

Philco Radio & Television Corp.

Model: 42-1002(121,122)

Chassis:

Year: Pre 1945

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

[Riders Volume 14 - PHILCO 14-85](#)

[Riders Volume 14 - PHILCO 14-86](#)

MODEL 42-1002(121,122)
 MODEL 42-1003(121,122)

PHILCO RADIO & TELEVISION CORP.

MODEL 42-1002, CODES 121-122

MODEL 42-1002, Codes 121-122 are six tube alternating current operated superheterodyne radio-phonograph combinations.

In general Codes 121 and 122 of this model are similar in design with the exception of the speakers, rectifier tubes and rectifier circuits. Code 121 contains a six-inch permanent magnet dynamic speaker and a type 35Z3 rectifier tube. The complete schematic diagram for code 121 is shown. Code 122 chassis incorporates a six-inch electrodynamic speaker and a type 50Y6GT rectifier tube. The rectifier circuit for code 122 is shown.

RADIO SECTION

Features of design included in the radio are: Built-in loop aerial; automatic volume control; beam power pentode audio output; two position tone control; Philco LOKTAL tubes; and a Permanent Magnet Speaker.

TUNING RANGE FREQUENCY: 540 to 1600 K.C.

INTERMEDIATE FREQUENCIES: 455 K.C.

AUDIO OUTPUT: 1.5 watts.

POWER SUPPLY: 115 volts, 60 cycle A.C.

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.

PHONOGRAPH SECTION

The phonograph consists of a rim drive turntable motor and a manually operated crystal pickup which uses a jewel needle. The phonograph is operated through the audio system of the radio.

The sound output of the radio and phonograph is controlled by a special dual volume control combined in one unit. The "ON-OFF" power switch is also included in the volume control. The phonograph motor is automatically started when the pickup is lifted from its rest and is designed to operate on 115 volts, 60 cycle, or 115 volts, 50 cycle A.C. power supply. When operating on 115 volts, 50 cycle current, a special spring collar, part No. 28-8999 must be placed on the motor driveshaft pulley.

OUTSIDE AERIAL: Under ordinary operating conditions, the loop aerial has sufficient pickup for reception of stations. In some locations, however, such as steel reinforced buildings, and other shielded areas where signal strength is weak, an additional outside aerial should be used. The Philco Safety Aerial, Part No. 40-6370 is recommended for use with this model.

The outside aerial connection consisting of a wire and lug is located on the rear lower left corner of the chassis; remove the lug from under the screw and attach the aerial.

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 of the compensators are shown on the schematic diagram.

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

PROCEDURE MODEL 42-1002, CODES 121-122

Operations in Order	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators in Order	
1	Tuning Cond. Stator Plate Lug	455 K. C.	540 K. C. Tuning Cond. Closed	Vol. Max.	19B 19A 15B 15A	Note B
2	Loop see above instructions	1500 K. C.	1500 K. C.	Vol. Max.	4B	Note A
3	Loop see above instructions	1500 K. C.	1500 K. C.	Vol. Max. Range Switch Brdct.	4A	

PROCEDURE MODEL 42-1003, CODES 121-122

1	Tuning Cond. Stator Plate Lug	455 K. C.	540 K. C. Tuning Cond. Closed	Vol. Max. Band Switch Brdct.	45A 41A 40B 40A	Note C
2	Loop on Generator see above instructions	1500 K. C.	1500 K. C.	Vol. Max. Band Switch Brdct.	4B, 4A	Note A
3	Loop on Generator see above instructions	580 K. C.	580 K. C.	Vol. Max. Band Switch Brdct.	33	Roll Tuning Condenser
4	Loop on Generator see above instructions	1500 K. C.	1500 K. C.	Vol. Max. Band Switch Brdct.	6B	
5	Loop on Generator see above instructions	15 M. C.	15 M. C.	Band Switch "SW"	33A, 3 Note D	

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 mark just below 500 K. C.

NOTE B—Before adjusting the I. F. compensators, tighten 15A compensator, then adjust compensators in the order as shown once only.

NOTE C—Before adjusting the I. F. compensators, tighten 40B and 40A compensators, then adjust compensators in the order as shown in the adjacent column once only for maximum output.

NOTE D—Turn tuning condenser until pointer is on 15 M. C. mark, then adjust oscillator compensator 33A to maximum on the second signal oval from the right position (compensator closed).