

MODELS 40-81, T, CSL, Codes 121-122; 40-82, 40-83

SPECIFICATIONS

Models 40-81, Codes 121 and 122 are 4 tube portable battery operated superheterodyne receivers. These receivers are similar with the exception of the type tubes used. Incorporated in the receivers is a self-contained loop aerial and an extremely sensitive permanent magnet field speaker. In addition terminals are provided for connection an outside aerial and ground. The receiver is operated from a self-contained A-B battery pack.

TUNING RANGE: 540 to 1550 K. C.

INTERMEDIATE FREQUENCY: 455 K. C.

PHILCO TUBES USED: Model 40-81, Code 121: 1-1LA6, 1st Detector and Oscillator; 1-1LN5, I. F. Amplifier; 1-1LH4, 2nd Detector, A. F. Amplifier and Automatic Volume Control; and 1-1LA4, Power Output.
Model 40-81, Code 122: 1-1A7G, 1st Detector and Oscillator; 1-1N5G, I. F. Amplifier; 1-1H5G, 2nd Detector, A. F. Amplifier and Automatic Volume Control; and 1-1A5G, Power Output.

PHILCO BATTERIES REQUIRED: One P-41A-4FL.

BATTERY CURRENT:

"A" Battery, 200 M. A.

"B" Battery, 5.6 M. A.

Model 40-82, Code 121, is a 4-tube portable battery operated superheterodyne radio and covers the standard broadcast frequency range from 540 to 1550 K. C. This Model is similar to Philco Model 40-81, Code 122, with the exception of the cabinet, and several of the replacement parts.

The following service data listed for Model 40-81, Code 122, also applies to Model 40-82, Code 121. The parts used in 40-82 which differ from those shown for Model 40-81, Code 122, are as follows:

Knobs	27-4876
Pointer	27-4891
Scale	27-5561
Tuning Condenser	31-2432
Cone Screen	56-1255
Cabinet	10450A

MODEL 40-83

Model 40-83 is similar to Model 40-81, Code 122, with the exception of the following parts:

Grille Screen	56-1539
Scale	27-5550
Pointer	56-1326

The service data listed for Model 40-81, Code 122, applies to Model 40-83.

MODEL 40-81, CODES 121-122

To improve the padding at 1500 K. C., condenser (2) 25 mmfd., Part No. 30-1137 changed to 15 mmfd. Part No. 61-0038.

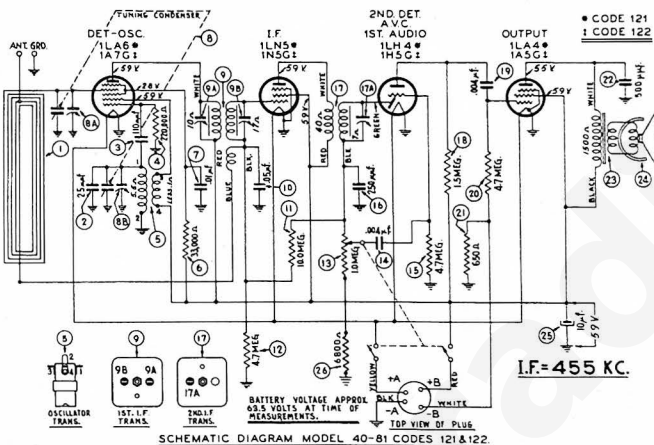
Tuning condenser, dial scale, and pointer changed on later production receivers. These changes are as follows:

(8) Tuning Condenser	Early Production	31-2402	Later Production	31-2432
Dial Scale	27-5538	27-5538	27-5561	27-5561
Pointer	56-1326	56-1326	27-4891	27-4891

MODEL 40-81, CODE 122

To improve the operating characteristics of the receiver at 550 K. C. and prevent oscillation the following items should be observed:

1. The loop wire going to the 1A7 grid, the wire from the 1A7 grid to the wiring panel and the wire from the tuning condenser antenna section lug to the wiring panel must be kept as far away from the 1A7 tube as is possible.
2. The second I. F. Shield must be tightly fastened to the sub-base so that no openings exist between the base and the bottom of the shield.



SCHEMATIC DIAGRAM MODEL 40-81 CODES 121&122

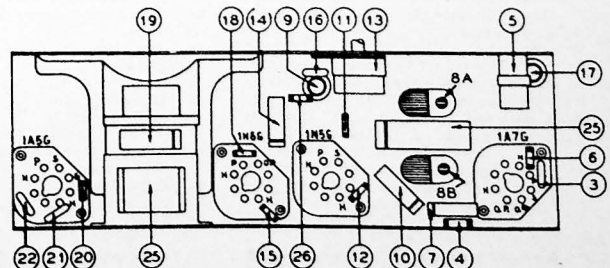
See Page 40 for Aligning Procedure.

REPLACEMENT PARTS

SCH. No.	DESCRIPTION	PART No.	SCH. No.	DESCRIPTION	PART No.	SCH. No.	DESCRIPTION	PART No.
1	Loop Assembly (Part of Cabinet)	10413A	Knobs (Volume and Tuning)	27-4876	Scale	27-5561		
2	Mica Condenser (18 mmfd.)	61-0038	Pointer	27-4891	Tuning Condenser	31-2432		
3	Mica Condenser (110 mmfd.)	30-1031	Speaker	36-1481	Grille Screen	56-1255		
4	Resistor (220,000 ohms, 1/2 watt)	33-422339	Shield (Tube, Code 122)	36-1566	Cabinet	10450A		
5	Oscillator Transformer	32-3277	Sockets (Loktal, Code 121)	55-0375				
6	Resistor (33,000 ohms, 1/2 watt)	33-333339	Sockets (Octal, Code 122)	27-6133				
7	Tubular Condenser (.01 mfd.)	30-4972	Spring (Drive Cord)	26-8751				
8	Tuning Condenser Assembly	31-2432	Turning Shaft Assembly	36-9876				
9	1st I. F. Transformer Assembly	32-3265						
10	Tubular Condenser (.08 mfd.)	30-4819						
11	Resistor (10.0 meg., 1/2 watt)	33-610339						
12	Resistor (4.7 meg., 1/2 watt)	33-547339						
13	Volume Control and On-Off Switch	33-5331						
14	Tubular Condenser (.004 mfd.)	30-4978						
15	Resistor (4.7 meg., 1/2 watt)	33-547339						
16	Mica Condenser (250 mmfd.)	61-0033						
17	2nd I. F. Transformer Assembly	32-3266						
18	Resistor (1.8 meg., 1/2 watt)	33-818339						
19	Tubular Condenser (.004 mfd.)	30-4978						
20	Resistor (4.7 meg., 1/2 watt)	33-847339						
21	Resistor (680 ohms, 1/2 watt)	33-168326						
22	Mica Condenser (500 mmfd.)	30-1114						
23	Output Transformer	32-8062						
24	Cone and Voice Coil Assembly (Speaker Part No. 36-1481-3)	36-4121						
25	Electrolytic Condenser (10 mfd., 180 V.)	30-2396						
26	Resistor (6800 ohms, 1/2 watt)	33-268339						

MISCELLANEOUS PARTS

Acetate Window	27-5541
Cabinet (40-81)	10413A
Clip (Coil Mounting)	26-8002
Drive Card Assembly	31-2411
Dial (40-81)	27-5561
Grille Screen	56-1539



PART LOCATIONS, UNDERSIDE OF CHASSIS, MODEL 40-81