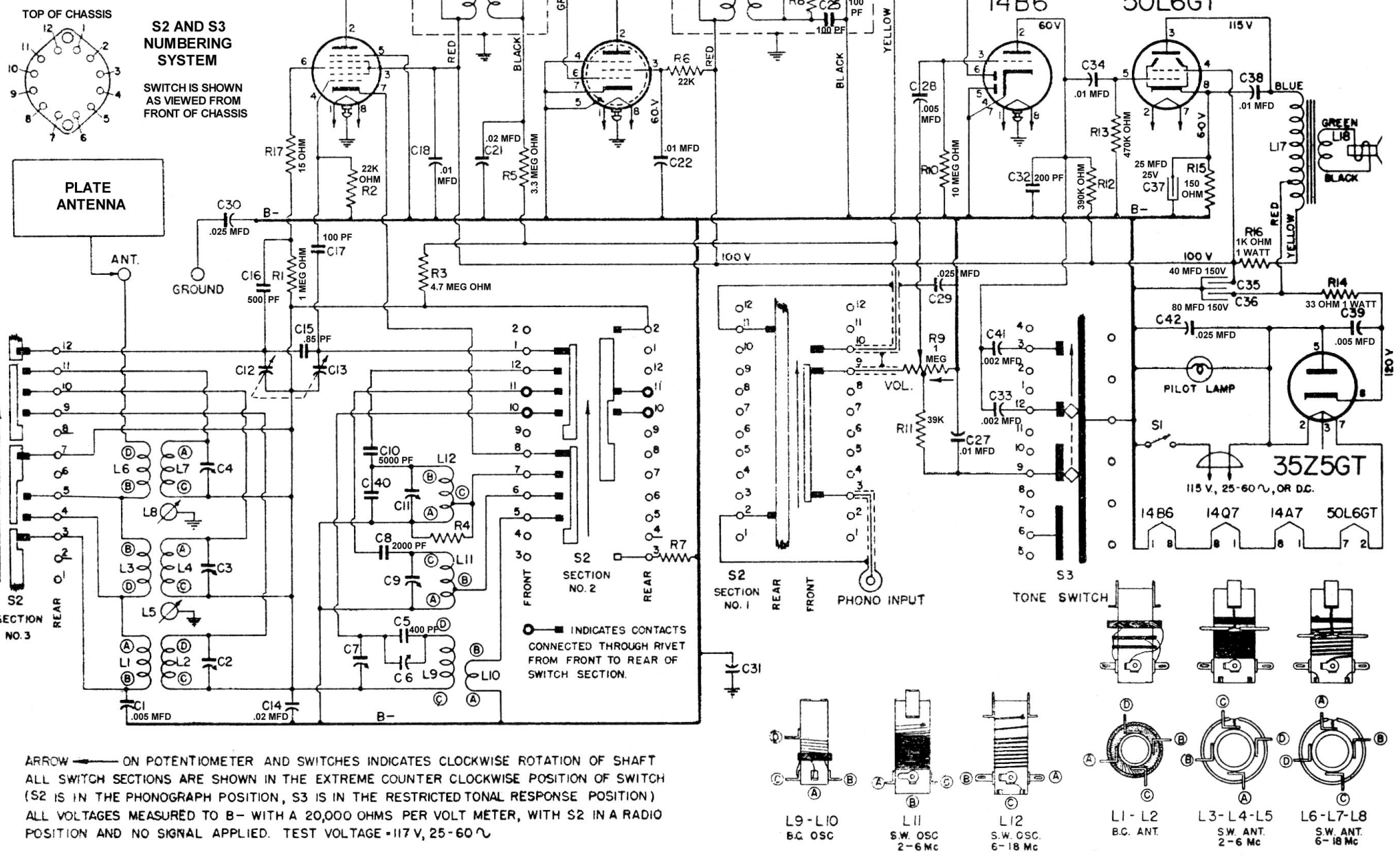
PHILIPS CM22L



ARROW ← ON POTENTIOMETER AND SWITCHES INDICATES CLOCKWISE ROTATION OF SHAFT
ALL SWITCH SECTIONS ARE SHOWN IN THE EXTREME COUNTER CLOCKWISE POSITION OF SWITCH (S2 IS IN THE PHONOGRAPH POSITION, S3 IS IN THE RESTRICTED TONAL RESPONSE POSITION)
ALL VOLTAGES MEASURED TO B- WITH A 20,000 OHMS PER VOLT METER, WITH S2 IN A RADIO POSITION AND NO SIGNAL APPLIED. TEST VOLTAGE = 117 V, 25-60 ~

ALIGNMENT PROCEDURE

SIGNAL GENERATOR			RECEIVER			
Operation Steps	Output Connections to Receiver	Frequency	Range Switch	Tuning Capacitor	See Notes	Adjust in Stated Order for Maximum Output
1	To 14A7 control grid (6) through .05 mfd. capacitor	455 kc.	Pos. 2	Min.		2nd I.F. Trimmers C24, C23
2	To stator of C12 through .05 mfd. capacitor	455 kc.	Pos. 2	Min.	A	1st I.F. Trimmers C20, C19
3	To antenna contact through 100 mmf. capacitor*	1600 kc.	Pos. 2	1600 kc.		B.C. Osc. Trimmer C7 B.C. Ant. Trimmer C2
4	To antenna contact through 100 mmf. capacitor*	600 kc.	Pos. 2	600 kc.	B	B.C. Osc. Padder C6
5	To antenna contact through 400 ohms resistor*	5 Mc.	Pos. 2	5 Mc.	C	S.W. Osc. Trimmer C9 S.W. Ant. Trimmer C3
6	To antenna contact through 400 ohms resistor*	2.4 Mc.	Pos. 3	2.4 Mc. approx.	D	Loop L5 on S.W. Ant. Coil (adjust loop position)
7	To antenna contact through 400 ohms resistor*	17 Mc.	Pos. 3	17 Mc.	C	S.W. Osc. Trimmer C11 S.W. Ant. Trimmer C4
8	To antenna contact through 400 ohms resistor*	6 Mc.	Pos. 4	6 Mc. approx.	D	Loop L8 on S.W. Ant. Coil (adjust loop position)

* or a standard dummy antenna with a 200 mmf. condenser in series.

ALIGNMENT NOTES

NOTE A — After completing operation 2, leave signal generator on C12 and carefully readjust C24 and C23.

NOTE B — After completing operation, return to 1600 kc. and repeat operation 3, then repeat operation 4.

NOTE C — Unscrew oscillator trimmer approximately **3 turns from tight.** Then turn adjustment clockwise until first output peak is obtained. Make adjustments using this peak. Rock the tuning capacitor slowly back and forth while adjusting antenna trimmer.

NOTE D — Adjust position of loop with non-metallic rod. Return to previous operation and carefully adjust antenna trimmer.

ALIGNMENT OF RECEIVER

With the variable capacitor fully closed, adjust the centre of the dial pointer to the edge of the dial opening (clear area) to the left of the 550 kc. calibration mark. Set the tone switch to position No. 2, and the volume to the full clockwise (maximum) position.

EQUIPMENT REQUIRED

OUTPUT INDICATOR: A high resistance A.C. voltmeter and an output transformer.

SIGNAL GENERATOR: A generator capable of supplying modulated signals between 500 kc. and 20 Mc.

ISOLATING TRANSFORMER: A one to one ratio line isolating transformer, if aligned on A.C. power.

EQUIPMENT CONNECTIONS AND ALIGNMENT PROCEDURE

OUTPUT INDICATOR: Connect the A.C. voltmeter across the voice coil of the speaker. During alignment, keep the output below 1½ A.C. volts across the voice coil. If the meter is not sensitive enough to indicate 1 volt, connect the secondary of an output transformer across the speaker voice coil and connect the A.C. voltmeter across the primary. When using the latter method, the maximum output reading should be kept below 25 A.C. volts. When the output indication increases, regulate the signal generator attenuator to restore the original indication.

SIGNAL GENERATOR: Connect the output lead of the signal generator to the points indicated in the chart below, in series with the specified resistor or capacitor. Connect the return lead of the signal generator to the B– lead of the receiver through a .05 mfd. condenser. The B– connection to the receiver is to be made to terminal No. 5 of the 14Q7 tube socket. **Do not connect a grounded lead to B– unless a line isolating transformer is used.**