

Radio-Phonograph Model 42-1001P, Code 122

SPECIFICATIONS

Model 42-1001, Code 122, is a table radio phonograph combination consisting of a five (5) tube superheterodyne radio, a manually operated turntable motor and a crystal reproducer.

The phonograph is automatically started when the pickup is lifted from its rest. A special switch operated by the pickup rest applies power to the phonograph motor and opens the cathode circuit of the radio. The sound output of the radio and phonograph is controlled by a new type dual volume control which also operates the power switch.

The radio includes a Philco built-in loop aerial, tuning band covering 540 to 1600 K.C., automatic volume control, tone control, beam power pentode audio output stage, permanent Magnet speaker and Philco LOKTAL tubes.

Intermediate Frequency: 455 K.C.

Power Supply: 115 volts A.C.

Philco Tubes: 7A8, converter; 7B7, I.F. Amplifier; 7C6, 2nd detector, A. V. C. 1st audio; 50L6GT, beam power audio output and in 50Y6GT, rectifier.

Aerial and Ground: Under ordinary operating conditions an outside aerial or ground is not required. In some locations, however, such as steel reinforced buildings and other shielded areas, an outside aerial should be used for maximum performance. For this purpose an outside aerial connection is located on the rear lower left corner of the chassis. Simply remove the lug from under the screw and attach the aerial lead to the lug.

Philco Safety Aerial, Part No. 40-6370, is especially designed for this radio, and can be obtained from your Philco Distributor.

Cabinet Dimensions:	Height 10 $\frac{3}{4}$ "	Width 16 $\frac{1}{4}$ "	Depth 13 $\frac{1}{2}$ "
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Note: When operating the radio the phonograph reproducer must be placed on its holder.

ALIGNING R. F. AND I. F. COMPENSATORS EQUIPMENT REQUIRED

- SIGNAL GENERATOR:** Covering the frequency range of the receiver, such as Philco Model 070.
- ALIGNING INDICATOR:** Either a vacuum tube voltmeter or an audio output meter may be used as an aligning indicator. Philco Models 027 or 029 circuit testers contain both these meters.
- TOOLS:** Philco Fiber Screw Driver, Part No. 45-2610.

CONNECTING ALIGNING INSTRUMENTS

AUDIO OUTPUT METER: If this type of aligning meter is used, connect it to the voice coil terminals of the speaker or from the plate of the 50L6GT tube to "B" (—) negative. Adjust the meter for the 0 to 10 volt scale.

The left terminal on the terminal panel at rear is also provided for connecting the audio output meter. If this terminal is used, the lowest A.C. scale of the meter should be used when aligning.

VACUUM TUBE VOLTMETER: To use the vacuum tube voltmeter as an aligning indicator, make the following connections: Attach the negative (—) terminal of the voltmeter to any point in the circuit where the A. V. C. voltage can be obtained. Connect the positive (+) terminal of the vacuum tube voltmeter to the chassis.

SIGNAL GENERATOR: When adjusting the I. F. padders, the high side of the signal generator is connected through a 1 mfd. condenser to the antenna

section of the tuning condenser. Connect the ground or low side of the generator to the chassis.

When aligning the R. F. padders a loop is made from a few turns of wire and connected to the signal generator output terminals; the signal generator is then placed close to the loop of the radio.

The receiver can be adjusted in the cabinet or removed from the cabinet.

When adjusting the radio outside the cabinet the loop aerial should be placed in approximately the same position around or near the chassis as when assembled.

After connecting the aligning instruments adjust the compensators as shown in the tabulation below. Locations are shown in Fig. 2.

If the indicating meter pointer goes off scale when adjusting the compensators, reduce the strength of the signal from the generator.

Operations In Order	SIGNAL GENERATOR		RECEIVER			Special Instructions
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators In Order	
1	Ant. Section of tuning	455 K. C.	540 K. C. Tuning Cond. Closed	Vol. Max.	12A, 12B, 10A, 10B	Note B
2	Loop see above instructions	1600 K. C.	1600 K. C.	Vol. Max.	(7B, Note C)	Note A
3	Loop see above instructions	1500 K. C.	1500 K. C.	Vol. Max.	(7A, Note D)	

NOTE A: DIAL POINTER CALIBRATION—In order to adjust the receiver correctly, the pointer must be adjusted to track properly with the tuning condenser. To do this, turn the tuning condenser to the maximum capacity (plates fully meshed). With the condenser in this position, set the tuning pointer on the first small line stamped in the scale plate on the left side. If adjusted in the cabinet, set the dial pointer to the mark on dial scale below 540 K.C.

NOTE B—Before adjusting compensators, turn down (10B) to tight position. Then adjust the compensators for maximum output in the following order: 12A, 12B, 10A and 10B.

Note C—Turn tuning condenser until dial pointer is on the first small line stamped in the scale plate from right side of chassis. Adjust padder (7B) to maximum at this point. If the radio is adjusted in the cabinet, set dial pointer to 1600 K.C.

Note D—Turn tuning condenser until dial pointer is on the second small line stamped in the scale plate from right side of chassis. Adjust padder (7A) to maximum at this point. If adjusted in cabinet, set pointer to 1500 K.C. on dial.

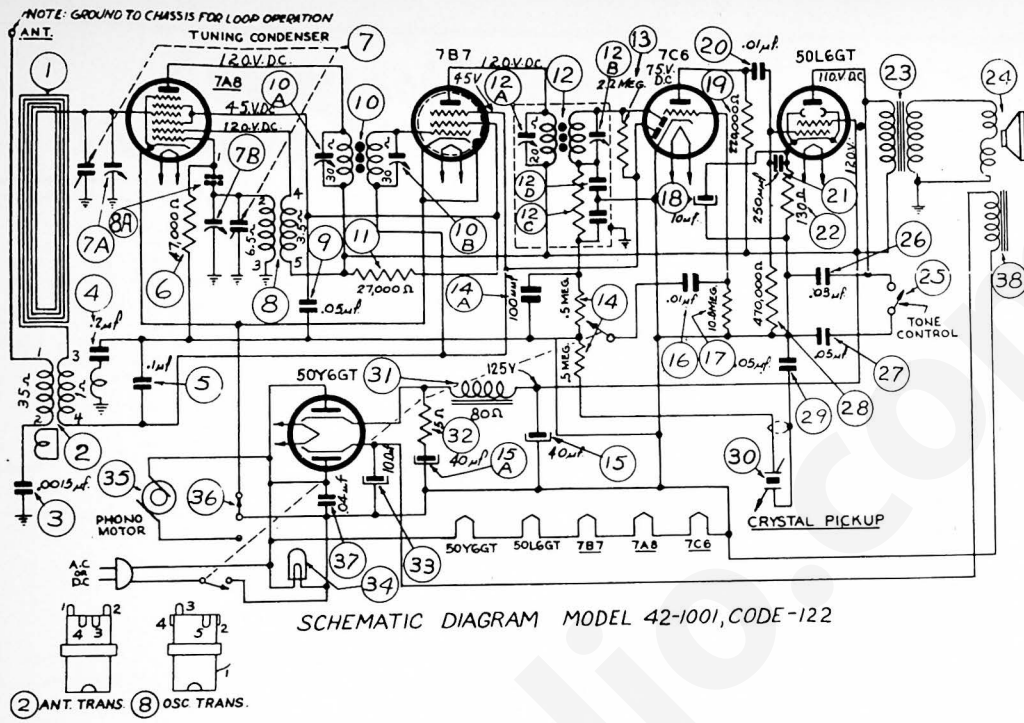


Fig. 1—Schematic Diagram—Model 42-1001, Code 122

THE TUBE SOCKET VOLTAGES INDICATED IN THE DIAGRAM WERE MEASURED WITH A 1,000 OHMS PER VOLTMETER PHILCO MODEL 027—POWER LINE VOLTAGE 117 VOLTS A.C.

REPLACEMENT PARTS

Schem. No.	Description	Part No.	Schem. No.	Description	Part No.	Schem. No.	Description	Part No.
1.	Loop Aerial	76-1224	31.	Filter Choke	32-8168	36.	Speaker	36-1570
	Washer (Mtg.)	W-152	32.	Resistor (15 ohms)	33-015339		Screw	W-2150
	Screw (Mtg.)	W-188	33.	Electrocond (10 mfd.)	30-2395		Socket (Loktal)	27-6177
2.	Aerial Transformer	28-3394	34.	Pilot Lamp	35-1265-2		Rivet	W-239
3.	Condenser (.0015 mfd., 200 volts)	28-5002	35.	Phone Motor	35-3047-2		Socket (50L6GT Tube)	27-6174
4.	Condenser (.02 mfd.) & Choke Assy.	30-4621		Turntable	W-151		Socket Assembly (Pilot Lamp)	76-1262
5.	Condenser (.1 mfd., 200 volts)	30-4586		Screw (Mtg.)	W-333		Washer (Chassis Mtg.)	W-410
6.	Resistor (47,000 ohms)	33-347339		Nut	W-2157		Screw (Chassis Mtg.)	W-2065
7.	Tuning Cond.	31-2527	36.	Motor Switch	27-4596			
7A.	Aerial Compensator (part of 7)			Sieve	28-5565			
7B.	Oscillator Comp. (part of 7)		37.	Switch Insulator	42-1651			
	Rubber Grommet	27-4610		Nut	27-9705			
	Drive Cord	31-2529		Switch Cover	W-681			
	Spring (Assy. Drive)	28-8954		Switch Plate	56-2109			
	Drive Shaft	31-2531		Screw	56-1793			
	Nut	W-2157		Washer	W-560			
8.	Oscillator Transformer	32-3562		Screw	30-4119			
	Mtg. Clip	28-5002	37.	Condenser (.04 mfd.)	30-4119			
8A.	Wire capacity (part of 8)		38.	Speaker field coil (Replace speaker 36-1570)	10535A			
9.	Condenser (.05 mfd., 200 volts)	30-4519		Cabinet	L-3199			
10.	1st I. F. Transformer	32-3603		Cable (Power)	27-5679			
	Nut	W-1919		Strap (Mtg.)	56-2068			
10A.	Primary Compensator (part of 10)			Screw	W-2150			
10B.	Secondary Compensator (part of 10)			Dial Pointer	56-2076			
11.	Resistor (27,000 ohms)	33-327339		Knob (Tuning-Volume)	54-4032			
12.	2nd I. F. Transformer	32-3601						
	Nut	W-1919						
12A.	Primary Compensator (part of 12)							
12B.	Secondary Compensator (part of 12)							
13.	Resistor (2.2 megohms)	33-522339						
14.	Volume Control	33-5437						
	Nut	W-2157						
14A.	Mica Condenser (100 mmd.)	60-110157						
15.	Electrolytic Condenser (40 mfd., 150 volts; 40 mfd., 150 volts; 10 mfd., 25 volts)	30-2501 30-4572 33-610339						
16.	Condenser (.01 mfd., 400 volts)	30-4572						
17.	Resistor (10 megohms)	33-610339						
18.	Electrolytic Condenser (10 mfd.) (part of 15)							
	Clamp	56-2229						
19.	Resistor (220,000 ohms)	33-422339						
20.	Condenser (.01 mfd., 400 volts)	30-4518						
21.	Mica Condenser (250 mmd.)	60-125157						
22.	Resistor (130 ohms)	33-13336						
23.	Output Transformer	32-8161						
24.	Cone Assy. (for speaker)	36-4210						
25.	Tone Control Switch	42-1562-2						
	Nut	W-684						
	Switch Insulator	27-9705						
	Switch Cover	56-1880						
26.	Condenser (.03 mfd., 400 volts)	30-4577						
27.	Condenser (.05 mfd., 400 volts)	30-4518						
28.	Resistor (470,000 ohms)	33-447339						
29.	Condenser (.03 mfd., 400 volts)	30-4516						
30.	Crystal Pickup Complete	35-2515						
	Pickup Bumper	54-4070						
	Cable (Chassis to Pickup)	3-3571						
	Needle	40-6158						
	Rubber Washer	54-4096						
	Rubber Washer	54-4095						
	Washer	W-851A						

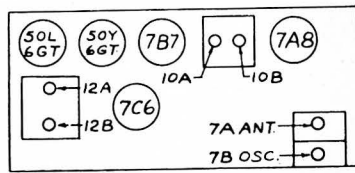


Fig. 2—Compensator Locations

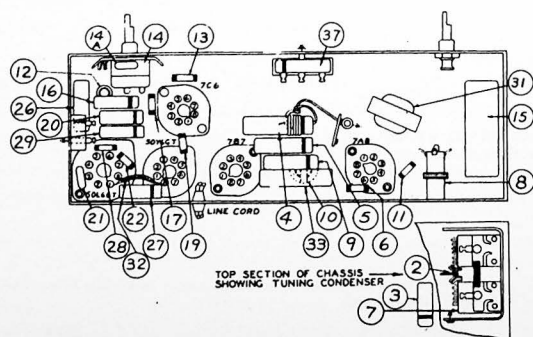


Fig. 3—Locations of Parts—Under Chassis

Radio-Phonograph Model 42-1001P, Code 121

SPECIFICATIONS

Model 42-1001, code 121, is a table type radio phonograph combination consisting of a five (5) tube superheterodyne radio, a manually operated turntable motor and a crystal reproducer.

The phonograph is automatically started when the pickup is lifted from its rest. A special switch operated by the pickup rest applies power to the phonograph motor and opens the cathode circuit of the radio. The sound output of the radio and phonograph is controlled by a new type dual volume control which also operates the power switch.

The radio includes a Philco built-in loop aerial, tuning band covering 540 to 1600 K.C., automatic volume control, tone control, beam power pentode audio output stage and Philco Loktal tubes.

INTERMEDIATE FREQUENCY: 455 K.C.

POWER SUPPLY: 115 volts A.C.

PHILCO TUBES: 7A8, converter; 7B7, I.F. Amplifier; 7C6, 2nd de-

rector, A. V. C. 1st audio; 50L6GT, beam power audio output and a 35Z3, rectifier.

AERIAL AND GROUND: Under ordinary operating conditions an outside aerial or ground is not required. In some locations, however, such as steel reinforced buildings and other shielded areas, an outside aerial should be used for maximum performance. For this purpose an outside aerial connection is located on the rear lower left corner of the chassis. Simply remove the lug from under the screw and attach the aerial lead to the lug.

PHILCO SAFETY AERIAL, Part No. 40-6370, is especially designed for this radio, and can be obtained from your Philco Distributor.

CABINET DIMENSIONS: Height $10\frac{3}{4}$ " Width $16\frac{7}{8}$ " Depth $13\frac{1}{2}$ "

NOTE: When operating the radio the phonograph reproducer must be placed on its holder.

ALIGNING R. F. AND I. F. COMPENSATORS EQUIPMENT REQUIRED

1. **SIGNAL GENERATOR:** Covering the frequency range of the receiver, such as Philco Models 070 or 177.

2. **ALIGNING INDICATOR:** Either a vacuum tube voltmeter or an

audio output meter may be used as an aligning indicator. Philco Models 027 or 028 circuit testers contain both these meters.

3. **TOOLS:** Philco Fiber Screw Driver, Part No. 45-2610.

CONNECTING ALIGNING INSTRUMENTS

AUDIO OUTPUT METER: If this type of aligning meter is used, connect it to the voice coil terminals of the speaker or from the plate of the 50L6GT tube to "B" (—) negative. Adjust the meter for the 0 to 10 volt scale.

The left terminal on the terminal panel at rear is also provided for connecting the audio output meter. If this terminal is used, the lowest A.C. scale of the meter should be used when aligning.

VACUUM TUBE VOLTMETER: To use the vacuum tube voltmeter as an aligning indicator, make the following connections: Attach the negative (—) terminal of the voltmeter to any point in the circuit where the A. V. C. voltage can be obtained. Connect the positive (+) terminal of the vacuum tube voltmeter to the chassis.

SIGNAL GENERATOR: When adjusting the I. F. padders, the high side of the signal generator is connected through a .1 mfd. condenser

to the antenna section of the tuning condenser. Connect the ground or low side of the generator to the chassis.

When aligning the R. F. padders a loop is made from a few turns of wire and connected to the signal generator output terminals; the signal generator is then placed close to the loop of the radio.

The receiver can be adjusted in the cabinet or removed from the cabinet.

When adjusting the radio outside the cabinet the loop aerial should be placed in approximately the same position around or near the chassis as when assembled.

After connecting the aligning instruments adjust the compensators as shown in the tabulation below. Locations are shown on Schematic.

If the indicating meter pointer goes off scale when adjusting the compensators, reduce the strength of the signal from the generator.

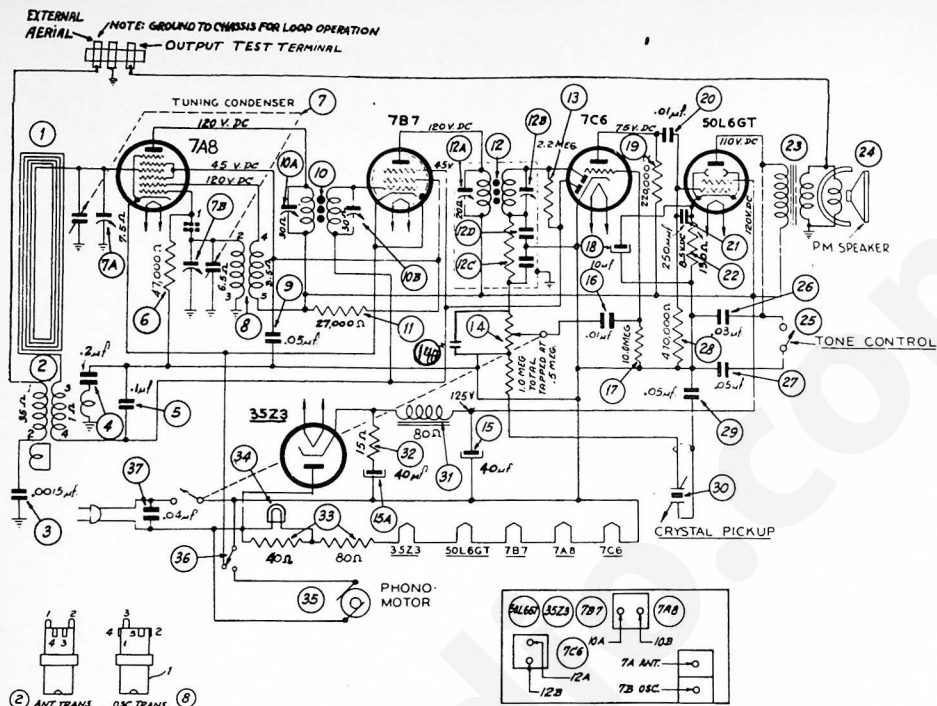
Operations In Order	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Setting Dial	Dial Setting	Control Setting	Adjust Compensators in Order	
1	Ant. Section of tuning	455 K.C.	540 K.C. Tuning Cond. Closed	Vol Max.	12A, 12B, 10A, 10B	Note B
2	Loop see above instructions	1600 K.C.	1600 K.C.	Vol Max.	(7B, Note C)	Note A
3	Loop see above instructions	1500 K.C.	1500 K.C.	Vol Max.	(7A, Note D)	

NOTE A: DIAL POINTER CALIBRATION—In order to adjust the receiver correctly, the pointer must be adjusted to track properly with the tuning condenser. To do this, turn the tuning condenser to the maximum capacity (plates fully meshed). With the condenser in this position, set the tuning pointer on the first small line stamped in the scale plate on the left side. If adjusted in the cabinet, set the dial pointer to the mark on dial scale below 540 K.C.

NOTE B—Before adjusting compensators, turn down (10B) to tight position. Then adjust the compensators for maximum output in the following order: 12A, 12B, 10A and 10B.

NOTE C—Turn tuning condenser until dial pointer is on the first small line stamped in the scale plate from right side of chassis. Adjust padder (7B) to maximum at this point. If the radio is adjusted in the cabinet, set dial pointer to 1600 K.C. If adjusted in the cabinet, set the dial pointer to 1600 K.C.

NOTE D—Turn tuning condenser until dial pointer is on the second small line stamped in the scale plate from right side of chassis. Adjust padder (7A) to maximum at this point. If adjusted in cabinet, set pointer to 1500 K.C. on dial.



SCHEMATIC DIAGRAM, MODEL 42-1001P, CODE 121

THE TUBE SOCKET VOLTAGES INDICATED IN THE DIAGRAM WERE MEASURED WITH A 1,000 OHMS PER VOLTMETER, PHILCO MODEL 027—POWER LINE VOLTAGE 117 VOLTS A.C.

REPLACEMENT PARTS

SCHEM. No.	DESCRIPTION	PART No.	SCHEM. No.	DESCRIPTION	PART No.	SCHEM. No.	DESCRIPTION	PART No.
1.	Loop Aerial	76-1224	28.	Resistor (470,000 ohms)	33-447339		Switch Cover	56-2109
	Washer (Mtg.)	W-152	29.	Condenser (.05 mfd., 400 volts)	30-4518		Switch Plate	56-1793
	Screw (Mtg.)	W-188	30.	Crystal Pickup Complete	35-2515		Screw	W-560
2.	Aerial Transformer	32-3394		Pickup Bumper	54-4070	37.	Condenser (.04 mfd.)	30-4119
	Clip	29-5002		Cable (Chassis to Pickup)	41-3571		Cabinet	10335A
3.	Condenser (.0015 mfd., 200 volts)	30-4553		Needle	40-6458		Cable (Power)	L-3199
4.	Condenser (.02 mfd.) & Choke Assy.	76-1161		Rubber Washer	54-4096		Dial	27-5679
5.	Condenser (.1 mfd., 200 volts)	30-4506		Rubber Washer	54-4095		Strap (Mtg.)	56-2068
6.	Resistor (47,000 ohms)	33-347339	31.	Filter Choke	32-8168		W-2150	
7.	Tuning Cond.	31-2527	32.	Resistor (15 ohms)	33-015339		Dial Points	56-2076
7A.	Aerial Compensator (part of 7)		33.	Filament Resistor (40-80 ohms)	33-3408		Knob (Tuning-Volume)	56-1541
7B.	Oscillator Comp. (part of 7)		34.	Pilot Lamp	34-2068		Screw	36-1541
	Rubber Grommet	27-4610	35.	Phono Motor	35-1265-2		Socket (Loktal)	27-6177
	Drive Cord	31-2529		Turntable	35-3847-2		Rivet	W-239
	Spring (Assy. Drive)	28-8954		Screw (Mtg.)	W-333		Socket (50L6GT Tube)	27-6174
	Drive Shaft	31-2531		Washer	W-151		Socket Assembly (Pilot Lamp)	76-1177
8.	Oscillator Transformer	32-3562		Rubber Grommet	27-4596		Washer (Chassis Mtg.)	W-410
	Mtg. Clip	28-5002		Slip	28-5655		Screw (Chassis Mtg.)	W-2065
9.	Condenser (.05 mfd., 200 volts)	30-4519	36.	Motor Switch	42-1651			
10.	1st I. F. Transformer	32-3603		Switch Insulator	27-9705			
	Nut	W-1949						
10A.	Primary Compensator (part of 10)							
10B.	Secondary Compensator (part of 10)							
11.	Resistor (27,000 ohms)	33-327339						
12.	2nd I. F. Transformer	32-3604						
	Nut	W-1949						
12A.	Primary Compensator (part of 12)							
12B.	Secondary Compensator (part of 12)							
13.	Resistor (2.2 megohms)	33-522339						
14.	Volume Control	33-5437						
	Nut	W-2157						
14A.	Mica Condenser (100 mfd.)	60-110157						
15.	Electrolytic Condenser (40 mfd., 150 volts; 40 mfd., 150 volts; 10 mfd., 25 volts)	30-2501						
16.	Condenser (.01 mfd., 400 volts)	30-4572						
17.	Resistor (10 megohms)	33-610339						
18.	Electrolytic Condenser (10 mfd., part of 15)							
19.	Clamp	56-2229						
20.	Resistor (220,000 ohms)	33-422339						
21.	Condenser (.01 mfd., 400 volts)	30-4572						
22.	Resistor (139 ohms)	60-125157						
23.	Output Transformer	33-113336						
24.	Cone Assy. (for Speaker 36-1541)	32-8164						
25.	Tone Control Switch	36-4199						
	Nut	42-1562-2						
	Switch Insulator	W-694						
	Switch Cover	27-9705						
26.	Condenser (.03 mfd., 400 volts)	56-1880						
27.	Condenser (.05 mfd., 400 volts)	30-4518						

FIG. 1—LOCATIONS OF PARTS—UNDERSIDE OF CHASSIS.