

# PHILCO RADIO-PHONOGRAPH, MODEL 48-1262

## Section 1

### TROUBLE SHOOTING

For the tests in this section, use a d-c voltmeter. Connect the negative lead to the B— bus, test point B; connect the positive lead to the test points indicated in the chart.

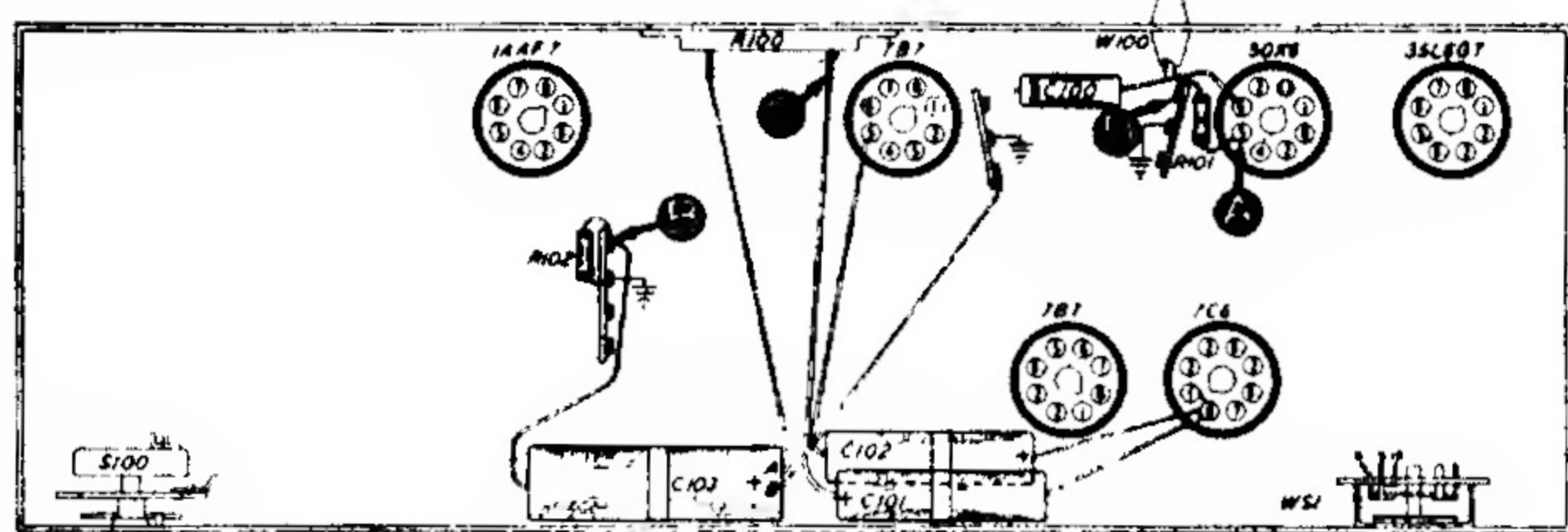


Figure 1. Bottom View, Showing Section 1 Test Points

The voltage readings given were taken with a 20,000-ohms-per-volt meter, at a line voltage of 117 volts, a.c.

With the radio-phonograph switch set to the radio position, turn the volume control to minimum and turn the tone control fully clockwise.

Follow the steps in sequence; if the "NORMAL INDICATION" is obtained in step 1, proceed with the tests for Section 2; if not, isolate and correct the trouble in this section.

STEP	TEST POINT	NORMAL INDICATION	ABNORMAL INDICATION	POSSIBLE CAUSE OF ABNORMAL INDICATION
1	A	167 v.	No voltage.	Trouble within this section. Isolate by the following tests. Defective: 50X6, S100, W100. Shorted: C101, C103. Defective: 50X6. Open: C101, C102. Leaky: C101, C102, C103A, C103B. Open: R100, T200,* R204.*
2	C	214 v.	Low voltage. High voltage.	Shorted: C103A. Open: C103A. Leaky: C103A, C204.* Open: R101, R204,* T200.*
3	D	181 v.	No voltage. Low voltage. High voltage.	Shorted: C103B. Leaky: C103B. Open: R204,* T200.*
4	A	167 v.	No voltage. Low voltage. High voltage.	

Listening Test: Abnormal hum may be caused by open C103A, C103B, or R102.

\* This part, located in another section, may cause abnormal indication in this section.

## Section 2

### TROUBLE SHOOTING

For the tests in this section, use an audio-frequency signal generator. Connect the generator ground lead to the B— bus, test point B; connect the generator output lead through a .1-mf. condenser to the test points indicated in the chart.

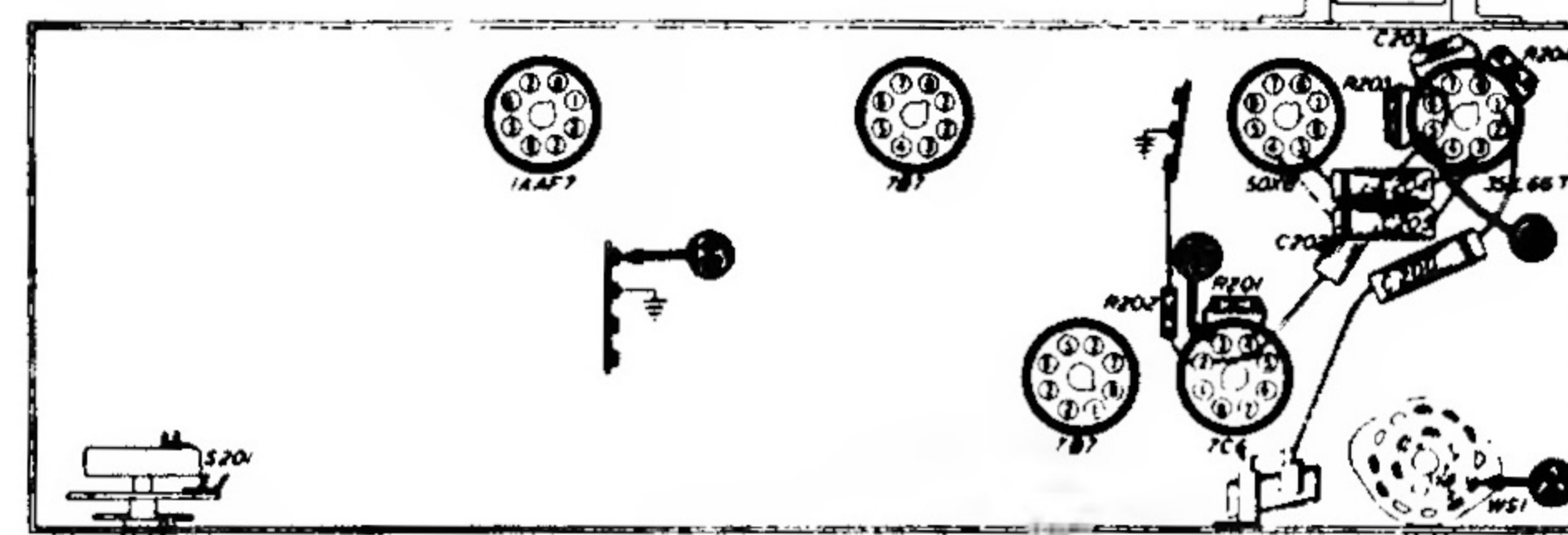


Figure 2. Bottom View, Showing Section 2 Test Points

Set the volume control to maximum, and the tone control fully clockwise. Adjust the signal-generator output as required for each step.

If the "NORMAL INDICATION" is obtained in step 1, proceed to the tests in Section 3; if not, isolate and correct the trouble in this section.

STEP	TEST POINT	NORMAL INDICATION	POSSIBLE CAUSE OF ABNORMAL INDICATION
1	A	Loud, clear signal with weak signal input.	Trouble within this section. Isolate by the following tests. Defective: 35L6GT, LS200, T200. Shorted: C202, C203, C204, C205. Leaky: C202, C203, C204, C205. Open: R203, R204.
2	C	Loud, clear signal with strong signal input.	Defective: 7C6. Open: C202, R202, R201. Leaky: C202.
3	D	Loud, clear signal with weak signal input.	Defective: W51, R200. Open: C201. Shorted: C301D.*
4	A	Loud, clear signal with weak signal input. (Rotate R200 through its range.)	

Listening Test: Distortion on strong signals may be caused by short-circuited or leaky C201, or open-circuited R201.

\* This part, located in another section, may cause abnormal indication in this section.

## Section 3

### TROUBLE SHOOTING

For the tests in this section, use an r-f signal generator, with modulated output, set at 455 kc. Connect the generator ground lead to the B— bus, test point B; connect the generator output lead through a .1-mf. condenser to the test points indicated in the chart.

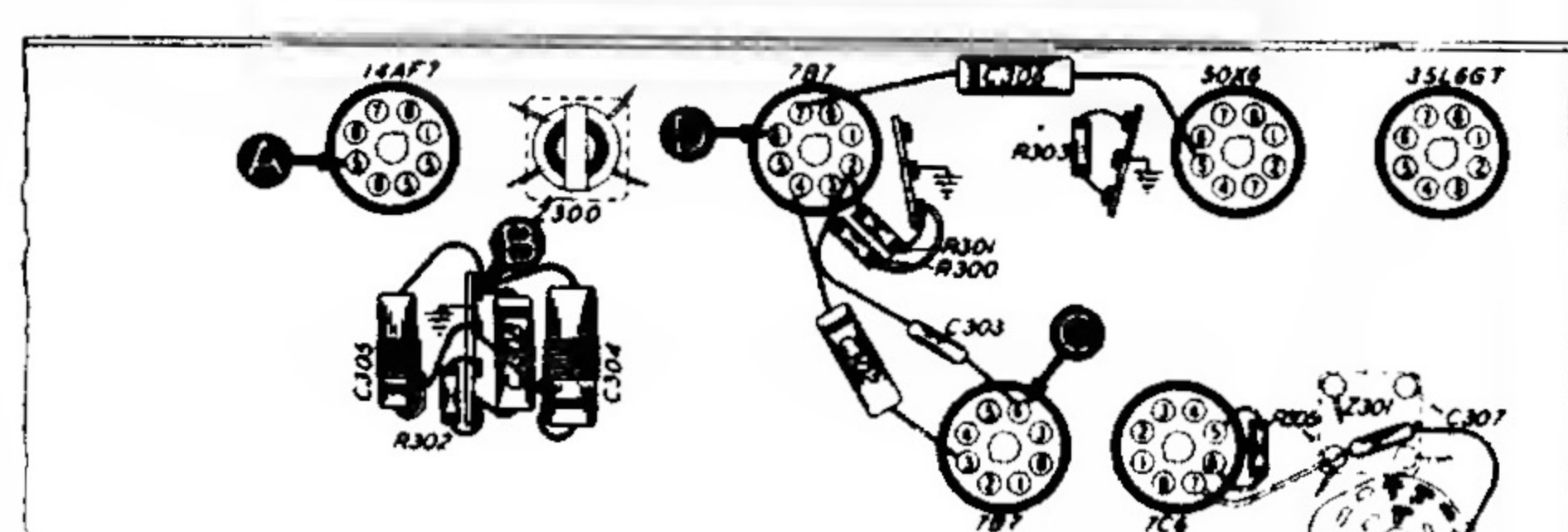


Figure 3. Bottom View, Showing Section 3 Test Points

Set the radio-phonograph switch to radio, turn the volume control to maximum, and set the tone control fully clockwise.

If the "NORMAL INDICATION" is obtained in step 1, proceed with the tests for Section 4; if not, isolate and correct the trouble in this section.

NOTE: Since the circuit location of test point A for this section is the same as that of test point C for Section 4, the effectiveness of step 1 as a master check is dependent upon the condition of certain parts in

Section 4; these parts are listed below under "POSSIBLE CAUSE OF ABNORMAL INDICATION."

STEP	TEST POINT	NORMAL INDICATION	POSSIBLE CAUSE OF ABNORMAL INDICATION
1	A	Loud, clear signal with weak signal input.	Trouble within this section. Isolate by the following tests. Defective: W51, 7B7 (2nd i.f.), 7C6, Z301. Open: C302, C306, R300, R302. Shorted: C302, C306. Leaky: C302, C306.
2	C	Loud, clear signal with strong signal input.	Defective: 7B7 (1st i.f.). Open: C303, C304, C305, C308, R301, R302. Shorted: C303. Leaky: C303.
3	D	Loud, clear signal with moderate signal input.	
4	A	Loud, clear signal with weak signal input.	Defective: 14AF7,* Z300. Misaligned: Z300. Open: R402,* R401.*

\* This part, located in another section, may cause abnormal indication in this section.

## Section 4

### TROUBLE SHOOTING

For the tests in this section (with the exception of the oscillator test), use an r-f signal generator with modulated output. Connect the generator ground lead to the B— bus, test point B; connect the generator output lead through a .1-mf. condenser to the test points indicated in the chart.

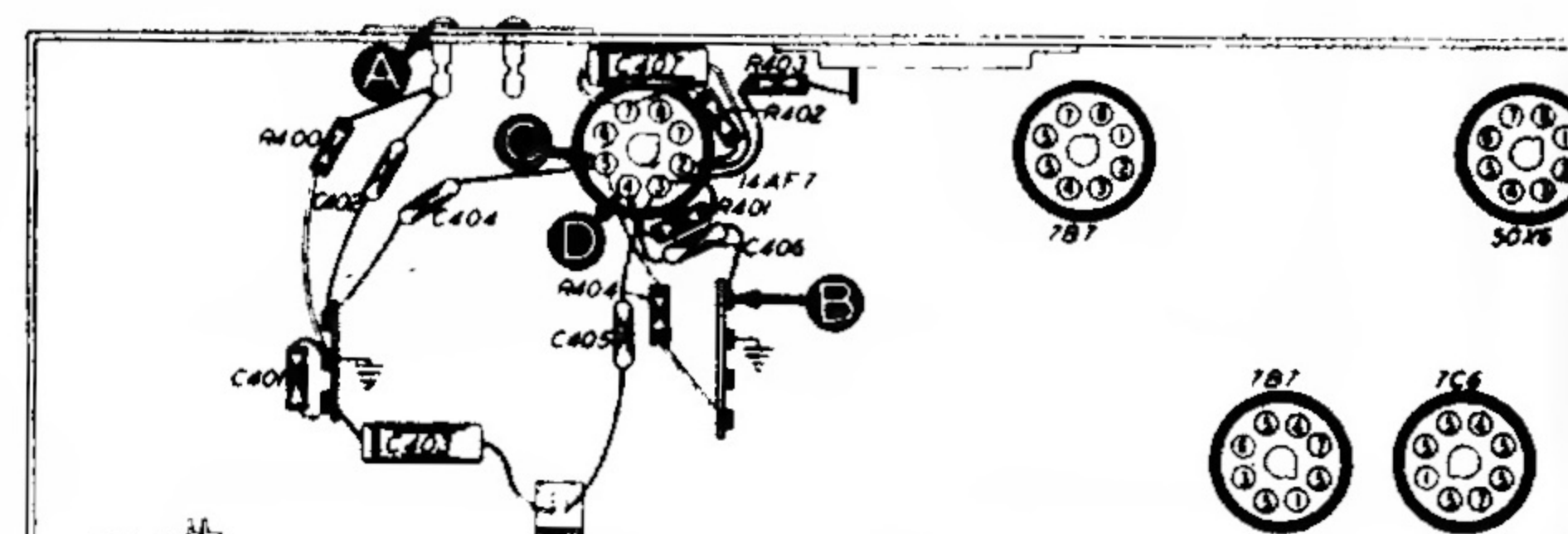


Figure 4. Bottom View, Showing Section 4 Test Points

Set the radio-phonograph switch to radio, turn the volume control to maximum, and set the tone control fully clockwise.

Except as noted for the oscillator test, set the radio and signal-generator dials to 540 kc.

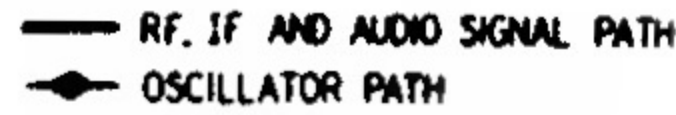
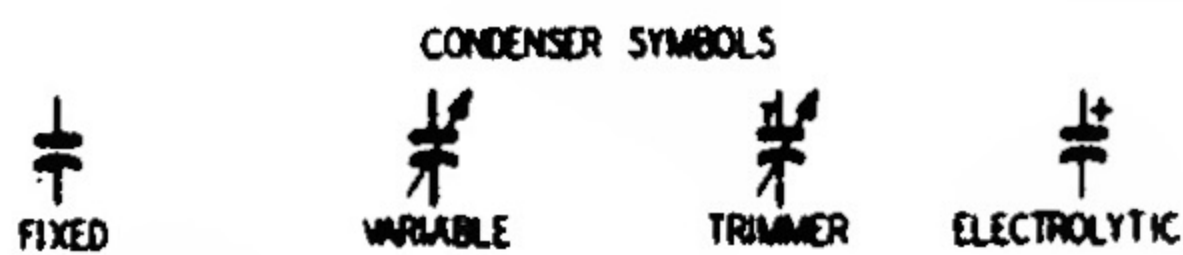
STEP	TEST POINT	NORMAL INDICATION	POSSIBLE CAUSE OF ABNORMAL INDICATION
1	A	Loud, clear signal with weak signal input.	Trouble within this section. Isolate by the following tests. Defective: 14AF7, osc. circuit. Open: C407, R402. Shorted: C407. Leaky: C407.
2	C	Loud, clear signal with weak signal input.	
3	D (Osc. test; see Note below.)	Negative 3.3 to 4.2 volts.	Defective: L400. Open: C403, C405, C406, R401, R403. Shorted: C400, C400A, C401, C402, C405, C406.
4	A	Loud, clear signal with weak signal input.	Defective: LA400. Shorted: C400, C400A, C402, C404. Open: C402, C404. Leaky: C402, C404.

OSCILLATOR-TEST NOTE: Connect positive lead of high-resistance d-c voltmeter to B— bus, test point B; connect prod end of negative lead through 100,000-ohm isolating resistor to oscillator grid, test point D. Use suitable meter range, such as 0—10 volts. Proper operation of oscillator is indicated by negative voltage of 3.3 to 4.2 volts (measured with 20,000-ohms-per-volt meter) throughout range of tuning control.

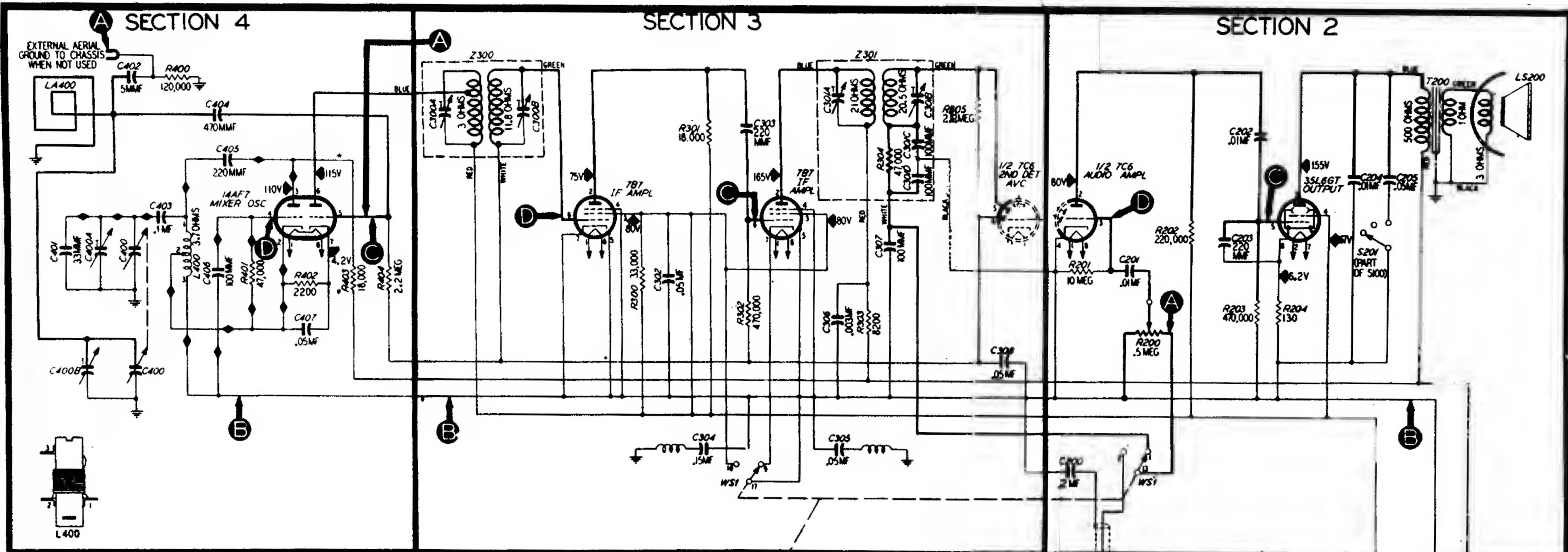
#### SYMBOLIZATION

The components in the radio circuit are symbolized according to the types of parts and the sections of the radio in which the parts are located. The prefix letter of the symbol designates the type of part, as follows.

C—condenser LA—loop aerial S—switch WS—water switch  
L—lamp LS—loud-speaker T—transformer  
L—choke or coil R—resistor W—power cord and plug Z—electrical assembly



NOTE: ALL RESISTANCE VALUES IN OHMS UNLESS OTHERWISE MARKED.



## PHILCO RADIO-PHONOGRAPH MODELS 48-1262 (CODE 122) AND 48-1282

Model 48-1262, Code 122 is similar to Model 48-1262, Code 121 with the following exceptions:

### Section 1

R102 is 150,000 ohms.

The .05-mf. condenser between the changer chassis and the phono-cable shield is removed, and is connected between the changer chassis and the radio chassis. The condenser is now located on a terminal strip attached to the cabinet.

A 1-megohm resistor is connected across the crystal pickup.

A .01-mf. condenser is connected in series with the low side of the crystal pickup and the phono-cable shield.

### Section 2

C200 is removed, and the cable shield is connected directly to B—.

C205 is .03 mf.

### Section 3

R302 is 150,000 ohms.

### Section 4

R400 is 150,000 ohms.

Model 48-1282, Code 121 is similar to Model 48-1262, Code 122, except for differences in the record changer and the cabinet.

