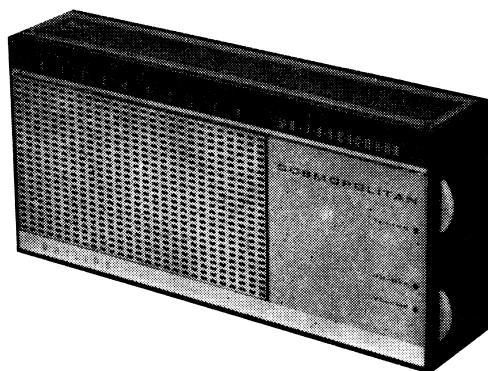


PHILIPS *Service* notes



MODEL PP3 *Cosmopolitan*

SPECIFICATIONS

Tuning range	.....	.....	.....	.....	520-1620 kc/s.
Intermediate frequency	.....	.....	.....	.....	455 kc/s.
Power supply—battery	.....	.....	.....	.....	type 2364 (9V).
				—mains unit	NP1481
				—with lead	NP1480/4.
Battery consumption	.....	.....	.....	.....	see table below

OUTPUT TRANSISTOR ADJUSTMENT

Provision is made by means of metering points for easy insertion of a meter for adjustment of output transistor current by means of R108. Current should be adjusted, at no signal, in accordance with the following table. This table includes total receiver current.

Temp. °F.	TR103/104 Current mA	Receiver Current mA
50	2.0	12.8
55	2.2	13.0
60	2.4	13.25
65	2.6	13.5
70	2.8	13.9
75	3.0	14.25
80	3.25	14.6
85	3.5	15.0
90	3.75	15.5
95	4.0	15.9
100	4.3	16.3
105	4.6	16.8
110	4.9	17.4
115	5.3	18.0

ALIGNMENT

The location of the various trimming points used in alignment is shown on circuit and interconnection drawings.

I.F. Alignment

Connect signal generator via I.F. dummy to base of TR1. Put volume control to maximum. Detune the secondaries IFT1-2 and IFT2-2 by screwing out cores about one turn. Peak cores in the following order and at the quoted frequencies.

- IFT3—455 kc/s.
 - IFT2-1—454 kc/s.
 - IFT1-1—454 kc/s.
 - IFT2-2—456 kc/s.
 - IFT1-2—456 kc/s.
- repeak IFT3 at 455 kc/s.

R.F. Alignment

Connect signal generator via a coupling loop around the rod aerial assembly. Put volume control at maximum. Fully close tuning capacitor and position dial cursor to stop mark on dial scale. Peak oscillator coil core at 520 kc/s. Fully open tuning capacitor and peak oscillator trimmer at 1620 kc/s. Repeat these two operations until band end setting is correct.

Tune to 600 kc/s (7ZL) and adjust aerial coil for maximum output. Tune to 1500 kc/s (3AK) and adjust aerial trimmer for maximum output. Repeat these two operations for correct tracking.

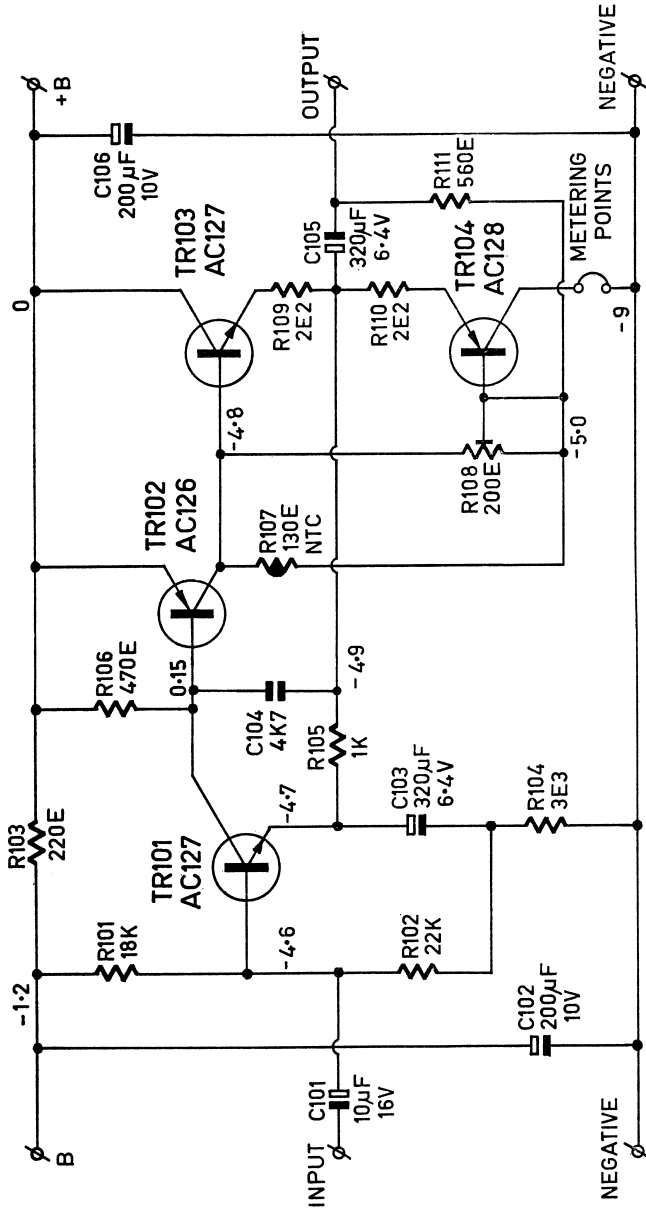
MODULE REMOVAL

Remove retaining screws and cabinet back. The R.F. module can be checked from the underside by unclipping from its mounting lid and tilting base upwards with leads intact. This module can be readily replaced if necessary at this stage. The shielding can may be lifted from the R.F. module by inserting a screwdriver a short distance through the square sided hole provided and twisting.

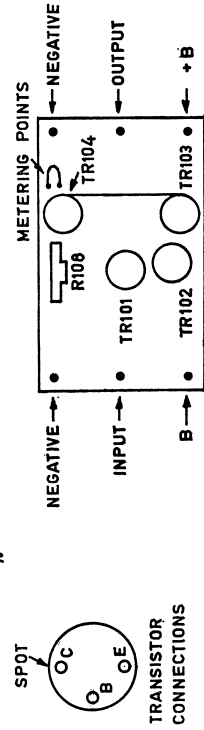
The audio module can be checked from the component side in its normal position, but if inspection from the underside or replacement is desired, it is necessary to free the common mounting base by first removing the dial overlay (2 screws) then the mounting base (3 screws), at the same time manipulating the "kilocycles" cursor from beneath the back plate bar.

Straighten the spills and separate the audio module from its mounting base. This module can now be readily replaced.

Refitting of modules and common mounting base is a reversal of the foregoing.



NOTE ON CONDENSERS:
 WHOLE NUMBERS - pF UNLESS INDICATED OTHERWISE. VOLTAGES MEASURED WITH VTVM AND $1K5 \pm 10\%$ COLLECTOR PNP: RED SPOT.
 TOLERANCE POLYESTERS: $\pm 10\%$ CONNECTED BETWEEN B AND NEGATIVE. COLLECTOR NPN: BLUE SPOT.
 TOLERANCE ELECTROLYTICS: $-10 \pm 50\%$ ZERO SIGNAL COLLECTOR CURRENT TR103 / TR104 IS SET BY MEANS OF R108 TO 3.0mA AT 75° F.
 RESISTORS ARE $\pm 10\%$ UNLESS INDICATED OTHERWISE.

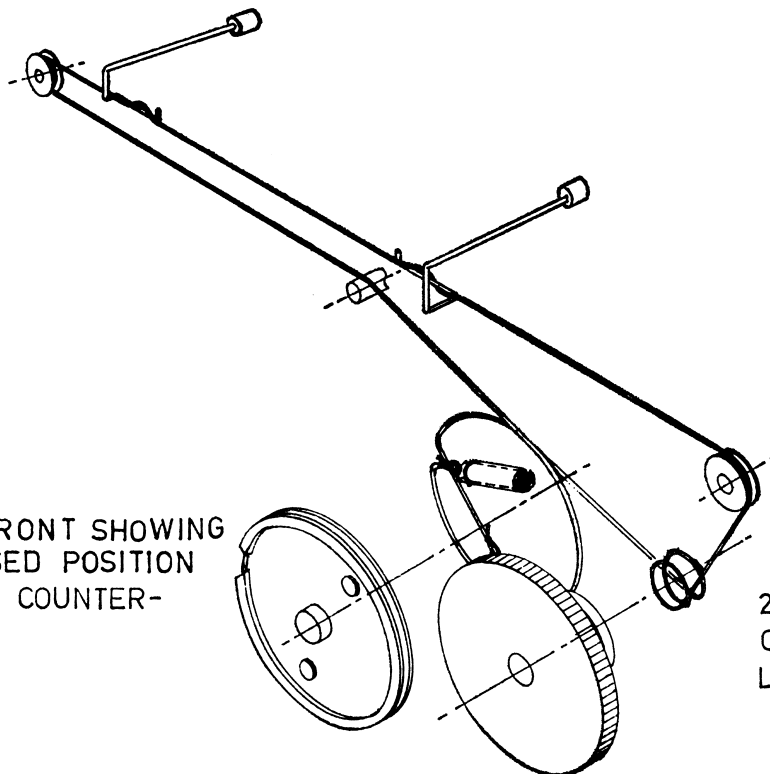


VIEW FROM COMPONENT SIDE OF BOARD

MECHANICAL PARTS LIST

Description	Code No.
Battery hatch cover	CS.463.165
Battery plug—3-pin	CZ.365.221
	C/F691-6-4
Cabinet back	CS.462.788
Carrying case—leather	CR.575.033
Dial cord (24" required) bulk .....	.965/JB1
Dial cord spring	CS.200.040
Dial cursor assy. L.H.	CR.480.691
Dial cursor assy. R.H.	CR.480.692
Dial drum	CS.360.403
Dial scale	CS.412.498
Dial window	CS.463.166

Description	Code No.
Escutcheon assy.—consisting of—	
case front (with mtg. inserts)	CR.520.031
speaker grille	
knob function panel	
frequency scale	
namestrip	
Jack for ext. power supply connection	CZ.369.942
	type SG1003
Knob—tuning	CS.432.593
Knob—volume	CR.523.596
Screw—case back fastening, 2x	CS.258.910
Screw—dial cover mounting, 2x	CH.496.648.3B



VIEW FROM FRONT SHOWING
GANG IN CLOSED POSITION
KNOB TURNED COUNTER-
CLOCKWISE.

2 1/4 TURNS
CORD LENGTH: 22 3/8"
LOOPED EACH END.

ELECTRICAL PARTS LIST

CAPACITORS

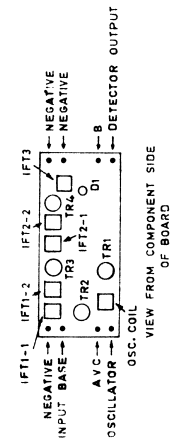
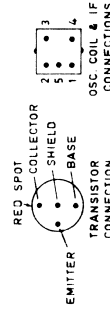
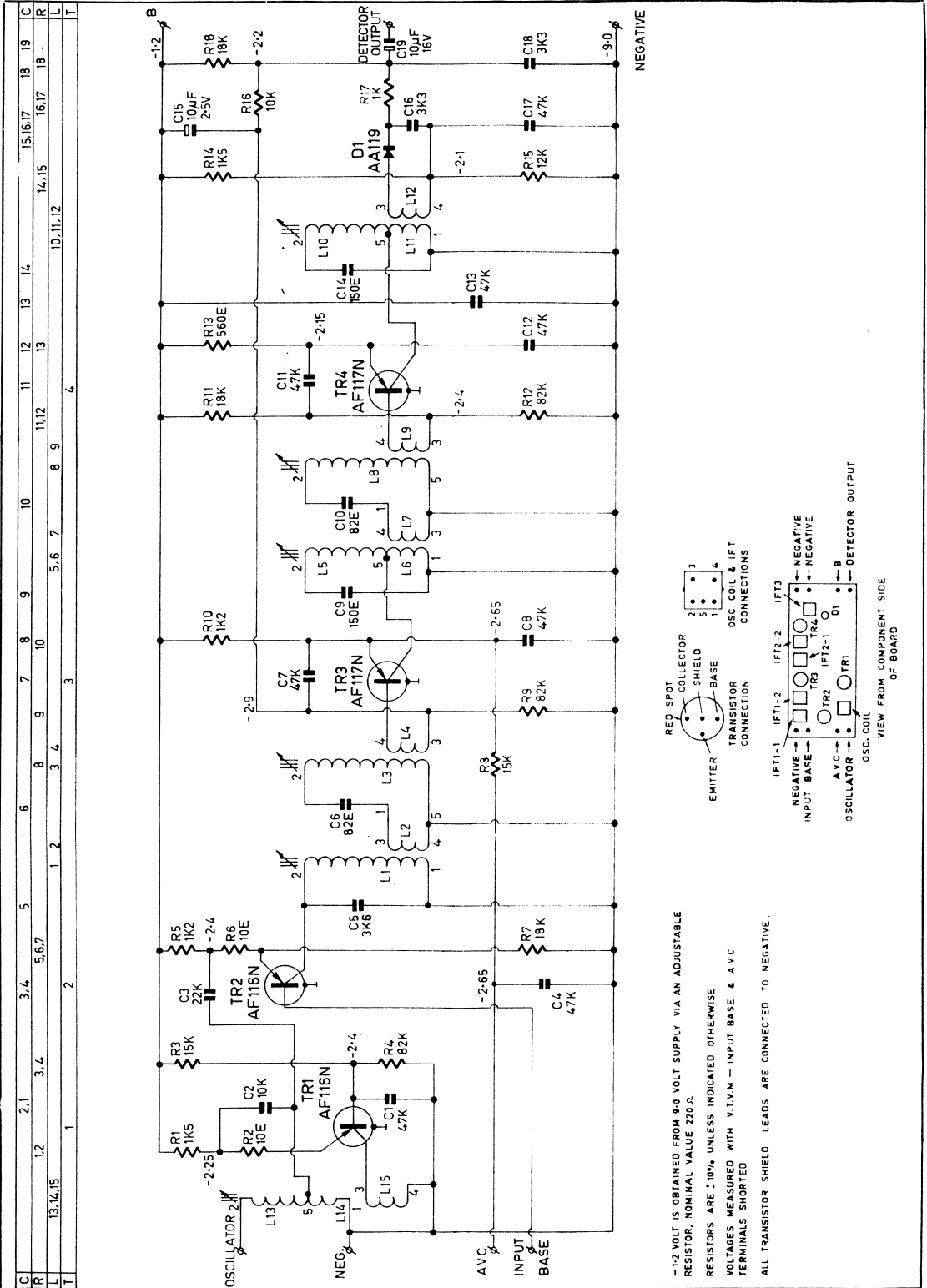
C. No.	Description	V.W.	Tol. ±%	Type or Code No.
1	47K ceramic	25	+80-20	Ducon CDR
2	10K ceramic	25	+80-20	Ducon CDR
3	22K ceramic	25	+80-20	Ducon CDR
4	47K ceramic	25	+80-20	Ducon CDR
5	3K6 Styroflex	100	5	C.285.AA/B3K6
6	part of 1st I.F.T.			
7	47K ceramic	25	+80-20	Ducon CDR
8	47K ceramic	25	+80-20	Ducon CDR
9	part of 2nd I.F.T.			
10	part of 2nd I.F.T.			
11	47K ceramic	25	+80-20	Ducon CDR
12	47K ceramic	25	+80-20	Ducon CDR
13	47K flat foil	30	20	C.280.AE/P47K
14	part of 3rd I.F.T.			
15	10M electrolytic	2.5	—	C.426.AS/A10
16	3K3 ceramic, pin up	—	-20+50	C.322.BA/H3K3
17	47K ceramic	25	+80-20	Ducon CDR
18	3K3 ceramic, pin up	—	-20+50	C.322.BA/H3K3
19	10M electrolytic	16	—	C.426.AR/E10
101	10M electrolytic	16	—	C.426.AR/E10
102	200M electrolytic	10	—	C.426.AR/D200
103	320M electrolytic	6.4	—	C.426.AR/C320
104	1K5 Polyester	400	10	C.296.AC/A1K5
105	320M electrolytic	6.4	—	C.426.AR/C320
106	200M electrolytic	10	—	C.426.AR/D200
201	Tuning capacitor			CZ.107.608
202	plus trimmers			M.S.P. K2XT
203				
204				
205	6E8 ceramic, N1500		0.5pF	Ducon CDS
206	68E ceramic, NPO		5	C.304.GB/B68E
207	18K Polyester	160	10	C.296.AA/A18K

RESISTORS

R. No.	Description	W.	Tol. ±%	Type or Code No.
1	1K5 carbon	1/2	10	IRC BTS
2	10E carbon	1/2	10	IRC BTS
3	15K carbon	1/2	10	IRC BTS
4	82K carbon	1/2	10	IRC BTS
5	1K2 carbon	1/2	10	IRC BTS
6	10E carbon	1/2	10	IRC BTS
7	18K carbon	1/2	10	IRC BTS
8	15K carbon	1/2	10	IRC BTS
9	82K carbon	1/2	10	IRC BTS
10	1K2 carbon	1/2	10	IRC BTS
11	18K carbon	1/2	10	IRC BTS
12	82K carbon	1/2	10	IRC BTS
13	560E carbon	1/2	10	IRC BTS
14	1K5 carbon	1/2	10	IRC BTS
15	12K carbon	1/2	10	IRC BTS
16	10K carbon	1/2	10	IRC BTS
17	1K carbon	1/2	10	IRC BTS
18	18K carbon	1/2	10	IRC BTS
101	18K carbon	1/2	10	IRC BTS
102	22K carbon	1/2	10	IRC BTS
103	220E carbon	1/2	10	IRC BTS
104	3E3 metal oxide	1/4	10	E.017.BC/A3E3
105	1K carbon	1/2	10	IRC BTS
106	470E carbon	1/2	10	IRC BTS
107	130E NTC disc	1	10	E.201.BC/A130E
108	200E carbon potentiometer pre-set (bias adj.)			E.086.AC/200E
109	2E2 metal oxide	1/4	10	E.017.BC/A2E2
110	2E2 metal oxide	1/4	10	E.017.BC/A2E2
111	560E carbon	1/2	10	IRC BTS
201	250K carbon potentiometer taper A (volume) with SPST rotary switch (on/off)			CZ.034.130 type E.088
202	2K2 carbon	1/2	10	IRC BTS

INDUCTORS

L. No.	Description	Type or Code No.
1, 2	Primary and coupling 1st I.F.T.	CZ.651.000
3, 4	Secondary and coupling 1st I.F.T.	CZ.651.001
5, 6, 7	Primary and coupling 2nd I.F.T.	CZ.651.002
8, 9	Secondary and coupling 2nd I.F.T.	CZ.651.001
10, 11, 12	3rd I.F.T.	CZ.651.005
13, 14, 15	Oscillator coil	CZ.652.000
201, 202	Rod aerial assy. Ferroxcube rod for above	CZ.323.092 CS.152.478 cut to 8"
203	Speaker, Rola 53D03/277/15Ω	CZ.162.542



-1.2 VOLT IS OBTAINED FROM 9.0 VOLT SUPPLY VIA AN ADJUSTABLE RESISTOR, NOMINAL VALUE 220 Ω.
RESISTORS ARE ±10% UNLESS INDICATED OTHERWISE
VOLTAGES MEASURED WITH V.T.V.M.— INPUT BASE & AVC TERMINALS SHORTED
ALL TRANSISTOR SHIELD LEADS ARE CONNECTED TO NEGATIVE.