

TROUBLE SHOOTING

Section 1 Power Supply

For the tests in this section, use a d-c voltmeter. Connect the negative lead to B—, test point B; connect the positive lead to the test points indicated in the chart. The voltage readings given were taken with a 20,000-ohms-per-volt meter at a line voltage of 117 volts, a.c.

Turn on the power, and set the volume to minimum.

If the "NORMAL INDICATION" is obtained in step 1, proceed with the tests for Section 2 (audio circuits); if not, isolate and correct the trouble in this section.

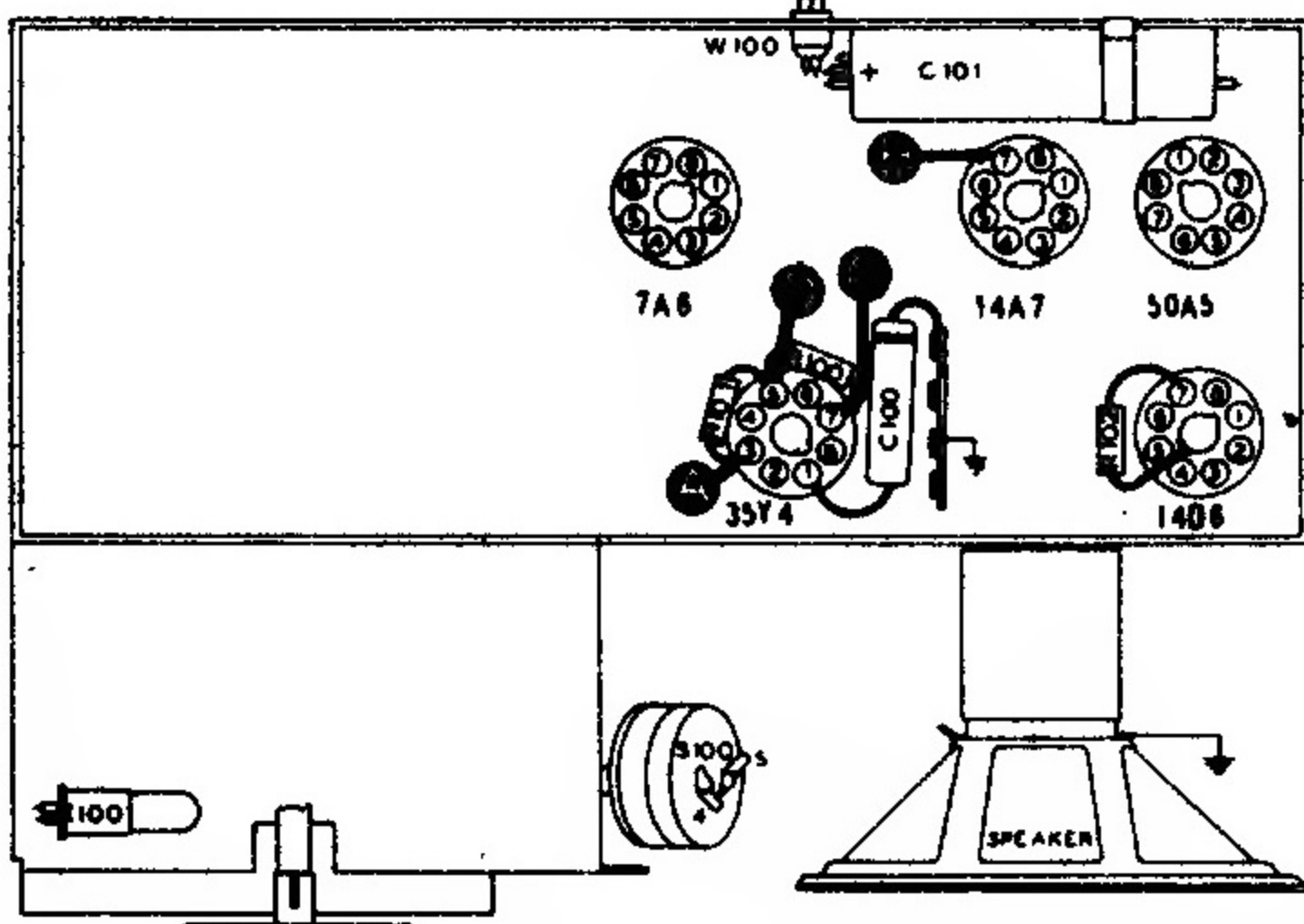


Figure 1. Bottom View, Showing Section 1 Test Points

Table with 4 columns: STEP, TEST POINT, NORMAL INDICATION, ABNORMAL INDICATION, POSSIBLE CAUSE OF ABNORMAL INDICATION. It details voltage tests for points A, C, D, and A, listing symptoms like 'No voltage' or 'Low voltage' and potential component failures like 'Defective: 35Y4' or 'Shorted: C101A'.

Listening Test: Abnormal hum may be caused by open C101A, C101B, or C101C.

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

TROUBLE SHOOTING

Section 2 Audio Circuits

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

Set the volume to maximum.

If the "NORMAL INDICATION" is obtained in step 1, proceed with the tests for Section 3 (i-f, detector, and a-v-c circuits); if not, isolate and correct the trouble in this section.

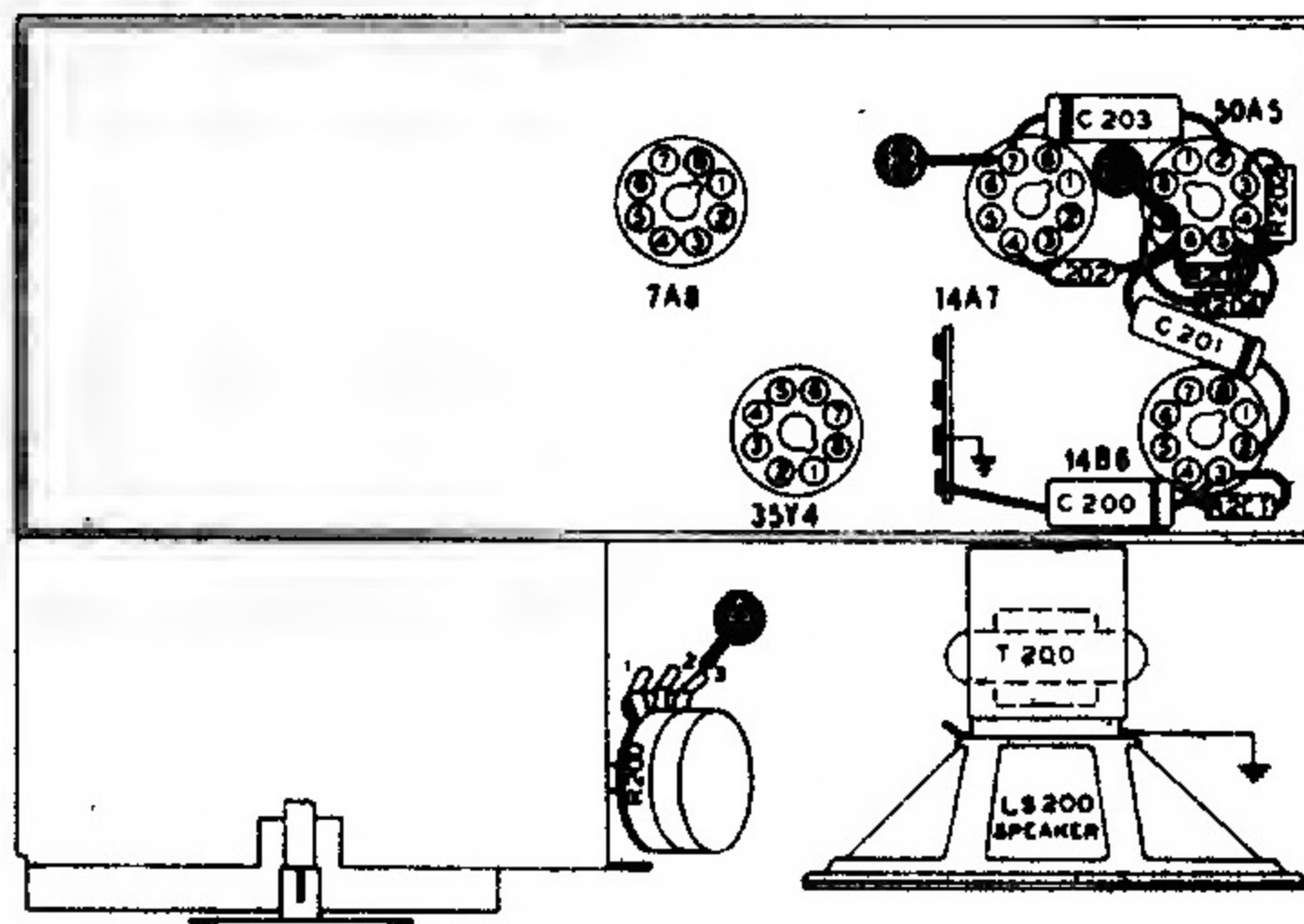


Figure 2. Bottom View, Showing Section 2 Test Points

Table with 4 columns: STEP, TEST POINT, NORMAL INDICATION, ABNORMAL INDICATION, POSSIBLE CAUSE OF ABNORMAL INDICATION. It details audio output tests for points A, C, D, and A, listing symptoms like 'No voltage' or 'Distortion' and potential component failures like 'Defective: 50A5, LS200' or 'Shorted: C202, C201, C203'.

Listening Test: Distortion may be caused by shorted or leaky C201.

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

TROUBLE SHOOTING

Section 3 I-F, Detector, and A-v-c Circuits

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 B—, test point B; connect the output lead through a .1-mf. condenser to the test points indicated in the chart.

Set the volume to maximum.

If the "NORMAL INDICATION" is obtained in step 1, proceed with the tests for Section 4 (r-f and converter circuits); if not, isolate and correct the trouble in this section.

To provide a complete i-f amplifier check, test point A for this section is placed at the grid of the mixer in Section 4; therefore, the effectiveness of step 1 as a master check is dependent upon the condition of certain parts in the mixer circuit. These parts are listed below under "POSSIBLE CAUSE OF ABNORMAL INDICATION."

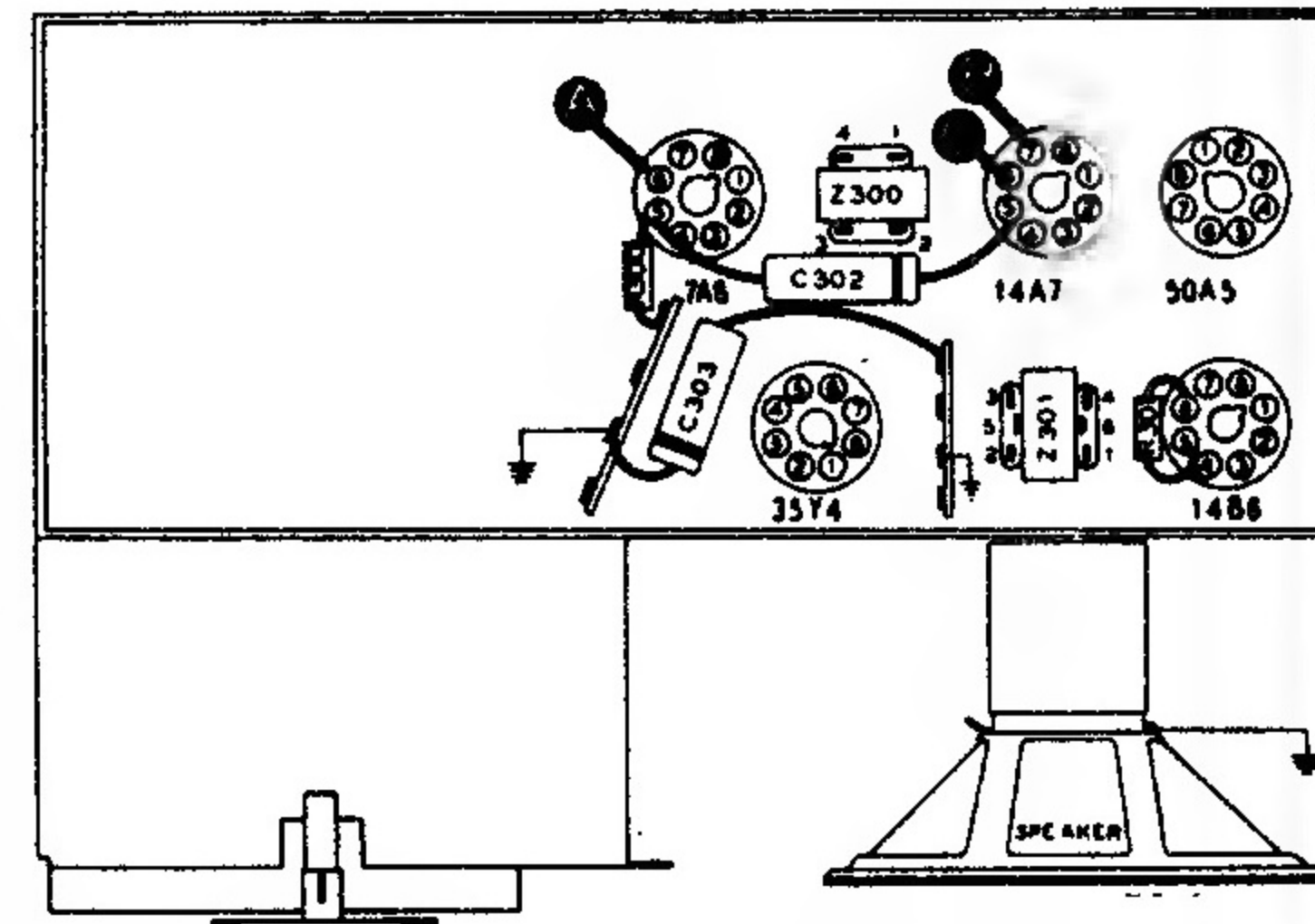


Figure 3. Bottom View, Showing Section 3 Test Points

Table with 4 columns: STEP, TEST POINT, NORMAL INDICATION, ABNORMAL INDICATION, POSSIBLE CAUSE OF ABNORMAL INDICATION. It details i-f and detector output tests for points A, C, and A, listing symptoms like 'Loud, clear speaker output' and potential component failures like 'Defective: 14A7, 14B6' or 'Shorted: C302, Z301'.

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

TROUBLE SHOOTING

Section 4 R-F and Converter Circuits

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 B—, test point B; connect the output lead through a .1-mf. condenser to the test points indicated in the chart.

Set the volume to maximum, and set the drum tuner and the signal-generator frequency as indicated in the chart.

If the "NORMAL INDICATION" is not obtained in step 1, isolate and correct the trouble in this section. If the trouble is not revealed by the tests for this section, check the alignment.

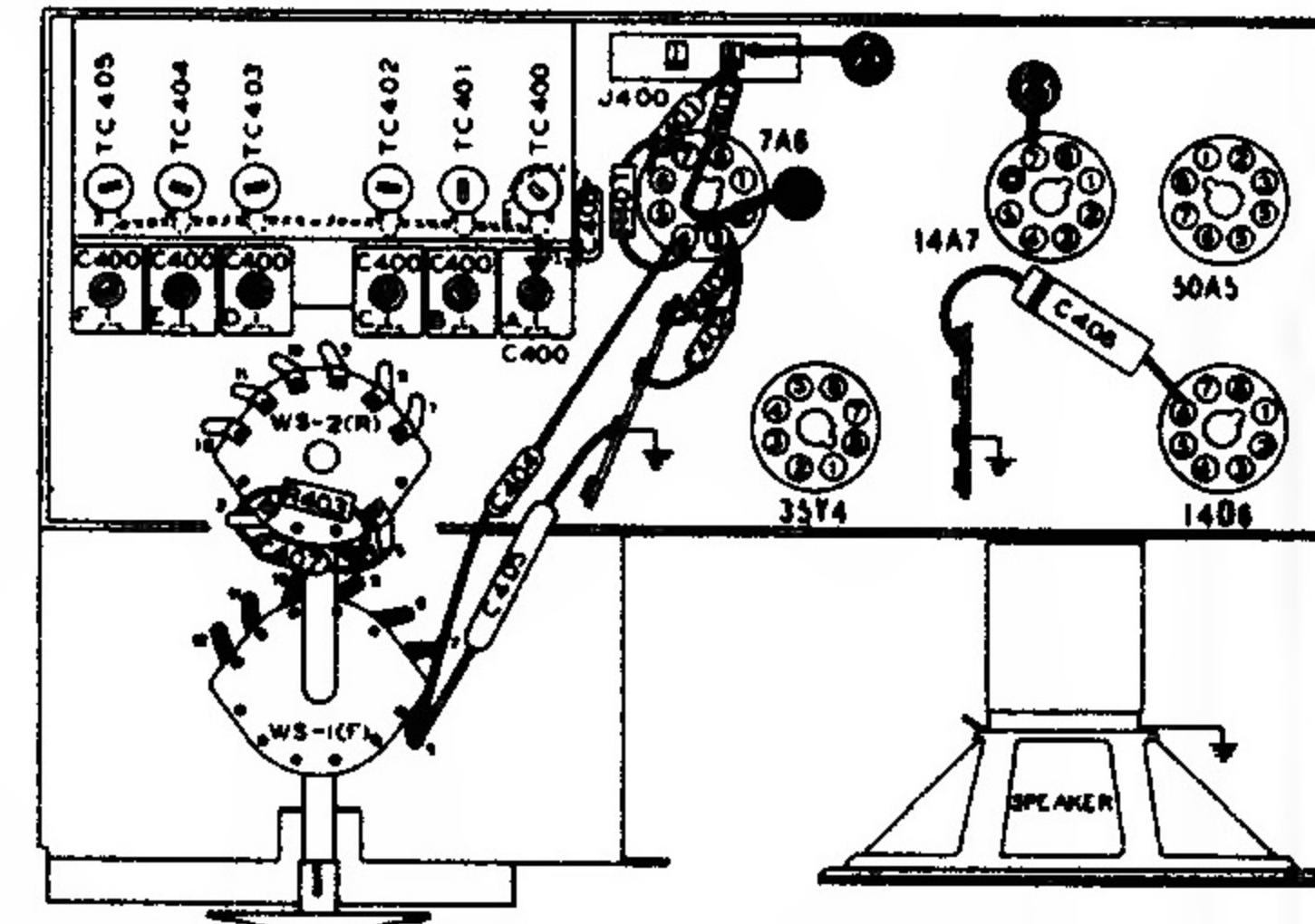


Figure 4. Bottom View, Showing Section 4 Test Points

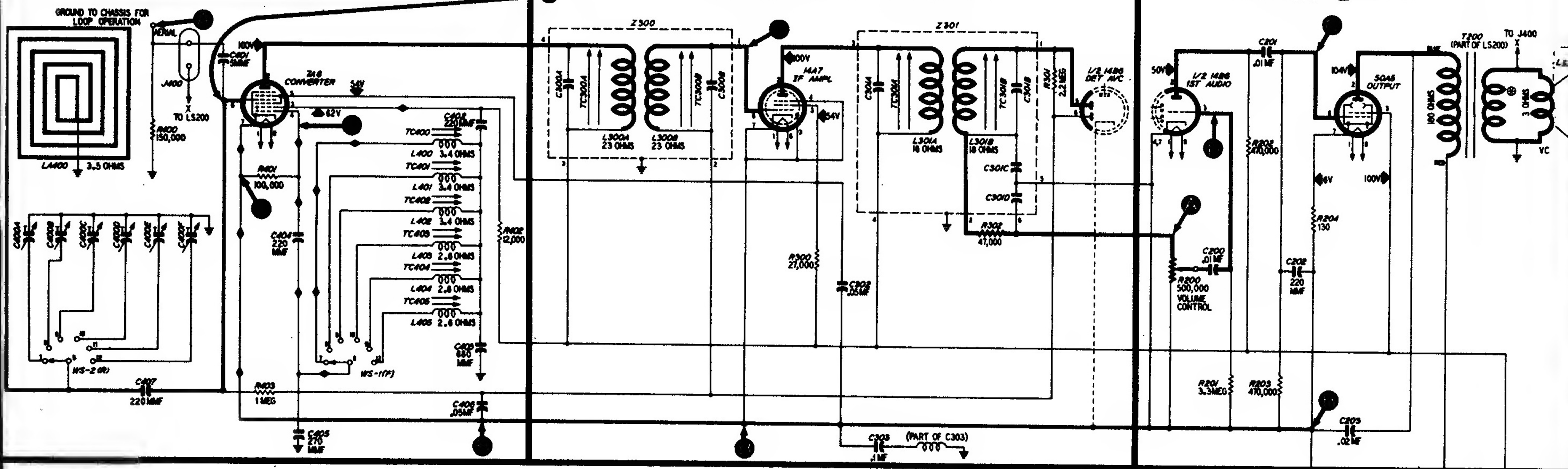
Table with 5 columns: STEP, TEST POINT, SIG. GEN. FREQ., DRUM TUNER, NORMAL INDICATION, POSSIBLE CAUSE OF ABNORMAL INDICATION. It details r-f and converter output tests for points A, C to B, and A, listing symptoms like 'Loud, clear speaker output' and potential component failures like 'Trouble in circuits associated with each position of the station-selector drum tuner'.

OSCILLATOR TEST: Connect the positive lead of a high-resistance voltmeter to B—, test point B; connect the prod end of the negative lead through a 100,000-ohm isolating resistor to the oscillator grid (pin 4 of 7A8), test point C. Use a suitable meter range, such as 0-10 volts. Proper operation of the oscillator is indicated by negative voltage of approximately the value given in the chart (measured with 20,000-ohms-per-volt meter) throughout the tuning range.

SECTION 4—RF AND CONVERTER

SECTION 3—IF, DETECTOR, AND AVC

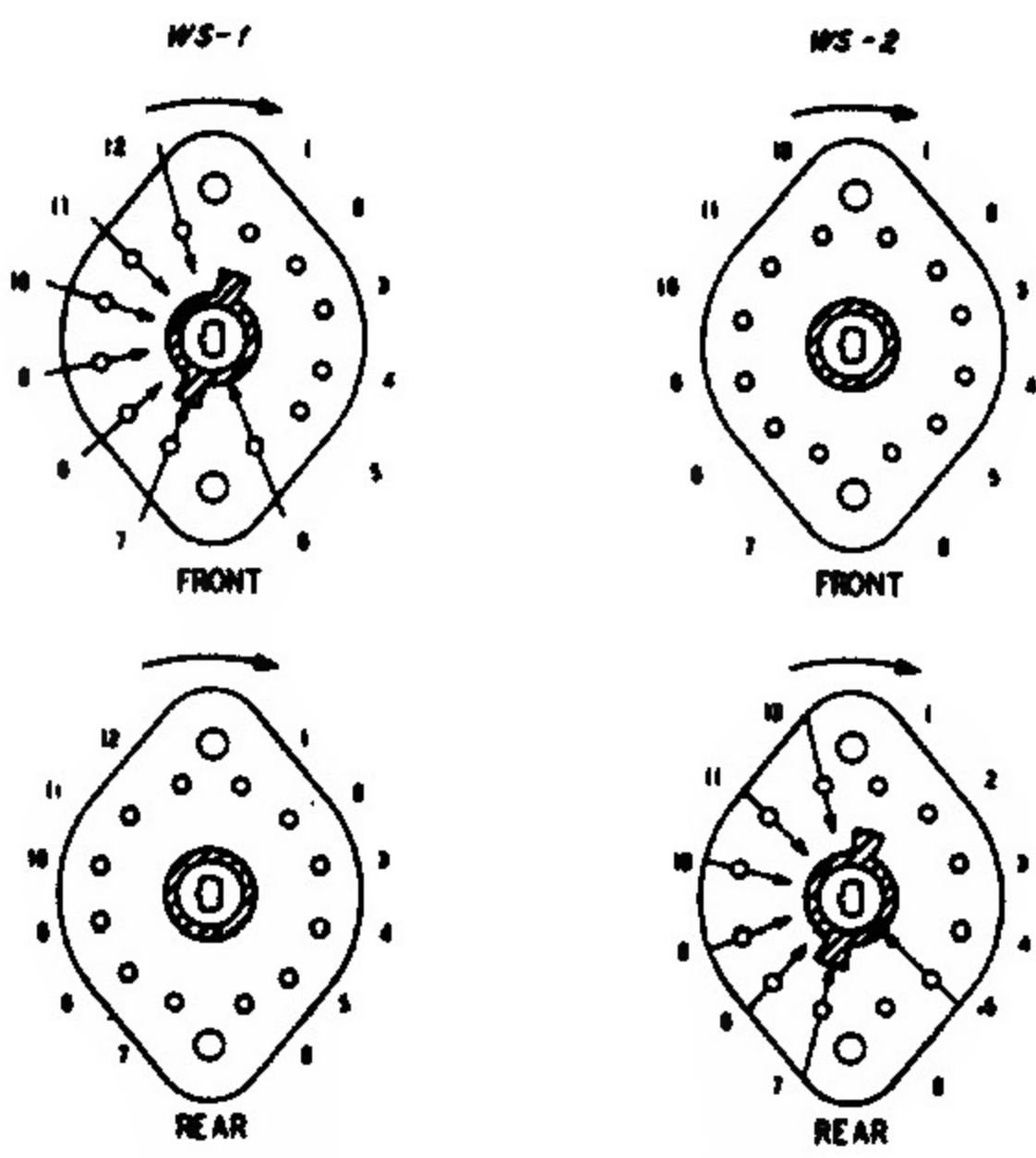
SECTION 2—AUDIO



INSTRUCTIONS FOR REMOVING OSCILLATOR COILS

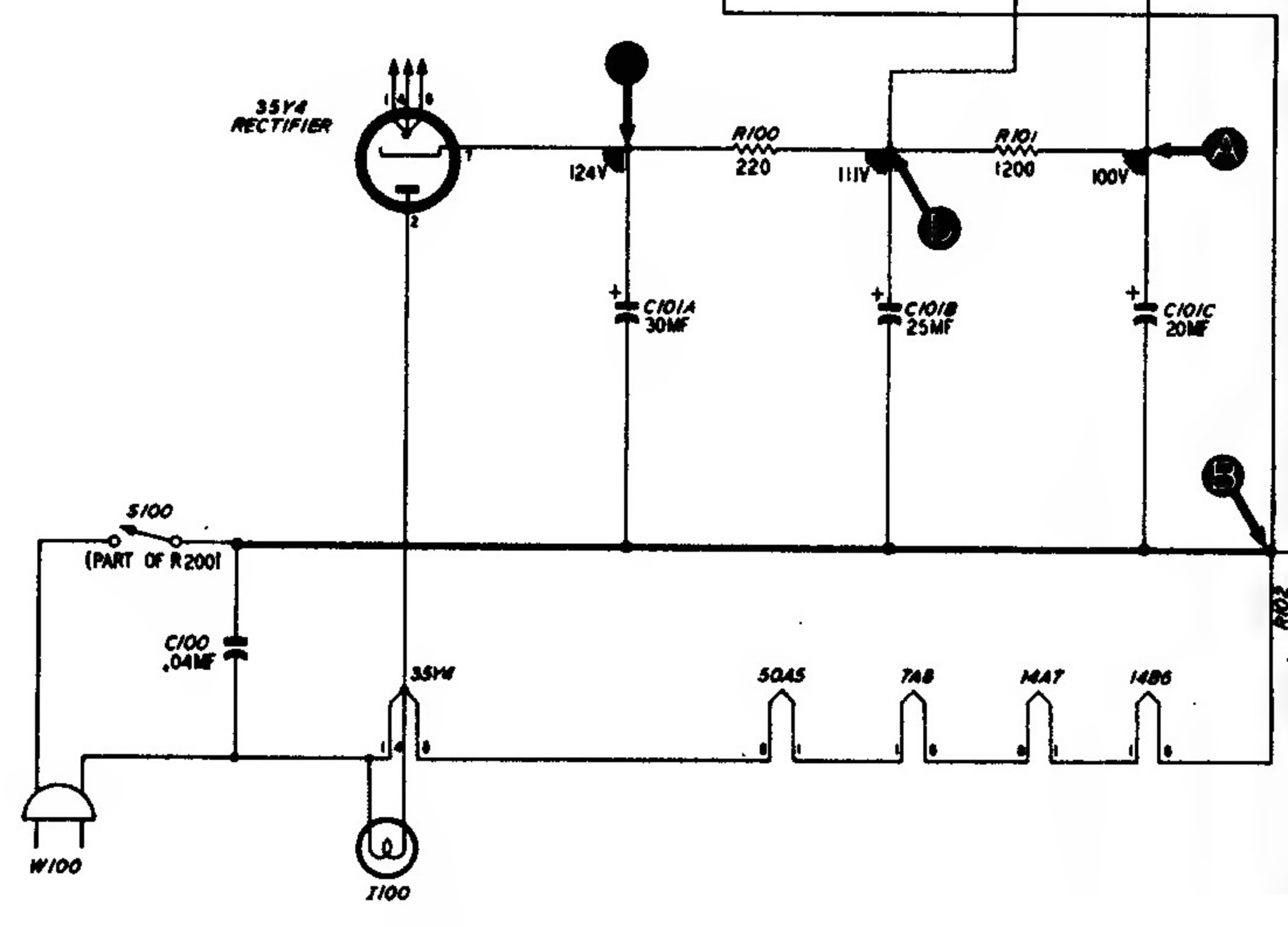
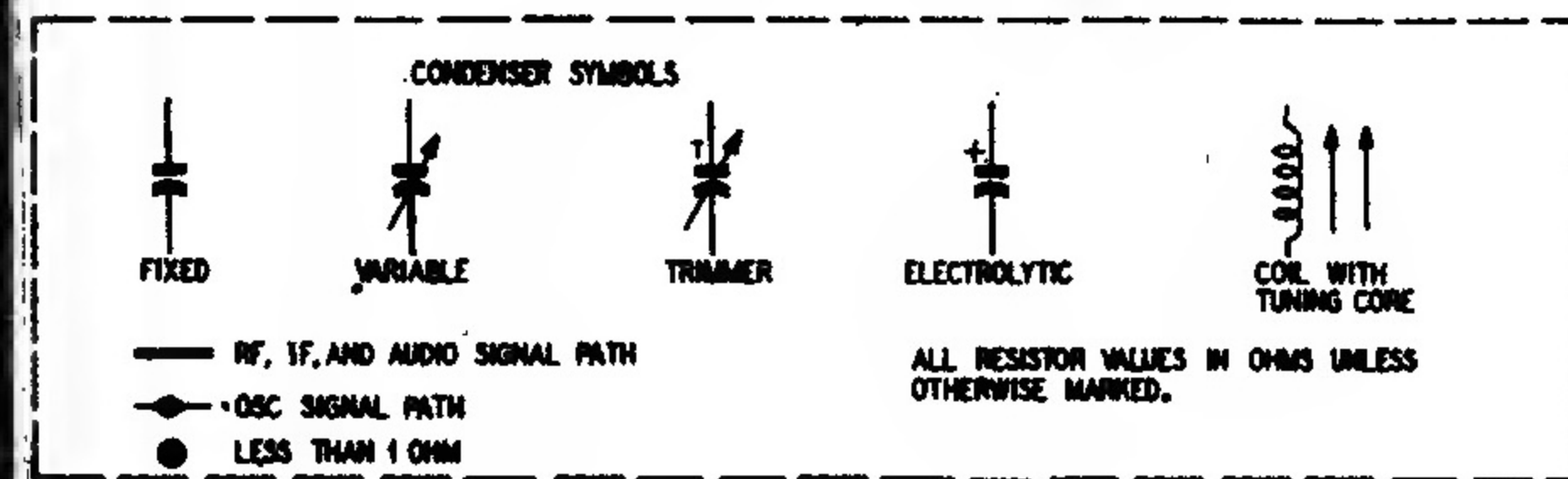
- THE FOLLOWING PROCEDURE IS RECOMMENDED FOR REMOVING THE OSCILLATOR COILS: 1. REMOVE ALL WIRE CONNECTIONS AND FIBER SHIELD FROM COILS. 2. HEAT COUPLING (4) WITH SOLDERING IRON AND REMOVE. 3. REMOVE CLIP (2). COIL SHOULD THEN BE REMOVABLE. REVERSE PROCEDURE FOR REPLACING COILS. WHEN MOUNTING COUPLING, REMOVE ALL EXCESS SOLDER FROM SCREW THREADS.

ALL VOLTAGES WERE MEASURED FROM B— WITH A 20,000-OHMS-PER-VOLT METER AT A LINE VOLTAGE OF 117 VAC.



SIX POSITION WIPER SWITCH SHOWN IN BROADCAST POSITION. (F) INDICATES FRONT CONTACTS LOOKING FROM FRONT. (R) INDICATES REAR CONTACTS LOOKING THROUGH FROM FRONT. SECTIONS OF SWITCH NUMBERED STARTING AT FRONT OF CHASSIS.

MODEL 49-901



SECTION 1—POWER SUPPLY