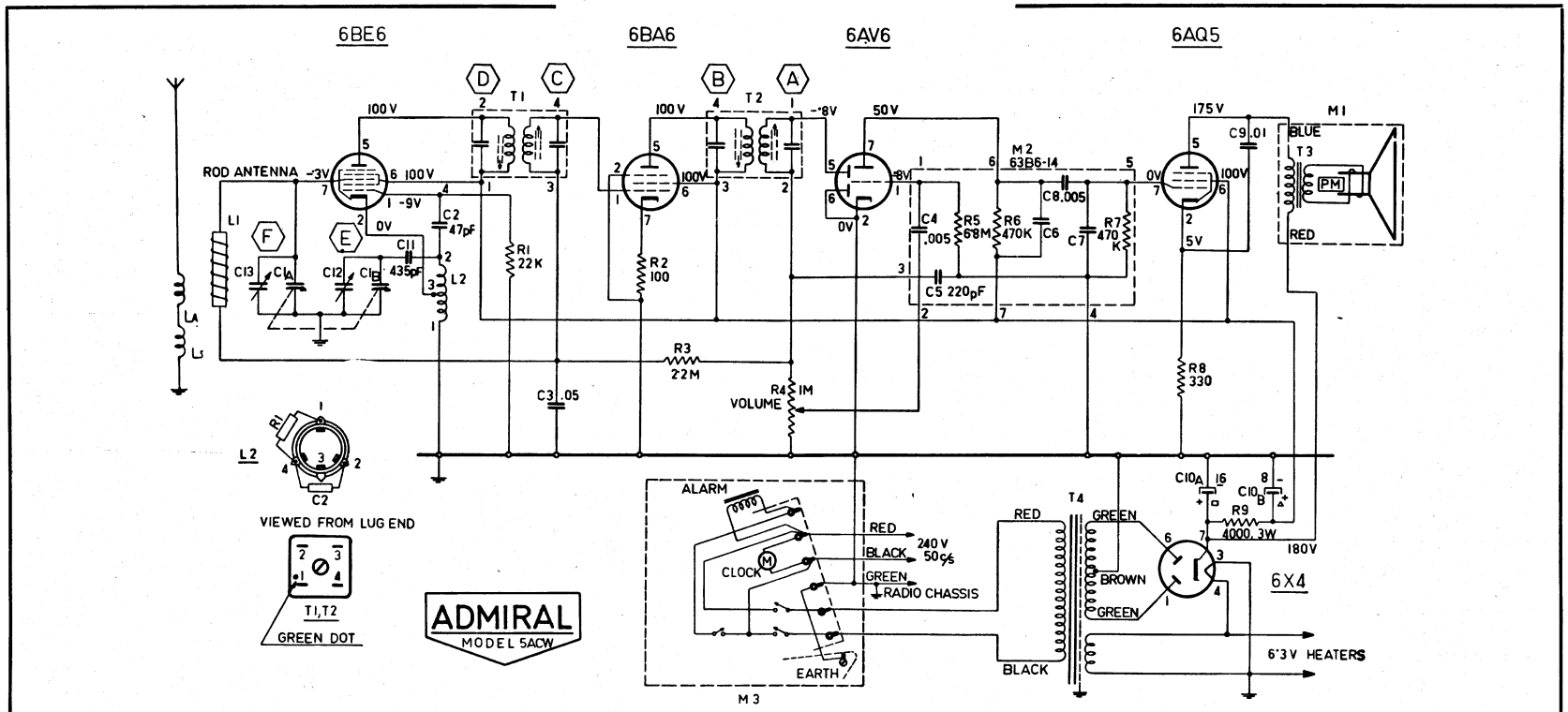
ADMIRAL RADIO MODEL 5ACW



RESISTORS

Symbol	Description	Part No.
R1	22 K ohms ½ watt 10% (on oscillator coil)	A60-02-223
R2	100 ohms ½ watt 10%	A61A10-101-4
R3	2.2 meg ohm ½ watt 10%	A60A11-225-4
R4	1 meg ohm volume control with D.P. switch	A75A05
*R5	6.8 meg ohm ½ watt 10% (Part of couplate .63B6-14.)	
*R6	470 K ohms ½ watt 10% (Part of couplate .63B6-14.)	
*R7	470 K ohms ½ watt 10% (Part of couplate .63B6-14.)	
R8	330 ohms ½ watt 10%	A61A10-331-4
R9	4000 ohms 3 watt W.W. 5%	A61A17-402-5

CAPACITORS

Symbol	Description	Part No.
C1A, C1B	2 gang condenser M.S.P. Miniature 18621	A68-01
C2	47 uuf. N750 Ceramicon 10% (On oscillator coil)	A65A27-54-4
C3	.05 uf 200V Upright	A64A26-155-4
*C4	.005 uf 450V.	
*C5	.220 uuf 450V.	
*C6, *C7	Together total 250 uuf. When replacing with individual components use combinations totalling 250 uuf or use 250 uuf across R6 in place of C7 and C8	Part of couplate 63B6-14
*C8	.005 uf 450V	
C9	.01 uf H1K Disc	A65A31-134-1
C10		
C11A	16 uf Dual Electrolytic 200 V.W.	A67-04
C11B	8 uf	
C12	435 uuf ± 2½%	A65A13-87-6
C13	Wire Trimmer	A66-02
C14	Compression Trimmer	A66-03

COILS TRANSFORMERS, ETC.

L1	Ferroscope Rod Antenna, F214	A71B03
L2	Oscillator Coil	A69-02
T1	1st I.F. Transformer	A72-01
T2	2nd I.F. Transformer	
T3	Speaker Transformer 16000/3 ohms	79A04
T4	Power Transformer	
M1	Speaker with Transformer T3 M.S.P. 4in. 16000 ohms	A80B05-1 A78-03
M2	Couplate (includes R5, R6, R7, C5, C6, C7, C8, C9)	63B6-14
	Socket—valve 7 pin minature printed circuit type	A87-06
	Socket—valve 7 pin minature printed circuit type with earth tag	A87-07

VALVES

Valve Converter	6BE6
Valve I.F. Amplifier	6BA6
Valve 2nd Detector A.V.C. & A.F. Amplifier	6AV6
Valve Audio Output	6AQ5
Valve Rectifier	6X4

MISCELLANEOUS PARTS

Compression Ring (for knobs)	A19A05
Compression Ring (Dial Drum)	A17A01
Printed Circuit Assembly complete with valves	APC1
Dial Drum	A17A01
Spring—(Dial Cord)	A19-07
Spacer ¼in. x 3/16in. (Gang Mounting)	A29A02
Support—Plastic (Aerial Rod)	A33A04
Scale—(Radio Dial)	A21A07
Pointer (Dial)	A26A02
Instruction Book	A41-07
Grommet—A2 (Speaker Contacts)	A12-09
Grommet—A3 (Transformer Leads)	A12-08
Spindle—Dial Drive	A28A03
Bearing—Tuning Spindle	A27A02
Cord—Dial Drive	A50-01
Pilot Light Bulb (6.3V—150 m.a.)	A81-02
Socket—Pilot Light	A82-02
Speaker Contacts	A86-01
Fibre Clamp (Power Cord)	A11A02
Bush—Front Retaining	A27A01
Inlay (Knob and Pointer)	A15A02
Speaker Lead Pins	A88-03
Crest	A26B04
Dial Background	A22A03
Baffle Board	A13-03

CABINET PARTS

CABINET BODY:—	
Primrose	A34D01-7
Grey	-8
Burgundy	-9
Ivory	-10
Beige	-11
Tan	-12
CABINET FRONT:—	
Black	A34C06-15
White	-16
Gold	-17
Canyon Copper	-18
CABINET BACK:—	
Primrose	A34C07-7
Grey	-8
Burgundy	-9
Ivory	-10
Beige	-11
Tan	-12
KNOB (CONTROL):—	
Grey	A33B01-8
Burgundy	-9
Ivory	-10
Beige	-11
Tan	-12
Black	-15

CLOCK PARTS

Clock, Smith's Special Face	A91-04
Knob (Control)	A33B01
Knob (Push-On)	A33C06-1
Knob (Left Hand Thread)	A33C06-2
Bracket—Clock Mounting	A15A21
Volume Control 1 Megohm	A75A06
Scale—Clock Dial	A21A01

ESCUTCHEON

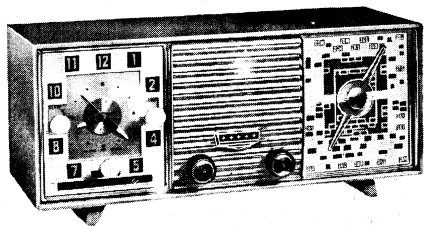
Black	A34C05-15
White	-16
Gold	-17
Canyon Copper	-18

A153

Admiral

SERVICE DOCUMENT

for MANTEL CLOCK RADIO MODEL 5ACW



GENERAL

This receiver employs the latest radio circuitry including the "printed" circuit wiring technique. This process eliminates the hook up wiring which has been in common use in the past. Figure 1 shows the lower view of this 5 valve receiver chassis. The "printed" circuit wiring is permanently bonded to the underside of the plastic chassis base. This results in uniformity of chassis wiring, fewer wiring troubles and simplified circuit tracing and trouble shooting. All circuit components are of standard size and design and readily available from normal sources. They are mounted on the upper side of the chassis board as shown in figure 2. Audio circuit components are contained in a couplate, which may be obtained through the Admiral Service Department.

Trouble shooting and parts replacement will, in general be along the same lines as for receivers wired with hook-up wire. However, when servicing, it is important to read the service information given in this manual with respect to the technique of servicing printed circuit receivers.

SERVICING THE SET

Servicing "printed" circuit sets is, in general, much the same as servicing ordinary receivers. However, certain tools and techniques are well suited for this type of work. It is particularly advised that good quality tools be purchased as these have greater durability and ensure more reliable service.

The following will be found most useful:

1. Pair of long-nose pliers.
2. Pair of flat-nose pliers.
3. Pair of diagonal side cutters.
4. $\frac{3}{8}$in. "Spintite" socket spanner.
5. Pencil type soldering iron, 35 watt rating with fine angled tip.
6. 6in. screwdriver, $\frac{1}{4}$in. head.
7. 10in. tuning tool with $\frac{1}{8}$in. flat head, to be made of a non ferrous, preferably non metallic, material.
8. Small stiff brush for removal of solder.

NOTE: Always use a multi-core low temperature solder for work on the chassis board, and do not use an iron in excess of a 35 watt rating. All operations can be suitably conducted within this limit, and damage to the board during component replacement is thereby avoided.

TEST EQUIPMENT

(a) Signal Generator.
(b) Multimeter (A.C.-D.C. Volts, Ohms, Amps).
(c) Output Meter.
(d) 3.2 ohm Speaker fitted with lead and 2 pin male plug.
(e) Valve tester.

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. (This should be no greater than 120/uVolts.
5. Use a non-magnetic, preferably non-metallic tool with $\frac{1}{8}$in. flat tip for aligning I.F. transformers.
6. Repeat sequence of following adjustments to ensure best results.

Step	Connection of Signal Generator	Signal Gen. Frequency	Receiver Gang Setting	Adjustment and Remarks
1	To stator of tuning condenser at aerial input	455Kc/s.	Fully open	A*, B, C*, D in this order for maximum output
2	To stator of tuning condenser at aerial input	1700Kc/s.	Fully open	E Oscillator tuner on gang for maximum output
3	Place signal lead of generator close to aerial rod	1400Kc/s.	Tune in generator signal	F Aerial tuner on gang for maximum output

*Adjustments A and C are made on underside of Chassis.