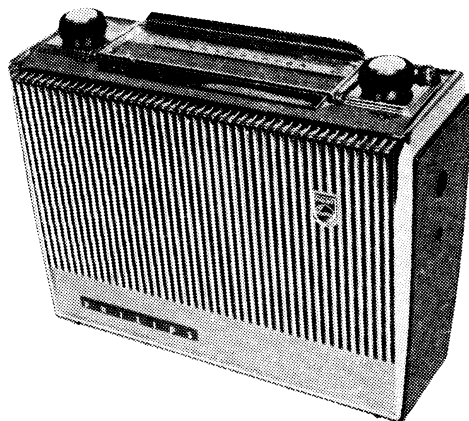


PHILIPS *Service* notes

MODEL PA2



SPECIFICATIONS

Tuning range	520 - 1620 kc/s
Intermediate frequency	455 kc/s
Power supply — battery	type 2761 (9v.)
Battery consumption	11 - 13mA (no signal)

ALIGNMENT

The location of the various trimming points used in alignment is shown in an inset drawing on the circuit diagram drawing.

I.F. Alignment

Fully open tuning capacitor, apply signal generator at 455 kc/s through I.F. dummy to TRI base. Put volume control at maximum. Peak cores (in the lower position) of I.F. transformers in the order of 3rd, 2nd and 1st. Recheck these adjustments.

R.F. Alignments (Car)

Position aerial switch for car use, put volume control at maximum. At this point check that the mounting and location of the Ferro-cube rod aerial is satisfactory, because its position affects the operation of the oscillator coil and movement of the assembly in its mount cannot be made after oscillator coil trimming is done. Apply the signal generator to the aerial socket through a dummy consisting of a capacitor of 120pF across the socket and another of 15pF in series with the generator lead.

Fully close the tuning capacitor and adjust the dial cursor to the stop mark on the dial scale.

Set generator to 520 kc/s and peak oscillator coil slug (in "out" position).

Fully open tuning capacitor, set generator to 1620 kc/s and peak oscillator trimmer.

Check above two adjustments.

Adjust generator and tune receiver to 600 kc/s (7ZL) and peak aerial coil slug.

Adjust generator and tune receiver to 1500 kc/s (3AK) and peak aerial trimmer on tuning capacitor.

Check above two adjustments.

R.F. Alignment (Portable)

Position aerial switch for portable use. Apply the signal generator via a coupling turn around the aerial rod assembly.

Adjust generator and tune receiver to 600 kc/s (7ZL) and peak aerial rod assembly (do not move in its mount—refer note under "car" alignment).

Adjust generator and tune receiver to 1500 kc/s (3AK) and peak aerial trimmer (ceramic) mounted on the aerial changeover switch.

Check above two adjustments.

PRINTED BOARD REMOVAL

Remove case rear and control knobs.

Unscrew and remove Aerial Switch knob from switch slide.

Unsolder anti-hash braid from external aerial socket.

Remove four mounting screws.

Turn cursor to low frequency end of dial and carefully withdraw board assembly at tuning spindle end until latter is clear of front escutcheon.

To withdraw switchpot spindle from escutcheon, pivot board upwards through 90°, at the same time releasing cursor from in front of dial scale until metal bracket is clear of speaker magnet. Board assembly is now readily accessible from either side.

Refitting is a reversal of the foregoing procedure.

N.B.—Anti-hash braid to be soldered as short as possible.

OUTPUT TRANSISTOR ADJUSTMENT

With the volume control set at minimum, adjust R34 to give a collector current in TR8 of 3mA.

REPLACEMENT OF TR4

If, as a consequence of replacing transistor TR4, instability is experienced in the vicinity of 910 kc/s, rotate the body of the transistor to the middle of the arc in which stability is obtained. Instability can be reduced by moving collector and emitter leads apart.

September, 1964

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ELECTRICAL PARTS LIST

CAPACITORS

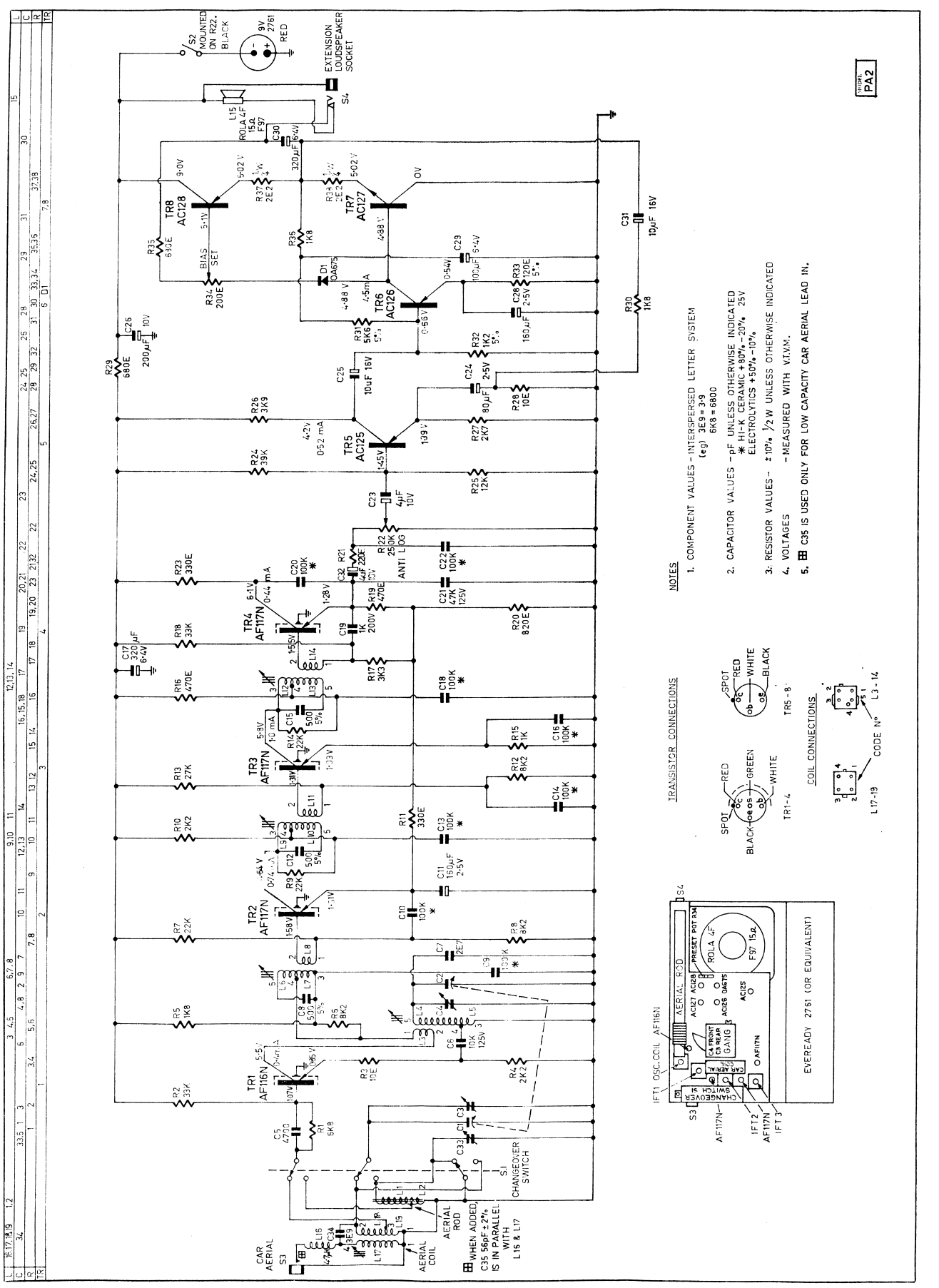
C. No.	DESCRIPTION	V.W.	TOL. ±%	TYPE OR CODE No.
1, 2	Tuning capacitor and trimmers			CZ.107.607 MSP type K2XT
3, 4	4K7 ceramic	25	+80-20	Ducon CDR
5	10K Polyester	125	10	C.296.AA/A10K
6	2E7 ceramic, N750		0.5pF	Ducon CDS
7	Part of 1st I.F.T.			
8	100K ceramic	25	+80-20	Ducon CDR
9	100K ceramic	25	+80-20	Ducon CDR
10	160M electrolytic	2.5	—	C.426.AR/A160
11	Part of 2nd I.F.T.			
12	100K ceramic	25	+80-20	Ducon CDR
13	100K ceramic	25	+80-20	Ducon CDR
14	Part of 3rd I.F.T.			
15	100K ceramic	25	+80-20	Ducon CDR
16	320M electrolytic	6.4	—	C.426.AR/C320
17	100K ceramic	25	+80-20	Ducon CDR
18	1K Styroal	200	20	Ducon DFB
19	100K ceramic	25	+80-20	Ducon CDR
20	4M electrolytic	10	—	C.426.AS/D4
21	80M electrolytic	2.5	—	C.426.AR/A80
22	10M electrolytic	16	—	C.426.AR/E10
23	200M electrolytic	10	—	C.426.AR/D200
24	160M electrolytic	2.5	—	C.426.AR/A160
25	100M electrolytic	6.4	—	C.426.AR/C100
26	320M electrolytic	6.4	—	C.426.AR/C320
28	10M electrolytic	16	—	C.426.AR/E10
29	4M electrolytic	10	—	C.426.AS/D4
30	9E ceramic trimmer	—	—	C.004.CA/9E
31	3E9 ceramic, N750	—	5	Ducon CDS

RESISTORS

R. No.	DESCRIPTION	W.	TOL. ±%	TYPE OR CODE No.
1	6K8 carbon	1/2	10	I.R.C. B.T.S.
2	33K carbon	1/2	10	I.R.C. B.T.S.
3	10E carbon	1/2	10	I.R.C. B.T.S.
4	2K2 carbon	1/2	10	I.R.C. B.T.S.
5	1K8 carbon	1/2	10	I.R.C. B.T.S.
6	8K2 carbon	1/2	10	I.R.C. B.T.S.
7	22K carbon	1/2	10	I.R.C. B.T.S.
8	8K2 carbon	1/2	10	I.R.C. B.T.S.
9	22K carbon	1/2	10	I.R.C. B.T.S.
10	2K2 carbon	1/2	10	I.R.C. B.T.S.
11	330E carbon	1/2	10	I.R.C. B.T.S.
12	8K2 carbon	1/2	10	I.R.C. B.T.S.
13	27K carbon	1/2	10	I.R.C. B.T.S.
14	22K carbon	1/2	10	I.R.C. B.T.S.
15	1K carbon	1/2	10	I.R.C. B.T.S.
16	470E carbon	1/2	10	I.R.C. B.T.S.
17	3K3 carbon	1/2	10	I.R.C. B.T.S.
18	33K carbon	1/2	10	I.R.C. B.T.S.
19	470E carbon	1/2	10	I.R.C. B.T.S.
20	820E carbon	1/2	10	I.R.C. B.T.S.
21	220E carbon	1/2	10	I.R.C. B.T.S.
22	250K carbon potentiometer	1/2	10	I.R.C. B.T.S.
23	330E carbon	1/2	10	I.R.C. B.T.S.
24	39K carbon	1/2	10	I.R.C. B.T.S.
25	12K carbon	1/2	10	I.R.C. B.T.S.
26	3K9 carbon	1/2	10	I.R.C. B.T.S.
27	2K7 carbon	1/2	10	I.R.C. B.T.S.
28	10E carbon	1/2	10	I.R.C. B.T.S.
29	680E carbon	1/2	10	I.R.C. B.T.S.
30	1K8 carbon	1/2	10	I.R.C. B.T.S.
31	5K6 cracked carbon	5	5	B8.305.05B/5K6
32	1K2 cracked carbon	5	5	B8.305.05B/1K2
33	120E cracked carbon	5	5	B8.305.05B/120E
34	200E carbon pre-set potentiometer (bias adj.)	5	5	E.097.AC/200E
35	680E carbon	1/2	10	I.R.C. B.T.S.
36	1K8 carbon	1/2	10	I.R.C. B.T.S.
37	2E2 metal oxide	1/2	10	E.012.AC/A2E2
38	2E2 metal oxide	1/2	10	E.012.AC/A2E2

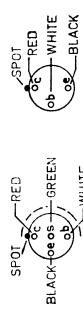
INDUCTORS

L. No.	DESCRIPTION	TYPE OR CODE No.
1, 2	Rod aerial assembly	CZ.323.083
	Ferroxcube rod for above	CS.152.478
		Cut to 6 ^{5/16} "
3, 4, 5	Oscillator coil (green, blue)	CZ.323.427
6, 7, 8	1st I.F. Transformer (white, green)	CZ.320.520
9, 10, 11	2nd I.F. transformer (blue)	CZ.320.524
12, 13, 14	3rd I.F. transformer (red)	CZ.320.467
15	Loudspeaker, Rola 4F, 15Ω	CZ.161.009
16	Aerial choke, 4.7μH	CZ.122.707
		I.R.C. CLA
17, 18, 19	Aerial coil	CZ.323.085

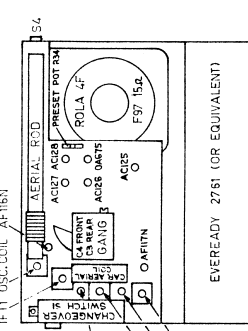
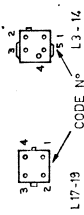


- NOTES**
1. COMPONENT VALUES - INTERSPERSED LETTER SYSTEM
(eg) 3E9 = 3.9
6K3 = 6800
 2. CAPACITOR VALUES - ΩF UNLESS OTHERWISE INDICATED
* HI-K CERAMIC ± 80% - 20% 25V
ELECTROLYTICS +50% - 10%
 3. RESISTOR VALUES - ± 10% 1/2 W UNLESS OTHERWISE INDICATED
 4. VOLTAGES - MEASURED WITH VTMM.
 5. C35 IS USED ONLY FOR LOW CAPACITY CAR AERIAL LEAD IN.

TRANSISTOR CONNECTIONS



COIL CONNECTIONS



EVEREADY 2781 (OR EQUIVALENT)

