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# PHILIPS

## SERVICE NOTES

for the receivers

### BX 236 U-62-63-95-96

1955. For A.C. and D.C. Mains Supply.

The four versions only differ in some points, which are summed up in the following table.

Waverange	-62	-63	-95	-96
M.W.	185-580 m (1622-517 kc/s)	185-580 m	185-580 m	185-580 m
S.W.	-	-	25-93.8 m (12-3.2 Mc/s)	25-93.8 m
S.W.2	16.75-63.2 m (17.9-4.75 Mc/s)	16.75-63.2 m	-	-
Mains voltages	220 V*	110-127 V	220 V*	110-127 V
Diallamp	8009D-07	8034D-07	8009D-07	8034D-07

\* The -62 and -95 version can be adapted to mains voltages of 110-127 V, by short-circuiting R11 and R12. (See circuit diagram).

#### Knobs

Left : Volume control + mains switch.  
Right: Tuning.

At the right side of the cabinet  
Waverange switch.

#### I.F.

452 kc/s.

#### Tubes

B1 : UCH42  
B2 : UF41  
B3 : UBC41  
B4 : UL41  
B5 : UY42

#### Loudspeaker

9742 X  
(Z = 5 Ω)

#### Consumption

48 W.

#### Bandwidth

The I.F. bandwidth measured from g1B1 is about 10.5 kc/s. The overall bandwidth measured from the aerial socket is about 10 kc/s at 1622 kc/s and about 8.5 kc/s at 550 kc/s.

Trimming the receiverWarning:

During repairs or trimming when the receiver has been connected to an A.C. mains, a transformer with separate windings has to be used. The chassis of the set may now be earthed.

Mind the polarity connecting the set to a D.C. mains.

I.F. circuits.

1. Volume control to maximum.
2. Tuning capacitor to minimum.
3. Waverange switch to M.W.
4. Connect a voltmeter via a trimming transformer to the connections of the loudspeaker.
5. Screw the cores of the I.F. bandfilters out as far as possible.
6. Apply a modulated signal of 452 kc/s via a capacitor of 33000 pF to g1 of B1.

	Trim for maximum output
4th I.F. circuit	S8
3rd I.F. circuit	S7
1st I.F. circuit	S5
2nd I.F. circuit	S6

7. Seal the cores of the I.F. bandfilters.

R.F. and oscillator circuits.

Trimming point 1 extreme left side of the dial.

Trimming point 2 extreme right side of the dial.

Set the pointer to trimming point 1 with the variable capacitor to minimum.

1. Volume control to maximum.
2. Connect a voltmeter via a trimming transformer to the connections of the loudspeaker.
3. Apply all signals via a normal dummy aerial to the aerial socket.

Version	Waverange switch	Pointer on trimming point	Modulated signal of	Trim for max. output	Remarks
-62 -63 -95 -96	M.W.	2 1	550 kc/s 1630 kc/s	S14; S12 C23; C22	) repeat
-95 -96	S.W.	2 1	3.3 Mc/s 12.2 Mc/s	S4; S2 C8	
-62 -63	S.W.2	2 1	5.11 Mc/s 18 Mc/s	S4; S2 C8	) repeat

Driving cord.

The path and length of the driving cord are indicated in fig.1, the variable capacitor being set to maximum.

Output transformer.

If the original output transformer becomes defective, it must be replaced by the standard transformer mentioned in the electrical parts list. For connections see fig.2.

Taking the chassis out of the cabinet.

1. Remove the knobs and rear panel.
2. Unscrew the screws which fasten the loudspeaker and the chassis to the cabinet.
3. Remove the spring of the waverange switch slider.
4. The chassis with loudspeaker can now be taken out of the cabinet.

LIST OF PARTS

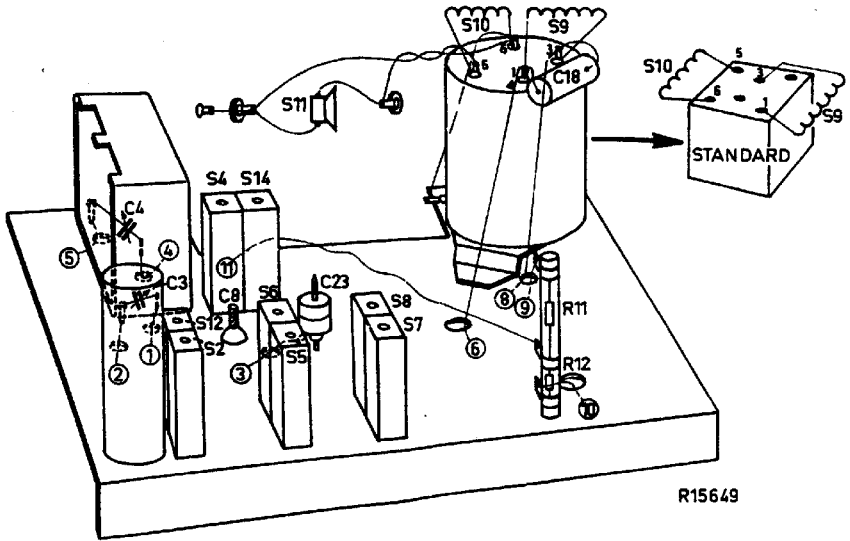
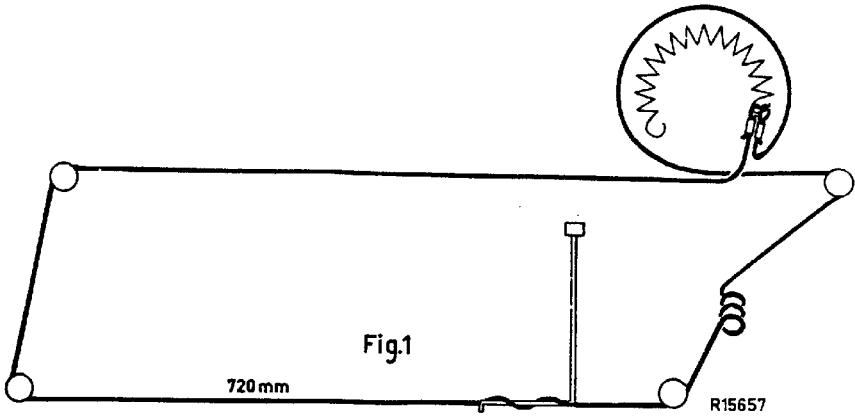
When ordering always quote:

1. Description and code number.
2. Colour code.
3. Type number of the set.

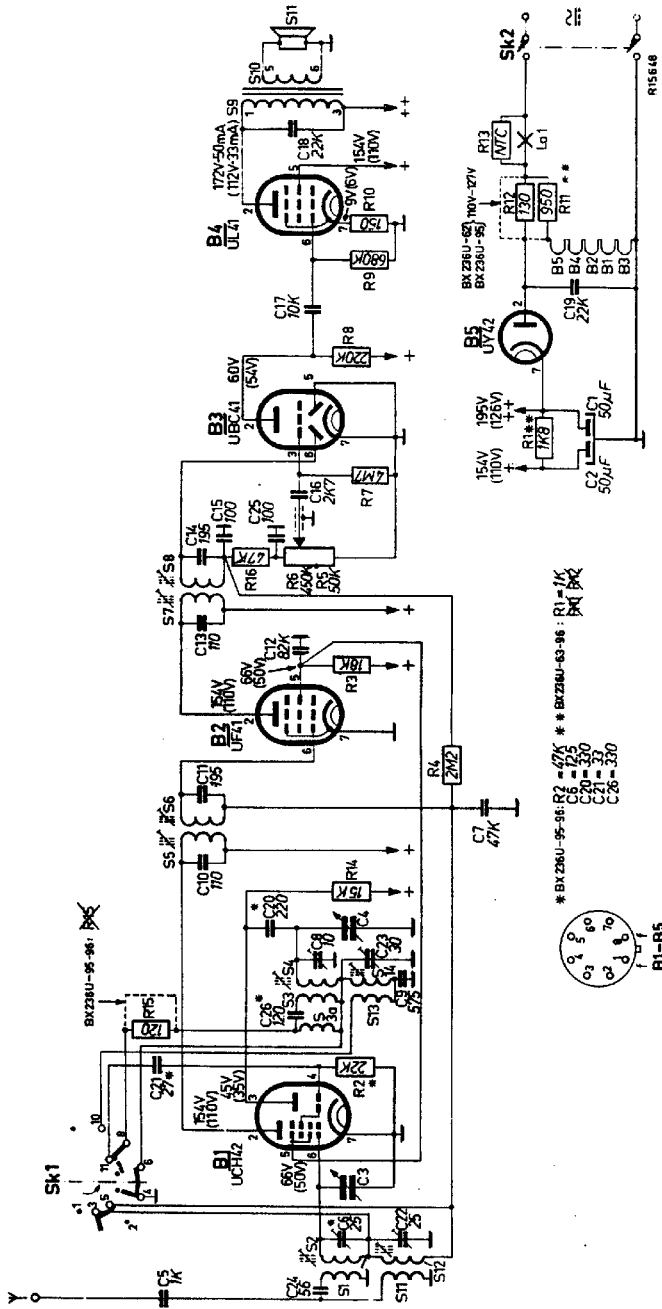
Description	Code number
Cabinet	A3 750 52.0
Knob	A3 738 49.0
Valve holder	B1 506 53.0
Spring for fixing coil cans	A3 652 58.3
Rubber grommet (variable capacitor)	A3 642 11.0
Spring (in drum variable capacitor)	A3 646 57.0
Vernier tuning	A3 396 68.0
Dial lamp holder	A3 359 16.0
Aerial socket plate	A3 384 39.0
Slider (waverange switch colour MG)	P4 380 92/19
Dial (-62) oversea	A3 743 74.0
Dial (-63) oversea	A3 743 81.0
Dial (-95, -96) oversea	A3 743 75.0

WV/MZ

S1)					220 pF	A9 999 04/220E
S2)	(-62 -63)	A3 125 29.1		C20	(-62 -63)	A9 999 04/330E
S1)					330 pF	
S2)	(-95 -96)	A3 125 30.1			(-95 -96)	
S3 )					27 pF	A9 999 04/27E
S3a )	(-62 -63)	A3 125 61.0		C21	(-62 -63)	A9 999 04/33E
S4 )					33 pF	
					(-95 -96)	
S3 )				C22	25 pF	A9 999 07/2E-
S3a )	(-95 -96)	A3 125 62.1				25E
S4 )				C23	30	28 212 36.4
S5				C24	56 pF	A9 999 04/56E
S6				C25	100 pF	A9 999 04/100E
C10	110 pF	A3 126 84.0			120 pF	A9 999 04/120E
C11	195 pF			C26	(-62 -63)	A9 999 04/330E
S7					330 pF	
S8					(-95 -96)	
C13	110 pF	A3 126 84.0		R1	1800 Ω	A9 999 00/1K8
C14	195 pF				(-62 -95)	
S9 )		A3 169 20.0			1000 Ω	A9 999 00/1K
S10)					(-63 -96)	
S11)				R2	47000 Ω	A9 999 00/47K
S12)		A3 125 35.0			(-95 -96)	
S13)					22000 Ω	A9 999 00/22K
S14)		A3 125 72.0			(-62 -63)	
C3	12-500 pF			R3	18000 Ω	A9 999 00/18K
C4	12-500 pF	49 001 56.0		R4	2.2 MΩ	A9 999 00/2M2
C5	1000 pF	A9 999 06/V1K		R5	0.05 MΩ	A9 999 16/
				R6	0.45 MΩ	DL50K+450K
C6	{ 25 pF ±	A9 999 07/		R7	4.7 MΩ	A9 999 00/4M7
	{ (-62 -63)	2E-25E		R8	0.22 MΩ	A9 999 00/220K
	{ 12.5 pF ±±	A9 999 07/		R9	0.68 MΩ	A9 999 00/680K
	{ (-95 -96)	1.5E-12.5E		R10	150 Ω	A9 999 00/150E
C7	47000 pF	A9 999 06/47K		R11	950 Ω	
C8	10 pF	49 005 64.0		R12	130 Ω	49 417 12.0
C9	575 pF ±±±	A9 999 07/			(-62 -95)	
		360E-575E		R13	N.T.C.	49 379 55.0
C10)	see coils			R14	15000 Ω	A9 999 00/15K
C11)	voir bobines			R15	120 Ω	A9 999 00/120E
	véase bobinas				(-62 -63)	
C12	82000 pF	A9 999 06/82K		R16	47000 Ω	A9 999 00/47K
C13)	see coils					
C14)	voir bobines					WV/MZ
	véase bobinas					
C15	100 pF	A9 999 04/100E		*	Adjust for 19 pF	
C16	2700 pF	A9 999 06/2K7			Régler à 19 pF	
C17	10000 pF	A9 999 06/10K			Ajustese a 19 pF	
C18	22000 pF	A9 999 06/V22K		**	Adjust for 11 pF	
C19	22000 pF	A9 999 06/V22K				
C1	50 μF	48 317 57/		***	Adjust for 470pF	
C2	50 μF	50+50				



BX 236 U-62-63-95-96



\* BX 236U-95-96: R2 = 47K, R3 = 1K, R4 = 1K, R5 = 1K, R6 = 1K, R7 = 1K, R8 = 1K, R9 = 1K, R10 = 1K  
 C1 = 100, C2 = 100, C3 = 100, C4 = 100, C5 = 100, C6 = 100, C7 = 100, C8 = 100, C9 = 100, C10 = 100

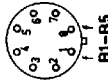


Fig.3

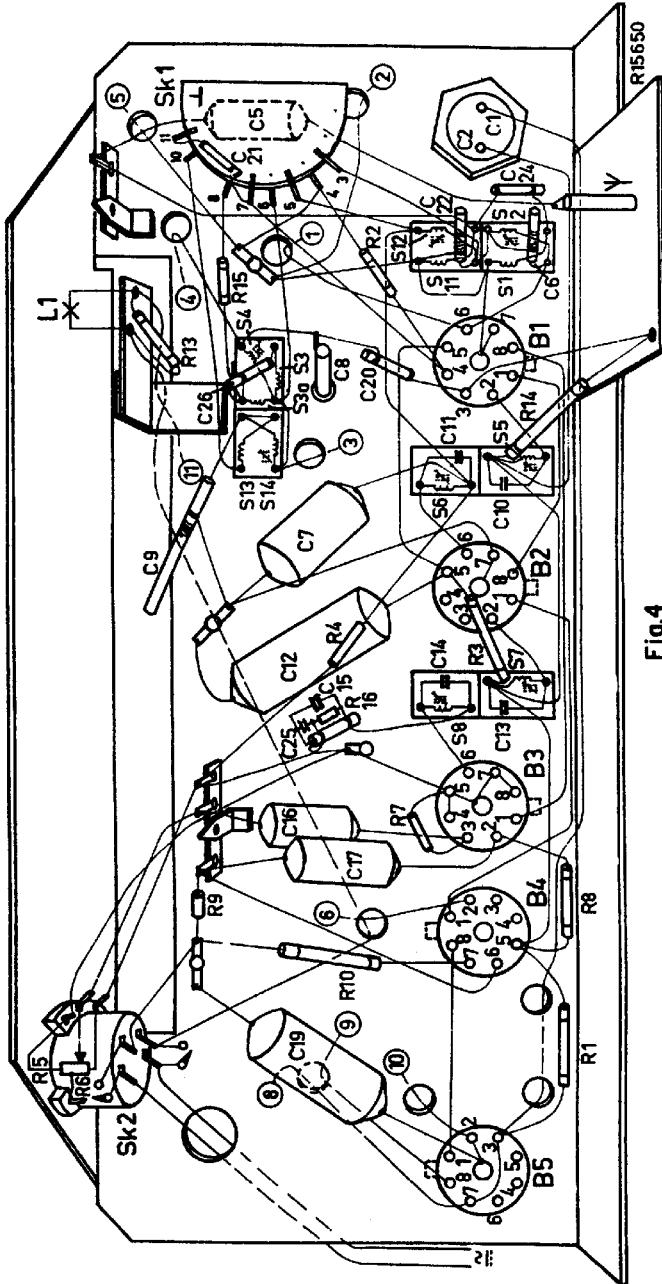


Fig. 4

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# PHILIPS

## SERVICE NOTES

for the receivers

**BX 236 U-72-73-75-76**

1955

For AC and DC mains supply

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These receivers are identical to the BX 236 U-62 and 63-95-96 respectively.

VW/LR



Eindhoven. Vermoensgvuldiging of mededeling aan derden in welke vorm ook, is zonder schriftelijke toestemming van de afzender niet geoorloofd.

ALG. GEG. GENERAL DATA	Schematype	Circuit type	Superhet		AFGELEIDE APPARATEN - DERIVED TYPES	
	Tuning on vooding	220V~	Voltage and supply	220V~ (zie pag. 1)		
Golfgolven: st. 1	Wave range: pos. 1		16,75-53,2m (12,9-4,75MHz)		BX236U-62 = BX135U-62 echter met M.G. toegevoegd	
" 2	" 2		185 - 580m (1622-517kHz)			
" 3	" 3					
" 4	" 4				BX236U-53 = BX236U-52, echter voor 110-127V~	
" 5	" 5					
" 6	" 6					
" 7	" 7				BX236U-95 = BX236U-82, echter met 25-35,8m (12-3,2MHz) i.p.v. 16,75 - 53,2 m	
" 8	" 8					
Bandspreiding	Bandspreid					
Mark	Brand	PHILIPS				
Lidder type	Speaker type	9742 X		BX236U-96 = BX236U-95, echter voor 110-127 V~		
Extra lidder, panel	Ext. speaker connect.					
Lidder, uitloch. beer	Speaker switch			BX236U-72 = BX236U-52, echter fabricage Metzlar		
Pick-up aansl.	Pick-up sockets					
Pick-up schak.	Pick-up switch			BX236U-73 = BX236U-72, doch ingesteld voor 110-127V~		
Plaatenspeler/wiss.	Record-player/changer					
Pick-up lippen	Pick-up heads			BX236U-75 = BX236U-95, echter fabricage Metzlar		
Magnetofon aansl.	Tap Recorder conn.					
Kwaliteitschakelaar	Performance-sw.			BX236U-76 = BX236U-75, doch ingesteld voor 110-127V~		
Tegentoppeling	Inverse feedback	Ja				
Kleinregeling hoog	Tone control high					
" laag	" low					
Verbandbreedte	Var.bandwidth					
Afstemindicatie	Tuning indicator					
Ingeb. antenne	Built in aerial	Geen				
Ingeb. ant. uitloch. beer	Sw. for built in aerial					
Netzeed	Main filter					
Zuig/sparkring vast	Wave trap, fixed					
" los	" optional					
Rijregeling	Variable drive	Ja				
Temp. veiligheid	Temp. fuse					
Veiligh. contact	Safety contact					
Spanningsaanduiding	Voltage indication					
Uitvoering	Execution	Niet stralingsvrij Icopanvast.				
Meatavoren	Extra accessories					
Aantal H.F. tringen	Number of H.F. circ.	AM: 1 + 1, FM: 1		OPMERKINGEN - REMARKS		
M.F.	M.F.	2 + 2		1, D, s.v. aan te solderen kortsluitdraad ook geschikt voor 110-127 V~		
M.F. in kHz.	I.F. in Kc.'s	452		voor 110-127 V~ uitvoering verl. lampje 80340-07.		
Selectiviteit (59) M.G.	Selectivity (59) M.W.	smal: 35x, breed				
L.G.	L.W.					
Gevoelheid in µV st. 1	Sensitivity in µV pos. 1	ca 20) bij 110-127 V~ 2 à 3x				
" 2	" 2	ca 15) slechter.				
" 3	" 3					
" 4	" 4					
" 5	" 5					
" 6	" 6					
" 7	" 7					
" 8	" 8					
B 1.6 in kHz.	B 1.6 in Kc.'s	M.W. smal: 5, breed:				
L.G.	L.W.					
Spiegelverhouding	Image ratio	M.W. 270 v.o.p f<1000 kHz				
L.G.	L.W.					
Verbruik in W. 110V~	Power cons. in W 110V~	15				
125V~	125V~	22				
220V~	220V~	45				
Bl. uitg. verm. in W. 110V~	Output in W 110V~	0,5				
(D = 10%) 125V~	(D = 10%) 125V~	1				
220V~	220V~	2				
Ac. uitg. verm. in mW 110V~	Acoust. output in mW 110V~	10				
(D = 10%) 125V~	(D = 10%) 125V~	20				
220V~	220V~	40				
Mengbuis + Oscillator		UCH42				
M.F.-buis		UF41				
Detector + L.F.-buis		UBC41				
Eindbuis		UL41				
Gelijkrichbuis		UY42				
Verlichting		80090-07 zie opg. 2				
Soort schaal	Kind of scale					
Schaalachtergrond	Scale background					
Afmetingen in mm.	Dimensions in mm.					
Material	Material					
Verlichting	Lighting					
Schaalbedrukking	Scale markings					
Slag v.d. wijzer	Stroke of pointer					
Wijzer	Pointer					
Golfgolven	Wave ranges	letters naast schakelaar. Reest als BX135U				
Kast	Cabinet					
Doek	Cloth					
Knoppen	Knobs					
Plaats v.h. embleem	Place of emblem					
Almetingen in mm.	Dimensions in mm.					

Serie: \_\_\_\_\_ AR. % \_\_\_\_\_ Richtlijn: \_\_\_\_\_  
 Ontwikkeling: \_\_\_\_\_ Fabricage: \_\_\_\_\_

Uiterlijk en bediening als BX135U, echter met golflengteschakelaar op rechter zijwand.

C.V.: 10071	S.V.: 417/8	<b>ONTVANGER RECEIVER 54/55</b>	TYPE
OPMERKING BEH - REM			GRONDTYPE <b>BX236U-62</b>
GET. - DESS. GEZ. - DRAWN	SPECIFICATIE SPECIFICATION	BL. P. - SH. 41	DATE 27-10-55
		VERV. - REMP. ERS. - SUPERS.	DATE 16-9-55
<b>N.V. PHILIPS' GLOEILAMPENFABRIEKEN, EINDHOVEN, HOLLAND - HOOFDINDUSTRIEGROEP APPARATEN</b>			