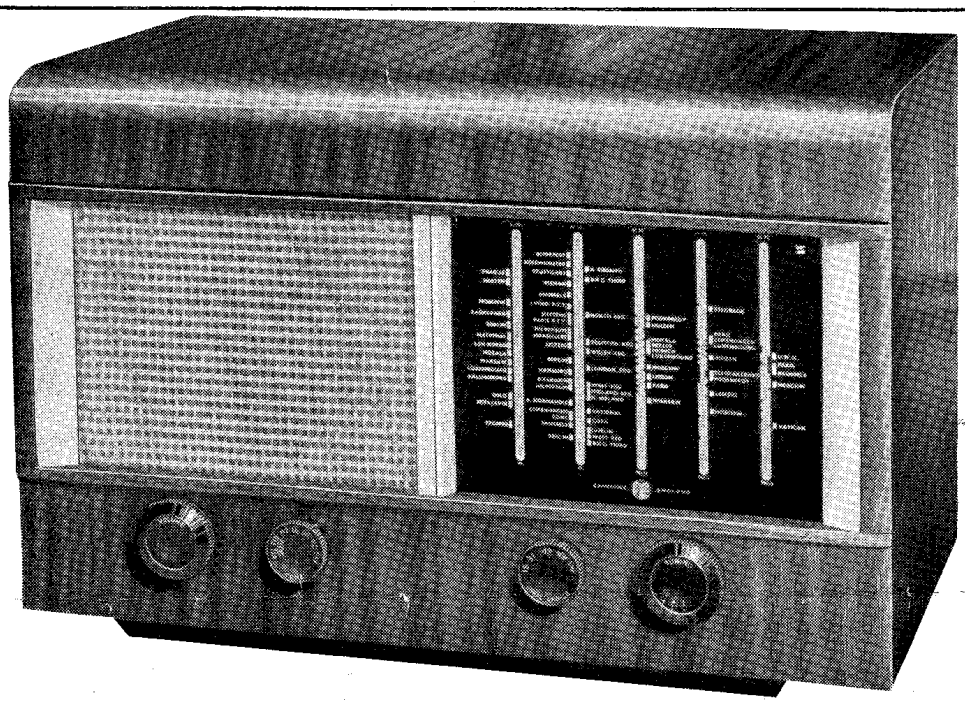
SERVICE SHEET FOR

Issue I. Jan., 1950

model P28



FOR OPERATION
OFF 200/250 V.
A.C. MAINS

CIRCUIT ANALYSIS

Mains consumption 47 watts. Unsmoothed H.T. 305 v. Smoothed H.T. 255 v.

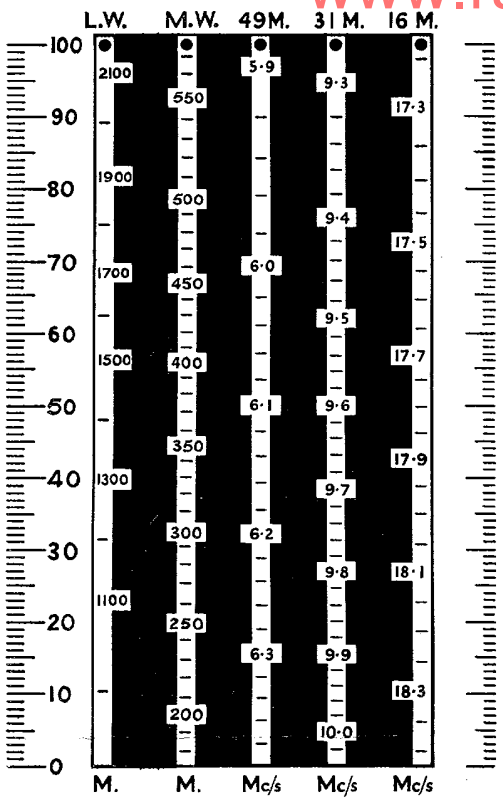
	Valve	Mullard	Ea	Ia	Es	Is	Osc. Ea	Osc. Ia	Ec	Ic
V1	Frequency Changer	ECH.35	255	3·6	90	2·6	126	5·5	2·5	11·7
V2	I.F. Amplifier	EF.22	255	6·2	90	2·0	—	—	2·7	8·2
V3	Det., A.V.C. and Output Stage ..	EBL.31	240	26	255	3·5	Bias volts 6·5		19·0	29·5
V4	Power Rectifier	AZ.31	285–0–285 A.C.						305	—

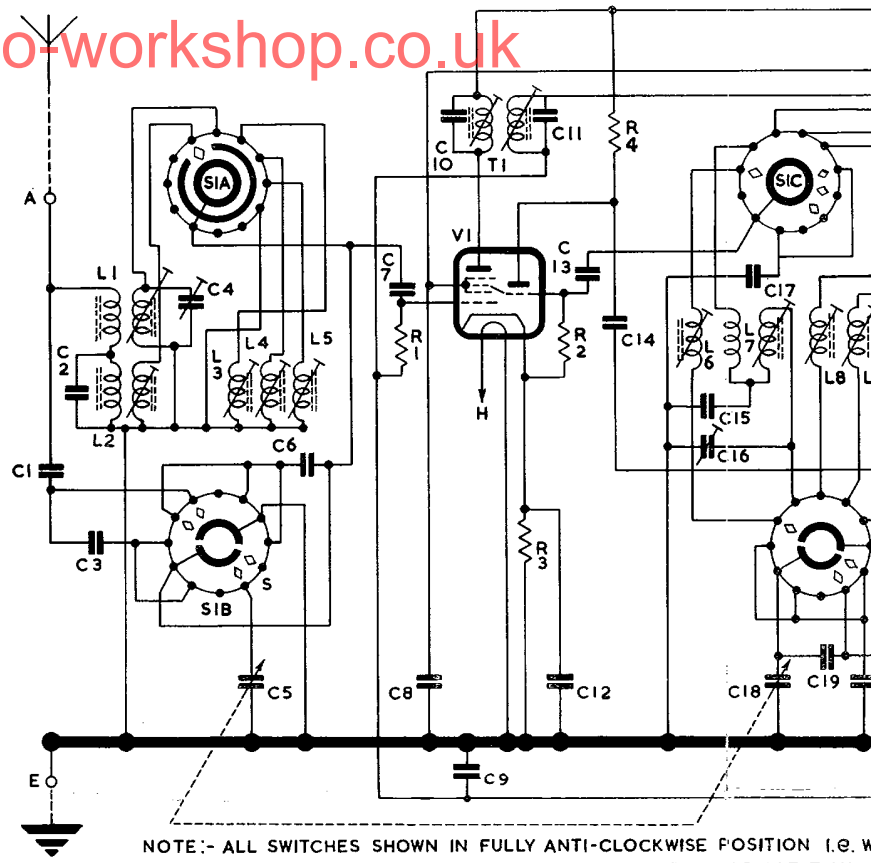
Note.—Set on L.W. with Gang Condenser fully meshed. No signal input. Mains input voltage 200 v. into 200/215 v. tap. Measurements taken with an Avometer Model 7 instrument.
All voltages over 10 v. taken on 400 v. range.
All voltages under 10 v. taken on 10 v. range.

TRIMMING PROCEDURE

Apply signal as below	Tune receiver to	Adjust in order for maximum output
(1) 465 kc/s. via 0·1 μF condenser between Earth Terminal and Control Grid of V1. Grid lead to remain connected	Low frequency end of L.W. band. Gang Condenser fully meshed. Pointer aligned with spots at top of tracks	Iron dust cores of T2 and T1
(2) 225 kc/s. (1333 metres) via Dummy Aerial between Aerial and Earth Terminals	L.W. 1333 metres	Iron dust cores of L6 and L2
(3) As (2) but 600 kc/s. (500 metres)	M.W. 500 metres	Iron dust cores of L7 and L1
(4) As (2) but 1500 kc/s. (200 metres)	M.W. 200 metres	Trimmer C16 and C4
(5) Repeat (4) and (5) until calibration and tracking are correct		
(6) As (2) but 6·1 Mc/s.	49 M. band 6·1 Mc/s.	Iron dust cores of L8 and L3
(7) As (2) but 9·6 Mc/s.	31 M. band 9·6 Mc/s.	Iron dust cores of L9 and L4
(8) As (2) but 17·8 Mc/s.	16 M. band 17·8 Mc/s.	Iron dust cores of L10 and L5

CALIBRATION CHART





NOTE:- ALL SWITCHES SHOWN IN FULLY ANTI-CLOCKWISE POSITION I.E. W
ALL SWITCHES VIEWED FROM FRONT & DIRECTION OF ROTATION

circuit diagram of the

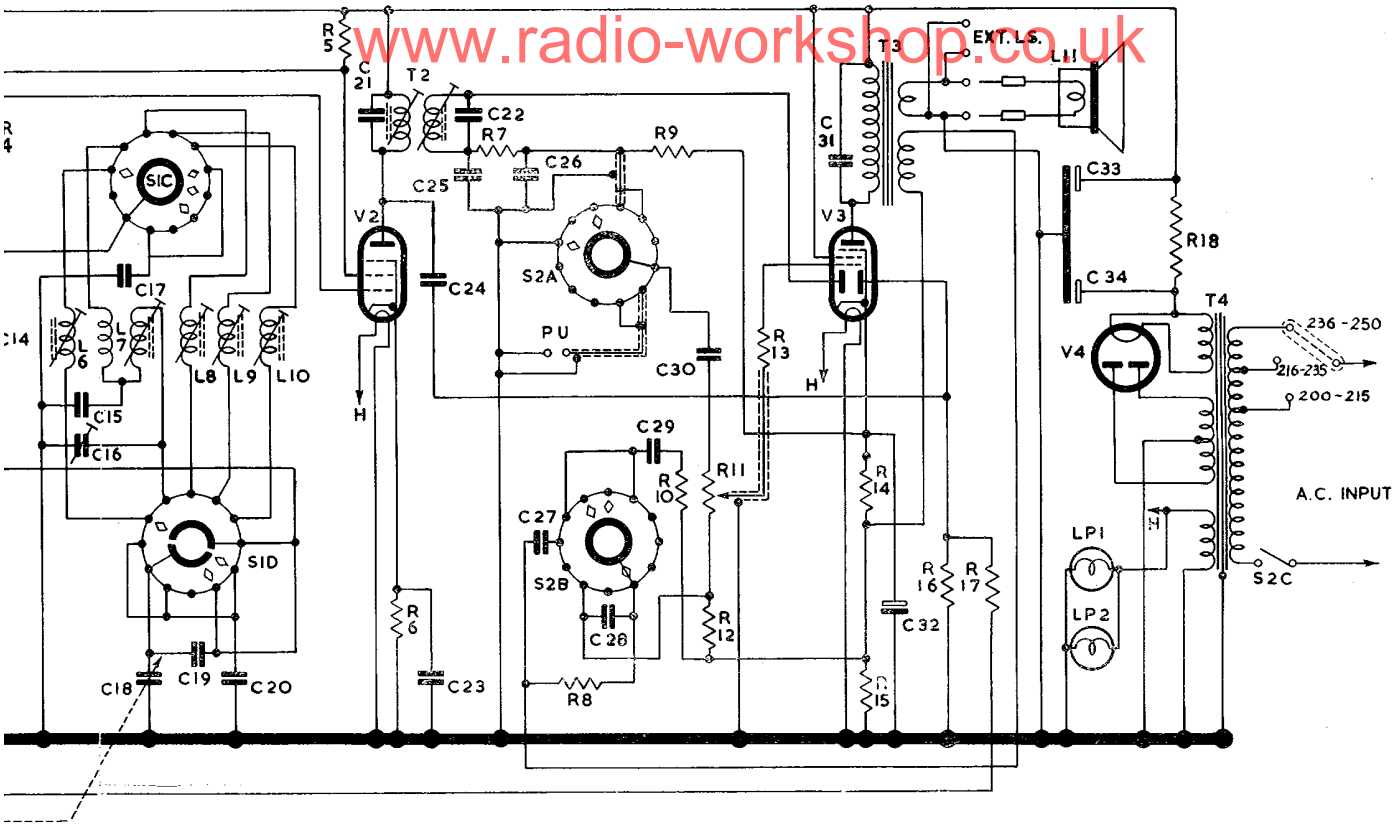
PYE MODEL P28

fitting a new tuning scale

1. Remove chassis.
2. Place Scale Plate in cabinet aperture and screw clips tightly in position, first making sure that the scale is square with the cabinet aperture.
3. Fit chassis in cabinet.
4. Adjust Gang Condenser to maximum position and line up the pointer to the spots to be found at the top of the tracks.

CONDENSERS

	Specification		Fig.	No
C1	100 pF Ceramic	±20%	3	6665
C2	220 pF Mica	±20%	3	6664
C3	5·6 pF Ceramic	±20%	3	6666
C4	3–50 pF Trimmer		3	8000
C5	Gang Condenser		1 & 2	8000
C6	82 pF Mica	± 2%	3	6662
C7	100 pF Ceramic	±20%	3	6665
C8	0·1 µF Tubular 500 v.		3	6681
C9	0·05 µF Tubular		3	6681
C10 * C11	100 pF + 100 pF Mica	± 2%	1 & 2	6664
C12	0·01 µF Tubular 350 v.		3	6680
C13	100 pF Ceramic	±20%	3	6665
C14	100 pF Ceramic	±20%	3	6665
C15	560 pF Mica	± 2%	3	6662
C16	3–50 pF Trimmer		3	8000
C17	200 pF Mica	± 2%	3	6667
C18	Gang Condenser		1 & 2	8000
C19	68 pF Mica	± 2%	3	6662
C20	130 pF Mica	± 2%	3	6664
C21 * C22	100 pF + 100 pF Mica	± 2%	1 & 2	6664
C23	0·1 µF Tubular 350 v.		3	6680
C24	10 pF Ceramic	±20%	3	6665
C25	100 pF Ceramic	±20%	3	6665
C26	100 pF Ceramic	±20%	3	6665
C27	0·1 µF Tubular 150 v.		3	6680
C28	0·1 µF Tubular 150 v.		3	6680
C29	0·1 µF Tubular 150 v.		3	6680
C30	0·01 µF Tubular 1000 v.		3	6680
C31	0·005 µF Tubular 600 v. A.C.		3	6681
C32	25 µF Electrolytic 25 v.		3	6670
C33 C34	32 µF + 32 µF Electrolytic 450 v.		1 & 2	6670



OCKWISE POSITION I.e. WAVE RANGE SWITCH ON LONG WAVES. TONE SWITCH IN OFF POSITION.
IRECTION OF ROTATION CLOCKWISE.

NSERS

		Fig.	No.
..	±20%	3	666520
..	±20%	3	666419
..	±20%	3	666659
..		3	800076
..		1 & 2	800023
..	± 2%	3	666231
..	±20%	3	666520
..		3	668127
..		3	668125
..	± 2%	1 & 2	666440
..		3	668027
..	±20%	3	666520
..	±20%	3	666520
..	± 2%	3	666242
..		3	800076
..	± 2%	3	666750
..		1 & 2	800023
..	± 2%	3	666229
..	± 2%	3	666412
..	± 2%	1 & 2	666440
..		3	668006
..	±20%	3	666525
..	±20%	3	666520
..	±20%	3	666520
..		3	668030
..		3	668030
..		3	668030
..		3	668003
..		3	668154
..		3	667013
..		1 & 2	667093

RESISTORS

	Ohms	Watts	±	Fig.	No.
R1	1 meg.	¼	20%	3	670410
R2	47,000	¼	10%	3	670538
R3	220	¼	10%	3	670510
R4	22,000	½	10%	3	670458
R5	39,000	½	10%	3	670461
R6	330	¼	10%	3	670512
R7	47,000	¼	10%	3	670538
R8	2,200	½	10%	3	670522
R9	470,000	¼	20%	3	670408
R10	1,000	¼	10%	3	670518
R11	1 meg. Volume Control			3	810000
R12	2,200	¼	10%	3	670522
R13	1,000	¼	20%	!	670392
R14	220	¼	10%	3	670510
R15	470	½	10%	3	670438
R16	1 meg.	¼	20%	3	670410
R17	1 meg.	¼	20%	3	670410
R18	1,000 wire wound ..	4	5%	3	670834

SWITCHES AND LAMPS

	Specification	Fig.	No.
S1A	Front Bank 1 } Aerial Section } Wavechange Switch 5 position	3	830256
S1B	Rear Bank 1		
S1C	Front Bank 2 } Osc. Section		
S1D	Rear Bank 2		
S2A	Front } Tone Control, Radio/Gram. and On/Off Switch	3	830255
S2B	Rear		
S2C	ON/OFF		
LP1-2	Dial Bulbs 6·5 volts 0·3 amps.	1	700494

INDUCTANCES

	Specification	Ref.	Fig.	No.
L1	M.W. Aerial Coil	M.W.10	3	780326
L2	L.W. Aerial Coil	L.W.6	3	780328
L3	49 M. Aerial Coil	S.W.11	3	780244
L4	31 M. Aerial Coil	S.W.5	3	780277
L5	16 M. Aerial Coil	S.W.2	3	780279
L6	L.W. Osc. Coil	L.W.1	3	780241
L7	M.W. Osc. Coil	M.W.9	3	780254
L8	49 M. R.F. Coil	S.W.9	3	780273
L9	31 M. R.F. Coil	S.W.7	3	780275
L10	16 M. R.F. Coil	S.W.4	3	780278
L11	Loudspeaker		1	850007

TRANSFORMERS

	Specification	Fig.	No.
T1	1st I.F. Trans. { Prim. 10Ω / Sec. 10Ω }	1 & 2	770345
T2	2nd I.F. Trans. { Prim. 10Ω / Sec. 10Ω }	1 & 2	770342
T3	Output Trans. { Prim. 456Ω / Feedback Sec. 96Ω / Output Sec. —— }	2	770070
T4	Mains Trans. { Prim. 45Ω / Sec. 280Ω+290Ω } ..	1 & 2	770308

Note * Integral part of I.F. Transformers

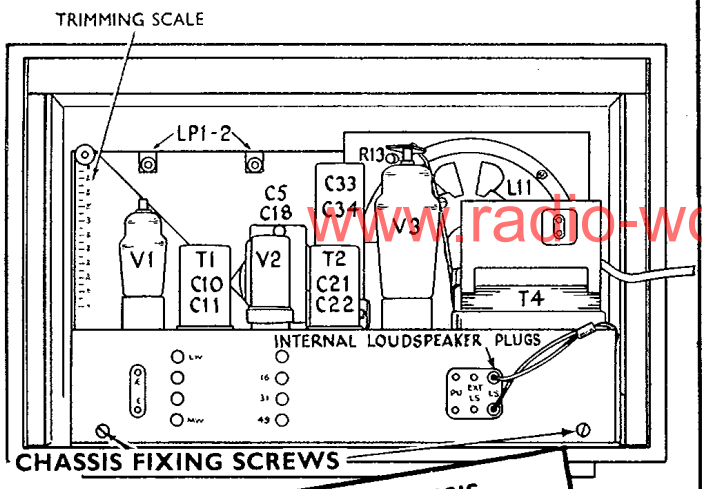


FIG. 1

TO REMOVE CHASSIS

1 PULL OFF KNOBS. **2** PULL OUT LOUDSPEAKER PLUGS. **3** REMOVE THE TWO CHASSIS FIXING SCREWS. **4** WITHDRAW CHASSIS APPROXIMATELY TWO INCHES, TIP UP AND LIFT OUT.

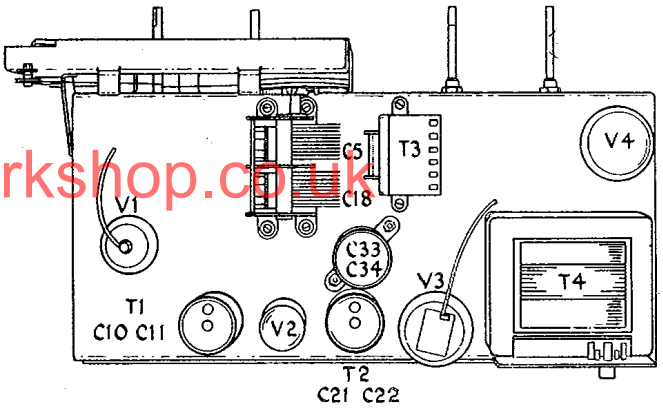


FIG. 2

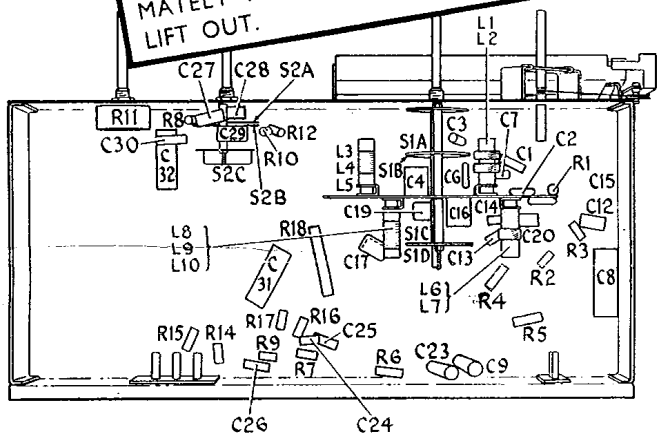
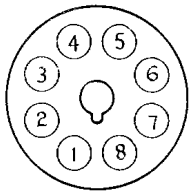


FIG. 3

VALVE BASE CONNECTIONS

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



VIEW LOOKING AT PINS

FIG. 4

THE DRIVE CORD SHOULD BE OF NYLON BRAIDED GLASS YARN. LENGTH 28¾" BETWEEN CENTRES OF LOOPS.

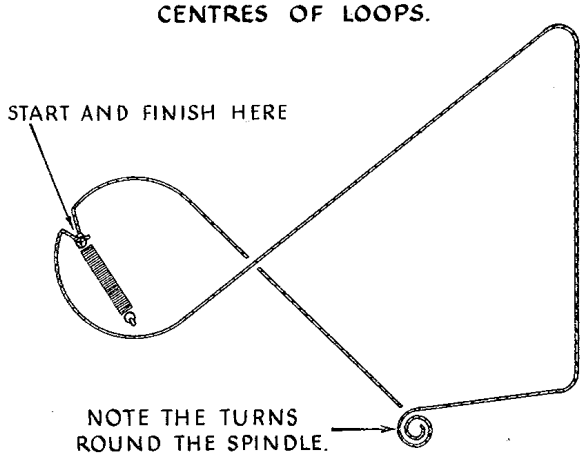


FIG. 5

Notes

1 The Pye Quick Release (Patent No. 601,920) permits the removal of chassis without turning the cabinet over. See Fig. 1.

2 The Special Flywheel Tuning needs no maintenance.

3 New design Aerial Circuit and Coils gives reduced image response and greater freedom from whistle.

4 A 100 division Trimming Scale is printed on the back of the scale reflector plate for use when trimming the receiver outside the cabinet. See Fig. 1.

The top of the pointer carriage serves as an index for the scale.

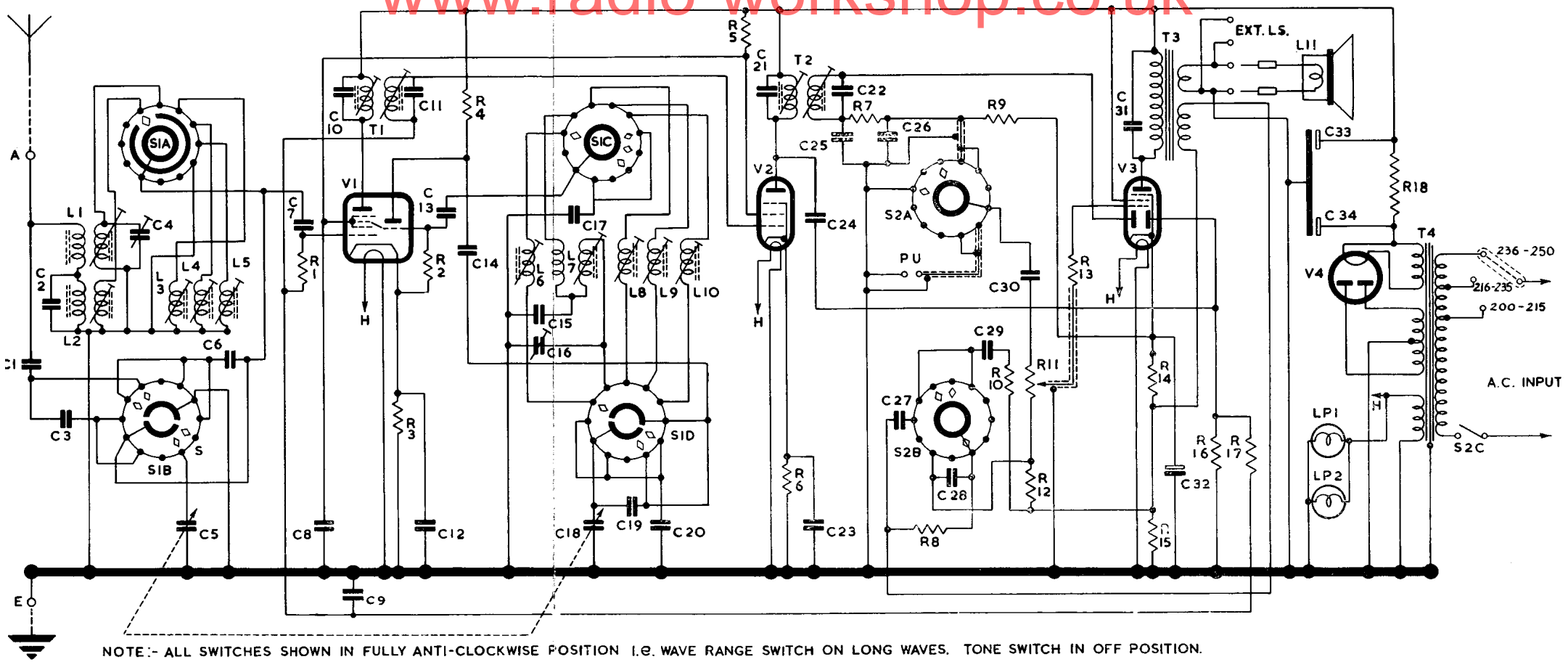
A Calibration Chart is printed on page 2.

When no accurate frequency standard is available the receiver should be calibrated against a reliable broadcasting station operating at a frequency close to that specified in the trimming instructions.

5 External Speaker, 2-4 ohms impedance.

6 Dial Bulbs 6·5 volt 0·3 amp. M.E.S.

7 Make sure Mains Voltage Selector is in correct position to ensure (*a*) maximum valve and component life and (*b*) full benefit of the Pye "FIDELITY" reproduction.



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