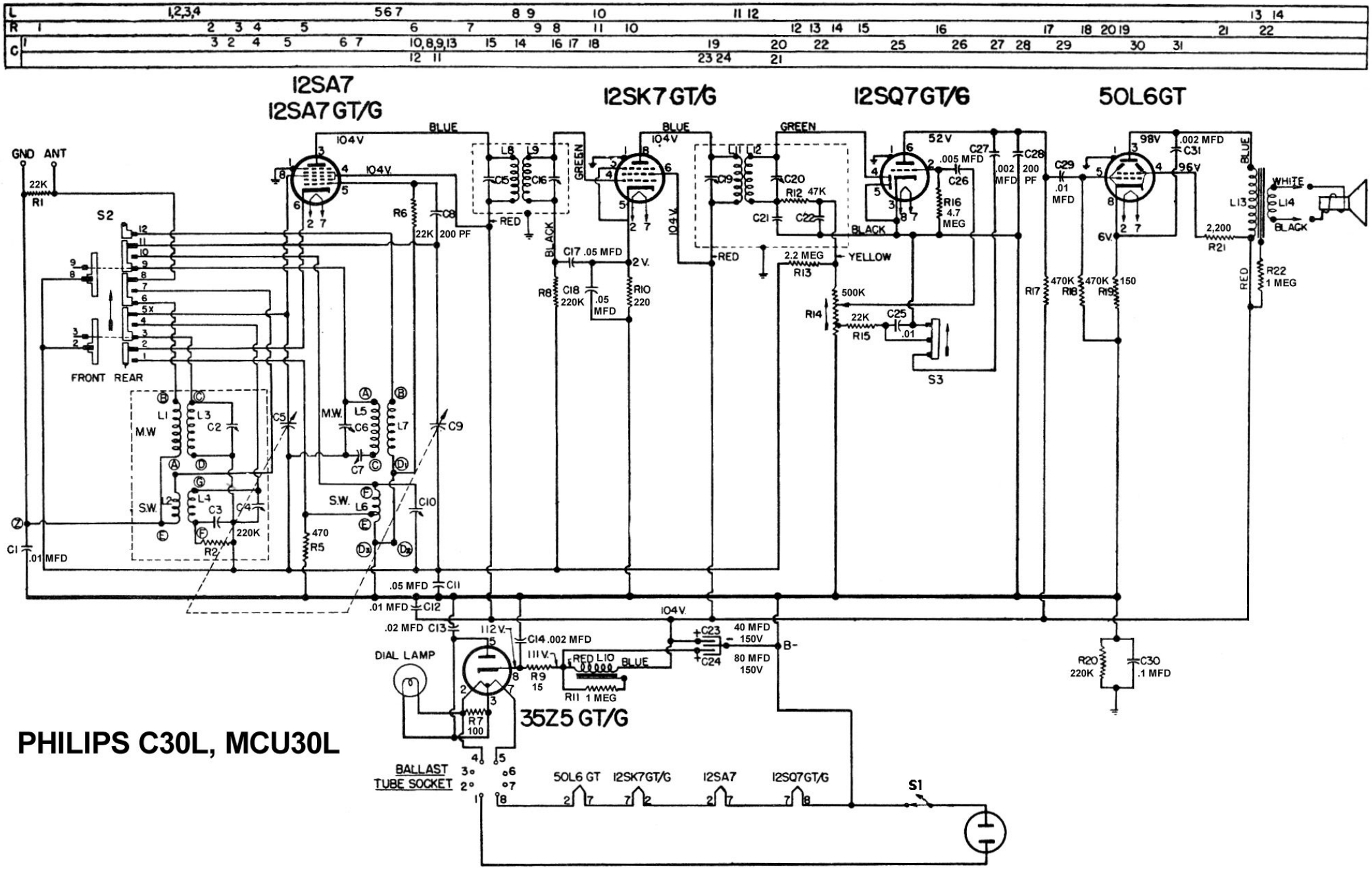

12SA7
12SA7 GT/G
12SK7 GT/G
12SQ7 GT/G
50L6GT
35Z5 GT/G
PHILIPS C30L, MCU30L
GND ANT
22K
R1
S2
FRONT REAR
M.W
S.W.
C1 .01 MFD
220K
R2
470
R5
C5
C9
C10
.05 MFD C11
.01 MFD C12
.02 MFD C13
C14 .002 MFD
DIAL LAMP
R7 100
R6 22K
C8 200 PF
C16
C17 .05 MFD
R8 C18 220K
.05 MFD
R10 220
R12 47K
C21
C22
.005 MFD C26
R16 4.7 MEG
C27 .002 MFD
C28 200 PF
2.2 MEG R13
YELLOW
500K R14
22K R15
C25 .01
S3
C29 .01 MFD
R17 470K
R18 470K
R19 150
C31 .002 MFD
2,200 R21
R22 1 MEG
WHITE
BLACK
BLUE
RED
GREEN
YELLOW
104V
112V
111V
52V
98V
96V
6V
2V
R9 15
R11 1 MEG
C23 40 MFD 150V
C24 80 MFD 150V
B-
R20 220K
C30 .1 MFD
BALLAST TUBE SOCKET
50L6 GT
12SK7GT/G
12SA7
12SQ7GT/G
S1

ALIGNMENT OF RECEIVER

Equipment Required

SIGNAL GENERATOR: Capable of supplying modulated frequencies between 455 kc. and 20 mc.
OUTPUT INDICATOR: A high resistance A.C. voltmeter or a power output meter or any output indicating device.

Preliminary

Set tuning capacitor to maximum capacity. Adjust dial pointer exactly under calibrating mark to right of 550 kc. Remove the chassis from the cabinet by unscrewing the four screws, two of which are on the rear chassis apron and two on the dial pointer support bracket. The two leads that connect the loud speaker to the chassis are long enough to permit removal of the chassis without disturbing the speaker. The wave range lever should remain in the cabinet until after the chassis has been removed.

Equipment Connections

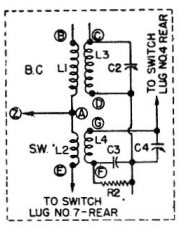
OUTPUT INDICATOR: If a power output meter is used adjust it for four ohms impedance and connect it across speaker voice coil. If an A.C. voltmeter is used it may be connected across the voice coil but a more satisfactory indication will be obtained if it is connected between the plate prong of the output tube and the chassis, being sure to use a .05 mfd. capacitor in series with the lead which is connected to the plate prong. Regulate the output attenuator of the signal generator until a mid-scale reading is obtained on a low scale of the output meter. Keep the receiver volume control in maximum output position. When output indication increases regulate signal generator attenuator to restore the original indication. This reduces A.V.C. action and permits more accurate adjustments.

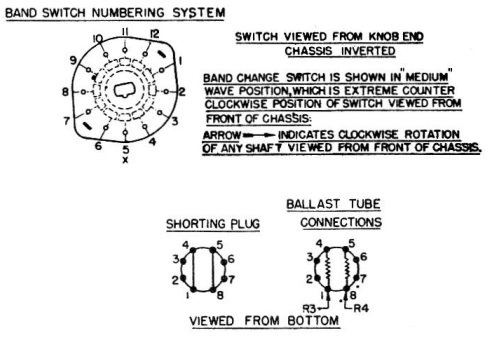
SIGNAL GENERATOR: When adjusting the I.F. trimmers connect the signal generator ground lead to "B" which is readily accessible on the rear of the terminal strip adjacent to the output transformer. For all other adjustments connect this lead to the ground contact of the "Antenna-Ground" receptacle located on the rear of the chassis. Connect the signal generator output lead to the points indicated in the chart below. ALWAYS BE SURE TO USE THE SPECIFIED CAPACITOR OR RESISTOR IN SERIES WITH THIS LEAD.

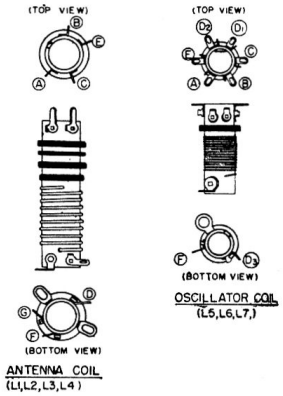
Alignment Procedure

		SIGNAL GENERATOR		RECEIVER		
Operation Steps	See Notes	Output Connection To Receiver	Frequency	Range Switch	Tuning Capacitor	Adjust Capacitors for Max. Output
1		To 12SK7GT/G control grid through 1 mfd. capacitor	455 kc.	M.W.	Max. Cap.	2nd I.F. Trimmers C19, C20
2	"A"	To stator of C6 through .1 mfd. capacitor	455 kc.	M.W.	Max. Cap.	1st I.F. Trimmers C15, C16
3	"B"	To antenna contact through 200 mmfd. capacitor	580 kc.	M.W.	580 kc.	Osc. Series Padder C7
4	"C"	To antenna contact through 200 mmfd. capacitor	1600 kc.	M.W.	1600 kc.	M.W. Osc. Trimmer C6 M.W. Ant. Trimmer C2
5	"D"	To antenna contact through 400 ohm carbon resistor	17 mc.	S.W.	17 mc.	S.W. Osc. Trimmer C10
6	"B"	To antenna contact through 400 ohm carbon resistor	17 mc.	S.W.	17 mc.	S.W. Ant. Trimmer C4

NOTE "A": After step 1 has been completed do not make any further adjustments of 2nd I.F. trimmers C19, C20.
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": Slide the chassis back into cabinet and adjust dial pointer exactly to 1600 kc. Remove chassis from cabinet, being careful not to alter tuning capacitor setting.
NOTE "D": Adjust oscillator trimmer to maximum capacity position (clockwise). Turn screw counter-clockwise until second peak is obtained. This will be the smaller capacitance position.







SPECIFICATIONS

MODELS C30L - MCU30L: Is a five-valve two-band superheterodyne receiver designed for use on A.C. or D.C. mains.

PHILIPS VALVES: Converter 12SA7 - 12SA7GT/G; I.F. amplifier 12SK7GT/G; 2nd detector and 1st audio 12SQ7GT/G; audio output 50L6GT; rectifier 35Z5GT/G.

TUNING RANGES:
Medium Wave — 540 kc. - 1750 kc.
Short Wave — 5.2 mc. - 18 mc.

INTERMEDIATE FREQUENCY: 455 kc.

AUDIO OUTPUT: 700 M.W.

LOUDSPEAKER: 5″ permanent magnetic.

ANTENNA and GROUND: For optimum results, an outside antenna is necessary. A secure earth connection should be made to an earthing plate, buried in damp ground or to a cold water pipe.

MAINS:
110 volts - 220 volts.
40-60 cycles or D.C.

Receiver must be adapted to mains voltage by inserting the correct ballast or shorting plug.

110-volt mains use shorting plug. 220-volt mains use ballast, Part No. 644-001. For mains voltages between 120 volt and 200 volt obtain correct ballast from Service Parts Depot.

POWER CONSUMPTION: 110 volts - 30 watts.

CABINET DIMENSIONS:
Width 11½″, Height 8″, Depth 6″.

WEIGHT: 8½ lbs.

PHILIPS C30L, MCU30L

LOCATION OF PARTS