VINTAGE RADIO

By RODNEY CHAMPNESS, VK3UG

A collector in the west: Keith Lang

Quite a few vintage radio enthusiasts now have interesting and extensive collections of old radio receivers. One such enthusiast is Keith Lang from Western Australia.

A couple of years ago, during a trip to Esperance in Western Australia, I took the opportunity to visit vintage radio enthusiast Keith Lang. Keith retired from farming in 1993 at the age of 69 and wanted an interesting hobby to fill in some of his spare time. Having been involved in radio and electrical activities for most of his life, he decided that vintage radio would be a rewarding pastime.

Keith's interest in radio started in 1934 at the tender age of 10, when he built his first "wireless" – a crystal set (doesn't every collector start with a crystal set?). The coil was wound on a cocoa container which consisted of a cardboard cylinder with metal ends but it was the earth that was really unusual. It consisted of an defunct car radiator buried in the ground, with the earth lead from the set connected to it. Water was poured into the radiator and, because of the many small holes that leaked water and the large surface area, it was very effective.

The aerial was the ubiquitous "long and high" outdoors type, which was typical of the era. However, like most youngsters of the era (and grown-ups too), Keith was reluctant to part with seven shillings and sixpence for a "wireless licence" for his crystal set. Hence the antenna grew at night and withered during the day.

When WWII came, Keith joined the army and became involved with Signals Maintenance and Training, which meant he gained a good overall knowledge of radio transmitters and receivers. Some sets that he recalls working with were the 11, 108 and 19 sets, all considerably more complex than the average radio receiver of the day.

After the war, he became a motor mechanic for a few years, then took up farming. Many other activities kept him busy when there was a lull in farming activities, such as being a motor mechanic, drilling 250 water bores and generally, as he put it, being a "jack of all trades".

One interesting activity involved rewinding Dodge car generators so that they supplied 32V DC for home lighting or DC voltages for other purposes. I saw one of the rewound armatures and it was most professionally done. Many small towns in the 20s, 30s and 40s also had small DC power reticulation systems and Keith had quite a bit to do with them too.

This home-made kitset mantel receiver (circa 1946) came in a stylish wooden case and has been fully restored. It featured inductance (Ferrotune) tuning.

High-voltage DC sets

There were both AC/DC and pure DC sets in some of the areas in which Keith lived, as many towns used only 250V DC supply reticulation. In fact, this was still the case in Esperance in 1958, when Keith moved there. Of course, all DC mains supplies have long since been replaced with 240V AC mains.

In their time, DC mains supplies served small towns quite well. In some cases, the power was only on for certain periods of the day and would go off at night "after the flicks had finished". The power would then come

on again early in the morning. In other cases, batteries were used during periods of light load and/or to supply energy during heavy load periods.

Keith is quick to point out the care needed to service the AC/DC and pure DC radios which ran off the 250V DC mains. He strongly recommends that restorers working on AC/DC sets use an isolating transformer on AC mains, as one side of the mains may be connected to the chassis – and it can easily be active 240V above earth! This is deadly if you touch the chassis and an earthed object at the same time.

Most such sets can easily be wired so that the Neutral is attached to the chassis, or the neutral busbar (if fitted) – but always check. Isolation transformers cannot be used on DC mains or pure DC receivers and servicemen had to be extremely careful when servicing such receivers.

(Editorial note: AC/DC sets in which one side of the mains is directly connected to chassis are "death traps". Do not operate or work on such sets unless you are very experienced and understand exactly what you are doing. The same goes for high-voltage DC sets).

Restoration

Keith especially enjoys restoring wooden console cabinets, so that they look like new. The internals are treated with equal care – the sets are often stripped down to a bare chassis which he then sandblasts using a special attachment he has for his air compressor. A lathe is used to turn up various parts and to wind coils and power transformers.

A counter attached to the lathe is used to count the number of turns when winding a coil or transformer. Unfortunately, not many vintage radio collectors have this type of equipment or the skill to use it.

There is also a good range of hand tools and test instruments in the workshop. These include digital and analog multimeters, an oscilloscope with a component testing facility, a capacitance meter, a signal generator and several valve testers. It is always nice to have an extensive range of test equipment for fault diagnosis and the equipment necessary to make replacement parts.

Recently, Keith restored a 1933 Raycophone "Pee Wee" receiver. This is a rather rare set and has a circuit that's similar to the simple superhets described in the April 2000 issue. After restoration, its performance was initially quite poor and tracking down this problem took some time.

Another stylish receiver in Keith's collection is this Philips table model.

This multiband portable transistor radio included a flip-up lid with a world map that showed the locations of major shortwave stations.

In the end, it turned out to be an incorrect resistor value in the cathode of the converter stage. Replacing this with the correct value resistor cured the problem and the set now performs

Keith's collection includes a good range of early transistor radios, including a compact "purse" receiver (next to the matchbox).

quite well.

Keith's extensive vintage radio collection, like so many others, has grown like "topsy" and very few of the sets are displayed at their best – although two lovingly restored consoles reside in the lounge. One of these, shown in one of the photos, is a 1935 AWA Bandmaster 365B battery console using a 34, 1A6, 34, 30, 32 and a 33 valve line-up. The set is powered from the 240V AC mains via one of Keith's home-made battery eliminators.

None of the many battery valve sets in the collection has been converted to direct mains operation. Instead, a separate mains-operated DC supply has been built for each set. Conversely, all the transistor portables in the collection run on batteries as it is easier to operate them this way and saves dragging an AC lead along with the set.

One of the photographs shows an HMV 601 "portable" set (AORSM Vol. 4 Page 147) which can operate from four sources of power – internal batteries, external batteries, an external AC power supply and, most interestingly of all, a 2V vibrator pack. Yes, that is right, a 2V vibrator pack!

A considerable portion of Keith's collection consists of portable radios, both valved and transistorised. The valved portables include the following brands: Philips, Astor, Healing, STC, AWA, HMV, Kriesler, Ferris and an English "Dynatron".

The smallest is a "purse" radio which is smaller than a pack of cigarettes and is seen in a collection of personal portables in one of the photographs. It boasts five transistors and is powered by a single AA cell, since there was no room for anything bigger.

The most elaborate Australian-made transistor sets are three AWA units. These receivers appear to be identical until a close inspection is made. Two are broadcast band sets with an RF stage but different dial scales, while the third is a 4-band unit which tunes from 550kHz to 30MHz. Quite a number of small Japanese sets are also tucked away on a shelf.

Car radios also feature strongly and include examples from AWA, Ferris, Philips, National and Astor. The intriguing ones are the Ferris M104 and M106 models, which can be powered from various sources.

Another unusual item is a home-made set using the Kingsley Ferrotune front end kit, produced around 1946 (see photo). A few manufacturers produced inductance tuned radios for household use, such as Radio Corpo-

A close-up view of the Ferrotune inductance tuning module (at left), as used in the home-made receiver.

ration, Philips and AWA.

There are also a few black and white TV sets in the shed waiting for restoration but there are many more radios in the queue ahead of them.

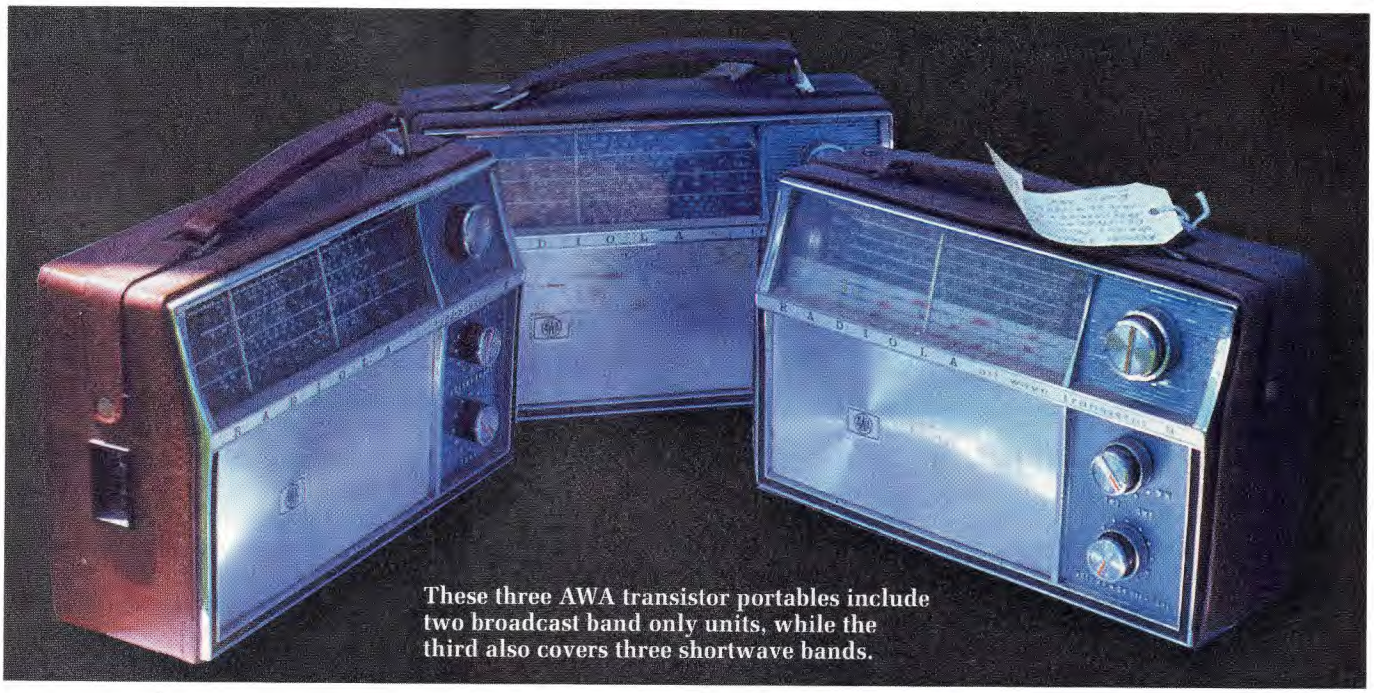
I asked if there were many collectors around the Esperance area and he replied that he knew of only one. This means that there is very little competition when it comes to obtaining sets at reasonable prices. On the downside, there is virtually no-one to share experiences or discuss problems with.

Keith has obtained his radios from quite some distance in some instances – eg, Albury (NSW) and Peterborough (SA). Closer to home, sets have come from Kalgoorlie and Boulder. Garage sales are a good source of receivers and generally keeping your eye out for them and letting people know of your interest will pay dividends. He has no particular favourite set or style, except that they should be wooden cabinet radios from the mid 1930s to early 1940s and Australian made.

Keith's collection reflects a slightly different emphasis compared to the average eastern states collector. Some of the sets were different due to local conditions, as was some of the equipment used.

But basically we're all interested much in the same thing – the retention of our technical history and the restoration of old receivers. It would be interesting to swap experiences with a vintage radio buff from across the Tasman! **SC**

Keith's pride and joy is this 1935 AWA Bandmaster 365B battery operated set.



These three AWA transistor portables include two broadcast band only units, while the third also covers three shortwave bands.