

VINTAGE RADIO

By JOHN HILL



Valve portables — hard on batteries

Portable radio receivers date right back to the early days of radio. Even then, the idea of being able to listen to radio programs, no matter where you went, had a certain amount of appeal. Portable radio was also another avenue to be exploited in order to sell wireless receivers.

Early portables, particularly those from the late 1920s era, were strictly for strong arm types only. The word portable should have been used with inverted commas for these early receivers were only marginally smaller than other radios of the day.

A particular advertisement from the late 1920s is a source of great amusement to me if no-one else. The advert shows a woman carrying a huge "portable" radio but she is shown only from the waist down.

Presumably, the reason for this is not to reveal the pained expression on her face due to the weight and size of the receiver. Either that, or they hired a muscle man for the purpose of the photograph and didn't wish to show him full length.

The possibility of getting a hernia while lugging around an early portable was real; so too was the risk of falling out of a tree whilst trying to place an extension aerial in a favourable place so that some form of reception was possible. A frame

or loop aerial at ground level was not the best way to pick up a signal at some country picnic ground situated miles from the big city stations. Most valve portables, even late model ones, had some provision for an external aerial.

But let's not be too critical. Every new idea must have a starting point somewhere — no matter how absurd it may seem to be some half century or so later. It is marvellous what 50 years of intense development can do!

Just how effective those very early portables were is just about anyone's guess these days but some of them must have worked well enough to sustain interest in this type of radio receiver. There have always been portable radios and they held a lot of appeal for those who liked the outdoors. The thought of being able to laze in the sun while listening to the races or the cricket inspired many to buy a portable radio.

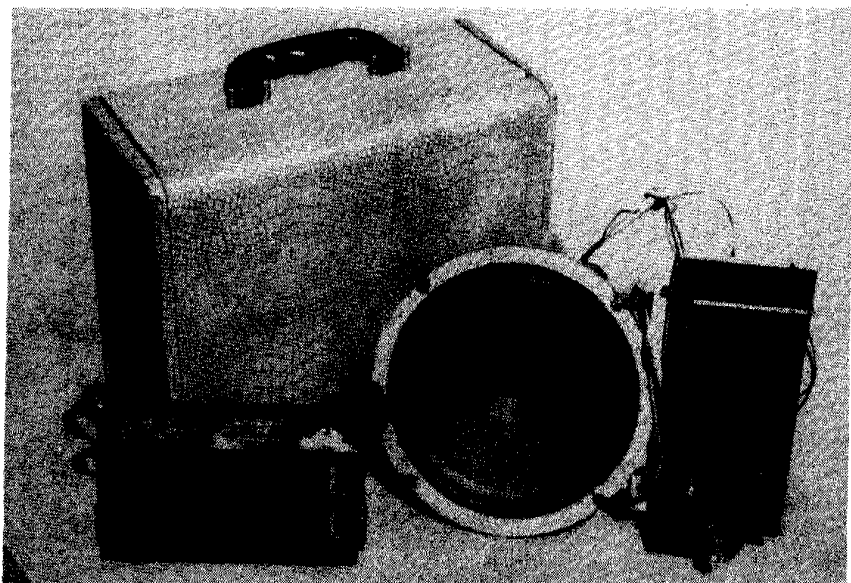
However, valve portables had a few problems that made them something of a disappointment to many owners.

Expensive batteries

Although size and weight must have been some disadvantage, the expense of batteries was perhaps the major drawback with valve portables.

Unlike transistorised equipment, a valve portable needs two power supplies in the form of "A" and "B" batteries. The "A" battery provides the low tension supply for the valve filaments, while the "B" battery or batteries are used for a high tension supply.

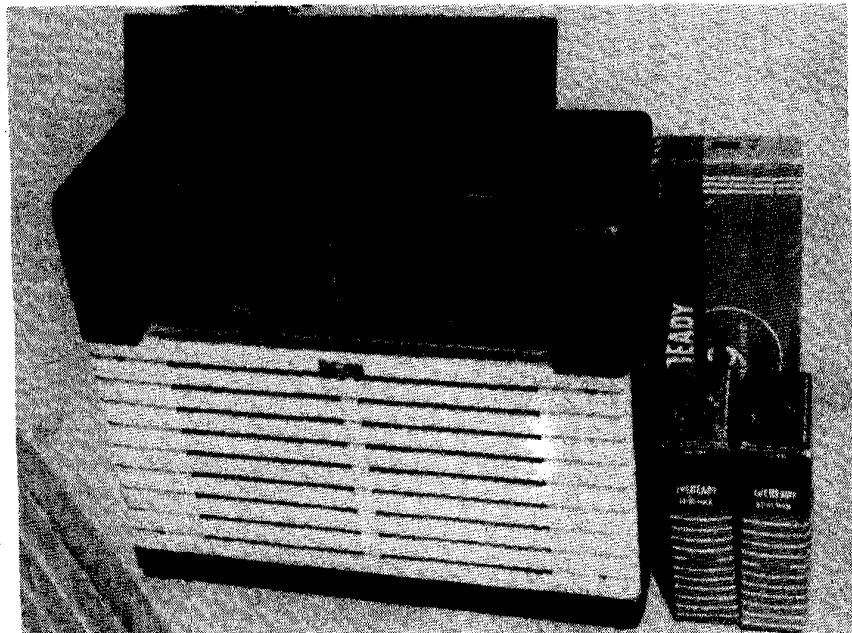
"A" and "B" batteries have con-



The big 8-inch speaker used in one particular Healing valve portable dwarfs the transistor radio shown in the foreground. The cabinet is of leatherette covered timber.



A valve portable is powered from a 1.5V "A" battery (for the valve filaments) and two 45V "B" batteries which provide the high tension supply. Compare their size to the modern 9V transistor battery in the foreground.



This photo shows an old Hotpoint portable, together with its batteries. The batteries took up a considerable amount of space inside the cabinet.

siderably different life spans and one would expect to replace the "A" battery at more regular intervals than the "B" battery. Buying a full complement of batteries was a costly experience. In fact, valve portables were so expensive to run they often had only a couple of sets of batteries, after which the novelty wore off and the set was put into a cupboard and forgotten.

I base that last statement on the fact that there are so many valve portables about which still work

OK. The cost (in batteries) to wear out a set of valves would have been phenomenal and in many instances valve portables were simply put away because the average working man really couldn't afford to run one.

From a collector's point of view, old portables generally don't hold much interest unless one is enthusiastic enough to specialise in them as an unusual aspect of valve radio. Most collectors will give them a miss because the battery

aspect of their operation is a bit of a humbug — particularly as the batteries are no longer made.

There are two choices to make with these old portables: you either collect them or you don't collect them. If you collect them you can either just clean them up and display them or get them going and use them.

Using an old valve portable can be a lot of fun. There are few things that attract more attention than a dirty great big old 1940s-style portable radio at a picnic or some other outdoor function. It is not only a great topic of conversation but it can also lead to finding other old radios. It always pays for collectors to advertise their interest and having a working valve portable is one way of doing it.

Providing power

One major problem regarding these old portables has already been mentioned and that is the unavailability of "A" and "B" batteries. Therefore, if one is to use these obsolete portable radios, suitable batteries must be improvised.

An "A" battery can be easily made by wiring up half a dozen standard "D" cells. Connecting them together in parallel will produce a battery that will keep the valve filaments glowing for quite some time, especially if the set is used sparingly. The makeshift battery can be wrapped in brown paper, masking tape or placed inside a suitable size cardboard box.

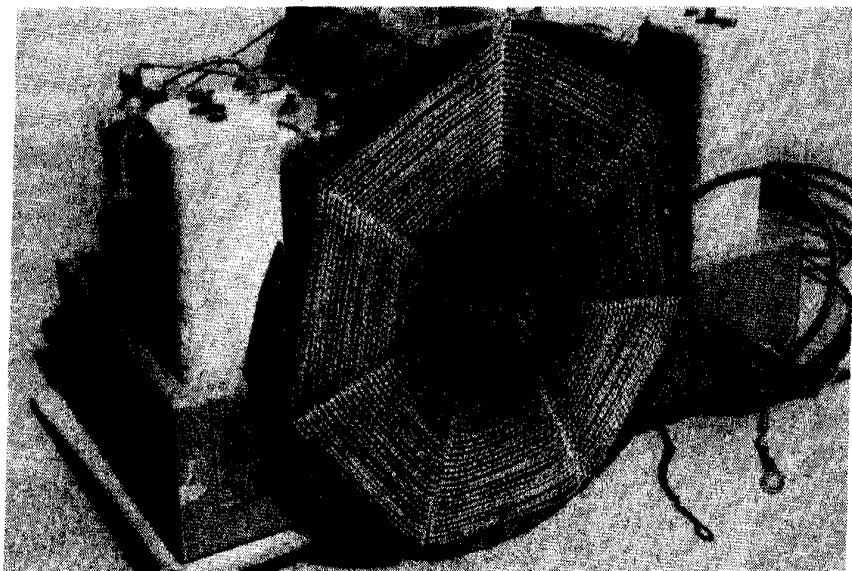
Likewise with the "B" battery. A 90 volt battery can be made up using 10 9V transistor batteries. These must be connected together in series and, as before, taped together to keep them tidy and prevent short circuits.

If you are really keen, the improvised batteries could be disguised by placing them inside some original battery boxes. The old batteries could be carefully removed from their packaging and replaced with new dry cells, thus dressing up the replacement battery to look like the real thing.

Incidentally, the average 4 or 5-valve portable consumes 8-10 milliamps of "B" battery current



Most old valve portables were big and heavy, with no attempt made to miniaturise components. This old valve portable used all standard size components.



This spiderweb wound aerial is considerably different to the ferrite types used in modern-day portable transistor radios. The protruding wire is for an external aerial connection.

which is about the same rate of discharge that a 9V transistor battery would receive in normal service. So the improvised 90 volt battery will last a reasonable time and is usable down to around 50-60 volts. Naturally, as the "B" battery voltage drops, so does the performance of the set.

On the other hand, the "A" battery consumption on a valve portable is around 250-300 milliamps. For this reason, the "A" batteries require replacement at more frequent intervals.

Today, as was the case 40 years ago, batteries are expensive and it will cost quite a few dollars to set up any old valve portable to run from battery power. Whether it is a worthwhile exercise or not is entirely up to the individual.

Unlike a transistor radio, the volume that a valve radio is operated at has little or no effect on battery consumption. The only way battery life can be extended is to place a small resistor in the filament circuit. This will reduce both "A" and "B" battery consumption.

Some receivers have a control knob marked "economy" for this purpose but lower battery consumption means less performance and is therefore only suitable for local station listening.

AC-DC sets

Not all valve portables were for battery operation only; some were of the AC-DC type. These more versatile portables were fitted with a small power transformer, a rectifier valve and/or a metal oxide rectifier to convert the AC voltage from the mains to DC voltages.

Now many of these AC-DC sets can be nasty things to play around with for the simple reason that they can have a live chassis when operating on AC power. That means that the chassis can have a 240 volt AC potential and to touch such a chassis under the wrong circumstances could be fatal. Speaking for myself, I consider that I am much too young to die and I am sure that you feel the same way.

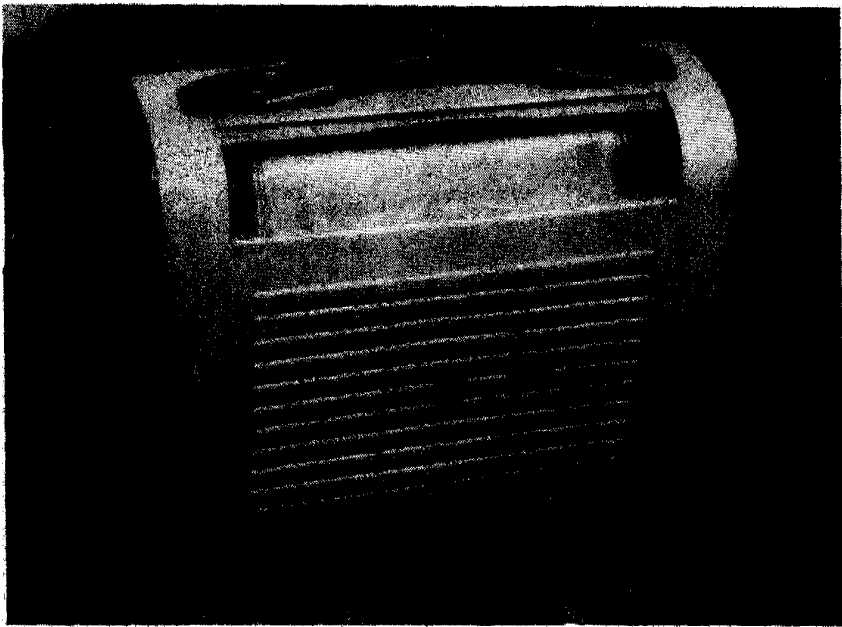
So be careful when working on an AC operated portable. They can bite unexpectedly if you are unwary. It is wise to check out the chassis potential with a multimeter set to the AC volts scale. Test between chassis and earth. This simple check could well save your life.

The old & the new

Comparing a valve portable with a modern transistor radio is an interesting exercise for there are so many incredible differences. Let's take a quick look at some of the more obvious ones.

The most noticeable difference is size and weight. Almost no attempt was made to make valve portables small and most used stock standard full size radio components. Only in a few instances were there valve portables made that could be described as being small personal portables.

Many of the portables from the early post-war period had large wooden cabinets that were covered in leatherette. They still retained the steel chassis type of construction that was typical of the valve era. Although these sets were supposed to be portable, the only thing that made them portable was the



This metal-cased valve portable from Philips featured a sliding dial shutter that also functioned as the on-off switch. The invention of the transistor made valve portables completely obsolescent.

fact that they were cordless and fitted with a carrying handle. Miniaturisation never entered into the equation in those days.

Some portables were built with quality of sound in mind and a particular Healing model was actually fitted with an 8-inch (20cm) speaker. Now that's something you're unlikely to see in a modern tranny!

Philips made a range of pressed steel portables that had quite a few variations. Some were battery-operated only, while others were AC-DC models. Some models also had a neon-like tuning indicator which was probably pretty useless anyway. Other models had a sliding shutter that covered the dial when the set was not in use. This cover also activated the on/off switch and

the set automatically switched on when the shutter was slid up to uncover the dial.

These Philips portable radios also had a large loudspeaker, although not quite in the same class as the previously mentioned Healing.

If anything has been truly superseded it would have to be the valve portable. The transistor made it completely obsolete.

However, despite the fact that these old portables are pretty useless today, they represent the best the radio industry could offer prior to the solid state era. While these old battery radios have a few problems regarding suitable power supplies, there is no reason why they shouldn't take their place in your vintage radio collection. **E**