SERVICE SHEET FOR

model *P295TG*

FOR OPERATION OFF 230 VOLT 50 CYCLE A.C. MAINS

CIRCUIT ANALYSIS

Mains Consumption { Radio 40 watts. Gram. 55 watts. } Unsmoothed H.T. 265 v. D.C. Smoothed H.T. 232 v. D.C.

	Valve	Mullard	Ea	Ia	Es	Is	Osc. Ea	Osc. Ia	Ek	Ik
V1	Frequency Changer	ECH.42	232	2·2	72	4·2	143	5·6	---	12·0
V2	I.F. Amplifier	EF.41	232	6·1	72	1·7	---	---	---	7·8
V3	Det. and A.F. Amplifier	EBC.41	62	0·6	—	—	—	—	—	0·6
V4	Output	EL.41	254	30·0	232	4·0	—	—	6·1	34·0
V5	Rectifier	EZ.40	Anode to Anode 500 v. A.C.						268	54·4

Note.—All measurements taken on band 1 with no signal input. Gang fully meshed. Mains input 230 volts Measurements taken with an Avometer Model 8 instrument which has a resistance of 20,000 ohms per volt.

TRIMMING PROCEDURE

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 μF condenser	Low frequency end of Band 1.	Iron dust cores of I.F. Transformers T2 and T1
(2) 600 kc/s. between Aerial and Earth Sockets via standard Dummy Aerial	Band 1. 600 kc/s.	Iron dust cores of L9 and L1
(3) As (2) but 1500 kc/s. (200 m.)	Band 1. 1500 kc/s.	Trimmers C16 and C2
(4) Repeat (2) and (3) above until calibration and tracking are correct.		
(5) As (2) but 3·3 Mc/s.	Band 2. 3·3 Mc/s.	Iron dust cores of L10 and L2
(6) As (2) but 7·2 Mc/s.	Band 2. 7·2 Mc/s.	Trimmer C5
(7) Repeat (5) and (6) above until calibration and tracking are correct.		
(8) As (2) but 9·6 Mc/s.	Band 3. 9·6 Mc/s.	Aluminium slugs of L11 and L3
(9) As (2) but 11·8 Mc/s.	Band 4. 11·8 Mc/s.	Aluminium slugs of L12 and L4
(10) As (2) but 15·3 Mc/s.	Band 5. 15·3 Mc/s.	Aluminium slugs of L13 and L5
(11) As (2) but 17·8 Mc/s.	Band 6. 17·8 Mc/s.	Aluminium slugs of L14 and L6

* Pointer should be lined up with the spots

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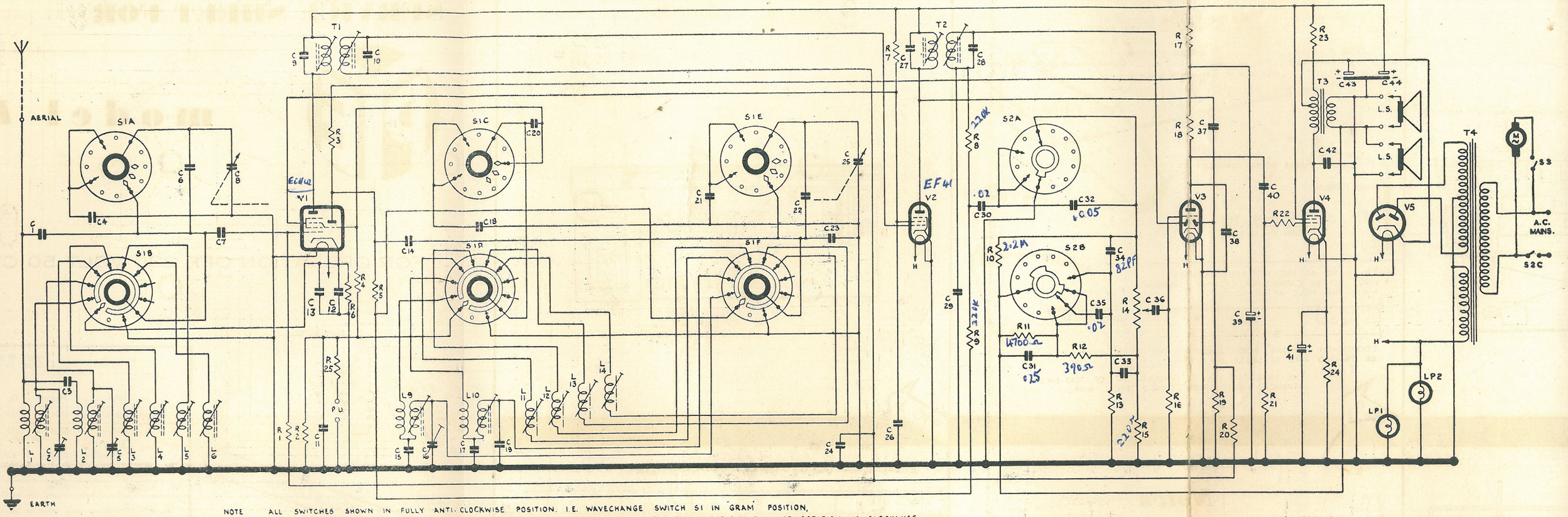
CALLAGHAN PRINT, WAIHI

P295TG



NOTE ALL SWITCHES SHOWN IN FULLY ANTI-CLOCKWISE POSITION. I.E. WAVECHANGE SWITCH S1 IN GRAM POSITION, AND TONE SWITCH S2 IN OFF POSITION. ALL SWITCHES ARE VIEWED FROM THE FRONT, AND THE DIRECTION OF ROTATION IS CLOCKWISE.

circuit diagram of the PYE MODEL 95TG

CONDENSERS

	Specification	Volts	±	Fig.	No.
C1	5·6 pF Ceramic		20%	4	666659
C2	3–50 pF Trimmer			4	800076
C3	47 pF Ceramic		20%	4	666660
C4	150 pF Mica		2%	4	664130
C5	3–50 pF Trimmer			4	800076
C6	82 pF Mica		2%	4	664092
C7	100 pF Ceramic		20%	4	666520
C8	528 pF Swing Gang Condenser			1 & 3	800032
C9*	100 pF + Mica		2%	1 & 3	
C10*	100 pF		5%	4	
C11	270 pF Mica			4	669082
C12	0·01 µF Tubular	150		4	667170
C13	25 µF Electrolytic	12		4	666678
C14	560 pF Ceramic		20%	4	664260
C15	510 pF Mica		2%	4	800076
C16	3–50 pF Trimmer			4	664938
C17	2700 pF Mica		5%	4	664130
C18	150 pF Mica		2%	4	666517
C19	27 pF Mica		10%	4	666520
C20	100 pF Ceramic		20%	4	664130
C21	150 pF Mica		2%	4	664130
C22	150 pF Mica		2%	4	666515
C23	15 pF Ceramic N750K		10%	4	668966
C24	0·05 µF Tubular	350		1 & 3	800032
C25	528 pF Swing Gang Condenser			4	668966
C26	0·05 µF Tubular	350		1 & 3	
C27*	100 pF + Mica		2%	4	666520
C28*	100 pF		20%	4	668594
C29	100 pF Ceramic	500		4	668609
C30	0·02 µF Tubular	350		4	669081
C31	0·25 µF Tubular	150		4	668599
C32	0·005 µF Tubular	350			
C33	0·05 µF Tubular				

CONDENSERS, Contd.

	Specification	Volts	±	Fig.	No.
C34	82 pF Ceramic		20%	4	666677
C35	0·02 µF Tubular	500		4	668594
C36	0·05 µF Tubular	350		4	668966
C37	47 pF Ceramic		20%	4	666660
C38	100 pF Ceramic		20%	4	666520
C39	16 µF Electrolytic	350		1 & 3	667537
C40	0·01 µF Tubular	350		4	669096
C41	50 µF Electrolytic	12		4	667171
C42	0·005 µF Tubular	1000		1 & 3	668870
C43	32 µF + Electrolytic	350		1 & 3	667504
C44	32 µF				

INDUCTANCES

	Specification	Ref.	Fig.	No.
L1	M.W. Aerial Coil	M.W.7	4	780246
L2	M.S.W. Aerial Coil	M.S.W.4	4	780338
L3	31 m. Aerial Coil	S.W.6	4	780276
L4	25 m. Aerial Coil	S.W.5	4	780277
L5	19 m. Aerial Coil	S.W.4	4	780278
L6	16 m. Aerial Coil	S.W.3	4	780272
L9	M.W. Osc. Coil	M.W.9	4	780254
L10	M.S.W. Osc. Coil	S.W.12	4	780255
L11	31 m. Osc. Coil	S.W.7	4	780275
L12	25 m. Osc. Coil	S.W.6	4	780276
L13	19 m. Osc. Coil	S.W.5	4	780277
L14	16 m. Osc. Coil	S.W.4	4	780278

RESISTORS

	Ohms	Watts	±	Fig.	No.
R1	1 meg.	¼	20%	4	670410
R2	220,000 meg.	¼	20%	4	670406
R3	10,000	¼	20%	4	670398
R4	82,000	¼	20%	4	671047
R5	220,000	¼	20%	4	670406
R6	220	¼	20%	4	670388
R7	27,000	¼	20%	4	671218
R8	220,000	¼	20%	4	670406
R9	220,000	¼	20%	4	670406
R10	2·2 meg	¼	20%	4	670412
R11	4,700	¼	20%	4	670396
R12	2,200	¼	20%	4	670394
R13	390	¼	20%	4	671061
R14	1 meg. Volume Control			4	810241
R15	220	¼	20%	4	670388
R16	10 meg.	¼	20%	4	670416
R17	4,700	¼	20%	4	670396
R18	220,000	¼	20%	4	670406
R19	1 meg.	¼	20%	4	670410
R20	1 meg.	¼	20%	4	670410
R21	220,000	¼	20%	4	670406
R22	10,000	¼	20%	4	670398
R23	1,600 Wire Wound	4	5%	4	671836
R24	180	¼	10%	4	670509
R25	470,000	¼	20%	4	670408

TRANSFO

	Specification	
T1	1st I.F. Trans.	Prim. 12·2Ω Sec. 12·2Ω
T2	2nd I.F. Trans.	Prim. 12·2Ω Sec. 12·2Ω
T3	Output Trans.	Prim. Start to T Prim. Start to Fi
T4	Mains Trans.	Prim. 35Ω on 2 Sec. 270 + 290

SWITCHES, LA

	Specification	
S1A	Rear Bank 3	Aerial
S1B	Front Bank 3	Section
S1C	Rear Bank 2	Gram. and
S1D	Front Bank 2	Osc. Switch 9 p
S1E	Rear Bank 1	Section
S1F	Front Bank 1	
S2A	Rear Bank 1	Tonemaste
S2B	Front Bank 1	ON/OFF S
S2C	Mains ON/OFF Switch	5 position
LP1	Dial Bulb 6·5 volt 0·3 amp.	
LP2	Dial Bulb 6·5 volt 0·3 amp.	
LS	Loudspeaker	

Note.—* Integral part

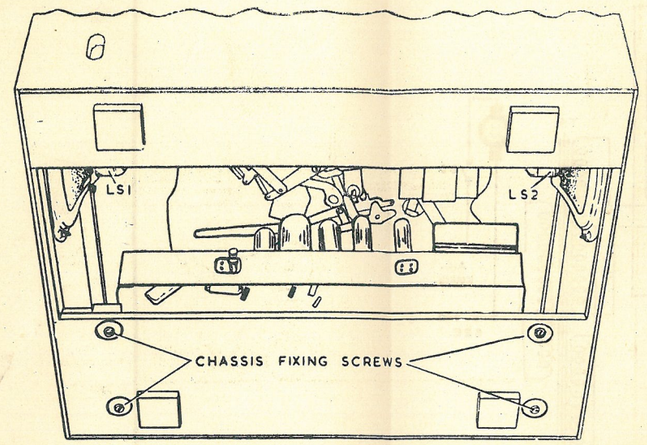


FIG. 1

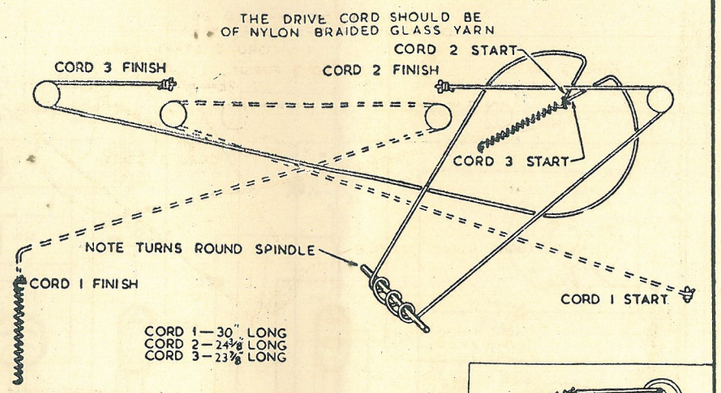


FIG. 2

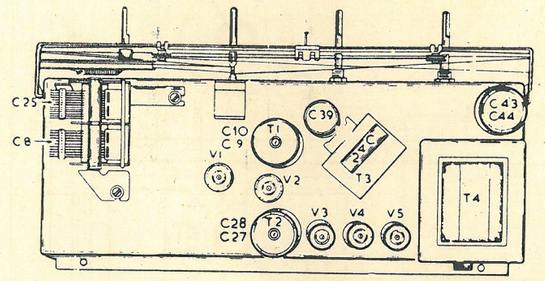
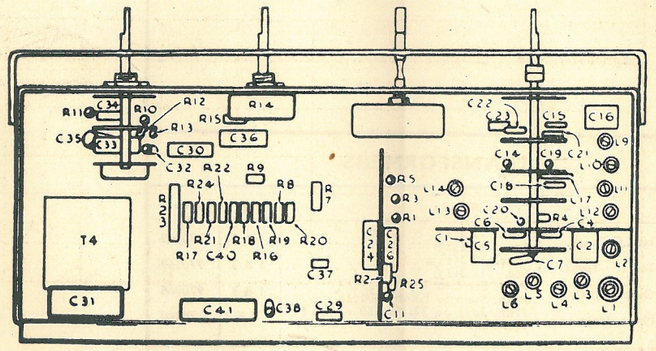
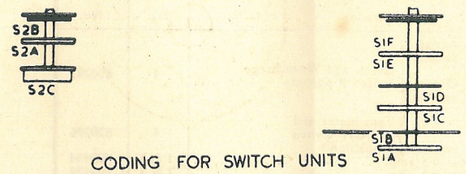


FIG. 3





CODING FOR SWITCH UNITS

FIG. 4

Notes

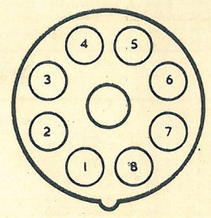
1. A 100 Division Trimming Scale is printed on the back of the scale reflector plate for use when trimming the receiver outside the cabinet. With the Gang fully closed, a mark should be made on the secondary pointer carriage to line up with the 100 division; this will serve as an index for the scale.

   A Calibration Chart is printed on centre pages. When no accurate frequency standard is available the receiver should be calibrated against a reliable broadcasting station operating on a wavelength close to that specified in the Trimming Procedure. After the alignment has been carried out and the chassis refitted in the cabinet, the pointer should be lined up with the spots to be found at the right-hand end of the tracks.

2. Dial Bulbs 6·5 v. 0·3 amp.

VALVE BASE CONNECTIONS

	1	2	3	4	5	6	7	8
V1	H	A H	A T	G 3 / G T	G 2 / G 4	G 1	K	H
V2	H	A	K / G 3 S	K / G 3 S	G 2	G 1	K / G 3 S	H
V3	H	A	G	S	D 1	D 2	K	H
V4	H	A	K / G 3	—	G 2	G 1	K / G 3	H
V5	H	A 1				A 2	K	H



VIEW LOOKING AT PINS

FIG. 5