

PHILIPS *Service* notes

Model PP2



SPECIFICATIONS

Tuning range	.....	.....	.....	520-1620 kc/s.
Intermediate frequency	.....	.....	.....	455 kc/s.
Power supply—battery	.....	.....	.....	type 2364 (9V).
Battery consumption	.....	.....	.....	10-12 mA (no signal).

REMOVAL OF PRINTED BOARD

An examination of the printed board may be made by removing the back of the case which is held by one screw only. Beyond this requirement, the printed board may be removed from the case by—

1. Unsoldering the two speaker leads.
2. Remove the three board mounting screws and the hexagonal spacer.
3. Release cursor from dial cord—this operation is facilitated if the turnover dial is moved to mid position.

Refitting of the printed board is a reversal of the above, but before the board fixing screws are tightened, temporarily locate the case back to check on the position of control knobs and adjust for clearance.

REPLACEMENT OF TUNING KNOB

If the tuning control knob has to be replaced, slide it from the tuning spindle from the end remote from the dial cord drive pulley wheel. Do not attempt to remove the pulley wheel.

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. This position usually is such that the row of transistor leads is parallel to the long side of the printed board.

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 TR1 base. Put volume control at maximum. Peak cores (in the lower position) of I.F. transformers in order of 3rd, 2nd and 1st. Recheck these adjustments.

R.F. Alignment

Close the tuning capacitor and position dial cursor to the stop mark on the dial scale. Put volume control at maximum. Apply the signal generator, through the I.F. dummy with a 4,700 Ω $\frac{1}{2}$ W carbon resistor in series, to TR1 base.

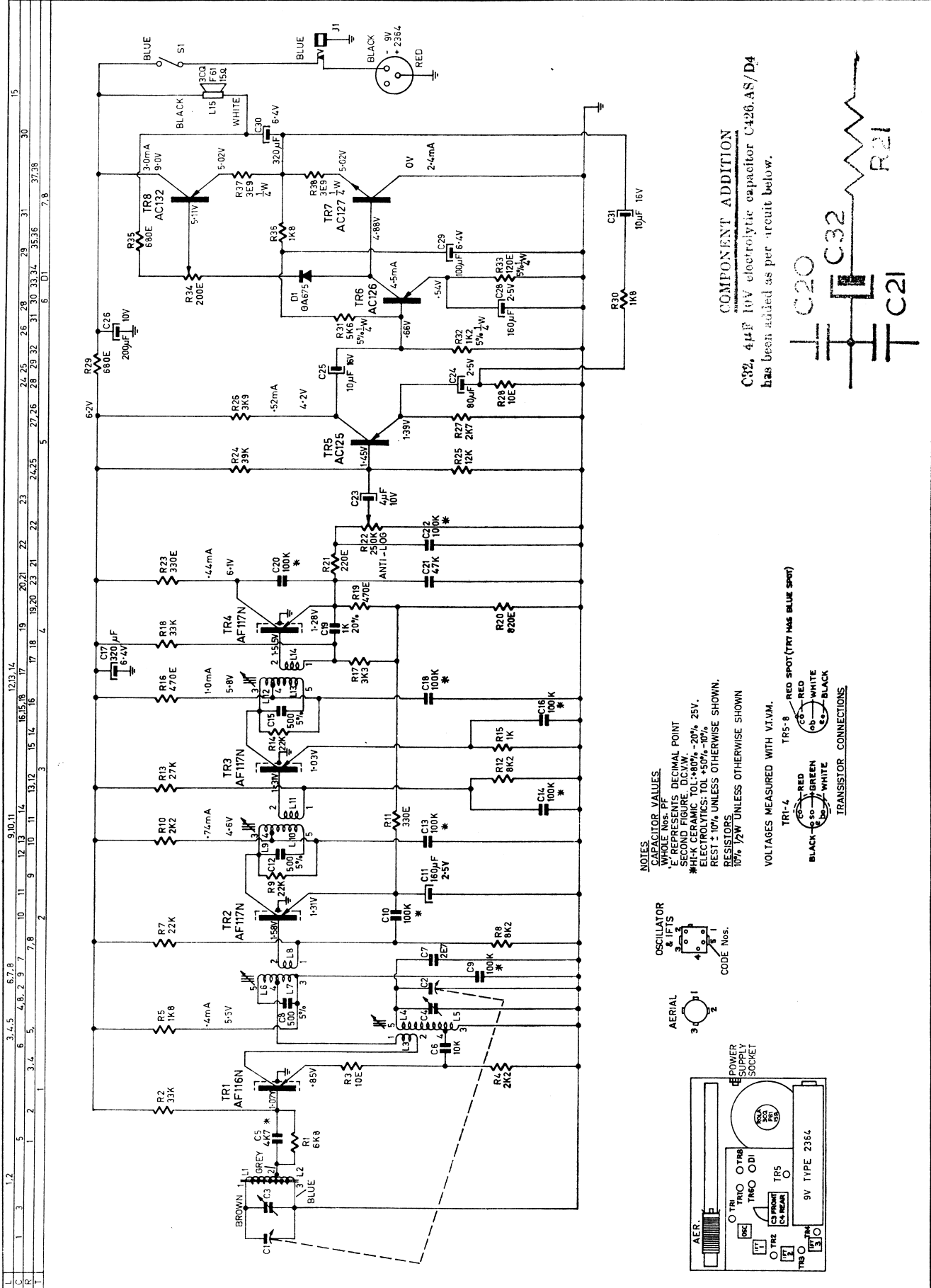
With tuning capacitor fully closed, peak oscillator coil at 520 kc/s. Fully open tuning capacitor and peak oscillator trimmer at 1620 kc/s.

Repeat these adjustments until extremity frequencies consistently lie at corresponding tuning capacitor positions.

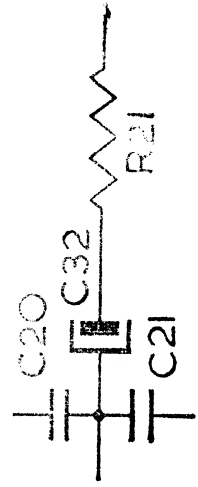
Set dial cursor at 600 kc/s (7ZL) and peak with aerial coil adjustment. Set dial cursor at 1500 kc/s (3AK) and peak aerial trimmer. Repeat these adjustments until alignment is satisfactory.

OUTPUT TRANSISTOR ADJUSTMENT

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



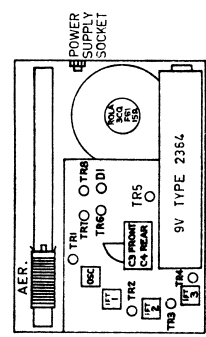
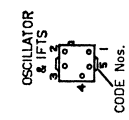
COMPONENT ADDITION
 C32, 4.4µF 10V electrolytic capacitor C426.AS/D4
 has been added as per circuit below.



NOTES
 CAPACITOR VALUES
 WHOLE NOS. PF
 'E' REPRESENTS DECIMAL POINT
 SECOND FIGURE, DGVW.
 *HI-K CERAMIC TOL: +80% -20% 25V.
 ELECTROLYTICS: TOL: +50% -10%
 RESISTORS
 10% 1/2W UNLESS OTHERWISE SHOWN

VOLTAGES MEASURED WITH VTVM.

TR1-4
 BLACK 6-50 GREEN WHITE
 RED SPOT (TR7 HAS BLUE SPOT)
 RED WHITE BLACK
 TRANSISTOR CONNECTIONS



L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
C	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
T	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

ELECTRICAL PARTS LIST

CAPACITORS

C. No.	Description	Tol. ±%	V.W.	Type or Code No.
1, 2 } 3, 4 }	Tuning capacitor and trimmers			CZ.107.607 MSP K2XT
5	4K7 ceramic	+80-20	25	Ducon CDR
6	10K Polyester	10	125	C.296.AA/A10K
7	2E7 ceramic, N750	0.5pF		Ducon CDS
8	Part of 1st I.F.T.			
9	100K ceramic	+80-20	25	Ducon CDR
10	100K ceramic	+80-20	25	Ducon CDR
11	160M electrolytic	—	2.5	C.426.AR/A160
12	Part of 2nd I.F.T.			
13	100K ceramic	+80-20	25	Ducon CDR
14	100K ceramic	+80-20	25	Ducon CDR
15	Part of 3rd I.F.T.			
16	100K ceramic	+80-20	25	Ducon CDR
17	320M electrolytic	—	6.4	C.426.AR/C320
18	100K ceramic	+80-20	25	Ducon CDR
19	1K Styroseal	20	200	Ducon DFB
20	100K ceramic	+80-20	25	Ducon CDR
21	47K Polyester	10	125	C.296.AA/A47K
22	100K ceramic	+80-20	25	Ducon CDR
23	4M electrolytic	—	10	C.426.AS/D4
24	80M electrolytic	—	2.5	C.426.AR/R80
25	10M electrolytic	—	16	C.426.AR/E10
26	200M electrolytic	—	10	C.426.AR/D200
28	160M electrolytic	—	2.5	C.426.AR/A160
29	100M electrolytic	—	6.4	C.426.AR/C100
30	320M electrolytic	—	6.4	C.426.AR/C320
31	10M electrolytic	—	16	C.426.AR/E10

RESISTORS

R. No.	Description	Tol. ±%	W.	Type or Code No.
1	6K8 carbon	10	½	I.R.C. B.T.S.
2	33K carbon	10	½	I.R.C. B.T.S.
3	10E carbon	10	½	I.R.C. B.T.S.
4	2K2 carbon	10	½	I.R.C. B.T.S.
5	1K8 carbon	10	½	I.R.C. B.T.S.
7	22K carbon	10	½	I.R.C. B.T.S.
8	8K2 carbon	10	½	I.R.C. B.T.S.
9	22K carbon	10	½	I.R.C. B.T.S.
10	2K2 carbon	10	½	I.R.C. B.T.S.
11	330E carbon	10	½	I.R.C. B.T.S.
12	8K2 carbon	10	½	I.R.C. B.T.S.
13	27K carbon	10	½	I.R.C. B.T.S.
14	22K carbon	10	½	I.R.C. B.T.S.
15	1K carbon	10	½	I.R.C. B.T.S.
16	470E carbon	10	½	I.R.C. B.T.S.
17	3K3 carbon	10	½	I.R.C. B.T.S.
18	33K carbon	10	½	I.R.C. B.T.S.
19	470E carbon	10	½	I.R.C. B.T.S.
20	820E carbon	10	½	I.R.C. B.T.S.
21	220E carbon	10	½	I.R.C. B.T.S.
22	250K carbon potentiometer CTS special D taper (volume) with rotary DPST switch			CZ.032.043 I.R.C. series 200
23	330E carbon	10	½	I.R.C. B.T.S.
24	39K carbon	10	½	I.R.C. B.T.S.
25	12K carbon	10	½	I.R.C. B.T.S.
26	3K9 carbon	10	½	I.R.C. B.T.S.
27	2K7 carbon	10	½	I.R.C. B.T.S.
28	10E carbon	10	½	I.R.C. B.T.S.

RESISTORS

R. No.	Description	Tol. ±%	W.	Type or Code No.
29	680E carbon	10	½	I.R.C. B.T.S.
30	1K8 carbon	10	½	I.R.C. B.T.S.
31	5K6 cracked carbon	5	¼	B8.305.05B/5K6
32	1K7 cracked carbon	5	¼	B8.305.05B/1K2
33	120E cracked carbon	5	¼	B8.305.05B/120E
34	200E carbon potentiometer, pre-set (bias adj.)			E.097.AC/200E
35	680E carbon	10	½	I.R.C. B.T.S.
36	1K8 carbon	10	½	I.R.C. B.T.S.
37	3E9 metal oxide	10	¼	E.012.AC/A3E9
38	3E9 metal oxide	10	¼	E.012.AC/A3E9

INDUCTORS

L. No.	Description	Type or Code No.
1, 2	Rod aerial assembly	CZ.323.076
	Ferroxcube rod for above	CS.152.47 8 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.T. Transformer (red)	CZ.320.467
18	Speaker, Rola 3CQ—15Ω	CZ.161.011

NOTE:—

The interspersed letter system of value designation is used in parts lists and in the circuit drawing. M is used to indicate a multiplier of 10⁶, K for a multiplier of 10³ and E a multiplier of 1 and each indicator is appropriately placed in the position of the decimal point. Thus 6K8 = 6,800 and 3E9 = 3.9.

PP2

MECHANICAL PARTS LIST

Description	Code. No.	Description	Code. No.
Carrying handle	CS.432.445	Spring for above	CS.282.505
Case rear assembly summer bronze	CR.570.779	Knob assembly—tuning	CR.523.553
(comprising case rear, grille, Madrid red	CR.570.776	Spring for above	CS.281.846
gauze and handle pivots) green	CR.570.777	Knob assembly—volume	CR.523.552
black	CR.570.778	Spring for above	CS.281.846
Case escutcheon assembly—	CR.520.882	“Philips” wordmark	CS.436.535
(comprising escutcheon, window, grille and Philips wordmark)		Pivot—carrying handle, 2x	CS.351.806
Cursor assembly	CR.480.686	Red ring for volume knob	CS.430.733
Dial cord (21 $\frac{3}{8}$ ” between loop ends) bulk	965/JB1	Screw for case back	CS.258.896
Dial drum assembly	CR.382.210	Socket—external power supply	CZ.369.942
Dial scale assembly (3 zoned scales)	CR.483.048	Spring—dial scale cam, 2x	CS.200.020
Dial scale window	CS.030.037	Spring—dial cord	CS.200.044
Knob assembly—dial scale	CR.523.574	Window—dial scale	CS.030.037
		Wordmark “Philips”	CS.436.535

DIAL CORD LAYOUT

EXPLODED VIEW FROM FRONT SHOWING GANG IN FULLY CLOSED POSITION

