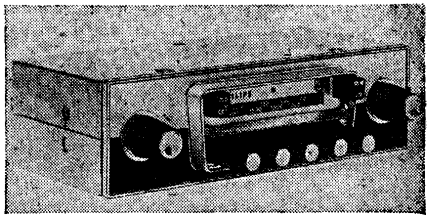
E R T SERVICE CHART 1674 PHILIPS 13RN260

RESISTORS																	
R1	100K	A2	R15	180	A2	R31	68	B2	C6	275pF	A2	C22	10KpF	B2
R2	12K	A1	R16	470	A2	R32	150	B1/2	C7	2K2pF	A2	C23	12.5mF	A1
R3	3K	A1	R17	470	A1	R33	560	—	C8	2K2pF	A1	C24	22KpF	B1
R4	100K	A1	R18	470	B1	R34	1	B2	C9	500pF	A1	C25	12.5mF	B2
R5	4K7	A1	R19	2K2	B2	R35	VDR	A2	C10	3K3pF	A1	C26	12.5mF	B1
R6	2K2	A1	R20	1K	B1				C11	12.5mF	A2	C27	250KpF	—
R7	560	A1	R21	1K	B2				C12	60-180pF	A1	C28	100mF	B2
R8	680	A1	R22	10K Log	—				C13	275pF	A2	C29	640mF	B2
R9	10K	A2	R23	680	B2				C14	33KpF	A2	C30	1000mF	B1
R10	Thermistor	A1	R24	10K Log	—	**CAPACITORS**			C15	15pF	A1	C31	100KpF	B2
R11	12K	A1	R25	10K	B1				C16	160mF	A1	C32	100KpF	B2
R12	1K8	A1	R26	27K	B1	C1	10KpF	A1	C17	12.5mF	A2	C33	500mF	B1
R13	100	A2	R27	180	B1	C2	27pF	—	C18	47KpF	—	C34	47KpF	A1
R14	2K2	A1	R28	120K	B1	C3	10-80pF	—	C19	47KpF	A1	C36	220pF	—
			R29	1K	B2	C4	1KpF	A2	C20	47KpF	B2	C37	180pF	A1
			R30	33	B2	C5	3K3pF	A2	C21	125mF	A2	C38	820pF	—



Car radio with five pre-set push buttons for LW or MW stations. Operates from 12V DC supply with positive or negative earth

FULLY transistorised car radio with variable tone control, push-button waveband and station selection. Operates from 12V DC supply with either battery pole connected to car chassis.

Supply. 12V DC, positive or negative earth.

Consumption. 700mA at 14.5V approximately.

Transistors. TR1 AF117 oscillator/mixer, TR2 AF117 IF/AF amplifier, TR3 OC82DM driver, TR4 AD140 power output.

Diodes. D1 OA81 AGC clamp, D2 OA70 demodulator and AGC.

Wavebands. Long 1200–1940m (250–155kc/s), Medium 185–575m (1625–520 kc/s).

IF. 470kc/s.

Pilot lamp. 14V 0.75W.

Input. Socket for aerial.

Fuse. FS1 2A.

Output. 2.5W.

Speaker. 7×4in. elliptical.

Dimensions. 7×3½×2in. high.

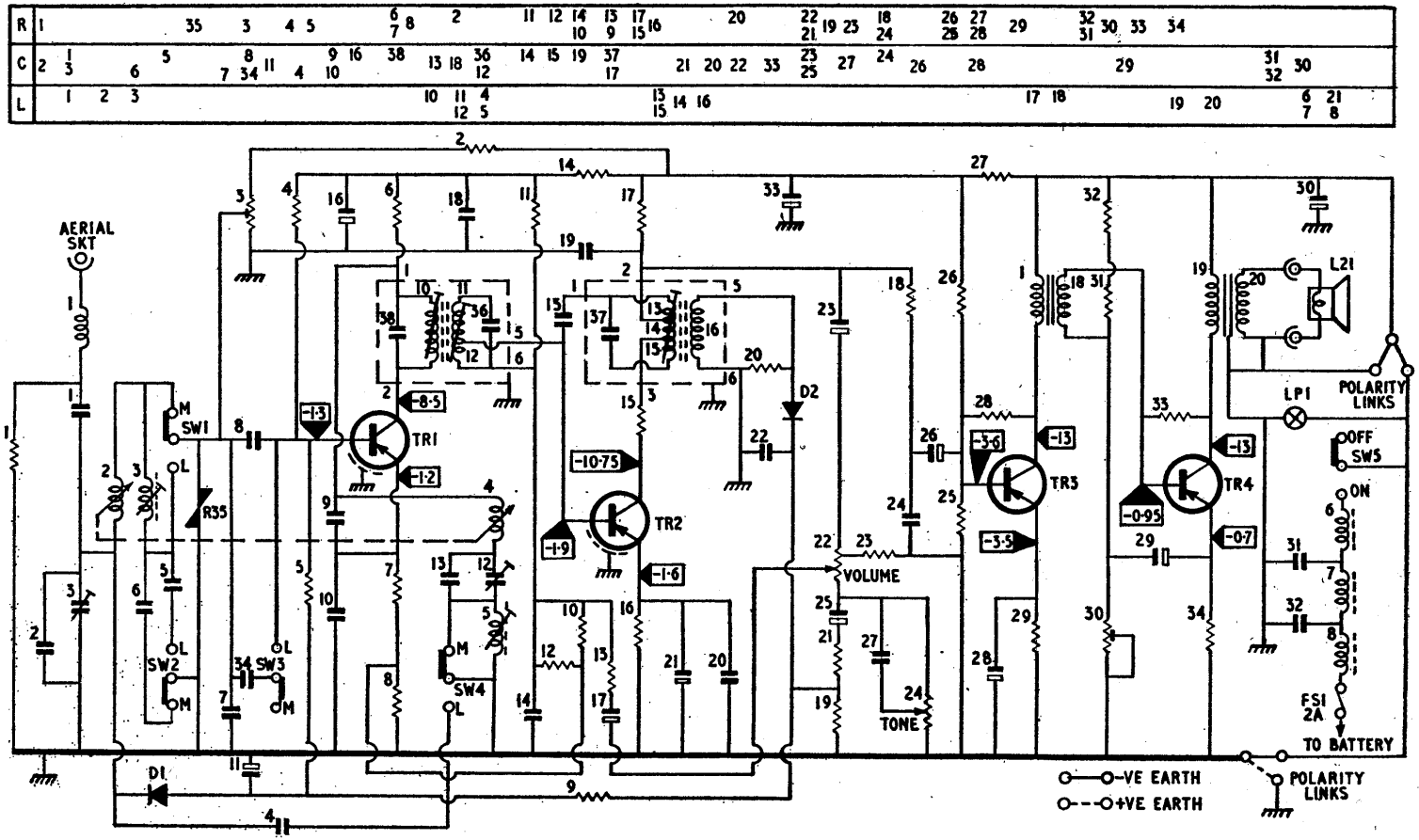
Manufacturer. Philips Electrical Ltd.

Service Department. Combined Electronic Services Ltd, Waddon Factory Estate, Croydon, CR9 4DR. Tel: spare parts, 01-686 7311; service enquiries, 01-688 7722. After hours recorded messages on both lines.

DISMANTLING

Scale assembly and covers. Remove volume and tone control knobs with locking nuts and washers from spindles. Take scale assembly from chassis. Take out two cross headed screws securing top and bottom covers to chassis. Top and bottom covers can now be hinged 90 degrees for normal maintenance.

continued overleaf



Circuit diagram showing polarity links (see Service Notes). Voltages taken with respect to positive line using 100Kohm/voltmeter, with no signal input and switches in MW position

Press button unit. Remove scale assembly as above. Slacken grub screws and pull off five press-button knobs. Unclip tuning pointer. Remove four bolts securing front of tuning unit, and two bolts and spacers from rear of tuning unit. Unsolder leads and ease unit from chassis.

SERVICE NOTES

Scale lamp replacement. Remove scale assembly as above. Lamp can then be unscrewed from holder and replaced.

Polarity adjustment. As supplied, receiver is suitable for negative earth operation. To adjust receiver for positive earth operation remove bottom cover plate and fit polarity leads as shown in diagram.

Press button adjustment. Five preset buttons can be tuned to MW or LW stations. Select required waveband, depress one button until it clicks into tuning position and rotate control carefully to obtain best reception of required station. Repeat procedure for other buttons in turn.

If all five press buttons have been depressed simultaneously they can be released by pushing the centre button.

Output transistor replacement. When replacing output transistor a coating of silicon grease should be applied to both sides of mica insulating washer.

AGC overload preset. Put a high impedance meter across D1 and adjust R3 to get a meter reading of 0.1V under no signal conditions.

Output bias adjustment. Insert a high impedance meter, 1A range, in TR4 collector lead and adjust R30 for a meter reading of 550mA.

ALIGNMENT

Equipment required. AM signal generator covering 250–1650kc/s, AF output meter, dummy aerial, 100KpF capacitor, trimming tools.

General. Connect output meter to speaker plugs. All alignment and measurements to be taken in negative earth position. Keep signal input levels down to minimum necessary during alignment, to avoid AGC detuning effects.

IF circuits. Switch to MW and tune receiver to approximately 1030kc/s. Inject 470kc/s signal via 100KpF capacitor to base of TR1. Adjust in turn L13/15, L11/12 and L10 to obtain maximum output.

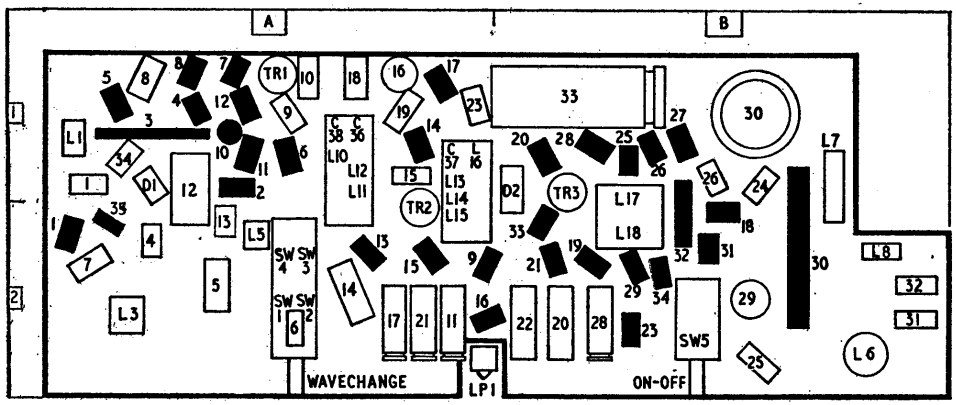
Now inject 470kc/s signal to aerial socket and adjust L3 aerial loading coil (IF rejector on MW) for minimum output by sliding coil along former.

RF MW. With receiver on MW depress one push button. Set tuning pointer to stop at high frequency end of scale, approximately 185m. Inject 1620kc/s signal, 30 per cent modulated with 400c/s, via dummy aerial. Adjust C12 and C3 in turn for maximum output.

Tune signal generator to 600kc/s and tune receiver to signal and check calibration. Adjust L2 and L4 if necessary.

RF LW. Switch receiver to LW and inject 250kc/s signal via dummy aerial to aerial socket. Tune set to 1200m and adjust L5 for maximum output.

Aerial trimming. To get optimum results receiver must be trimmed to suit the car aerial by adjusting C3 (near aerial socket). Adjust this to get maximum output when tuned to weak signal near 200m.



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