

PHILIPS SERVICE

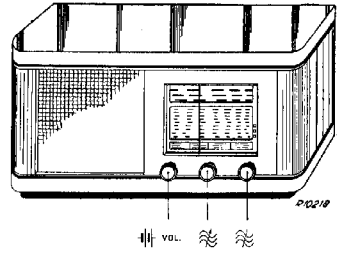
611 B

16,7-51 m
186-585 m
708-2000 m

B-10 9660, Z = 5 Ω
9686, Z = 5 Ω

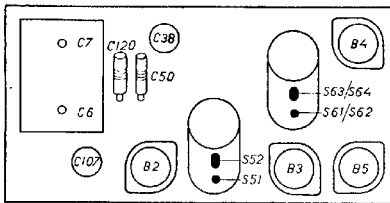
2 V, 120 V
0,175 A, 9,9 mA

473 kc/s



708-2000 m I		186-585 m III		708-2000 m III	
VOL max.		VOL max.		VOL min.	
C6, C7 min.		C6, C7 + 15°		C7	
473 kc/s-33000 pF-g4B2		1600 kc/s-Υ		25 pF-aB2	
S51-82 pF		C38, C107, C38, C107 max.		160 kc/s-Υ	
S52 max.		25 pF aB2		C6, C7 1875 m	
S51		C7		C7	
S52-82 pF		550 kc/s-Υ			
S51 max.		546 kc/s (B-07)		VOL max.	
S52		C6, C7 max.		C50 max.	
S61/S62-82 pF		C7			
S63/S64 max.		C120 max.			
S61/S62					
S63/S64-82 pF					
S61/S62 max.					
S63, S64					
		186 585 m		16,7-51 m III	
		VOL max.		VOL max.	
		1154 kc/s-Υ		17,8 Mc/s-Υ	
		C6, C7 260 m		C6, C7 17,8 Mc/s	
		260 m		(1e max.)	
				C34 max.	

15° = 09 992 44.0



R10445A

R11	0,275 MΩ	49 500 89.0	C1	50 μF	49 020 01.0
R11a	0,075 MΩ		C6	11-490 pF	49 001 05.0
R31	0,27 MΩ	48 425 10/270K	C7	11-490 pF	48 406 10/68E
R32	4 Ω	28 303 64.1	C13	68 pF	48 406 10/56E
R33	0,82 MΩ	48 425 10/820K	C19	56 pF	48 406 10/12E
R34	0,33 MΩ	48 425 10/330K	C20	12 pF	48 406 99/8E2
R35	22000 Ω	48 425 10/22K	C34	8.2 pF	49 005 05.2
R36	1.5 MΩ	48 426 10/1M5	C38	2.5-20 pF	48 406 05/30E
R37	0.1 MΩ	48 425 10/100K	C40	30 pF	48 406 10/330E
R38	50000 Ω	48 425 10/56K	C49	330 pF	48 406 10/82E
R40	1.5 MΩ	48 426 10/1M5	C50	200 pF	28 212 08.2
R42	390 Ω	48 425 10/390E	C51	100 pF	—
R43	0.47 MΩ	48 425 10/470K	C52	106 pF	—
R44	1 MΩ	48 426 10/1M	C61	106 pF	—
R45	15000 Ω	48 425 10/15K	C62	106 pF	—
R46	180 Ω	48 425 10/180E	C82	68 pF	48 406 20/68E
R50	0.82 MΩ	48 425 10/820K	C83	10000 pF	48 751 20/10K
R60	82000 Ω	48 425 10/82K	C84	10000 pF	48 750 20/10K
R81	47000 Ω	48 425 10/47K	C85	1000 pF	48 752 20/1K
			C86	47 pF	48 406 10/47E
			C100	100 pF	48 406 10/100E
			C101	150 pF	48 406 10/150E
			C102	470 pF	48 406 10/470E
			C103	0.47 pF	48 751 10/470K
			C105	47000 pF	48 750 20/47K
			C106	47000 pF	48 751 20/47K
			C107	2.5-20 pF	49 005 05.2
			C108	0.1 pF	48 751 20/100K
			C109	0.1 pF	48 750 20/100K
			C110	82000 pF	48 750 10/82K
			C120	200 pF	28 212 08.2
S13, S14		A1 001 11.0			
S17, S18, S19, S20		A1 001 15.0			
S33, S34		A1 001 12.0			
S37, S38		A1 001 14.0			
S39, S40		A1 001 15.0			
S51, S52, C51, C52		A1 035 67.3			
S61, S62, S63, S64		A1 036 74.0			
C61, C62		A1 081 54.1			
S81, S82					

	B2	B3	B4	B5	
	DK 21	DF 21	DAC 21	DL 21	
V _a	115	115	32	114	V
V _{g2}	—	60	—	115	V
V _{g5}	60	—	—	—	V
I _a	0,56	0,8	0,1	4,8	mA
I _{g2}	2,5	0,17	—	0,83	mA
I _{g5}	0,11	—	—	—	mA

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611 B

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Radio Techn. Bureau
VOORLEZING
TILBURGPHILIPSSERVICE MANUAL

for receiver type

611 B

for feeding by batteries

GENERAL REMARKSWAVE RANGES

Short waves : 16,7 - 51 m (17,96 - 5,38 Mc/s)
 Medium waves : 186 - 585 m (1613 - 513 kc/s)
 Long waves : 708 - 2000 m (424 - 150 kc/s)

DIMENSIONS

Width : 51 cm
 Height : 27 cm
 Depth : 20 cm

WEIGHT: 7,4 kg.KNOBBS

From the left to the right: On-off switch - volume control
 Tuning
 Wave range switch

BALANCING THE RECEIVERA. THE IF-CIRCUITS

1. Earth the set and switch it to long waves.
2. Turn the variable condenser to minimum and the volume control to maximum.
3. Connect the output indicator via the trialing transformer to the additional speaker sockets.
4. Apply a modulated signal of 473 kc to the control grid of B2 (G4) via a condenser of 3200 pF.
5. Connect across S51 a condenser of 80 pF (fig.5).
6. Tria S52 to maximum output.
7. Connect the condenser of 80 pF across S52 (fig.4).
8. Tria S51 to maximum output.
9. Fit the condenser of 80 pF parallel to S61, S62 (fig.5).
10. Tria S63, S64 to maximum output.
11. Fit the condenser of 80 pF parallel to S63, S64 (fig.5).
12. Tria S61, S62 to maximum output.
13. Seal the cores of the coils.

B. THE HF- AND GENERATOR CIRCUITS

I. Medium waves

1. Earth the receiver and switch it to medium waves. Connect the output indicator.
2. Turn the volume control to its maximum value.
3. Fit the 15° gauge.
4. Turn the variable condenser firmly against the gauge (minimum capacity).
5. Apply a modulated signal of 1600 kc/s (187,5 m) to the aerial socket via the standard artificial aerial.
6. Trim to maximum output successively C33-C107-C38-C107.
7. Seal the trimmers with wax.

II. Long waves

1. Earth the receiver and switch it to long waves; connect the output-indicator.
2. Turn the volume control to maximum.
3. Short circuit C7 (fig.4).
4. Connect an auxiliary receiver to the anode of B2 via a condenser of 20 pF.
5. Apply to the aerial-socket, via the standard artificial aerial, a modulated signal of 160 kc/s (1875 m).
6. Tune the auxiliary receiver to 160 kc/s (1875 m).
7. Tune the receiver to be trimmed to maximum output.
8. Remove the auxiliary receiver and the short circuit of C7 and turn the volume control to maximum.
Do not touch the variable condenser.
9. Connect the output indicator to the receiver.
10. Trim C50 to maximum output.
11. Seal C50 with wax.

III. Short waves

If reception on short wave is not sufficient, C34-8 pF must be replaced by a trimmer of 12 pF. In the last series this has already been done in the factory. Balancing short wave range is as follows:

1. Earth the receiver and switch it to medium waves.
2. Turn the volume control to maximum.
3. Connect the output indicator via the trimming transformer to the additional-speaker sockets.
4. Apply a modulated signal of 17, MHz to the aerial socket via the standard artificial aerial.
5. Tune the receiver to maximum output (first maximum from minimum capacity of variable).
6. Do not turn the variable condenser any more and trim C34 to maximum output.
7. Seal the trimmers with wax.

DIAL ADJUSTMENT

1. Switch the receiver to medium waves.
2. Apply a modulated signal of 260 m. via the standard artificial aerial to the aerial-socket.
3. Tune the receiver accurately to this signal.
4. Set the pointer at 260 m. and secure it.

DRIVING STRING

The length of the driving string of the pointer is 1140 mm., measured between the fixing points. Together with the loops a piece of 1170 mm. is required.

CURRENTS AND TENSIONS

	B2	B3	B4	B5	
Va	115	115	32	114	V
Vg2	-	60	-	115	V
Vg5	60	-	-	-	V
Ia	0,56	0,8	0,1	4,8	mA
Ig2	2,5	0,17	-	0,83	mA
Ig5	0,11	-	-	-	mA

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Vf : 2 V
 If : 0,175 A
 Va total +B: 120 V
 Ia total : 9,9 mA

The voltages are measured with volt meters having a resistance of 2000 ohms per volt.

VALVES

B2	B3	B4	B5
DK 21	DF 21	DAC 21	DL 21

RESISTANCES

Nr.	Value	Code number	Price
R11	0,275 M. Ohm)	49 500 09.0	2)
R11a	0,075 M. Ohm)		
R30	0,82 M. Ohm	49 375 59.0	2)
R31	0,27 M. Ohm	49 375 53.0	
R32	4 Ohm	28 803 64.0	
R33	0,82 M. Ohm	49 375 59.0	
R34	0,33 M. Ohm	49 375 54.0	
R35	22000 Ohm	49 375 40.0	
R36	1,5 M. Ohm	49 376 62.0	
R37	0,1 M. Ohm	49 375 48.0	
R38	56000 Ohm	49 375 45.0	
R40	1,5 M. Ohm	49 376 62.0	
R42	390 Ohm	49 375 29.0	
R43	0,47 M. Ohm	49 375 56.0	
R44	1 M. Ohm	49 376 60.0	
R45	15000 Ohm	49 375 38.0	
R46	100 Ohm	49 375 12.0	
R50	0,82 M. Ohm	49 375 59.0	
R60	82000 Ohm	49 375 47.0	
R81	47000 M Ohm	49 375 47.0	

2) Receivers with serial number 1500 - 3100

LIST OF SPARE PARTS AND TOOLS

When ordering always mention:

1. Description
2. Code number
3. Type of the receiver

Fig.	Pos.	Description	Code number	Price
1	1	Cabinet	A1 247	52.0
1	3	Speaker cloth	06 601	71.0
1	4	Station name dial (South Europe)	A1 348	45.0
1	4	" " " (North Europe)	A1 395	70.0
1	5	Pointer	A1 468	02.0
1	6	Pointer of the wave band indicator	A1 462	31.0
		Rear panel	A1 716	80.0
1	7	Knob (colour 038)	23 610	90.0
		Clip for fixing the variable condenser	A1 478	05.2
		Spring for driving cord	28 750	51.0
		Valve holder	48 231	22.3
		Clip for fixing coils	A1 385	30.1
		Tuning spindle	28 003	71.0
		Spindle for volume control	A1 435	27.0
2	8	Switch unit	49 552	39.1
		Plug. (red)	49 259	04.0
		" (black)	28 898	16.0
		Indication plate	25 600	96.0
		Cable lug	08 121	12.0
		Anode-cable	33 981	16.0
		Accumulator-cable	33 981	16.0
		Flat spring against the spindle of the wave band switch	25 751	45.1
		Roll for driving cord	23 695	04.0
		Spindle for this roll	A1 552	04.0
		<u>HOUSE BATTERY TYPE 2660</u>		
		Clamping ring	25 870	75.0
		Paper ring	23 445	39.0
		Cone with coil	28 220	51.1
		<u>TOOLS</u>		
		Trimming "key" 6 mm	23 605	66.0
		150 gauge	09 292	44.0

For parts not mentioned in the above list see "General spare part list".

CONDENSERS

671B

Nr.	Value	Code number	price
C1	50 uF	49 020 01.0	
C6	11-490 pF)		
C7	11-490 pF)	49 001 05.0	
C13	68 pF	49 055 26.0	
C19	56 pF	49 055 25.0	
C20	12 pF	49 055 17.0	
C34	8,2 pF	49 055 15.0	
C34	12 pF	28 212 05.0 3)	
C38	20 pF	49 035 05.0	
C40	30 pF	49 057 11.0	
C49	330 pF	49 055 34.0	
C50	200 pF	28 212 08.1	
C51)			
C52)	see "Coils"		
C61)			
C62)			
C82	68 pF	49 055 48.0	
C83	10000 pF	49 128 57.0	
C84	10000 pF	49 127 57.0	
C85	1000 pF	49 129 51.0	
C86	47 pF	49 055 24.0	1)
C100	100 pF	49 055 23.0	
C101	150 pF	49 055 30.0	
C102	470 pF	49 055 36.0	
C103	0,47 uF	49 128 34.0	
C105	47000 pF	49 127 61.0	
C106	47000 pF	49 128 61.0	
C107	20 pF	49 005 09.0	
C108	0,1 uF	49 128 63.0	
C109	0,1 uF	49 127 63.0	
C110	82000 pF	49 127 25.0	

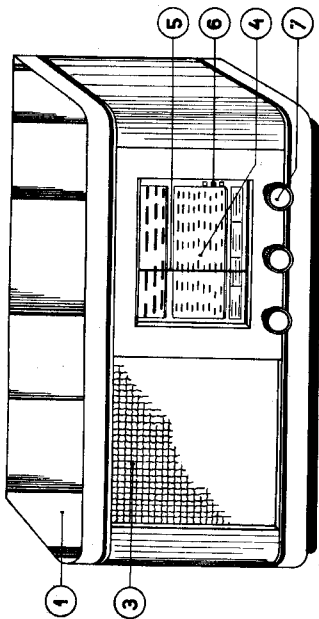
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1) receivers with serial number 100 - 1500.

3) see "Balancing the receiver short waves".

COLLS

Nr.	Value	Code number	Price
S13)			
S14)	1 Ohm	Al 001	11.0
S17	23 Ohm)		
S18	5 Ohm)		
S19	150 Ohm)	Al 001	13.0
S20	150 Ohm)		
S33	1,5 Ohm)	Al 001	12.0
S34	.1 Ohm)		
S37	2,3 Ohm)	Al 001	14.0
S38	.7 Ohm)		
S39	2,7 Ohm)	Al 001	15.0
S40	.16 Ohm)		
S51	.7 Ohm)		
C51	100 pF)	Al 035	67.1
S52	.7 Ohm)		
C51	106 pF)		
S61	2,8 Ohm)		
C61	106 pF)		
S62	4,2 Ohm)	Al 036	74.0
C62	109 pF)		
S63	2,8 Ohm)		
S64	4,2 Ohm)		
S81	800 Ohm)	Al 001	54.1
S82	1 Ohm)		

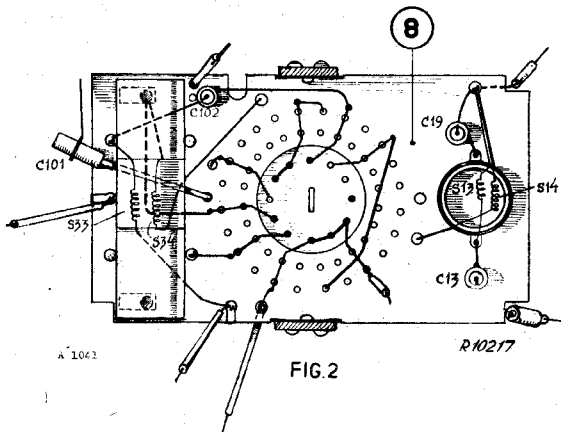
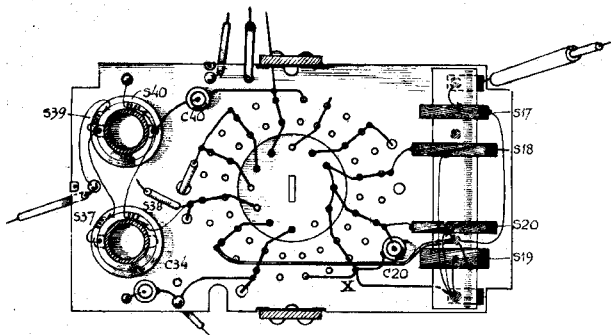


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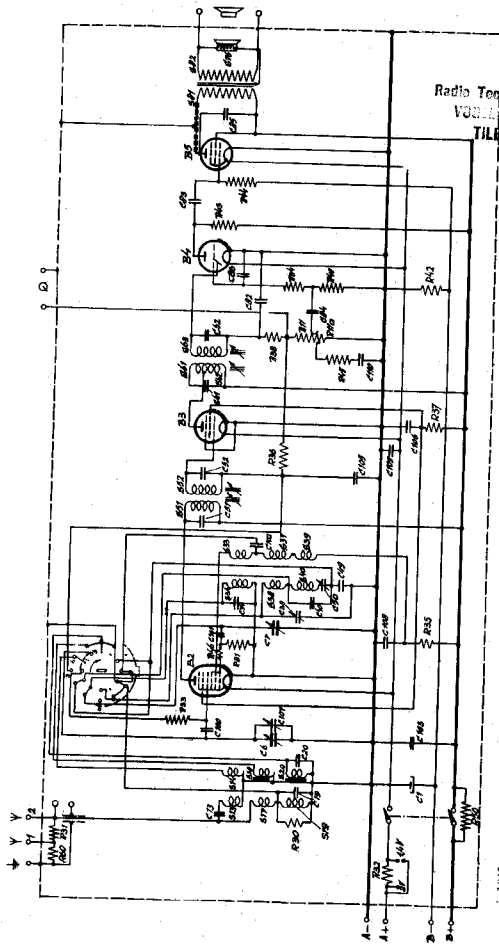
D. 802/19

FIG. 1

A. 1040



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	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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FIG. 3

4 1042

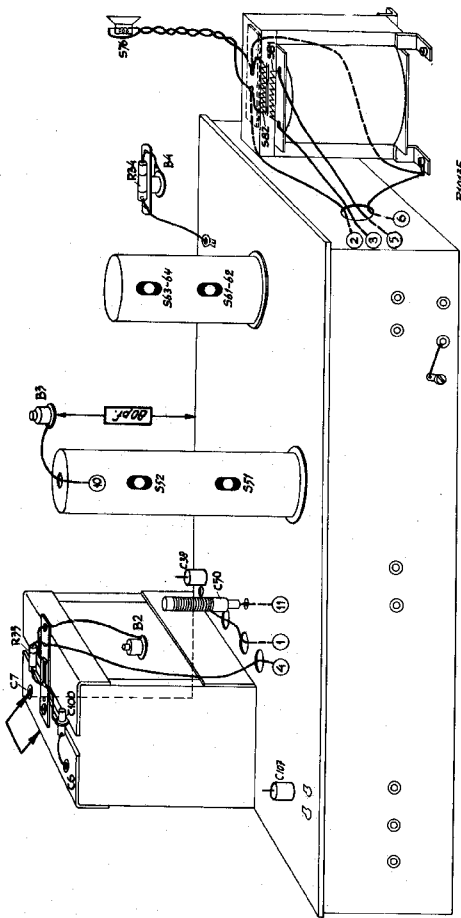


FIG. 4

R10135

A 1043

S	63	64	38	62.61	31	52			
C	87	83	32	44	42.40	50	47.27	36	1.106
R	43	87	84	82	50	47.27	36	1.106	52
									109
									108
									46
									31
									31
									49
									38
									107
									7.6
									60

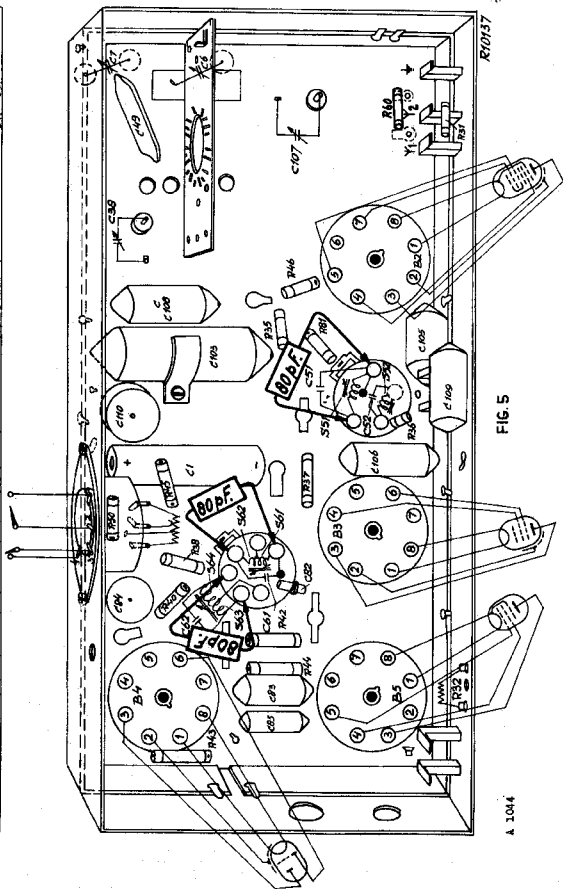


FIG. 5

A 1044

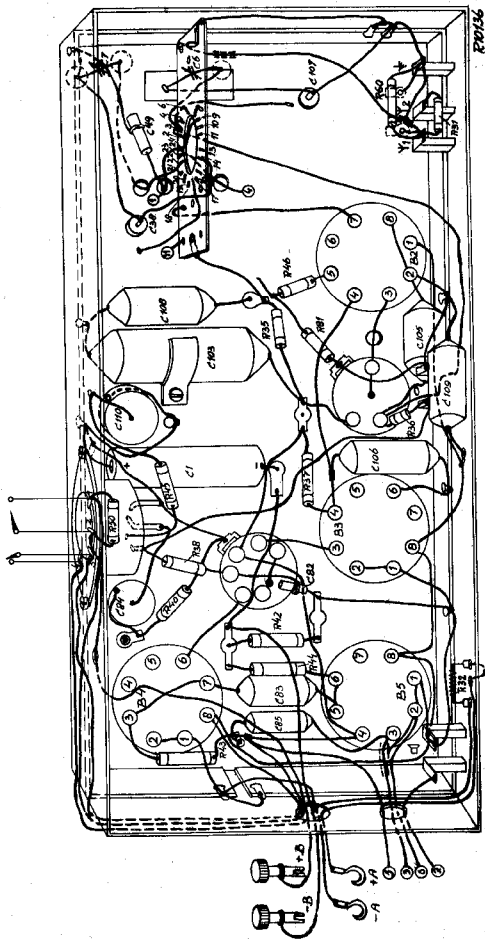


FIG. 6

N.V. PHILIPS EINDHOVEN HOLLAND		MEETTABEL TABLEAU DE MESURAGE MESSTABELLE MEASURING TABLE		611 B		NR.: R 10216	
SERVICE						DAT:	

OC7

OC6

$\frac{1}{2}$ $\frac{1}{1}$ $\frac{1}{2}$ P U L S
 O O O O O O O

R																		
9	24	25	27	29	39	34	43	46	47	49	55	56	39/U	P/U				
	410	450	460	70	95	410	230	260	260	95	140	140	100	280				
10	27	Y1																
	250	120																
11		Y2		53														
	KG	MG	LG															
	60	60	240	410														
12	21/29	51/58	21	22	23	31	32	33	36	38	41	42	48	51	52	54	58	L/S
	150	150	5	215	5	5	155	5	150	5	5	150	5	5	5	150	40	
12	C6			C7														
	KG	MG	LG	KG	MG	LG												
	10	160	400	15	165	400												

C										
9	-A/-B									
	480									
10	-A/+B									
	270									
11	39	55								
	145	325								
12	43/55	29	46							
	250	90	215							

Voedingssnoeren onderling doorverbinden. Volumeregelaar op maximum.	Connect battery cables together. Volume control on maximum.
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A 1046

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