

**MODEL RP341** 'Nine Octave' Record Reproducer employs a five valve high fidelity amplifier, four speed auto-changer and three loud-speakers in an acoustically tuned cabinet of contemporary design. Facilities are incorporated to enable the instrument to reproduce from monaural records, a tape deck, a radio tuner, etc., or with a special pick-up head and supplementary amplifier such as the Ekco Model SU341, to reproduce from stereo records.

**MAINS SUPPLY** : 200-250V A.C. 50 c/s.

**MAINS CONSUMPTION** : Amplifier 46W. Gram Motor 10.7W.

**RECORD CHANGER** : Garrard 121 D/4 Mk. II.

**VALVES** : V1—ECC83, V2—EF86, V3,4—EL84, V5—EZ80.

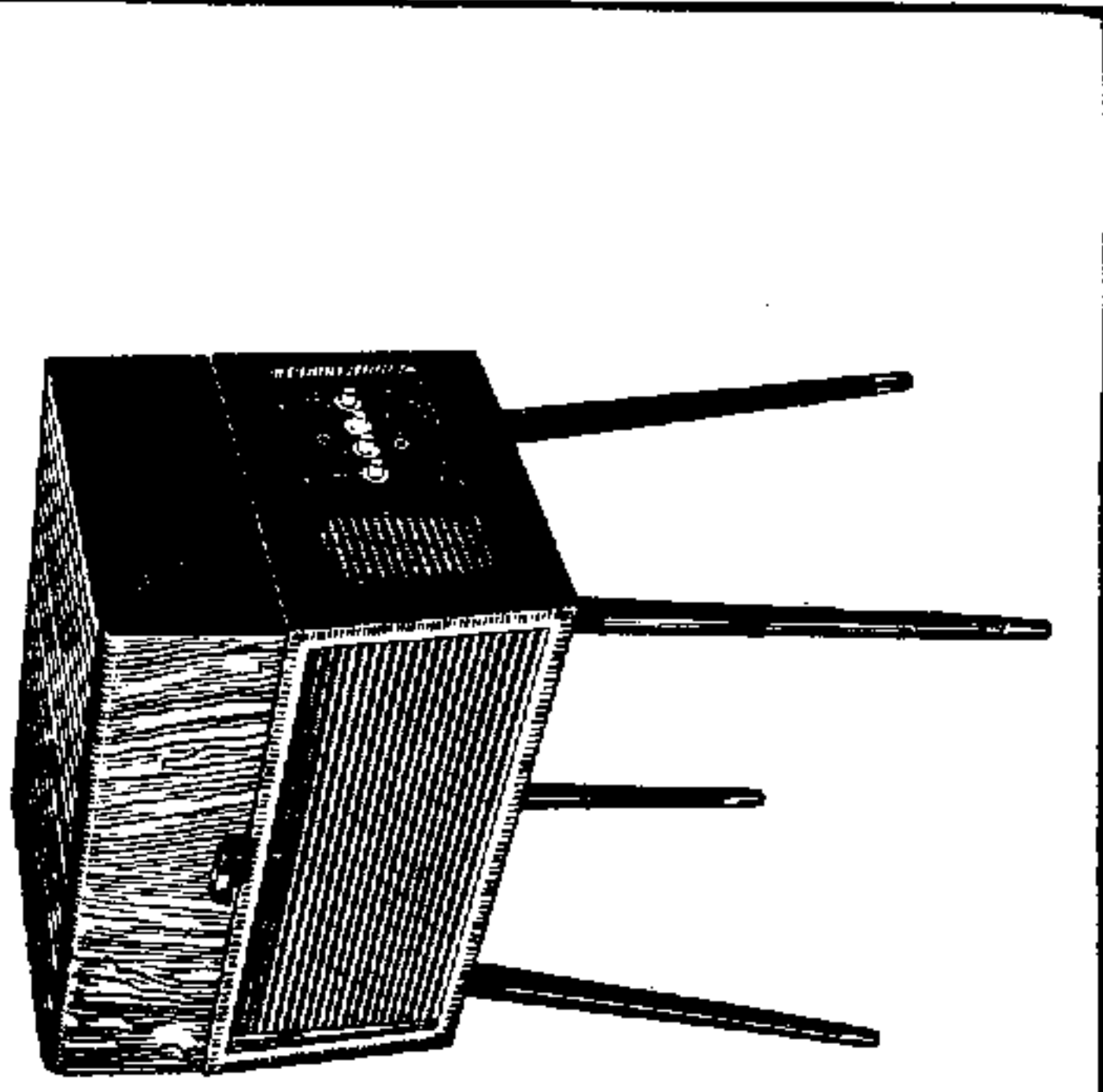
**LOUD-SPEAKERS** : Main—10" x 6". High Frequency Units 4" dia. Each loud-speaker has an impedance of 3 ohms at 400 c/s.

**FREQUENCY RESPONSE** : 30 c/s to 16 Kc/s.

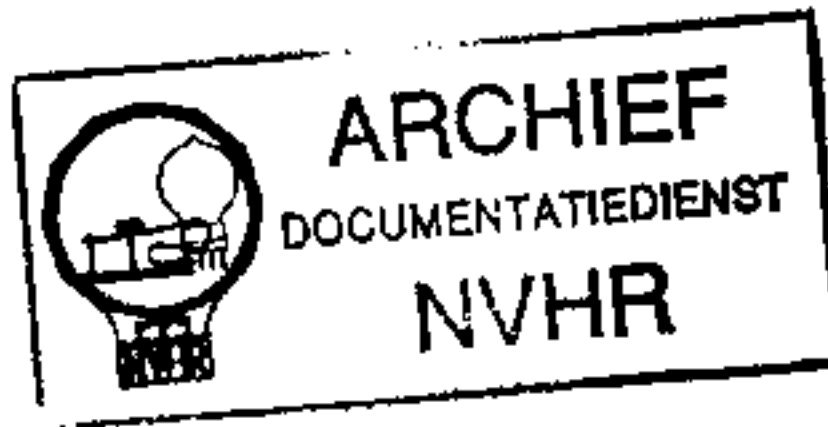
**CONTROLS** : The control panel at the side contains four operating controls including the ON/OFF switch at the top and SELECTOR, TREBLE, BASS and VOLUME in that order, from left to right across the centre. The socket at the bottom of the panel may be connected to a tape deck, etc., or to an SU341 stereo amplifier.

**CHASSIS REMOVAL** : Disconnect from the mains supply, remove six Philips head screws surrounding the control panel, then withdraw the panel and amplifier to the extent of the internal leads. Disconnect the octal plug from the power unit, then the loud-speaker and pick-up leads from the amplifier chassis which can then be fully removed from the cabinet. The chassis cover is secured by two screws into the rear flange.

To remove the power unit, disconnect the gram motor plug, then pull off the pilot lamp holder from inside the cabinet front, and remove three screws securing the power unit to the cabinet base. The power unit may then be withdrawn through the opening normally occupied by the amplifier panel (remove the plug from the mains lead if necessary).



Ned. Ver. v. Historie v/d Radio



Heater Volts measured at V1=6.25V.

Pilot Lamp Voltage, measured at Mains Transformer=5.7V.

**Conditions** : Mains input 245V to the 240/250V tap. Meter used Avometer Model 8 (20,000 ohms per volt). Amplifier quiescent, VR3 at minimum resistance, Volume Control adjusted for minimum output.

**D.C. RESISTANCE OF WINDINGS :**

T1 Output Transformer primary 300 ohms.

T2 Mains Transformer primary 44 ohms (total).

0-200V 36 ohms.

0-220V 40 ohms.

Secondary H.T. 444 ohms (total).

Other windings less than 0.5 ohm.

**TUNING THE ACOUSTIC CHAMBER** : This will be necessary only in the event of the base cover having been disturbed or a replacement loud-speaker fitted. The instrument must be standing on its legs and be free from obstruction beneath the base of the cabinet, otherwise the tuning of the acoustic chamber will be ineffective.

A test set should be constructed as shown in the small circuit diagram page 3. This comprises a 5 ohms wire wound resistor, an A.C. voltmeter (0-1½V minimum range), a change-over switch and a three pin plug to fit SK6. A B.F.O. will also be required. Disconnect P6 and replace this with the plug of the test set. Switch on and allow the valves to warm up then connect the B.F.O. to the socket on the control panel. Set the controls to mid-position and slacken the three screws securing the chamber cover to the front of the cabinet base.

Switch the voltmeter to 'L' then sweep the B.F.O. through the low frequency range. Two major peaks will be observed on the voltmeter reading, one occurring between 40 and 60 c/s and the other between 80 and 120 c/s. Tune to the upper frequency producing a major peak, switch the voltmeter to 'R' then adjust the B.F.O. output to give a reading of 0.5V on the voltmeter.

The auto-changer is secured to the cabinet by three screws through special spring mountings.

When re-assembling the various units it is essential to tighten fully all securing screws, excepting those used to secure the auto-changer.

**WARNING** : The cover at the base of the cabinet should not be disturbed unless it is intended to re-tune the acoustic chamber.

**VOLTAGE AND CURRENT DATA :**

Valve	Anode		Screen		Cathode	
	Pin	V	Pin	V	Pin	V
V1A	1	94	—	—	3	1
V1B	6	104	—	—	8	0.8
V2	6	140	1	140	3	1.5
V3	7	232	9	233	3	8.4
V4	7	232	9	233	3	8.4
V5	1 & 7	255 A.C. each anode	—	—	3	292
						63.2

Switch to 'L' and note the voltmeter reading. This reading multiplied by 10 is the impedance of the loud-speaker in ohms at this frequency. With the voltmeter switched to 'L' select the lower frequency producing a major peak then switch to 'R' and adjust the B.F.O. to give a reading of 0.5V. Switch to 'L' and note the voltmeter reading which when multiplied by 10 will be the impedance of the loud-speaker at the lower frequency.

Should the impedance at the upper frequency differ from that at the lower frequency the cover over the tuning slot must be adjusted to achieve a balance within a limit of 1 ohm maximum difference.

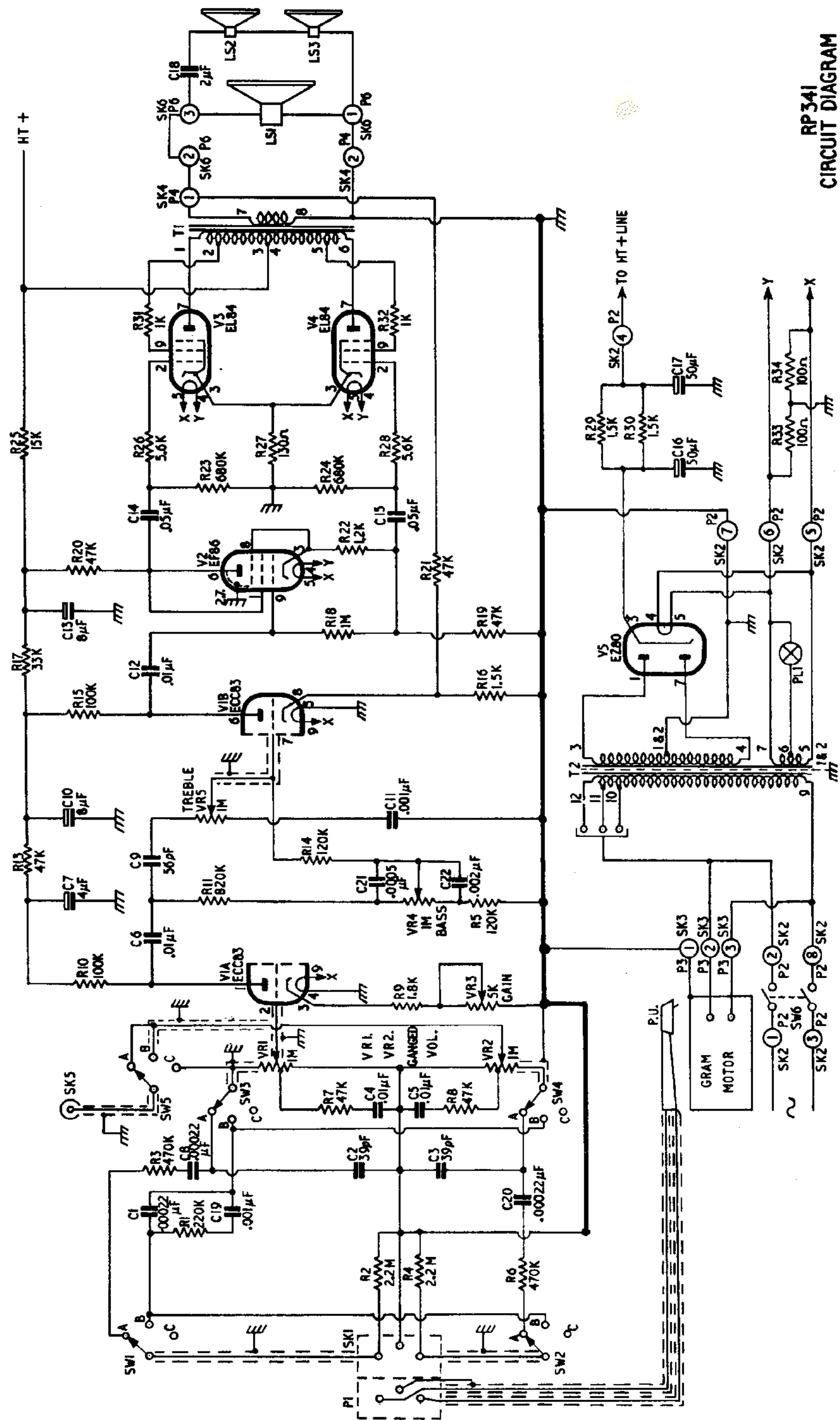
**LOUD-SPEAKER PHASING :** Careful phasing of the loud-speakers has been effected during manufacture to ensure that, when coupled to a Model SU341 Stereo Reproducer, the speaker systems of both instruments shall be in phase. It is therefore essential that connections throughout the instrument are not altered from the original, with particular attention to input and output leads which should on no account be reverse connected.

Should it be necessary to replace a loud-speaker, replacements (available from Service Dept.) are marked with a red dot in a similar manner to the original unit, to assist in maintaining correct phasing.

**VR3 ADJUSTMENT :** The output of some pick-ups is near the upper limit of the manufacturing tolerance and, in this case, it is possible for the pick-up to cause microphony effects. VR3 has been incorporated to limit the gain of V1A and thus eliminate pick-up microphony troubles. The gain of the amplifier should not be reduced by VR3 beyond the point necessary to eliminate this form of microphony. If possible, a frequency test record should be used. The control is accessible through the ventilation slots of the control panel, using an ordinary screwdriver. Turn anti-clockwise to reduce gain.

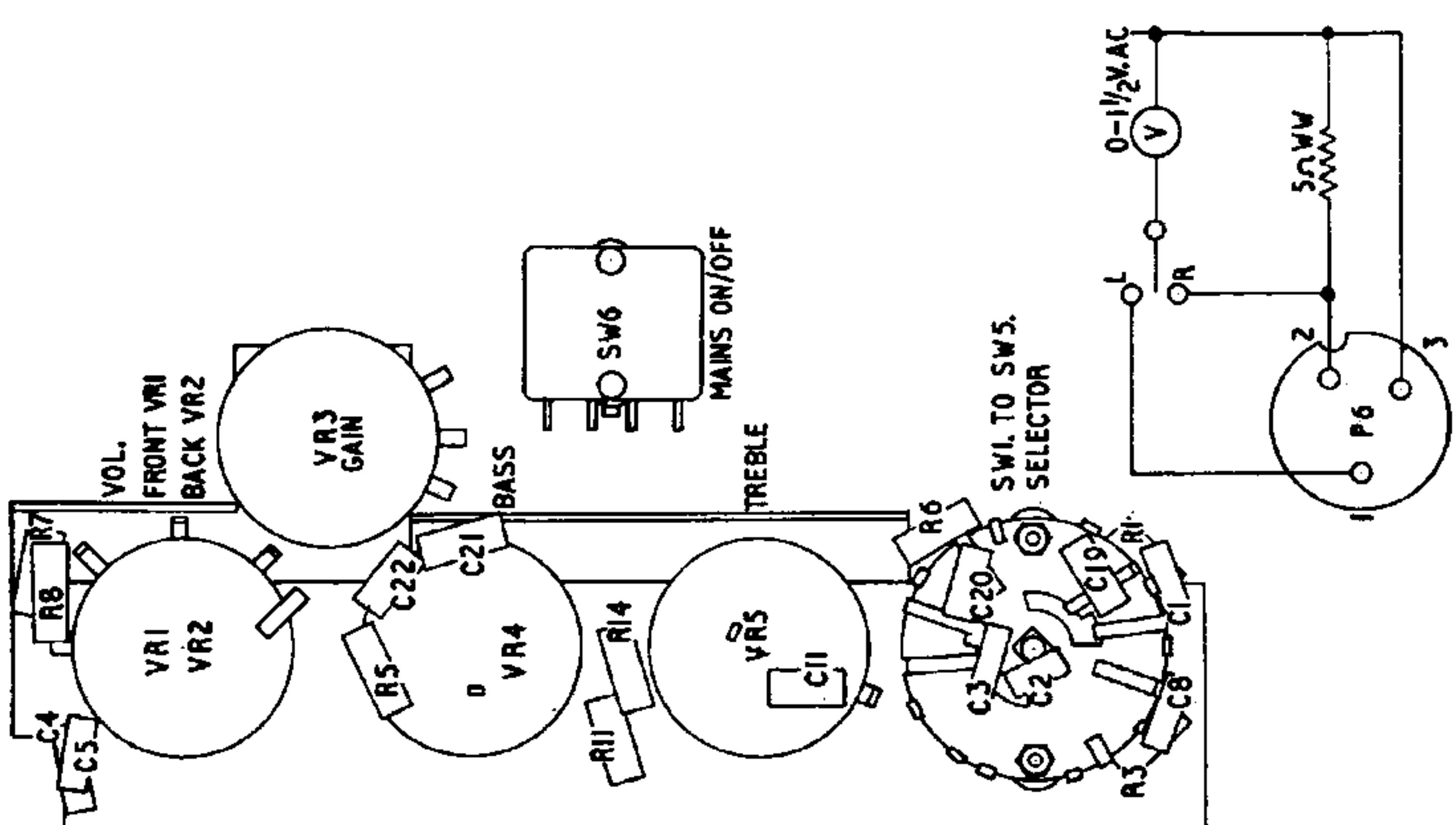
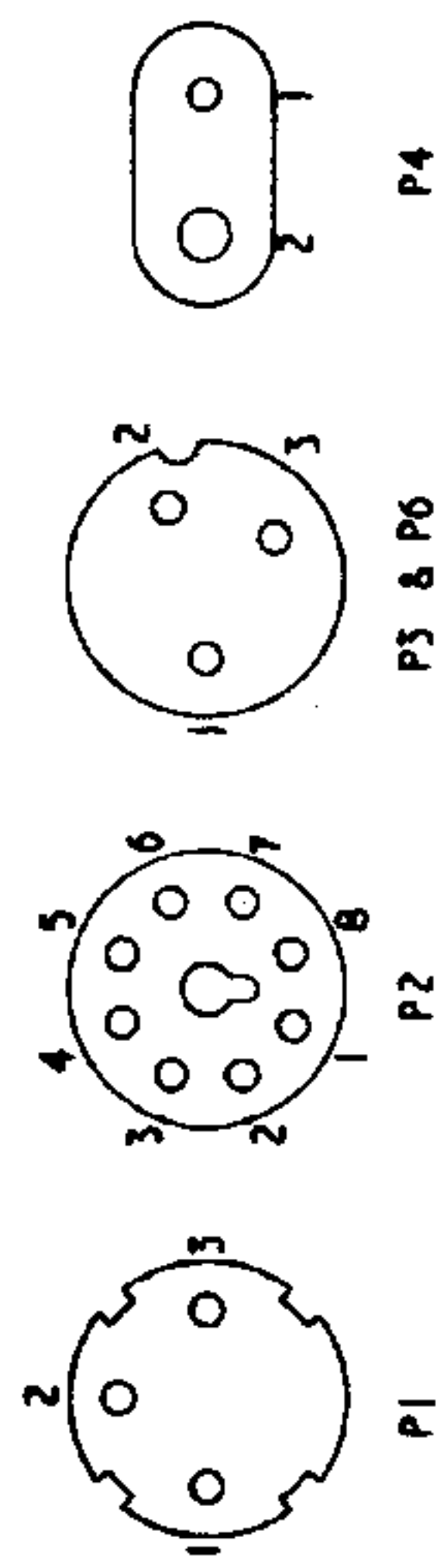


C	1. 19.B.	6	7. 21.	9.	10.	12.	13.	14.	18.	19.	20.	21.	22.	31.	32.		
R	2. 1.	3. 7.	4. 5.	11.	13, 14.	15.	17.	18.	20.	23, 24, 25, 26, 27	35, 28, 29, 30, 34.						
M	SW1.	SK5.SW3.	SW5.	VRI.	VIA.	VR5.	VIB.	T2.	V2.	PL1.	V5.	V3.	V4.	TI.	SK4.P4.LS1.	LS2.	LS3.
	P1.	SW2.	SK1.	VR2.	SW6.	VR3.P3.	SK3.	VR4.									

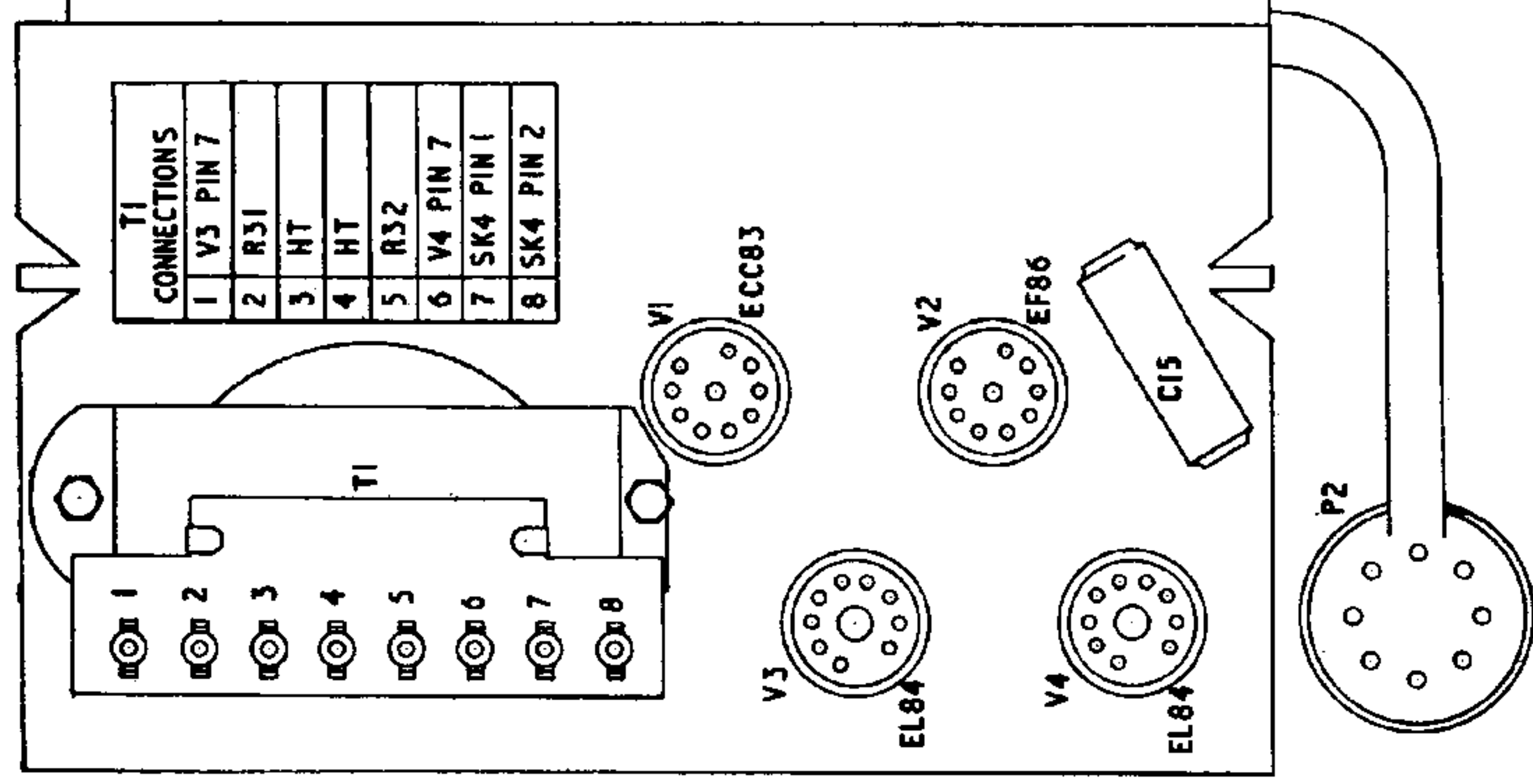


RP 341  
CIRCUIT DIAGRAM

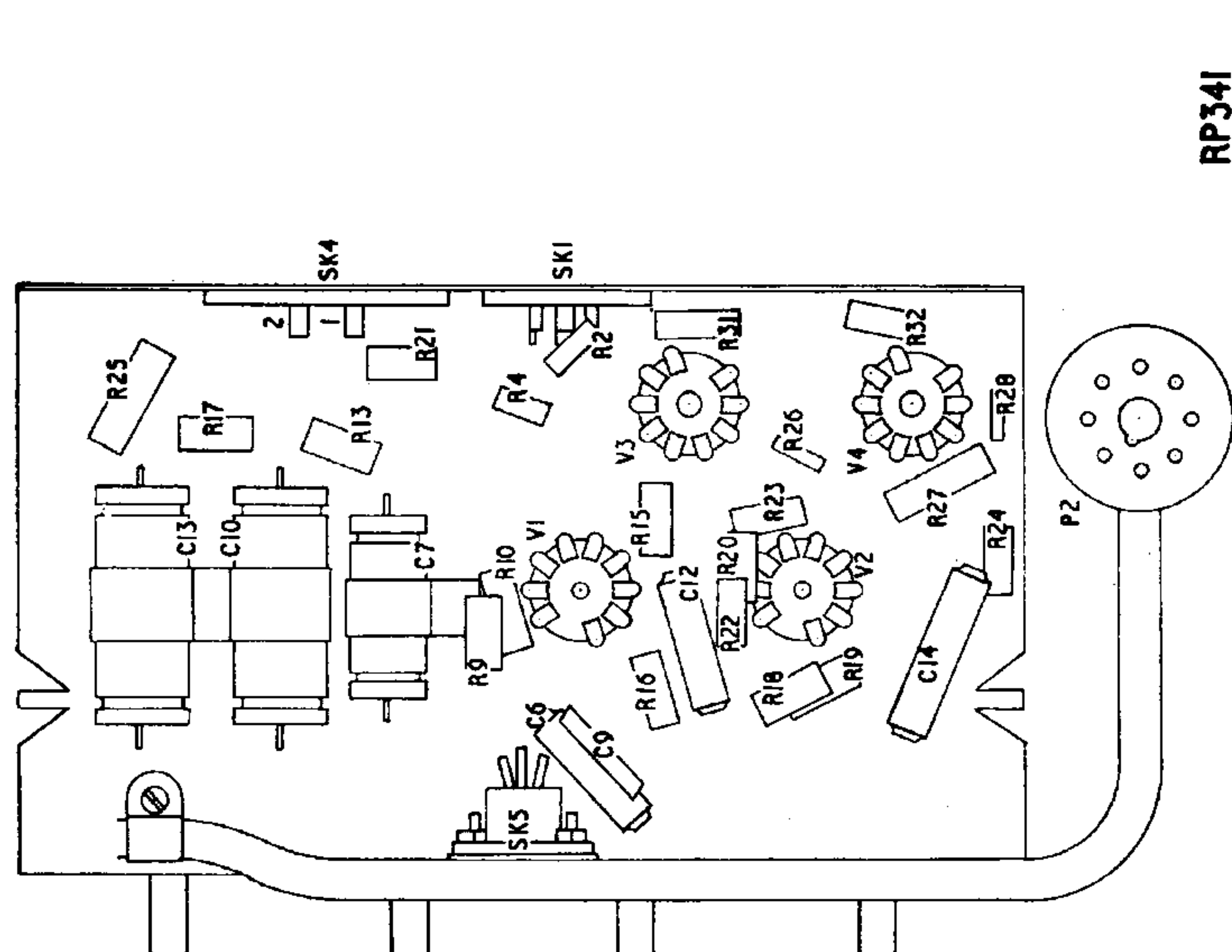
DETAILS OF PLUGS VIEWED FROM FREE ENDS OF PINS



TEST SET CIRCUIT DIAG.



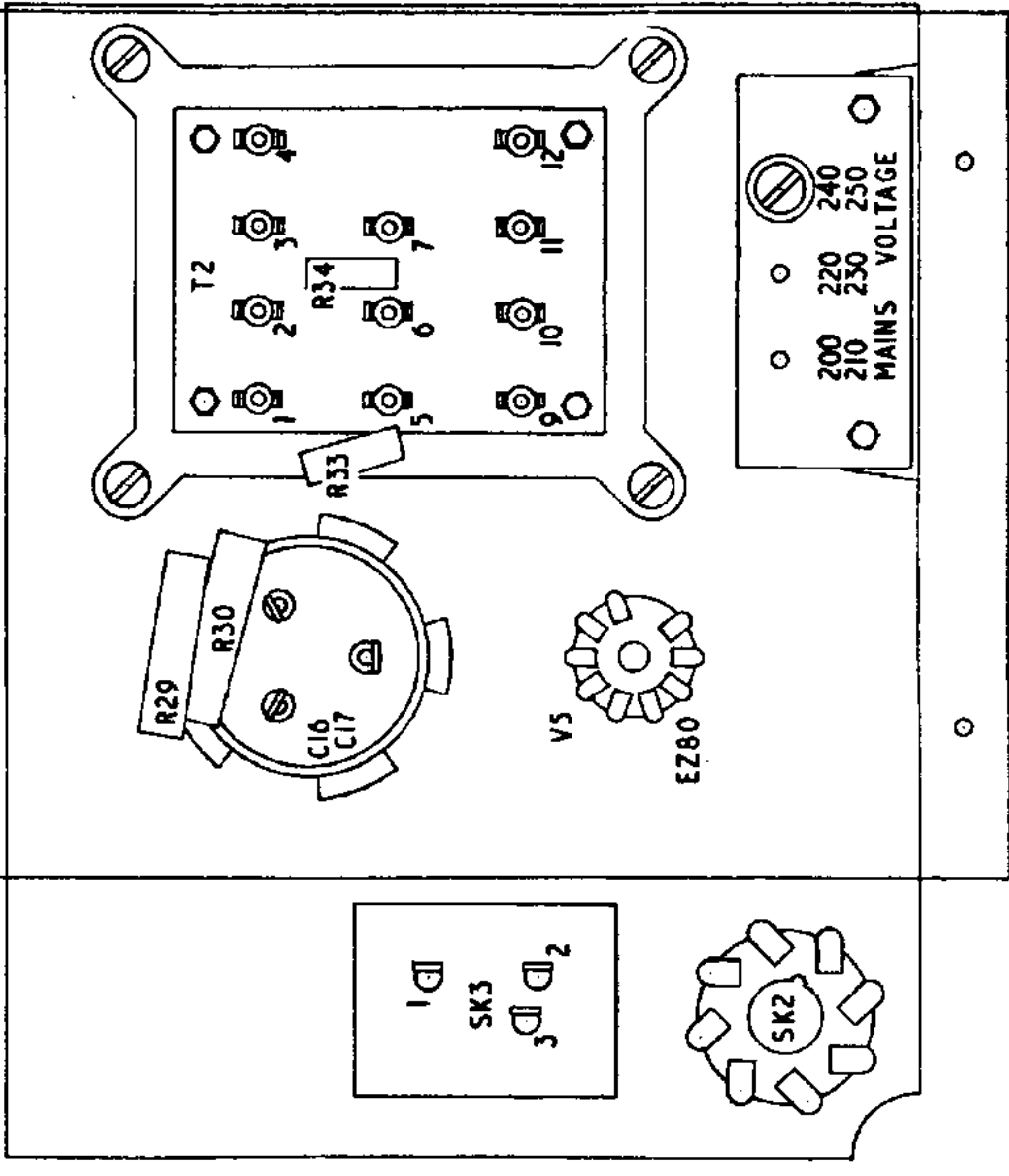
TOP



UNDERSIDE

RP341 AMPLIFIER CHASSIS

RP341 POWER UNIT



**MODEL SU341** is an amplifier specially designed to operate in conjunction with Model RP341 in a stereo installation. The cabinet is finished in walnut veneers to match the cabinet of the Record Reproducer and has a similar acoustic chamber.

**MAINS SUPPLY :** 200-250V, A.C. 50 c/s.

**MAINS CONSUMPTION :** 41W.

**PILOT LAMP :** 6.5V 0.3A.

**VALVES :** V1—EF86, V2,3—ECL82.

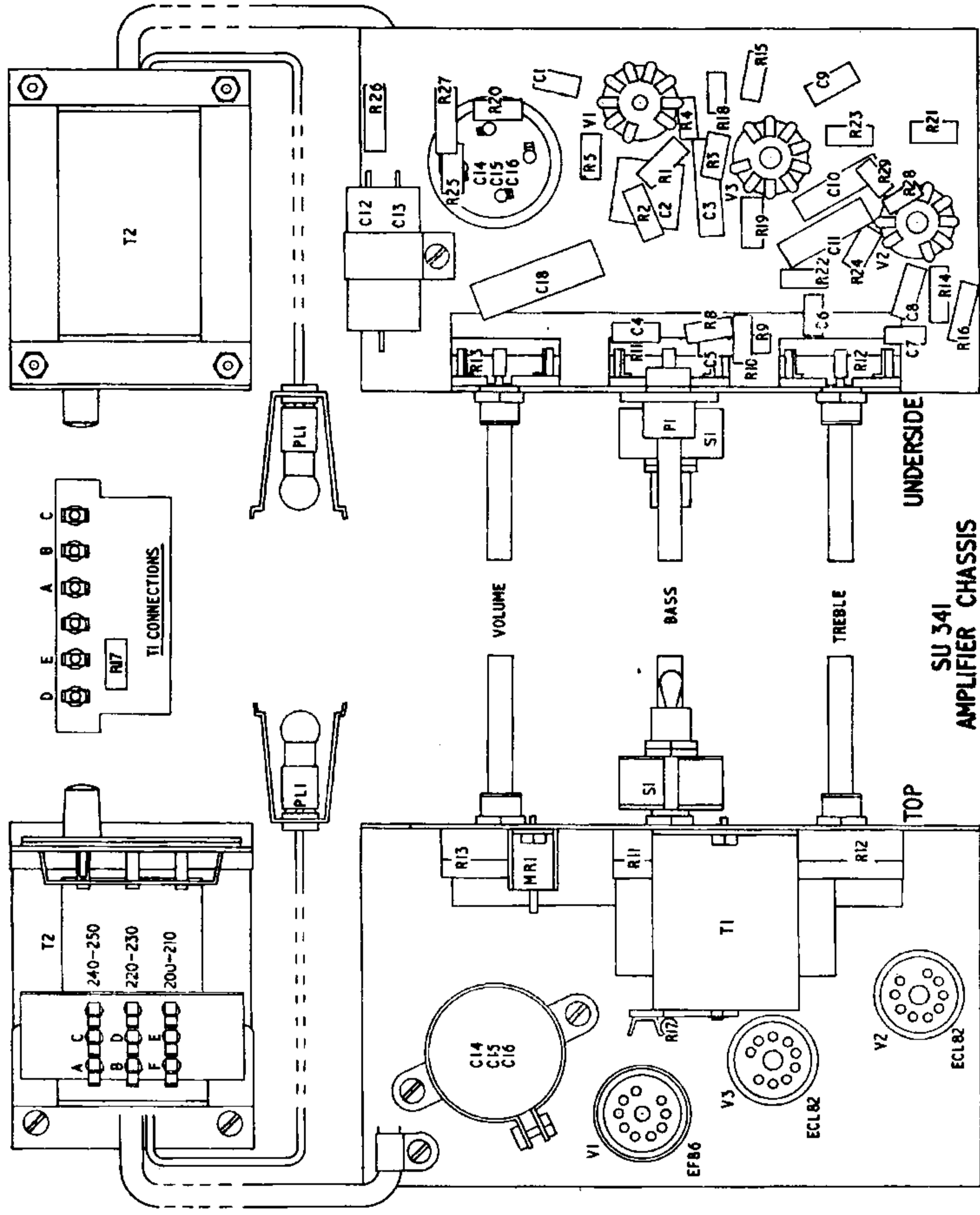
**RECTIFIER :** Westinghouse EC1.

**LOUD-SPEAKERS :** One 10" x 6" main and two 4" dia. high frequency units. The notes concerning loud-speaker phasing and tuning the acoustic chamber on pages 1 and 2 are also applicable to this unit.

**CONTROLS :** left—TREBLE, centre—BASS, right—VOLUME. The ON/OFF switch is at the top of the control panel.

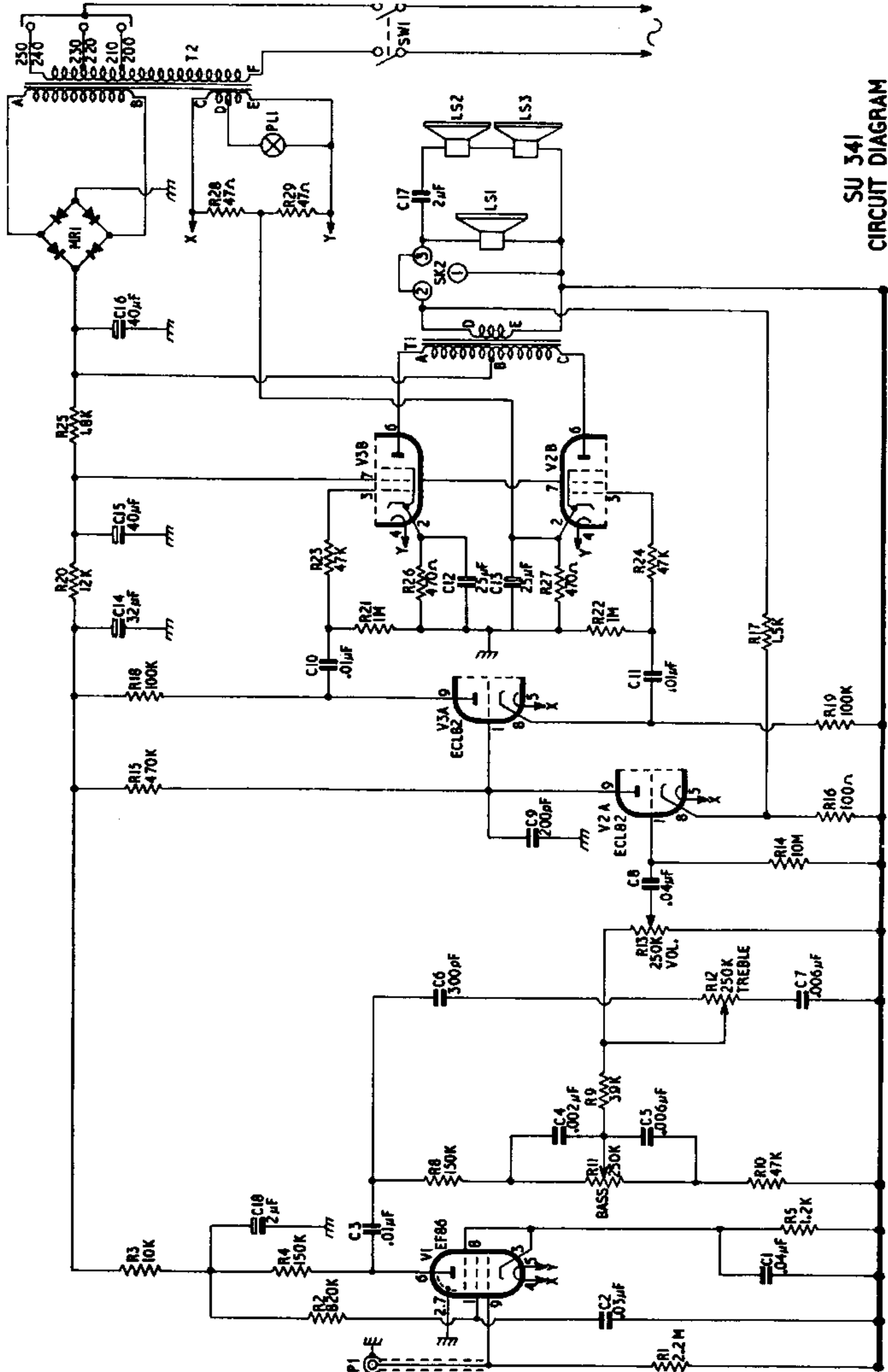
**CHASSIS REMOVAL :** Disconnect from the mains supply, then remove the rear cover. Remove the control knobs, then release four nuts securing the chassis to the side of the cabinet. The chassis can now be withdrawn to the extent of the loud-speaker and transformer leads. To remove further, disconnect the loud-speaker leads from the output transformer, then remove four screws and nuts securing the transformer to the base of the cabinet. The chassis and transformer can now be withdrawn together.

Care should be taken when re-fitting that all the covers are fitted correctly.



SU 341  
AMPLIFIER CHASSIS

C	2.	1.	18.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.
R	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	



SU 341  
CIRCUIT DIAGRAM