Philco Radio & Television Corp.

	Model: 42-PT-7 (121,122)	**Chassis:**	**Year:** Pre 1945
	Power:	**Circuit:**	**IF:**
	Tubes:		
	Bands:		

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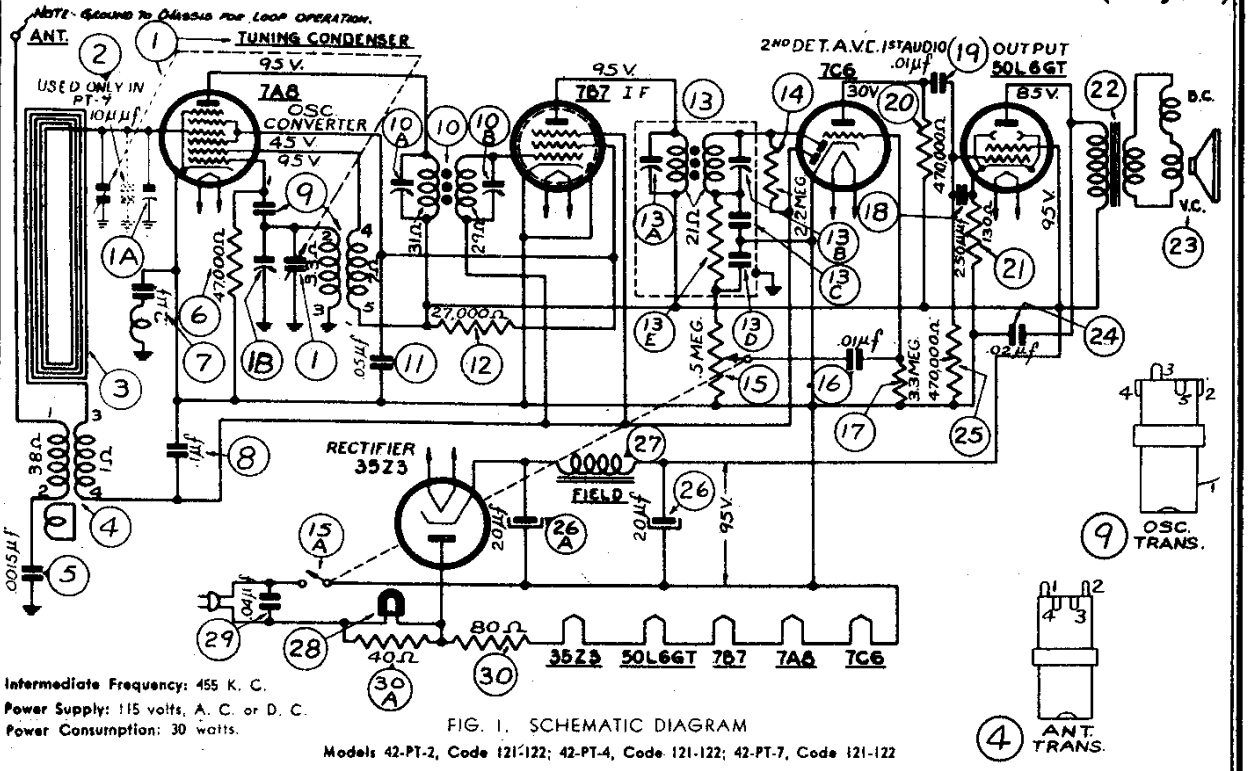
PHILCO RADIO & TELEVISION CORP.

MODELS 42-PT-2, 42-PT-4, 42-PT-7(121,122)



Intermediate Frequency: 455 K. C.
Power Supply: 115 volts, A. C. or D. C.
Power Consumption: 30 watts.

FIG. 1. SCHEMATIC DIAGRAM

Models 42-PT-2, Code 121-122; 42-PT-4, Code 121-122; 42-PT-7, Code 121-122

The D. C. Voltages indicated at the tube elements in the above diagram were measured with a 1000 ohms per voltmeter, Philco Model 027.

REPLACEMENT PARTS

Schem. No.	Description	Part No.
1.	Tuning Condenser (PT-2, 4, 7, Code 121)	31-2527
	Tuning Condenser (PT-2, 4, 7, Code 122)	31-2610
	Drive Shaft	31-2531
	Mtg. Nut	W-2157
	Drive Cord	31-2529
	Spring	28-8954
	Mtg. Grommet	27-4610
	Pointer	56-2076
1a.	Aerial Compensator (Part of Tuning Condenser)	
1b.	Oscillator Compensator (Part of Tuning Condenser)	
2.	Mica Condenser (10 mmfd., used in PT-7 only)	60-010137
3.	Loop Aerial (PT-2, Code 121-122)	318-2773
	Loop Aerial (PT-4, Code 121-122)	318-2773
	Loop Aerial (PT-7, Code 121)	76-1196
	Loop Aerial (PT-7, Code 122)	76-1196
	Mtg. Washer	W-152
	Mtg. Screw	W-881
4.	Aerial Transformer	32-3391
	Mtg. Clip	28-5002
5.	Condenser (.0015 mfd., 200 volts)	30-4621
6.	Resistor (47,000 ohms)	33-347339
7.	R. F. Choke and Condenser (.2 mfd.)	76-1161
8.	Condenser (.1 mfd., 200 volts)	30-4586
9.	Oscillator Transformer (PT-2, 4, 7, Code 121)	32-3562
	Oscillator Transformer (PT-2, 4, 7, Code 122)	32-3839
	Mtg. Clip	28-5002
10.	First I.F. Transformer	32-3603
	Mtg. Nut	W-1949FA3
10a.	Primary Compensator (Part of 10)	
10b.	Secondary Compensator (Part of 10)	
11.	Condenser (.05 mfd., 400 volts)	30-4519
12.	Resistor (27,000 ohms)	33-327337
13.	Second I.F. Transformer	32-3604
	Mtg. Nut	W-1949
13a.	Primary Compensator (Part of 13)	
13b.	Secondary Compensator (Part of 13)	
13c.	Condenser (Part of 13a and 13b)	
13d.	Condenser (Part of 13a and 13b)	
13e.	Resistor (Part of 13)	
14.	Resistor (2.2 megohms)	33-522339
15.	Volume Control	33-5434
	Mtg. Nut	W-2157
15a.	Power Switch (Part of 15)	
16.	Condenser (.01 mfd., 400 volts)	30-4572
17.	Resistor (3.3 megohms)	33-533339
18.	Mica Condenser (250 mmfd.)	60-125107
19.	Condenser (.01 mfd., 400 volts)	30-4572
20.	Resistor (470,000 ohms)	33-447339
21.	Resistor (130 ohms)	33-113336
22.	Output Transformer	32-8164
23.	Speaker	36-1533-9
	Cone Assembly	36-4198
24.	Condenser (.02 mfd., 400 volts)	30-4516
25.	Resistor (470,000 ohms)	33-447339
26.	Electrolytic Condenser (20 mfd.)	30-2382
26a.	Electrolytic Condenser (20 mfd.) (Part of 26)	
	Mtg. Clamp	56-1346
27.	Field Coil (Replace Speaker 36-1533)	
28.	Pilot Lamp	34-2068
	Socket Assembly	76-1177

Schem. No.	Description	Part No.
29.	Condenser (.04 mfd., 400 volts)	30-4119
30.	Filament Resistor (80 ohms)	33-3408
30a.	Filament Resistor (40 ohms) (Part of 30)	

MISCELLANEOUS PARTS

Cabinet and Loop (PT-2, code 121-122)	76-1195
Back	27-9817
Mtg. Stud	W-2235FA8
Cabinet and Loop (PT-4, code 121-122)	76-1218
Back	27-9870
Cabinet (PT-7, code 121)	10583A
Cabinet (PT-7, code 122)	10583B
Back	27-9944
Mtg. Screw	W-2023
Cord (Power)	L-3199
Dial Scale (PT-2, code 121)	27-5679
Dial Scale (PT-2, code 122)	27-5810
Mtg. Strap	56-2059
Mtg. Screw	W-2249FA3
Dial Scale (PT-4, code 121)	27-5695
Dial Scale (PT-4, code 122)	27-5811
Mtg. Strap	56-2059
Mtg. Screw	W-2249
Dial Scale (PT-7, code 121)	27-5781
Dial Scale (PT-7, code 122)	27-5812
Mtg. Strap	56-2068
Knob (PT-2, code 121, 122)	54-4052
Knob (PT-4, code 121, 122)	27-4805
Knob (PT-7, code 121, 122)	54-4135
Socket (50L6GT)	27-6174
Socket (LOKTAL TUBES)	27-6177
Screw (Chassis Mtg. PT-2-4)	W-1921FA9
Screw (Chassis Mtg. PT-7)	W-2065
Washer (Chassis Mtg. PT-2-4)	29-2615
Washer (Chassis Mtg. PT-7)	W-410

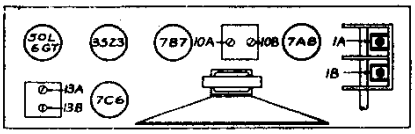


FIG. 2. COMPENSATOR LOCATIONS

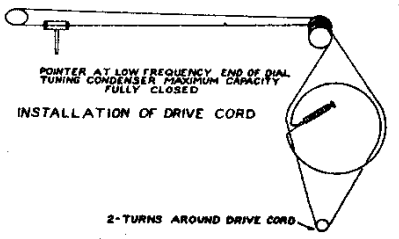


FIG. 3. DRIVE CORD ARRANGEMENT

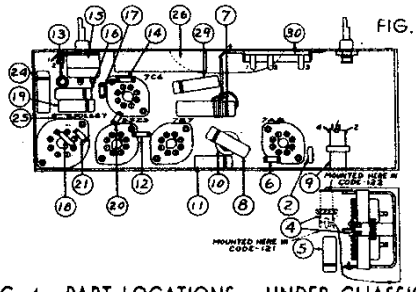


FIG. 4. PART LOCATIONS — UNDER CHASSIS

FOR ALIGNMENT SEE INDEX

December, 1941

MODELS 42-PT-2, 42-PT-4, 42-PT-7
MODELS 42-PT-10, 42-321
MODEL 42-1004

PHILCO RADIO & TELEVISION CORP.

ALIGNMENT FOR MODELS 42-PT-2, 42-PT-4, 42-PT-7 42-321, 42-PT-10

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. The aligning points on scale plate should also be used.

After connecting the aligning instruments adjust the compensators as shown in the tabulation below. Compensator locations are shown on the 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 42-321, -PT-10	Adjust Compensators in Order 42-PT-2, -PT-4, -PT-7	
1	Ant. Section of tuning	455 K. C.	540 K. C. Tuning Cond. Closed	Vol. Max.	18A, 18B, 14A, 14B	13B, 13A, 10A, 10B	Note B
2	Loop see above instructions	1600 K. C.	1600 K. C.	Vol. Max.	(6B, Note C)	(1B, Note C)	Note A
3	Loop see above instructions	1500 K. C.	1500 K. C.	Vol. Max.	(6A, Note D)	(1A, 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.

NOTES FOR MODELS 42-321, -PT-10

NOTE B—Before adjusing compensators, turn down (14B) to tight position. Then adjust the compensators for maximum output in the following order: 18A, 18B, 14A and 14B.

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 (6B) to maximum at this point.

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 (6A) to maximum at this point.

NOTES FOR MODELS 42-PT-2, -PT-4, -PT-7

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—When adjusting padder outside of cabinet, turn tuning condenser until dial pointer is on the first small line stamped in the scale plate from right side of chassis. Adjust padder (1B) to maximum at this point.

NOTE D—When adjusting padder outside of cabinet, turn tuning condenser until dial pointer is on the second small line stamped in the scale plate from right side of chassis. Adjust padder (1A) to maximum at this point.

MODEL 42-1004

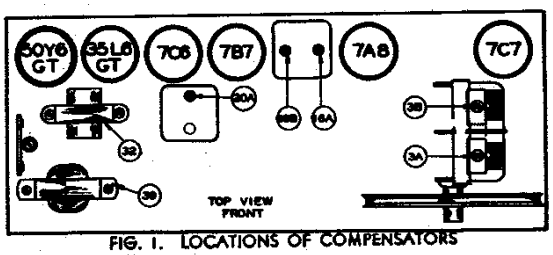


FIG. 1. LOCATIONS OF COMPENSATORS

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. A paper aligning scale, Part No. 27-9985, is also attached to the metal dial plate for adjusting the radio outside of the cabinet. The scale is marked with three lines indicating from left to right—"Dial Calibration Point," "580 K.C." and "1500 K.C." After connecting the aligning instruments adjust the compensators as shown in the tabulation below. Locations of the compensators are shown in fig. 1.

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.	20A, 16B, 16A	
2	Loop see above instructions	1600 K.C.	1600 K.C.	Vol. Max.	3B, 3A	Note A

Operations in Order	SIGNAL GENERATOR MODEL 42-1006 CODE 122		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. Switch-Radio	22A, 21B, 21A	
2	Loop see above instructions	1600 K.C.	1600 K.C.	Vol. Max. Switch-Radio	3B, 3A	Note A

NOTE A:—Dial Calibration: In order to adjust the receiver correctly, the dial must be aligned to track properly with the tuning condenser. To do this, proceed as follows: Turn the tuning condenser to the maximum capacity position (plates fully meshed). With the condenser in this position, set the tuning pointer on the small dot below 540 K.C.