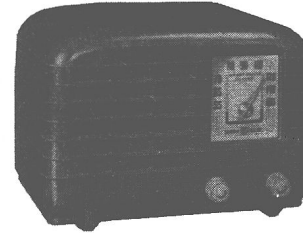


MODEL JK-51

Five Tube, Single-Band, AC-DC Superheterodyne Receiver

General Description

The CGE Model JK51 is a five-tube single band superheterodyne receiver housed in a plastic cabinet of modern design. Features include: Magnetite core I.F. transformers; built-in loop assembly with provision for use with an external antenna; beam power output tube; sensitive, five inch electrodynamic loudspeaker and a well filtered, rectifier network.



*Molded Cabinet
Supplied in oak and onyx finish*

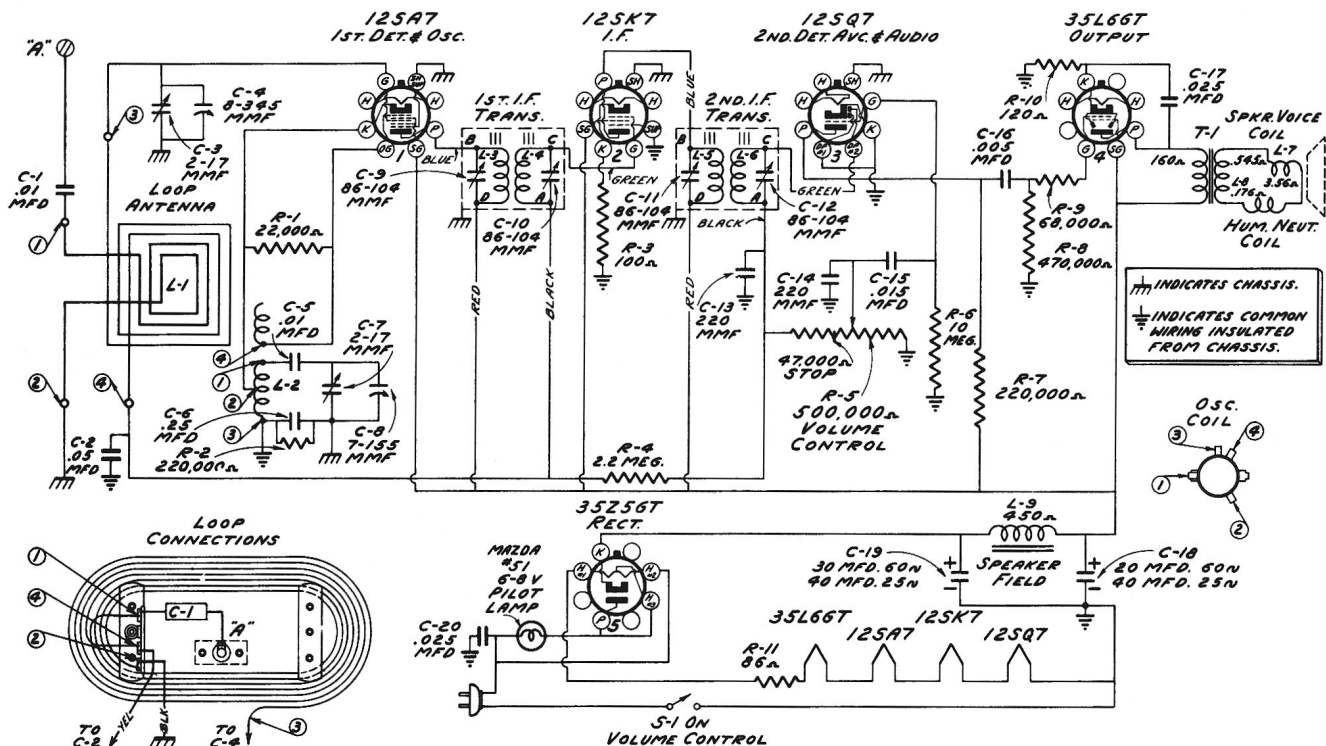
Electrical and Mechanical Specifications

FREQUENCY RANGE 540-1,600 kc
Intermediate Frequency 455 kc
TUBE COMPLEMENT
(1) Type 12SA7 1st-Detector-Oscillator
(2) Type 12SK7 I-F Amplifier
(3) Type 12SQ7 2nd-Detector, 1st A-F, and A.V.C.
(4) Type 35L6GT Power Output
(5) Type 35Z5GT Rectifier
Dial Lamp (1) Mazda 51, 7.5 volts, .2 amp.

POWER SUPPLY RATINGS
A-C Rating 105-125 volts, 50-60 cycles, 30 watts
D-C Rating 105-125 volts, direct current, 30 watts
POWER OUTPUT (125 volt, 60 cycle supply)
Undistorted 1.0 watts
Maximum 1.5 watts
LOUDSPEAKER
Type 5-inch Electrodynamic

REPLACEMENT PARTS FOR MODEL JK-51

STOCK NO.	DESCRIPTION	STOCK NO.	DESCRIPTION
RECEIVER ASSEMBLIES			
12694	Capacitor-220 mmfd.(C13,C14).....	31319	Socket-Radiotron socket.....
4838	Capacitor-.005 mfd.(C16).....	34449	Socket-Pilot lamp socket.....
4858	Capacitor-.01 mfd.(C1,C5).....	30585	Spring-Drive cord tension spring (Pkg.2).....
11315	Capacitor-.015 mfd.(C15).....	35056	Transformer-Output transformer(T1)..
4870	Capacitor-.025 mfd.(C17,C20).....	S-2787	Transformer-First I.F.transformer (L3,L4,C9,C10).....
32787	Capacitor-.05 mfd.(C2).....	S-2788	Transformer-Second I.F.transformer (L5,L6,C11,C12).....
12484	Capacitor-0.25 mfd.(C6).....	S-2774	Volume Control and power switch (R5,S1).....
32576	Capacitor-Electrolytic consisting of one 30 mfd.section and one 20 mfd. section(C18,C19)60 cyc.....	REPRODUCER ASSEMBLIES (CRL-517) 5"	
S-2421	Capacitor-Electrolytic consisting of two 40 mfd.sections(C18,C19)25 cyc...	32907	Cap-Dust cap for cone centre(Pkg.5).
S-2776	Coil-Oscillator coil(L2).....	S-2775	Coil-Field coil (L9).....
S-2786	Condenser-2 gang variable tuning condenser and drum assembly(C3,C4,C7,C8).....	35066	Cone-Reproducer cone & voice coil (L7).....
S-2767	Cord-Condenser drum drive cord.....	S-2777	Reproducer-complete less output transformer.....
S-2783	Dial-Station selector dial scale.....	MISCELLANEOUS ASSEMBLIES	
S-2768	Indicator-Station selector indicator pointer.....	S-2780	Cabinet-Molded plastic cabinet (Oak).....
11765	Lamp-Dial Lamp.....	S-2781	Cabinet-Molded plastic cabinet (Onyx).....
S-2773	Loop-Antenna loop assembly(L1).....	S-2782	Knob-Volume or tuning control knob..
33558	Resistor-82 ohm,flexible type(R11)....		
32535	Resistor-120 ohm,flexible type(R10)....		
S-2575	Resistor-100 ohm,1/4 watt (R3).....		
13998	Resistor-22,000 ohm,1/4 watt(R1).....		
13715	Resistor-68,000 ohm,1/4 watt(R9).....		
12264	Resistor-220,000 ohm,1/4 watt(R2,R7)...		
12285	Resistor-470,000 ohm,1/4 watt(R8).....		
12679	Resistor-2.2 meg; 1/4 watt (R4).....		
13601	Resistor-10 meg; 1/4 watt (R6).....		
35058	Shaft-Tuning condenser drive shaft.....		



Schematic Circuit Diagram

CAUTION

Remove Power plug from outlet before servicing this receiver. Avoid contact of chassis or component parts to external ground.

Alignment Procedure

Output Meter Alignment.—Connect the meter across the voice coil, and turn the receiver volume control to maximum.

Test-Oscillator.—Connect the low side of the test-oscillator to the receiver chassis, through a .01 mfd. capacitor, and keep the output as low as possible.

Pre-Setting Dial.—With gang condenser in full mesh, the pointer should be adjusted so that pointer is horizontal.

Antenna.—The set is equipped with a built-in loop antenna. If an outdoor antenna is used, it may be connected to the "ANT" terminal on rear of cabinet. It should not be longer than 100 feet, including lead-in. If it is longer, connect a 100 to 200 mmf. capacitor in series with the lead-in.

Power-Supply Polarity.—For operation on d-c, the power plug must be inserted in the outlet for correct polarity. If the set does not function, reverse the plug. On a-c, reversal of the plug may reduce hum.

Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. peak output—
1	12SK7 (I-F) grid in series with .01 mfd.	455 kc	Quiet point at 800 kc end of dial	C11, C12 (2nd I-F trans.)
2	Tuning condenser stator (ant.) in series with .01 mfd.			C9, C10 (1st I-F trans.)
3	Radiation loop consisting of two turns of wire 18 inches in diameter	1,600 kc	Full clockwise (out of mesh)	C7 (oscillator)
4		1,400 kc	Resonance on 1,400 kc signal	C3 (antenna)

Radiotron Socket Voltages

Type	Plate	Screen Grid	Cathode	Filament
12SA7 Det.	90V	90V	—	12V
12SK7	90V	90	1.1V	12V
12SQ7	40V	—	—	12V
35L6GT	84V	90V	5V	35V
35Z5GT	114V	—	112V	35V

Note:—All voltages are measured to common wiring insulated from chassis with a line voltage of 117 volts.

Precautionary Lead Dress

1. Audio coupling capacitor to volume control must be dressed under the terminal board and down against the corner of the chassis.
2. The voice coil leads from the output transformer to the speaker must be dressed away from the terminal on the terminal-board to which the above audio coupling capacitor is connected.
3. The output tube bypass condenser must be dressed away from the 12SQ7 tube.