Admiral Radio

5A5X · 5L5X CHASSIS

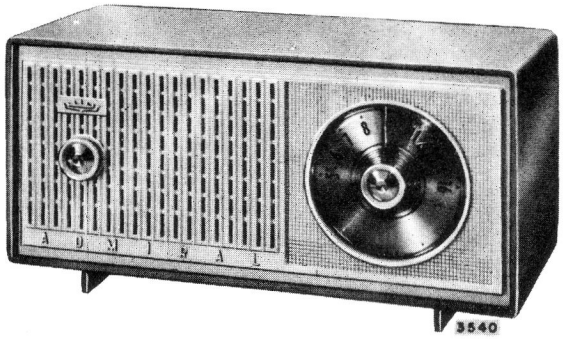


Figure 1. Front View of 846X, 847X, 848X and 849X Models.

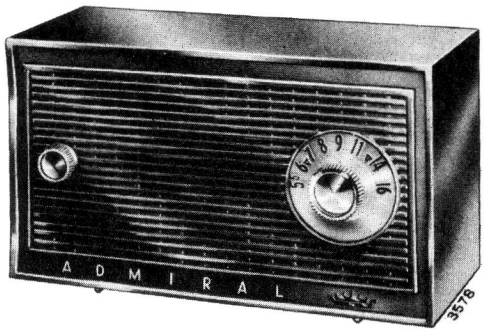


Figure 2. Front View of 833X, 837X, 838X and 839X Models.

SPECIFICATIONS

ANTENNA: Built-in loop, or Ferrite Rod.

CIRCUIT: Superheterodyne using 5 miniature tubes.

FREQUENCY RANGE: Standard broadcast band: 535 to 1620 KC.

INTERMEDIATE FREQUENCY: 455 KC.

POWER SUPPLY: 117 volts, 60 cycles, AC or DC.

POWER CONSUMPTION: 30 watts.

SPEAKER: 4″ PM with Alnico V magnet. Voice coil impedance, 3.2 ohms.

GENERAL

All components, except the speaker (with output transformer) and the antenna rod, (or loop) are mounted on an etched circuit board. The use of etched circuitry provides an efficient, compact and practically trouble free receiver.

The two groups of models listed in the chart, differ only in the type of cabinet, color and type antenna used.

The cabinets of the 833X, 837X, 838X and 839X models are a single color.

The 846X, 847X, 848X and 849X models have two-tone cabinets.

The 5A5X chassis is supplied with a ferrite rod antenna; the 5L5X chassis uses a loop antenna mounted on the cabinet back.

Note: Refer to Admiral Service Manual No. S559 for service information on etched circuit wiring.

TABLE RADIO

MODEL	COLOR	CHASSIS
833X	White	5L5X
837X	Rose Beige	
838X	Turquoise	
839X	Grey-Green	
846X	Yellow and White	5A5X
847X	Beige and White	
848X	Turquoise and White	
849X	Grey-Green	

TO REMOVE CHASSIS FOR SERVICING TUBES

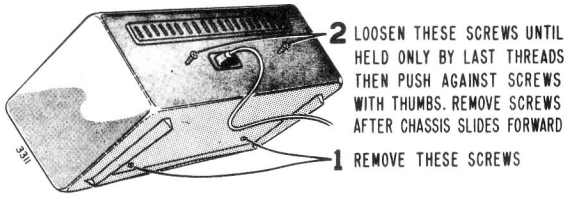


Figure 3. Rear View of Cabinet Showing Chassis Mounting Screws.

SERVICE MANUAL T1076

VOLTAGE PRECAUTION

DO NOT CONNECT AN EARTH GROUND WIRE TO THE RECEIVER.

The chassis of this receiver is connected directly to one side of the power line. To prevent damage to test equipment or to etched wiring, do not place chassis directly on a metal bench, or other metal objects.

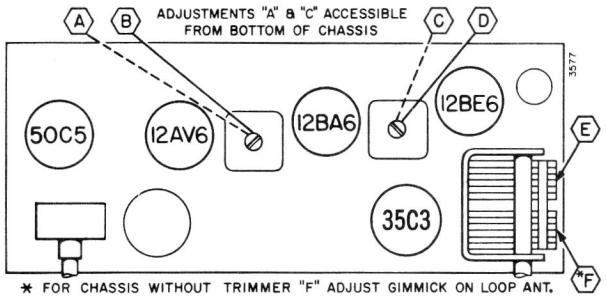


Figure 4. Top View of Chassis Showing Tube and Alignment Points Locations.

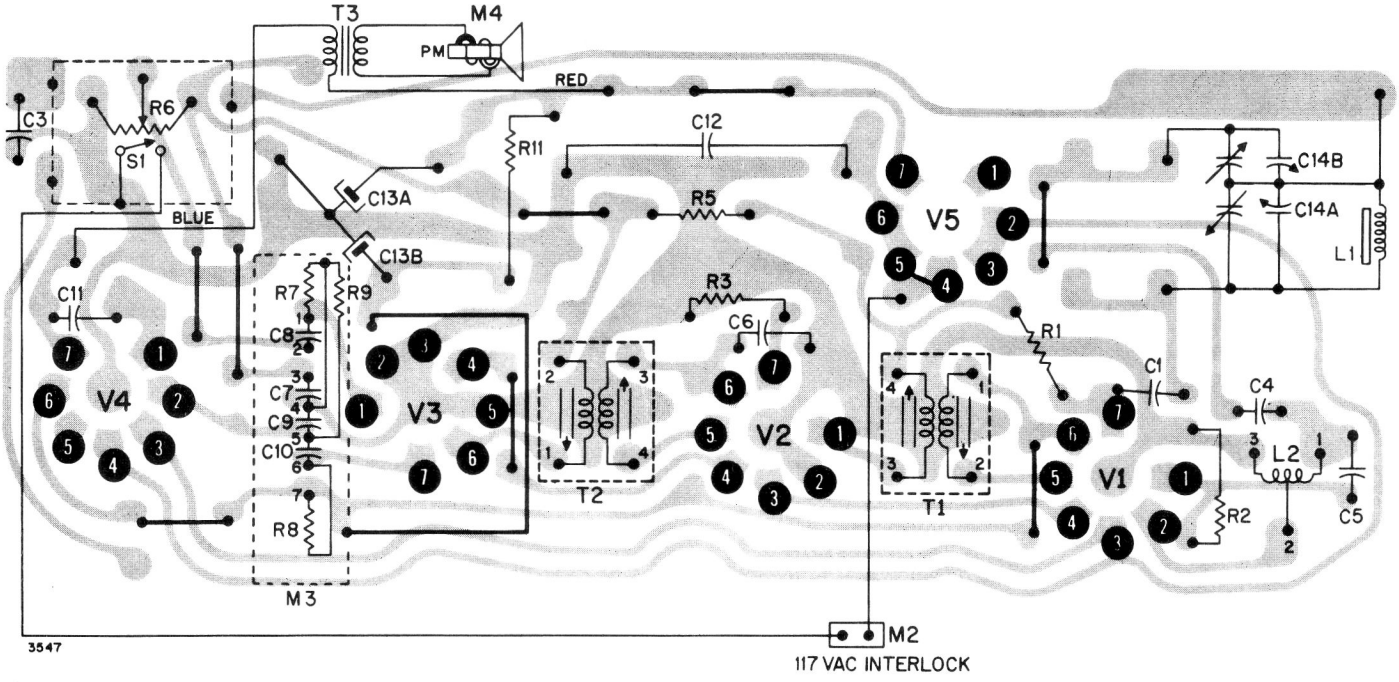
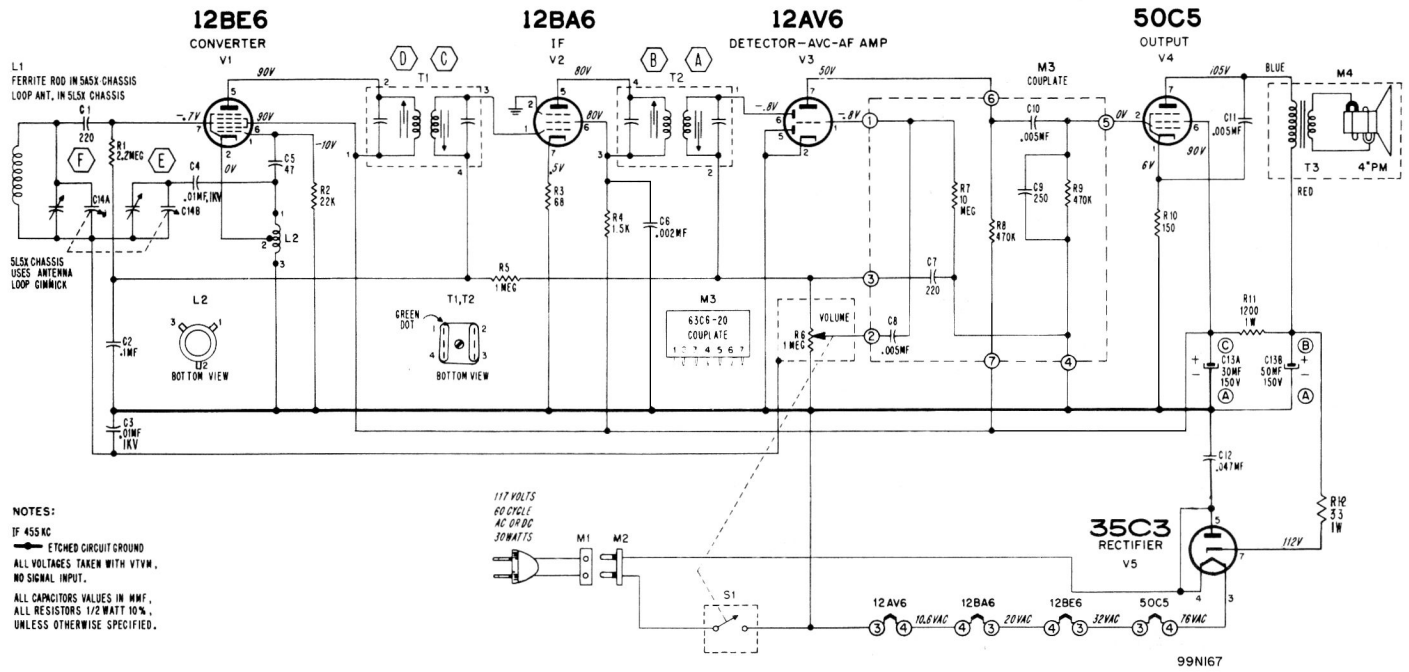


Figure 5. Bottom View of Etched Circuit Board. Gray area represents etched wiring; black symbols and lines represents components and connections on opposite side.



VOLTAGE DATA

- All readings made between tube socket terminals and common ground.
- Dial turned to low frequency end; volume control at minimum.
- Line voltage 117 Volts AC.
- All voltages measured with vacuum-tube voltmeter.

ALIGNMENT PROCEDURE

- Use an isolation transformer if available; otherwise, connect a .1 mfd. capacitor in series with low side of signal generator and connect to etched circuit ground (see figure 5).
- Set volume control full on.
- Connect output meter across output secondary. For best results disconnect voice coil and use a 3.2 ohm load.
- Use lowest setting of signal generator capable of producing adequate indication on lowest scale of output meter.
- Use a non-metallic alignment tool with a blade 3/32" wide for aligning IF transformers.
- Repeat adjustments to insure good results.

STEP	CONNECTION OF SIGNAL GENERATOR	SIGNAL GENERATOR FREQUENCY	RECEIVER GANG SETTING	ADJUSTMENT
1	Through a .1 mf capacitor to stator, Antenna section of gang tuning capacitor	455 KC	Gang fully open	*"A", "B", *"C" and "D" for maximum output
2	Same as "STEP 1"	1620 KC	Gang fully open	"E" for maximum output
3	Use a radiated signal. Loop of several turns of wire, or place generator lead close to receiver loop or rod for adequate signal pickup.	1400 KC	Tune in on generator signal	"F" for maximum output

*Adjustments "A" and "C" made from underside of chassis; see figure 4.

CHASSIS REMOVAL

Models 833X, 837X, 838X and 839X Only

IMPORTANT: Instructions given in figure 3 do not apply. One chassis mounting screw is accessible only after removing the tuning knob and trim plate under the knob. The other is accessible after removing the cabinet back.

The cabinet back is held in three slots in the cabinet so is easily removed without the use of tools.

In Models 846X, 847X, 848X and 849X Only, the cabinet is removed as shown in figure 3. The front panel is part of the chassis assembly.

COMPONENT REPLACEMENT

Defective resistors and capacitors should be removed by clipping leads as close to the unit as possible then the new part neatly soldered to the old leads. If any resistor or capacitor is found inconvenient to replace on the top side of board, it is permissible to solder component on the rear of the board.

If a unit such as the oscillator coil or IF transformer is to be replaced, first remove old part by heating the mounting lugs with a pencil type soldering tool (35 watts or less) and straighten with pick and long nose pliers. Brush away any loose solder with a stiff glue brush. Before inserting new unit make certain all lug holes are free of solder, to prevent damage to wiring or component or both.

SERVICE HINTS

When taking voltage or resistance measurements, use test prods with needle points to avoid short circuits between sections of the circuit wiring.

An open or damaged section of the etched wiring may be repaired by soldering a short jumper wire across the break.

PARTS LIST

RESISTORS

Sym.	Description	Part No.
R1	2.2 meg, ½W, 10%	60B8-225
R2	22K ohm, ½W, 10%	60B8-223
R3	68 ohm, ½W, 10%	60B8-680
R4	1.5K ohm, ½W, 10%	60B8-152
R5	1 meg ohm, ½W, 10%	60B8-105
R6	1 meg, ohm, 30%, Volume Control	75D56-1
R7	10 meg ohms, ½W	Part of M3
R8	470K, ½W	Part of M3
R9	470K, ½W	Part of M3
R10	150 ohm, ½W, 10%	60B8-151
R11	1.2K ohm, 1W, 10%	60B14-122
R12	33 ohm, 1W, 10%	60B14-330

CAPACITORS

C1	220 mmfd, ± 20%, 500V	65D10-83
C2	.1 mfd, 400V, Tubular	64L6-26
C3	.01 mfd, GMV, 1000V	65M1-3
C4	.01 mfd, GMV, 1000V	65M1-3
C5	47 mmfd, ± 20%, 500V	65D10-198
C6	.002 mfd, ± 10%, 500V	65D10-125
C7	220 mmfd, ± 20%, 500V	65D10-83
C8	.005 mfd, 600V	Part of M3
C9	250 mmfd, 500V	Part of M3
C10	.005 mfd, 600V	Part of M3
C11	.005 mfd, 500V	65D10-152
C12	.047 mfd, 20%, 400V	64L6-28

Sym.	Description	Part No.
C13A	30 mfd, 150V Electrolytic	67B39-1
C13B	50 mfd, 150V Electrolytic	
C14A	272.3 mmfd, max. ant. gang	68C76-1
C14B	102.1 mmfd, max. osc. gang	

COILS, TRANSFORMERS, ETC.

L1	Loop Antenna (5L5X)	69N7-1
L1	Rod Antenna (5A5X)	69B228-3
L2	Coil (Osc.)	69A217-1
T1	1st I.F. Transformer	72C170-5
T2	2nd I.F. Transformer	72C170-4
M2	Plug Interlock	88W36
M3	Couplate Audio	63C6-20

MISCELLANEOUS PARTS

Terminal and Connect	9C28-51
Chassis P.C. Board	14E216-5
Bracket, Antenna Mtg.	15B1665
Plastic Extrusion	33C233-2

Description	Part No.
Tube Socket, 7 Pin	87D35-13
Tube Socket, 7 Pin	87D35-14
Tube Shield, 7 Pin	87B52-2

CABINET PARTS

Cabinet Model 849X (Grey-Green)	34D129-25
Cabinet Model 846X (Yellow)	34D129-26
Cabinet Model 848X (Turquoise)	34D129-27
Cabinet Model 847X (Rose Beige)	34D129-28
Cabinet Front (Grey) (849X)	34D148-1
Cabinet Front (White) (846X,47X,48X)	34D148-2
Dial Scale Insert	23C367-1
Knob, Volume	33C353-1
Knob, Tuning	33C353-3

Form No. T1076

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