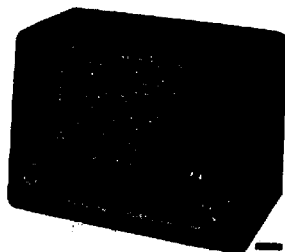


# PHILIPS

## SERVICE NOTES

for the receiver

**B4 X 66U**

1956

For A.C. and D.C. mains supply

### General

#### Waveranges

S.W. 2a:	11.5 - 20 m	{ 26,2 - 15 Mc/s }
S.W. 2b:	25 - 31.6 m	{ 12 - 9.5 Mc/s }
S.W. 3 :	30 - 93.7 m	{ 10 - 3,2 Mc/s }
M.W. :	185 - 580 m	{ 1622 - 517 kc/s }

#### Controls

##### Left

Large knob : Volume control and mains switch  
Small knob : Tone control

##### Right

Large knob : Waverange switch and p.u. switch  
Small knob : Tuning

#### Tubes

B1 - UCH81	B4 - UL84
B2 - UF89	B5 - UY42
B3 - UBC81	B6 - DM71

#### Bandwidth

I.F. bandwidth (1:10)  
measured from g1-B1 is about 10.5 kc/s  
"Overall" bandwidth (1:10)  
measured from the aerial socket is about  
10 kc/s at 1000 kc/s

I.F. 452 kc/s

#### Mainsvoltages

110, 127, 200, 220V $\approx$ 

#### Power consumption

approx. 53 Watts  
(220V $\wedge$ )

#### Loudspeaker

AD 3700X

#### Fuses

Z<sub>1</sub>: 315 mA  
Z<sub>2</sub>: 100 mA

#### Diallamp

L1 - 8097D -00

#### Dimensions

Width : 370 mm  
Height : 275 mm  
Depth : 196 mm

Important

When connecting a receiver to A.C. mains supply for repairs or trimming, it is necessary to use a transformer with separate windings. The secondary winding must not be earthed and one set only should be connected to the transformer. The chassis can then be earthed. When connecting to D.C. mains, check for the right polarity.

Trimming the receiver

General

Volume control at maximum

Connect a voltmeter via a trimming transformer to the loudspeaker terminals.

Unless otherwise stated, all signals are applied via a dummy aerial to the aerial socket. Screw the cores of the I.F. bandfilters nearly full out (S48, S46, S42, S40)

Trimming is done with the aid of trimming points on the dial.

Trimmingpoint 1 is on the extreme left on the dial

Trimmingpoint 2 is on the extreme right on the dial

Before trimming, turn the variable capacitor to minimum and set the pointer on the trimmingpoint 1

	Wave-range	Signal	Trimming point	Trim for max. output voltage	Indication
I.F. Bandfilters	M.W.	452 kc/s via 33000pF to g1-B1	1	S48 S46 S40 S42	
R.F.- and oscillator circuits	M.W.	550 kc/s	2	S37, S24-S25	Repeat
		1630 kc/s	1	C34, C21	
	S.W.3	3,3 Mc/s	2	S31, S22	Repeat
		10,1 Mc/s	1	C32, C20	
	S.W.2b	11.8 Mc/s	Tune the receiver	C23	
		12,2 Mc/s	1	C38	
S.W.2a	14.7 Mc/s	2	S28, S17	Repeat	
	26,3 Mc/s	1	C39, C19		

For all waveranges, excepted S.W.2b, the oscillator frequency = tuned frequency + I.F.

The waverangeswitchwafers, indicated in the circuit diagram, are drawn in position "pick up"

The voltages and currents, indicated in the circuit diagram, are measured with the receiver connected to 220V, waverangeswitch to M.W. and no signal to the aerial socket.

List of parts

- 3 -

When ordering always quote:

1. Codenumber
2. Description and colour
3. Typenumber of the receiver

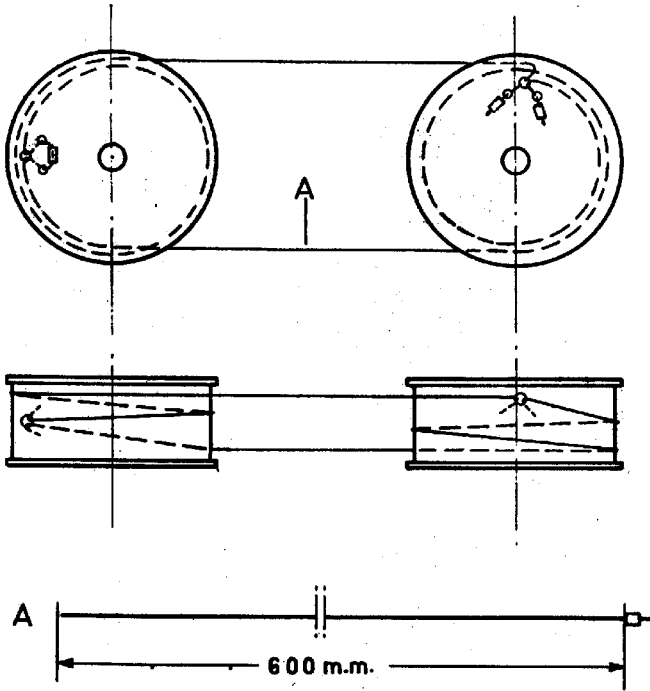
	Description	Codenumber
	Cabinet	A3 770 95.0
	Knob (tuning)	A3 769 34.0
	Knob (tone control) 1)	A3 769 65.0
	Knob (wave-range switch)	A3 769 66.0
	Knob (volume control)	A3 769 67.0
	Pick-up switch	A3 402 44.0
	Dial (oversea)	A3 806 47.0
	Knob (voltage adaptor)	A3 228 52.0

B4X66U

S1)			A1 000 34.0	C32	22 pF	908/22E
S2)				C33	315 pF	905/300E
S16)			921/11-20M +	C34	30 pF	905/15E
S17)			921/24-32M	C35	580 pF	908/30E
S21)			921/30-90M	C36	160 pF	905/560E
S22)				C37	82 pF	905/20E
S24)			922/01	C38	250-400 pF	905/160E
S25)				C39	30 pF	904/82E
S26)			923/10-20M	C50	4700 pF	907/250E-40CE
S27)				C51)		908/30E
S28)				C52)		906/4K7
S29)			923/30-90M	C53)		voir bobines
S30)				C54)		see coils
S31)				C55	47000 pF	zie spoelen
S36)			923/185-590M	C56	0.1 μF	véanse bobinas
S37)				C57	10000 pF	906/47K
S40)			925/452	C58	8200 pF	906/100K
S42)				C59	82 pF	904/10K
C51)	195	pF		C60	4700 pF	906/8K2
C52)	195	pF		C61	15000 pF	904/82E
S46)			925/452	C62	0.47 μF	906/4K7
S48)				C63	6800 pF	906/15K
C53)	195	pF		C64	3900 pF	906/470K
C54)	195	pF		C65	12000 pF	906/V6K8
S50)			918/05	C66	22000 pF	906/3K9
S51)				C68	4700 pF	906/12K
S52)				C69	270 pF	906/22K
S53)				C70	47000 pF	906/4K7
S56)			A3 161 86	C71	4700 pF	904/270E
S57)				C72	1000 pF	906/V47K
C1)	50..	μF	912/L50+50	C73	4700 pF	906/V1K
C2)	50	μF		C74	4700 pF	906/V4K7
C6)	11-498	pF	49 001 56	R1	1350 Ω	900/2K7
C7)	11-498	pF		R2	33000 Ω	900/2K7
C18)	700	pF	904/680E	R7	1,2 MΩ	900/33K
			904/22E	R8	47000 Ω	900/1M2
C19)	22	pF	908/22E	R9	10000 Ω	900/47K
C22)	3000	pF	905/3K	R10	15000 Ω	900/10K
C23)	275	pF	907/45E-275E	R11	0,1 MΩ	900/15K
C24)	160	pF	904/150E	R12	0.1 MΩ	900/1M8
			904/10E	R13	47000 Ω	900/100K
C25)	82	pF	904/82E	R14	1,6 MΩ	900/47K
C26)	12	pF	904/12E	R15)	0.4 MΩ	916/DL 400K+
C27)	220	pF	904/220E			1M6+
C28)	100	pF	904/100E	R16	18 MΩ	A3 432 93
C29)	100	pF	904/100E	R17	330 Ω	900/18M
C30)	68	pF	904/68E	R18	0.22 MΩ	900/330E
C13)	380	pF	905/200E	R19	3300 Ω	900/220K
			905/180E	R20	0,33 MΩ	900/3K3
				R21	18000 Ω	900/330K
				R22	120 Ω	900/18K
						900/120E







R 15256

Fig2

S:	1, 2	16, 21, 17, 22, 24, 25	26, 29, 27, 30, 36, 28, 31, 37	40, 42
C:	69, 72, 71	67, 22, 26, 25, 21, 19, 23, 18, 24, 6, 27	75, 65, 70, 35, 82, 28, 38, 29, 7, 35, 1, 25, 30, 33, 31, 39, 32, 2, 34	51, 52, 55
R:	21, 36	41, 39, 38, 34, 32, 42, 7	8, 37, 9	1, 2

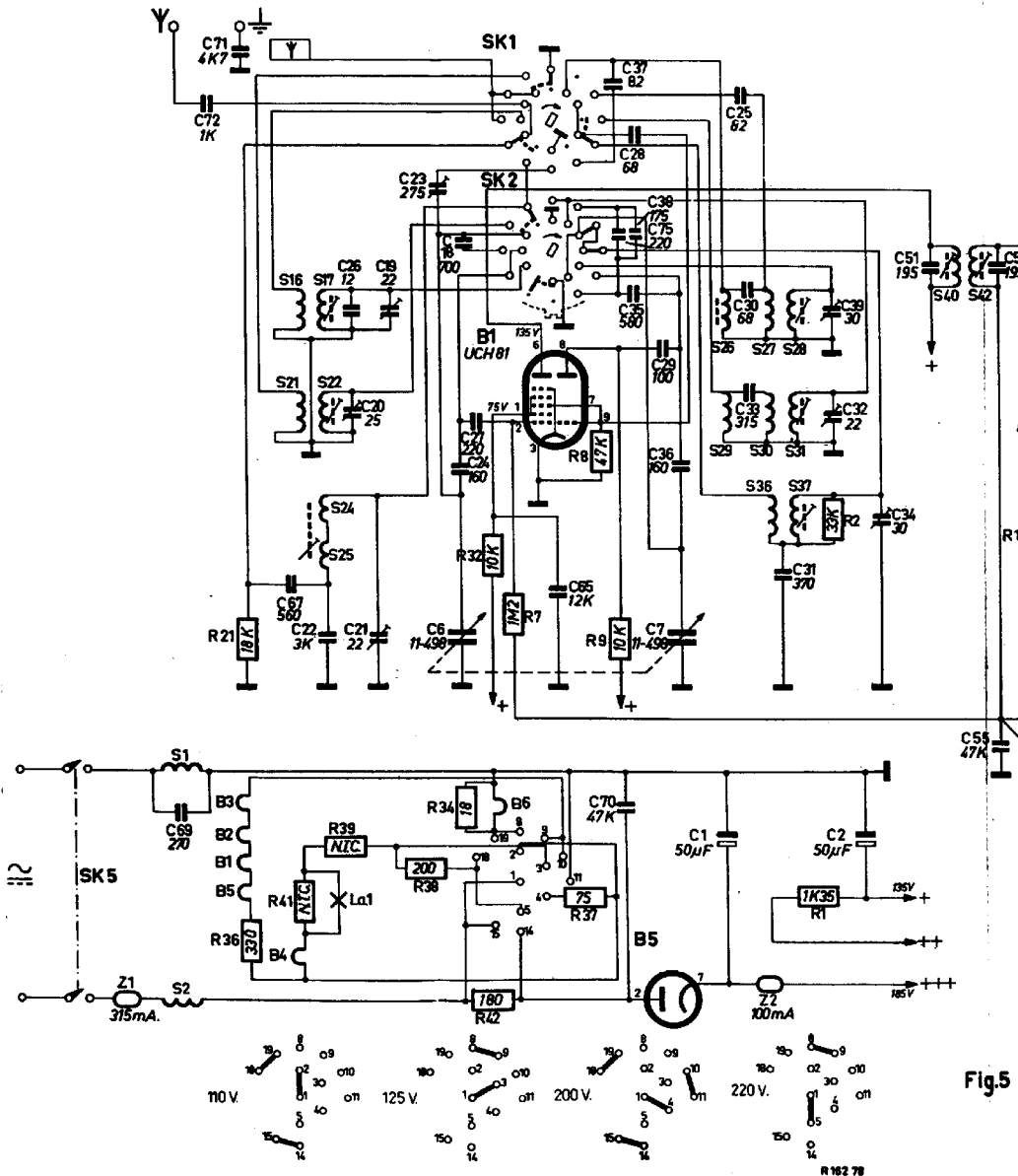
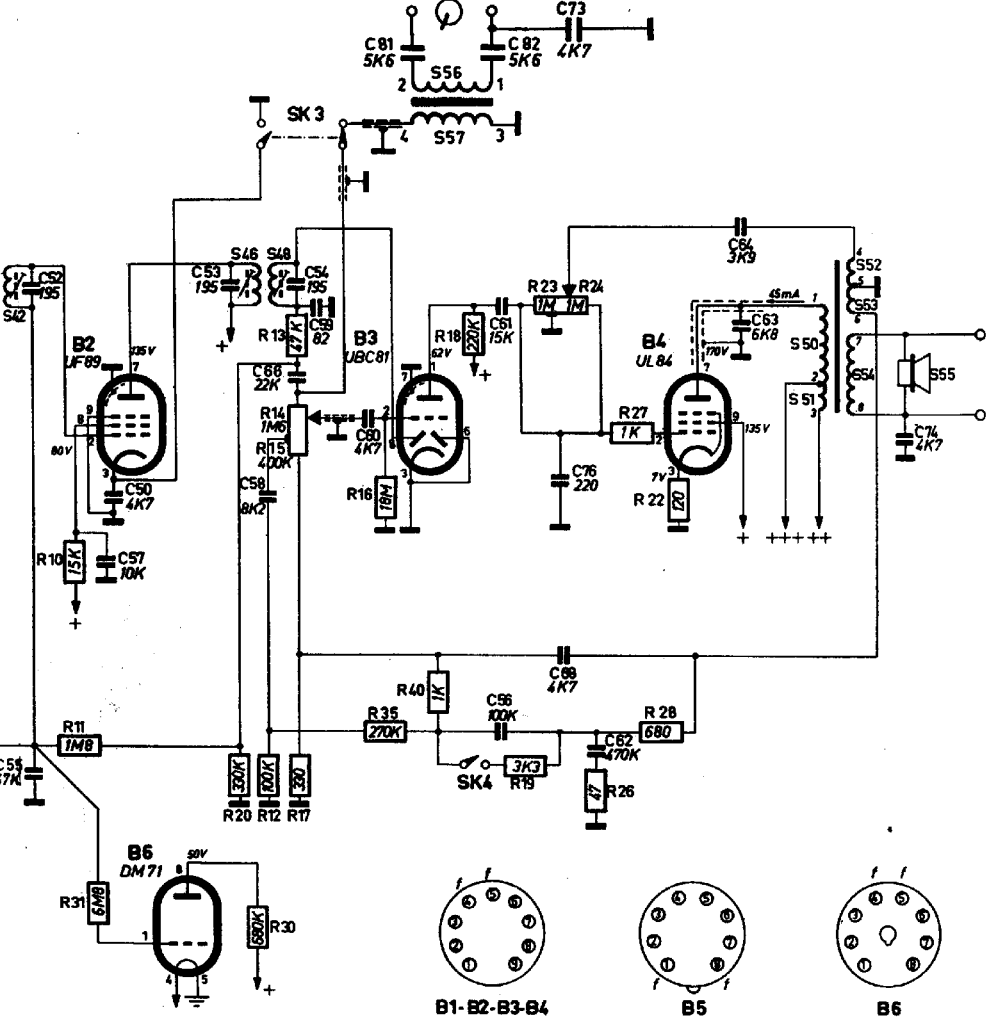


Fig.5

R 162 78



46. 48.		50. 51.		52. 53. 54. 55.	
52. 55.	57. 50.	53. 98. 66. 54. 59. 60.	61. 73. 56. 68. 76. 62.	64. 63.	74.
10. 11. 31.	20. 30. 12. 17. 13. 14. 15.	16. 35. 40. 18.	19. 23. 24. 26. 27.	28. 22.	



B1-B2-B3-B4

B5

B6

R 162 52

Fig.5

S:	57. 56.										J.											
C:	56.	64.	68.	58.	73.	62.	76.	61.	66.	60.	74.	55.	65.	57.	59.							
R:	23.	24.	35.	40.	12.	19.	28.	15.	14.	26.	27.	22.	17.	18.	20.	11.	16.	13.	34.	31.	32.	30.

