

Crosley Corp.

Model: **5V2**

Chassis:

Year: **Pre October 1936**

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

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This schematic diagram illustrates a vacuum tube radio receiver circuit. The power supply section at the top left includes a transformer with primary taps labeled A, G, and 26. The secondary winding provides AC to a full-wave rectifier bridge consisting of four diodes (labeled 10, 11, 12, 13) and a filter capacitor (14). The B+ rail is connected to the positive terminal of the filter capacitor and passes through a series of resistors (18, 19, 20, 21, 22, 23, 24, 25) before reaching the plate of the first vacuum tube (50). The ground connection is established through a common return point (27) which connects to the cathode of the first tube and the negative terminal of the filter capacitor.

The signal path begins with an antenna input (A) connected to a tuned circuit (L-match network) consisting of an inductor (1) and capacitors (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). This is followed by a second tuned circuit (L-match network) and a third tuned circuit (L-match network). The output of the final tuned circuit is coupled to the grid of the second vacuum tube (51), which is configured as a detector or amplifier stage. The plate of the second tube is connected to a load resistor (16) and a variable capacitor (17).

The frequency of the oscillator is specified as 181.5 Kc. I.F. (Intermediate Frequency).

TUBE VOLTAGES—MODEL 5V2

Type	Where Used	El	Ep	Eg	Eg	Ek	Emup	Eg-osc	Ep-osc
6A7	Osc-Mod.	6.5	240	0	90	3	0	-15	125
6D6	I. F.	6.5	240	-3.5	125	0	0	—	—
6B7	Diode-AF	6.5	30	-3.5	40	0	—	—	—
80	Output	6.5	230	6.5	240	0	—	—	—
80	Rectifier	5.1	—	-18	—	240	—	—	—

ALL VOLTAGES ARE PLUS OR MINUS 10%. ALL DC VOLTAGES ARE MEASURED TO CHASSIS AT 117.5 LINE WITH 1000 OHMS PER VOLT 250-VOLT VOLTMETER. POWER DEMAND IS 50 WATTS AT 110 VOLTS 60 CYCLES. ALIGNMENT AND SERVICING PROCEDURE SAME AS ON MODEL 5V1.

PARTS LIST—MODEL 5V2

Item No.	Part No.	Description	Part No.	Description
1	G24-32000	Prestlector Coil	G10-26719	Ant.-Cnd. Terminal
2	G15-32002	Oscillator Coil	B-3356A	A.C. Cord and Plug
	G25-25025B	Coil Shield 1"	W-33566	Level Control
	W-25300	Coil Shield	W-25937	275 Ohm Resistor
	W-25981	Retaining Washer	W-21277A	60,000 Ohm Resistor
	W-21451C	Insulating Ring	W-21876	10,000 Ohm Resistor
	W-25024B	Coil Shield	W-25577	3 Megohm Resistor
	W-25300	Coil Shield	W-21455	500,000 Ohm Resistor
	W-25981	Insulating Washer	W-23785	500,000 Ohm Resistor
	W-21451C	Retaining Ring	W-21875	100,000 Ohm Resistor
	G1-32003	2nd. 1" F. Transformer	W-23785	500,000 Ohm Resistor
	W-25024B	Coil Shield	W-31883	8,500 Ohm Resistor
	W-25981	Insulating Washer	W-24900	25,000 Ohm Resistor
	W-21451C	Retaining Ring	W-21875	100,000 Ohm Resistor
	G2-32002	Tuning Condenser Gang	W-23785	500,000 Ohm Resistor
	G2-25050	Dial Assembly	W-418C	Speaker
	C8-32075	Drive Wheel Assembly	W-31007A	Speaker Cable
	C4-33005	1st. 1" F. Primary Trimmer Condenser	C6-30745	Power Transformer, 110 Volt, 50 Cy.
	W-25008A	1st. 1" F. Secondary Trimmer Cond.	G7-30745	Power Transformer, 220 Volt, 25 Cy.
	G3-33005	2nd. 1" F. Primary Trimmer Cond.	W-33245	Power Transformer Switch
	C3-32768	2nd. 1" F. Secondary Trimmer Cond.	G14-27312	Dial 1 Light Socket Assembly
	W-26571	0.0001 Mfd. 200 Volt Condenser	G47-27456	6-A 1/2" Socket
	W-30321A	0.0005 Mfd. 400 Volt Condenser	W-27981A	Tube Shield Base
	W-30321A	1.0 Mfd. 160 Volt Condenser	W-27981A	Tube Shield
	W-26521	0.02 Mfd. 200 Volt Condenser	W-27981D	Tube Shield
	W-30323	0.01 Mfd. 200 Volt Condenser	C48-27456	6-B 1/2" Socket
	W-25537A	0.001 Mfd. 400 Volt Condenser	W-27981A	Tube Shield Base
	W-30322A	0.003 Mfd. 200 Volt Condenser	W-29632A	Tube Shield
	W-23271A	0.005 Mfd. 200 Volt Condenser	G75-27456	6-D 1/2 Socket
	W-30322A	0.006 Mfd. 200 Volt Condenser	W-27981A	Tube Shield
	W-23271A	0.02 Mfd. 400 Volt Condenser	W-27981D	Tube Shield
	W-30059C	8.0 Mfd. 250 Volt (Yellow) Cond.	C48-27456	6-B 1/2" Socket
		8.0 Mfd. 450 Volt (Red) Cond.	W-27981A	Tube Shield Base
		8.0 Mfd. 450 Volt (-Red, -No Code) Condenser	W-29632A	Tube Shield
			C25-27456	-42 Socket
			C6-27456	-80 Mfd. 400 Volt Condenser
			W-30095	Ohm Resistor
			W-23013	30,000 Ohm Resistor
			W-23013	Knob (Black)
			W-32552	Knob (Brown)
			W-31585B	Eructicon
			W-31463	Eructicon

Figures in first column refer to parts shown in diagrams.

RCA R-10 DC

With the exception of the interlock, the R-10 DC is identical with the R-7 and R-9 DC chassis, shown on pages RCA 2-8, 2-9 and 2-10 in Rider's Manual, Volume II, pages 504-D-3 and 504-D4 in the early issues and on pages 1772, 1773 and 1774 in the Rider-RCA Combination Manual.

RCA RE-16

The RCA RE-16 receiver employs the standard R-7, R-9 AC Superette chassis already listed in Rider's Manual. To this chassis is added the phonograph motor, pickup and volume control. Service information other than those relating to replacement parts can be had by referring to the service notes covering the Superette and the Radiola 86 receivers.

In view of the absence of phonograph pickup connection to the Superette receiver, the pickup leads in the RE-16 are connected to terminals 1 and 2, the connecting link being removed. The ground connection upon the shielded lead is joined to terminal 4. The d.c. resistance of the pickup coil is 4.5 ohms. The pickup volume control is 60 ohms. The input transformer is tapped and the following values of d.c. resistance apply. Between terminals 1 and 2, 3.2 ohms; between terminals 2 and 3, 150 ohms, and between terminals 3 and 4, 4300 ohms. The connections of the pickup correspond with the data shown for the RE 16-A receiver, shown on pages RCA 4-19 and 4-20.

Crosley 5V2 and 5A3

The i-f. peak in these receivers is 181.5 kc. The alignment and servicing procedure for the 5V2 is the same as that for the 5V1, shown on pages Crosley 5-21 and 5-22 in Rider's Manual, Volume V. The circuit is substantially the same except for the addition of a 2,000-ohm resistor between the moving arm of switch 48 and the terminal which is a part of switch 48 and which connects to the low end of the input coil to the mixer portion of the 6A7. The voltage for the 5V2 is the same as that for the 5V1, shown in Rider's Manual.

Airline Model 62-166

The present production of these receivers differs from the early runs. In the early models the plate circuit of the 75 triode, contained only the plate coupling resistor of 150,000 ohms. In the

later models a plate filter resistor of 50,000 ohms was added. In addition a .25-mfd. bypass condenser, which bypassed this plate filter resistor, was also added.

In the early models the capacity range of the trimmers used across the windings of the first i-f. transformer, was 150 to 300 mmfds.

Majestic 400

The receiver schematic appears upon page Majestic 3-42 and in the RCA-Rider Combination Manual on page 1234.

In some receivers the 250-ohm resistor R-3 and the 2000-ohm resistor R-11 were replaced by a 160-ohm and a 2500-ohm resistor respectively. The purpose of this was to make the G-57A-S modulator tube oscillate more readily. If a 250-ohm and a 2000-ohm resistor are used in the receiver, it may be necessary to try two or three different tubes in this stage, when replacement is being made, before a tube is found, which will oscillate readily over the entire frequency band. If trouble is experienced along this line, the changing of either one or both of the resistors mentioned should eliminate the difficulty.

Condenser C-17 will be found to have a value of .05 mfd, in a number of receivers; however, it should be replaced with a .1-mfd unit, as shown in the schematic.

Silvertone 1840, 1842 Oscillator Plate Resistor

In some instances, the 10,000-ohm wire-wound resistor in the oscillator plate circuit of the models 1840 and 1842 opens during operation. The cause of the breakdown is mechanical, rather than electrical. Apparently, the form on which the resistance wire is wound expands sufficiently during operation to break the wire. If this break occurs during operation, a small arc occurs at the point of open, making a burnt mark upon the resistor and creating the impression that the unit failed due to overload. As has been stated, such is not the case. At any rate, replacement should be made with a 10,000-ohm carbon resistor rated at 2. watts and bearing part No. R10465.

Montgomery-Ward Models 62-185, 62-187, 62-190, 62-196

In the early models 6D6 and 42 glass tubes were used. These have been replaced by the metal tubes, 6K7 and 6F6 respectively.

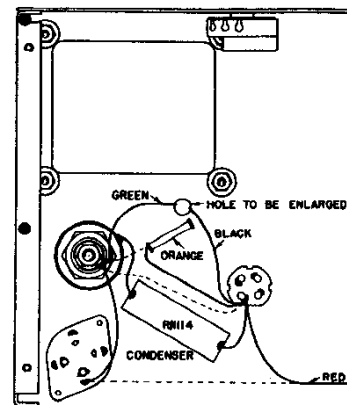
Silvertone 1720, 1725, 7065

Any trouble due to hum in these models can be eliminated by performing the following operations, the purpose being to add an additional section of filtering to the power supply.

Enlarge the hole in the chassis near the power transformer to about 0.25 inch diameter, as indicated in the illustration.

Remove the cover of the power transformer. To do this, it is first necessary to remove the four nuts on the under side of the chassis and then to unscrew the bolts that pass through the laminations. The tone control and switch will have to be dismounted in order to get at one of the transformer's nuts.

Mount a Part No. R10793B choke on top of the power transformer in place of the original transformer cover. Be sure to mount the choke so that its leads can come down through the enlarged hole in the chassis. Also be sure to tighten the bolts well, in order



Changes to be made in Silvertone Models 1720, etc.

to prevent hum. Then remount the transformer and choke assembly on the chassis and remount the tone control.

Make the wiring changes indicated in the illustration. The dotted lines represent the original wiring, which is to be changed and the solid lines show the new connections. Note that a new part, a 2-mf., 440-volt, dry electrolytic condenser, Part No. R11114, is added.

See page 4-22 of Rider's Manual for schematic diagram.

Sparton Models 61, 62

A 50-ohm, 2-watt resistor, Part No. B-6061-1, has been added in series with the plate lead of the 25Z5 that is drawn nearest the speaker field in the schematic diagram, shown on Sparton page 4-11 in Rider's Volume IV. This resistor protects the 25Z5 tube against voltage surges.

It is advisable to put this resistor in any Models 61 and 62 not so equipped that may service.