

# RADIO-PHONOGRAPH MODEL 41-601, CODE 121

## SPECIFICATIONS

Model 41-601 code 121 is a table type radio phonograph combination consisting of a five (5) tube super-heterodyne radio, a manually operated turntable motor and a crystal reproducer.

The phonograph is automatically started when the pickup rest 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 detector, 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.

**THE PHILCO UTILITY AERIAL,** Part No. 40-6384, is especially designed for this radio, and can be obtained from your Philco Distributor.

**CABINET DIMENSIONS:** Height 10 - 3/4 Width 16 - 7/8 Depth 13 - 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 077 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 the chassis. Adjust the meter for the 0 to 10 volt scale.

**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	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. Range Switch Brdcast.	12A, 12B, 10A, 10B	Note B
2	Loop see above instructions	1600 K.C.	1600 K.C.	Vol. Max. Range Switch Brdcast.	(7B, Note C)	Note A
3	Loop see above instructions	1500 K.C.	1500 K.C.	Vol. Max. Range Switch Brdcast.	(7A, Note D)	

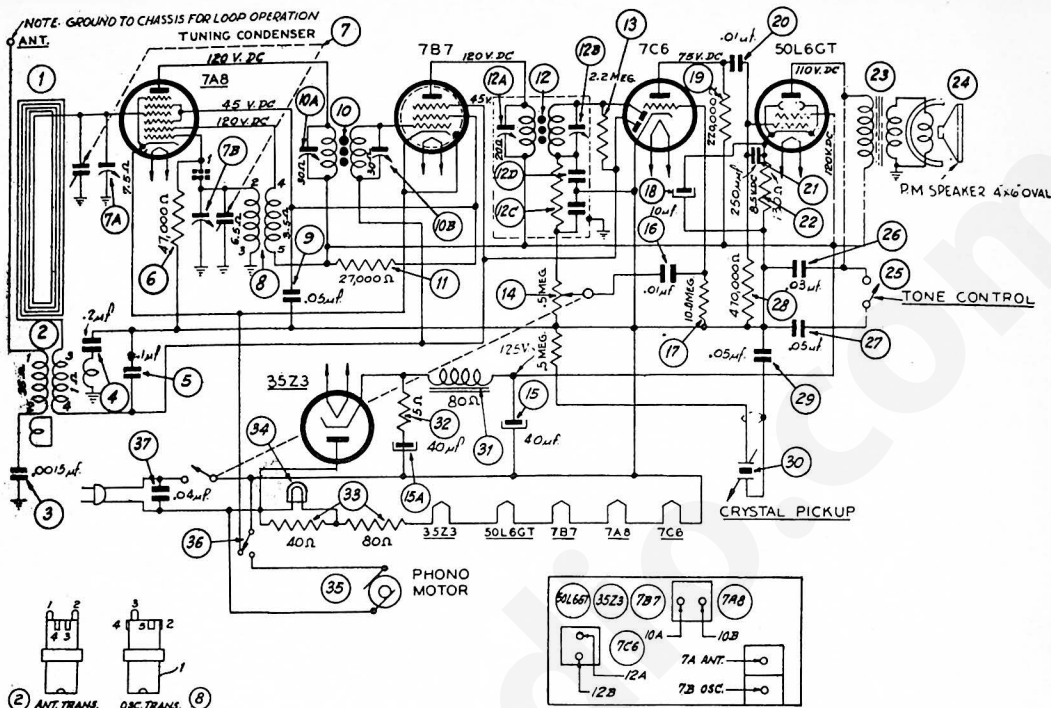
**NOTE A: DIAL POINTER CALIBRATION**—In order to adjust the receiver correctly, the pointer must be adjusted to track properly with the tuning condenser. To do this, turn the tuning condenser to the maximum capacity (plates fully meshed). With the condenser in this position, set the tuning pointer on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

**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.

# RADIO-PHONOGRAPH MODEL 41-601, CODE 121 (CONTINUED)



**SCHEMATIC DIAGRAM  
MODEL 41-601, CODE 121**

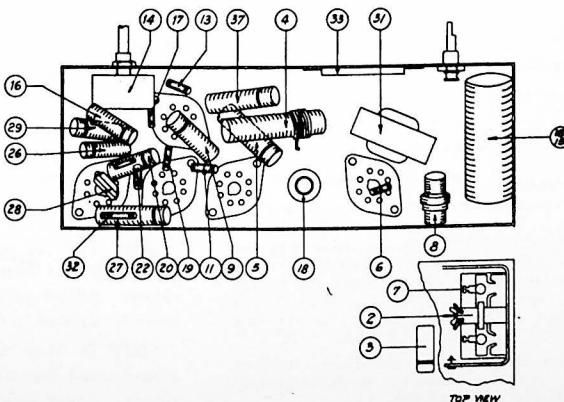
## Replacement Parts — Model 41-601

SCHEM. No.	DESCRIPTION	PART No.	SCHEM. No.	DESCRIPTION	PART No.	SCHEM. No.	DESCRIPTION	PART No.
1	Loop Aerial	76-1224	26	Condenser (.05 mfd., 400 volts)	30-4518	26	Condenser (.04 mfd.)	30-4119
2	Washer (Mtg.)	W-152	27	Crystal Pickup Complete	35-2456	27	Cabinet	10-435A
3	Screw (Mtg.)	W-333	28	Pickup Bumper	54-4070	28	Cable (Power)	L-3199
4	Aerial Transformer	32-3394	29	Cable (Chassis to Pickup)	41-3571	29	Dial	27-5679
5	Clip	28-5002	30	Filter Choke	32-8168	30	Dial Strap (Mtg.)	56-2068
6	Condenser (.0015 mfd., 200 volts)	30-4555	31	Resistor (15 ohms)	33-015339	31	Screw	W-1322
7	Condenser (.2 mfd., 200 volts)	30-4586	32	Filament Resistor (40-80 ohms)	33-3408	32	Dial Pointer	56-2076
8	Condenser (.1 mfd., 200 volts)	30-4586	33	Pilot Lamp	34-2068	33	Knob (Tuning-Volume)	54-4052
9	Resistor (47,000 ohms)	33-347339	34	Phono Motor	35-1240	34	Speaker	38-1541
10	Tuning Condenser	31-2527	35	Turntable	35-3047	35	Socket (Loktal)	27-6151
11	Aerial Compensator	Part of 7	36	Screw (Mtg.)	W-89	36	Socket (50L6GT Tube)	27-6184
12	Oscillator Compensator	Part of 7	37	Motor Switch	42-1651	37	Socket Assembly (Pilot Lamp)	76-1177
13	Rubber Grommet	27-4810						
14	Drive Cord	31-2529						
15	Spring (Assy. Drive)	28-5954						
16	Drive Shaft	31-2531						
17	Oscillator Transformer	32-3562						
18	Condenser (.05 mfd., 200 volts)	30-4519						
19	1st I. F. Transformer	32-3603						
20	Resistor (27,000 ohms)	33-327339						
21	2nd I. F. Transformer	32-3604						
22	Resistor (2.2 megohms)	33-522339						
23	Volume Control	33-5437						
24	Palmut	W-2157						
25	Electrolytic Condenser (40-40-10)	30-2382						
26	Condenser (.01 mfd., 400 volts)	30-4572						
27	Resistor (10 meg. ohms)	33-610339						
28	Electrolytic Condenser (10 mfd.)	Part of 26						
29	Clamp	56-1346						
30	Resistor (220,000 ohms)	33-42339						
31	Condenser (.01 mfd., 400 volts)	30-4572						
32	Mica Condenser (250 mmfd.)	80-125157						
33	Resistor (130 ohms)	33-119338						
34	Output Transformer	32-8164						
35	Cone Assembly (for Speaker 38-1541)	36-4199						
36	Tone Control Switch	42-1582-2						
37	Switch Plate	56-1793						
38	Screw	W-500						
39	Nut	W-684						
40	Condenser (.03 mfd., 400 volts)	30-4517						
41	Condenser (.05 mfd., 400 volts)	30-4518						
42	Resistor (470,000 ohms)	33-447339						

## PRODUCTION CHANGES

Electrolytic condenser (15) on diagram was changed from Part No. 30-2382 to No. 30-2501. The values of both condensers are the same 40 mfd., 150 volts; 10 mfd., 25 volts. Change in condenser design only.

The motor (35), Part No. 35-1240 listed in the bulletin is for operation on 115 volts, 60 cycle current. To operate this model on 115 volts, 50 cycle current the motor must be changed to Part No. 35-1250.



LOCATION OF PARTS — UNDERSIDE OF CHASSIS