

# VINTAGE RADIO

By JOHN HILL



## Old radio books & magazines

**As a vintage radio enthusiast, I have amassed a good collection of old receivers, ancient loudspeakers and a considerable quantity of assorted bits and pieces. But while the basic aim of most collectors would be to collect radio receivers and associated equipment, literature from the early days of radio is also a valuable and collectable item.**

Old radio books and magazines contain a wealth of knowledge from the past. When dealing with a bygone era, such as valve radio, one needs all the facts and figures that are available and old radio books are crammed full of useful information. In perhaps just 20 or 30 years from now, these old books and magazines will be the only permanent source of information regarding valve technology. All those who knew first hand will have either

passed on or forgotten the details.

There are surprisingly few people around today who have a sound knowledge of valve technology. Although valves were starting to be phased out only 25-30 years ago, the solid state revolution was so totally overwhelming that, almost overnight, valves became obsolete. Even currently practising technicians who started out when valve television was at its peak would probably now have

trouble remembering some of the finer points of valve technology.

The accumulated knowledge of 50-60 years of valve development has been largely forgotten in a very short period of time.

Many of those involved in vintage radio have had no previous electronics experience. They can be doctors, plumbers, office workers, students or whatever. These people have found an interest in early radio and have a pressing need to find out more about it, hence the value they place on old radio books of any kind. In many instances, reading from the past is their only way of finding solutions to the problems they encounter with their hobby today.

There is plenty of information around on modern electronics but very little on the valve era. The only way one can get onto old electronics magazines and valve radio books, in particular, is to look and keep looking until they are found.

The Sunday morning "trash and treasure" market is one such place to find old pre-loved books. Likewise with secondhand dealers and book exchanges. Ask and keep looking! Scrounging takes time but it can be very exciting when an interesting book is found.

### Valve specifications

One of the most valuable books is a valve specification manual. Without a valve manual, the vintage radio repairer is working in the dark with one hand tied behind his back. If he cannot determine which valve socket connection is what, then he will be greatly disadvantaged as far as any checking or repair work is concerned. A valve manual should be high on one's list of book priorities for it contains much useful information.



**Valve specification manuals are about the most valuable old books the vintage radio collector can have. In fact, they can be considered essential for the vintage radio repairman as they contain such vital information as operating voltages.**



Valve equivalents manuals are also very handy to have. These useful books list valves of similar characteristics, many of which are completely interchangeable without having to modify the circuit. They can save you both time & expense.



These old radio and television theory books were bought for \$10. Written in technical jargon, they are fairly difficult for the lay person to understand.

since. Only on odd occasions is there an article or project that is radio oriented.

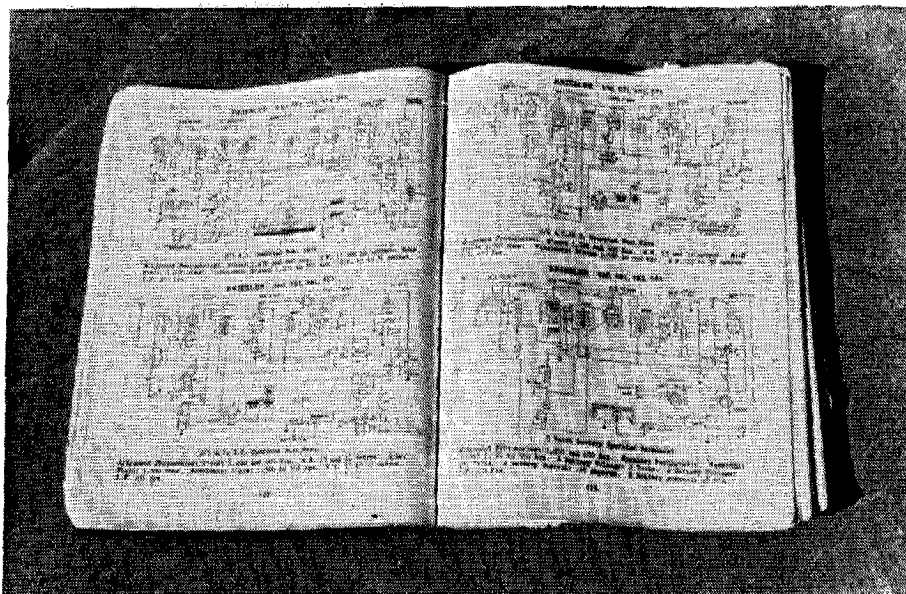
Developments in modern solid state electronics over the past 20 years or so and, in particular, the intense interest in personal computers and other state of the art "high-tech" pieces of equipment, have generally made radio a fairly tame and uninteresting subject. Just about gone are the days when enthusiasts built their own receivers and audio systems. Likewise with the true radio amateur who constructed his own transmitter and receiver. Today's attitude seems to be: "if it can't be bought, it can't be made".

But we're getting off the track a bit here - back to the books!

As mentioned earlier, if you are looking for simple, basic, understandable information relating to valve radio, then search out old radio books and magazines from the 1920s through to the mid 1950s. These publications are crammed full of all the things the up and coming vintage radio enthusiast is wanting to know about.

Of special interest in some old magazines is the questions and answers section, where readers queries are answered. Also of great interest is the never ending saga of the "Service-man Who Tells". Much can be learnt from his stories.

Early radio magazines were considered so valuable that some enthusiasts had them bound and covered. I was fortunate recently to obtain a bound set of "Radio and Hobbies" magazines, ranging from 1939 to 1947. These were kindly given to me by a lady who thought that I might have some use for them.



Australian service manuals contain the circuits used by Australian manufacturers for a particular year. The manual shown here contains 1938 circuits. If only there were more such manuals around today.

Even better is to have several valve manuals from different valve manufacturers. The reason for suggesting this is simple: European type valves are not listed in the American RCA valve catalog but they are all there in the Philips manual.

Radio was a compelling hobby from the early 1920s through to the post-war period until about the television era. The radio magazines of those days presented an almost endless array of radio and audio projects for both the beginner and the more experienced

alike. Old radio magazines, especially those directed at the hobbyist, contain a great deal of useful know-how about valve radio. Many of these magazines, especially "Radio and Hobbies", can still be found today and they always supply informative reading.

The television era began in Australia at the time of the 1956 Olympic Games. From about that time on, radio began to take a back seat as far as electronics magazines were concerned and has remained there ever



More dusty old books on the subject of early radio. There is something to be learnt in each one. Keep your eyes out for old books - a vintage radio library is part of the hobby.

Many hard cover books published in the 1920s were not far removed from the radio magazine format. Some of these publications were practical books on building and repairing the radios of the day. Most of these books were written for those who knew absolutely nothing about radio and after reading them for a while, one feels as though they were prepared for kindergarten children, not adults thirsting for scientific knowledge.

Some of these early radio publications appear fairly amateurish in their presentation of a technical subject but

it is all very well to be knowledgeable some 60 years further down the track.

Only a few months ago, I had the opportunity of sorting through some old radio "junk" which included half a dozen or so old books. The late owner of the books was thoughtful enough to write his name and the purchase date on each one, which is a great help if there is no publication date inside.

One of these books was dated 1919

which goes to show that old George had an interest in radio quite some time before broadcasting began here in Australia. Somewhere around 1924, George built himself a 5-valve receiver (which is now part of my collection) and he was one of the first in the Nhill district of Victoria to have a radio.

### Hidden costs

Another of those old books is titled "Boys Book of Wireless" and it contains some very detailed instructions on how to build a crystal set for the extraordinary low cost of three shillings and sixpence.

The humorous part about this incredibly low-priced wireless receiver was all of the additional extras that the author, for some reason or other, did not consider to be part of the overall expense of setting up such a receiver. Yet he warned not to settle for less than what he suggested.

These incidental extras were: 15 shillings for headphones, 10 shillings for a listener's licence, 100 feet of aerial wire, a substantial 2-piece wooden aerial mast with suitable guy wires and insulators, a combined lightning arrester and knife switch, plus a 3ft square sheet of copper deeply buried in the ground for an earth. All up, it probably came to more

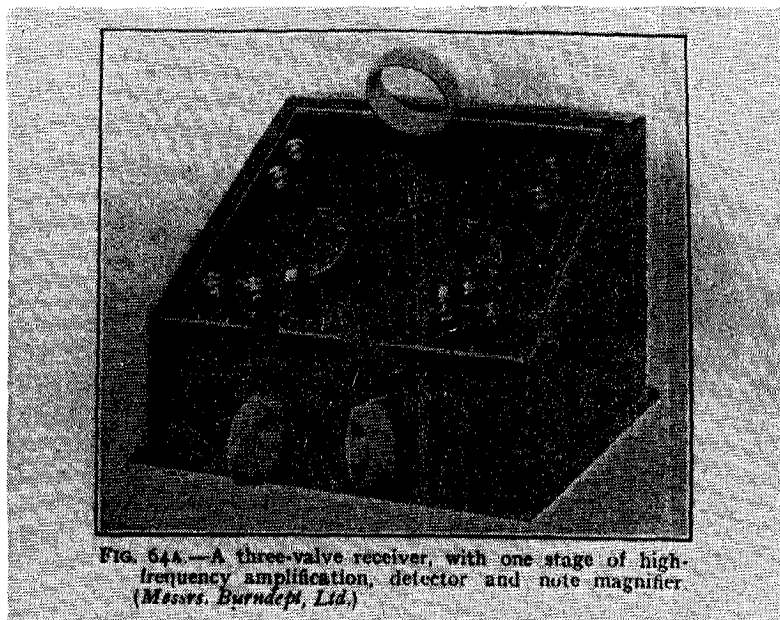


FIG. 64A.—A three-valve receiver, with one stage of high-frequency amplification, detector and note magnifier (Messrs. Burndep, Ltd.)

Only old radio books will reveal what early radio was all about, although terms such as "note magnifier" often leave the reader a little puzzled.



This back page magazine advertisement from 1949 helped the author to accurately date three of his vintage radios.

## Vintage Radio Service Tips

### Mullard Models 61 & 69

Weak reception and loss of sensitivity in these models can often be traced to the  $\frac{1}{2}W$  100k $\Omega$  resistor in the screen of the IF stage and the  $\frac{1}{2}W$  150k $\Omega$  resistor in the converter screen. Either or both of these resistors frequently go high in resistance. Replace with 1W resistors.

The symptoms and causes referred to above frequently occur in other makes of radio using high value screen resistors. If you don't have access to a circuit diagram with valve voltages, a check of the resistors using a good quality multimeter should suffice. For the sake of an extra few cents, always use 1W resistors when replacing  $\frac{1}{2}W$  types that go high.

### Peter Pan Model BKL

There are still quite a few of these mantel sets to be found and they

look quite attractive when restored. Oscillator stability can be improved by installing a 50pF mica capacitor in series with the 6A8 oscillator grid. The capacitor should be connected between the grid end of the oscillator coil and the oscillator grid leak.

### Faulty Tracking

If stations are received above or below their dial markings, the high frequencies being OK but the low frequencies being out and sensitivity poor, check the oscillator tracking capacitor. The readings will be high or low depending on whether the capacitor is open or short-circuited or whether it has reduced or increased in capacity.

*Vintage Radio Service Tips are supplied by Resurrection Radio, 51 Chapel St, Windsor, Vic 3181. Phone (03) 529 5639.*

like a couple of week's wages rather than the claimed three and sixpence.

Likewise with some of the advertisements for early radios. People were encouraged to buy budget priced radios with items such as valves, batteries and loudspeakers being optional extras. Talk about hidden costs!

Prices and wages in the 1920s are things that we cannot comprehend today. I remember my mother making the comment just after World War 2 that the pound didn't buy much any more. It bought even less in a 1920s radio shop. Radios and radio parts and accessories were very expensive, as old books and magazines so readily reveal. (I wonder what Mum thinks of the dollar these days?)

### Early terminology

When reading these old books, some of the early terminology takes a bit of coming to grips with, too.

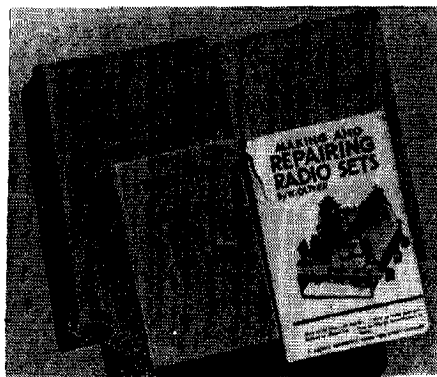
A couple of mid 1920s books frequently mention the term "note magnifier". There are note magnifier valves and note magnifier stages. Could this be an early version of a guitar amplifier? No - but close! It would appear that the term note magnifier describes the audio section of a radio. A note magnifier valve was, in

fact, a valve suitable for audio work.

This term was only in vogue for a short period and seems to be peculiar to early English publications.

One set of books that are well worth having if you can obtain them are the "Australian Radio Service Manuals". These books were published at yearly intervals and contained all the circuits that Australian manufacturers used during the previous year. Any book with circuits in it is a very handy thing to have.

I have only one of these service



Radio books from the 1920s and 1930s are usually written in simple terms with numerous illustrations and explanations. They are ideal for those just starting out in vintage radio.

manuals and it covers 1938 circuits. It has not only helped out with the right circuit from time to time but has also established an accurate manufacturing date for a couple of receivers. If the model number matches up with a circuit in the book, then it's not hard to guess the year in which the set was made.

Books on radio theory are also worth collecting and delving into. These can help solve the mysteries of automatic gain control, grid bias, high tension supplies and numerous other aspects of valve radio. However, some radio theory books can be heavy going and obviously weren't intended for the layman.

Yes, there is a lot of interesting reading to be found in old radio books. Every vintage radio collector should also have his vintage radio library for not only do these books look back into early electronic history but there is so much to be learnt from them.

Old radio books also give an insight into the advances electronics has made since the turn of the century. The only word to describe that progress is "incredible"!