

Malvern Star 1946 model 6252A

By Graham Parslow

Restoration of a model 6252A prompted me to share the experience and to look into the history of a company better known for its bicycles. As received the case was in good condition, but the speaker grille was faded and holed and the celluloid dial cover was yellowed.



First step was to slide the chassis out after removing the knobs and four screws at the bottom of the case.

There was a hair-line crack in the top of the Bakelite that would open up if any stress was put on the case. Cyano-acrylate (super glue) was ineffective as a repair. The crack was stabilised by using epoxy glue to place a patch of aluminium sheet inside the case, under the crack.

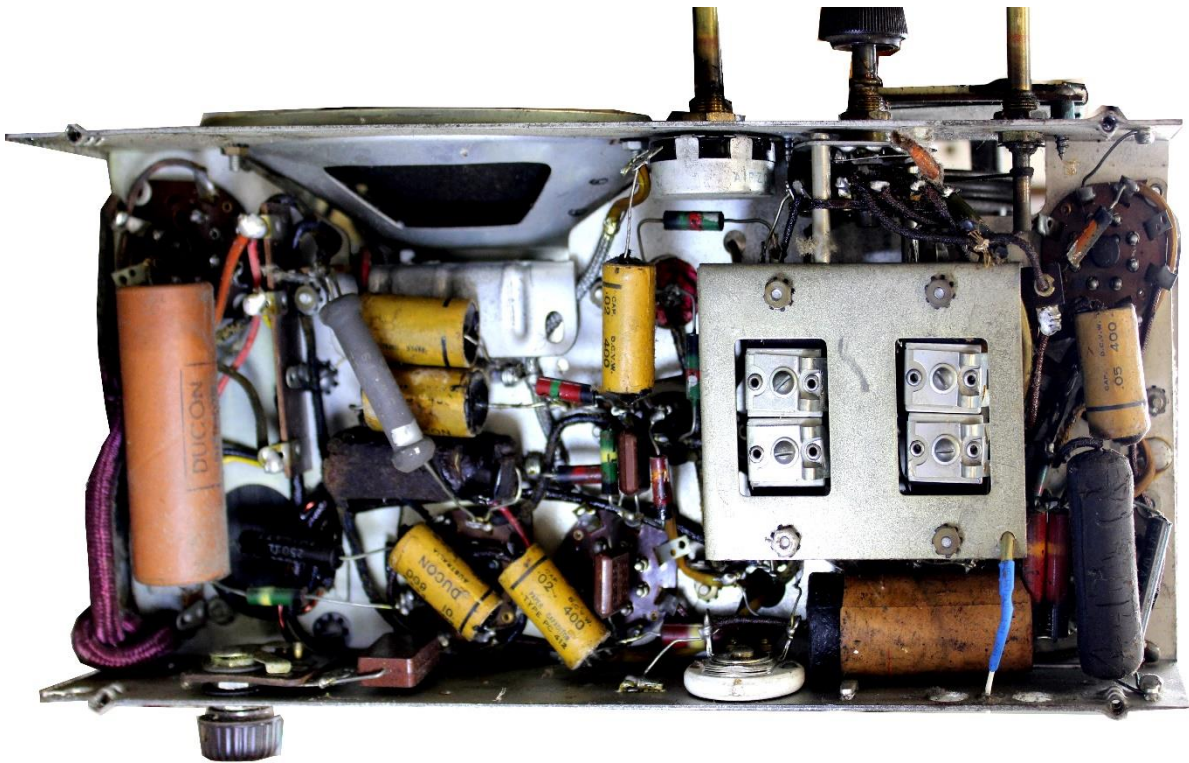
The speaker grille cloth was backed by a cardboard support that conforms to the rounded corner design. The cardboard had not lasted well and had disintegrated in some



places. A replica was easily made from heavy duty cardboard obtained from an artist's supply shop. By fortune I had some grille cloth at hand that was identical to the original. That cloth was used by many manufacturers at the time.

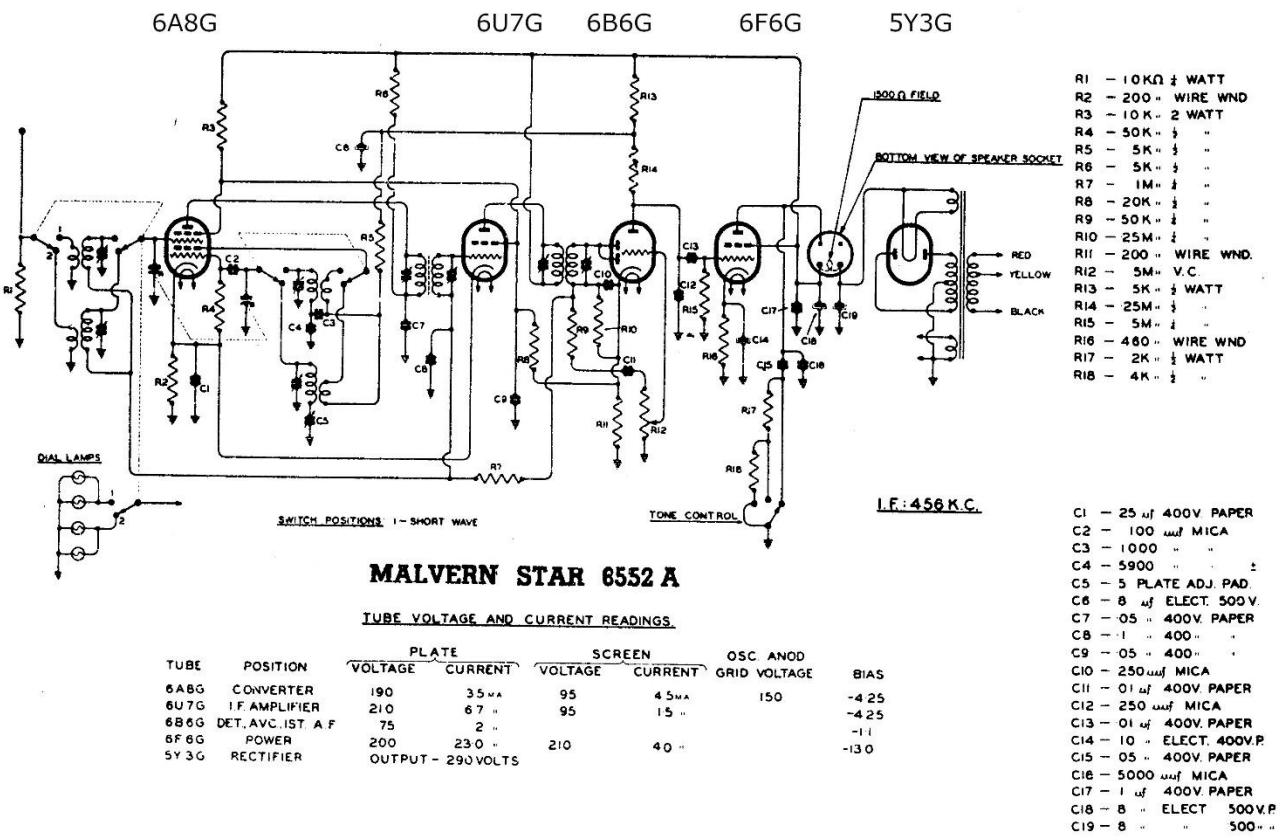
A section of clear polycarbonate was cut to replace the opaque celluloid dial cover and neatly cemented inside the case using Bondic UV-setting polymer. The great advantage of Bondic is that the polymer sets in seconds when exposed to UV light (see <https://notaglu.com/>). It is the same polymer as used by dentists to cement dental prostheses. Despite the hyperbole about its amazing strength Bondic is not always the best choice when applied to non-porous surfaces. The Bondic kit comes with a UV LED light driven by a button battery that eventually goes flat. My response to a flat battery was to remove the UV-LED, glue it to the end of an empty ball-point pen casing and wire the LED to a 4.8V bench power supply. This works even better than the LED as originally supplied. T

The knobs were cleaned ultrasonically. After a carnauba-wax polish the case presented very well.



The next step is usually to remove the valves and clean the chassis. In this case someone had glued the top-cap grid connectors to the valves so the valves were locked in place and cleaning was compromised.

Under the chassis there were two badly cracked "chocolate dip" capacitors and three unserviceable electrolytics.



MALVERN STAR 6552 A

TUBE VOLTAGE AND CURRENT READINGS.

TUBE	POSITION	PLATE		SCREEN		OSC ANOD GRID VOLTAGE	BIAS
		VOLTAGE	CURRENT	VOLTAGE	CURRENT		
6A8G	CONVERTER	190	35 mA	95		150	-4.25
6U7G	I.F. AMPLIFIER	210	6.7 "	95	4.5 mA		-4.25
6B6G	DET. AVC. 1ST. A.F.	75	2 "				-11
6F6G	POWER	200	23.0 "	210	4.0 "		-13.0
5Y3G	RECTIFIER	OUTPUT - 290 VOLTS					

MALVERN STAR RADIO
 Manufactured by Bruce Small Pty. Ltd., Sydney

The two metal cannister electrolytics mounted in the centre of the chassis showed leakage of electrolyte from the positive terminal under the chassis. The positive terminal connecting lugs were snipped at the base to remove the old electrolytics from circuit while retaining the multiple wires terminated on the lugs. I am now finding that after 70 or so years cannister electrolytics are more likely to have failed than axial electrolytics.

Dubious components were replaced and a three core mains lead was installed. Happily the radio worked well at switch-on.

The valve location sticker on this radio is correct in listing a 6J8 as the converter (not a 6A8 as in the circuit diagram). However, the 6F6 listing is incorrect because a 6V6 output tetrode was installed. By the circuit diagram the cathode bias resistor R16 (460 Ohm) will give -13V bias to a 6F6. In reality R16 was 250 Ohm and gave the 6V6 a bias of -6.5V which is correct for a 6V6. It is most likely that the 6V6 substitution was a factory production-line change rather than a later replacement.

The electrodynamic speaker indicated was replaced by a permanent magnet type and a 3K ohm dropping resistor had been substituted for the field core.

CHASSIS TYPE 6252A
 200/230V 40-50 ~
 230/250V 50 Watts

The two ranges of Mains Voltages are controlled by a connection inside the chassis and should be adjusted to suit the supply voltage where the receiver is installed.

WARNING
 This receiver operates at a voltage which may be dangerous. No adjustments should be made to the chassis, neither should valves or dial lamps be changed without first removing plug from the supply mains.

VALVE LOCATIONS

MADE IN SYDNEY AUSTRALIA

The circuit for model 6552A appears in AORSM volume 6 1948 and the same circuit appears in that manual under Arirzone, also designated model 6552A. The AORSM has no entries for the chassis type designated 6252A, but all key components and values are the same. The voltages supplied on the circuit

also match measured values on the bench.
Power consumption was 50W.



An interesting feature of the model 6252A is that *Malvern Star* is moulded into the case. On other models the logo is a stick-on badge replacing an Airzone badge, as in model 6852V.





In 1898 cyclist and bicycle mechanic Tom

Finnigan

entered the Austral Wheel Race, the highly prized two mile handicap at the MCG which had a First Prize of 240 gold sovereigns – a sizeable amount in those days, easily enough to start a business on. Tom won the race with a time of 4 minutes 30.8 seconds. He then set up his own bike shop at 58 Glenferrie Road, Malvern and in 1903 began building and selling his own brand of bikes. The Malvern Star was born, its logo featuring a six-pointed star which matched a tattoo on his forearm.

Tom Finnigan retired in June 1920 due to failing health and the business was bought by 24-year-old Bruce Small. Small kept the name Malvern Star and in 1921 awarded a new bike as third prize in a race to a young 17-year-old racer, Hubert Opperman. He at once recognised Opperman's potential and thus began a relationship which would see rider and brand catapulted onto the world stage.

Bruce Small's brothers, Frank and Ralph, joined in the business, enlarging the shop that was now at 185 Glenferrie Rd. In 1925, the headquarters moved to Prahran and the number of staff had grown to 13.



By 1933 Malvern Star employed 100 people and released its new prime racer, the Malvern Star Opperman. In January 1940, Hubert Opperman rode the last major endurance ride of his career at the Sydney Arena velodrome. In a 24-hour ride he broke 101 world, national and state records. At this time Malvern Star had become the largest bicycle manufacturing plant in the southern hemisphere with thousands of bicycles built annually.

With the Second World War, the supply of bicycle parts became scarce, so Malvern Star started manufacturing its own bicycle parts and diversified into electronics with defence contracts for radio location sets for the RAAF. At its peak after the war, Malvern Star had 115 stores with 1,000 dealers. Opperman helped promote Malvern Star and make both a household name in Australia.

The Malvern Star factory was relocated to the corner of Clarendon Street and Normanby Road in South Melbourne which is now the site of the Melbourne Conference and Exhibition Centre opposite Crown Casino.

Malvern Star was sold to Electronic Industries in 1958 then in 1970 the brand was purchased by the Dutch multinational Philips, which sold Malvern Star in 1980 to Raleigh Bicycles. Malvern Star returned to Australian ownership in 1992 under Pacific Brands and was later sold to New Zealand's Sheppard Bicycles in 2011.

Most of this history came from the web sites.

<https://burwoodbulletin.org/malvern-star-a-legend-born-locally/>

https://en.wikipedia.org/wiki/Malvern_Star

Malvern Star learnt from the example of its competitor Healing bicycles. Healing bicycles were the primary business and it was an act of diversification to make radios beginning in 1928. Healing simultaneously imported Atwater-Kent radios, but tariffs and limits on imports in 1929 saw the company discontinue the US radios. With only internal competition within Australia the stage was set for a booming radio manufacturing industry.

After the war Malvern Star chose not to make its own radios, but to badge-engineer other makers products.. Most of the radios were manufactured for Bruce Small Pty Ltd Sydney by Airzone then sold through Malvern Star's large number of bicycle shops and dealers.

The Australian Official Radio Service Manual lists these models.

8552A	1947
6852V	1947
458	1947
MS457B	1948
AA411	1948
5 Valve dual wave	1949
5 Valve Portable	1949

The advertisement from Womens Weekly June 5 1948 shows model 458 in green, model A625A in walnut and model MS457B in blue leatherette.

Three additional models are listed at Radiomuseum including a radiogram (no model number). Considering the limited time span and model offerings a remarkable number have survived in collections.

Although not shown in the advertisement reproduced here, the advertising for the 5-valve dual wave model 6252A, as featured in this article, proclaimed:

The rich warm walnut of this dual wave mantel is dignified and perfect for any setting. It's a powerful radio with all the very latest technical improvements – and the way stations romp in all over the dial is amazing. Local, interstate and foreign stations come in with crystal clarity. And its wonderful tone makes listening sheer pleasure. Moulded plastic cabinet with streamlined speaker grille creates a pleasing effect of sweeping horizontals in true modern tradition. The ideal set for the lounge.

So Malvern Star was a fleeting star, but significant in Australian Radio heritage.

MALVERN STAR BRINGS

Harmony

INTO THE HOME!

Malvern Star Radio is available in colours to harmonise PERFECTLY with ANY furnishing scheme . . . to please the most aesthetic of tastes . . . radio to pour forth melody equally as rich and satisfying as its appearance. We'll be glad to demonstrate Malvern Star Radio in your own home without any obligation on your part.



WALNUT

IVORY

MALVERN STAR 4 VALVE MANTEL MODEL

A lovely little handful in either delicate pastel green, elegant ivory, or rich brown walnut—a mantel model with plenty of punch and glorious tonal balance, yet it's small enough to tuck under your arm and take anywhere in the house . . . into the bedroom, the lounge, the kitchen, the sunroom.

- Walnut, £17/10/- (£18/1/6 in Nth. Q. and W.A.). (Country freight extra.)
- Pastel Green, Ivory, £13/11/- (£13/2/6 in Nth. Q. and W.A.).

EASIEST OF EASY TERMS!



MALVERN STAR 5 VALVE DUAL WAVE MANTEL MODEL

The rich, warm walnut of the dual wave mantel is dignified and perfect for any setting. It's a powerful radio with all the very latest technical improvements—and the way stations romp in all over the dial is amazing! Local, interstate, and foreign stations come in with crystal clarity, and its wonderful tone makes listening sheer pleasure. Moulded plastic zonite cabinet with streamlined speaker grille creates a pleasing effect of sweeping horizontals in true modern tradition. The ideal set for the lounge.

- £26/14/- (£27/14/- in Nth. Q. and W.A.). (Country freight extra.)

EASIEST OF EASY TERMS!



TAN

BOTTLE GREEN

MALVERN STAR 4 VALVE PORTABLE

Australia's outstanding outdoor radio is available in dark blue, tan, or bottle-green hard-wearing leather-cloth. Powered by long-life miniature batteries and featuring the very latest miniature valves, this grand little set packs plenty of power, with extraordinary range and full, rich tone rarely found in other portables. Easy to carry; patent fastening clip automatically switches off batteries when closed; open, and out pours the melody—at once!

- £25/19/6 (£26/19/6 in Nth. Q. and W.A.). (Country freight extra.)

EASIEST OF EASY TERMS!

You'd be better on a
Malvern Star

BRUCE SMALL PTY. LTD.

CITY ADDRESSES:—MELBOURNE: 283 Elizabeth St. • SYDNEY: 730 George St. and 40 Park St. • BRISBANE: 440 Queen St. and 184-190 Elizabeth St. • NEWCASTLE (N.S.W.): 541 Hunter St. • ADELAIDE: 60 Pulteney St. • PERTH: 38-40 Forrest Place and 222A William St. • HOBART: 95-97 Elizabeth St.

112 Branch Stores and 1300 authorized distributors throughout the Commonwealth.