Identical twins in different clothing.

Monarch model DKL and Peter Pan model GKL

By Graham Parslow

Badge engineering has been a part of Australian radio history since the beginning of commercial manufacturing. AWA remained the biggest manufacturer of radios through the golden age of radio. AWA (Amalgamated Wireless Australasia) was a hybrid between Marconi UK and RCA USA. Between them they bought other manufacturers and used their names for offering brand choices to customers. AWA manufactured products badged as Radiola (proprietary to RCA), Hotpoint, General Electric, Bandmaster, Westinghouse, Diamond Dot Cruiser and Genalex. Sometimes only the badge was changed, but most times other cosmetic changes were involved. Second only to AWA in production volume was Astor (Radio Corporation of Australia) and they too did their fair share of badge engineering. Brands in the extended Astor family included Croyden, Eclipse, Saxon and Univox as well as the two brands featured here.

Astor released the popular Mickey model KL immediately after the war in 1946. It was cheap and cheerful, featuring only 4 valves.

The same basic circuit as the Astor KL was used for the radios repackaged as Monarch model DKL and Peter Pan model GKL. As you can see the case work is significantly different and this required different layouts for the chassis and access to the tuning and volume controls.

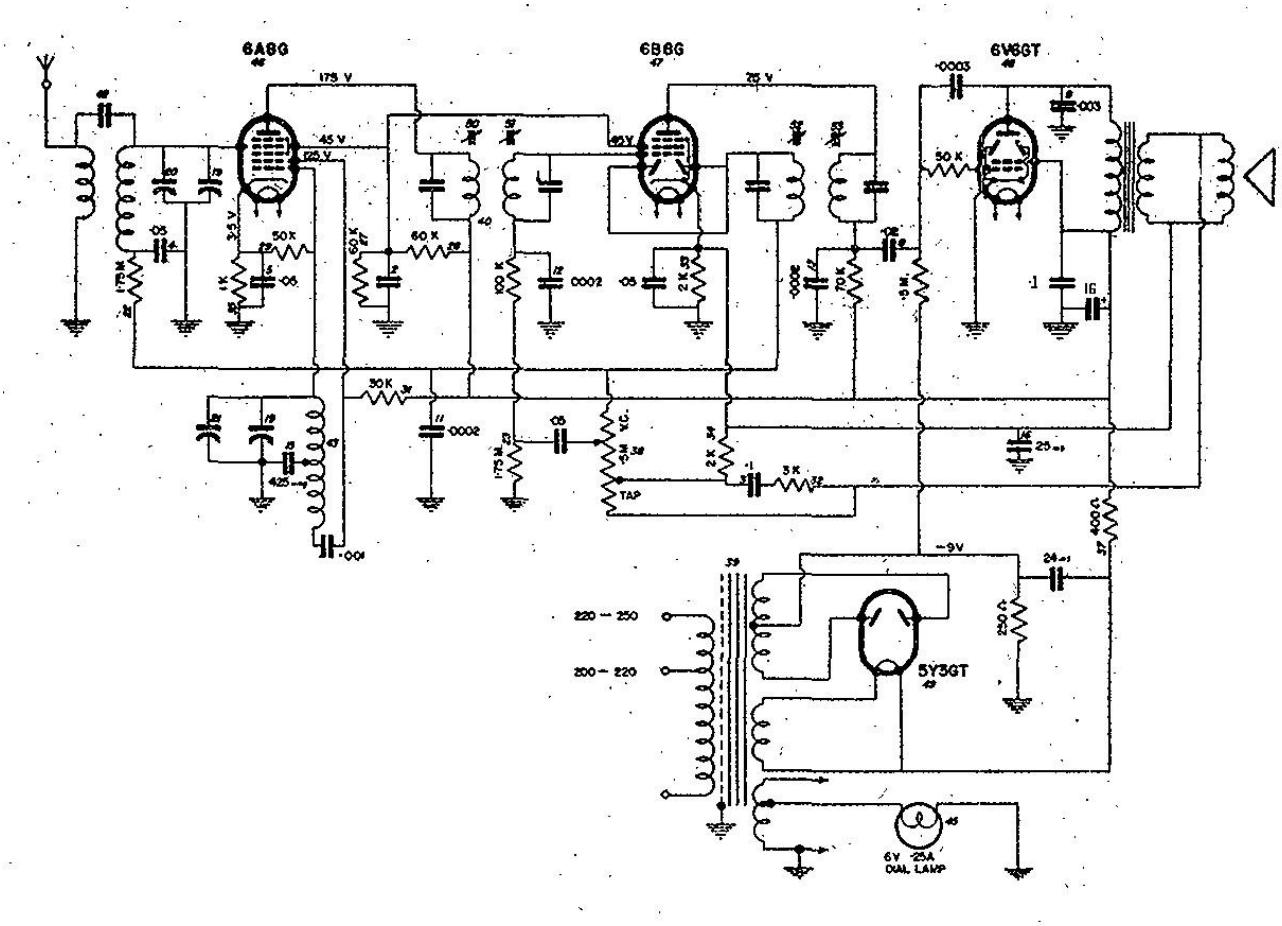
By chance I acquired both the Monarch and Peter Pan radios from a deceased estate, not realising at the time that they were twins, or even part of triplets when the Astor Mickey is counted.

THE CIRCUIT

The AORSM circuits for the DKL and GKL are absolutely identical and a copy is shown here. The essential features of the circuit are

evident even though the diagram is low in definition.

The AORSM circuit for the Astor KL is drawn in a different style and to my eye only three components are different. For the KL the mains transformer has slightly different windings so the voltages are higher requiring a 450 Ohm voltage dropping resistor in the HT filter circuit, rather than 400 Ohm. The capacitor arrangement linking the primary and secondary of the aerial coil is also different. Other than those minor revisions all circuit details appear to match.



The following description of the circuit has been adapted from the notes published in the 1946 edition of the AORSM (Australian Official Radio Service manual).

VALVE COMPLEMENT .

6A8G Converter. _ _

6B8G IF, Amplifier, AVC., Detector, first Audio.

6V6GT Beam Power Amplifier.

5Y3G Full Wave Rectifier.

INTERMEDIATE FREQUENCY: 455 kHz.

TUNING RANGE: - 535 to 1640 kHz

POWER CONSUMPTION: 40 Watts Approximately.

GENERAL DESCRIPTION

A Mantel Model with 4 valves. It is a reflexed superheterodyne receiver. The circuit which is of unusual design has overcome the usual disadvantages of reflexed circuits, i.e. low-volume distortion and failure of the volume control to cut off. The valve line up consists of a 6A8G pentagrid converter followed by a type 6B8G diode pentode used as a combined IF amplifier, diode detector and A.V.C. bias source and first audio amplifier. A.V.C. is applied to the 6A8G only. Volume is

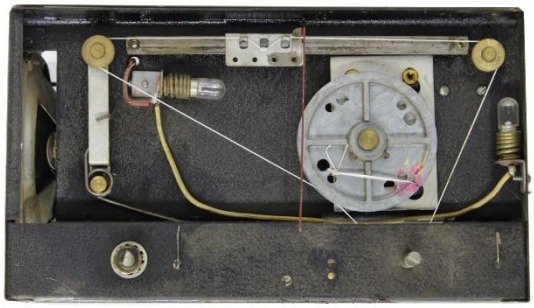
controlled by varying the reflexed audio signal applied to the 6B8G valve. The audio output of this valve is fed directly to the 6V6GT output valve. Negative feedback is taken from the secondary of the output transformer and applied to the bottom of the volume control. A second circuit providing bass boost is connected to the tap on the volume control. Bias for the 6V6GT output valve is obtained from the voltage drop across the 250 Ohm resistor between earth and the mains transformer centre tap. High tension is supplied from the 5Y3G full wave rectifier and filtered by a resistance-capacitive filter comprising 24MFD electrolytic, 400 Ohm resistor and 16MFD electrolytic capacitor.

TUBE	FIL	PLATE	SCREEN	GRID	CATHODE	OSCL. PLATE
6A8G	6.3V	175V	44.5V	–	3.5V	115V
6B8G	6.3V	75V	44.5V	–	2.7V	–
6V6GT	6.3V	165V	175V	9.0V	–	–
5Y3G	5.0V	198/198V. RMS. The initial surge voltage across the first electrolytic condenser (circuit No. 17) is 255 volts, dropping to normal operating value of 196 volts. The D.C. voltage across the 400 Ohm filter resistor is 16 volts.				

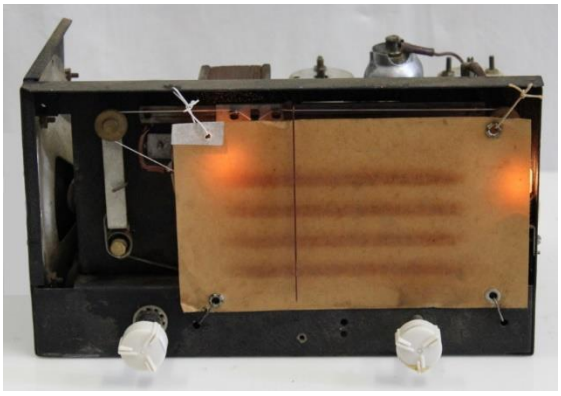
Peter Pan model GKL

As seen from the rear, the top right hand corner of the case was chipped off. The gap was filled with two-part car-body filler, profiled to shape, then painted ivory to match the case.

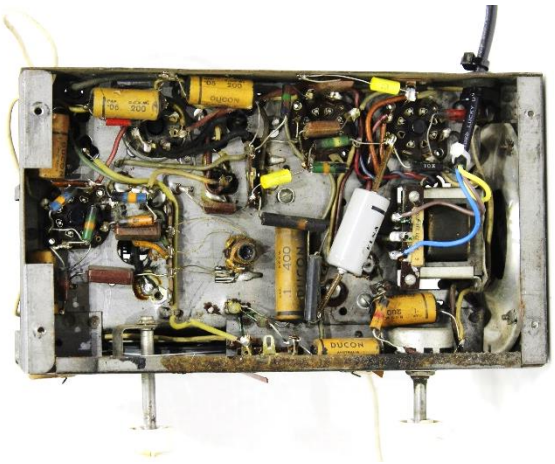
The dial string was broken. Replacement was relatively easy because the dial string has a spring-tensioned arm, rather than a conventional spring in the dial drum. After the string is in place it is a simple matter to rotate the torsion arm and apply tension.



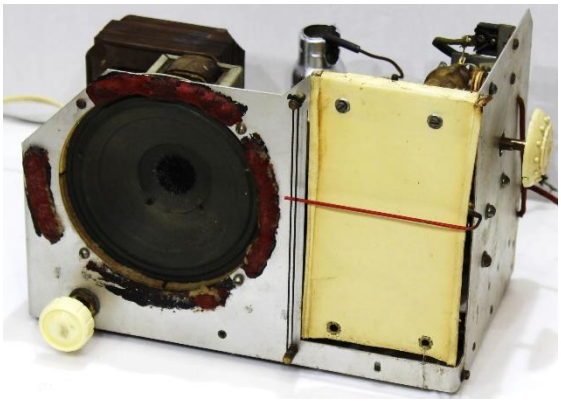
A diffuser card for the dial is retained by ties anchored in grommet holes.



Restoration included replacing the 0.02 uF audio coupling capacitor to the 6V6 and the 6V6 0.003 uF plate decoupling capacitor. A new three core power cable was installed. With these minor changes the radio worked well, with everything performing to specification.



Unusually the chassis is painted in black-crackle finish.



The chassis layout is tight, but not cramped.

Monarch model DKL

This is the baby Monarch. The five valve model has a scaled-up case of similar appearance. This example has a crack extending across the left hand top. But it is a minor blemish and it was left alone.

The underside of the chassis is well set out for easy replacements. Some critical capacitors had already been replaced so only the plate bypass capacitor to the 6V6 was additionally replaced. The radio performs well within the limitations of four valves and a five inch Rola speaker.

A wit has observed that all Mexican foods are the same; whether it is called a Burrito or a Taco only depends on how you wrap it. Astor

likewise managed to wrap its products with imaginative variations.