

Philco Radio & Television Corp.

Model: 212

Chassis:

Year: Pre October 1937

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

Riders Volume 2 - PHILCO 2-6

Riders Volume 8 - PHILCO 8-10

Riders Volume 1 - PHILCO 1-26

Riders Volume 4 - PHILCO 4-59

Numbering of Philco Coils

For the purpose of identification, Philco coils are being code numbered. These numbers are stamped upon the mounting bracket before the part leaves the National Service Station. The following is a list of these coils (Dated Jan. 1932)

KEY NO. IN SERVICE BULLETIN DIAGRAM

CODE NO.	PART NO.	USED IN MODELS	KEY NO. IN SERVICE BULLETIN DIAGRAM
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1	3075A	511, 86, 87	○○○
2	3075B	511, 86, 87	○○○
3	3506B	65	○
4	3506A	65	○
5	3744A	95, 96	○○
6	3744B	95, 96	○○
7	3744C	95, 96	○○
8	3744D	95, 96	○○
9	3834A	90 (Pentode Output)	○
10	3834B	76, 77, 40, 41	○○○○
11	3834C	76, 77, 40, 41	○○○○
12	3834D	20, 21	○○○○
13	3834E	20, 21	○○○○
14	3834F	111, 112	○○○○
15	3834G	111, 112	○○○○
16	3834H	111, 112	○○○○
17	3834I	111, 112	○○○○
18	3834J	111, 112	○○○○
19	3834K	46, 46E	○○○○
20	3834L	46, 46E	○○○○
21	4182A	30	○
22	4182B	30	○
23	03014	90 (all Models)	○○
24	03015	90 (all Models)	○○
25	03016	90 (all Models)	○○
26	03052	70, 35	○○
27	03053	70, 35	○○
28	03233	50	○
29	03234	50	○
30	03320	35	○
31	03321	35	○
32	03360	90 (Pentode Output)	○
33	03013	90 (45's Output)	○
34	03009	90 (all Models), 35	○
35	03038	111, 112	○○
36	03039	111, 112	○○
37	03040	111, 112	○○
38	03091	70, 35	○○
39	03092	70, 35	○○
40	03143	90 (45's Output)	○
41	03784	45, 470, 480	○
42	03850	51	○
43	03881	51	○
44	03882	51	○
45	03887	51	○
46	03887	51	○
47	03886	51	○

Coil Numbering Standard Compensating Condensers

PHILCO RADIO & TELEVISION CORP.

Standard Compensating Condensers

The various compensating condensers used in the models 35, 70, 270, 370, 90, 112, and 212 have been changed so as to include a bakelite mounting board on which the code letter of the condenser appears. In the case of the I. F. compensating condensers, which have been used in conjunction with a parallel fixed condenser, the new compensating condensers have been increased in capacity so that the fixed condensers are no longer required. For replacement purposes, if desired, the new compensating condensers can be substituted on earlier sets for the earlier combination of a fixed and an adjustable condenser.

The low frequency compensating condensers have been changed with respect to the bakelite mounting, but their capacity remains unchanged, thereby requiring the parallel fixed condenser as in the past.

All of these new condensers can be identified by the letter which is stamped on the bakelite mounting board. For example part 04000-E has the letter E stamped over the surface of the mounting board; part 04000-F has the letter F stamped on the board.

The following table lists the part numbers of the various new condensers, their identification code letter, capacity range, where used, the superseded part number, and the part number of the parallel fixed condenser when one is still used.

(#98 - Dated Sept. 1931)

Part Number	Identification Code Letter	Capacity Range Mmf.	Used on Models	Supersedes	Used with Fixed Condenser
04000-B	B	40-250	90 (Early and Late)	03050	4520 (700 mmf.)
04000-D	D	6-50	112, 212	3772-A	—
04000-E	E	5-30	112, 212	3968-A	—
04000-F	F	40-250	112, 212	3772-B	4520 (700 mmf.)
			370 70, 270	03120	5120 (410 mmf.)
			35	03249	5120 (410 mmf.)
04000-H	H	40-180	70*, 270*, 370* 90* early	03051	—
04000-J	J	40-180	70*, 270*, 370*, 212* 112*, 90* early	3772-C	—
04000-K	K	30-140	70*, 370*	03061	—
04000-L	L	30-140	270*	03262	—
04000-M	M	15-130	112*	3772-D	—
			35*	03411	—

*FIXED PARALLEL CONDENSER NOT REQUIRED

MODELS 15, 111, 112 (Above
Ser. #174001), 211
212, 211A, 212A
MODELS 22, 22L, 71, 270, 370

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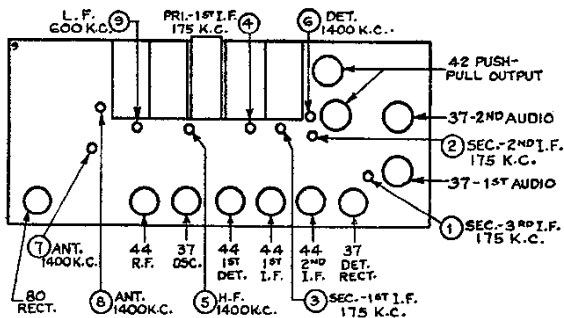
MODELS 35, 35B, 36, 37
Alignment, Trimmers

MODEL NOS. 15, 111, 112, 211, 212

Signal Generator Connection	Signal Generator Frequency	Dial Position	Wave Band Switch Position	Trimmer Number	Output Signal
Remove grid clip from 1st det.					
1st det.	175 k.c.	55	...	1	Max.
"	"	"	...	2	Max.
"	"	"	...	3	Max.
"	"	"	...	4	Max.
Connect grid clip to 1st det.					
Ant.**	1400 k.c.	140	...	5	Max.
"	"	"	...	6	Max.
"	"	"	...	7	Max.
"	"	"	...	8	Max.
"	600 k.c.	60	...	9	Max.**
"	1400 k.c.	140	...	5	Max.

* While rocking.

** Connect 200-mmf. condenser between signal generator and antenna post, at the antenna post.



MODEL NOS. 35, 36

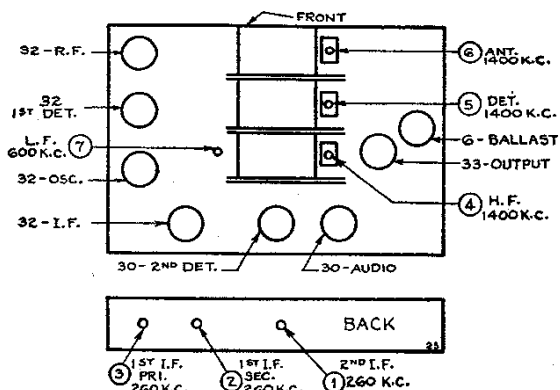
Signal Generator Connection	Signal Generator Frequency	Dial Position	Trimmer Number	Output Signal
Remove grid clip from 1st det.				
Control grid of 1st det.	260 k.c.	55	1 ¹	Max.
"	"	"	2 ¹	Max.
"	"	"	3 ¹	Max.
Connect grid clip to 1st det.				
Ant.*	1400 k.c.	140	4	Max.
"	"	"	5	Max.
"	"	"	6	Max.
"	600 k.c.	60	7 ²	Max.**
"	1400 k.c.	140	4	Max.

Note 1.—(1), (2), and (3) are accessible at rear of chassis.

Note 2.—(7) is accessible through hole from top of chassis.

* Connect a 200-mmf. condenser between signal generator and antenna post of set, at the antenna post.

** While rocking.

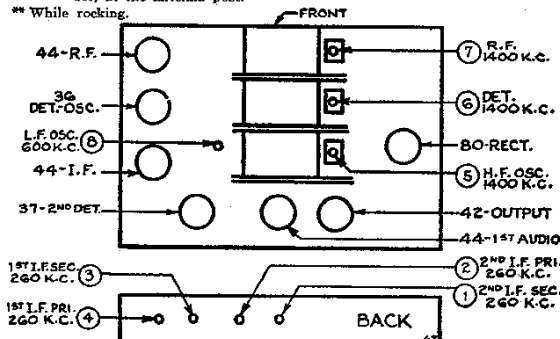


MODEL NOS. 71, 270, 370, 22, 22L

Signal Generator Connection	Signal Generator Frequency	Dial Position	Wave Band Switch Position	Trimmer Number	Output Signal
Remove grid clip from det.-osc.					
Control grid of det.-osc.	260 k.c.	55	...	1	Max.
"	"	"	...	2	Max.
"	"	"	...	3	Max.
"	"	"	...	4	Max.
Connect grid clip to det.-osc.					
Ant.	1400 k.c.	140	...	5	Max.
"	"	"	...	6	Max.
"	"	"	...	7	Max.
"	600 k.c.	60	...	8	Max.**
"	1400 k.c.	140	...	5	Max.

* Connect a 200-mmf. condenser between signal generator and antenna post of set, at the antenna post.

** While rocking.

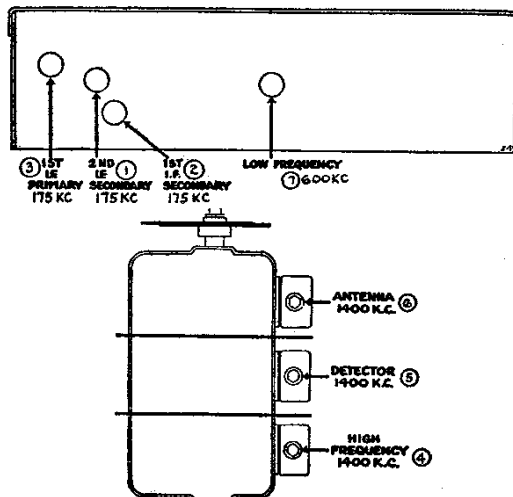


MODEL NO. 37

Signal Generator Connection	Signal Generator Frequency	Dial Position	Trimmer Number	Output Signal
Remove grid clip from 1st det.				
Control grid of 1st det.	175 k.c.	55	1	Max.
"	"	"	2	Max.
"	"	"	3	Max.
Connect grid clip to 1st det.				
Ant.*	1400 k.c.	140	4	Max.
"	"	"	5	Max.
"	"	"	6	Max.
"	600 k.c.	60	7	Max.**
"	1400 k.c.	140	4	Max.

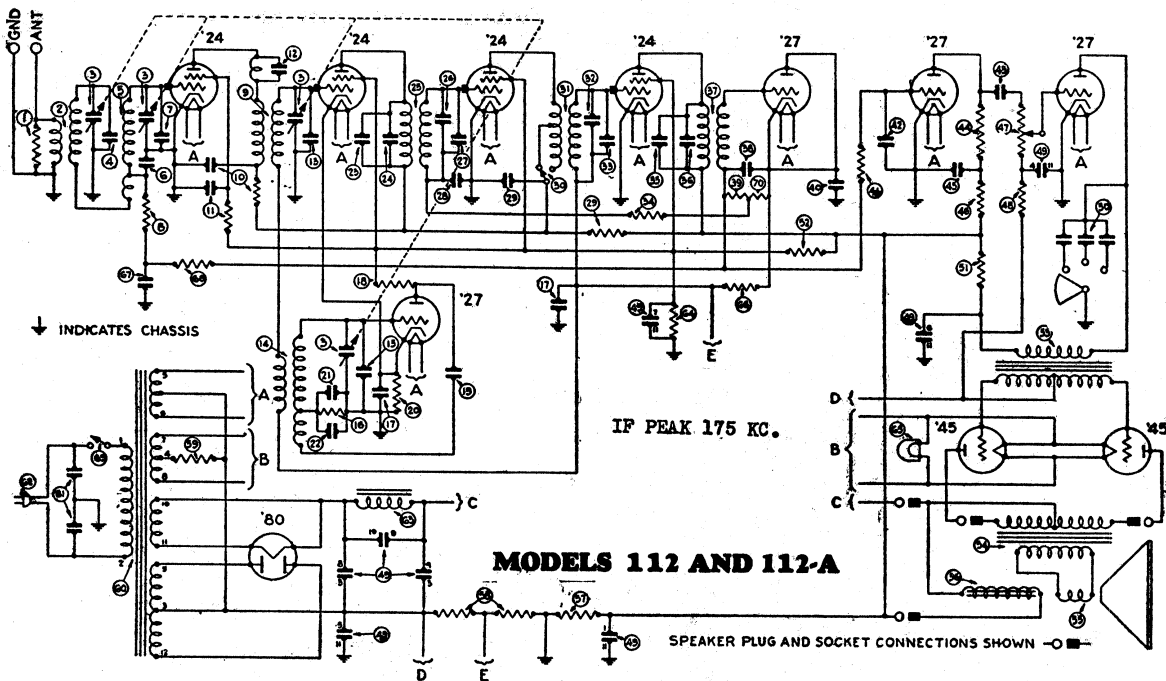
* Connect a 200-mmf. condenser between the signal generator and the antenna post of the set, at the antenna post.

** While rocking.



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MODEL 112, 112-A
Below #174,001
MODEL 212, 212-A
Schematics

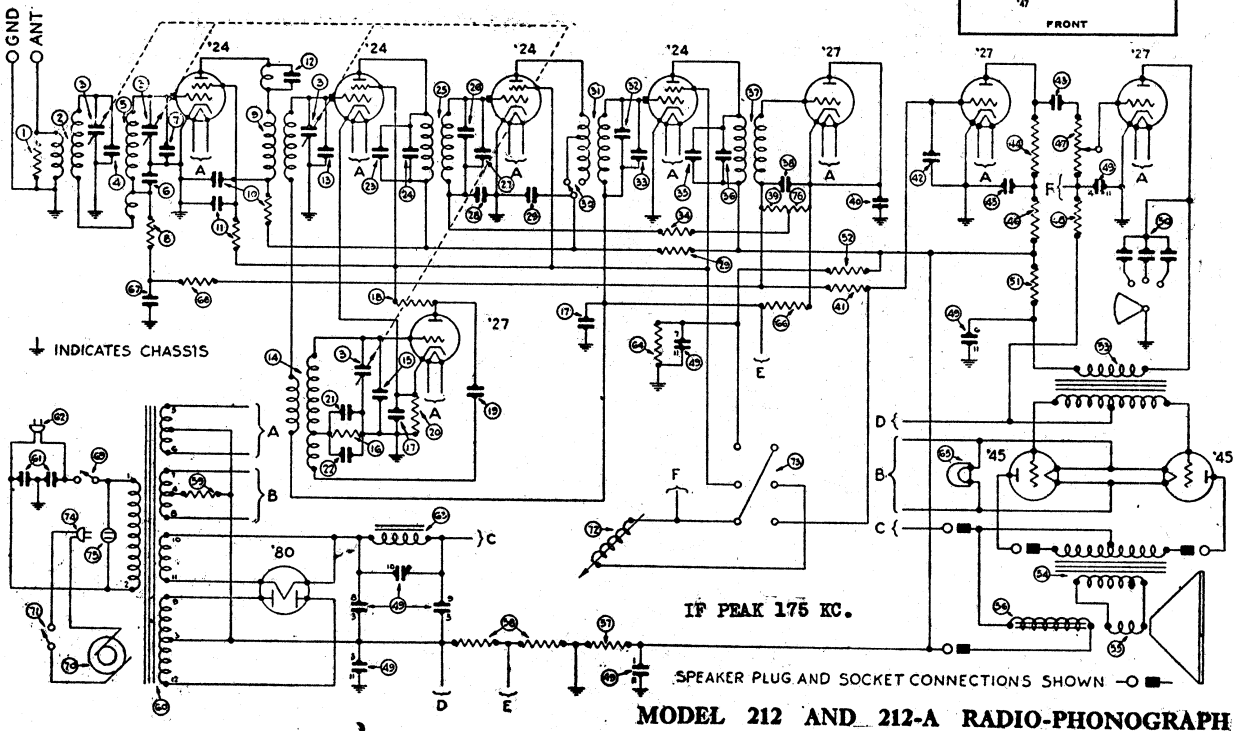
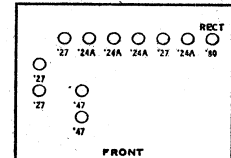


SPECIAL NOTE

Resistor (70) in models 112, 112-A
is (76) in models 212, 212-A

For voltage data and other
values applying to models 212, 212-A, see
data for models 112, 112-A

Models 112, 112A, 112E, 212, 212E



Phonograph
Pickup Data

PHILCO RADIO & TELEVISION CORP.

MODEL 211,212,220
270,296
Pickup data

Adjusting the Electric Pickup

Distortion of electric phonograph reproduction is usually caused by a badly worn needle (ordinary steel needles should never be used on automatic record changer instruments), a loose needle, or by improper centering of the electric pickup armature. The adjustment for centering the pick-up is extremely simple, and can be accomplished in the following manner:

Low Impedance Type Part 5251 Used on Model 270

1. Remove the pickup from the tone arm, and remove the cover from the pickup, taking care not to loose the phosphor bronze spring, which serves as a pressure clamp between the top of the magnet and the cover.
2. Slide the magnet out from the pole pieces slightly so that a keeper (heavy flat piece of steel) can be placed across the poles of the magnet before the latter is removed from the assembly. *Great care must be exercised to see that the magnet does not become disconnected from the pole pieces (or the keeper) even for an instant.* A noticeable loss in pickup efficiency and volume will result if this point is not carefully observed.
3. Lift the magnet and keeper from the assembly, taking extreme care that the keeper does not come off the magnet.
4. Loosen the two round head screws in the small brass plate, and move the plate slightly to the right or left as required until the armature is exactly centered between the pole pieces.
5. Tighten the screws while holding the plate in this centered position.
6. After making certain that the armature has not shifted while the screws were being tightened, replace the magnet over the pole pieces, taking care that the magnet is in contact with both pole pieces before removing the keeper.
7. Re-assemble the pickup cover, and replace the pickup on the tone arm.

High Impedance Type Part 4584 Used on Models 296, 220, 211 and 212

1. Remove the pickup from the tone arm, and remove the cover from the pickup as described above. It will be unnecessary to remove the magnet when making this adjustment.
2. Loosen the nuts which clamp the pole pieces to the pickup housing so as to free the adjusting arms.
3. Push the right or the left adjusting arm, as required, until the armature is properly centered.
4. Tighten the nuts while holding the armature in this centered position.
5. Re-assemble the cover, and replace the pickup on the tone arm.