tap to the parallel tuned wavetrapp C1/L1. This circuit is to tune out the unwanted station. The antenna is then virtually capacitively coupled via C2 to the best tapping on the primary of L2. At non-resonance, the impedance from antenna to C2 is merely the resistance of L1, which can be ignored. Notice also that the capacitor form of reaction control is used.

When 'adjusting' this set, the text notes that the set may be prone to oscillations if the wave trap and the tuning circuit are 'too

closely matched'. This of course makes sense. The solution is to judiciously adjust the interplay of the wavetrapp, C2 and the tapping of L2.

One other feature is the use of multi circuit jacks instead of a switch. The diagrams are not particularly clear in this regard, but A+ goes to both the middle bar of the output jack (J2), which we can call the 'wiper', and also to the top bar of the first jack (J1). The diagram is unclear here, but this bar would be normally open. The top bar of the output jack is also connected to the normally closed bar of J1. Now if the speaker plug is inserted into J1, the second bar is lifted and connects to the top bar, thus connecting A+ to V1 and V2. By virtue of the A+ connections to J2, V3 is switched off.

Now, if the speaker is connected to J2, the 'wiper' bar is lifted and connects A+ to V3. At the same time, A+ is also connected to the third bar of J1, which is normally closed to the 'wiper' (i.e. the second bar of J1) and thereby connects A+ to V1 and V2. Very neat...

The circuit in Fig.4 is a simplified version and appeared merely three weeks later in the issue for March 11th. Here the wave-

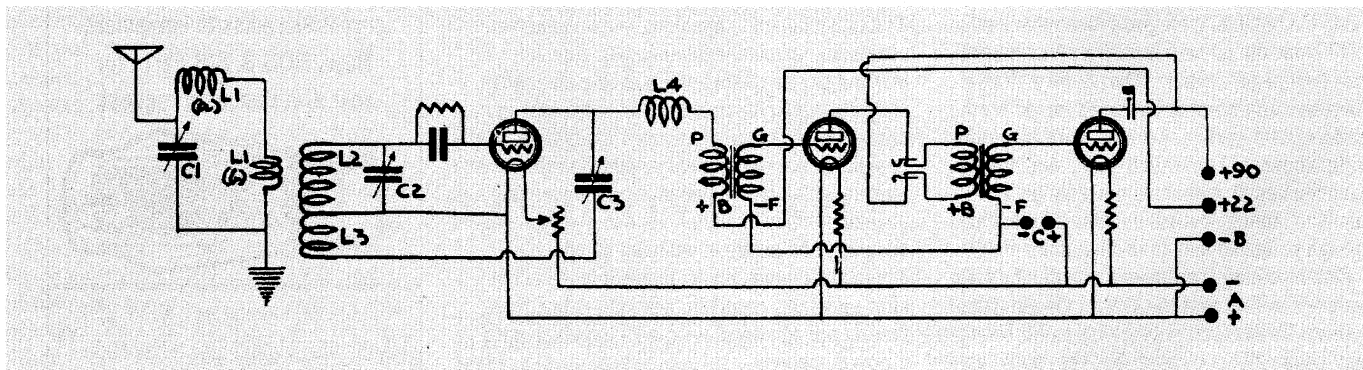
trap is much simplified, consisting of L1(a) and (b). Quite detailed instructions for the windings of these coils are given. The wavetrapp is curiously described as a 'reaction' unit. Just where these wacky names came from is anyone's guess. Perhaps the marketing philosophy was that if a particular feature didn't have a distinguished name, then it wouldn't be distinguished!

The remainder of the circuit is quite conventional, with the usual provision of alternative speaker jacks. In this instance, V3 is in circuit regardless of where the speaker is connected.

## Summary

TECHNICALLY, 1927 was very little different from the two preceding years. Radios were still battery powered all-triode TRFs, sometimes neutralised, still with three-dial tuning and filament rheostats to complicate matters. Yes, prices had come down, and the new low consumption valves previously mentioned brought the purchase price and running costs down even more. In some ways, it marked the end of an era.

1928 was a far, far different story, but that story will have to await another day. ❖



**Fig.4: A similar but simpler receiver with a built-in wavetrapp, published in *WW* for 11/3/27.**