

# Four HMV stereograms and stereo-AM broadcasting in Australia

By Graham Parslow



His Master's Voice is the title of a painting by Francis Barraud of the dog Nipper listening to a cylinder phonograph. The HMV brand was first used by the Gramophone Company UK in London in 1921 for gramophones and records. In 1931 The Gramophone Company and The Columbia Company merged as Electric and Musical Industries (EMI) and began manufacturing radios. The company

made HMV radios in Australia from 1936 at 2-6 Parramatta Road, Homebush NSW. The 1936 advertisements for HMV proclaimed that the radios were for “discriminating buyers who demand the best”. Most recently HMV were a chain of music shops largely selling CDs. The glory of Little Nipper ended when the EMI/HMV group were wound up internationally as insolvent in January 2013.

By the opportunistic way that radio collections tend to grow, four HMV stereograms have come my way, two intact and two as chassis. The first one collected was a 1966 Caprice stereogram shown as item [1]. The date June 1966 is stamped inside the cabinet as the date of completing the wood-work. It is stained a deep rosewood tint and is an impressive item of furniture with excellent sound



1966 HMV Caprice  
6AN7, 6N8 & two 6GW8



quality from the dual-cone 8” Magnavox speakers. The all-in-one stereo unit reflects the tradition that since the 1930s consumers were sold an integrated unit rather than separate modules, but that was to change entirely by the 1970s for HiFi systems. As I came to appreciate, HMV used the same chassis for all of the stereograms shown here with

adaptations to different valves and rectifier technology. The rectifiers changed from selenium in 1960 to discrete silicon diodes in the mid 60s. The line-up and spacing of controls on a common chassis remained the same throughout.

The 1960 stereogram, item [2], was acquired at a HRSA auction where it was labelled “radio works”. This was true, but only one channel worked due to an open circuit output transformer and the radio sound was badly distorted. Using a separate amplifier the distortion was evident at the volume control so it was the radio section at fault. The case had suffered from being in a shed and used as a base for storing leaky cans. Application of a belt sander and some polyurethane restored much of

the radiograms former glory. Because of the multiple faults, including a non-functional record player (perished idler wheel) I told myself this radiogram was for display only. However I did have second thoughts after I acquired item [3] intending to cannibalise it and repair the radiogram.



Item [3] is a HMV chassis purchased at a HRSA auction to repair item [2]. Sadly the radio section



3a

1966 HMV chassis  
6AN7, 6N8 & two 6GW8  
Front and back views.

All tuner hardware was subsequently removed.



performed with the same amount of distortion as the radiogram it was intended to repair. I could have recapped the chassis hoping that it might remove the distortion. However I did not see this as good value for time spent, so item [2] remains display-only. What was inspiring about item [3] was the use of 6GW8 valves in the amplifier section and it took me back to 1965 when I built a guitar amplifier from a R,TV & H Playmaster circuit featuring a 6GW8. The nostalgia was a powerful motive to rebuild this as a 6GW8 guitar amplifier and additionally as a valve based stereo amplifier. The 6GW8

introduced in 1961 was the perfect end-of-the-line triode-pentode for domestic level output, as proved by its wide use in the 1960s. The radio section was stripped from the chassis and a plate made to cover the punch holes. RCA sockets were added to convert the gram function to AUX-IN. The radio function was adapted to guitar input so that the function switch conveniently split a mono



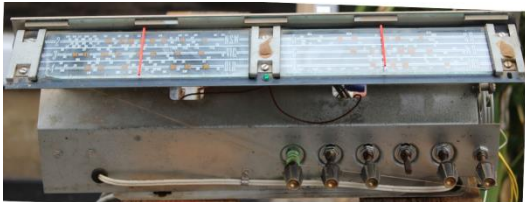
3b

Rebuilt amplifier with two 6GW8



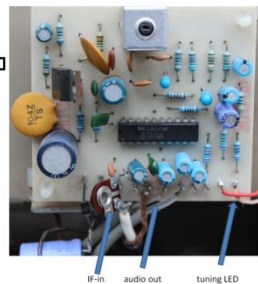
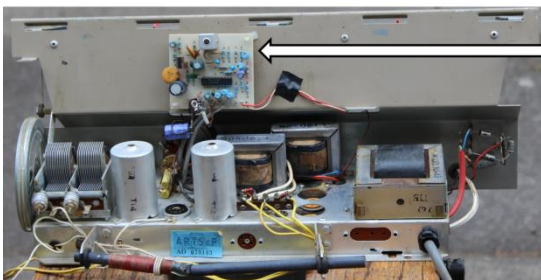
ohms) with a 150 ohm resistor. This changed grid bias from -6V to -7V which is in line with the valve specification. With the bias at -7V a 400Hz sine wave produced clipping at 4.5W RMS for a single channel driven. This is right on the specified power output for a 6GW8. Persistent crackles were removed by replacing the 0.01μF capacitors coupling the 6GW8 triodes to the pentode grids. Fortunately the components are well spaced and easy to work on (see picture of underside of the next chassis [4c] that has the same layout as [3]). The rebuilt amplifier became a great joy in every respect. I rediscovered the simple pleasure of listening to music as I spent hours enjoying CDs

guitar input to drive both channels. Using some black paint, extra metal work and some art-work with gold metalised card, the final *Twin 6GW8 valve amplifier* took form. For a two valve amplifier the initially measured total power consumption of 39W was a bit high. This was reduced to 30W by replacing the 100 ohm common cathode bias resistor shared by both 6GW8s (gone low at 90



4a

1966 HMV chassis  
6AN7, 6N8 & two 6GW8  
plus a surprise add on.



delivered with the characteristic audio signature of a valve amplifier.

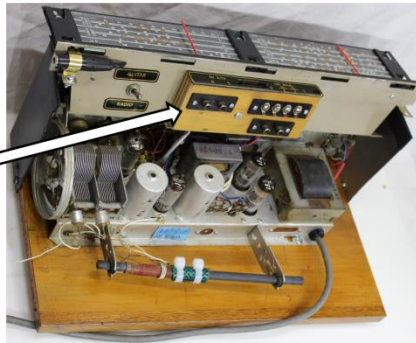
Item [4] had spent some years on my spare parts shelf after it was fetched back from rural Creswick in Victoria. It was part of an eBay lot of bits passed on by the son of the town's deceased radio repairman. The success of the prior conversion of item [3] inspired a return to this chassis. In this case the

radio performed faultlessly so the conversion was made, building on prior experience, to become a radio – guitar amplifier – stereo amplifier. A great surprise in this rebuild was the extra circuit that had been added (see picture of unit [4]). I had assumed it was a magnetic cartridge preamplifier, but it soon became evident that it was a much more interesting circuit. It was a C-QUAM stereo decoder for AM radio built from an Electronics Australia project of 1984 (circuit board 84ms10). It was wired into the IF output of the 6N8 and produced perfectly clear AM radio output that had been wired for



4b

After rebuild.  
A radio-ux-guitar amplifier.



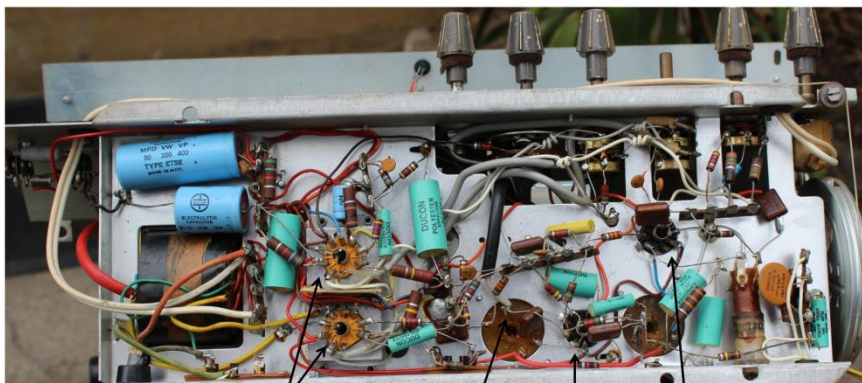
stereo via the gram input channels. Although stereo should have been indicated by a green LED built into the tuner panel, no Melbourne station in 2014 caused the LED of this unit to show that the AM signal was encoded in stereo. The heart of the decoder is an MC13020P chip as described by the data sheet included here [5].

When AM stereo was introduced in 1985 it produced a period of infatuation followed

by disillusionment with a decline in the 1990s when most radio stations ceased stereo encoding. The following information was mostly provided by a blogger called Hot Hits at the web site

4c

Chassis 4.



2 x 6GW8 IF-2 with feed to stereo decoder 6N8 6AN7

<https://groups.google.com/forum/#!topic/aus.radio.broadcast/oAT0bn2TufA>. When AM stereo was launched on Feb 1 1985 it was claimed that 8 out of every 10 radio listeners who favour AM stations could now listen in stereo. A number of car audio shops sold AM stereo radios and even the K Mart auto section had a good range. A lot of people bought AM stereo radios by default not even realising that they had the capability. Stereo AM radios included Concord HPL 500, AWA Clarion 990E, Sony Walkman, Pioneer KEA 433AM Sansui, Eurovox MCC 2330R & 2301R, Marantz SR 440, Sansui SX 1100, Sherwood, Yamaha plus all the Voxon Range. Very popular was the SONY 1 Rack Unit tuner that was suitable for both professional and domestic use. The big-success conversion kit was the Playmaster unit encountered here with item [4], available from from Dick Smith. The

