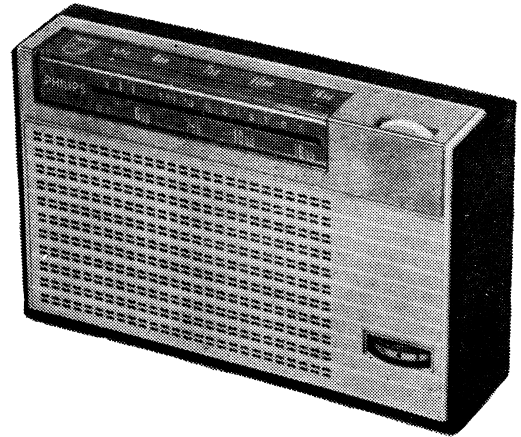


PHILIPS

Service notes

RL180



POPMASTER

MODEL RL180

SPECIFICATIONS

Tuning Range	525 KHz to 1620 KHz
Intermediate Frequency	455 KHz
Batteries	4 x No. 1015 or equivalent
Battery Consumption	10-16 mA (No Signal)

ACCESS FOR SERVICE

Slide cover from battery compartment at the base of the receiver and remove batteries. Unscrew the case-back retaining screw located in the centre of the battery compartment and slightly spring the sides of the case to release the case-back from the moulded catches along the sides. Remove the free battery connector, slide the case-back slightly forward to clear the moulded catch at the top of the case and remove the case-back. Unscrew the two p.w. board chassis securing screws (shown in the inset drawing on the circuit diagram). The complete chassis assembly can then be removed for servicing. Re-assembly is the reverse of the above.

ALIGNMENT

The locations of the various trimming points used in alignment are shown in the inset drawing on the circuit diagram.

Note: Coils and tuning slugs of miniature assemblies are easily damaged by the use of incorrect alignment tools. A complete range of properly designed alignment tools is available in the Philips toolkit type 800/TX.

I.F. ALIGNMENT

Fully open the tuning capacitor and set the volume control to maximum.

- (1) Apply a signal at 455 KHz to the base of TR3 via a 470K pF capacitor. Adjust IFT3 coil core for maximum output.

- (2) Apply a signal at 454 KHz to the base of TR2 via a 470K pF capacitor. Adjust IFT2 coil core for maximum output.
- (3) Apply a signal at 456 KHz to the base of TR1 (Aerial side of C5), via a 470K pF capacitor. Adjust IFT1 coil core for maximum output.

DO NOT REPEAT TRIMMING PROCEDURE

R.F. ALIGNMENT

Connect the signal generator to the base of TR1 (aerial side of C5). Set volume control to maximum.

- (1) Fully close tuning capacitor and set pointer. Apply a signal of 520 KHz and adjust oscillator coil core for maximum output.
- (2) Fully open tuning capacitor. Apply a signal of 1630 KHz and adjust oscillator trimmer for maximum output. Repeat until no further improvement is possible.

Couple the signal generator to the aerial by means of a single turn around the aerial rod.

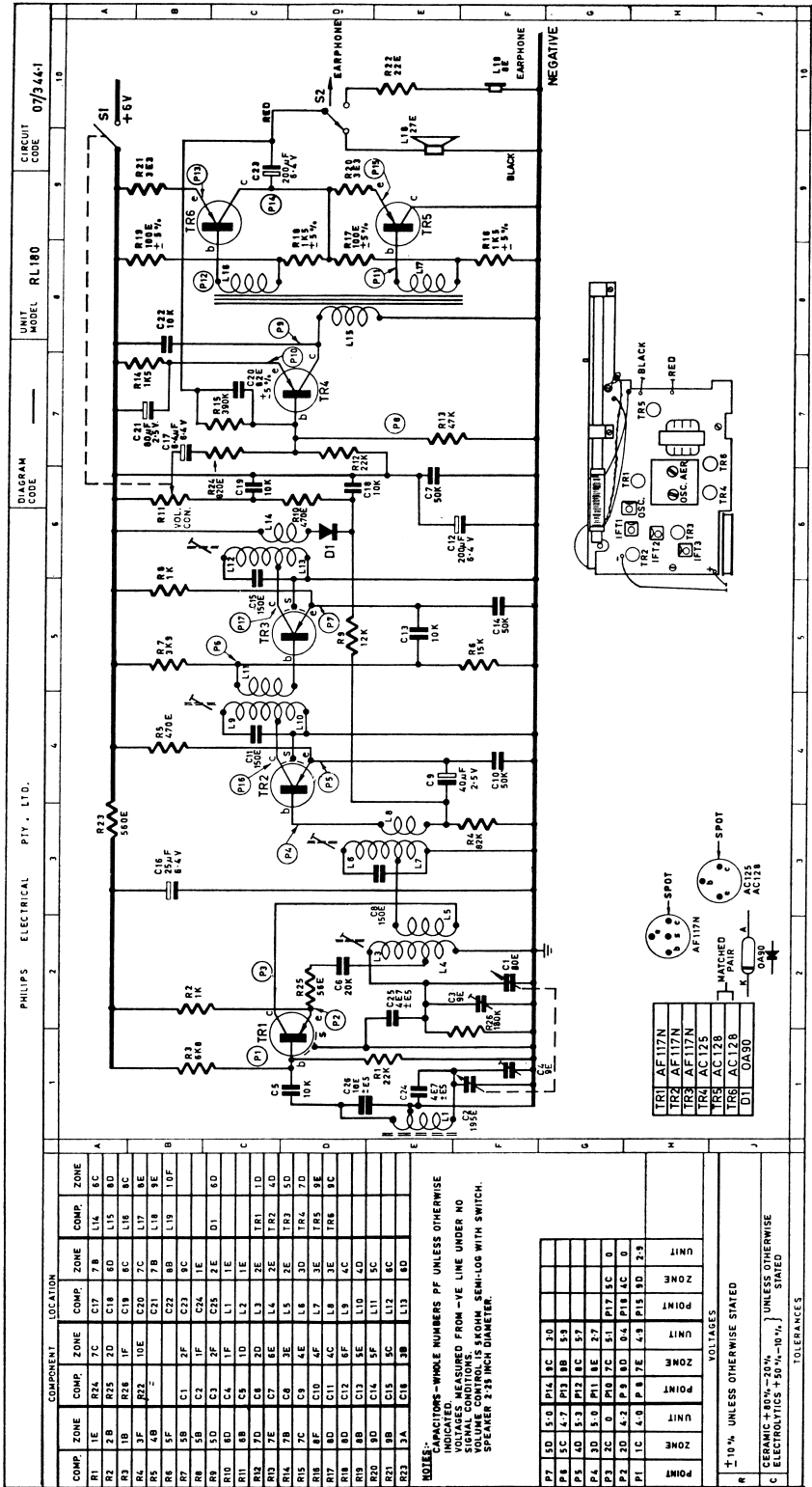
- (1) Tune to 600 KHz and apply a signal at this frequency. Adjust the aerial coil for maximum output.
- (2) Tune to 1500 KHz and apply a signal at this frequency. Adjust the aerial trimmer for maximum output.

Repeat until no further improvement is possible. Seal aerial coil to rod.

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RL180



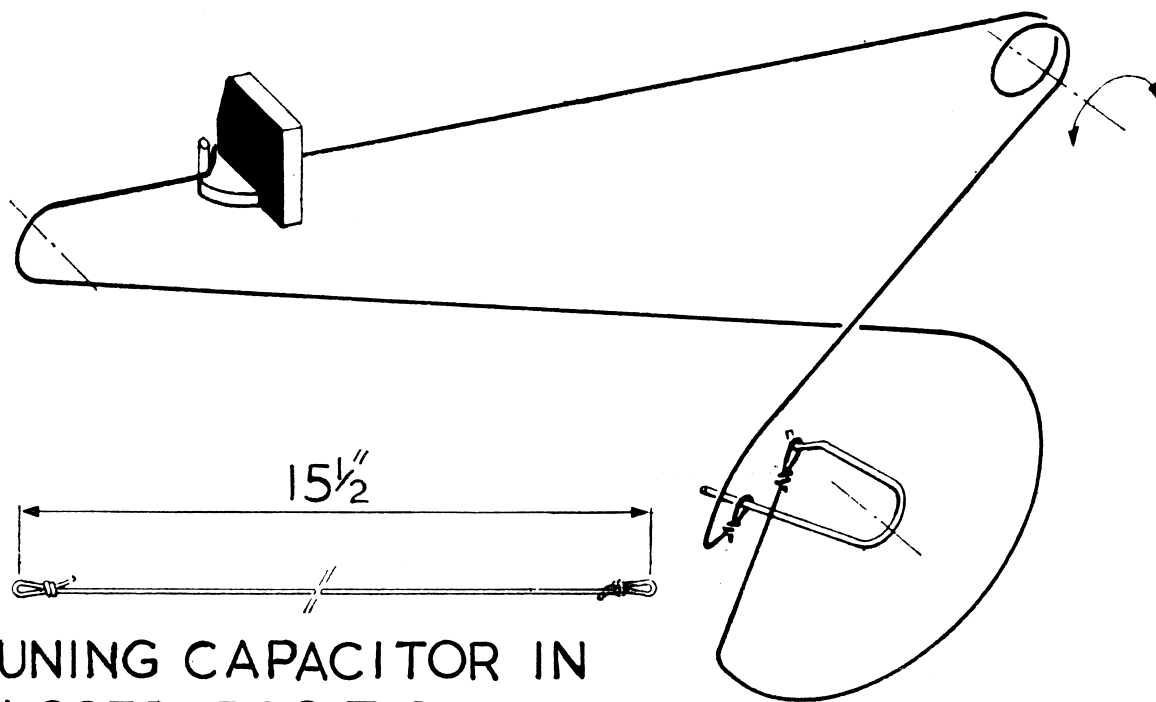
ELECTRICAL PARTS LIST

CAPACITORS				RESISTORS				INDUCTORS		
C. No.	Description	V.W. Tol.±%	Replacement Type or Code No.	R. No.	Description	W. Tol.±%	Replacement Type or Code No.	L. No.	Description	Code No.
C1, 2, 3, 4	Tuning capacitor		4822.125.20138	R1	22K Carbon	10	B8.305.05A/22K	1, 2	Rod aerial assembly	4822.158.60095
C5	10K Ceramic	25 +80-20	Ducon CDR 10K-A	R2	1K Carbon	10	B8.305.05A/1K		Ferrite rod (for above)	4822.158.60228
C6	22K Ceramic	25 +80-20	Ducon CDR 22K-A	R3	6K8 Carbon	10	B8.305.05A/6K8	3, 4, 5	Oscillator coil	4822.156.30022
C7	47K Ceramic	25 +80-20	Ducon CDR 47K-B	R4	82K Carbon	10	B8.305.05A/82K	6, 7, 8	1st I.F.T.	4822.153.10121
C8	150E Ceramic		Part of 1st I.F.T.	R5	470E Carbon	10	B8.305.05A/470E	9, 10, 11	2nd I.F.T.	4822.153.10121
C9	40M Electrolytic	2.5	C426.AR/A40	R6	15K Carbon	10	B8.305.05A/15K	12, 13, 14	3rd I.F.T.	4822.153.10122
C10	47K Ceramic	25 +80-20	Ducon CDR 47K-B	R7	3K9 Carbon	10	B8.305.05A/3K9	15, 16, 17	Driver transformer	4822.142.40138
C11	150E Ceramic		Part of 2nd I.F.T.	R8	1K Carbon	10	B8.305.05A/1K	18	Speaker (MSP 225 HD/27)	CZ.161.042
C12	200M Electrolytic	6.4	C426.AR/C200	R9	12K Carbon	10	B8.305.05A/12K	19	Earphone assembly	4822.242.40001
C13	10K Ceramic	25 +80-20	Ducon CDR 10K-A	R10	470E Carbon	10	B8.305.05A/470E			
C14	47K Ceramic	25 +80-20	Ducon CDR 47K-B	R11	5K Carbon pot. (Volume) with SPST SW. c/w Knob		4822.101.90022			
C15	150E Ceramic		Part of 3rd I.F.T.	R12	22K Carbon	10	B8.305.05A/22K			
C16	25M Electrolytic	6.4	C426.AR/C25	R13	47K Carbon	10	B8.305.05A/47K			
C17	6M4 Electrolytic	6.4	C426.AS/C6.4	R14	1K5 Carbon	10	B8.305.05A/1K5			
C18	10K Ceramic	25 +80-20	Ducon CDR 10K-A	R15	390K Carbon	10	B8.305.05A/390K			
C19	10K Ceramic	25 +80-20	Ducon CDR 10K-A	R16	1K5 Carbon	5	B8.305.05B/1K5			
C20	82E Ceramic NPO	5	C304.GB/B82E	R17	100E Carbon	5	B8.305.05B/100E			
C21	80M Electrolytic	2.5	C426.AR/A80	R18	1K5 Carbon	5	B8.305.05B/1K5			
C22	10K Ceramic	25 +80-20	Ducon CDR 10K-A	R19	100E Carbon	5	B8.305.05B/100E			
C23	200M Electrolytic	6.4	C426.AR/C200	R20	3E3 Carbon	10	B8.305.05A/3E3			
C24	4E7 Ceramic NPO	5	C304.GB/L4E7	R21	3E3 Carbon	10	B8.305.05A/3E3			
C25	4E7 Ceramic NPO	5	C304.GB/L4E7	R22	22E Carbon	10	B8.305.05A/22E			
C26	10E Ceramic	5	C304.GB/L10E	R23	560E Carbon	10	B8.305.05A/560E			
				R24	820E Carbon	10	B8.305.05A/820E			
				R25	56E Carbon	10	B8.305.05A/56E			
				R26	180K Carbon	10	B8.305.05A/180K			

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MECHANICAL PARTS LIST

Description	Code No.	Description	Code No.
Aerial slab support	4822.401.10225	Dial cord spring	4822.492.40182
Battery connector (+ and - take-off)	4822.492.50405	Dial drum	4822.528.40061
Battery connector (phone end)	4822.290.80029	Knob, tuning	4822.413.40173
Battery slide	3113.104.02451	Phone/speaker switch	4822.277.10058
Case front assy.	3123.108.00080	Screw 3mm. x 5mm. L. (Speaker fixing)	4822.502.10558
Case back assy.	3113.104.00320	Screw 3mm. x 6mm. L. (Case back to case front)	4822.502.10558
Case, carrying	4802.600.17001	Screw 2mm. x 8mm. L. (P.W. board to case front)	4822.502.10681
Dial cord, 22" required	CE.085.91		
Dial cursor assy.	4822.450.80087		



TUNING CAPACITOR IN
CLOSED POSITION