ADMIRAL

RADIO

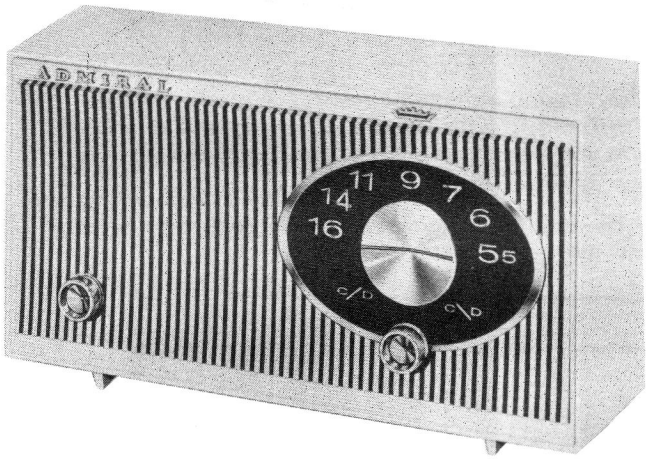


Fig. 1. Front View of Y3313X

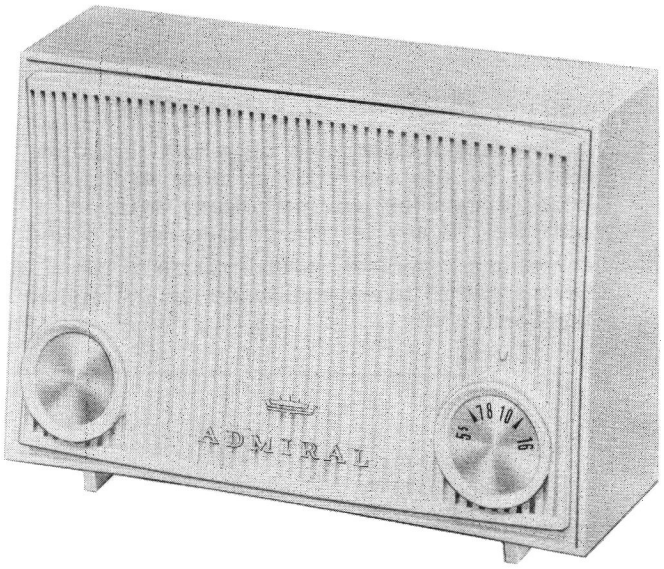


Fig. 2. Front View of Y3100AX, Y3104AX, Y3107AX, Y3109AX Models

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 impedance 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.

TABLE RADIO

MODEL	COLOUR	CHASSIS
Y3100AX	Grey	5A6AHX
Y3104AX	Pink	
Y3107AX	Beige	
Y3109AX	Blue	
Y3313X	White	5A6BHX

Service Manual T1153

CHASSIS REMOVAL

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

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.

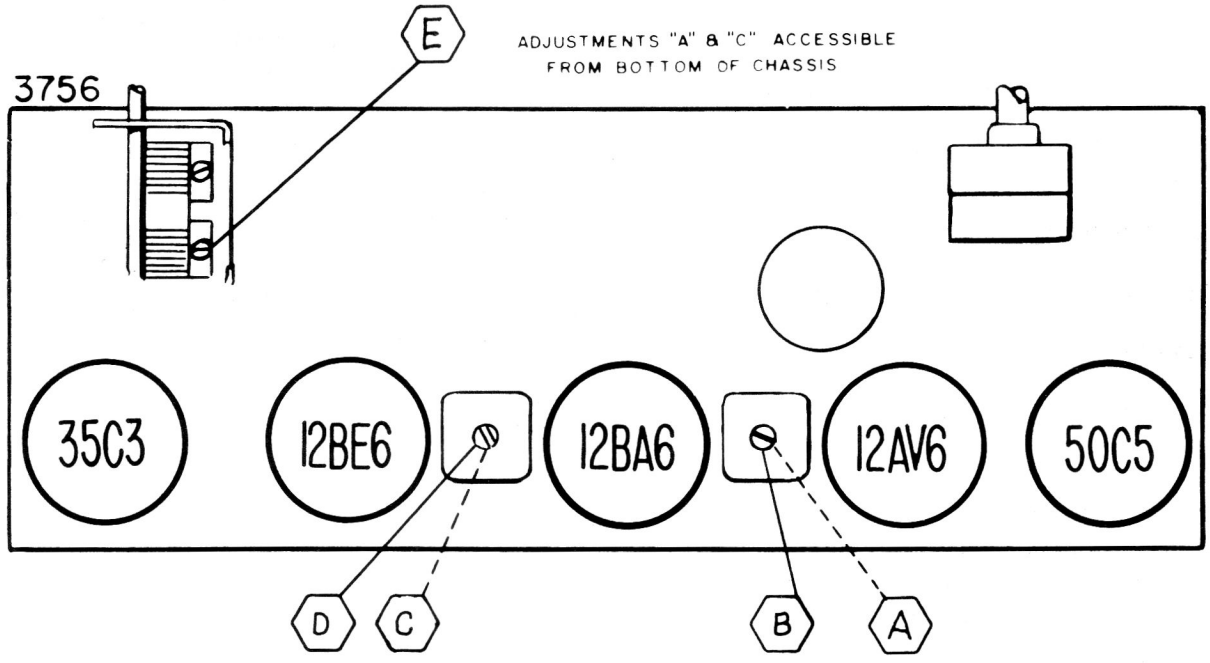
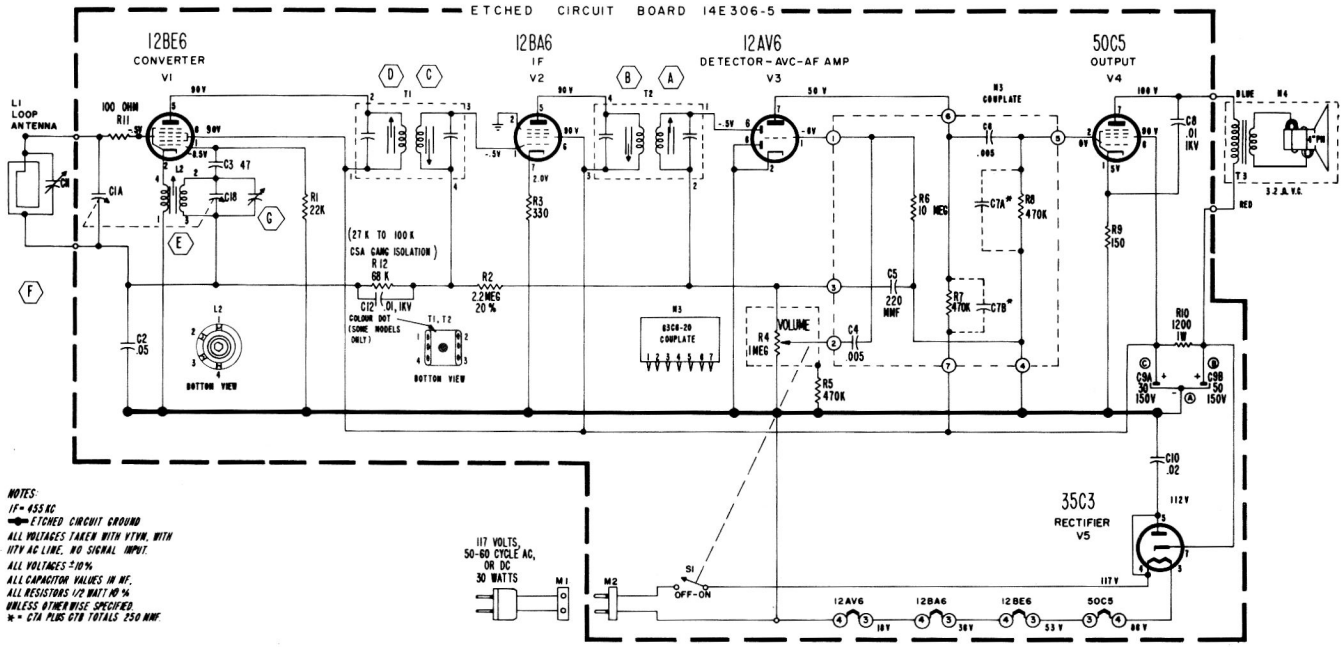


Figure 4. Top View of Chassis Showing Tube and Alignment Points Locations.



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 #
R1	22K, 1/2W, 20%	60B8-223
R2	2.2 meg, 1/2W, 20%	60B8-225
R3	330 ohm, 1/2W, 10%	60B8-331
R5	470K, 1/2W, 20%	60B8-474
R9	150 ohm, 1/2W, 10%	60B8-151
R10	1.2K, 1W, 10%	60B14-122
R11	100 ohm, 1/2W, 10%	60B8-101
R12	68K, 1/2W, 20%	60B8-683

CAPACITORS

C1	Gang (5A6AHX Chassis)	68C96-1
C1	Gang (5A6BHX Chassis)	68C97-3
C2	.05 mf, 50V	65C45-32
C3	47 mmf, 500V, 20%	65D10-198
C8	.01, 1KV, GMV	65M1-3
C9	Electrolytic	67B39-1
C10	.02 mfd, 1000V	65D10-239
C12	.01, 1KV, GMV	65M1-3

COILS, TRANSFORMERS, MISCELLANEOUS

Coil, Oscillator	69C292-1
Trans. I. F. (1st)	72C170-5
Trans. I. F. P.C. (2nd)	72C227-4
Control, 1 meg, 30% (5A6AHX Chassis)	75C77-4
Control, 1 meg, 30% (5A6BHX Chassis)	75C77-10
Terminal & Connect	9C28-51
Connector, Interlock	9B42-2
Chassis, P.C. Brd.	14E306-5
Bracket, Gang Mtg. (5A6BHX Chassis).	15C2557-1
Bracket, Bushing Mtg.(5A6BHX Chassis)	15B2559-1
Spring, (5A6BHX)	19D1-2
Shaft, Tuning (5A6BHX Chassis)	28B153-4
Bushing (5A6BHX Chassis)	33B534-1
Dial Cord (10") (5A6BHX Chassis)	50A1-3
Couplate	63D6-20
Shield, Tube 7 Pin	87B52-2
Socket, Tube, Min. 7 Pin	87D35-47
Socket, Tube, Min. 7 Pin (with Gnd. Strap)	87D35-49

CABINET PARTS 5A6AHX CHASSIS

Knob, Tuning, Beige (Y3107AX)	33C455-9
Knob, Volume, Beige (Y3107AX)	33C455-10
Knob Tuning, Pink (Y3104AX)	33C455-11
Knob, Volume, Pink (Y3104AX)	33C455-12
Knob, Tuning, Blue (Y3109AX)	33C455-13
Knob, Volume, Blue (Y3109AX)	33C455-14
Knob, Tuning, Grey (Y3100AX)	33C455-15
Knob, Volume, Grey (Y3100AX)	33C455-16
P.C. Brd, Support Extrusion	33B464-1
Cabinet, Beige (Y3107AX)	34E181-5
Cabinet, Pink (Y3104AX)	34E181-6
Cabinet, Blue (Y3109AX)	34E181-7
Cabinet, Grey (3100AX)	34E181-8
Trimmer (Rivet to Cabinet Back)	66A33-1
Loop Antenna & Cab't. Back	69N13-1
Speaker 4 in.	78B142-8
Line Cord & Plug (6' long)	89C62-4

CABINET PARTS FOR 5A6BHX CHASSIS (Y3313X)

Support, P.C. Board	33B464-1
Knob, Tuning & Volume	33B532-1
Hub, Pointer	33B544-1
Disc., Pointer	33B545-1
Cabinet, White	34E207-1
Trimmer (Rivet to Cab't. Back)	66A33-1
Loop Ant. & Cab't Back	69N16-4
Speaker 4 in. with Transformer	78D142-8
Line Cord & Plug (6' long)	89C62-4