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PHILIPS

SERVICE NOTES
FOR THE RECEIVER:

BX 388A

For A.C. mains supply.

GENERAL

WAVE RANGES

Short wave 1 : 11,29 - 33 m (26,55 - 9,09 Mc/s)
Short wave 2 : 33 - 100 m (9,09 - 3 Mc/s)
Medium wave : 165 - 560 m (1818,2 - 535,7 kc/s)

INTERMEDIATE FREQUENCY

452 kc/s.

VALVES AND PILOT LAMP

B1 : ECH21
B2 : ECH21
B3 : EEL21
B4 : AZ1
L1 : 804SD-00

LOUDSPEAKER

Type 9726.

CONTROL KNOBS

Right side : waverange switch
Frontside right : tuning
Frontside left : mains switch and volume control
Left side : tone switch (up: speech; middle: normal; down: mellow).

DIMENSIONS

Height : 25 cm.)
Length : 44 cm.) including knobs
Depth : 19 cm.)

WEIGHT

7 kg., including valves.

BANDWIDTH

- The I.F. bandwidth (1:10) is about 10,5 kc/s, measured from the control grid g1 of valve B1.
- The overall-bandwidth (1:10) measured from the serial socket is about 10 kc/s at 1000 kc/s.

CONSUMPTION

48,5 Watt at 220 V 50 c/s.

SUPPLY PART

The set is suitable for connection to A.C. mains of 110, 125, 145, 200, 220 and 245 Volt. The voltage adaptor is provided at the back of the set.

TRIMMING THE RECEIVER

GENERAL

For the trimming the set has to be decased. In all waveranges the oscillator frequency is higher

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than the signal frequency.

A. I.F. BANDFILTERS

- Set tone switch to normal (middle position) and volume control to maximum.
- Waverange switch to the M.W. position.
- Variable condenser to minimum capacity.
- Earth the chassis.
- Connect outputmeter via trimming transformer to the extension loudspeaker sockets.
- Apply a modulated signal of 452 kc/s via a 33000 pF condenser to g1 of valve B1. Unscrew all iron cores as far as possible.
- Trim successively to maximum output the 4th, 3rd, 1st and 2nd I.F. circuit.
 - 1st circuit : coil D above S19/S20
 - 2nd circuit : coil D underneath S21/S22
 - 3rd circuit : coil E above S23/S24
 - 4th circuit : coil E underneath S25/S26After the last I.F. circuit (2nd circuit) has been trimmed no more adjustments may be made to the others.
- Seal the trimmers.

REMARK

The iron cores of the I.F. bandfilters are sealed with 'vaselink compound' (for code number see list of parts and tools). This compound does not require heating for making adjustments for it can be removed in the cold state with a screw-driver. HEATING OF THE CORE DAMAGES THE COREHOLDER AND MAKES ADJUSTMENTS IMPOSSIBLE.

I.F. BLOCKING CIRCUIT

- Volume control to maximum. Tone switch to normal (middle position).
- Wave range switch in M.W. position.
- Variable condenser to maximum capacity.
- Connect outputmeter to extension loudspeaker sockets.
- Apply a modulated signal of 452 kc/s to the serial socket.
- Trim CG to minimum output.
- Seal CG.

B. H.F. AND OSCILLATOR CIRCUITS

Tone switch to normal (middle position)
Earth the chassis.

93 971 45.1.05

Waverange to be trimmed

		S.W.1	S.W.2	M.W.
1	Waverange switch in position			
2	Apply 15° jig to variable condenser. Turn variable condenser against the jig (minimum capacity). Volume control to maximum. Connect outputmeter via trimming transformer to extension loud-speaker sockets.	15°	15°	15°
3	Apply to the aerial socket via a normal dummy aerial a modulated signal of	25,6 Mc/s	9 Mc/s	1700 kc/s
4	Trim to maximum output successively the trimmers (fig. 2) (First maximum from minimum capacity)	C16, C8	C17, C9	C19, C10
5	Remove 15° jig. Volume control to minimum. Short circuit C5. Connect anode of E1 (heptode part) via a capacitor of 25 pF to the aerial socket of an auxiliary set or the input socket of an aperiodic amplifier. Outputmeter behind auxiliary set or aperiodic amplifier. Tune auxiliary set to	9,6 Mc/s	-	550 kc/s
6	Apply to the aerial socket of the set to be trimmed a modulated signal of. Tune the set to be trimmed to maximum output. Do not turn variable condenser any more	9,6 Mc/s	-	550 kc/s
7	Remove auxiliary set or aperiodic amplifier. Connect outputmeter to set to be trimmed. Remove short circuit of C5 and set volume control to maximum. Trim to maximum output	C15	-	C20
8	Repeat the points	1 till 4	-	1 till 4
9	Seal the following trimmers	C8 C15 C16	C9 C17	C10 C19 C20

REPAIRS AND EXCHANGING PARTS

DECASING

1. Remove the ornamental strips by inserting a small screw-driver between dial and the strip.
2. Remove the dial (taking out two screws).
3. Remove the pointer. This is pressed on to the intermediate drum.
4. Take off the knobs. The switch lever need not be taken off.
5. Remove two screws at the side of the chassis and one screw above the intermediate drum.
6. Desolder loudspeaker connections.
7. Take the chassis out of the cabinet.

RENEWING DRIVING CORD AND DRIVING CABLE

Fig. 3 shows how the driving cord and driving cable are laid. The lengths of cable and outer-cables are indicated in the illustrations. The length of the driving cord is 395 mm. Slightly longer length of cord is required for making the loops. The driving cable is first laid round the drum of variable condenser. The outer-cables are then put in place and the cable laid over the

guide pulleys and intermediate drum. Take the spring from the intermediate drum and hook it onto the cable loops, then putting it back again. After the cable has been put on lay on the driving cord.

REPLACING THE PILOT LAMPHOLDER

1. Decase the chassis and remove the driving cable and -cord from the intermediate drum.
2. Take off the chassis the bracket on which the intermediate drum is mounted.
3. Remove screw A from the back of the bracket (see fig. 4), after which the intermediate drum with pilot lampholder can be taken off the bracket.
4. Slide intermediate drum from pilot lampholder (see fig. 5).
5. Solder the new lampholder to the connections and give it a little grease.
6. Slide the intermediate drum onto the lampholder and secure it on the bracket. See that the sporn B fits in the hole of the bracket. Put the bracket back in place and re-affix the driving cable and -cord.

CONDENSATEURS-CAPACITORS-CONDENSADORES

No.	Waarde Valeur Valor	Codenummer No. de code No. de code
C1	50 uF)	48 317 9/50*50
C2	50 uF)	
C3	100 uF	49 020 39 0
C4	12-492 pF)	49 001 23 1
C5	12-492 pF)	
C6	30 pF	28 212 36 4
C8	32 pF	23 212 06 2
C9	32 pF	23 212 06 2
C10	7 pF	49 005 26 1
C11	220 pF	48 408 20/220E
C12	47000 pF	48 750 20/47K
C13	82 pF	48 410 10/82E
C14	150 pF	48 410 20/150E
C15	125 pF	28 212 07 2
C16	30 pF	28 212 36 4
C17	30 pF	28 212 36 4
C18	2500 pF	48 429 02/25K5
C19	30 pF	28 212 36 4
C20	350-575 pF	49 005 46 1
C21	115 pF)	Spoeien
C22	115 pF)	Bobines
		Coils
C23	47000 pF	48 751 20/47K
C24	82 pF	48 406 10/82E
C25	115 pF)	Spoeien
C26	115 pF)	Bobines
		Coils
C27	47 pF	48 406 10/47E
C28	27000 pF	48 750 10/27K
C29	19000 pF	48 750 20/19K
C30	0,1 uF	48 751 20/100K
C31	10000 pF	48 751 20/10K
C32	10 pF	48 406 99/10E
C33	4700 pF	48 758 20/47K
C38	47000 pF	48 750 20/47K
C39	470 pF	48 408 20/470E
C40	10000 pF	48 750 10/10K
C41	22000 pF	48 756 20/22K
C43	3300 pF	48 751 20/33K3

BOBINES-COILS-BOBINAS

No.	Weerstand Resistance Resistencia	Codenummer No. de code No. de code
S1	45 Ohm)	
S2	240 Ohm)	A3 141 32.0
S3	1 Ohm)	
S4	1 Ohm)	
S5	40 Ohm)	A3 110 60.0
S6	2 Ohm)	
S7	1 Ohm)	A3 122 00.0
S8	5 Ohm)	
S9	1,5 Ohm)	
S10	10 Ohm)	
S11	5 Ohm)	A3 122 34.0
S12	1 Ohm)	
S13	1 Ohm)	
S14	1,5 Ohm)	
S15	1 Ohm)	
S16	1 Ohm)	A3 122 02.0
S17	3 Ohm)	
S18	6,5 Ohm)	
S19	3 Ohm)	
S20	4,5 Ohm)	
S21	3 Ohm)	A3 121 94.1
S22	4,5 Ohm)	
S23	3 Ohm)	
S24	4,5 Ohm)	
S25	4,5 Ohm)	A3 121 94.1
S26	3 Ohm)	
S27	700 Ohm)	
S28	20 Ohm)	A3 168 63.0
S29	1 Ohm)	

RESISTANCES-RESISTORS-RESISTENCIAS

No.	Waarde Valeur Valor	Codenummer No. de code No. de code	No.	Waarde Valeur Valor	Codenummer No. de code No. de code
R1	1200 Ohm	48 466 10/1K2	R15	1,5 MOhm	48 426 10/1M5
R2	0,82 MOhm	48 425 10/820K	R16	0,1 MOhm	48 426 10/100K
R3	47000 Ohm	48 425 10/47K	R17	0,56 MOhm	48 425 10/560K
R4	22000 Ohm	48 427 10/22K	R18	0,1 MOhm	48 425 10/100K
R5	15000 Ohm	48 427 10/47K 39R	R19	33 Ohm	48 426 10/33E
R6	12000 Ohm	48 425 10/12K	R20	68 Ohm	48 426 10/68E
R7	47000 Ohm	48 425 10/47K	R21	120 Ohm	48 425 10/120E
R8	0,28 MOhm)		R29	1,5 MOhm	48 426 10/1M5
R9	0,07 MOhm)	49 501 02.0	R30	22000 Ohm	48 425 10/22K
R10	1,5 MOhm	48 426 10/1M5	R31	10 Ohm	48 425 10/10E
R13	0,82 MOhm	48 425 10/820K	R32	1000 Ohm	48 425 10/1K
R14	1,5 MOhm	48 426 10/1M5			

In latere series is als schaalverlichtingslampje de 8073D-00 toegepast.

Dans les series ultérieures on a employé la lampe d'éclairage 8073D-00

En series ultérieures se ha usado la lamparita de iluminacion de escala tipo 8073D-00.

LIST OF SPARE PARTS AND TOOLS

WHEN ORDERING ALWAYS STATE

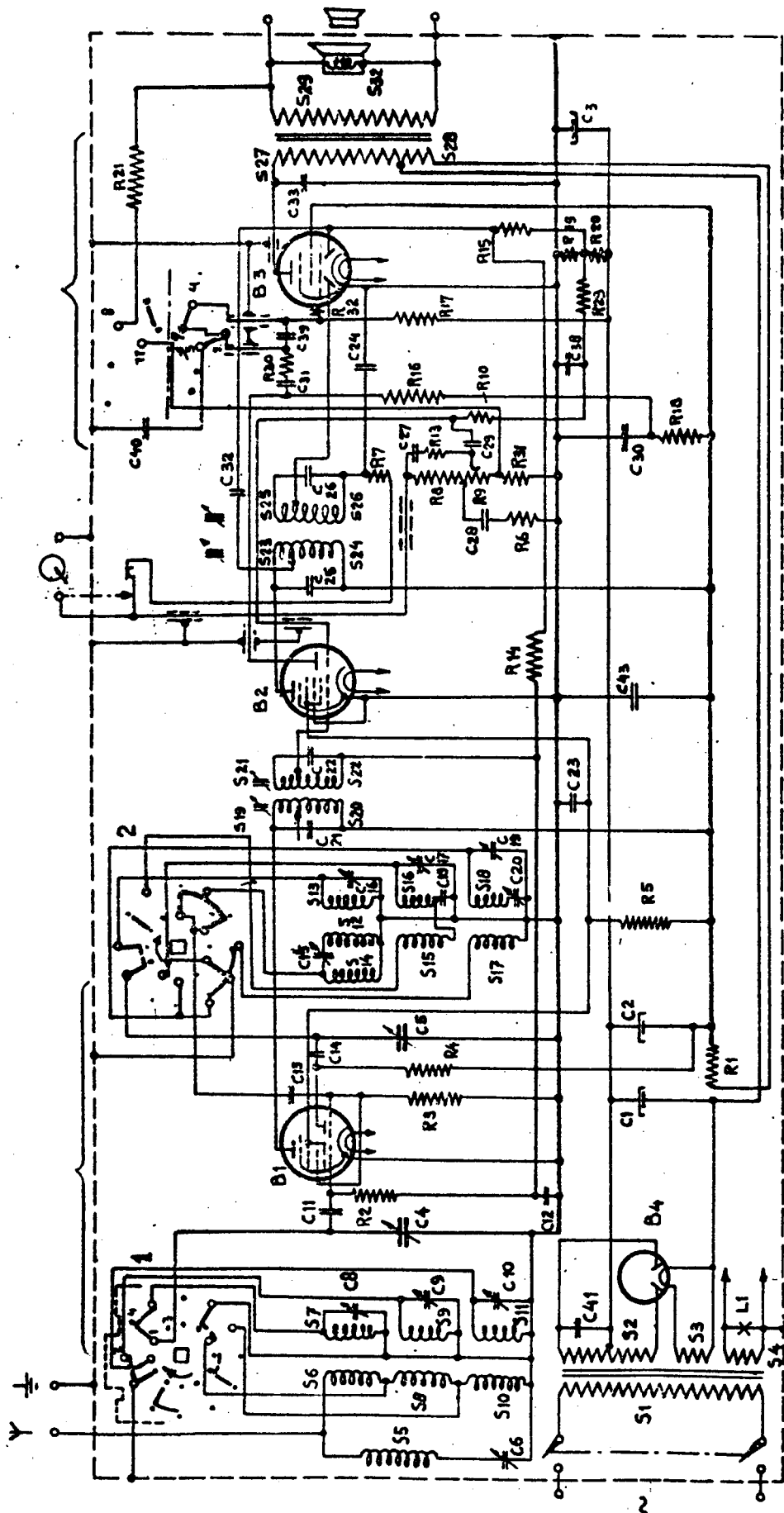
1. Codenumber, A. 4
2. Description
3. Type number of set

Pos.	Fig.	Description	Code number
1	5	Cabinet	23 641 79.0
		Back plate	A3 250 33.0
2	5	Bracket for fixing back plate	A3 449 09.1
		Knob (030) for volume controls and tuning	23 609 10.0
		Knob (030) for waverange switch	23 609 07.0
3	5	Lever (030) for tone switch	A3 209 26.1
		Spring for knobs	28 753 01.2
		Dial	A9 563 51.0
		Pointer	23 693 10.2
		Ornamental strip	A3 320 97.0
3	5	Valve holder	28 226 10.0
4	5	Bracket for fixing coil box	A1 515 69.0
4	5	Plug socket plate for serial/earth	A3 378 51.0
5	5	Plug socket plate for pick-up	A3 136 19.0
		Plug pin plate for tension changeover	A3 378 03.0
7	5	Cap for voltage changeover (111)	A1 339 01.1
		Spindle for tuning	A3 332 73.9
		Spindle for volume control	A3 428 42.1
		Rubber grommet 11x1	25 655 56.0
		Tension spring for driving cable	A3 646 09.3
		Tension spring for driving cord	A3 646 20.0
		Switch segment No. 1	A3 199 48.0
		Switch segment No. 2	A3 199 20.0
		Spindle for waverange switch	A3 196 23.0
		Stopplate for waverange switch	A1 638 78.0
		Spring for stop mechanism waverange switch	A3 643 42.0
		Plate for fixing springs	A3 514 13.3
9	5	Switch segment for tone switch	A3 181 12.0
1	4	Pilotlamp holder	A3 359 40.0
2	4	Driving drum (111)	23 644 92.7
1	3	Guide pulley	A3 575 00.0
		Driving cable	33.403 37.0
		Driving cord	06 606 29.0
		Sheath for driving cable	09 010 52.6
		Rubbertube for limiting movements of variable condenser	A3 437 10.1
		Rubberdisc for limiting movements of variable condenser	A3 574 73.0
		Spring for suspension of variable condenser	A3 652 22.2
		L. GUSTAFSEN	25 373 41.0
		Clamping ring	28 432 69.0
		Flaperring	49 981 11.0
		Cone with coil	
		TOOLS	
		Service oscillator	23 2382
		Universal measure apparatus	33- 4256 or 33- 4257
		15° jig	09 994 03.0
		Trimming transformer	09 992 22.0
		Vaseline compound	X 007 14.0

Sam. 10.10.1947

BX388A

S: 1, 5, 6, 7, 2, 3, 4, 9, 10, 11, 14, 15, 17, 12, 13, 14, 16, 19, 20, 21, 22	23, 24, 25, 26	27, 28, 29, 32
C: 6	8, 9, 10, 11, 12, 13, 14, 15, 2, 15, 20, 18, 17, 13, 21, 23, 22, 4, 3	33, 34
R: 2	3, 4, 1, 5	14, 6, 7, 8, 9, 13, 31, 10, 18, 16, 30, 17, 29, 15, 19, 20, 32, 21



R11389

fig. 6.