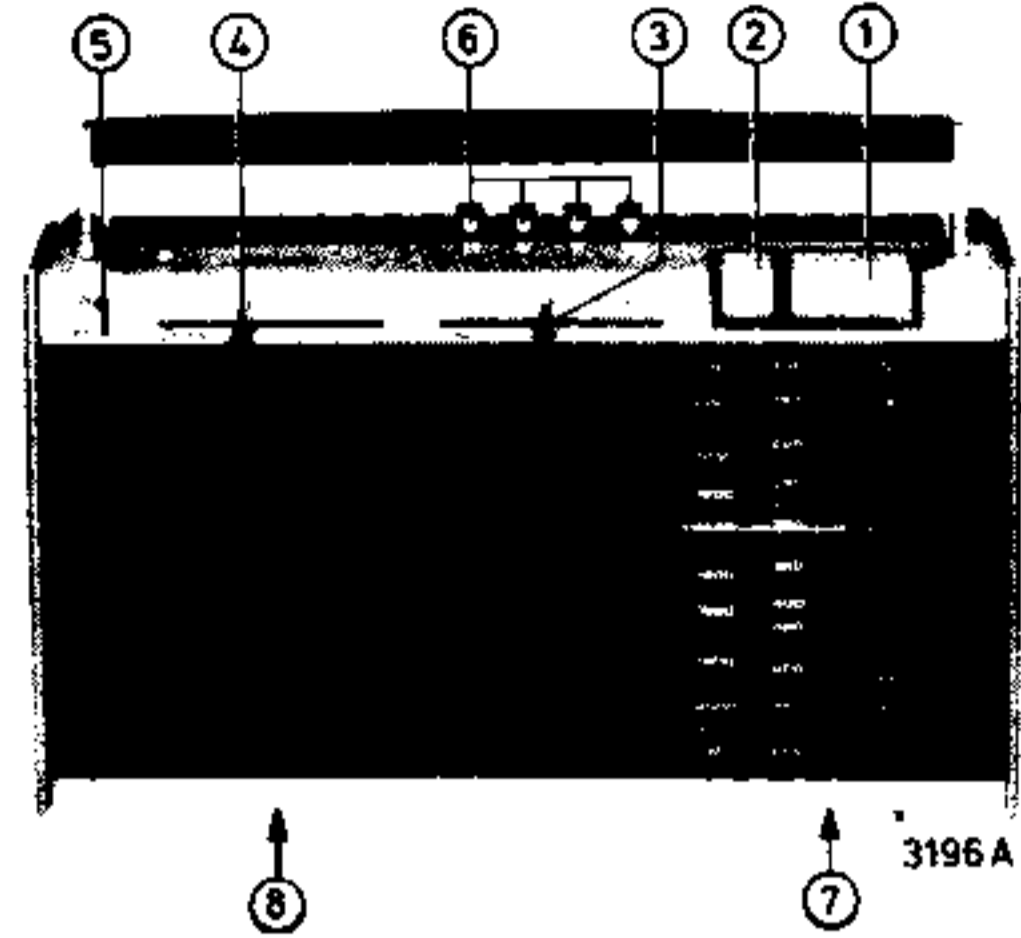


RADIO 90RL414

00/15/22

# Service manual



Dimensions: 300 x 180 x 80 mm

**PHILIPS**



Met dank aan [www.radiomuseum-hengelo.nl](http://www.radiomuseum-hengelo.nl)

<p>① Tuning Afstemming Syntonisation Abstimmung Sintonia</p> <p>④ Volume control Volumeregeling Commande de volume Lautstärkereglung Controllo di volume</p> <p>⑦ Switch PU/Radio Schakelaar PU/Radio Sélecteur PU/radio Schalter TA/Radio Commutatore giradischi/radio</p>	<p>VC</p> <p>R48</p> <p>SK-E</p>	<p>② Fine tuning Fijnafstemming Réglage fin Feinabstimmung Sintonia fine</p> <p>⑤ On-off switch Aan-uit schakelaar Commutateur marche/arrêt Ein/Aus-Schalter Commutatore marcia/fermo</p>	<p>C57</p> <p>SK-F</p>	<p>③ Tone control Toonregeling Commande de tonalité Klangreglung Controllo di tono</p> <p>⑥ Wave range switch Golfbereikschakelaar Sélecteur de gammes d'onde Wellenbereichschalter Commutatore di scale d'onde</p> <p>⑧ Mains switch Netspanningsschakelaar Commutateur secteur Netzschalter Commutatore di rete</p>	<p>R46</p> <p>SKA-D</p> <p>SK-G</p>
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<p>ⓖ Supply voltage External supply Consumption FM (without signal) AM Output power Loudspeaker IF-AM /00 /15 /22 IF-FM</p>	<p>9 V (6x1,5 V) 220 V/117 V 27 mA 22 mA 1 W 8 Ω 452 kHz 470 kHz 460 kHz 10,7 MHz</p>	<p>ⓗ Voedingsspanning Externe voeding Verbruik FM (zonder signaal) AM Uitgangsvermogen Luidspreker MF-AM /00 /15 /22 MF-FM</p>	<p>Ⓣ Tension d'alimentation Alimentation externe Consommation FM (sans signal) AM Puissance de sortie Haut-parleur FI-AM /00 /15 /22 FI-FM</p>	<p>ⓓ Speisespannung Externe Speisung Verbrauch UKW (ohne Signal) AM Ausgangsleistung Lautsprecher ZF-AM /00 /15 /22 ZF-UKW</p>	<p>9 V (6x1,5 V) 220 V/117 V 27 mA 22 mA 1 W 8 Ω 452 kHz 470 kHz 460 kHz 10,7 MHz</p>	<p>Ⓡ Tensione d'alimentazione Alimentazione esterna Assorbimento FM (senza segnale) AM Potenza uscita Altoparlante FI-AM /00 /15 /22 FI-FM</p>
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**Wave ranges - Golfbereiken - Gammes d'onde - Wellenbereiche - Gamme d'onda**

LW - LG - GO - LW - OL	: 150 - 260 kHz (2000 - 1150 m)
MW - MG - PO - MW - OM	: 520 - 1605 kHz ( 577 - 187 m)
SW - KG - OC - KW - OC	: 5,95 - 18,3 MHz ( 50 - 16 m)
FM - UKW	: 87,5 - 104 MHz

Index: CS37379-CS37384

Subject to modification

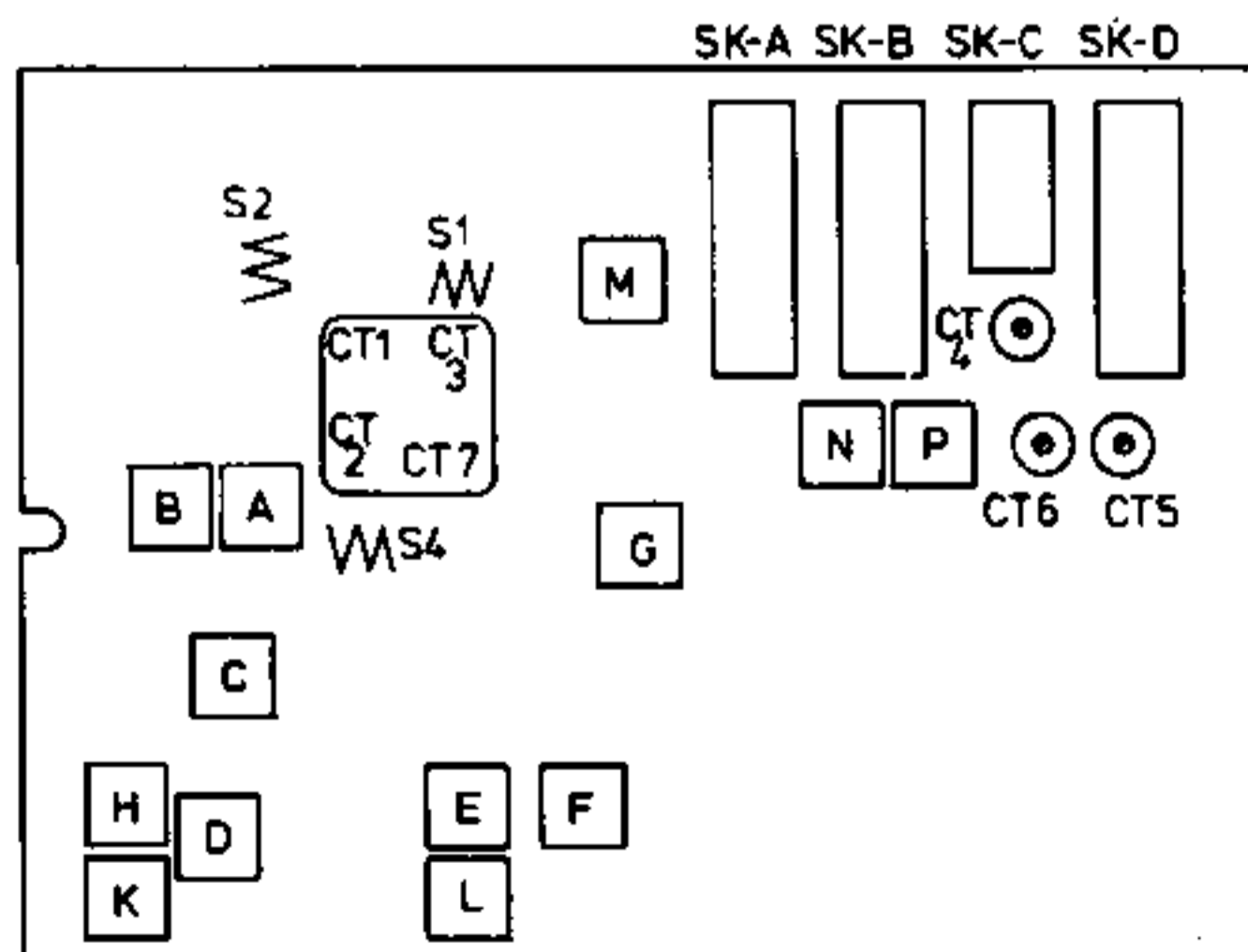
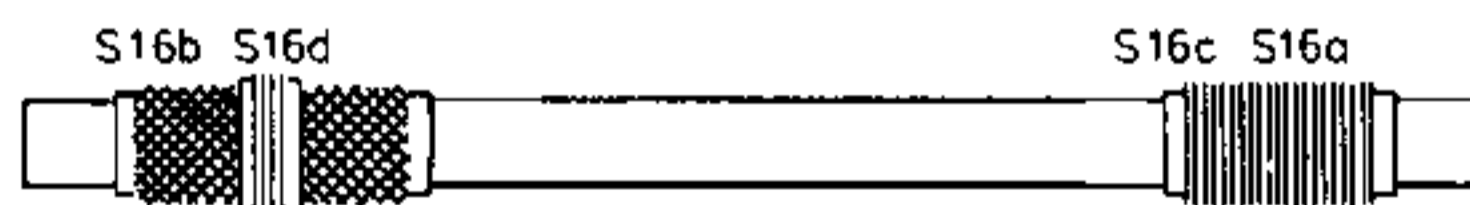
4822 725 11113

Printed in the Netherlands



Wave range SK....	Signal to		Varicap	Detune	Adjust	Indication	
MW (520-1605 kHz)	<b>1</b> /33 nF	<b>A</b> <b>B</b> <b>C</b>	Min.	<b>L</b> <b>K</b> <b>H</b> <b>G</b>	<b>L</b> <b>K</b> <b>H</b> <b>G</b>	<b>1</b> /100 kΩ Max.	
MW (525-1605 kHz)	512 kHz 1635 kHz 600 kHz 1400 kHz	<b>C</b>	Max. Min. Tune in		<b>P</b> CT6 S16a,c CT4	<b>1</b> /100 kΩ Max.	
LW (150-260 kHz)	147 kHz 200 kHz		Max. Tune in		CT5 S16b,d		
SW (5.95-18.3 MHz)	5.8 MHz 18.7 MHz 6.5 MHz 17.5 MHz		<b>D</b>	Max. Min. Tune in			<b>N</b> CT7 <b>M</b> CT3
FM (87.5-104 MHz)	<b>2</b> 10.7 MHz /4.7 nF Δf=200 kHz (50 Hz)			<b>E</b> <b>B</b> <b>F</b> <b>D</b>	Max.		<b>F</b> <b>E</b> <b>D</b> <b>C</b> <b>B</b> <b>A</b>
FM (87.5-104 MHz)	86.5 MHz 105 MHz 88 MHz 104 MHz	<b>D</b>		Max. Min. Tune in		<b>E</b> <b>D</b> <b>C</b> <b>B</b> <b>A</b> <b>F</b>	<b>3</b> <b>4</b> /100 kΩ
				Max. Min. Tune in		S4 CT2 S2 CT1	<b>3</b> /100 kΩ Max.

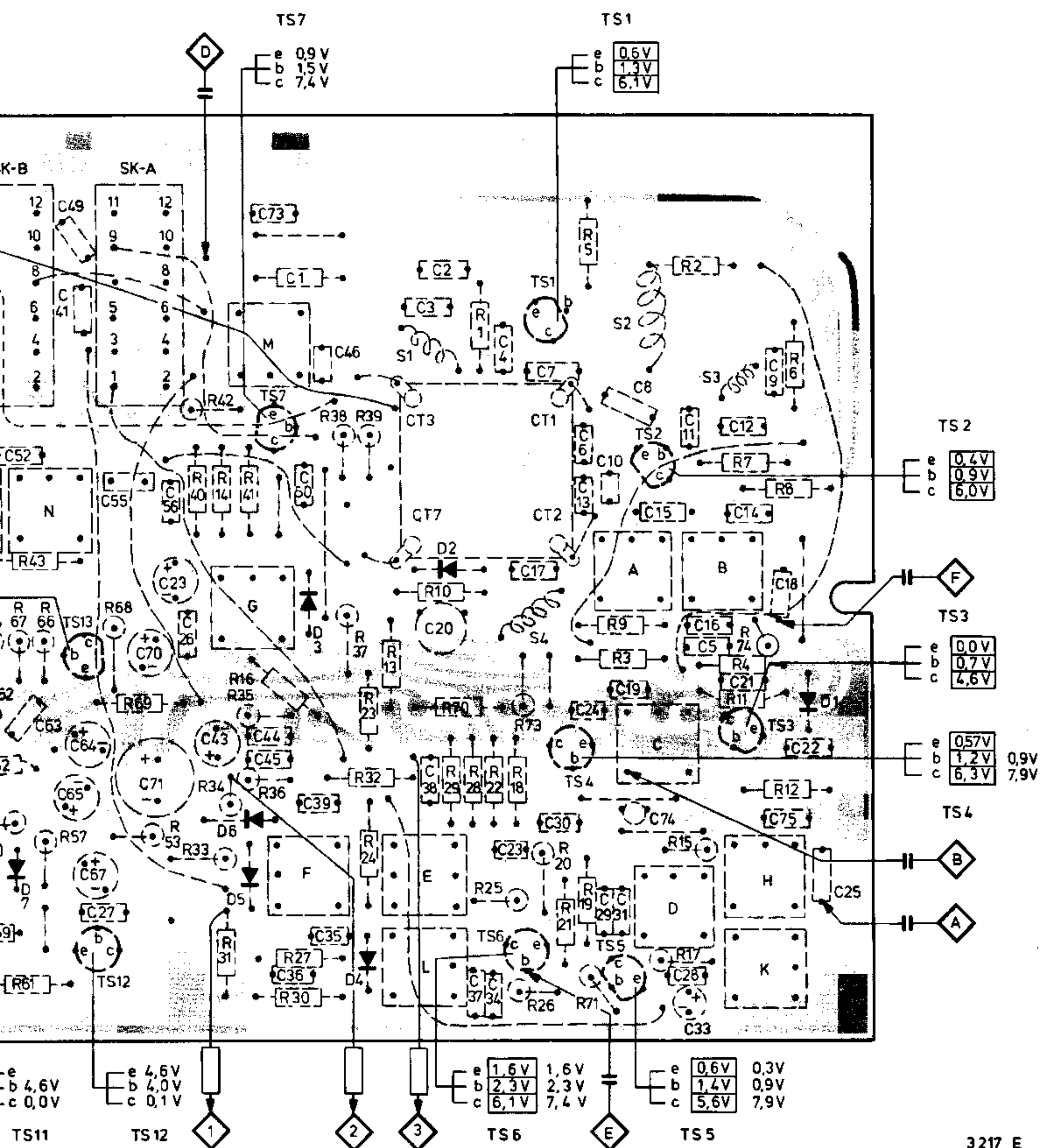
Repeat - Herhalen - Répéter - Wiederholen - Repitire



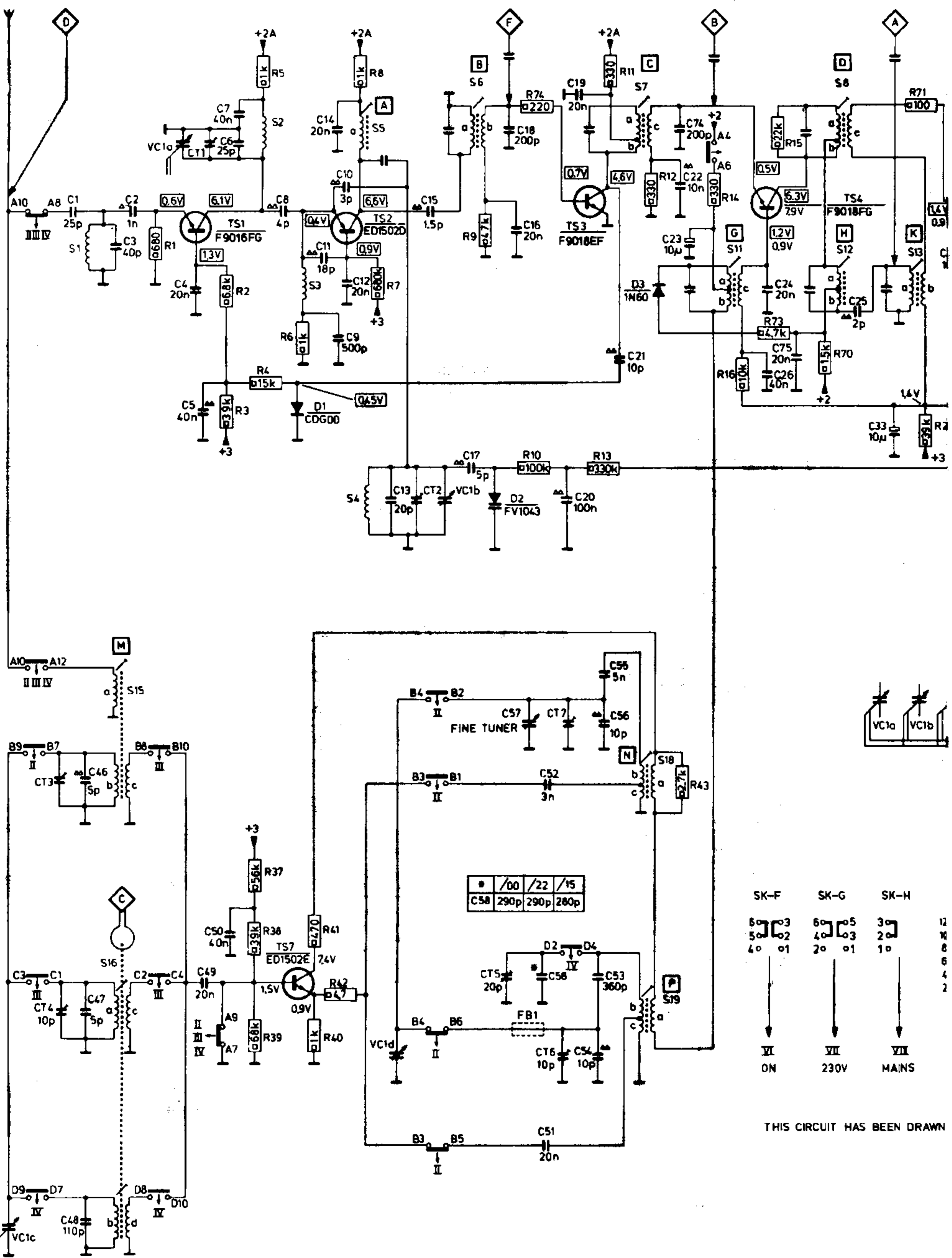
3089A



07.N	TS13,12	D5,6,TS7,G.	M.	F,D3,4	L. E. 1.D2.	4,TS1,4,5,6,TS2,A.	2. C. D3,TS3. B. K.H.D1.	M																							
2	41	49	55	70	23	56	73	50	1	46	CT7	CT3	2-4	17	7	CT	CT1	13	6	10	19	8	15	11	5	16	14	12	9	18	C
52	63	65	64	67	27	71	26	43	45	44	36	39	35	20	38	37	34	32	30	24	29	31	74	28	33	21	75	22	25	C	
±67	43	68	34	40	14	42	41	37	38	39	13	10	70	1	22	18	73	5	9	3	2	7	4	8	6	74	R				
61	57	69	53	33	31	35	16	36	30	27	24	32	23	29	28	25	26	20	21	19	71	15	17	11	12	R					



M	S1	MC	TS1	TS7	D1	S3,4	A	TS2	B	D2	TS3	PN	C	D3	G	TS4	PH	K
C	1	3 2	1a 4 5 11 6 7	8 14 9+11	13 12	15 17	18 16	20 19	21 23 22	26 24 75	25 33							
C	1c	T3,4	46+48	49	50	1d	58 57	T5+7	51+56									
R			1	2+5	6	78	9	74 10	13 11	12	14 16	15 73	70					
R						37+39	40+42					43						



**GB**

- 1 Apply the required IF signal.
- 2 Detach the minus side of C43. Short-circuit CT2.
- 3 Adjust for maximum height and symmetry of the response curve.
- 4 Adjust for maximum symmetry of the S-curve and remove the short-circuit from CT2.

**D**

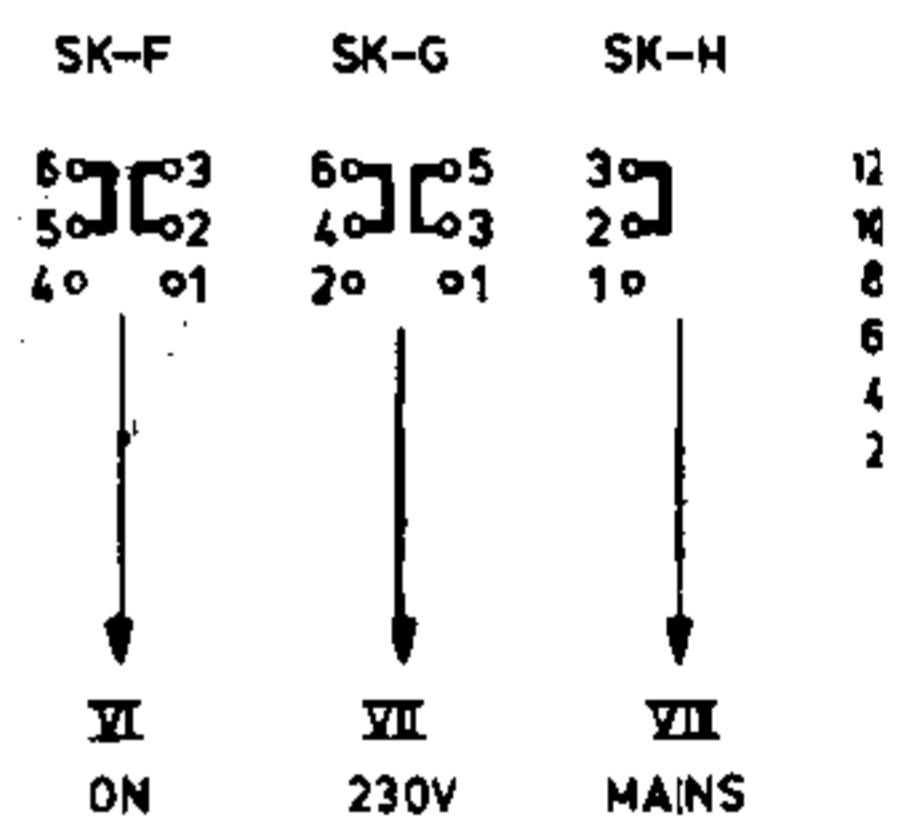
- 1 Führe das gewünschte ZF-Signal zu.
- 2 Löse die Minusseite von C43 und schliesse CT2 kurz.
- 3 Justiere auf maximale Höhe und Symmetrie der Durchlasskurve.
- 4 Justiere auf maximale Symmetrie der S-Kurve und beseitige den Kurzschluss CT2.

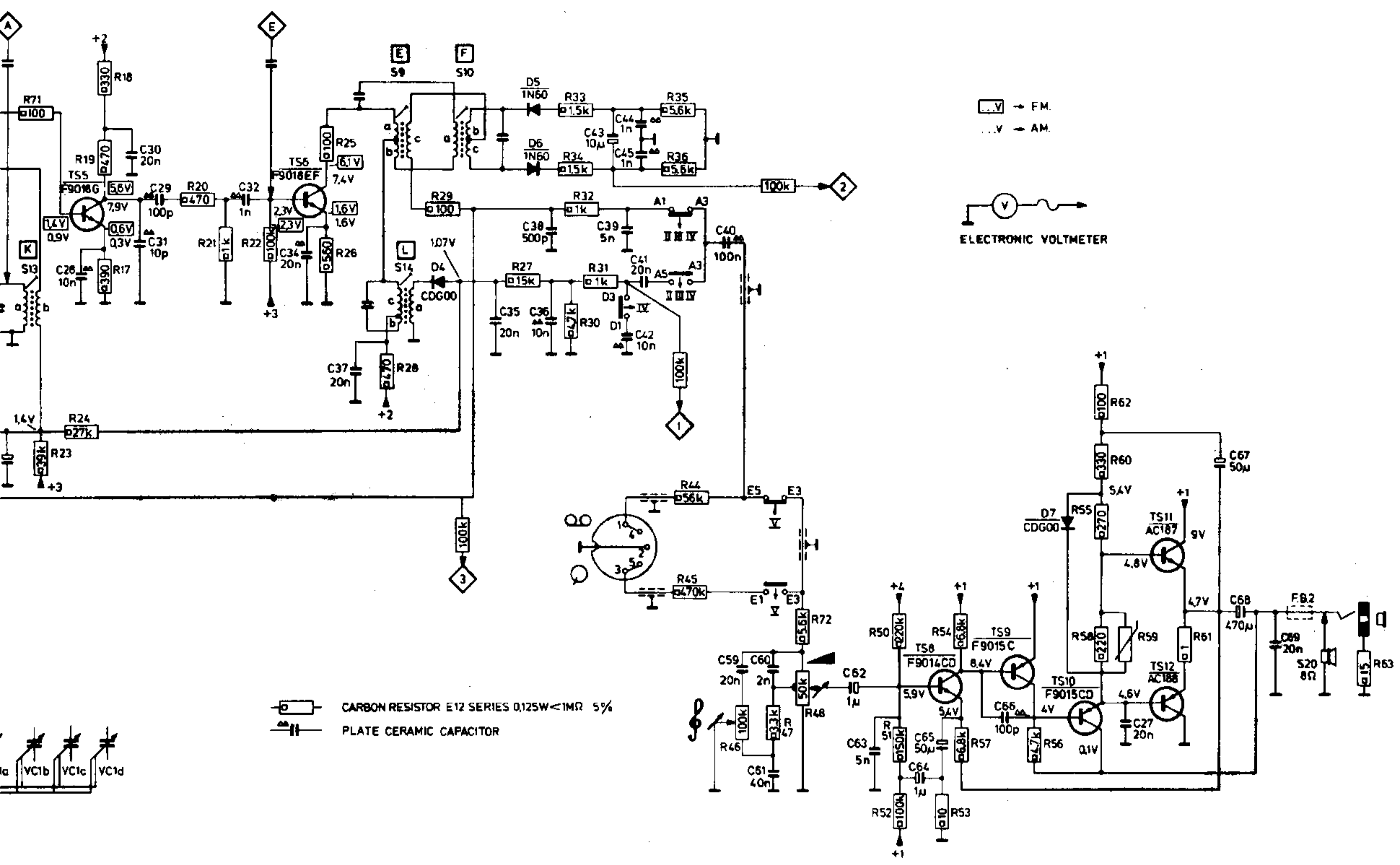
**NL**

- 1 Gewenste MF-sigitaal toevoeren.
- 2 De minzijde van C43 loshalen. CT2 kort.
- 3 Afregelen op max. hoogte en symmetrie curve.
- 4 Afregelen op max. symmetrie van de S-kortsluiting CT2 opheffen.

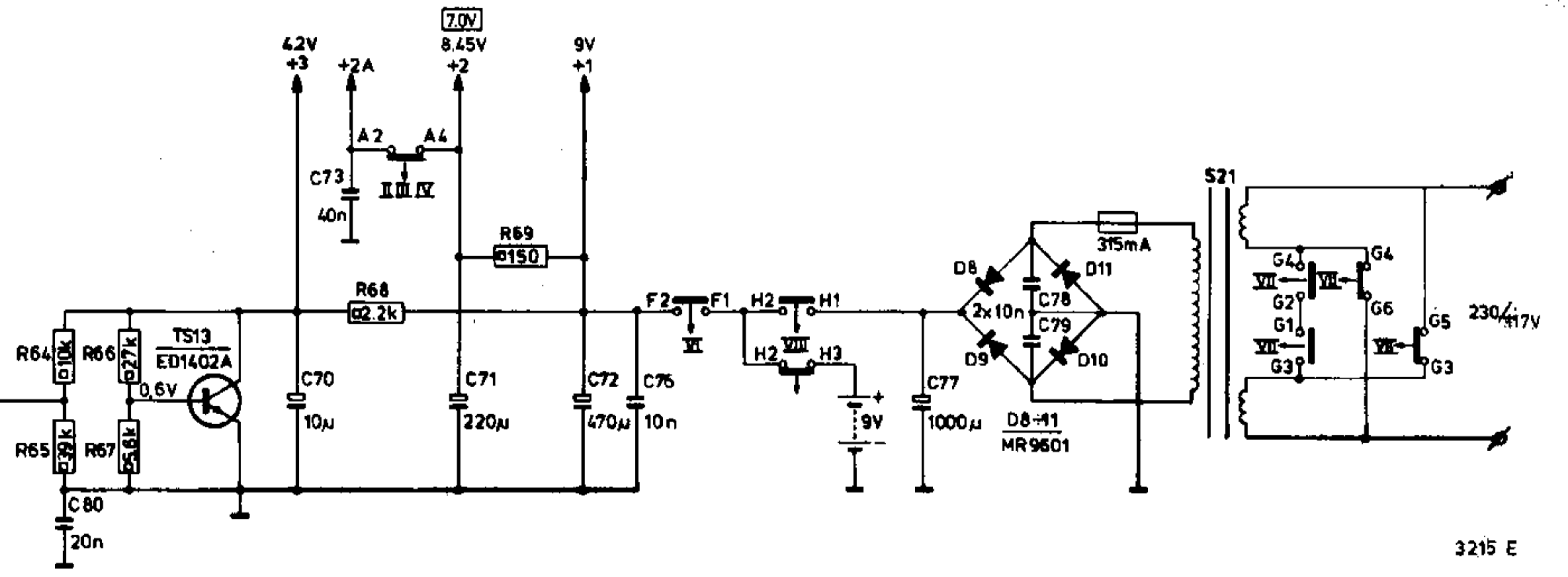
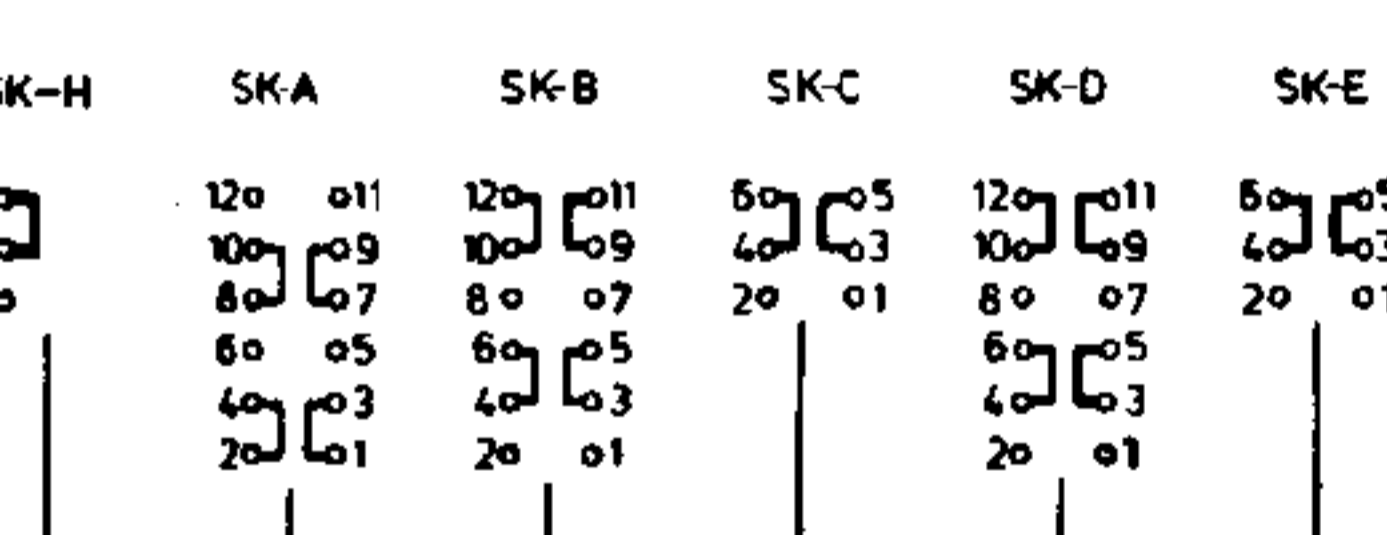
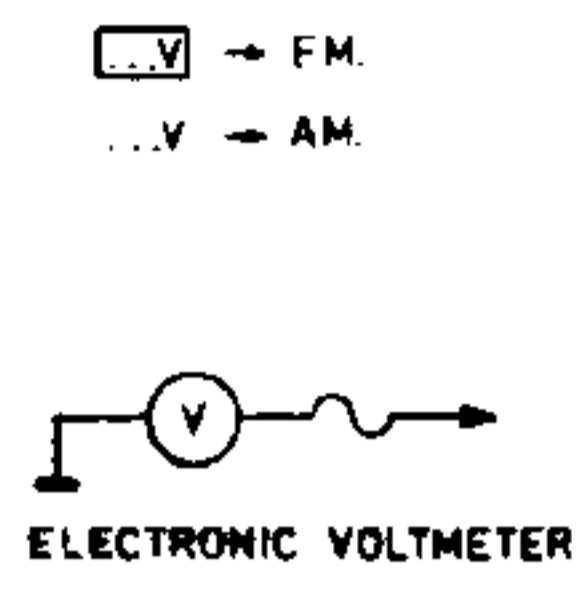
**E**

- 1 Aplíquese la señal de FI necesaria.
- 2 Desconéctese el lado negativo de C43 y a CT2.
- 3 Ajustese a altura y simetría máxima de la curva.
- 4 Ajustese a simetría máxima de la curva al cortocircuito de CT2.





CARBON RESISTOR E12 SERIES 0,125W < 1MR 5%  
 PLATE CERAMIC CAPACITOR

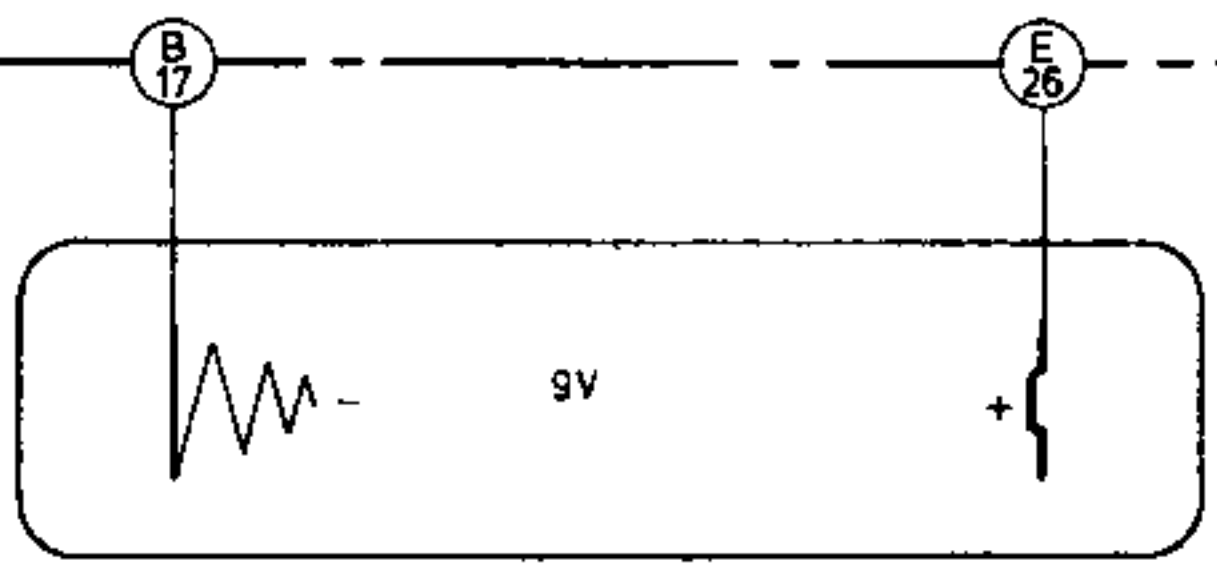
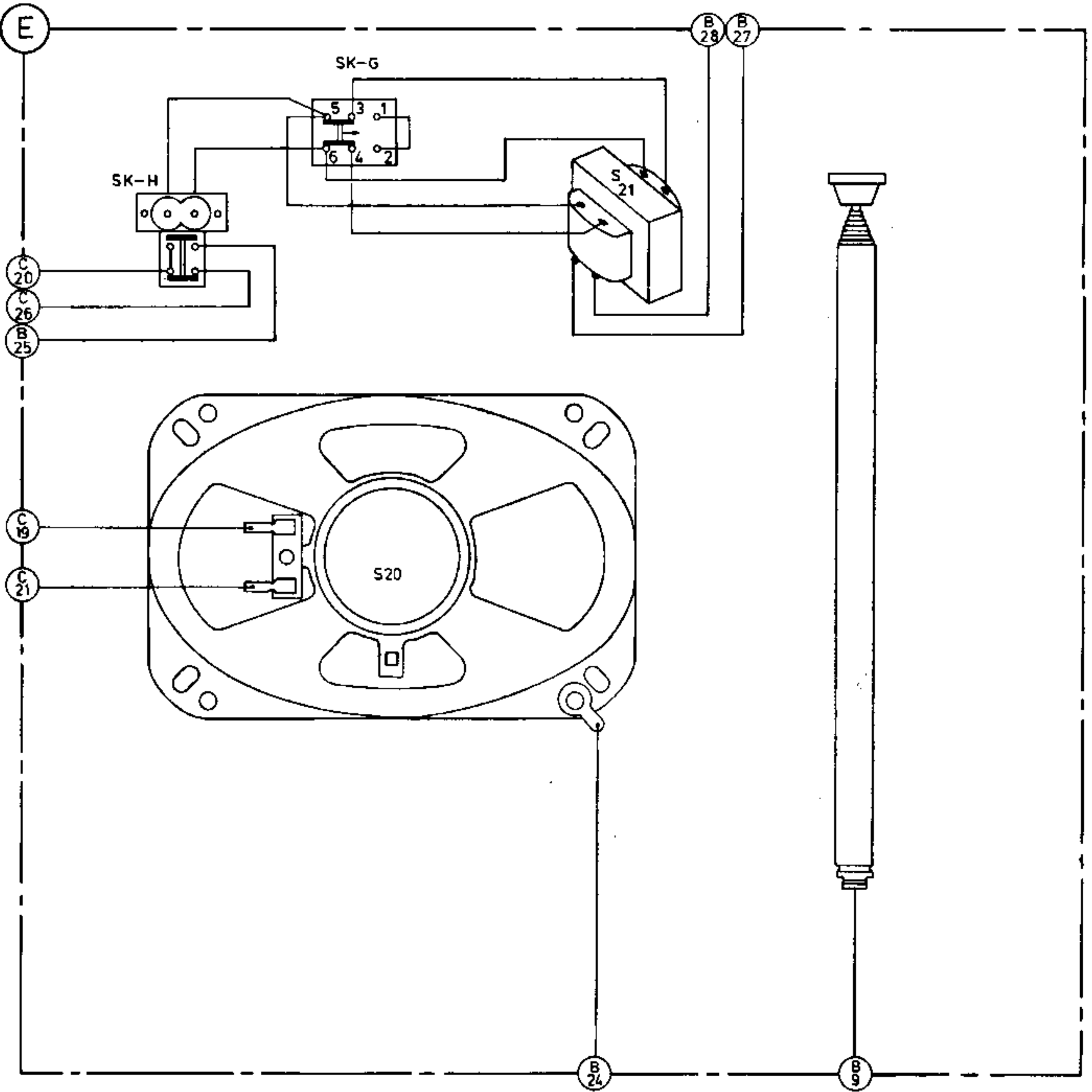
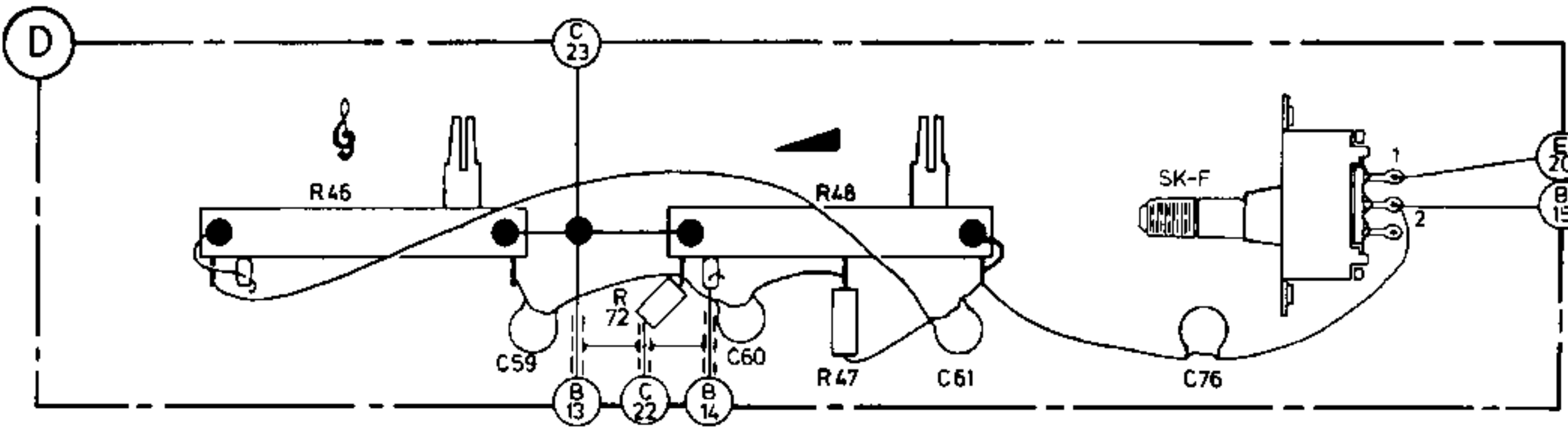


- (F)**
- 1 Appliquer le signal de F.I. nécessaire.
  - 2 Détacher le côté négatif de C43 et court-circuiter CT2.
  - 3 Ajuster sur hauteur maximum et symétrie de la courbe de réponse.
  - 4 Ajuster sur symétrie maximale de la courbe en S. Ensuite, supprimer le court-circuit sur CT2.

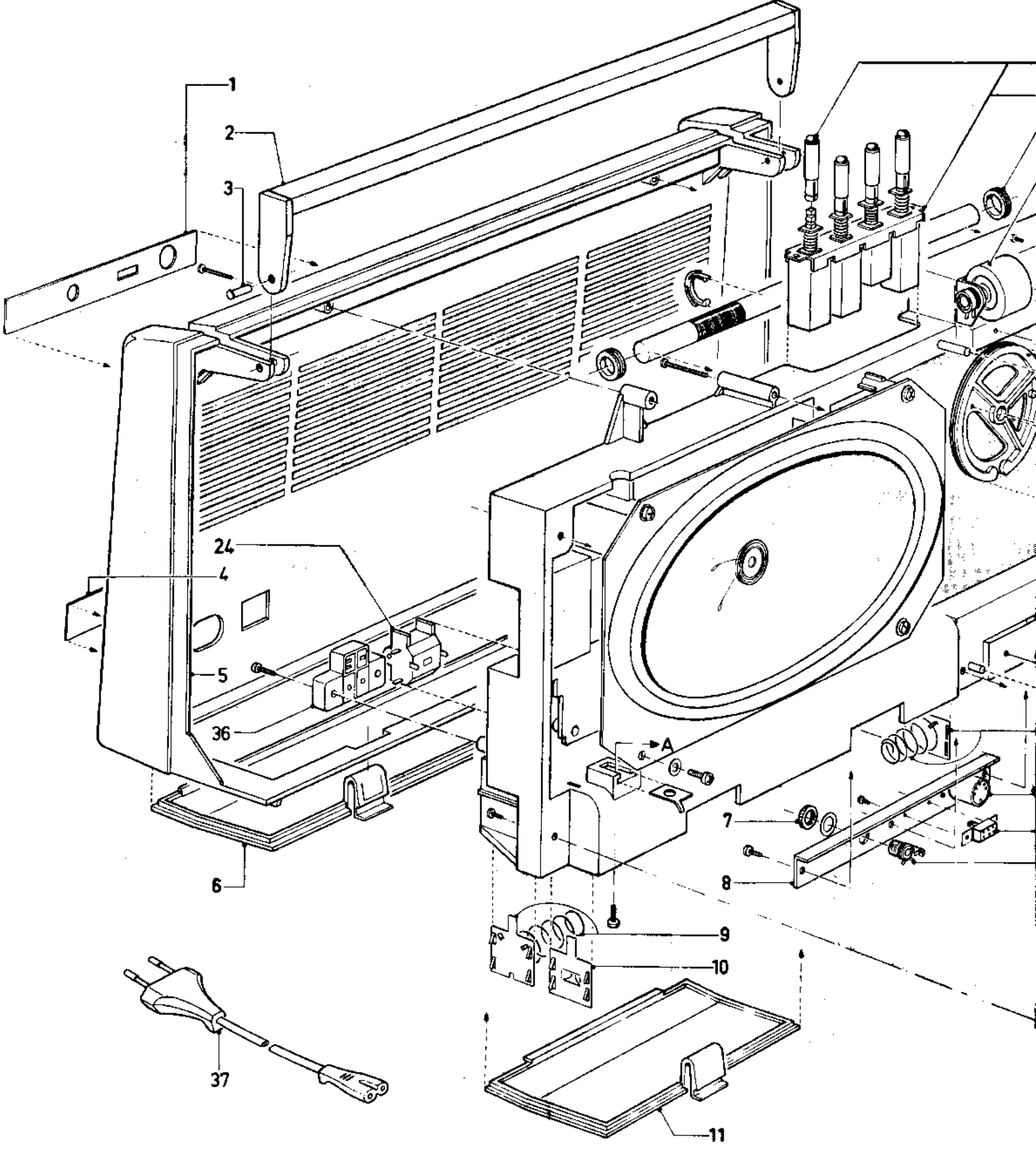
T2 kortsluiten.  
 metrie van doorlaatkromme.  
 van de S-kromme. Daarna  
 ia.  
 C43 y cortocircuitese  
 xima de la curva de paso.  
 a curva S. Suprímese luego



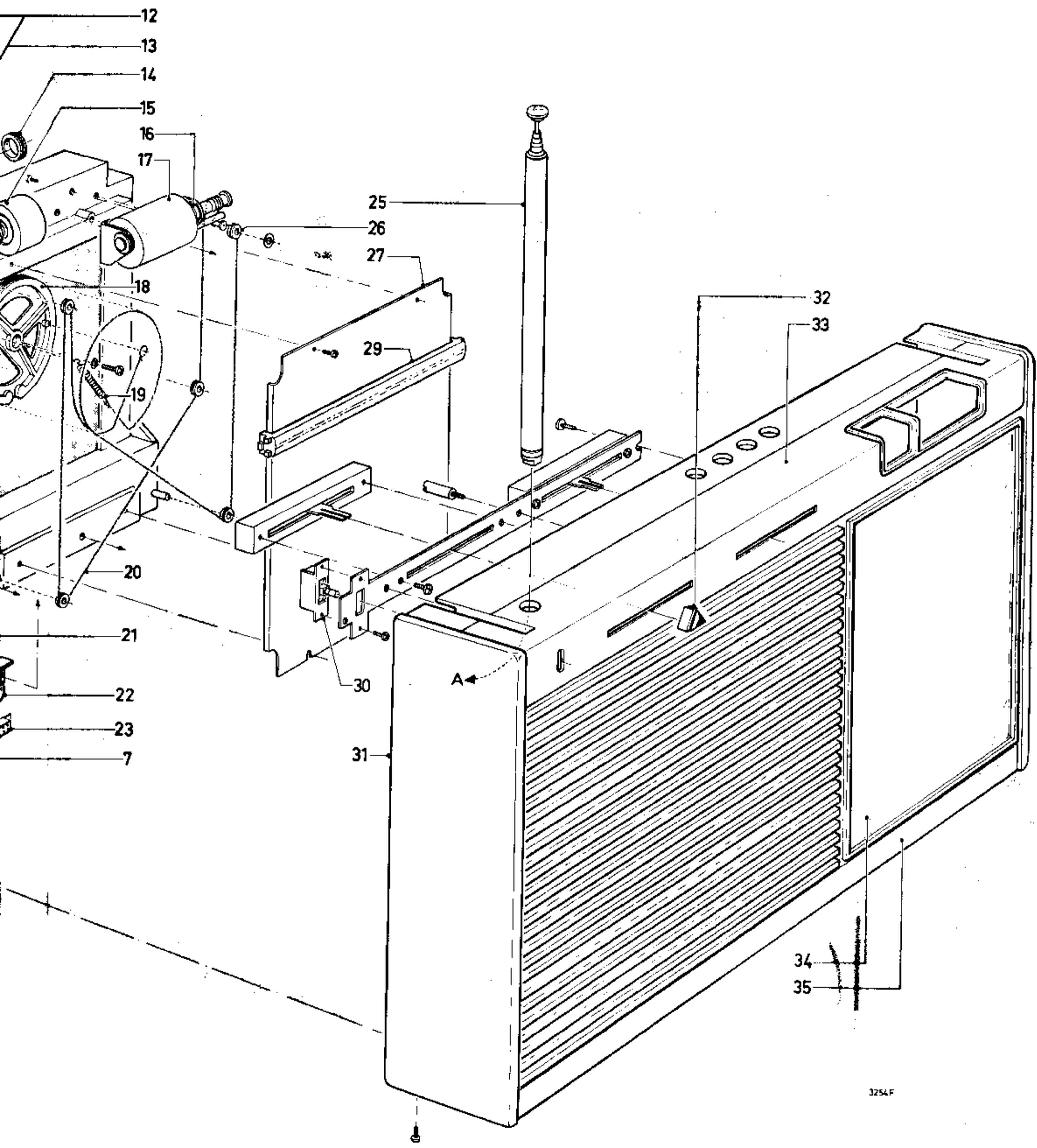
SK-H	SK-G S20	S21	M
42	59	60	C
46	72	48 47	C
			R
			R







1	4822 454 10351	11	4822 423 40342	21	4822 290 80267	31	
4		12	4822 413 30594	22	4822 267 40039	33	
2	4822 498 40353	13	4822 276 40181	23	4822 277 20155	34	4822 423 50213
3	4822 535 90948	14	4822 325 60145	24	4822 277 10238	35	
5	4822 422 40111	15	4822 413 40626	25	4822 303 30148	32	4822 411 60285
6	4822 423 40341	16	4822 528 80576	26	4822 528 80578	33	4822 460 10349
7	4822 267 30043	17	4822 413 40625	27	4822 333 20022	34	4822 450 60108
8	4822 459 50155	18	4822 528 80577	29	4822 450 80407	35	4822 460 10351
9	4822 492 51052	19	4822 492 31153	30	4822 277 20156	36	4822 265 20106
10	4822 290 80266	20	4822 321 30132			37	4822 321 10105 -/00-/2
							4822 321 10156 -/15



3254F



# Service mededeling

PHILIPS NEDERLAND B.V. - EINDHOVEN  
TECHNISCHE SERVICE

Ref. R 311

Type 90 RL 414

Datum januari 1976

RADIO

Het bestelnummer van pos.36 is 4822 265 20106.

Het bestelnummer van NTC weerstand R59 is gewijzigd in 4822 116 30117.

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# PHILIPS

# Service mededeling

PHILIPS NEDERLAND B.V. - EINDHOVEN  
TECHNISCHE SERVICE

Ref. R364

Type 90RL650, 90RL750, 90RL413  
90RL414, 90AL765, 22AH967 Datum April 1977

Betreft: wijziging bestelnummers.

- 90RL650 : Het bestelnummer voor R39 wordt 4822 105 10138
- 90RL750 : Het bestelnummer voor R56 NTC wordt 4822 116 30185
- 90RL413 : Het bestelnummer R46, 100 k ohm, lin. wordt 4822 105 10101;  
90RL414 : voor R48, 50 k ohm, log. wordt het bestelnummer 4822 105 10099
- 90AL765 : Voor R73, NTC wordt het bestelnummer 4822 116 30185
- 22AH967 : De volgende bestelnummers zijn gewijzigd:
- |                     |                |
|---------------------|----------------|
| Stereodecoder       | 4822 210 30027 |
| Dioden D7905, D7908 | 5322 130 34196 |
| Dioden D7906, D7907 | 4822 130 30932 |



# PHILIPS