

Vintage Radio

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Our radio heritage on display

How many of us have had the opportunity to see working examples of equipment dating from the end of the 19th century? There was a lot of impressive equipment on display during the HRSA's recent 25th anniversary celebrations in Melbourne.

A special display of vintage radio equipment was recently held in Melbourne to mark the 25th anniversary of the Historical Radio Society of Australia (HRSA). That display took place over the weekend of 13-15th April 2007 and there were members and visitors from all states (except the Northern Territory) and from New Zealand.

The display, held at the Holmesglen

TAFE conference centre, gave HRSA members a chance to get to know one another and to enhance their skills in restoring our important radio and television heritage. It was put together by a dedicated band of enthusiasts and there was even an auction for those who had surplus items to sell.

By the way, HRSA members come from a diverse range of backgrounds. While many are retired and many

come from non-radio/electronics backgrounds, others are currently involved in the industry at the cutting edge of technology. Even then, many have no professional connection with radio, although they may come from electronics backgrounds.

The auction

The auction took place on Saturday afternoon, with around 300 items presented for sale. Some items sold for as little as \$1, with the top price of \$750 paid for a Fisk Radiolette (brown empire state) receiver.

However, around 20% of the items were passed in, having failed to meet their reserve prices. One interesting item passed in was a 1934 Kriesler grandfather clock radio, a bid of \$2750 falling short of the mark.

The spark era

The history of radio began with "spark" equipment but not much of this original equipment has survived. Instead, replicas of spark equipment have been built by some enthusiasts to maintain a link to this important first step in our radio history.

One such exhibitor was Ian Johnston, who displayed both original and replica spark-era equipment. This gear included coherers and other various types of detectors, spark transmitter induction coils, Morse code paper tape perforating machines, sounders, Morse keys and headphones, etc.

Naturally it is all Morse code equipment and is quite different in many respects to the valve equipment developed later on.

The 1920s

By the 1920s, spark transmissions were still used for marine, land and amateur communications, although valve equipment was being introduced



Sales and service 1950s style – this is what a typical radio shop looked like back in the post WW2 valve era.



This 1934 Kriesler grandfather clock radio was for sale but was passed in at \$2750.

into these services. However, for voice and music entertainment, valve-type transmitters were a necessity and any receiver with reasonable performance also had to have some valves, although crystal sets were still quite popular with the less well-heeled – including school boys.

The typical receiver of the era was built either as a “breadboard” or “coffin” box style construction. This was arguably the peak time for radio experimenters who built all sorts of weird and wonderful radios. The experiments were often very haphazard with little real documentation in most cases.

There were several displays of 1920s radios and the ancillary devices that made up a typical radio receiving installation of the day. In those days, radios rapidly became the focus point in the lounge room, much like the home theatre installations of today.

Included in the displays were many varieties of ornamental cone type speakers, as well as the earlier horn types. Several “coffin” style sets were also on display, along with one “breadboard” 5-valve receiver.

Loop antennas were also common during the 1920s and were more efficient (but much larger) than the loop-stick antennas of today. A relatively



This display shows a collection of speakers from the 1920s. Note the stands and the ornate patterns used to cover the speaker cones.



A collection of the dry batteries used to power vintage radio receivers. They came in all shapes and sizes.



This stand showed both pre-war and post-war Healing receivers.



This collection of spark equipment dates from around 1900 through until about 1920. A lot of this gear was used for wireless telegraphy.



This top-of-the-line 1935 Scott console used 23 valves and featured a chrome-plated chassis that was mounted on top of the cabinet.

recent replica of a 1-valve set from the era (called the "Unidyne") was also on display.

The 1930s era

This era has often been described as the halcyon era of radio because so many advances were made in the

radio field. This was the era in which consoles were the flagships of the domestic radio market.

Many of the upmarket receivers had all sorts of "gizmos" included in their design, to make them more appealing to the wealthier buyers. In addition, the cabinets were carefully crafted

– often using several different types of timber.

The 1933 Beale (see photograph) is a good example of this craftsmanship. In fact, all the consoles on display were good examples of the woodworker's skill when it came to cabinet design and these sets were priced accordingly.

At the very top end of the console range was the 1935 Scott 23-valve receiver owned by Dick Howarth. Yes, that's right – it employed 23 valves, which is more than most TV sets had in the B&W days.

This receiver is quite different to other sets, because the radio frequency (RF) and low level audio stages are mounted on a chassis on top of the cabinet – see photo. Scott apparently believed that the works of the set should be shown for all to see and marvel at.

In addition, the chassis and the components mounted on top were chrome-plated, so they really do look impressive. The chrome plated power supply and audio output stages, along with the speakers, were mounted inside the cabinet in the conventional manner.

However, it really depended on what cabinet you wanted with your Scott 23-valve chassis, as conventional consoles were also available. It was a truly magnificent receiver for its era

but at 145 pounds without a cabinet, it didn't come cheap.

The top of the line unit called the "Warwick Grande Special", complete with record changer, sold in the UK in 1935 for 612 pounds 50 pence which was several years wages for the average worker! So you needed to have been very wealthy to afford one of these.

The 1940s & 1950s

No displays were specifically related to this era but there were table and mantel receivers on show. The display of Healing radios featured sets from the late 1930s to the 1950s.

The Americans were renowned for their novelty sets and there were two "Hopalong Cassidy" mantel radios on display, each with a decorative front panel featuring Hopalong on his horse!

Full-size & miniature portables

Quite a number of portable receivers were on display, starting with a 1925 superheterodyne portable complete with a swing-out loop antenna. This set has six valves, all type UV-199 triodes, and its sensitivity and selectivity are good even by today's standards.

In greater detail, it has an RF stage followed by a self-oscillating mixer stage. The output is then re-applied to the RF stage (reflexed) which doubles



These miniature valve portables could all easily be mistaken for the portable transistor radios that appeared much later. The valves used are the standard 1R5, 1T4, 1S5 and 3S4 line-up



These vintage radio receivers were all for sale. You could pick a good radio up for less than \$70.00.



The 1933 Beale console was another receiver for the well-heeled. The wooden cabinet is beautifully crafted.



Some rare and usual radios from the pre-war era. The Astor-Baby Grand's cabinet (centre) was really quite stylish.



This collection of radio receivers and other equipment is mainly from the 1920s era.

as the first IF amplifier operating on a frequency of approximately 55kHz.

From there, the signal is applied to a second IF amplifier and following that is a grid detector stage. Two transformer-coupled audio stages then complete the line-up, with the speaker fed from the last UV-199 valve.

It really is quite surprising that such a sophisticated design for the time was available in a commercial portable receiver. And although it's quite "weighty", it was far ahead of other designs of the era.

At the other extreme were six miniature 4-valve portables. These are all

roughly the same size as the later Australian-made "pocket" transistor receivers, at approximately 180 x 120 x 60mm. In fact, I mistook the first one of these I saw to be a transistor receiver.

In these receivers, the loop-stick antenna is quite slim and the coils are miniaturised, as are the loudspeaker and the tuning capacitor. The valves are the standard 1R5, 1T4, 1S5 and 3S4 line-up.

Naturally, it is not possible to fit a miniature 467 67.5V battery into one of these sets, so an even smaller battery similar in size to three 216 9V batter-

ies was fitted. The filament battery is a single D cell.

The life of those batteries would have been just 10-20 hours, so these little sets would have been quite expensive to run. In fact, they were the last of the small valve portables manufactured by the Japanese. We made nothing as small in Australia.

Batteries

An extensive range of the dry batteries used in battery-powered valve and transistor receivers was also on display. Many of the types used were quite specialised and there were many specials produced for battery-powered radio transceivers as well. Eveready, Diamond, Impex, Volta and Vidor are just some of the brands that were available over the years.

Dry batteries were not the only ones used. Some radios designed for country areas used 2V valves and were powered using either a lead-acid 2V black rubber wet cell or a 6V black rubber wet cell battery. For sets using a 2V cell, the HT was supplied by three 45V batteries.

Sales & service 1950s style

One particularly interesting display showed the style of shop a small radio retailer/serviceman might have had during the 1950s. The display cases showed some of the mantel sets of the era and behind the counter was the



This 1925 RCA Radiola 24 was an early portable superhet receiver. It used six valves, was battery powered and featured a swing-out loop antenna.

Airzone 588 6-Valve Receiver (1938)



PRODUCED IN 1938 BY AIRZONE RADIO, SYDNEY, the model 588 was housed in a tall attractive bakelite cabinet. An interesting feature of the set was its "Teletune" pre-set tuning. The individual buttons could be set to preferred stations and the whole front "ring" assembly could then be rotated to quickly select the desired station.

The valve line-up was as follows: 6A8-G frequency changer; 6U7-G IF amplifier; 6B6-G audio amplifier/ detector/ AVC rectifier; 6F6-G audio output; and 5Y3-G rectifier. Photo: Historical Radio Society of Australia, Inc.

serviceman's workbench, with various test instruments and spare parts.

Other displays

Lots of other items were on display, including a Traeger 36/40 Flying Doctor radio, a 1931 American Crosley grandfather clock radio, various homemade radios, some rare sets like the WW2 German People's Radio, vintage amateur radio gear and WW2 military and aeronautical equipment.

In short, there really was something for anyone who has even the slightest interest in vintage radio equipment. These was even a question and answer session on vintage radio restoration

run by an expert panel consisting of Michael Justin, Mike Osborne (President) and Peter Lankshear (New Zealand).

For further information about the HRSA or its sister organisation in New Zealand, the contact details are as follows:

(1) Historical Radio Society of Australia Inc, PO Box 2283, Mt Waverley, Victoria 3149. Phone (03) 9539 1117 or point your web browser to www.hrsa.asn.au.

(2) New Zealand Vintage Radio Society, PO Box 13 873, Onehunga, Auckland 1643; or browse to www.nzvrs.pl.net; or email office@nxvrs.pl.net. **SC**