

PHILCO Model 39-71, Code 121



SERVICE BULLETIN No. 309 for members of RADIO MANUFACTURERS SERVICE

A PHILCO Service Plan

Specifications

TYPE OF CIRCUIT: Model 39-71 is a portable, four tube, battery operated superheterodyne receiver designed with a built-in loop aerial. Connections are also provided for an external aerial and ground.

New Philco tubes which require very low current for operation and specially designed for battery sets are used in this receiver.

A new very efficient Philco speaker is also included which gives high sound output with small audio power.

TUNING RANGE: 530 to 1720 K. C.

INTERMEDIATE FREQUENCY: 470 K. C.

PHILCO TUBES USED: One 1A7G, First Detector Oscillator; one 1N5G, I. F. Amplifier; one 1H5G, Second Detector, first audio and Automatic Volume Control; one 1C5G, Audio Output.

BATTERIES REQUIRED: One (1) Philco "A" Pack, Part No. 41-8017; two (2) Philco "B" Packs, Part No. 41-8018.

BATTERY DRAIN: "A"—240 Ma.; "B" 8.5 Ma. Total current with no signal.

AERIAL AND GROUND: In localities where station signals are weak, an aerial and ground may be necessary. A terminal strip will be found underneath the cabinet marked "Ant" "Grd" for this purpose.

Alignment of Compensators

EQUIPMENT REQUIRED:

(1) Philco Model 077 A. C. operated Signal Generator or Model 177 Battery operated, which have a fundamental frequency range from 115 to 36,000 K. C. are the correct instruments for this purpose.

(2) Output Meter, Philco Model 027 Circuit Tester, incorporates a sensitive output meter and is recommended.

(3) Philco Fiber Handle Screw Driver, Part No. 27-7059 and Fiber Wrench, Part No. 3164.

OUTPUT METER: The Philco 027 Output Meter is connected to the plate and screen terminals of the 1C5G tube. Set the meter to use the 0-30 volt scale.

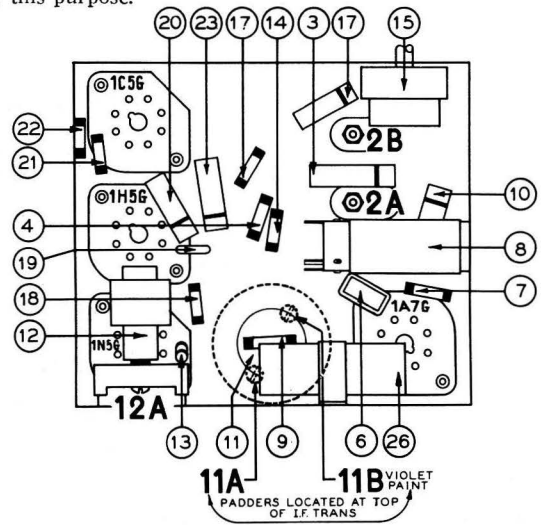


Fig. 1. Compensator and Part Locations Underside of Chassis

Operations in Order	SIGNAL GENERATOR			RECEIVER			Special Instructions
	Output Connections to Receiver	Dummy Antenna (Note A)	Dial Setting	Dial Setting	Control Settings	Adjust Compensators in Order	
1	1A7G Grid	.1 mfd.	470 K. C.	580 K. C.	Vol. Cont. Max.	12A, 11B, 11A	Note C
2	Ant. & Grd. Terminals	400 ohms	1550 K. C.	1550 K. C.	Vol. Cont. Max.	2B, 2A	Note B Note C

NOTE A—The "Dummy Antenna" consists of a condenser or resistor connected in series with the signal generator output lead (high side). Use the capacity or resistance as specified in each step of the above procedure.

NOTE B—**DIAL CALIBRATION:** In order to adjust the receiver correctly, the dial must be aligned to track properly with the tuning condenser. To adjust the dial proceed as follows: Turn the tuning condenser to maximum capacity (plates fully meshed). With tuning condenser in this position set the pointer to the small "black dot" at the low frequency end of the dial scale.

NOTE C—To adjust the I. F. compensators, remove the back from the cabinet, which is held in place by four screws. The chassis is then taken out by removing the four screws and two corks underneath the cabinet, and the Tuning and Volume knobs. The I. F. compensators are located on top of the I. F. transformers.

When adjusting the Antenna (2A) and Oscillator (2B) compensators, the chassis must be assembled in the cabinet with the batteries and loop in place. The Signal Generator output lead with the "Dummy Antenna" is then connected to the terminals marked "Ant" and "Grd" underneath the cabinet. The antenna and oscillator compensators are then adjusted through the holes in the bottom of the cabinet.

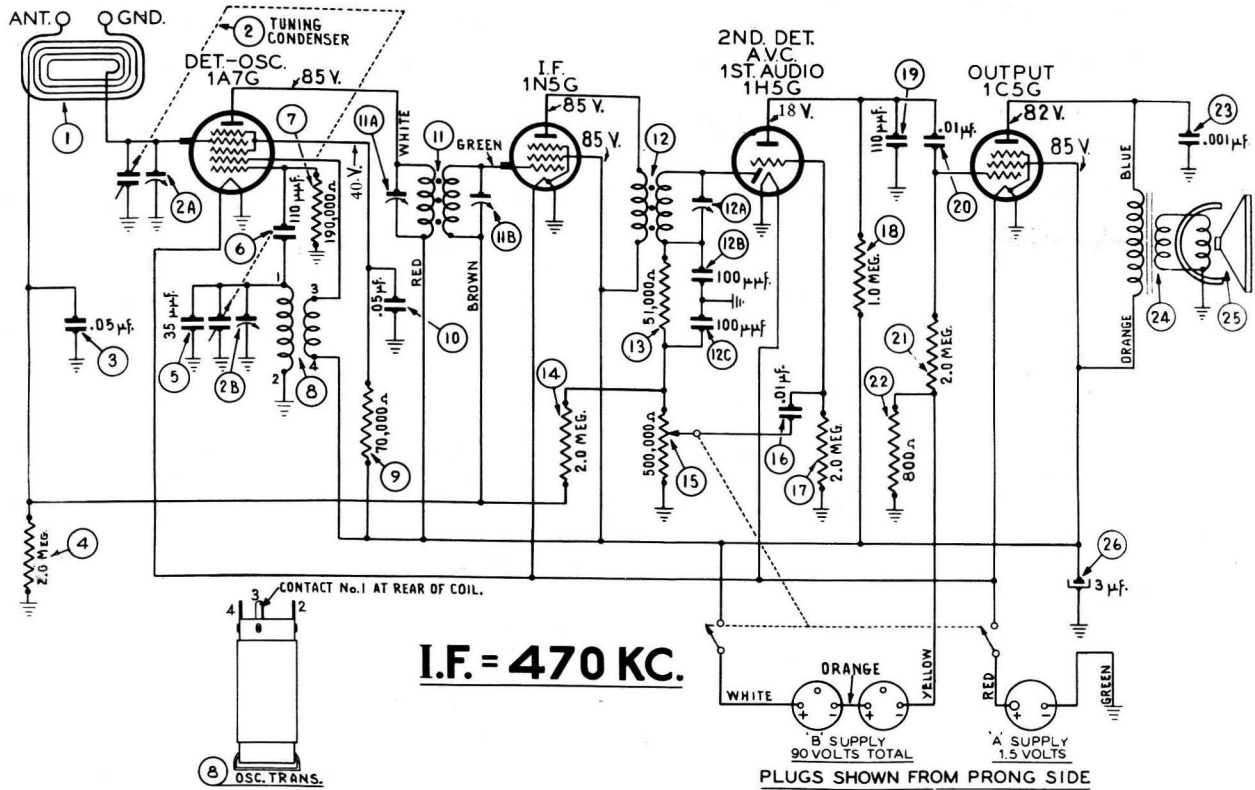


Fig. 2. Schematic Diagram and Tube Voltages

Replacement Parts

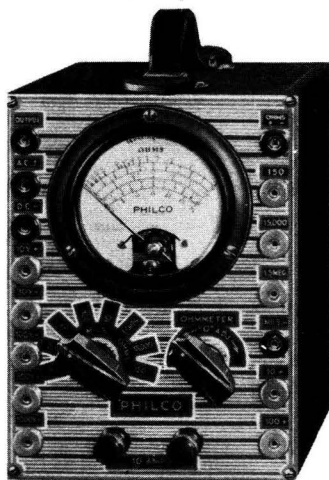
Code No.	Description	Part No.	Code No.	Description	Part No.	Code No.	Description	Part No.
1	Loop Assy.	40-6421	14	Resistor (2 megohms)	33-520339	26	Electrolytic Cond. (3 mf.)	30-2359
2	Tuning Cond.	31-2322	15	Volume Control & Switch	33-5301		Bezel Window	27-5434
3	Tubular Cond. (.05 mf.)	30-4519	16	Tubular Cond. (.01 mf.)	30-4572		Dial	31-2321
4	Resistor (2 megohm)	33-520339	17	Resistor (2 megohm)	33-520339		Dial Pointer	28-5185
5	Mica Cond. (35 mmf.)—mounted on top of tuning condenser	30-1095	18	Resistor (1 megohm)	33-510339		Dial Drive Cord Assy.	31-2323
6	Mica Cond. (110 mmf.)	30-1031	19	Mica Cond. (110 mmf.)	30-1031		Dial Tuning Shaft & Brkt. Assy.	31-2324
7	Resistor (190,000 ohms)	33-419339	20	Tubular Cond. (.01 mf.)	30-4572		Escutcheon (knobs)	56-1252
8	Oscillator Trans.	32-3118	21	Resistor (2 megohm)	33-520339		Escutcheon (screws)	W-2129
9	Resistor (70,000 ohms)	33-370339	22	Resistor (800 ohms)	33-180339		Knob (Tuning, Volume)	27-4331
10	Tubular Cond. (.05 mf.)	30-4444	23	Tubular Cond. (.001 mf.)	30-4201		Loop Antenna	40-6421
11	1st I. F. Trans. Assy.	32-3103	24	Output Trans. for Speaker No. 36-1451-3	36-1451-3		Pulley (Tuning Condenser)	28-6662
12	2nd I. F. Trans. Assy.	32-3081	25	Voice Coil Assy. for Speaker No. 36-1451-3	36-4090		Socket (6 prong)	27-6086
13	Resistor (51,000 ohms)	33-351339					Socket (7 prong)	27-6087
							Spring (Dial Cord)	28-8751
							Speaker	36-1451

- Battery Operated
- Self-Contained
- Ruggedly Constructed

SIZE

- 7 Inches High
- 5 Inches Wide
- 6 Inches Deep

Net Dealer Price
\$28.50



PHILCO CIRCUIT TESTER Model 026

The famous Model 026 Philco Circuit Tester has been the serviceman's standard for nearly three years—a compact moderate-priced complete set tester with 23 useful measuring ranges.

Equipped with a sensitive, high-quality meter, the 026 provides accurate tests of voltage, current, resistance and capacity, and makes an ideal output meter for use in alignment work. Provides 5 A.C. voltage ranges, 5 D.C. voltage ranges, 3 ohmmeter ranges, capacity range, and special shunt for auto radio current tests. Furnished complete with test prods, leads, output meter connectors and full instructions. A remarkable value.

PHILCO RADIO AND TELEVISION CORPORATION
Parts and Service Division Philadelphia, Pa.