

**model P320TG**  
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**Serial Nos.**  
**490201 onwards**

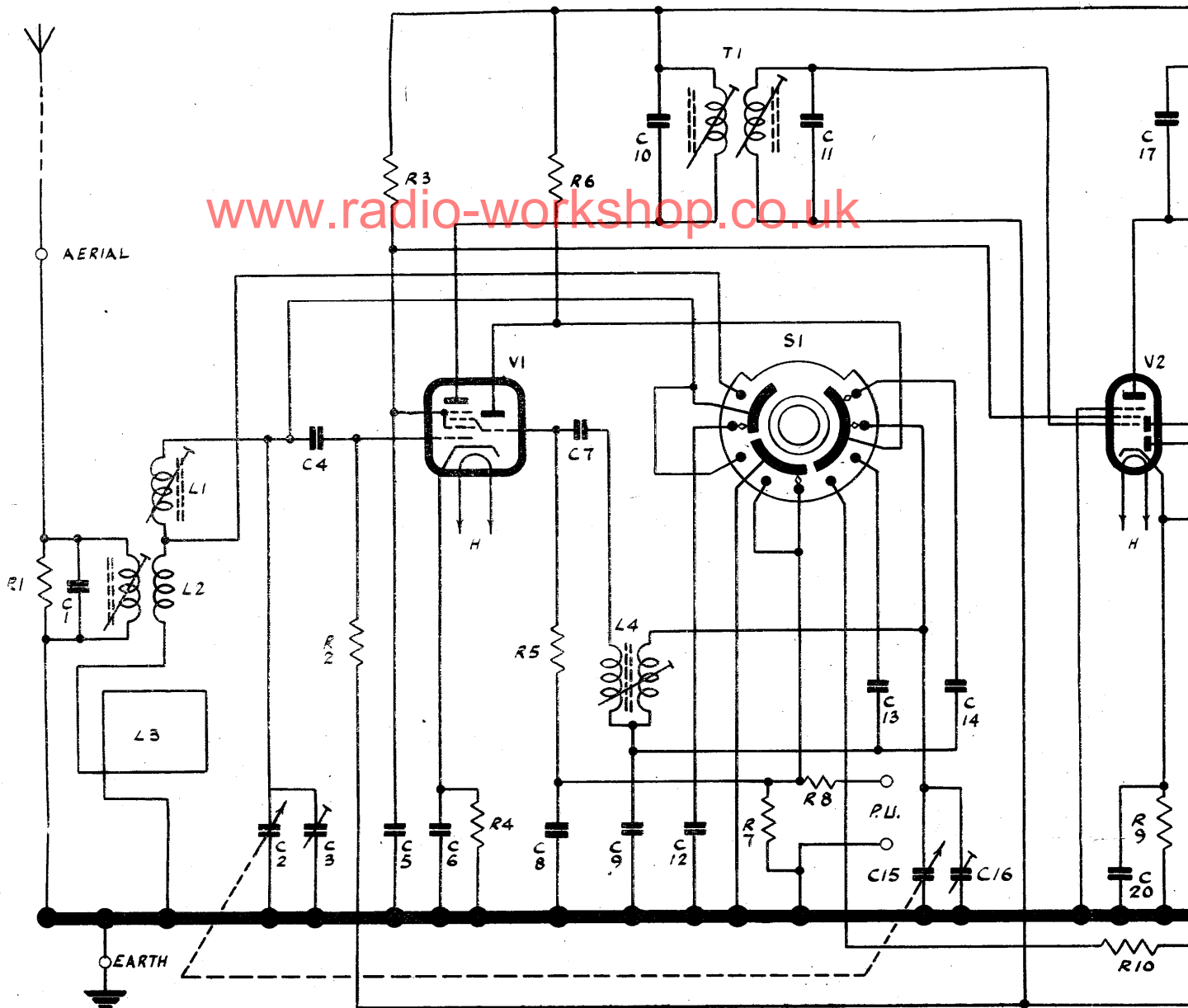
FOR OPERATION OFF  
 200 TO 250 VOLT  
 A.C. MAINS

CIRCUIT ANALYSIS

TRIMMING PROCEDURE

Mains Consumption 34 watts, 47 watts with Gram. Motor. A.F. Output 2.2 watts										
	Valve	Mullard	Ea	Ia	Es	Is	Osc.		Ek	Ik
							Ea	Ia		
V1	Frequency Changer	ECH.42	183	2.3	94	4.1	90	1.7	1.8	8.1
V2	Det. and I.F. Amplifier	EBF.80	183	4.7	94	1.8	—	—	3.0	6.5
V3	Output	EL.41	200	26	183	4.0	—	—	4.5	30
V4	Power Rectifier	EZ.40	Anode to Anode 400 v. A.C.						210	44.6
<p><b>Note.</b>—Set on M.W. with Gang Condenser fully meshed. No Signal input. Mains input voltage 230 v. A.C. into the 226-250 v. tap. Measurements taken with an Avometer Model 7 instrument.                      All voltages over 10 v. taken on 400 v. range.                      All voltages under 10 v. taken on 10 v. range.</p>										
Apply signal as below		Set Receiver Controls to			Adjust in order for Maximum Output					
(1) 470 kc/s. between chassis and control grid of V1 via 0.1 $\mu$ F condenser		Low frequency end of M.W. band (550 metres)			Iron dust cores of T2 and T1					
(2) 600 kc/s. (500 metres) by allowing Signal Generator output lead to lie near Frame Aerial		M.W. (500 metres)			Iron dust core of L4 (Osc.) Iron dust core of L2 (Aerial)					
(3) As (2) but 1500 kc/s. (200 metres)		M.W. (200 metres)			Osc. Trimmer C16 Aerial Trimmer C3					
(4) As (2) but 214 kc/s. (1400 metres)		L.W. (1400 metres)			Iron dust core of L1					
(5) Repeat (2), (3) and (4) until calibration and tracking are correct										

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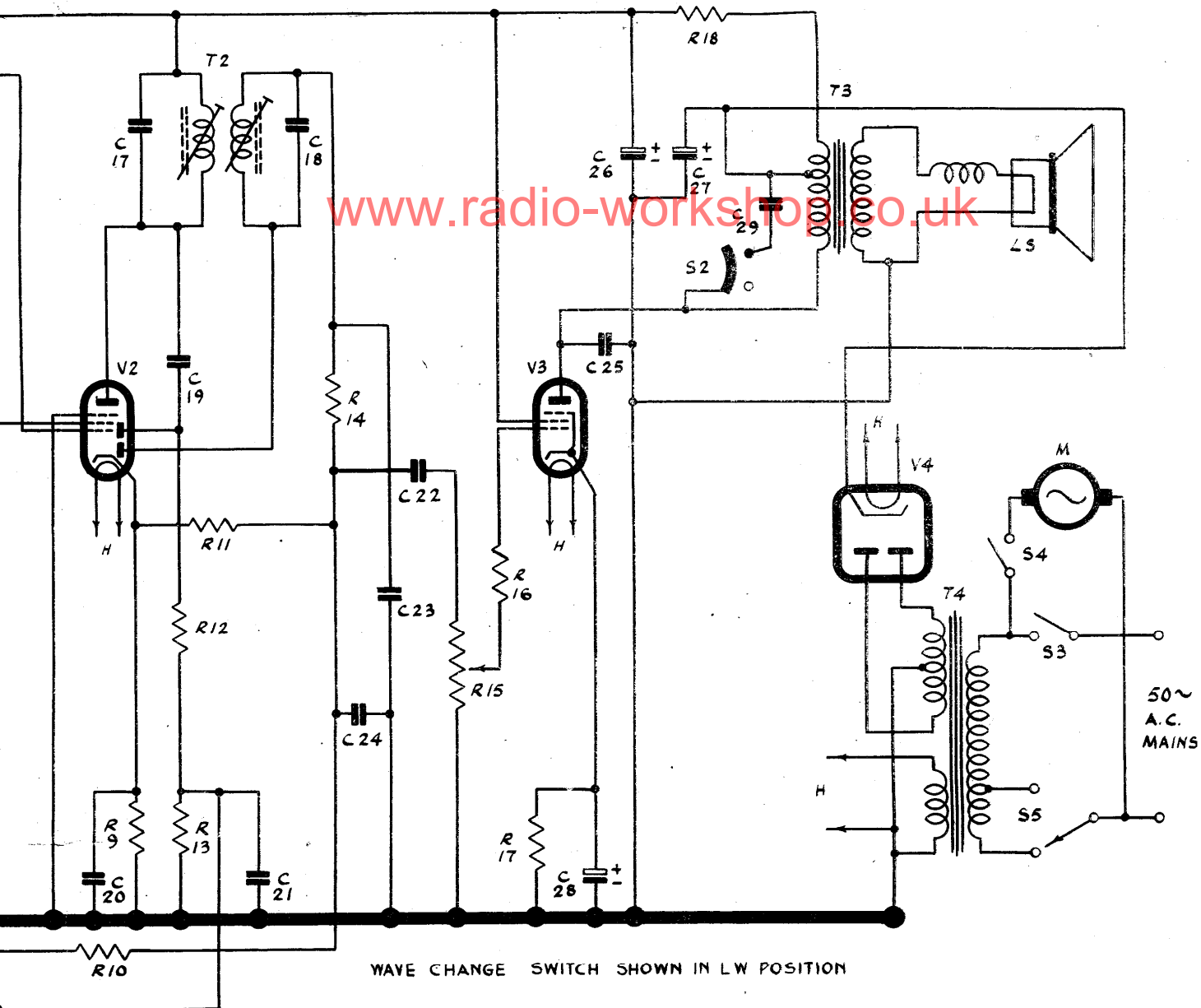


*circuit diagram of the*  
**PYE MODEL**  
**P32Q TG**

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**CONDENSERS**

	Specification	Volts	±
C1	100 pF Ceramic ..		20
C2	Gang Condenser ..		20
C3*	3-35 pF Trimmer ..		20
C4	100 pF Ceramic ..		20
C5	0.1 μF Tubular ..	350	
C6	0.04 μF Tubular ..	150	
C7	100 pF Ceramic ..		20
C8	330 pF Mica ..		20
C9	560 pF Mica ..		2
C10†	100 pF Mica ..		
C11†	100 pF Mica ..		
C12	180 pF Mica ..		2
C13	22 pF Ceramic ..		20
C14	560 pF Mica ..		2
C15	Gang Condenser ..		
C16*	3-35 pF Trimmer ..		
C17†	100 pF Mica ..		
C18†	100 pF Mica ..		
C19	10 pF Ceramic ..		20
C20	0.1 μF Tubular ..	350	
C21	0.04 μF Tubular ..	150	
C22	0.01 μF Tubular ..	350	
C23	100 pF Ceramic ..		20
C24	100 pF Ceramic ..		20
C25	0.005 μF Tubular ..	600 A.C.	
C26	32 μF Electrolytic ..	350	
C27	32 μF Electrolytic ..	350	
C28	25 μF Electrolytic ..	12	
C29	0.02 μF Tubular ..	600 A.C.	



CONDENSERS					RESISTORS					INDUCTANCES			
Volts	±	Fig.	No.	Fig.	No.	Ohms	Watts	Fig.	No.	Specification	Fig.	No.	
350 150	20%	3	666520	R1	22,000	10%	3	670534	L1	L.W. Loading Coil	2	780517	
		3	800034	R2	2.2 meg.	20%	3	670412	L2	M.W. Aerial Coil	2	780528	
		3	800034	R3	15,000	10%	3	670456	L3	Frame Aerial	1	732377	
		3	666520	R4	220	10%	3	670510	L4	M.W. and L.W. Osc. Coil	2	780539	
		3	668638	R5	47,000	10%	3	670538	L5	Loudspeaker	1	850019	
	350 150 350	20%	3	669106	R6	47,000	10%	3	670538	<b>TRANSFORMERS</b>			
			3	666520	R7	680,000	20%	3	670409				
			3	665720	R8	220,000	20%	3	670406				
			3	664272	R9	470	20%	3	670390				
			3	666776	R10	150,000	20%	3	670405				
2% 20% 2%		2	666776	R11	680,000	20%	3	670409					
		3	664150	R12	1 meg.	20%	3	670410					
		3	666512	R13	330,000	20%	3	670407					
		3	664272	R14	100,000	20%	3	670404					
		3	800034	R15	0.8 meg. Volume Control	20%	3	810223					
600 A.C. 350 350 12 600 A.C.	20%	2	666776	R16	10,000	10%	3	670530	T1	1st I.F. Trans.	2	770369	
		2	666776	R17	150	10%	3	670508	T2	2nd I.F. Trans.			
		3	666525	R18	1,500	10%	3	670444	T3	Output Trans.	2	770397	
		3	668638	<b>SWITCHES, ETC.</b>					T4	Mains Trans.	2 & 3	770483	
		3	669106										
	3	669096											
	3	666520											
	3	666520											
	3	668845											
	20% 20%	2	667500						S1	Ae. and Osc. Section Range Switch	3	830305	
3		668850	S2						Tone Control	3	830306		
3		668850	S3						Mains ON/OFF (on Volume Control)	3	810223		
1		668850	S4						Gram. Motor ON/OFF	1	710649		
1		668850	S5	Mains Selector	1	700581							
3	668850	M	Gram. Motor	2	710649								

\*Part of Gang Condenser.  
† Integral Part of I.F. Transformer.

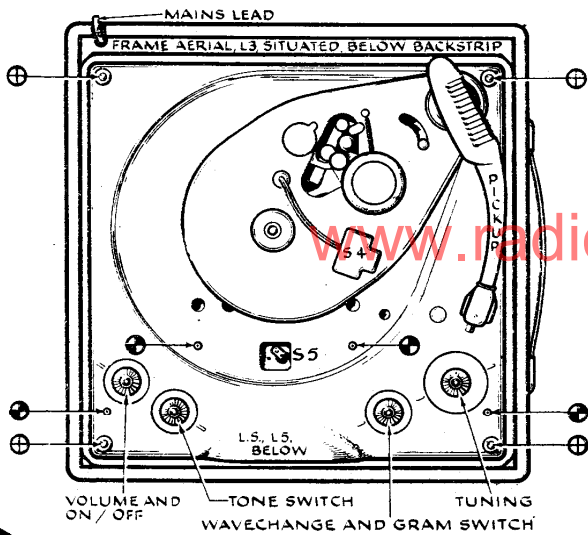


FIG. 1

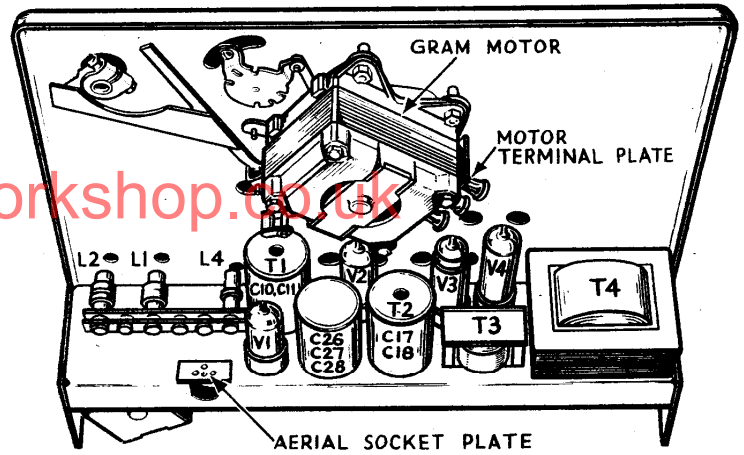


FIG. 2

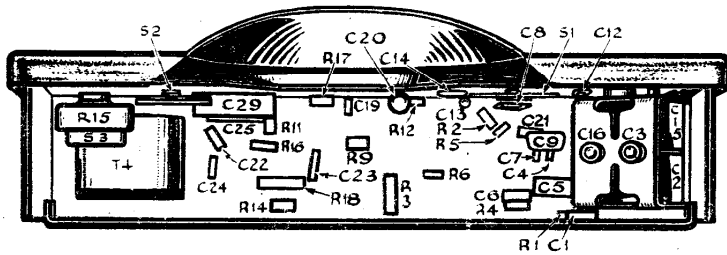
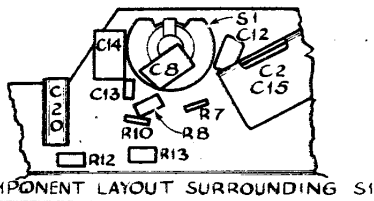


FIG. 3

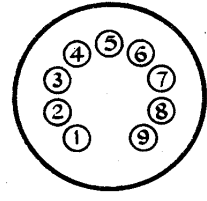
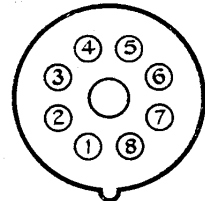


COMPONENT LAYOUT SURROUNDING S1

### VALVE BASE CONNECTIONS

	1	2	3	4	5	6	7	8	9
V1	H	AH	AT	G3 GT	G2 G4	G1	K	H	—
V2	G2	G1	K	H	H	A	D1	D2	G3
V3	H	A	K G3	—	G2	G1	K G3	H	—
V4	H	A1	—	—	—	A2	K	H	—

VALVE BASE FOR V1, V3, V4      VALVE BASE FOR V2



VIEW LOOKING AT PINS

FIG. 4

### Notes

#### TO GAIN ACCESS TO CHASSIS

- 1 Remove the 4 Motor Board fixing screws, see Fig. 1.
- 2 Lift Motor Board just clear of cabinet.
- 3 Detach plug from Aerial Socket Plate.
- 4 Stand Motor Board upright in bottom of cabinet.
- 5 Remove Aerial Leads from cleat in bottom of cabinet and insert Aerial Plug in socket plate.

#### TO REMOVE CHASSIS FROM MOTOR BOARD

- 1 Pull off Control Knobs and Tuning Scale.
- 2 Unsolder Pick-up, motor and loudspeaker leads and detach aerial plug.
- 3 Remove clipclip from centre spindle and lift off turntable.
- 4 Remove the 4 chassis fixing screws, see Fig. 1. Chassis may now be lifted clear.

To replace Chassis and Motor Board, reverse the procedure given above.

Make sure that the Mains Voltage Selector, see Fig. 1, is in the correct position to ensure maximum valve and component life.

The Pick-up is fitted with the new Pye Universal Stylus specially designed to play both microgroove and normal type discs. Being a permanent sapphire stylus, needle changing is eliminated.

