Admiral Radio

5D5X CHASSIS

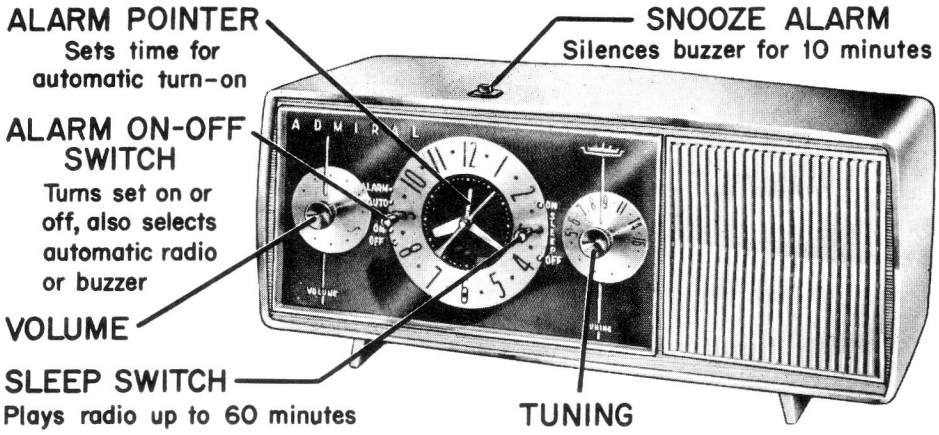


Figure 1. Front View of Set Showing Controls.

SPECIFICATIONS

ANTENNA: Ferrite rod.

CIRCUIT: Superheterodyne using 5 miniature tubes.

CLOCK: Westclox timer, with "Snooze Alarm".

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

INTERMEDIATE FREQUENCY: 455 KC.

POWER SUPPLY: Power line of 117 volts, 60 cycles AC only.

POWER CONSUMPTION: Radio, 30 watts. Appliance outlet, 1100 watts.

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

GENERAL

This group of radios has been designed for use with the latest type, precision electric clock, known as the clock radio with the "Snooze Alarm". The snooze alarm button (see figure 1) when pressed, will silence the buzzer, but it will start again after approximately 10 minutes. The Snooze Alarm may be repeated 5 times.

The complete chassis wiring is incorporated into an etched circuit board, with all component symbols screened on the top. Therefore, these radios are compact, efficient and easy to service.

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

CLOCK RADIO

MODEL	COLOR	CHASSIS
873X	White	5D5X
875X	Melon	
878X	Turquoise	

TO REMOVE CHASSIS FOR SERVICING

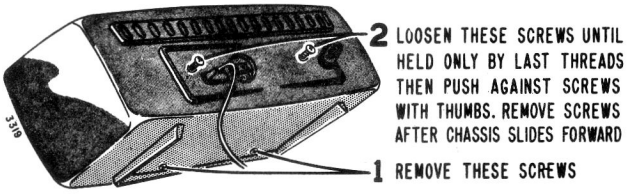


Figure 2. Rear View of Cabinet Showing Chassis Mounting Screws.

REMOVING THE CHASSIS

1. Disconnect line cord plug, then tilt cabinet forward and remove two screws located on the bottom near the front. See figure 2.
2. Loosen the two screws located on the back, until they are held only by the last threads. Apply pressure to these loosened screws with the thumbs to break the AC interlock connection inside cabinet.

SERVICE MANUAL T1078

VOLTAGE PRECAUTION

DO NOT CONNECT AN EARTH GROUND TO THIS RECEIVER.

The chassis is connected directly to one side of the power line. To avoid possibility of damage to test equipment or to the etched circuit board, do not place the chassis directly on a metal service bench, tools or other metal objects.

When taking voltage readings or making resistance measurements, use test leads with needle point prods to avoid possibility of short circuits between sections of the etched wiring.

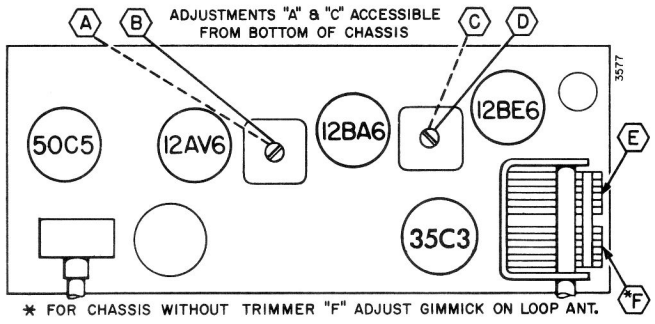


Figure 3. Tube And Alignment Point Locations.

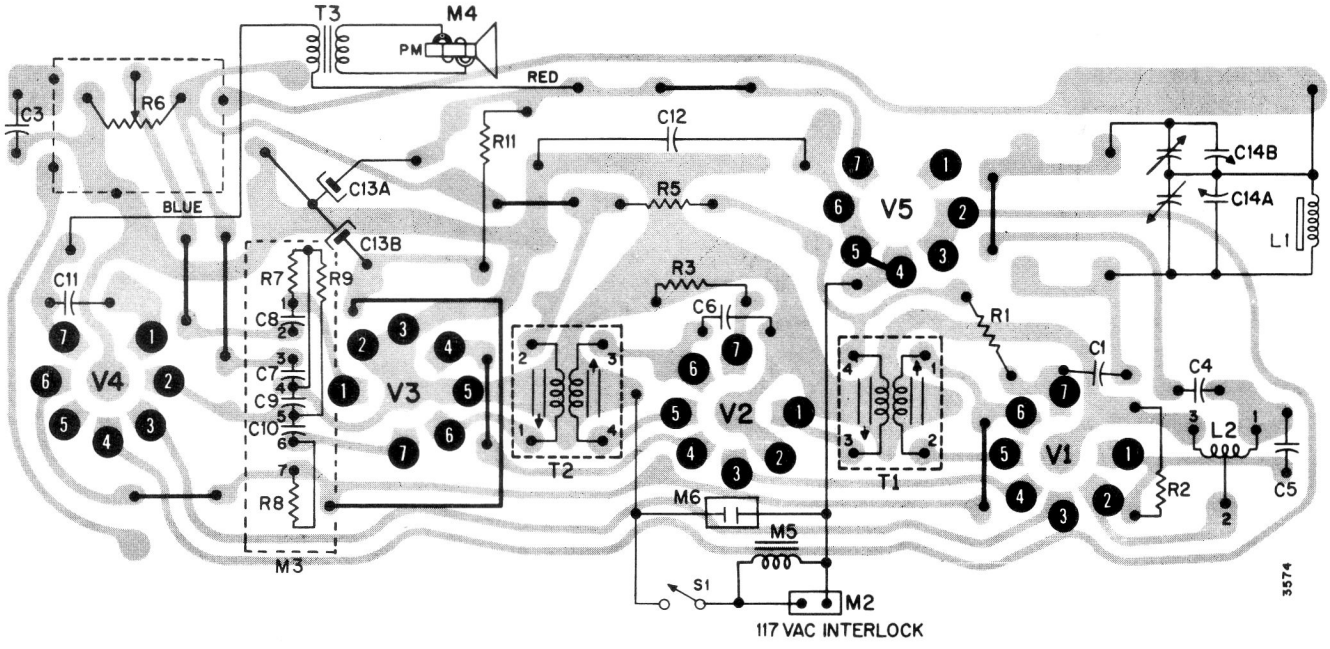
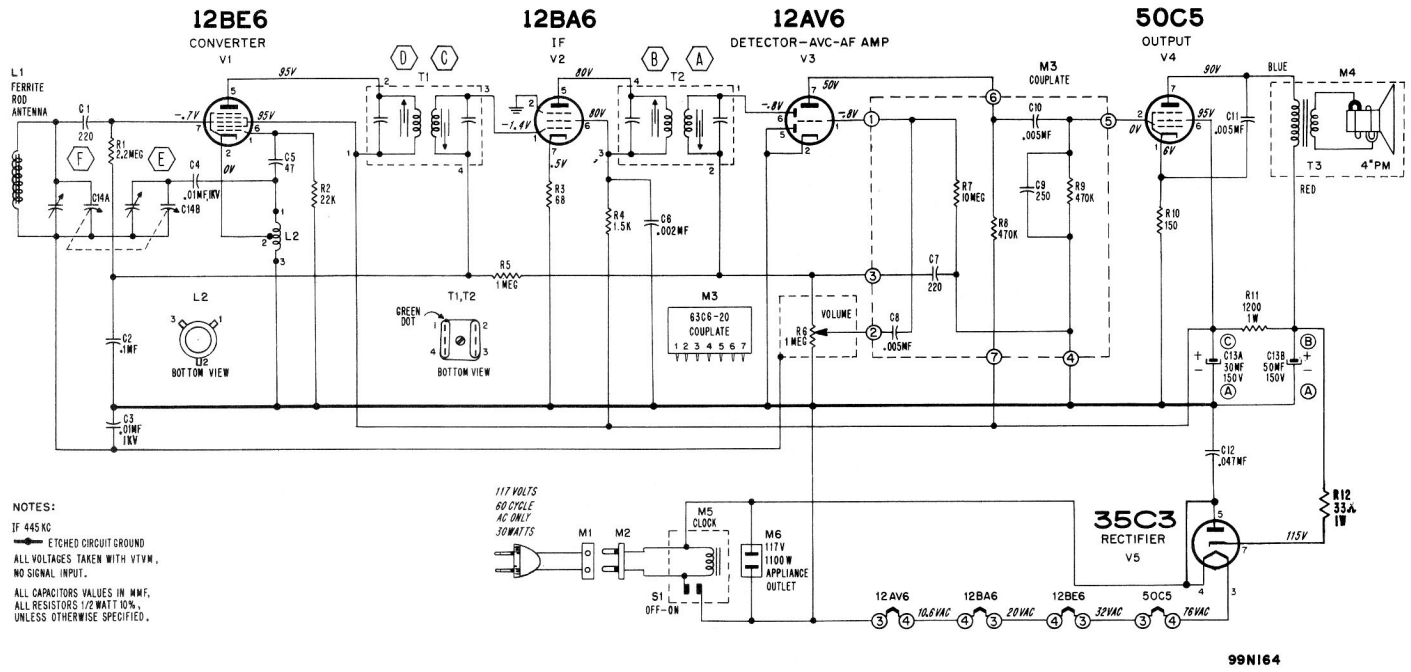


Figure 4. Rear View of Etched Circuit Board. Gray area represents etched wiring; black symbols and lines represent components and connections on opposite side.



VOLTAGE DATA

- All readings made between tube socket terminals and etched circuit ground.
- Dial turned to low frequency end; Volume control at minimum.
- Measured on 117 Volts AC line.
- 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 common ground.
- Set volume control full on.
- Disconnect voice coil leads and connect output meter across output secondary. 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	ADJUSTMENTS
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 ferrite antenna 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 3

3. Remove screws loosened and pull chassis, with front panel attached, out of cabinet. Make sure Time Set knob, on clock, clears opening provided in cabinet back.

REMOVING THE CLOCK

1. Remove the cabinet as illustrated in figure 2.
2. Remove the four knobs and the screws holding the chassis and extrusion assembly brackets to the rear of the cabinet front.
3. Remove the clock crystal by pressing down on the three top tabs and upward on the three bottom tabs.
4. Remove the metal discs under the radio knobs. Remove two screws mounting the chassis assembly. One is located at the rear in the volume control bracket, the other at the front that goes into the frame of the gang.
5. Remove black back-ground insert. NOTE: The clock is held in position by two nuts at opposite corners and by the clock face tabs at the four sides. Remove the two nuts and lift tabs straight out. The clock is removed from the front. Lift bottom out first to clear snooze alarm shaft.

SERVICE HINTS

The compact etched circuit will make servicing easier if the suggestions given here and in Service Manual No. S559 are followed. With the aid of the bottom view of the board (figure 4) it is possible to "see" through the board and make voltage and resistance measurements as desired. When taking voltage or resistance readings, use meter probes with needle point prods to make a good connection without shorting out adjacent circuits.

Replace resistors and capacitors by cutting into the defective part and leaving the pig tail leads as long as possible. Then, solder the replacement part onto the pig tail leads.

Remove components such as coils, IF transformers and tube sockets by alternately heating and loosening each pin. Brush away melted solder as each pin is heated.

Use a low wattage soldering iron or gun of 35 watts or less. Overheating may break the bond between the foil and the board.

PARTS AND SERVICE FOR CLOCK

Consult your Admiral distributor for the address of the nearest parts and service station for clocks used in Admiral radios.

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	Control 1 meg ohm, 30%	75D56-3
R7	10 meg ohms, ½W,	Part of M3
R8	470,000 ohm, ½W	Part of M3
R9	470,000 ohms, ½W	Part of M3
R10	150 ohms, ½W, 10%	60B8-151
R11	1.2K ohms, 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, 500V	Part of M3
C8	.005 mfd, 600V	Part of M3
C9	250 mfd, 500V	Part of M3
C10	.005 mfd, 600V	Part of M3
C11	.005 mfd, 500V	65D10-152
C12	.047, 20%, 400V	64L6-28

CAPACITORS

Sym.	Description	Part No.
C13A	30 mfd, 150V Electrolytic	67B39-1
C13B	50 mfd, 150V Electrolytic	
C14A	272 mmfd, max. ant. gang	68C76-3
C14B	102 mmfd, max. osc. gang	

COILS AND TRANSFORMERS

L1	Rod Antenna	69B228-3
L2	Oscillator Coil	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
M6	Outlet Appliance	87A77-2
	or	
M6	Outlet Appliance	87A77-3

MISCELLANEOUS PARTS

Terminal and Connect	9C28-51
Chassis P.C. Board	14E216-5
Bracket, Antenna Mtg.	15B1665
Spring (Appliance Outlet Mtg.)	18B264-1
Spring (Appliance Outlet Spacer)	18A266-1
Insert (Decorative)	23B372-1
Plastic Extrusion	33C233-5
Tube Socket, 7 Pin	87D35-13
Tube Socket, 7 Pin	87D35-14
Tube Shield, 7 Pin	87B52-2

CABINET PARTS

Description	Part No.
Cabinet Model 873X (White)	34D125-25
Cabinet Model 875X (Melon)	34D125-26
Cabinet Model 878X (Turquoise)	34D125-27
Plastic Front (White)	34D150-1
Calibration Disc (Tuning)	21C127-1
Calibration Disc (Volume)	21C127-2
Knob (Volume and Tuning)	33B364-1
Doze Button	33B367-1
Escutcheon (Doze Button)	33B368-1
Speaker 4" P.M.	78B94-2
Line Cord and Plug (Heavy Duty)	89B62-5

CLOCK PARTS

Clock Face	23C368-1
Crystal Dial	24C33-1
Knob (Clock)	33B365-2
Knob (Clock)	33B365-3
Clock (Westclox)	91C40-1

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