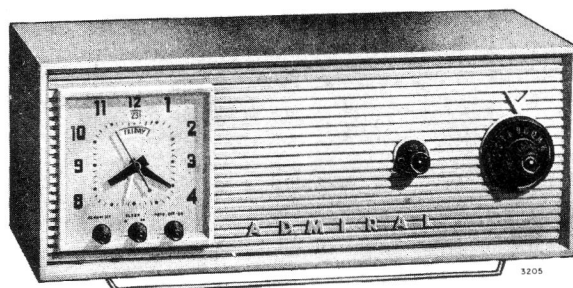




Admiral Radio

Chassis 5W3X



SPECIFICATIONS

CIRCUIT: Superheterodyne using 5 miniature tubes.

See additional circuit information below.

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

INTERMEDIATE FREQUENCY: 455 KC.

POWER SUPPLY: Power line of 117 volts AC, 60 cycles only. (see label).

POWER CONSUMPTION: 30 watts.

ANTENNA: Built-in loop antenna.

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

GENERAL

The printed circuit wiring used in this receiver results in greater uniformity of chassis wiring and component placement, simplified circuit tracing (see figure 1) and greater component accessibility. The printed circuit wiring is permanently bonded to the plastic chassis board. This board is translucent. If a light source is directed on the bottom of the chassis board, the printed wiring will be silhouetted through the board and component location for circuit tracing will be facilitated.

The printed circuit wiring has been coated with a lacquer to prevent humidity and dust from creating leakage paths between adjacent printed wires. It may be difficult to penetrate this coating with blunt tipped meter probes. The force applied to such probes may also be sufficient to crack the plastic chassis board and cause intermittent open circuits to develop later. Blunt probes also have a tendency to slip. If this happens and the probe shorts low and high voltage circuits together, the printed wiring may become damaged or burned out. It is therefore recommended that needle tipped probes be used for all circuit measurements taken either on the top or bottom of the chassis board.

The printed circuit wiring is permanently bonded to the chassis board. This bonding is rugged, but can be destroyed by excessive heat from soldering irons with large wattage ratings. The soldering iron (and other equipment listed below) is well suited for printed circuit servicing.

CLOCK RADIO

MODEL	COLOUR	MODEL	COLOUR	CHASSIS
5W31X	Black	5H44X	Pink	5W3X
5W32X	Mahogany	5H47X	Tan	
5W33X	Ivory	5H49X	Grey	
5W34X	White	5J41X	Black	
5W35X	Red	5J42X	Maroon	
5W36X	Sun Gold	5J44X	Pink & White	
5W37X	Beige	5J45X	Red & White	
5W38X	Green	5J48X	Green & White	
5W39X	Gray	5J49X	Gray & White	

- (1) Low wattage soldering iron with a small point or wedge (Rating should not exceed 35 watts).
- (2) Small wire brush.
- (3) 60% tin, 40% lead, low temperature (melts at 370°F) rosin core solder. (Do not use ordinary solder which melts at 460°F and is usually 40% tin, 60% lead.)
- (4) Thin bladed knife.
- (5) Small wire pick, or soldering aid.
- (6) Small bottle of Silicone Resin lacquer, clear lacquer or Krylon spray.
- (7) Solvent for the Silicone Resin. Recommended solvents are Xylene or Denatured Alcohol which are available at drug stores.

NOTE: To make the servicing of printed circuits even easier than ordinary wired circuits, Admiral offers a printed circuit repair kit. Order kit number 98A79.

COMPONENT REPLACEMENT

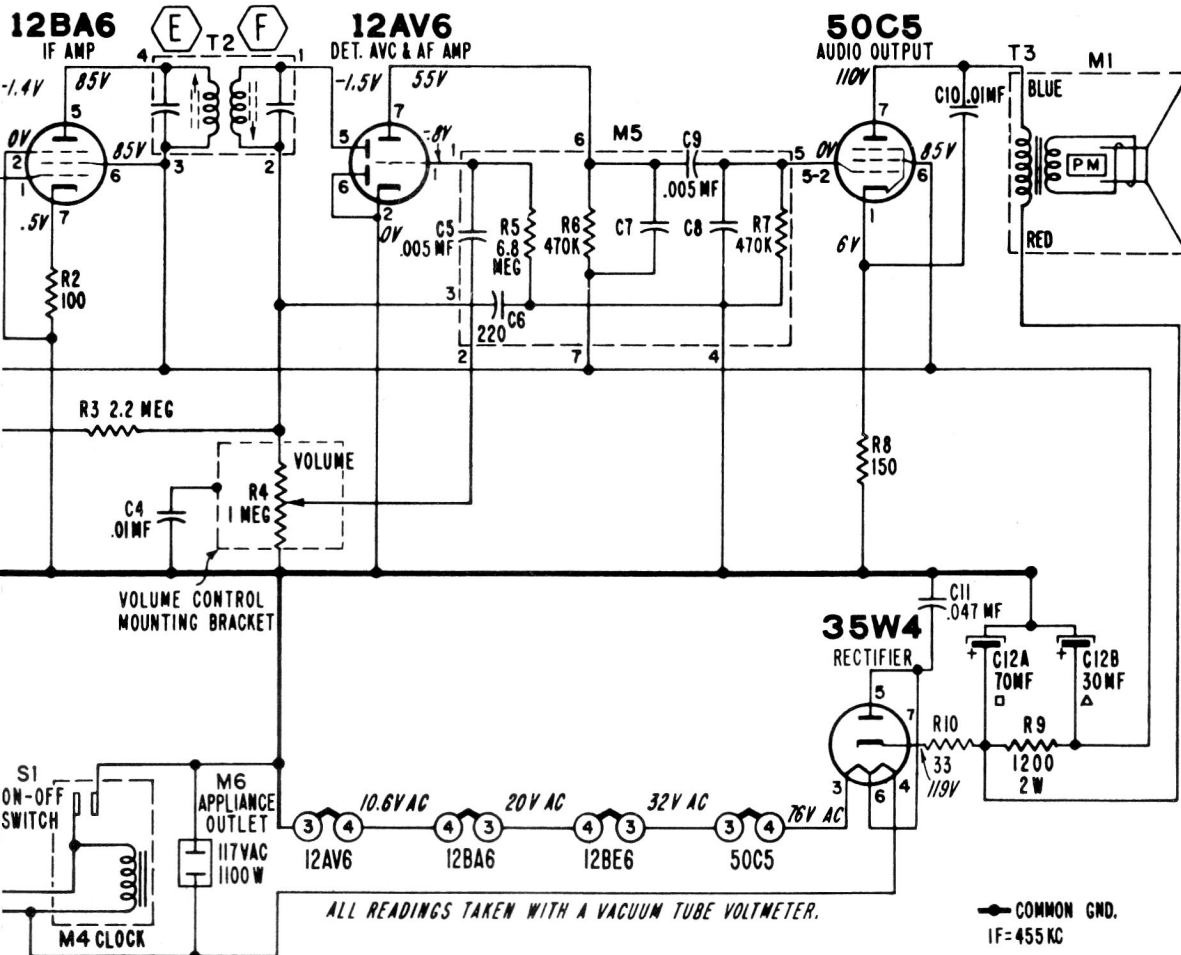
All components used in this receiver are of standard size and design and are mounted on the top side of the chassis; see figure 2.

Resistors and capacitors should be replaced by clipping out the defective part and neatly soldering the new part to the connecting leads remaining from the original part.

If a unit, such as the oscillator coil or IF transformer is to be removed, heat the mounting lugs with a pencil type soldering iron and straighten them with a long nose pliers or metal pick. Continue heating the lugs and brush away the molten solder with a small wire brush. Remove the defective unit by lifting it off the chassis. Before inserting the new unit, be certain that the lug holes are open and free from solder. Forcing a lug against a solder filled



Compression rings (for knobs).....	19A 31-10
Retainer, Line Cord, Fiber.....	32A 223-2
Operating Instructions, 5W32, etc.....	41X 20-95EF
Shield, Tube.....	87C 7-19
Socket, Tube.....	87D 35-13



Symbol	Description	Part No.
Socket, Tube, Shield Mtg.....		87D 35-14
Spacer, Gang Mtg.....		32A 250

CABINET PARTS

Cabinet	
Black 5W31X, 5J41X.....	34D 87-1
Maroon 5W32X, 5J42X.....	34D 87-2
Ivory 5W33X.....	34D 87-3
White 5W34X.....	34D 87-4
Red 5W35X.....	34D 87-5
Sun Gold 5W36X.....	34D 87-6
Beige 5W37X.....	34D 87-7
Green 5W38X, 5J41X.....	37D 87-8
Gray 5W39X, 5J42X.....	34D 87-9
Pink 5H44X.....	34D 87-11
Tan 5H47X.....	34D 87-12
Grey 5H49X.....	34D 87-13
Pink & White 5J44X.....	34D 87-14
Red & White 5J45X.....	34D 87-15
Green & White 5J48X.....	34D 87-16
Gray & White 5J49X.....	34D 87-17
Cabinet Back, fiber (includes loop antenna).....	69Y 205-1
Cabinet Back and Loop Antenna 5H44X-47X-49X.....	69Y 205-2
Cabinet Base (gold rod).....	37B 124-2
Cabinet Base 5H44X-47X-49X.....	37B 140-1
Cabinet Base 5J41X-42X-44X-45X-48X-49X.....	
 Knob, Tuning	
Black 5W31X.....	33C 154-1
Maroon 5W32X.....	33C 154-4
Ivory 5W33X.....	33C 154-7
White 5W34X-35X-36X.....	33C 154-10
Beige 5W37X.....	33C 154-19
Green 5W38X.....	33C 154-22
Gray 5W39X.....	33C 154-25

Description	Part No.
Knob, Tuning 5H44X-47X-49X.....	
Knob, Tuning 5J41X-44X-45X-48X-49X.....	33C 197-3
Knobs, Volume Maroon for 5J42X.....	33C 197-5
Knobs, Tuning Maroon for 5J42X.....	33C 197-6
Clock 60 cycle 5J41X-42X-44X-45X-48X-49X.....	91C 20-1
Clock 25 cycle 5J41X-42X-44X-45X-48X-49X.....	91W 20-1
Knob, Volume	
Black 5W31X.....	33C 154-2
Maroon 5W32X.....	33C 154-5
Ivory 5W33X.....	33C 154-8
White 5W34X-35X-36X.....	33C 154-11
Beige 5W37X.....	33C 154-20
Green 5W38X.....	33C 154-23
Gray 5W39X.....	33C 154-26
Knob, Volume 5H44X-47X-49X.....	33C 197-2
Knob, Volume 5J41X-44X-45X-48X-49X.....	

CLOCK PARTS

Clock, 60 cycle 5H44X-47X-49X.....	91C 21-1
Clock, 25 cycle 5H44X-47X-49X.....	91W 21-1
Clock, 60 cycle 110V.....	91C 15-1
Clock, 25 cycle 110V.....	91C 15-2
Clock 60 cycle 5J41X-42X-44X-45X-48X-49X.....	91C 20-1
Clock 25 cycle 5J41X-42X-44X-45X-48X-49X.....	91W 20-1
Crystal.....	24A 20
Knob, Clock	
Black 5W31X.....	33C 154-3
Maroon 5W32X.....	33C 154-6
Ivory 5W33X.....	33C 154-9
White 5W34X-35X-36X.....	33C 154-12
Beige 5W37X.....	33C 154-21
Green 5W38X.....	33C 154-24
Gray 5W39X.....	33C 154-27
Knob, Clock 5H44X-47X-49X.....	33A 200-1
5J41X-42X-44X-45X-47X-49X.....	

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 (see figure 1).
Caution: Do not connect a ground wire directly to chassis.
- Set volume control full on.
- Connect output meter across speaker voice coil.
- 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	"E", "F", "C" and "D" for maximum output
2	Same as "STEP 1"	1620 KC	Gang fully open	"B" for maximum output
3	Radiated Signal. Loop of several turns of wire, or place generator lead close to receiver loop for adequate signal pickup.	1400 KC	Tune in generator signal	"A" for maximum output

*Adjustments "C" and "E" made from underside of chassis; see figure 1.

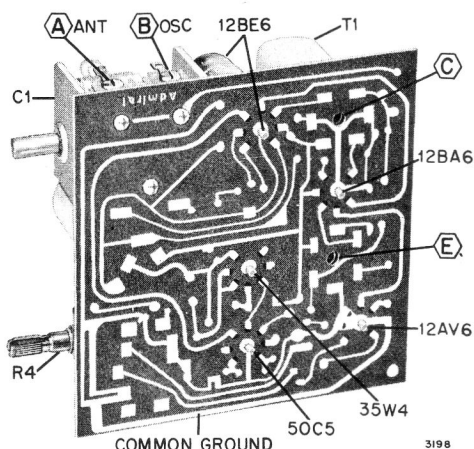


Figure 1. Bottom View of Chassis.

lug hole may break the bond between the chassis base and the "printed" wiring. It is, therefore, necessary to exercise care when replacing units.

An open or damaged section of "printed" circuit wiring can be replaced by soldering a short jumper wire across the points to be connected. Pigtail trimmings from capacitors and resistors are ideal for this purpose.

Thoroughly clean the surfaces to be soldered with Xylene. After the soldering operation is completed, spray the surface with Krylon spray. This seals the surface and prevents humidity and dust from causing leakage patterns to develop between adjacent printed circuit wires.

To avoid need for complete tube socket replacement, defective tube socket pin clips may be replaced individually. Tube socket pin clips are available under part number 87A35-2.

Note: If sockets must be replaced, the tubular shield (center connection) at the bottom of each tube socket must be securely soldered to the "printed" circuit wiring, otherwise hum or oscillation will result.

For further information pertaining to printed circuit

servicing, refer to Service Manual S559, "Printed Circuits, Service and Repair."

TO REMOVE CHASSIS OR CLOCK FROM CABINET

To remove the chassis from the cabinet, proceed as follows:

Remove the line cord plug from the AC outlet, the knobs from the front of the cabinet, and the hex head screws in the cabinet back. Remove the screw under the Tuning knob, the screw that holds the Volume control bracket to the cabinet and the screw that holds the line cord retainer or interlock to the cabinet. Slide the chassis out of its mounting rack after disconnecting the output transformer leads.

To remove the clock from the cabinet, proceed as follows:

Remove the cabinet back, the knobs on the front of the clock face and the four screws that mount the clock to the cabinet. If complete removal is necessary, unsolder the clock leads from the chassis.

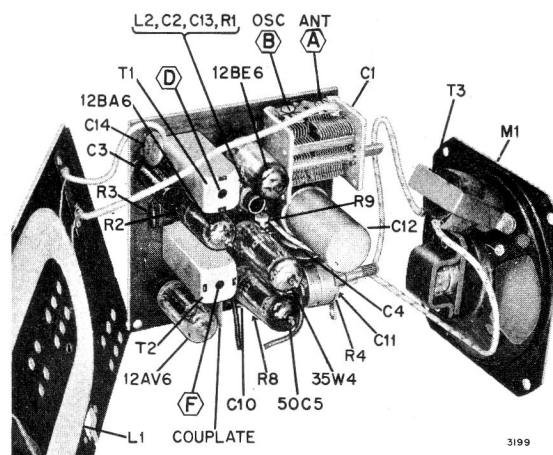


Figure 2. Top View of Chassis. Location of components and alignment points shown.

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