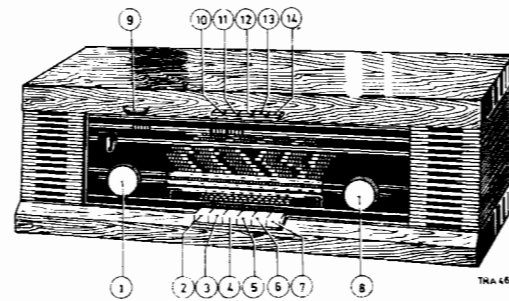


SERVICE NOTES

RADIO

5230A/01/02



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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>① Volume control
Volumeregelaar
Contrôle de volume
Lautstärkeregl.
Control de volumen</p> <p>② Mains switch
Netschakelaar
Interrupteur secteur
Netzschalter
Conmutador de red</p> <p>③ PU switch
PU-schakelaar
Commutateur PU
TA-Schalter
Conmutador de PU</p> <p>④ MW switch
MG-schakelaar
Commutateur PO
MW-Schalter
Conmutador de OM</p> <p>⑤ LW switch
LG-schakelaar
Commutateur GO
LW-Schalter
Conmutador de OL</p> | <p>⑥ SW switch
KG-schakelaar
Commutateur OC
KW-Schalter
Conmutador de OC</p> <p>⑦ FM switch
FM-schakelaar
Commutateur FM
UKW-Schalter
Conmutador FM</p> <p>⑧ Tuning
Afstemming
Syntonisation
Abstimmung
Sintonía</p> <p>⑨ Balans control
Balansregelaar
Contrôle de balance
Stereowaage
Control de balance</p> <p>⑩ Mono switch
Mono-schakelaar
Commutateur mono
Mono-Schalter
Conmutador de mono</p> | <p>⑪ Stereo switch
Stereo-schakelaar
Commutateur stéréo
Stereo-Schalter
Conmutador estereo</p> <p>⑫ Bass switch
Lage-tonenschakelaar
Commutateur des graves
Bassschalter
Conmutador de bajos</p> <p>⑬ Treble switch
Hoge-tonenschakelaar
Commutateur des aiguës
Höhenschalter
Conmutador de altas</p> <p>⑭ Treble switch
Hoge-tonenschakelaar
Contrôle des aiguës
Höhenschalter
Conmutador de altas</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Loudspeaker	2xAD3700AM (800 Ω)	Luidspreker	Haut-parleur	Lautsprecher	2xAD3700AM (800 Ω)	Altavoz
IF	(/01=452 kc/s(AM) (/02=460 kc/s(AM) (10,7 Mc/s (FM)	MF	FI	ZF	(/01=452 kc/s(AM) (/02=460 kc/s(AM) (10,7 Mc/s (FM)	FI
Mains voltages	110-127-145-165- 220-245 V.	Netspanningen	Tensions sec- teur	Netzspannungen	110-127-145-165- 220-245 V.	Tensiones de red
Consumption	70 W (AM) 80 W (FM)	Verbruik	Consommation	Verbrauch	70 W (AM) 80 W (FM)	Consumo
Output	2x2 W	Uitgangsvermo- gen	Puissance	Anfangslei- stung	2x2 W	Tension de salida
Dimensions	652x248x230 mm	Afmetingen	Dimensions	Abmessungen	652x248x230 mm	Dimensiones

Wave ranges - Golfgebieden - Gammes d'ondes - Wellenbereiche - Margenes de ondas

LW - LG - GO - LW - OL	: 750 - 2000	m (400 - 150	kc/s)
MW - MG - PO - MW - OM	: 185 - 580	m (1622 - 517	kc/s)
SW - XG - OC - KW - OC	: 16,5 - 50,8	m (18,2 - 5,95	Mc/s)
FM - FM - FM - UKW - FM	: 2,88 - 3,43	m (104 - 87,5	Mc/s)

Valves - Buizen - Tubes - Röhren - Válvulas

B1 - ECC85	B6 - ECC83	L5 - 955/D6X50
B2 - ECH81	B7,8 - EL84	
B3 - EF89	B9 - EZ81	
B4 - EBF89	B10 - EM80	
B5 - EAA91	L1,2 - 955/D6,3X320	

Transistors - Diodes

TS1,2,3 - AF126
TS4,5 - AC125
TS6 - AC127
GR1-6,8 - AA119
GR7,7a,9 - OA200

SERVICE INFORMATION									
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Serv-o-mecum	Wave range Golfgebied Gamme d'ondes Wellenbereich Margen de ondas	Trimming point Trimpunt Point de réglage Trimpunkt Punto de ajuste	Signal Signaal Signal Signal Señal	Trim Afregefen Réglage Abgleichen Ajustense	Indication Aanwijzing Indication Anzeige Indicación	
IP-MF-FI-ZF-FI (AM)	MW-MG-PO-MW-OM	1620 kc/s	(/01) 452 kc/s (/02) 460 kc/s	2B2 via 33000 pF	S23,S22,S18,S19	Max. output
		517 kc/s	(/01) 452 kc/s (/02) 460 kc/s		S4	Min. output
	LW-LG-GO-LW-OL	550 kc/s	158,5 kc/s		S15a,S8	Max. output
	HPTR		158,5 kc/s		S8a	
	SW-KG-OC-KW-OC		6,3 Mc/s		S13,S6	
	MW-MG-PO-MW-OM		550 kc/s		S14a,S7	
	LW-LG-GO-LW-OL		380 kc/s		C27,C9	
	HPTR		380 kc/s		C14	
	MW-MG-PO-MW-OM	1500 kc/s	17 Mc/s		C26,C17	
			1500 kc/s		C23	
IP-MF-FI-ZF-FI (FM)	FM-UKW	88 Mc/s	10,7 Mc/s via 1500 pF	2B4	S50	OV DV
					S24	Max. DV
					S26,S27 1)	OV DV
				2B3	S20,S21 2)	Max. DV
2B2	S16,S17					
	3)	S59,S10				
HF-HF-EP-HF-EP (FM)	FM-UKW	88 Mc/s	88 Mc/s		S56,C95	Max. DV
		104 Mc/s	104 Mc/s		C88	
		96 Mc/s	96 Mc/s		S57,695	

Unless stated otherwise the signals are applied to the aerial socket via a dummy aerial.

1. Connect the vacuum-tube voltmeter (DV) via two resistors of 0.22 MΩ (1%). See circuit diagram.
2. Remove the resistors of 0.22 MΩ and connect the DV across C49 (in series with 0.1 MΩ).
3. Pull the screening bush of B1 upwards 1 cm and apply the signal to this bush.

Tenzij anders aangegeven worden de signalen via een kunstantenne aan de antennebus toegevoerd.

1. Sluit de diodevoltmeter (DV) aan via twee weerstanden van 0,22 MΩ (1%). Zie prinsipschema.
2. Verwijder de weerstanden van 0,22 MΩ en sluit de DV aan over C49 (in serie met 0,1 MΩ).
3. Trek de omschermbus van B1 1 cm omhoog en voer het signaal toe aan deze bus.

Sauf indication contraire les signaux sont appliqués à la douille d'antenne par l'intermédiaire d'une antenne fictive.

1. Connecter le voltmètre à diode (DV) à travers de deux résistances de 0,22 MΩ - 1%. Voir schéma le principe.
2. Enlever les résistances de 0,22 MΩ et connecter le DV sur C49 (en serie avec 0,1 MΩ).
3. Tirer le manchon de blindage de B1 en haut 1 cm et appliquer le signal à ce manchon.

Wenn nicht anders angegeben, werden die Signale der Antennenbuchse über eine Kunstantenne zugeführt.

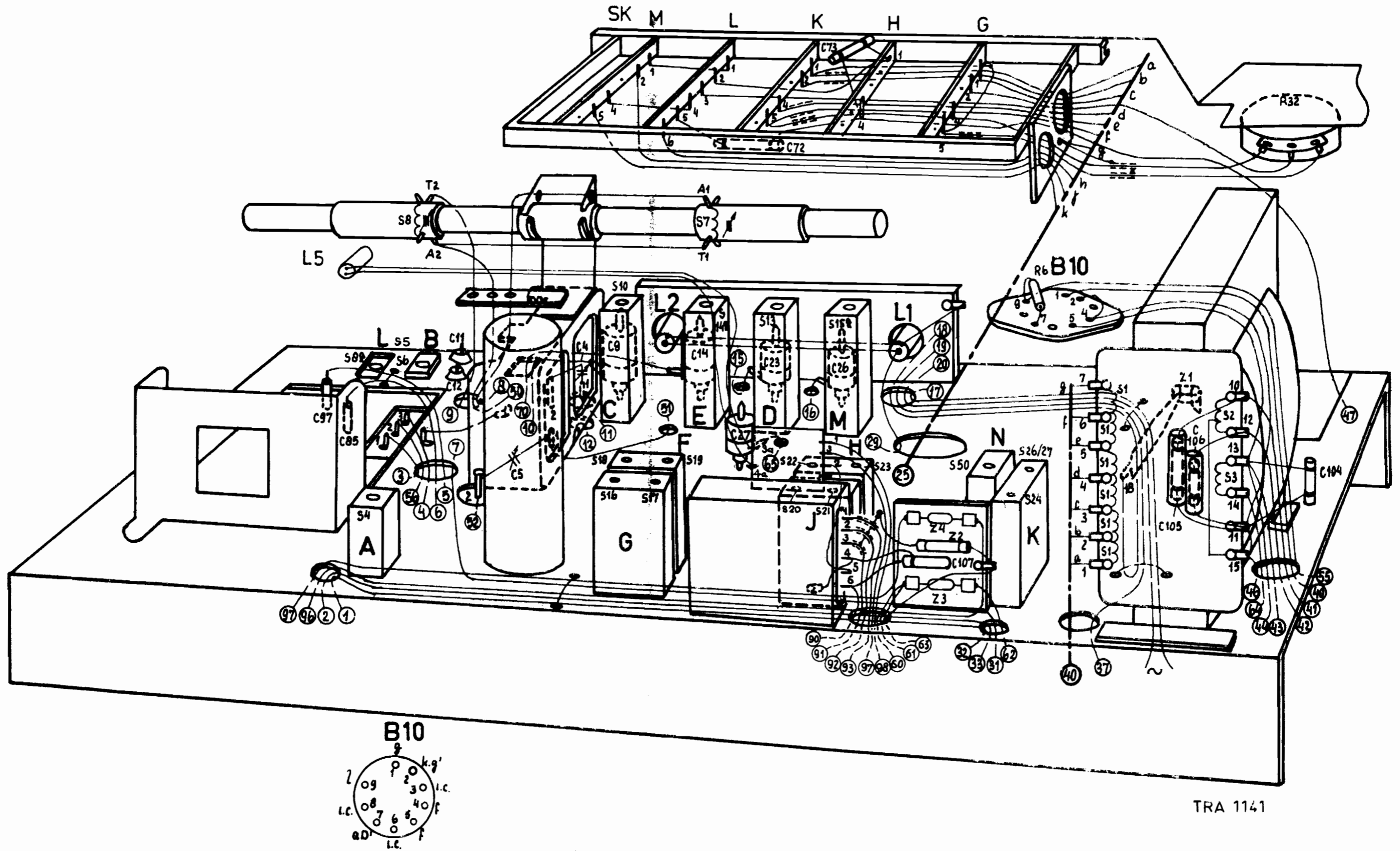
1. Das Diodevoltmeter (DV) über zwei Widerstände von 0,22 MΩ (1%) anschliessen. Siehe Prinzipschaltbild.
2. Die Widerstände von 0,22 MΩ (1%) entfernen und das DV über C49 anschliessen (in Serie mit 0,1 MΩ).
3. Die Abschirmbuchse von B1 1 cm heraufziehen und das Signal an dieser Buchse zuführen.

Salvo indicación contraria las señales son aplicadas a la hembrilla de antena a través de una antena artificial.

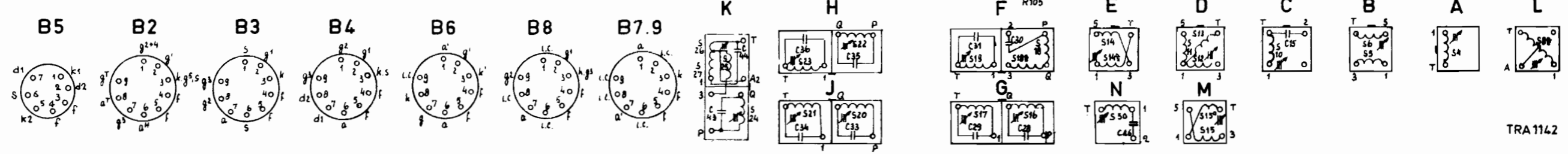
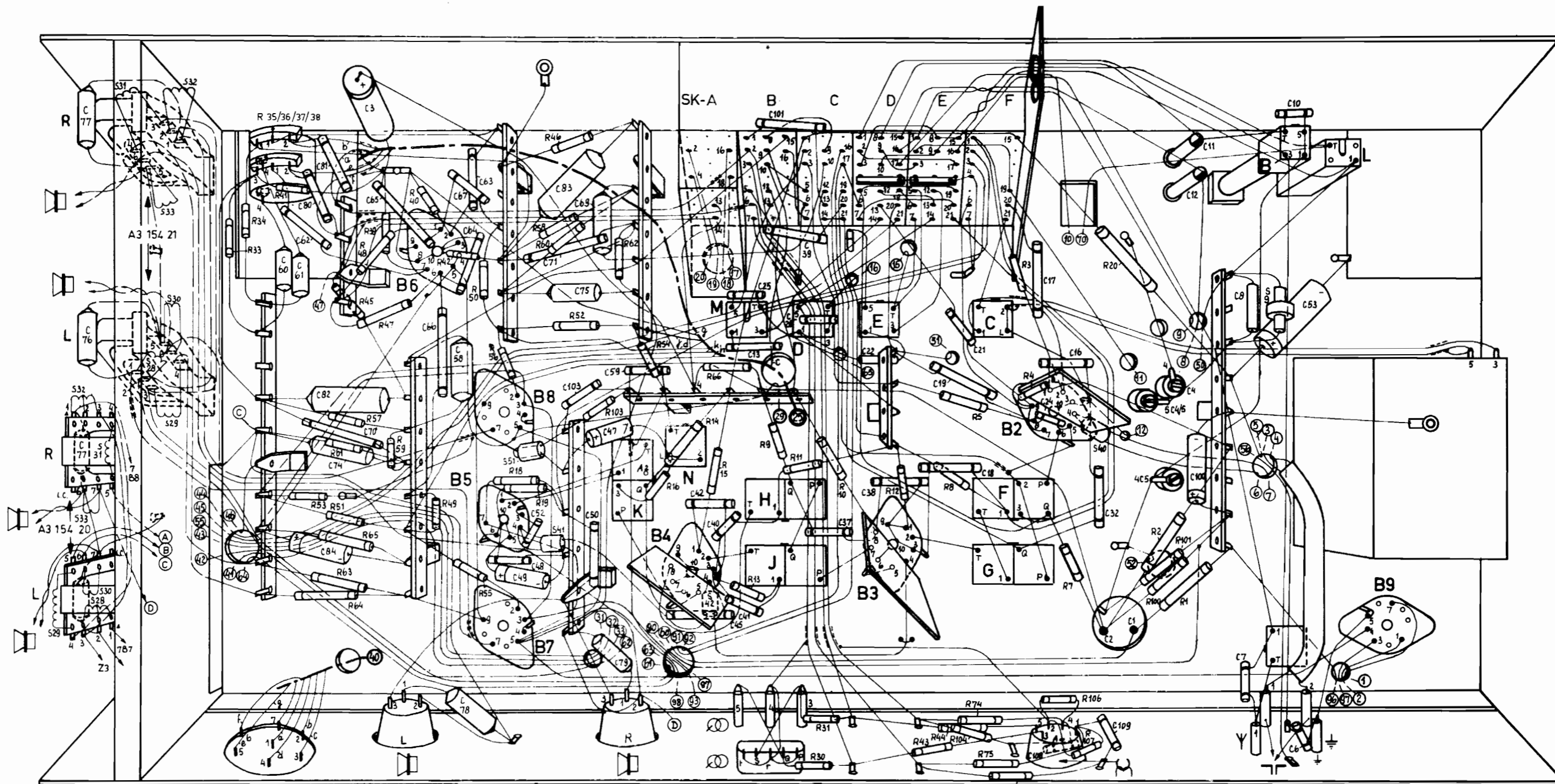
1. Conéctese el voltímetro de diodo (DV) sobre dos resistencias de 0,22 MΩ (1%). Véase el esquema de principio.
2. Quite las resistencias de 0,22 MΩ y conéctese el DV sobre C49 (en serie con 0,1 MΩ).
3. Levántese 1 cm el mangito de blindaje de B1 y aplíquese la señal al mismo.

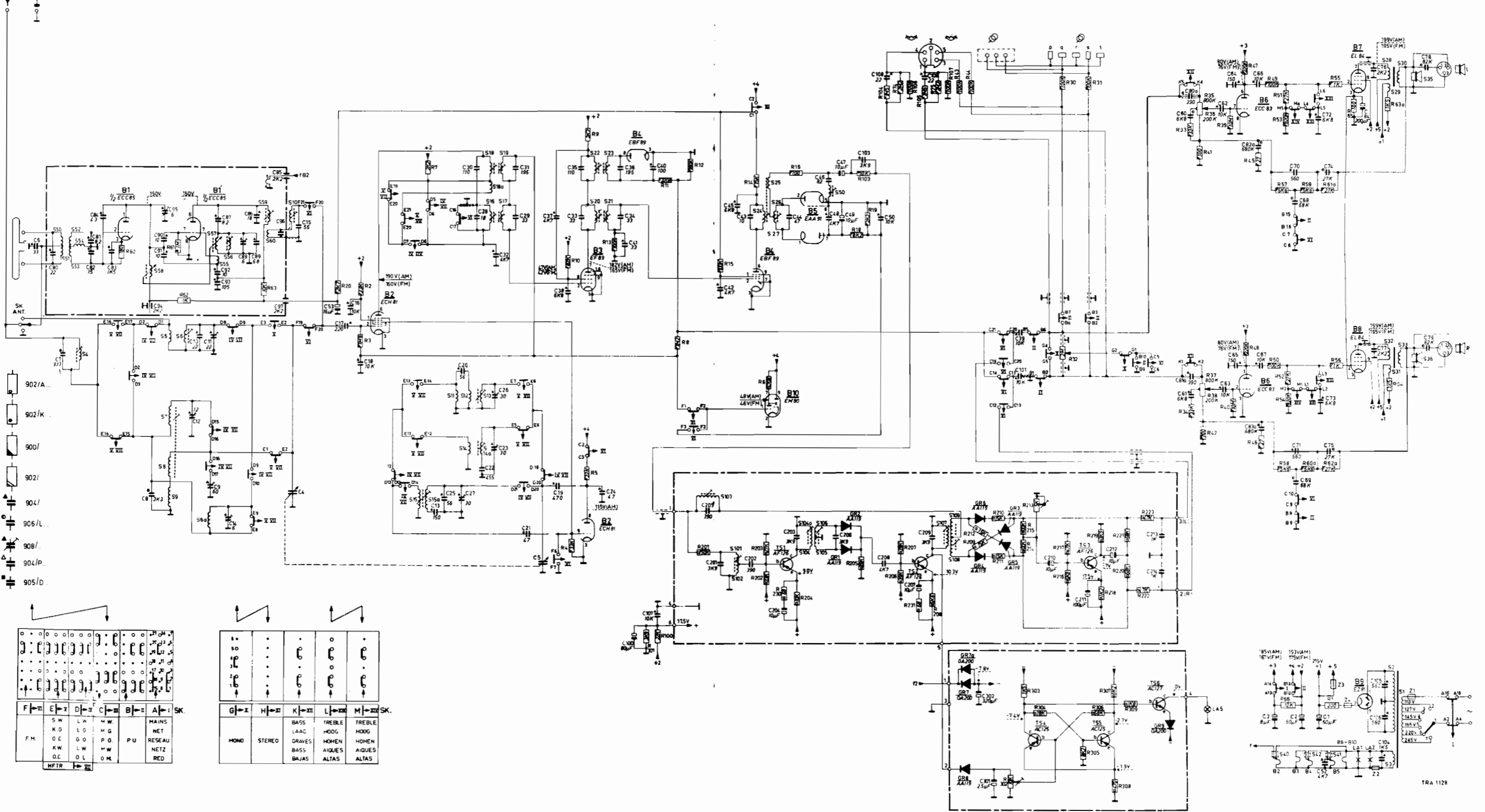
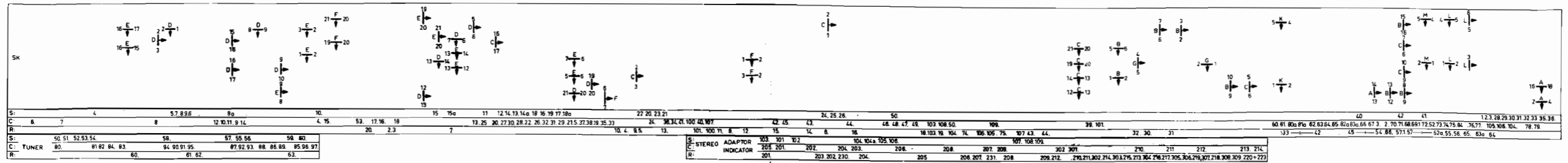
JGB/JD

S	A. L. 8. B.				C. G. F. E. 7. D. J. M. H.				N. K.		1	2. 3	
C	97. 85	11.12	5	4	9	14	27. 72. 23	73. 26	104			105 106	104
R										6			32



S	31, 28, 29, 30, 33, 32,	41,	K,	N,	42,	M,	H, J, D,	E,	C, F, G,	40,	9, A, B,	L,						
C	77, 76,	60, 61, 62, 80, 81, 74, 70, 82, 3,	65,	66, 58, 64, 67, 63, 78,	48, 49, 52,	83, 103, 50, 89,	47, 79, 59,	45, 42, 40, 25, 13,	39,	20, 27,	22,	30,	10, 19, 21,	24,	100, 16, 32, 2, 109, 1,	11, 12, 100,	8, 7,	10, 93, 6,
R	33, 34, 36, 37, 38, 53, 51, 65, 64, 63, 65,	57, 45, 48, 38, 47, 59,	40, 49,	42, 35, 50, 56,	18, 19,	50, 60, 46, 71, 52, 103, 62,	54, 16,	14,	15, 66,	9, 11,	30, 31, 10,	12,	43, 8, 3, 44, 104, 74, 75, 3, 14, 5, 4,	7, 106,	107, 20,	2, 101, 100, 1,		

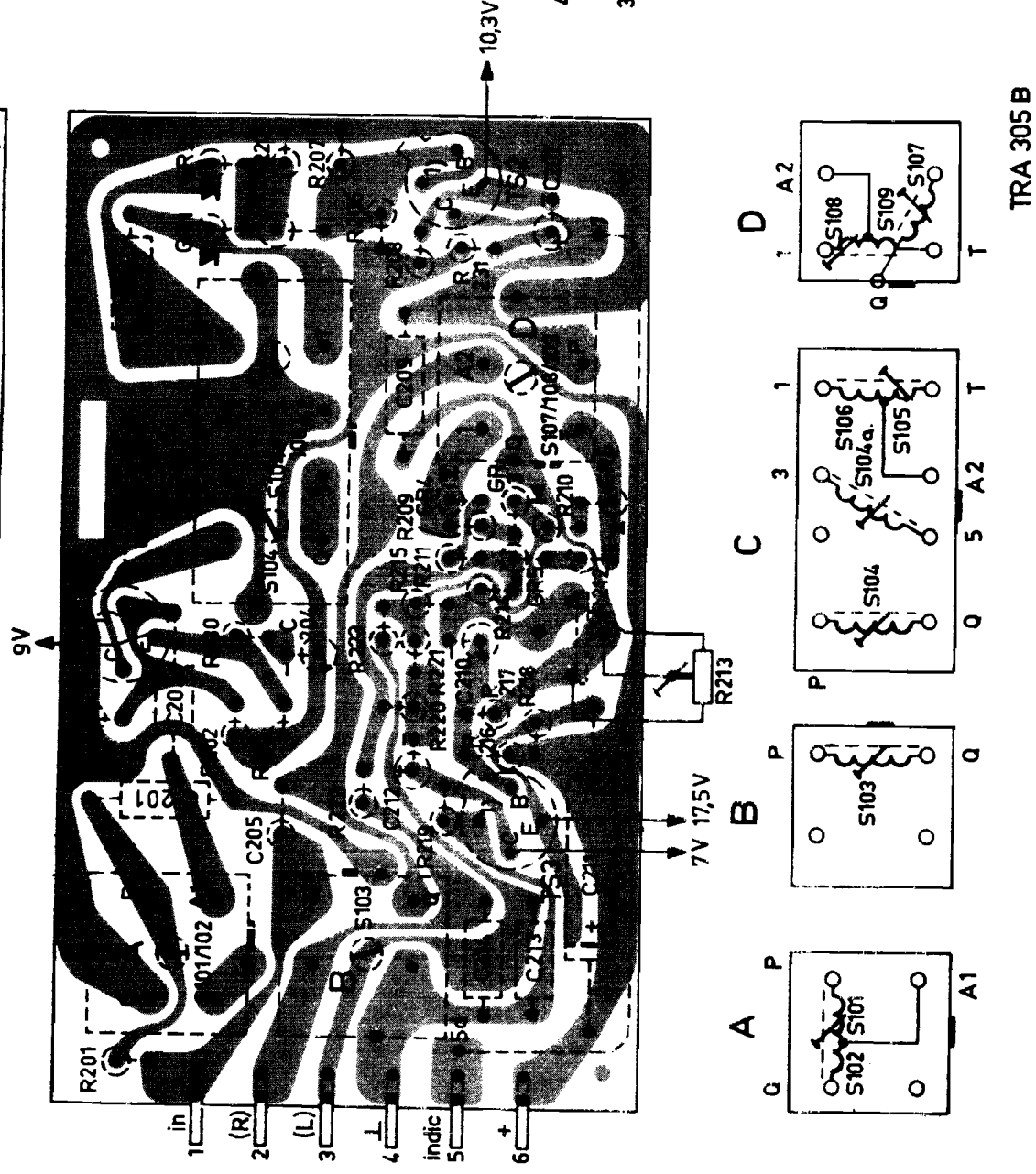




F	E	D	C	B	A	SK
S W	L W	M W	N W	P U	M A I N S	
K O	G L	H G	P O	P U	N E T	
K W	L W	M W			R E S E A U	
O L	O L	O M			N E T Z	
					R E D	
MFTR						XII

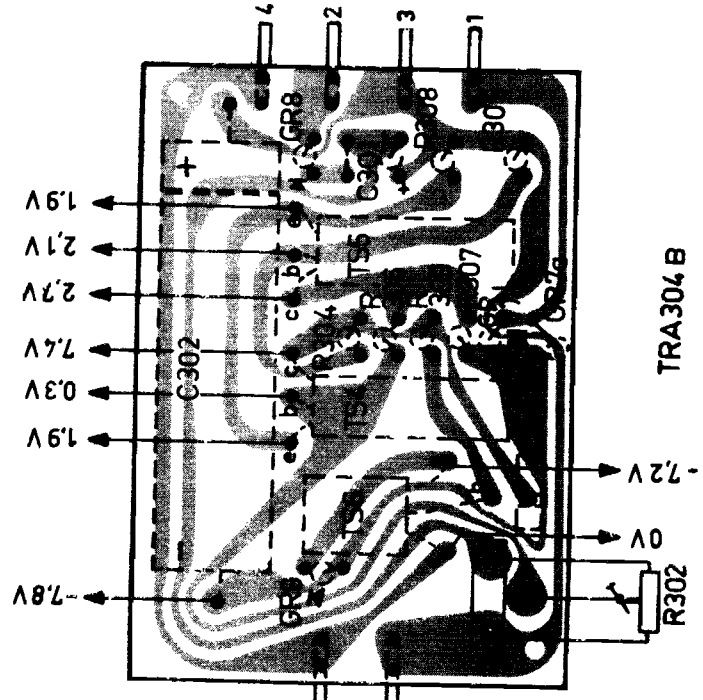
G	H	I	J	K	L	M	SK
M O N O	S T E R E O	B A S S	T R E B L E	B A S S	T R E B L E	T R E B L E	
		L A A G	H O O G	H O O G	H O O G	H O O G	
		G R A V E S	H O H E N	H O H E N	H O H E N	H O H E N	
		B A J A S	A I Q U E S	A I Q U E S	A I Q U E S	A I Q U E S	
			A L T A S	A L T A S	A L T A S	A L T A S	

S	101,102,103	104, 104a, 105,106,107,108,109
C	214,215, 211,205,201,212, 202, 210,204,	203, 209, 206, 208,207
R	201	230, 219, 222, 202,204,216,203,220,217,218,213,223,221,215,214,212,211,209,210,208,231,206,205,207



TRA 305 B

C	302	301
R	303,304,306,307,309,308,305	



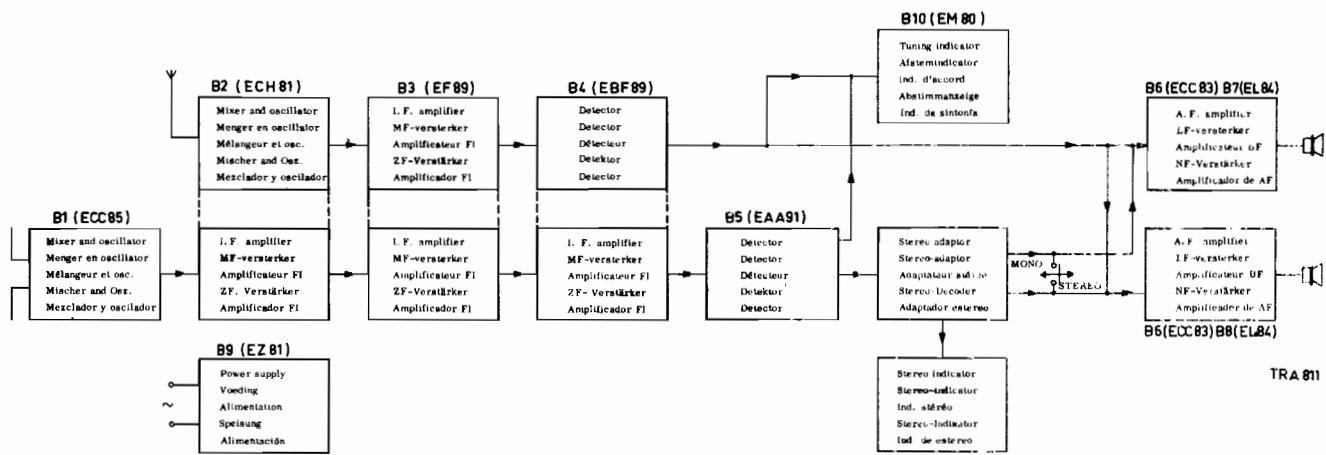
TRA 304 B

Stereo adapter - Adaptateur stéréo - Stereo Decoder - Adaptador de estereo

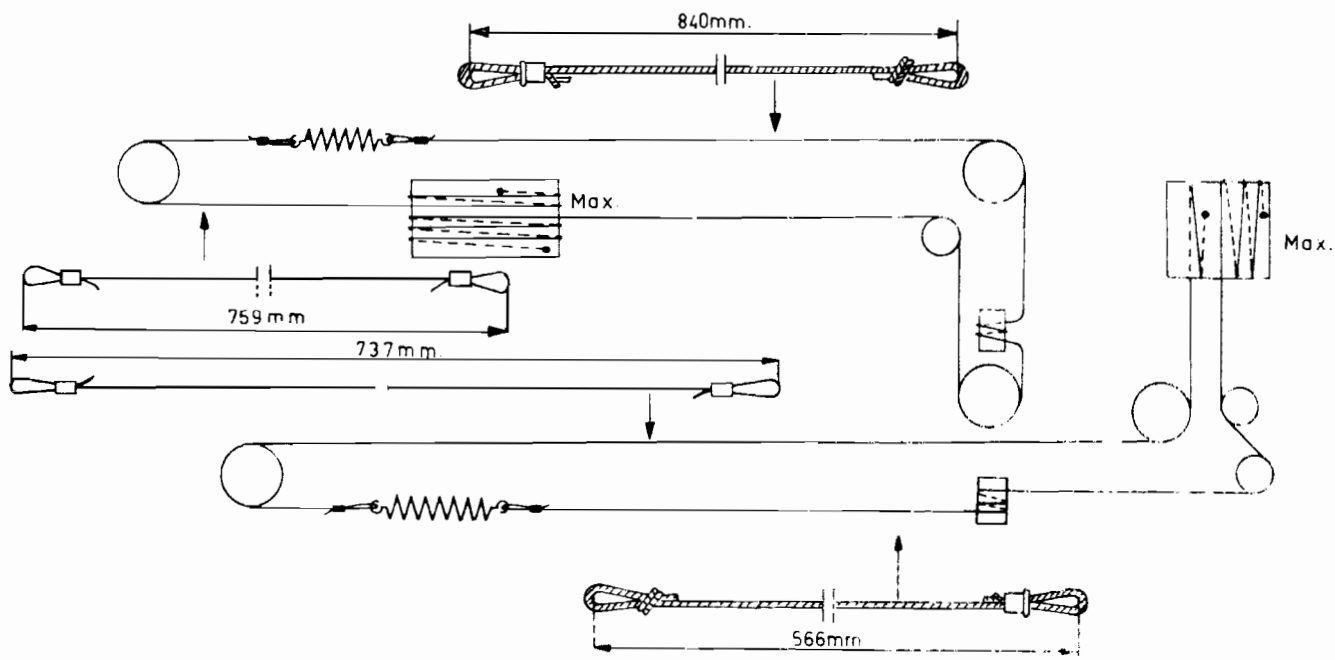
S101 } A3 494 54	Filter coil 19 kc/s	S107 } A3 494 55	Filter coil 38 kc/s
S102 } A3 494 54	Filterspoel 19 kHz	S108 } A3 494 55	Filterspoel 38 kHz
	Bobine de filtre 19 kHz	S109 } A3 494 55	Bobine de filtre 38 kHz
	Filterspule 19 kHz		Filterspule 38 kHz
	Bobina de filtro 19 kc/s		Bobina de filtro 38 kc/s
S103	Filter coil 67 kc/s	C201,203,206,209	4822 069 00544
	Filterspoel 67 kHz	(3900 pF-25 V)	
	Bobine de filtre 67 kHz	C202,205	C 285 AB/D390E
	Filterspule 67 kHz	(390 pF-25 V)	
	Bobina de filtro 67 kc/s	C204,207,210,212	909/W10
		(10 µF-16 V)	
S104 } A3 494 52	IF filter 19 kc/s	C208 (4700 pF-25 V)	4822 069 00545
S104a } A3 494 52	MF-filter 19 kHz	C211 (100 µF-6,4 V)	909/W125
S105 } A3 494 52	Filtre FI 19 kHz	C213,214 (1000 pF-25 V)	C 285 AA/S1K
S106 } A3 494 52	ZF-Filter 19 kHz	R213 (5000 Ω)	WE 417 90
	Filtro FI 19 kHz		

Stereo indicator
 Indicateur stéréo
 Stereo-Anzeige
 Indicador de estereo
 C301(2,5 µF-16 V) 909/W2,5
 C302(320 µF-10 V) 909/U32C
 R302 (10 kΩ) B1 531 13
 R303 (1500 Ω-NTC) E 203 BB/P1K5

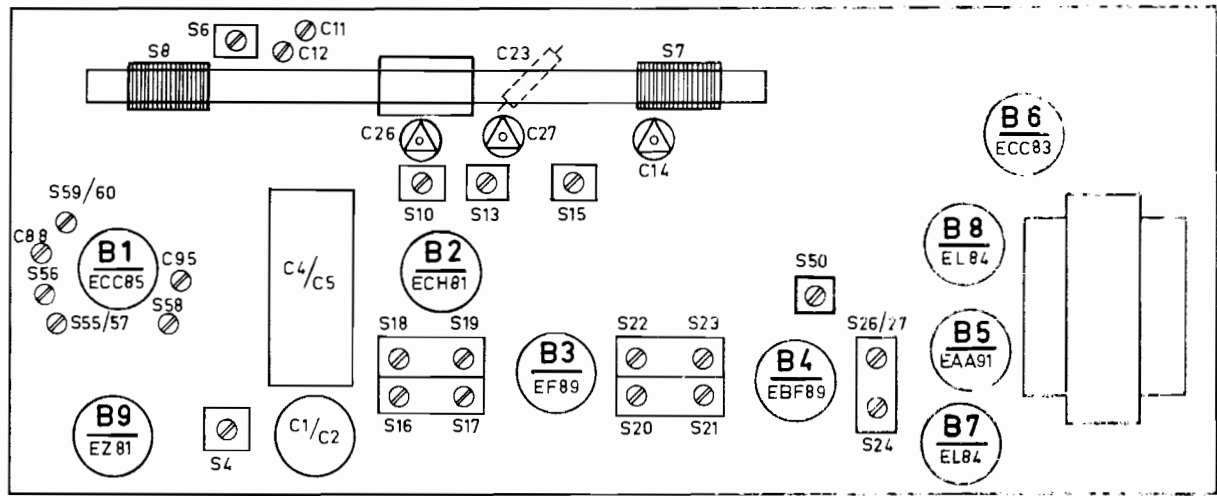
JGB/JD



TRA 81



R188 85 B



TRA 271A

4822 176 00011	Cabnet	S1	Main transformer	4822 176 00011	Mueble	S4	Wave trap coil	4822 176 00011	4822 176 00011
4822 108 00565	Knob (1 and 8)	S2	Wettransformator	4822 108 00565	Botón	S5	Bobine transformator	4822 108 00565	4822 108 00565
A3 818 38	Spring in knob	S3	Transformateur	A3 818 38	Resorte en botón	S6	Transformator	A3 818 38	A3 818 38
4822 106 00436	Knob (9)	Z1	Transformator de red	4822 106 00436	Botón		Transformador de red	4822 106 00436	4822 106 00436
4822 110 00324	Dial			4822 110 00324	Cuadrante			4822 110 00324	4822 110 00324
979/75X1	Socket PU (5p)			979/75X1	Enchufe hembra PU			979/75X1	979/75X1
979/20	Spring for socket			979/20	Resorte para enchufe hembra			979/20	979/20
A3 410 65	Socket LS			A3 410 65	Enchufe hembra h-p			A3 410 65	A3 410 65
979/5x180	Socket LS			979/5x180	Enchufe hembra magn.			979/5x180	979/5x180
JE 303 02	Socket PU-antenna			JE 303 02	Hembrilla PU-antena			JE 303 02	JE 303 02
A3 229 76	Voltage adapter			A3 229 76	Selector de tensión			A3 229 76	A3 229 76
A3 311 15	Lampholder			A3 311 15	Portalámpara			A3 311 15	A3 311 15
P4 120 10/AA	Roller (20 mm)			P4 120 10/AA	Rollito (20 mm)			P4 120 10/AA	P4 120 10/AA
P5 420 26/7C	Push button (2-7)			P5 420 26/7C	Pulsador (2-7)			P5 420 26/7C	P5 420 26/7C
P5 420 38/7C	Push button (10-14)			P5 420 38/7C	Pulsador (10-14)			P5 420 38/7C	P5 420 38/7C
A9 885 07	Plate behind dial			A9 885 07	Placa detrás cuadrante			A9 885 07	A9 885 07
A3 758 24	Window for EM80			A3 758 24	Ventanilla para EM80			A3 758 24	A3 758 24
A3 810 77	Spring fuse holder			A3 810 77	Resorte portafusible			A3 810 77	A3 810 77
A3 265 61	Fz unit			A3 265 61	Unidad FM			A3 265 61	A3 265 61
4822 107 00313	FM stereo adapter			4822 107 00313	FM stereo adapter			4822 107 00313	4822 107 00313
S1				S1				S1	
S2				S2				S2	
S3				S3				S3	
S4				S4				S4	
S5				S5				S5	
S6				S6				S6	
S7				S7				S7	
S8				S8				S8	
S9				S9				S9	
S10				S10				S10	
C15				C15				C15	
S11				S11				S11	
S12				S12				S12	
S13				S13				S13	

PARTS WHICH ARE NOT MENTIONED REFER TO OUR CATALOGUE OF SERVICE PARTS. - VOOR NIET GEMENDE ONDERDELEN ZIE ONZE CATALOGUS VOOR SERVICE-ONDERDELEN. JGB/JD
 DES PIÈCES PAS MENTIONNÉES VOIR NOTRE CATALOGUE POUR PIÈCES SERVICE. - POUR NIET GEMENDE TEILE ZIEH UNSEREN KATALOG VON SERVICE EINZELTEILE.
 PARA COMPONENTES NO MENCIONADOS SE REMITE A NUESTRO CATALOGO DE ACCESORIOS DE SERVICIO.