

Admiral

SERVICE MANUAL for MANTEL RADIO MODEL 5 BW

ALIGNMENT PROCEDURE

1. Connect the earth clip of the signal generator to the chassis.
2. Set volume control full on.
3. Connect output meter across speaker voice coil.
4. Use lowest setting of signal generator capable of producing indication on lowest scale of output meter.
5. Use a non-magnetic, preferably non-metallic tool with $\frac{3}{16}$ in. flat tip for aligning I.F. transformers.

Step	Connection of Signal Generator	Signal Gen. Frequency.	Receiver Gang Setting	Adjustment and Remarks
1.	To Aerial stator of tuning capacitors	455 Kc/s	Fully open	I.F. Transformer cores A*, B, C*, & D in this order.
2.	To Aerial terminal lead through 200 pF capacitor	600 Kc/s	Tune to 600 Kc/s and rock gang whilst adjusting.	Adjust oscillator slug for maximum output.
3.	To Aerial terminal lead through 200 pF capacitor.	1670 Kc/s	Fully open	Adjust oscillator trimmer "p" for maximum output.
4.	To Aerial terminal lead through 200 pF capacitor.	1500 Kc/s	Tune to 1500 Kc/s	Adjust aerial trimmer "p" for maximum output.

Repeat steps 2 to 4 until correct tracking is obtained.
*Adjustments A & C are made on underside of chassis.

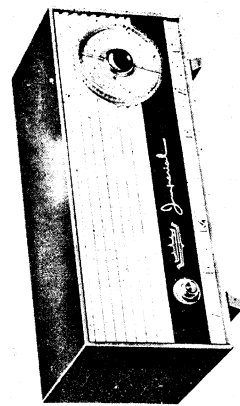


FIG. 1

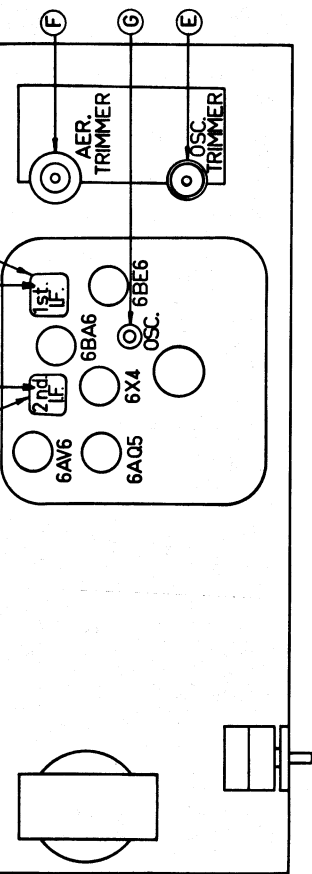
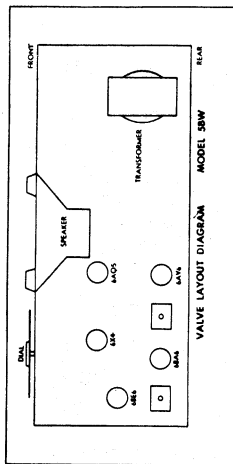


Fig. 4. View of component side of printed circuit board and chassis showing alignment positions.

REPLACING VALVES



This set uses the following valves:—One 6BE6, one 6BA6, one 6AV6, one 6A05, and one 6X4. To reach valves for checking or replacement remove the four screws securing the back plate of the cabinet, and lift it clear of the set. A valve layout diagram is attached underneath the radio.
When replacing valves, make sure each valve is inserted in its correct socket or damage will result. The correct marking is engraved on the side of each valve and the positions must correspond with the markings shown in the illustration above.

5. Remove screw from bottom centre of cabinet front.
6. Chassis with cabinet back attached may now be withdrawn.

To simplify circuit tracing as well as locating and identifying individual circuit components, refer to figure 2.

Figure 2 refers to the foil side of the board and its schematic symbols illustrate what appears in approximately the same position on the reverse side of the board. Use figure 2 together with the schematic for circuit tracing as well as voltage and/or resistance measurements.

Refer to Service Manual No. AS559, available from your Admiral distributor for further general service and repair information of printed circuit wiring.

PRINTED WIRING BOARD

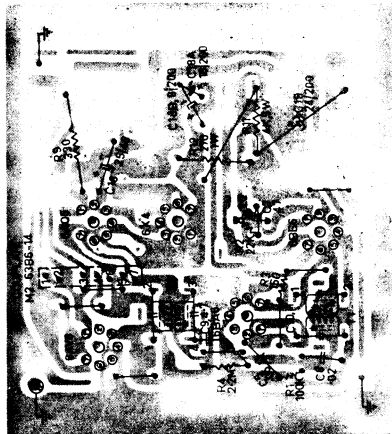


Fig. 2. View of WIRING SIDE of Printed Wiring Board APC27. White area represents printed wiring. Black regions and lines represent components and connections on opposite side.

COLOUR RANGE
Red, Cream, Turquoise, Green

SPECIFICATIONS

Circuit. Superheterodyne receiver with five miniature tubes.

Frequency Range. Standard broadcast band, 535 to 1670 Kc/Sec.

Intermediate Frequency. 455 Kc/Sec.

Power Supply. This receiver operates on the mains supply of 240 volts, 50 cycle alternating current.

Power Consumption. Approximately 30 Watts.

Antenna. Built in Ferro. Scope Antenna.

Speaker. 4in. Permanent Magnet Voice Coil impedance 3 ohms at 400 cps.

SERVICING THE SET.

To Remove Chassis from Cabinet

1. Gently pull tuning, volume and tone knobs off.
2. Remove dial scale and remove screw located under same.
3. Unscrew nut from volume/tone control bush.
4. Remove plastic cabinet trim and fibre board packing.

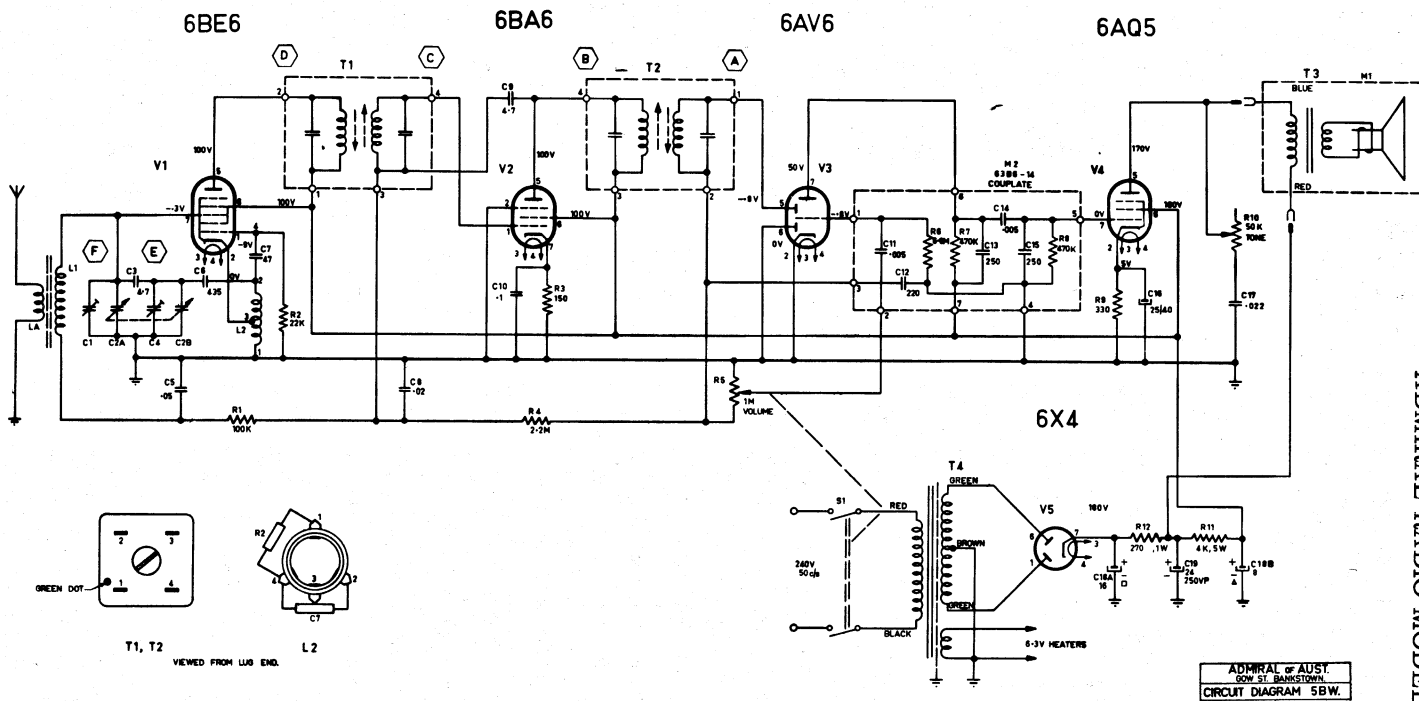


FIG. 3 SCHEMATIC 5 BW

ADMIRAL RADIO MODEL 5BW

COMPONENTS CODE LIST

RESISTORS

Code No.	Value in Ohms	Tolerance +-in %	Wattage	Part Number
R1	100,000	10	½	60B8-104
R2	22,000	10	½	60B8-223
R3	150	10	½	A61A10-151-4
R4	2,200,000	10	½	60B8-225
R5	1,000,000	Volume Control		A75B27-1
R6	6,800,000	Part of M2 Couplate		63B6-14
R7	470,000	Part of M2 Couplate		63B6-14
R8	470,000	Part of M2 Couplate		63B6-14
R9	330	10	½	A61A10-331-4
R10	50,000	Tone Control		A75B27-1
R11	4,000	5	5	A61A12-402-5
R12	270	10	1	60B14-271

CAPACITORS

Code No.	Capacity	Tolerance +-in %	Type	Part Number
C1	Compression Trimmer			A66-03
C2	Gang Condenser - AWA Miniature	18683		A68-01
C3	4.7 pf	5	Ceramic Disc	A65A20-21-5
C4	3 - 30 pf	Trimmer		A66-02
C5	.05 mfd	+50 -25	Ceramic Disc	A65A31-155-2
C6	435 pf	2½	Mica	A65A13-87-6
C7	47 pf	10	Ceramic Disc	A65A27-54-4
C8	.02 mfd	+100 -0	Ceramic Disc	A65A31-141-1
C9	4.7 pf	5	Ceramic Disc	A65A20-21-5
C10	.1 mfd	+ 80 -20	Ceramic Disc	A65A81-167-7
C11	.005 mfd	Part of M2 Couplate		63B6-14
C12	220 pf	Part of M2 Couplate		63B6-14
C13	250 pf	Part of M2 Couplate		63B6-14
C14	.005 mfd	Part of M2 Couplate		63B6-14
C15	250 pf	Part of M2 Couplate		63B6-14
C16	25 mfd	Electrolytic 40 VP		A67-32
C17	.022 mfd	20	Paper Tubular 600V	A64A36-142-3
C18A	16 mfd	Electrolytic		A67-04
C18B	8 mfd	Electrolytic 200 VW		A67-04
C19	24 mfd	Electrolytic ET5C 250 VP		A67- 9

COILS - TRANSFORMERS, ETC.

Code No.	Description	Part Number
L1	Aerial Rod Assembly	C69A13
L2	Oscillator Coil Assembly	C69A17
T1	Transformer I.F. Assembly	C72B08-1
T2	Transformer I.F. Assembly	C72B08-1
T3	Transformer Speaker	-----
T4	Transformer Power	A80B05 2
M1	Speaker - MSP 4" - 4PW C/W Transformer	A78-03

VALVES

Part No.	Description
6BE6	Covertor
6BA6	I.F. Amplifier
6AV6	2nd Detector AVC & AF Amplifier
6AQ5	Audio Output
6X4	Rectifier

MISCELLANEOUS

Description	Part Number
Support - Plastic - Aerial Rod	A33A04
Scale - Dial - Radio - N. S. W.	A21A20-1
Scale - Dial - Radio - Queensland	A21A20-2
Scale - Dial - Radio - Victoria	A21A20-3
Scale - Dial - Radio - South Australia	A21A20-4
Scale - Dial - Radio - Western Australia	A21A20-5
Scale - Dial - Radio - Tasmania	A21A20-6
Booklet - Operating Instruction	A41-42
Board Cabinet Front Backing	A43C122
Printed Circuit Board Assembly (including valves)	APC 27

CABINET PARTS

Description	Part Number
Knob - Gold	A33B51-1
Knob - Dual Control - Rear	A33B56
Knob - Handspan Tuning C/w Insert & Clip	A33C57
Cabinet Body - Red	A34D01-13
Cabinet Body - Cream	A34D01-14
Cabinet Body - Green	A34D01-15
Cabinet Body - Turquoise - 5 BW	A34D01-16
Panel - Cabinet Front	A34D27
Cabinet Back - Red	A34C07-13
Cabinet Back - Cream	A34C07-14
Cabinet Back - Green	A34C07-15
Cabinet Back - Turquoise	A34C07-16