ADMIRAL®

RADIO

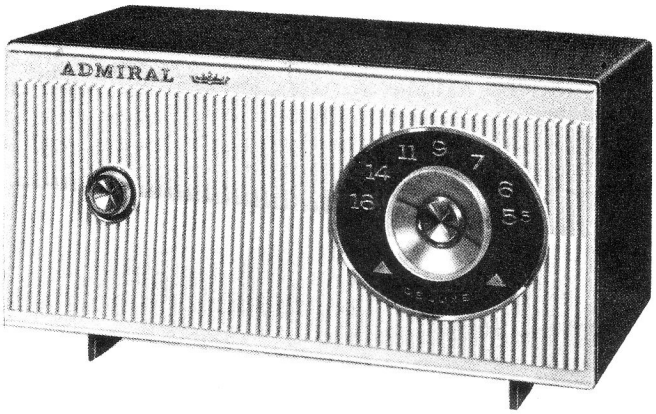


Figure 1. Front View of Y3012BX, Y3016BX and Y3019BX Models

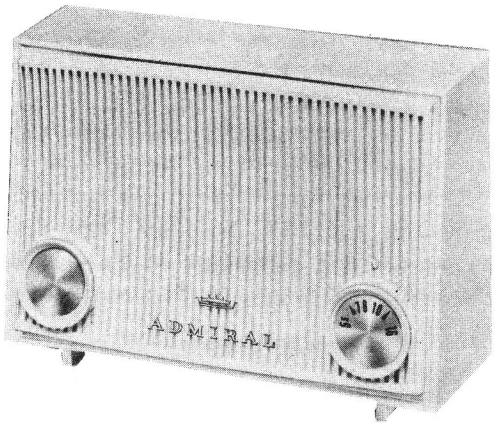


Figure 2. Front View of Y3100BX, Y3104BX Y3107BX and Y3109BX Models

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

SPECIFICATIONS

ANTENNA: Built-in loop.

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: 20 watts.

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

GENERAL

All components, except the speaker (with output transformer) and the antenna 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.

The cabinet of the Y3100BX, Y3104BX, Y3107BX and Y3109BX models are a single colour.

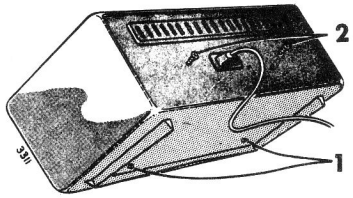
The Y3012BX, Y3016BX and Y3029BX models have two-tone cabinets.

The 5A6BX chassis uses a loop antenna mounted on cabinet back; the 5B6BX chassis uses a loop antenna mounted to the chassis.

TABLE RADIO

MODEL	COLOUR	CHASSIS
Y3100BX	Grey	5A6BX
Y3104BX	Pink	
Y3107BX	Beige	
Y3109BX	Blue	
Y3012BX	Coral and White	5B6BX
Y3016BX	Sungold and White	
Y3019BX	Grey and White	

TO REMOVE CHASSIS FOR SERVICING TUBES



LOOSEN THESE SCREWS UNTIL HELD ONLY BY LAST THREADS THEN PUSH AGAINST SCREWS WITH THUMBS. REMOVE SCREWS AFTER CHASSIS SLIDES FORWARD

REMOVE THESE SCREWS

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

T1119

CHASSIS REMOVAL

Models Y3100BX, Y3104BX, Y3107BX and Y3109BX only

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

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

In Models Y3012BX, Y3016BX, and Y3019BX 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 bottom 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.

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.

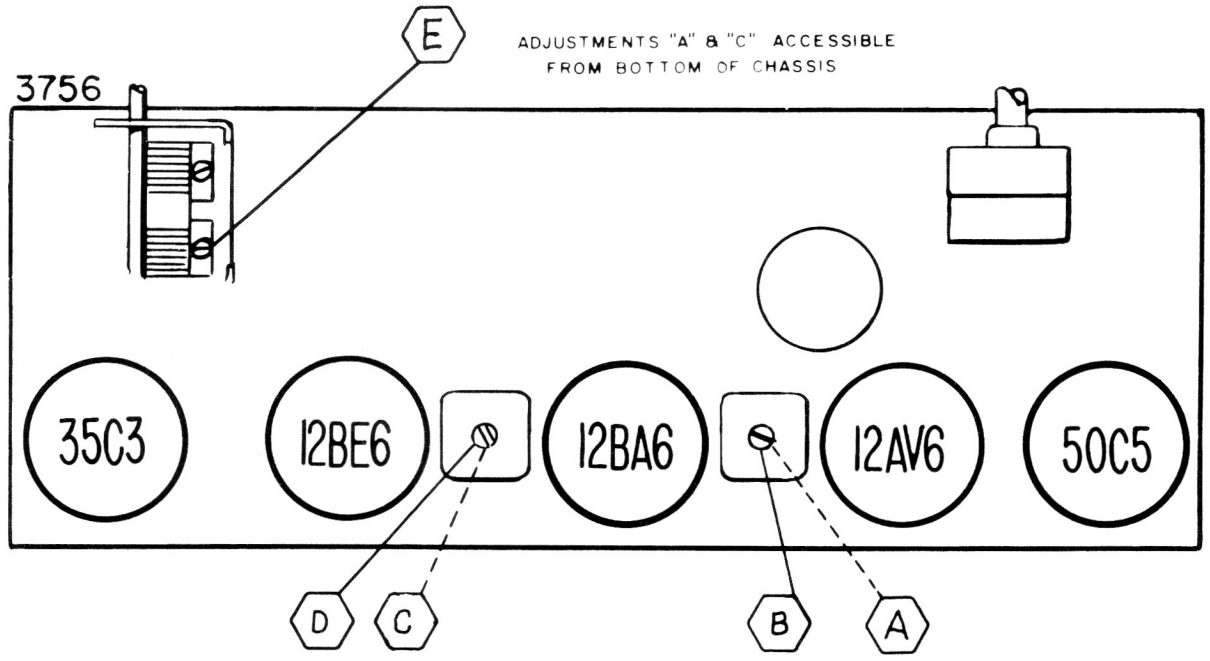
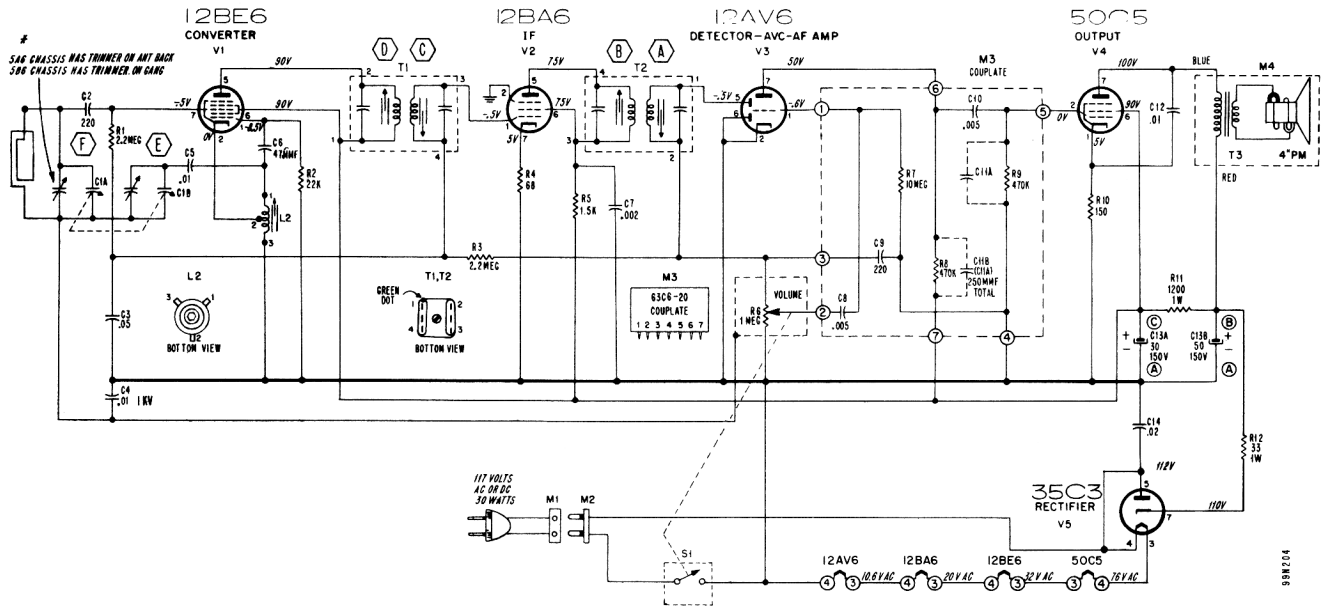


Figure 4. Top View of Chassis Showing Tube and Alignment Points Locations.



NOTES:

IF 455 KC

ETCHED CIRCUIT GROUND

ALL VOLTAGES TAKEN WITH VTVM, AT 117V LINE, NO SIGNAL INPUT. ALL VOLTAGES ± 10%.

ALL CAPACITOR VALUES IN MF. ALL RESISTORS 1/2 WATT 10%. UNLESS OTHERWISE SPECIFIED.

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. 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. 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 for adequate signal pickup	1400 KC	Tune in on generator signal	

* Adjustments "A" and "C" made from underside of chassis.

PARTS LIST

RESISTORS

Sym.	Description	Part No.
R1	2.2 megohms ½W, 10%.....	60B8-225
R2	22,000 ohms, ½W, 10%....	60B8-223
R3	2.2 megohms, ½W, 10%....	60B8-225
R4	100 ohm, ½W, 10%	60B8-101
R5	1,500 ohm, ½W, 10%.....	60B8-152
R6	1 megohm, volume control	
	5A6BX.....	75C77-4
	5B6BX	75C56-6
R7	1 megohm.....	Part of
R8	470K.....	63C6-20
R9	470K.....	couplate
R10	150 ohms, ½W, 10%.....	60B8-151
R11	1,200 ohms, 1W, 10%.....	60B14-122
R12	33 ohms, 1W, 10%.....	60B14-330

CAPACITORS

C1A	gang, tuning 5A6BX chassis.	68C87-1
C1B	gang, tuning 5B6BX	68C76-8
C2	220 mmf, 500V, cer. disc..	65D10-83
C3	.05 mf, 50V.....	65D45-32
C4	.01 mf, 1KV, GMV.....	65M1-3
C5	.01 mf, 500V, cer. disc ...	65D10-41
C6	47 mmf, 500V, cer. disc...	65D10-198
C7	.002 mf, 500V, cer. disc ..	65D10-7
C8		
C9		Part of
C10		63C6-20
C11A		Couplate
C11B		
C12	.005 mf, 500V, cer. disc ..	65D10-152
C13A	Electrolytic 30 mf, 150V...	
C13B	cond. 50 mf, 150V...	67D39-1
C14	.02 mf. 1000V, cer. disc ..	65D10-239

COILS, TRANSFORMERS AND MISCELLANEOUS CHASSIS PARTS

L1	Antenna Loop 5A6BX.....	69N13-1
L1	Antenna Loop 5B6BX.....	69C242-7
L2	Oscillator Coil 5A6BX,	
	5B6BX.....	69C263-2
T1	Transformer, 1st IF.....	72C170-4
T2	Transformer, 2nd IF.....	72C170-5
T3	Transformer, Output	Part of M4
M1	AC line cord	
	with interlock socket	
	5A6BX.....	89C62-10
M1	AC line cord with interlock	
	socket 5B6BX.....	89C62-4
M2	Plug Interlock 88W36-1	
M3	Couplate.....	63C6-20
M4	Speaker, 4" (includes T3) ...	78D142-6
S1	Switch.....	Part of
		75C77-4
		or
		75C56-6
	Shield, Tube.....	87B52-2
	Socket, Tube 12AV6.....	87D35-47
	Socket, Tube	87D35-49

CABINET PARTS

Cabinet, Pink	Y3104BX.....	34E181-2
Cabinet, Beige	Y3107BX.....	34E181-1
Cabinet, Blue	Y3109BX.....	34E181-3
Cabinet Back, Yellow	Y3116BX...	34E129-49
Cabinet Back, Brown	Y3117BX...	34E129-48
Cabinet Back, Blue	Y3119BX ..	34E129-50
Cabinet Front, White	Y3116BX,	
	Y3117BX, Y3119BX.....	34E164-1
Knob, Tuning	Y3104BX.....	33C455-3
Knob, Volume	Y3104BX.....	33C455-4
Knob, Tuning	Y3107BX.....	33C455-1
Knob, Volume	Y3107BX.....	33C455-2
Knob, Tuning	Y3109BX.....	33C455-5
Knob, Volume	Y3109BX.....	33C455-6
Knob, Tuning	Y3116BX,	
	Y3117BX, Y3119BX.....	33C415-1
Knob, On/Off Vol.	Y3116BX,	
	Y3117BX, Y3119BX.....	33C415-2
Support, Extrusion	Y3116BX, Y3117BX	
	Y3119BX.....	33B467-1
Support, Extrusion	Y3104BX, Y3107BX,	
	Y3109BX.....	33B464-1
Insert, Metal.....		23D413-1

Admiral
SERVICE BULLETIN

SERVICE DIVISION

501 LAKESHORE ROAD, PORT CREDIT, ONTARIO

RADIO & TELEVISION

RAD 7-63

March 7, 1963

GENERAL MAILING

5B6BX Radio Chassis

The cabinet Parts List for the models Y3012BX, Y3016BX, and Y3019BX was omitted from manual T1119. Please add this list to your manual.

CABINET PARTS LIST FOR MODELS Y3012BX-16BX-19BX CHASSIS 5B6BX

Description	Part No.
Cabinet Front White	34D164-2
Knob Tuning	33C415-1
Knob - On - Off - Vol.	33C415-2
Extrusion	33B467-1
Cabinet Back Y3012BX	34D129-52
Cabinet Back Y3016BX	34D129-54
Cabinet Back Y3019BX	34D129-53
Line Cord and Plug	89B62-4

RJD/cc

National Service Division.