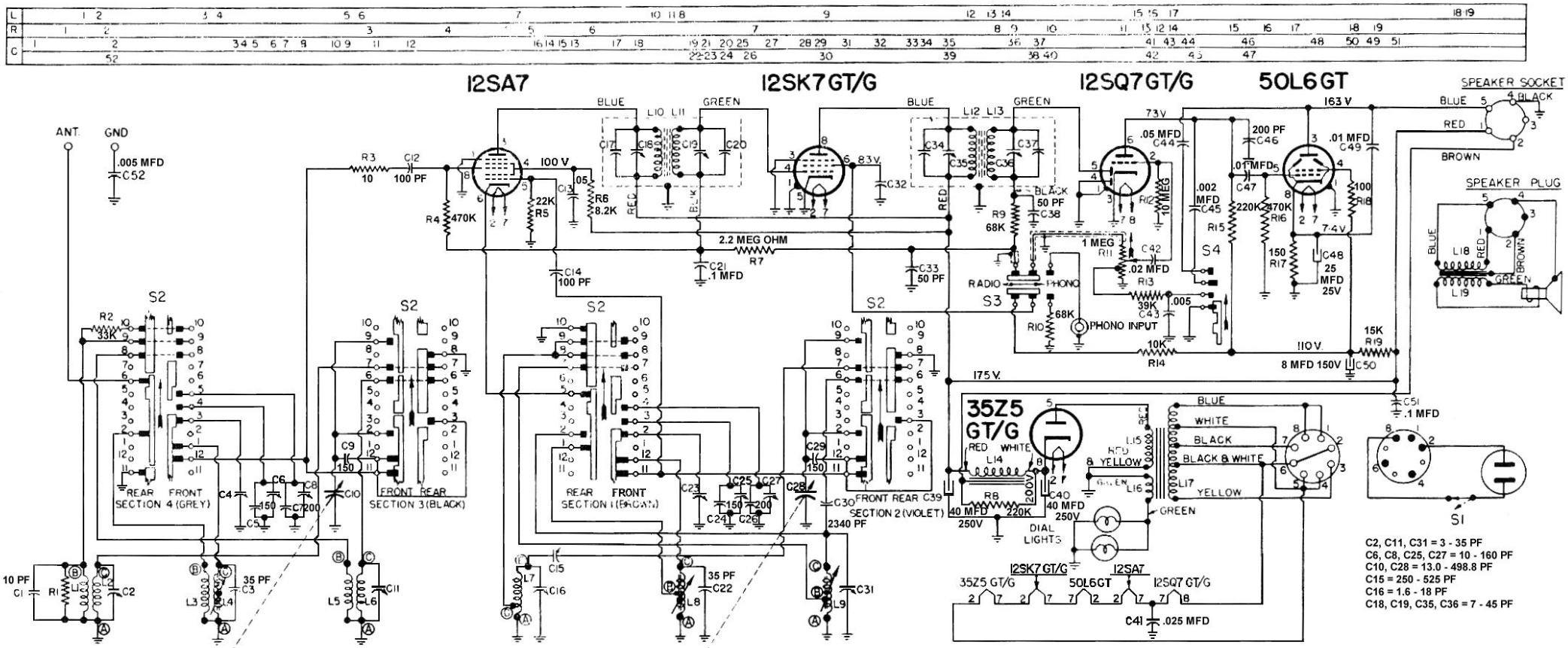


PHILIPS C50A, C52A, C53A

SPECIFICATIONS

MODEL C50A: Is a 5 valve superheterodyne receiver designed for use on 110V-245V 40-60 cycle mains. It is provided with a plate transformer to eliminate possible ripple and has two medium ranges and four short wave ranges with spread band on three ranges.

PHILIPS VALVES: Converter 12SA7; I.F. Amplifier 12SK7GT; A.V.C. Detector and Audio Tube 12SQ7GT; Audio Output Tube 50L6GT and Rectifier Tube 35Z5GT.

TUNING RANGES:

Medium Wave	540 kc.	— 1620 kc.
1st Short Wave	2.6 mc.	— 7.5 mc.
2nd Short Wave	9.2 mc.	— 10.4 mc.*
3rd Short Wave	10.3 mc.	— 12.2 mc.*
4th Short Wave	14.9 mc.	— 22.2 mc.*

**Spread Band*

INTERMEDIATE FREQUENCY:
455 kc.

AUDIO OUTPUT:
2 Watts.

LOUDSPEAKER: Permanent Magnet 6 inches.

AERIAL AND EARTH: Banana plugs are supplied for Aerial and Earth. A good aerial is recommended for maximum results and a good clean tight earth connection should be made to a cold water pipe or an earthing plate or post in damp ground.

MAINS:
110V-245V. A.C. 40 cycle-60 cycle.

POWER CONSUMPTION:
110V.
245V. 55 Watts.

CABINET DIMENSIONS:
Height: 11½ inches.
Width: 17½ inches.
Depth: 9 inches.

WEIGHT:
23 lbs. 2 ozs.

ALIGNMENT OF RECEIVER

SIGNAL GENERATOR: Capable of supplying modulated frequencies from 455 kc. to 20 mc.

OUTPUT INDICATOR: A high resistance A.C. voltmeter, a power output meter or any visual output indicator.

Equipment Connections

OUTPUT INDICATOR: If power output meter is used adjust it for 4 ohms impedance and connect it across speaker voice coil. If an A.C. voltmeter is used it may be connected across the voice coil but a more satisfactory indication will be obtained if it is connected from the plate prong of the output tube and chassis with a .05 mfd. capacitor in series, connecting the capacitor to the tube prong. Adjust the output of the signal generator to middle scale reading on the output meter. Adjust the receiver gain control to maximum. As output increases reduce signal generator output to maintain middle scale reading on output indicator. This reduces A.V.C. action and permits more accurate adjustments.

		SIGNAL GENERATOR		RECEIVER		
Operation Steps	See Notes	Output Connections to Receiver	Frequency	Range Switch	Tuning Capacitor	Adjustment Capacitors For Maximum Output
1		To 12SK7GT/G Control Grid Through .1 mfd. Capacitor	455 kc.	Position 2	Max. Cap.	2nd I.F. Trimmers C36, C35
2	'A'	To Stator of C10 Through .1 mfd. Capacitor	455 kc.	Position 2	Max. Cap.	1st I.F. Trimmers C19, C18
3	'B'	To Antenna Contact Through Standard Dummy Antenna	600 kc.	Position 2	600 kc.	Broadcast Padder C15
4	'C'	To Antenna Contact Through Standard Dummy Antenna	1500 kc.	Position 2	1500 kc.	B.C. Osc. Trimmer C16 B.C. Ant. Trimmer C2
5	'D'	To Antenna Contact Through Standard Dummy Antenna	7.0 mc.	Position 3	7.0 mc.	S.W. Osc. Trimmer C31 S.W. Ant. Trimmer C11
6	'E'	To Antenna Contact Through Standard Dummy Antenna	2.9 mc.	Position 3	2.9 mc.	S.W. Osc. Coil L9
7	'F'	To Antenna Contact Through Standard Dummy Antenna	21.5 mc.	Position 6	21.5 mc.	B.S. Osc. Trimmer C23 B.S. Ant. Trimmer C4
8	'G'	To Antenna Contact Through Standard Dummy Antenna	15.2 mc.	Position 6	15.2 mc.	B.S. Osc. Coil L8 B.S. Ant. Coil L4
9	'H'	To Antenna Contact Through Standard Dummy Antenna	11.6 mc.	Position 5	11.6 mc.	B.S. Osc. Trimmer C25 B.S. Ant. Trimmer C6
10	'I'	To Antenna Contact Through Standard Dummy Antenna	9.6 mc.	Position 4	9.6 mc.	B.S. Osc. Trimmer C27 B.S. Ant. Trimmer C8

Standard Dummy Antenna =200 mfd. Capacitor.

NOTE 'A': After step 1 has been completed do not make any further adjustments of 2nd I.F. trimmers C36 and C35.

NOTE 'B': Tune the receiver to maximum output. Adjust trimmer slightly and rock the tuning capacitor back and forth. Repeat this procedure until greatest output is obtained.

NOTE 'C': Tune in the signal with C16. Tune C15 for maximum output.

NOTE 'D': Adjust the Osc. Trimmer C31 to tune in the signal and adjust the antenna trimmer C11 for maximum output.

NOTE 'E': Adjust L9 for maximum output, rocking the tuning capacitor back and forth. Repeat operation 5.

NOTE 'F': Adjust the Osc. trimmer C23 to tune in the signal and adjust the antenna trimmer C4 for maximum output, rocking the tuning capacitor back and forth.

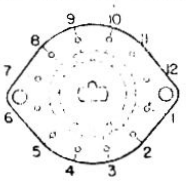
NOTE 'G': Adjust the Osc. Coil L8 to tune in the signal and adjust the Antenna Coil L4 for maximum output, rocking the tuning capacitor back and forth. Repeat operation 7.

NOTE 'H': Tune in the signal with the Osc. Trimmer C25 and adjust the antenna trimmer C6 for maximum output.

NOTE 'I': Tune in the signal with the Osc. Trimmer C27 and adjust the antenna trimmer C8 for maximum output.

PHILIPS C50A, C52A, C53A

BAND SWITCH NUMBERING SYSTEM



TOP OF CHASSIS

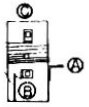
SWITCH IS SHOWN AS VIEWED FROM FRONT OF CHASSIS

BAND SWITCH SECTIONS ARE SHOWN IN EXTREME COUNTER-CLOCKWISE POSITION OF SWITCH (FULL CLOCKWISE POSITION OF KNOB) VIEWED FROM FRONT OF CHASSIS.

ARROW ➡ INDICATES CLOCKWISE ROTATION OF POTENTIOMETER AND SWITCHES (BUT ANTI-CLOCKWISE ROTATION OF BAND SWITCH KNOB) VIEWED FROM FRONT OF CHASSIS

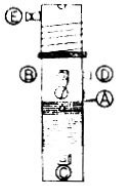
L1, L2

L3, L4

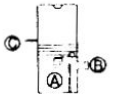


L5, L6

L7 AND L9

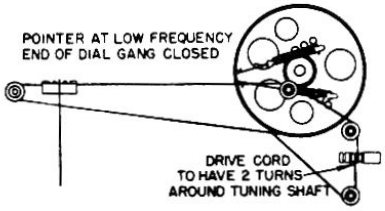


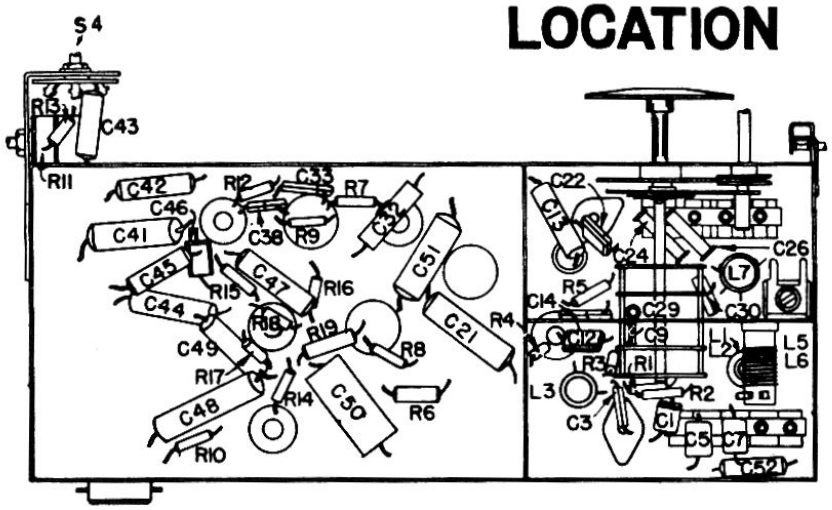
L8

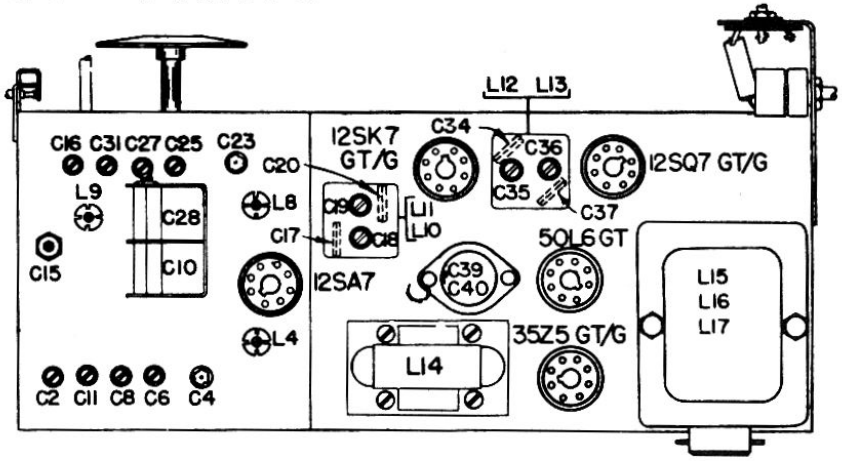


NOTE
ALL VOLTAGES MEASURED TO CHASSIS
METER SENSITIVITY 20,000 OHMS/VOLT
BAND CHANGE SWITCH AT STANDARD BROADCAST POSITION
PHONO-RADIO SWITCH IN RADIO POSITION

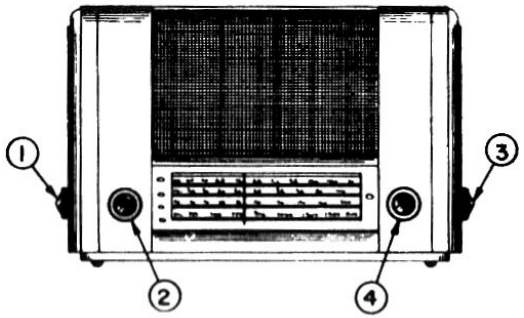
LOCATION OF PARTS







C 50A



ALIGNMENT PROCEDURE