

Vintage Radio

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A look at the Kurrajong Radio Museum



Radio museums can tell us much about our radio history, as well as preserving many worthwhile items that would otherwise be lost. One of the best is at Kurrajong in NSW, just west of Sydney.

MUSEUMS CAN BE DUSTY, uninteresting places, particularly if the people running them know little about the exhibits and the presentation is poor. But that's not the case with a vintage radio museum I recently visited in Kurrajong, NSW. It was run by an enthusiast named Ian O'Toole and is one of the best I've seen.

How it started

The start of this museum goes back many years. Ian's father owned a newsagency in Newcastle in the 1950s and 60s and Ian had the job of helping his father with the magazine returns. This is a boring job which involves returning either the front covers or the headings of magazines and newspapers for credit on the unsold items.

However, in 1955 when he was 10 years old, one magazine stood out – "Radio & Hobbies", which later became "Radio, TV & Hobbies" and then "Electronics Australia". He quickly became interested in the magazine and eventually decided to try building some of the projects described. In fact, I wonder how many other radio enthusiasts (both hobbyist and professional) got their introduction to the radio field through "Radio & Hobbies"? I know I did.

To start off, a semi-complete crystal set was purchased for ten shillings (\$1) in 1955. And that was to be the start of a lifetime interest in radio and vintage radio equipment.

Ian was fortunate to have a mentor for his radio interests in Bill Munn, a

local primary school teacher. Bill had an amateur radio licence and in 1967, Ian also qualified for an amateur's licence, obtaining the call-sign VK2ZIO which he still holds. This amateur radio licence has proved invaluable over the years, as it has allowed him to test many of his military radio transceivers on-air.

After leaving school, Ian qualified as a primary school teacher and worked in many locations throughout NSW, before retiring in 2002 to the Sydney suburb of Castle Hill. Teaching kept the wolf from the door and provided the money for him to indulge his passion for collecting vintage radios. It was fortunate that he did because many of the items in his collection would now be impossible to obtain.

The Kurrajong site

It is apparent that Ian was bitten by the collecting bug well before most of us in the vintage radio field had even thought about it. By 2002, he had quite a sizeable collection and had a "museum of sorts" squeezed into a 5 x 11-metre shed. However, there was no room to display the equipment – it was really just in storage.

Determined to have a proper display, Ian began looking for potential sites and eventually found a property in a semi-rural environment in Kurrajong which had considerable potential. It had been an old mushroom farm and had a large modern shed measuring about 24.4m long by 9.2m wide, with walls 6.1m high.

There were also two houses joined together and a second, older shed roughly the same size as the new shed. In addition, there were numerous other sheds of varying sizes, so this place really was "shed heaven" – ideal for the museum. The location wasn't too far out in the sticks, being at the



This section of the museum displays domestic radios from 1927 onwards. Pre-1927 radios are displayed separately.

foothills of the Blue Mountains, which meant Sydney residents could visit the museum when it opened.

The height of the new shed wasn't a problem, as Ian intended to install a mezzanine floor. The museum would then be housed on this upper floor, while the bottom floor would be used for storing radios and other material, and for mechanical restoration work. However, the museum would not take up the entire upper floor, as three rooms would be added to house a workshop/repair area (for electronics only), a broadcast studio and a room devoted to AWA equipment.

Because the block is reasonably steep, the mezzanine floor entrance would be at ground level (following suitable earth works). Once the museum building was nearing completion, a demountable classroom was brought on site. This was fitted out as the entrance, toilet block and shop, with tables and chairs so visitors could sip coffee or tea and relax.

700 items

Ian now had room to effectively display 700 major items of radio history, while many other lesser items could



These World War 2 military radios were built by Astor Radio Corporation in Melbourne, Victoria.

be stored on the bottom floor, below the museum.

It took Ian and his wife Patricia about six weeks and two trailer loads a day to shift all the items. Those

items intended for the museum were put into a separate shed and at the end of six weeks, the doors could hardly be closed! The equipment was then gradually sorted and eventually



This is the radio station salvaged from the North Korean “drug ship” Pong Su. The ship was used subsequently by the RAAF for target practice.



This section of the museum houses a selection of World War 2 era “walkie talkies” and backpack radios.

brought back for assembly in the museum building.

According to Ian, this process took them around three years from start to finish and they received lots of valuable help from some very good amateur radio friends.

Laying it out

Once the museum shell was finished, everything had to be laid out in

a logical fashion. This also involved carefully planning the electrical wiring, as well as the many cables that would be necessary to connect antennas and audio lines, etc.

Ian’s career as a primary school teacher proved invaluable in the design of the museum. As well as displaying lots of interesting equipment, it had to tell a story and be of interest to all ages.

Over a period of many months, Ian set up the equipment and displays, along with yellow information cards. Antennas were vitally important too, otherwise on-air displays would be a dismal failure. Ian installed antennas to cover various frequency ranges, along with broadband amplifiers to provide enough signal for most of the receivers.

The accompanying photographs show the wide variety of equipment on display. One area of particular interest is the Morse code training area, where people can try their hand at Morse code. The 12 listening posts are also interesting. These provide aural history lessons via pre-recorded information on CDs as follows:

- Old radio serial introductions.
- Old radio advertisements.
- A radio history channel.
- Morse recorded off air (this goes to the two Morse training positions).
- A time and frequency channel (time signals from WWVH, Hawaii).
- An aircraft channel – where aircraft flying the Pacific can be heard.
- A School of the Air channel – listen to lessons as they happened.
- A maritime channel – weather forecasts for shipping.
- An international broadcast channel featuring the 1950s & 1960s.
- Radio amateurs talking about radio restorations.
- Amateur Radio NSW weekly broadcast
- The VKS737 Outback Radio channel – hear travellers in outback Australia.

Opening day

It’s all very well to have a first-class museum but if no-one knows about it there will be no visitors. Fortunately, Ian is a bit of a PR man and had been extolling the virtues of his new museum for some time, particularly to amateur radio operators and to members of the Historical Radio Society of Australia (HRSA), to name but a few groups.

It is always a smart move to get a well-known dignitary to open such a facility and Ian engaged the local Mayor of Hawkesbury City Council, Bart Basset, to do the honours. Bart is

a helicopter pilot and had a particular interest in the operational aviation radios on the day.

The opening ceremony was held on Saturday 27th May 2006, with the museum officially opening to the public on Sunday 4th June 2006. Working closely with the council was important as they are able to help publicise the museum through their tourist information centre.

The Pong Su

So who or what was the “Pong Su”? Well, as you may remember, the Pong Su was a 3743-tonne North Korean freighter that was observed anchored in Australian waters off Lorne, Victoria on the night of April 15, 2003. Australian Federal Police observed the vessel and followed two suspects who appeared to have come from the ship. They were apprehended and found with 50kg of heroin in their possession.

Ultimately, a total of 125kg of heroin was found and Australian authorities ordered the ship into harbour. The ship then endeavoured to escape into international waters and a 4-day chase ensued. It ended when Australian Army Special Operations Forces boarded the ship from a helicopter and seized control.

The ship was subsequently brought into Sydney harbour and the crew arrested. After all the legal action had been taken, the ship was stripped, towed out to sea and sunk by RAAF F-111 aircraft on 23rd March 2006.

So what has this to do with Ian's museum? Quite a bit actually! Ian was able to secure the radio station from the Pong Su and it now forms the biggest single display in the museum. Not many people have the opportunity to see the radio station from a large ship, as they are normally out of bounds to passengers.

This particular radio station was manufactured by the Japanese company Anritsu in 1980. It weighs close to 800kg and can basically be divided into two sections. The lefthand side contains the mandatory emergency equipment and is capable of being powered by the ship's 24V batteries. This equipment includes an emergency transmitter and a receiver for low-power communication on the MF and HF marine bands, along with a 500kHz Auto Alarm receiver.

The righthand side of the station



Rack alley – an impressive collection of the equipment used by radio stations.



This history board has lots of information on the era preceding 1930, together with scrapbooks containing press clippings on radio station 2WS (1224kHz).

contains the main receiver and transmitter. These were powered from the ship's supply, with 100V AC for the receiver and transmitter frequency synthesiser and 440V AC 3-phase for the power amplifier. The latter uses a pair of 4CX250Bs as the output valves and these deliver 500W CW (Morse) on MF and HF.

Ian could find no indication that the transmitter was used on any mode other than CW (HF) and MCW (MF).

He says there is a lot of circuitry in the frequency synthesiser so there may be provision for SSB, although it certainly hasn't been utilised in this particular installation.

Both receivers are operational and cover 100kHz to 34MHz. The transmitters cover the 400-515kHz, 2MHz, 4MHz, 6MHz, 8MHz, 12MHz, 16MHz, 22MHz & 25MHz marine bands.

Unfortunately, the VHF (156MHz) and radio direction finding (DF) equip-



Ian O'Toole taking delivery of the 1961 AWA 500W transmitters for his museum.



Vintage cars visiting vintage radios at the Kurrajong Radio Museum.

ment had “disappeared” before Ian obtained the station. However, he does have the ship’s PA system, which has its own tuner and tape recorder, plus a cassette with a CW practice session (the ship’s engines can be heard running in the background).

A quick tour

So much for the specialist areas. Let’s now take a quick look at the rest of the museum.

First, there is a 1940 Palmavox Console Radio, which plays the Argonaut’s theme. Then there’s the 1926

crystal set, which astounds people with its quality. There are also many reel-to-reel tape recorders ready to be demonstrated, along with cartridge machines and cassette players.

The working radio studio control room is quite an experience; there are 10 display boards illustrating radio history from the very beginning until the end of WW2; there’s a special room for the AWA Company and its products; there is a 12-minute video “AWA and the War”; there are operational teleprinters; and there is a long wall of armed service/professional radios.

A special display shows the history of domestic radios. There is also a display of WW2 spy radios (I’d be particularly interested in these). In

short, there is a vast array of radio equipment on display and it continues to grow.

The shop

The shop not only provides light refreshments to visiting groups (by arrangement) but also sells DVDs, CDs and some books. There are also some small curios, including FT243 crystal cases and metal 6H6 valves mounted on wooden bases.

Where is it?

The Kurrajong Radio Museum is located at 842 Bell’s Line of Road, Kurrajong Hills, 2758. If you are approaching from Sydney, you will have to cross the Hawkesbury River at North



AWA CR6 & Kingsley AR7 HF aviation receivers.



Scouts tune in at the listening booths.

Photo Gallery: Gladiola 1932 TRF Receiver



THE GLADIOLA COMPANY OF ADELAIDE was one of Australia's smaller radio manufacturers. The set shown here is a 3-valve TRF receiver and was manufactured in 1932. It was housed in an upright wooden cabinet and used the following valve types: 57 detector, 2A5 audio output and 80 rectifier. Photo: Historical Radio Society of Australia, Inc.

Richmond. As you come off the bridge the museum is 8.42km ahead on the righthand side of the road, between Kurrajong and Kurrajong Heights (look for the Kurrajong Radio Museum signs on the property).

If you want more precise instructions, visit their web page at www.vk2bv.org/museum/ or just enter "Kurrajong Radio Museum" into the Google search engine. The museum is usually open on Saturdays and Sundays from 10am to 5pm and at other times by special arrangement. The cost is \$10 per adult and \$5 per child.

Summary

The Kurrajong Radio Museum does an excellent job when it comes to displaying and preserving many im-

portant aspects of our vintage radio heritage.

However, Ian is always on the lookout for more items that may be suitable for the museum. In fact, he has just recently obtained two broadcast-band 500W transmitters (circa 1961) and these are shown together in one of the photos, loaded onto his trailer before transport to the museum. He only needs a large antenna to go with them and he will have a complete broadcasting station!

In short, Ian and Patricia O'Toole's museum is a welcome addition to the local Hawkesbury area as a tourist attraction and an educational facility. It's much more than just a collection of old radios and is well worth seeing and supporting. **SC**