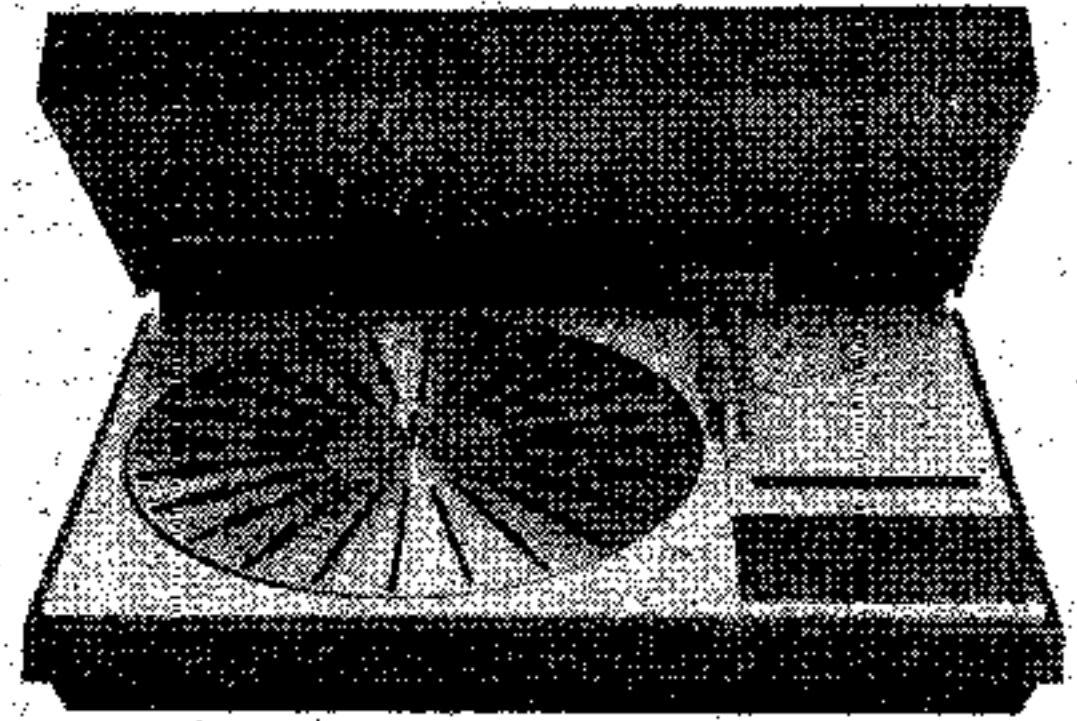


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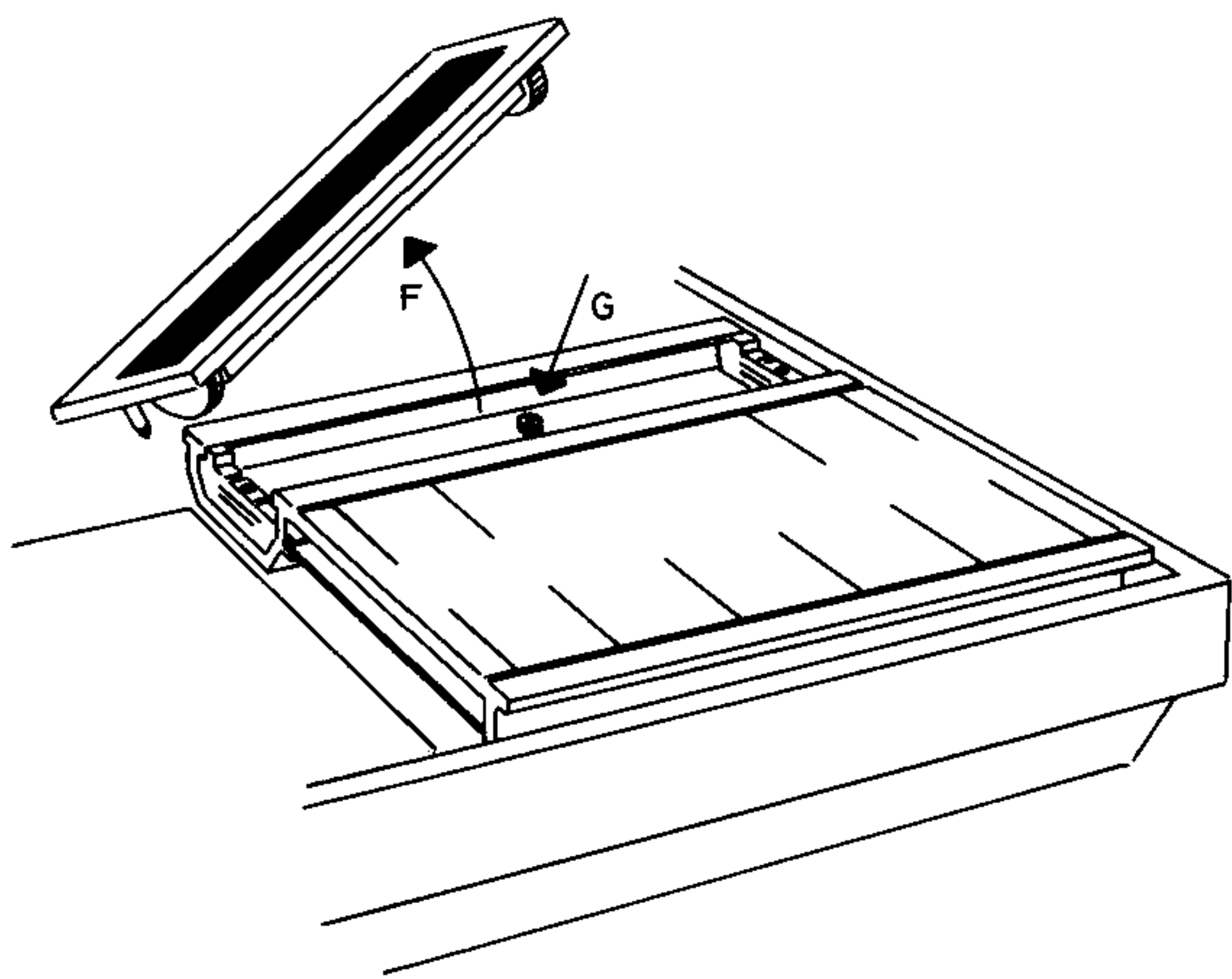
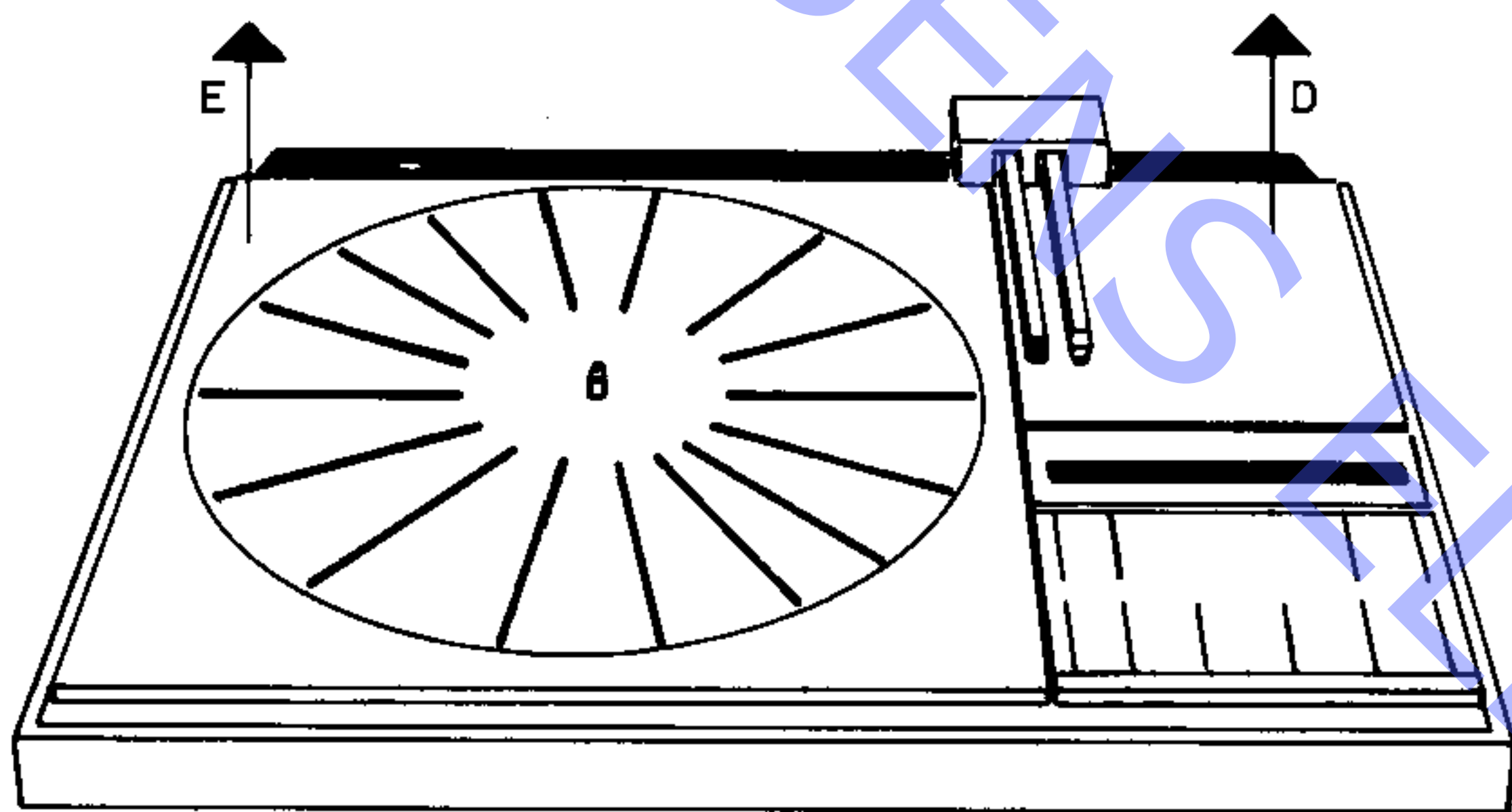
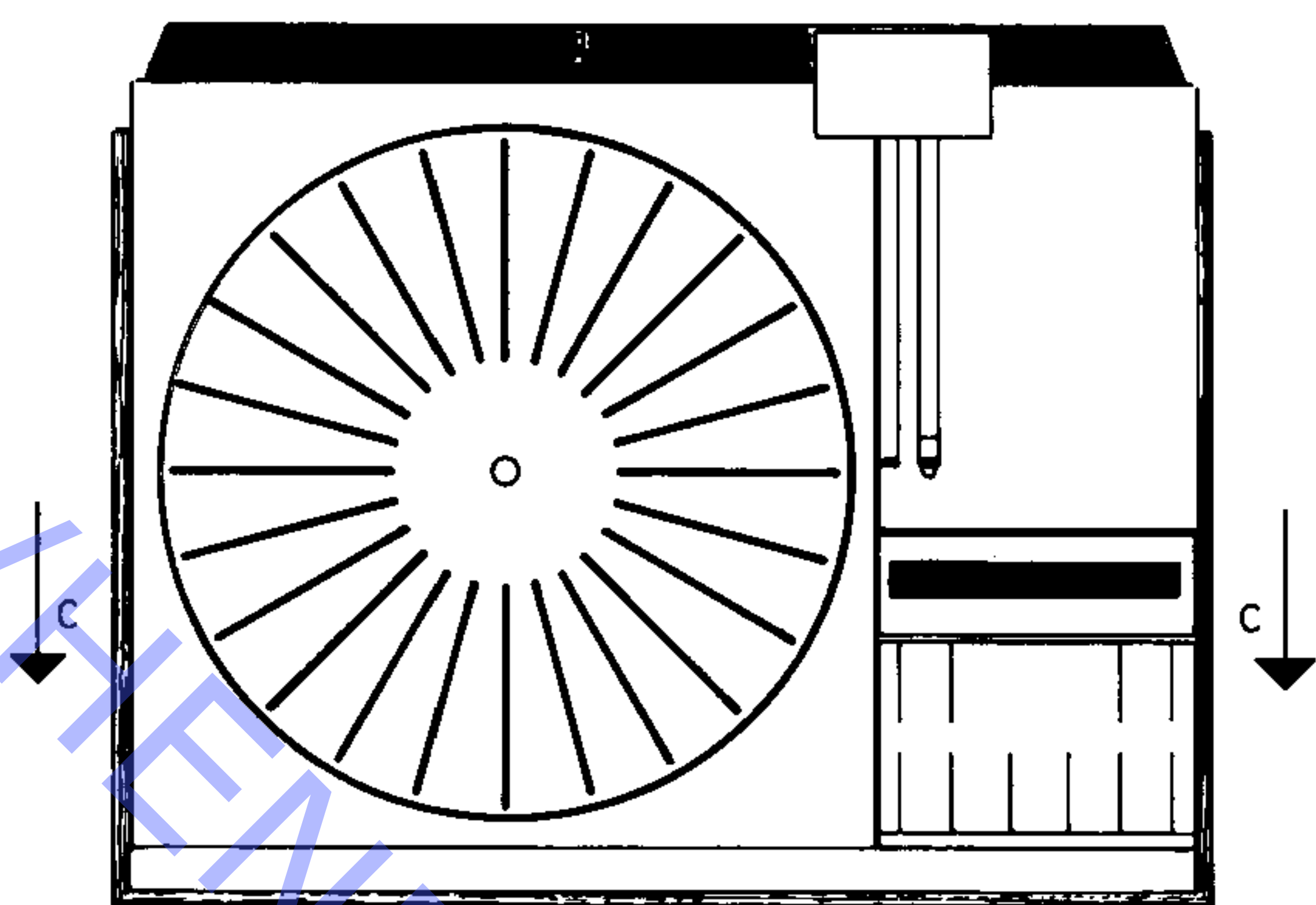
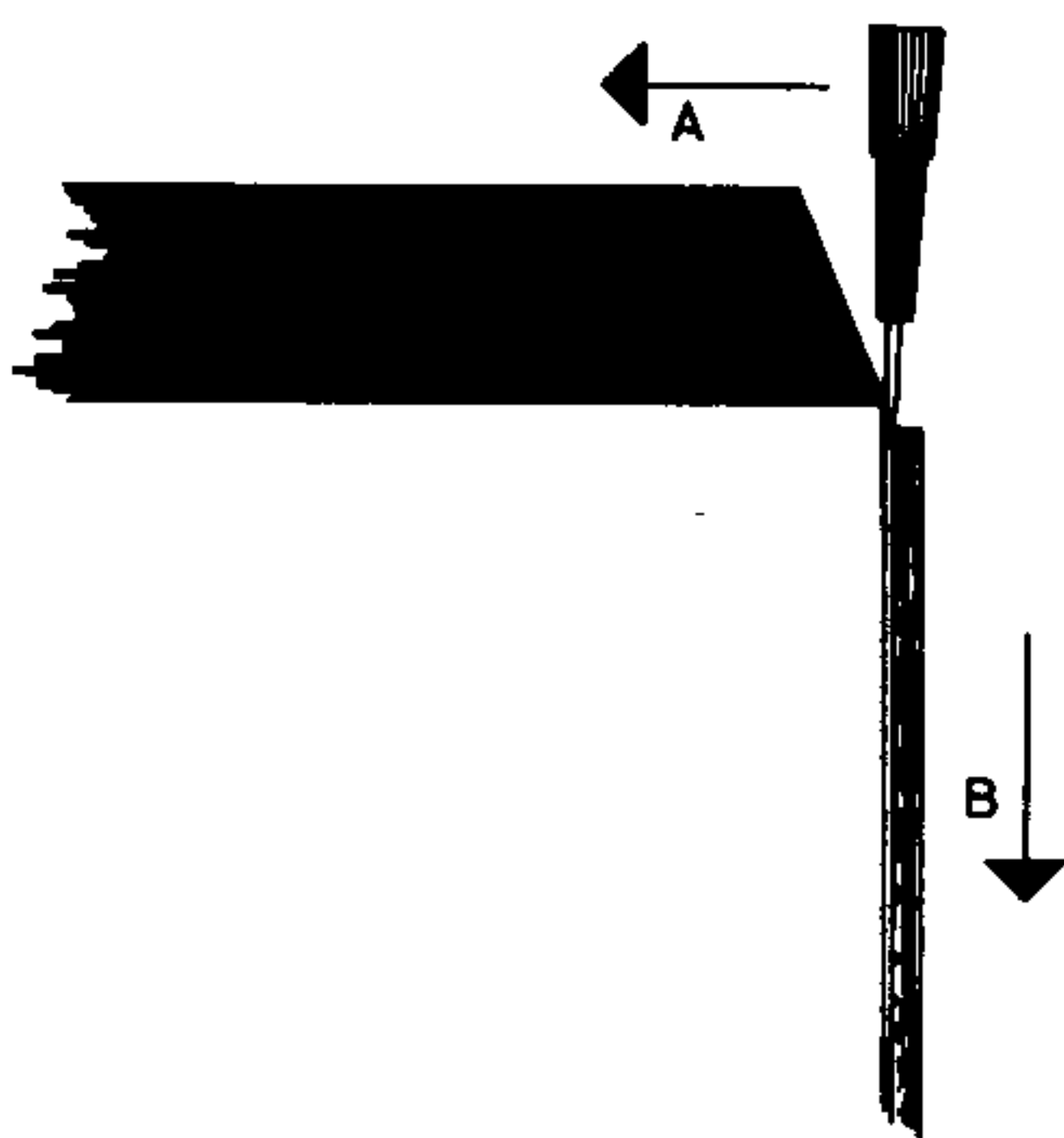
BEOGRAM 4002-6000

TYPE 5501-5502



ABO-CENTER V/HENRIKSENS ELEKTRONIK

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ABO-CENTER VIKTORIKSEMS ELEKTRONIK

TECNICAL DATA	DIN 45 500 requirements	BEOGRAM 4002	BEOGRAM 6000
Type No.		5501	5502
Sound system		Stereo, matrix	CD-4, Stereo, matrix
Output		2 x 1 mV	4 x 200 mV/470 k ohms
Speeds		33 - 45 rpm	33 - 45 rpm
Tone arm		Tangential	Tangential
Pickup cartridge		MMC 4000	MMC 6000
Automatic record-size		Yes	Yes
Automatic pickup movement		Yes	Yes
Automatic speed selection		Yes	Yes
Wow and flutter DIN	< ± 0,2%	< ± 0,05%	< ± 0,05%
Wow and flutter WRMS		< ± 0.025%	< ± 0,025%
Rumble, DIN unweighted	> 35 dB	> 42 dB	> 45 dB
Rumble, DIN weighted	> 55 dB	> 65 dB	> 65 dB
Speed deviation	< + 1,5% - 1%	< 0,02%	< 0,02%
Speed control range		> 6%	> 6%
Dial for speed		2 pointers	2 pointers
Stylus pressure range		0 - 1,5 gram	0 - 1,5 gram
Tangential tracking		0,04°	0,04°
Lift system		Electronic	Electronic
Antiskating		Parallel tracking angle compensated	Parallel tracking angle compensated
Motor		Controlled synchronous	Controlled synchronous
Drive system		Belt	Belt
Turntable		30 cm 2,2 kg	30 cm 2,2 kg
Dust cover		Hinged and detachable	Hinged and detachable
Power supply		110 - 130 - 220 - 240 volts	110 - 130 - 220 - 240 volts
Frequency		50 - 60 Hz	50 - 60 Hz
Power consumption		40 watts	50 watts
Dimensions W x H x D		49 x 10 x 38 cm	49 x 10 x 38 cm
Weight		12 kg	12 kg

Pick-up		MMC 4000	MMC 6000
Stylus		Elliptical naked diamond	Pramanik diamond
Radius of curvature	Spherical 15 µm ± 5 µm	5 x 17 µm	(CD-4 quadro)
Frequency range	40 - 12.000 Hz ± 5 dB 63,5 - 8.000 Hz ± 2 dB	20 - 25.000 Hz ± 1,5 dB	20 - 15.000 Hz ± 1,5 dB 30 - 45.000 Hz A-Rating
Channel separation 1000 Hz	≥ 20 dB	> 25 dB	> 25 dB
400 - 10000 Hz	≥ 15 dB	> 20 dB	> 20 dB
Channel difference	≤ 2 dB	< 1,5 dB	< 1,5 dB
FIM distortion	< 1%	< 1%	< 1%
Recommende stylus pressure	< 5 gram	1 gram	1 gram
Compliance	> 4 x 10 ⁻⁶ cm/dyn	30 x 10 ⁻⁶ cm/dyn	30 x 10 ⁻⁶ cm/dyn
Effective tip mass		0,4 mg	0,22 mg
Output mV/cm/sec.		0,6 mV/47 k ohms	0,6 mV/100 k ohms

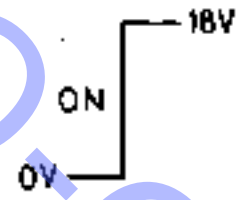
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Symboler
Symbols
Symbole

Som supplement til spændingsangivelserne benyttes symboler fra betjeningspanelet samt fra slædekontakterne til at angive, at en DC spænding i et kredsløb ændrer sig fra et niveau til et andet.

As a supplement to the measuring specification symbols from the operating panel and from the carrier switch are used to indicate that a DC voltage in a circuit changes from one level to another e.g.

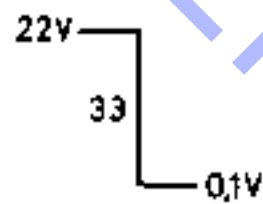
Als Ergänzung zu den Spannungsangaben werden die Symbole vom Bedienungspanel und von den Schlittenkontakten dazu benutzt, anzugeben, dass eine DC Spannung in einer Kreislauflauf sich von einem Niveau auf ein anderes ändert.



F.eks. betyder dette symbol, at spændingen springer fra 0 til 18 V, når panelkontakten ON aktiveres.

This symbol indicates that the voltage goes from 0 to 18 V when activating panel switch ON.

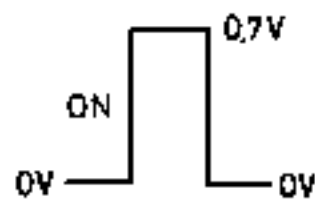
Z.B. bedeutet dieses Symbol, dass die Spannung von 0 auf 18 Volt springt, wenn den Kontakt ON aktiviert wird.



Dette symbol betyder, at spændingen springer fra 22 V til 0,1 V, når panelkontakten 33 aktiveres.

This symbol indicates that the voltage goes from 22 V to 0,1 when activating panel switch 33.

Dieses Symbol bedeutet, dass die Spannung von 22 Volt auf 0,1 Volt springt, wenn den Panelkontakt 33 aktiviert wird.

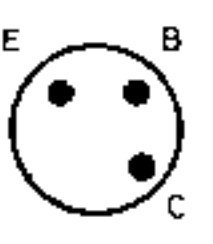
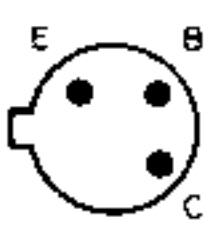

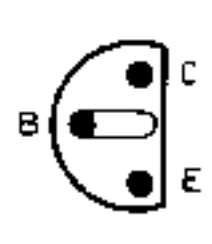
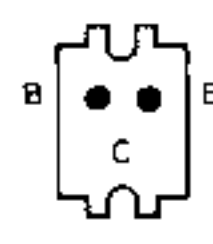
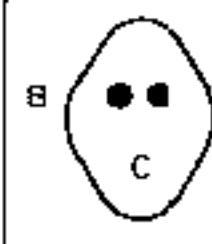
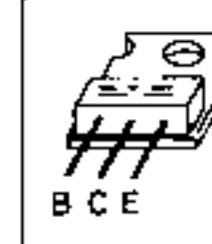


Dette symbol betyder, at spændingen springer fra 0 til 0,7 V, så længe ON kontakten aktiveres, hvorefter spændingen igen springer på 0 V.

This symbol indicates that the voltage goes from 0 to 0,7, as long as the ON switch is activated, whereafter the voltage goes to 0 again.

Dieses Symbol bedeutet, dass die Spannung von 0 auf 0,7 springt, solange den Kontakt ON aktiviert wird, worauf die Spannung wieder auf 0 Volt springt.

DIAGRAM 1 Beogram 4002 Type 5501 until no. 257556
Beogram 6000 Type 5502 until no. 260028

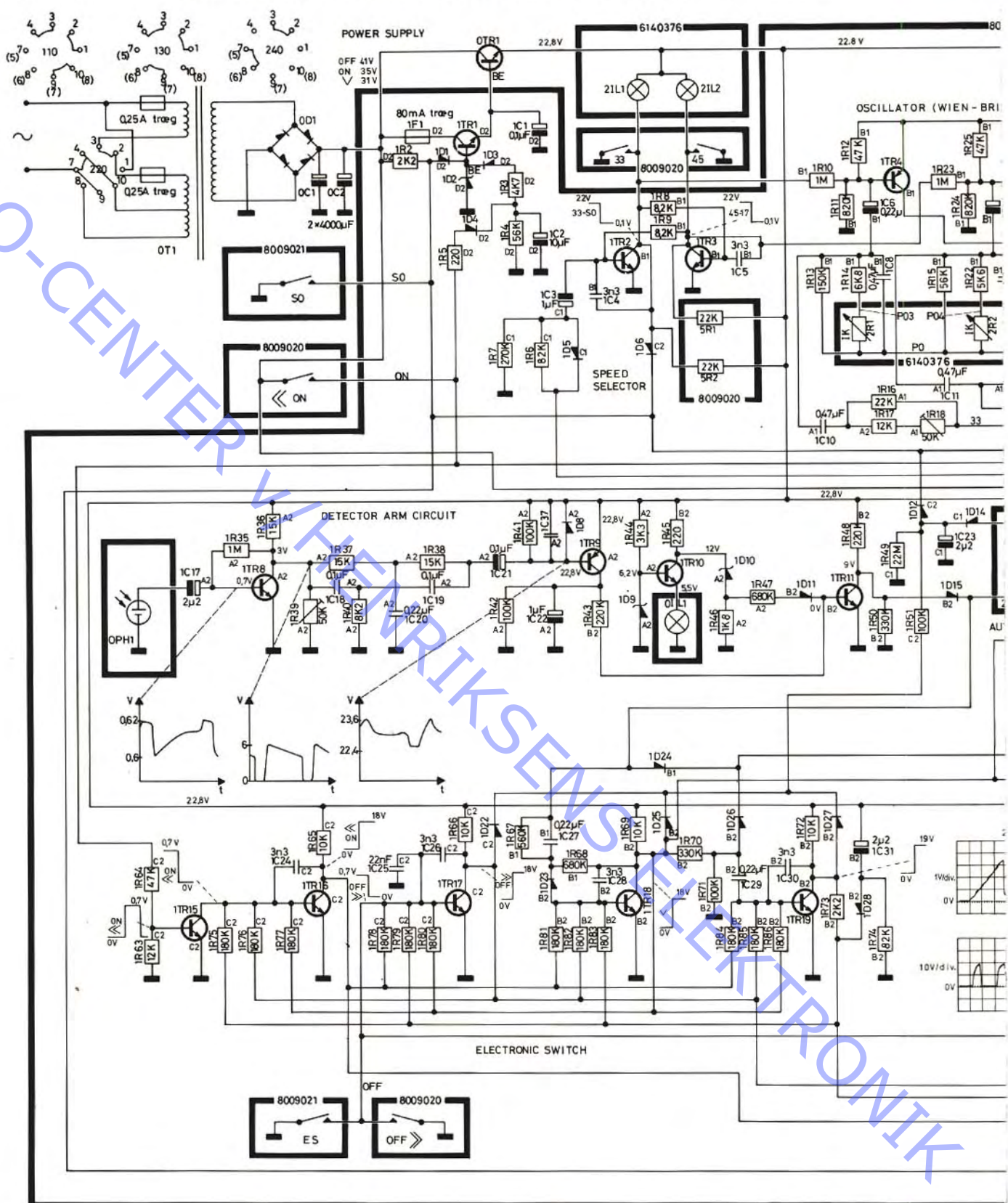
INDEX							
8320097	BC207B	BC107B	BC182BL	BC547B BC237B BC182B BC171B			
8320103					2N5034 2N5035		
8320135		MM3005/ MM4005 BC143/ BC144 BC143/ BC142					
8320161		BC261B	BC212BL	BC212B BC251B			
8320222					BD182 2N3055		
8320232		BC142 BC144					
8320265						TIP32	
8320266						TIP31	
8320295			BFR41	BC337			
8320312						TIP41A	

0TR1 8320103	1TR7 8320232	1TR19 8320097
0TR1 8320222	1TR8 8320097	1TR20 8320097
0TR2 8320266	1TR9 8320161	1TR21 8320097
0TR3 8320265	1TR10 8320295	1TR22 8320097
0TR4 8320312	1TR11 8320097	1TR23 8320161
1TR1 8320232	1TR12 8320097	1TR24 8320135
1TR2 8320097	1TR13 8320097	1TR25 8320135
1TR3 8320097	1TR14 8320232	1TR26 8320135
1TR4 8320161	1TR15 8320097	1TR27 8320135
1TR5 8320161	1TR16 8320097	1TR28 8320097
1TR6 8320232	1TR17 8320097	1TR29 8320161
	1TR18 8320097	

0D1	8310020	B80C2200	
1D2	8300054	ZPD24V±5%	BZX79C24V0
1D9	8300201	ZPD6V2±5%	BZX79C6V2
1D10	8300053	ZPD15V±5%	BZX79C15V0
1D12	8300101	BAX16	BZY88C15
3D1	8300102	IN4004	EM504
Other diodes	8300058	IN4148	SFD184

DIAGRAM 1

Beogram 4002 Type 5501 until no. 257556/Beogram 6000 Type 5502 until no. 260028



Alle DC spændinger er positive i forhold til stel, og de er målt med roterende pladetallerken, med hævet pick-up arm og med detektorarmen inde over en plade.

Spændingerne er målt med voltmeter med en indre modstand på mindst 2 Mohm.

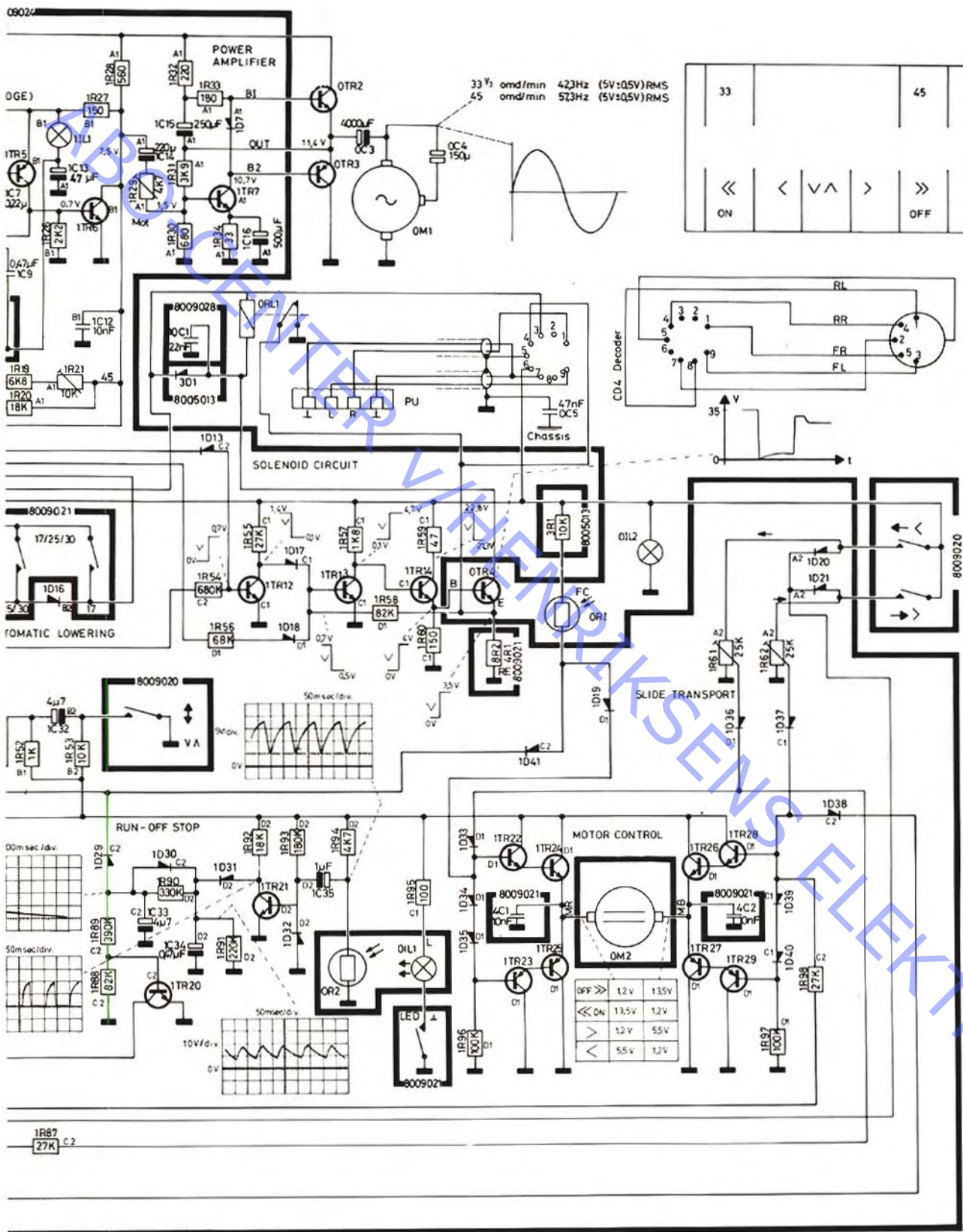
De angivne impulser i detektorarmskredsløbet er målt med roterende pladetallerken og med detektorarmen inde over ribberne uden plade på. Impulserne i udløbsstoppet er målt med pick-up'en sænket i en udløbsrille med en stigning på ca. 3 mm/omdr. på 30 cm plade.

All DC voltages are positive in proportion to chassis table and raised pick-up arm and with the detector arm

The voltages are measured by voltmeter and an inner

The stated impulses of the detector arm circuit are measured with the detector arm over the ribs without any record on

The impulses of the outlet stop are measured with the pick-up arm lowered in a groove with a rise of approx. 3 mm/turns on 30 cm record.



and they are measured with rotating turn-rm over a record.

resistor of at least 2 M ohms.

measured with rotating turntable and with

a pick-up lowered into an outlet groove

Alle DC Spannungen sind positiv im Verhältnis zu Masse und sie sind mit rotierendem Plattenteller, mit gehobenem Tonarm und mit dem Detektorarm über einer Platte gemessen.

Die Spannungen sind mit Voltmeter gemessen (Innenwiderstand min. 2 M ohm).

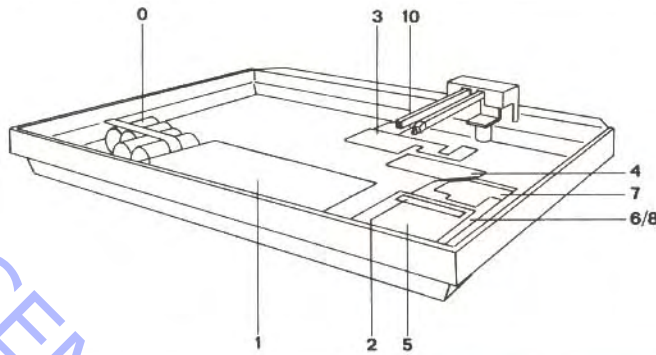
Die angegebenen Impulse des Detektorarmkreislaufes sind mit rotierendem Plattenteller und mit Detektorarm über den Ribben ohne Platte gemessen.

Die Impulse der Auslaufabschaltung sind mit dem Tonarm in einer Auslaufrille mit einer Steigung von etwa 3 mm/Umdrehungen auf 30 cm Platte gesenkt gemessen.

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DIAGRAM 1

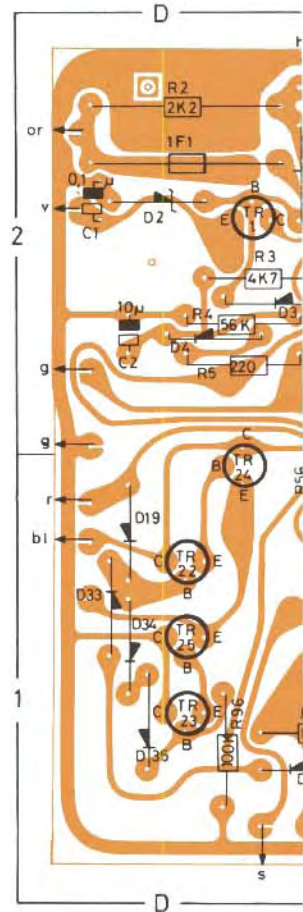
Beogram 4002 Type 5501 until no. 277556
Beogram 6000 Type 5502 until no. 260028



0		M	
		M1	8400066
		M2	8400062
C		RL	
C1	4200310 4000 µF 50 V	RL1	6810001
C2	4200310 4000 µF 50 V	PH	
C3	4200259 4000 µF 25 V	PH1	8760002 BP 100
C4	4200260 150 µF 10 V BIPOLAR	R	
C5	4130087 47 nF 10% 250 V	R1	5210004 ORP61
IL			
IL1	8230047 6 V 50 mA		
IL2	8230044 24 V 25 mA		

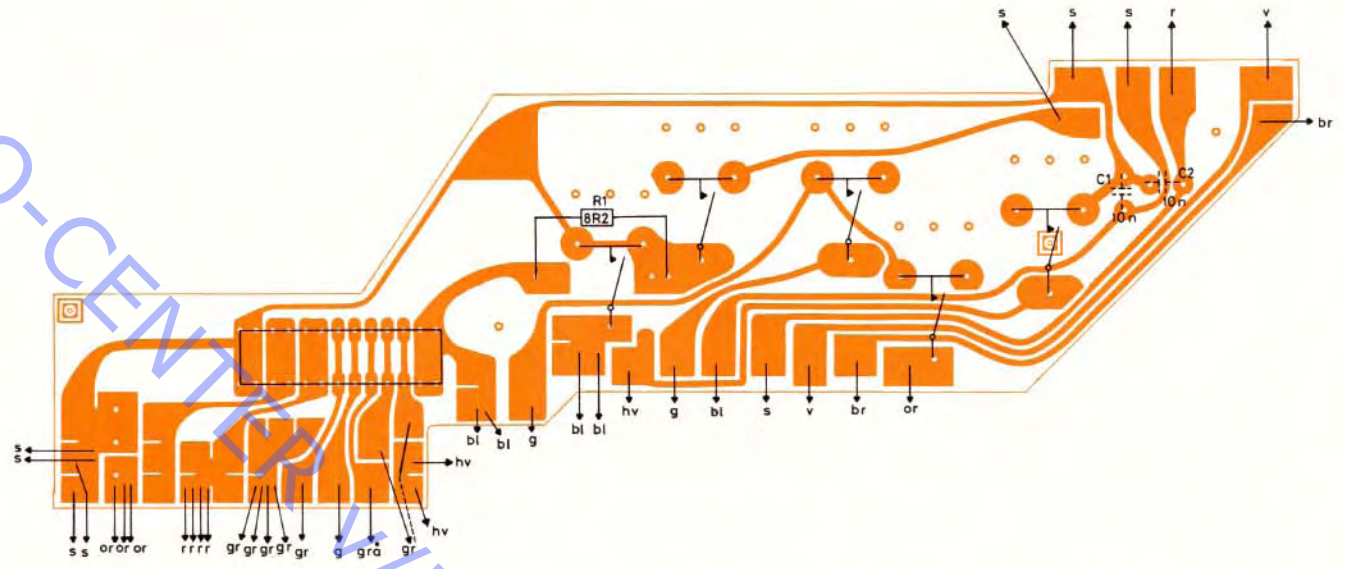
1 PC 8009024

R					
R2	5002028	2K2 Ohm 10% 1 W	R33	5010362	180 Ohm 5% 1/8 W
R3	5010048	4K7 Ohm 5% 1/8 W	R34	5010253	33 Ohm 5% 1/8 W
R4	5010061	56 KOhm 5% 1/8 W	R35	5010054	1 MOhm 5% 1/8 W
R5	5010092	220 Ohm 5% 1/8 W	R36	5010053	15 KOhm 5% 1/8 W
R6	5010091	82 KOhm 5% 1/8 W	R37	5010053	15 KOhm 5% 1/8 W
R7	5010083	270 KOhm 5% 1/8 W	R38	5010053	15 KOhm 5% 1/8 W
R8	5010154	8K2 Ohm 5% 1/8 W	R39	5370061	50 KOhm 20% LIN
R9	5010154	8K2 Ohm 5% 1/8 W	R40	5010154	8K2 Ohm 5% 1/8 W
R10	5010054	1 MOhm 5% 1/8 W	R41	5010049	100 KOhm 5% 1/8 W
R11	5010505	820 KOhm 5% 1/8 W	R42	5010049	100 KOhm 5% 1/8 W
R12	5010045	47 KOhm 5% 1/8 W	R43	5010120	220 KOhm 5% 1/8 W
R13	5010063	150 KOhm 5% 1/8 W	R44	5010076	3K3 Ohm 5% 1/8 W
R14	5010052	6K8 Ohm 5% 1/8 W	R45	5002017	220 Ohm 10% 1 W
R15	5010061	56 KOhm 5% 1/8 W	R46	5010066	1K8 Ohm 5% 1/8 W
R16	5010079	22 KOhm 5% 1/8 W	R47	5010074	680 KOhm 5% 1/8 W
R17	5010042	12 KOhm 5% 1/8 W	R48	5010120	220 KOhm 5% 1/8 W
R18	5370061	50 KOhm 20% LIN	R49	5001085	22 MOhm 10% 1/2 W
R19	5010052	6K8 Ohm 5% 1/8 W	R50	5010117	330 KOhm 5% 1/8 W
R20	5010135	18 KOhm 5% 1/8 W	R51	5010049	100 KOhm 5% 1/8 W
R21	5370074	10 KOhm 20% LIN	R52	5010040	1 KOhm 5% 1/8 W
R22	5010041	5K6 Ohm 5% 1/8 W	R53	5010059	10 KOhm 5% 1/8 W
R23	5010054	1MOhm 5% 1/8 W	R54	5010074	680 KOhm 5% 1/8 W
R24	5010505	820 KOhm 5% 1/8 W	R55	5010141	27 KOhm 5% 1/8 W
R25	5010045	47 KOhm 5% 1/8 W	R56	5010062	68 KOhm 5% 1/8 W
R26	5010064	2K2 Ohm 5% 1/8 W	R57	5010066	1K8 Ohm 5% 1/8 W
R27	5010057	150 Ohm 5% 1/8 W	R58	5010091	82 KOhm 5% 1/8 W
R28	5002022	560 Ohm 10% 1W	R59	5002008	470 Ohm 10% 1 W
R29	5370058	5 KOhm 20% LIN	R60	5010057	150 Ohm 5% 1/8 W
R30	5010144	680 Ohm 5% 1/8 W	R61	5370068	25 KOhm 20% LIN
R31	5010441	3K9 Ohm 5% 1/8 W	R62	5370068	25 KOhm 20% LIN
R32	5010092	220 Ohm 5% 1/8 W	R63	5010042	12 KOhm 5% 1/8 W
			R64	5010071	560 KOhm 5% 1/8 W
			R65	5010059	10 KOhm 5% 1/8 W
			R66	5010059	10 KOhm 5% 1/8 W
			R67	5010071	560 KOhm 5% 1/8 W
			R68	5010074	680 KOhm 5% 1/8 W
			R69	5010059	10 KOhm 5% 1/8 W
			R70	5010117	330 KOhm 5% 1/8 W
			R71	5010049	100 KOhm 5% 1/8 W
			R72	5010059	10 KOhm 5% 1/8 W
			R73	5010064	2K2 Ohm 5% 1/8 W
			R74	5010091	82 KOhm 5% 1/8 W
			R75	5010072	180 KOhm 5% 1/8 W
			R76	5010072	180 KOhm 5% 1/8 W
			R77	5010072	180 KOhm 5% 1/8 W
			R78	5010072	180 KOhm 5% 1/8 W
			R79	5010072	180 KOhm 5% 1/8 W
			R80	5010072	180 KOhm 5% 1/8 W
			R81	5010072	180 KOhm 5% 1/8 W
			R82	5010072	180 KOhm 5% 1/8 W
			R83	5010072	180 KOhm 5% 1/8 W
			R84	5010072	180 KOhm 5% 1/8 W
			R85	5010072	180 KOhm 5% 1/8 W
			R86	5010072	180 KOhm 5% 1/8 W
			R87	5010141	27 KOhm 5% 1/8 W
			R88	5010091	82 KOhm 5% 1/8 W
			R89	5010073	390 KOhm 5% 1/8 W
			R90	5010117	330 KOhm 5% 1/8 W
			R91	5010120	220 KOhm 5% 1/8 W
			R92	5010135	18 KOhm 5% 1/8 W
			R93	5010072	180 KOhm 5% 1/8 W
			R94	5010048	4K7 Ohm 5% 1/8 W
			R95	5002024	1 KOhm 10% 1W
			R96	5010049	100 KOhm 5% 1/8 W



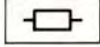
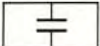
3-4

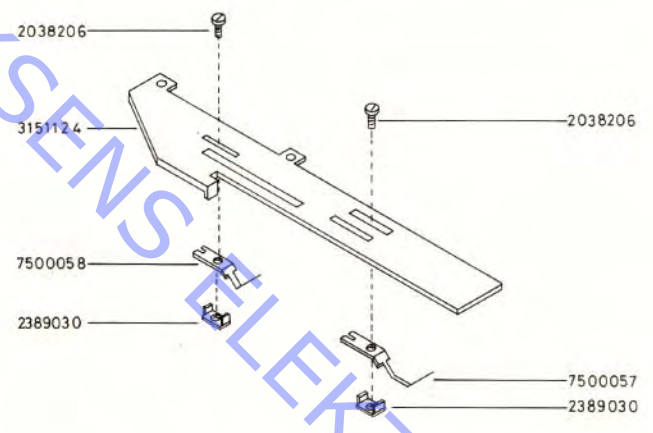
Beogram 4002 Type 5501 until no. 277556
 Beogram 6000 Type 5502 until no. 260028



SET FRA PRINTSIDE / SEEN FROM CONDUCTOR SIDE / VON DER LEITERSEITE AUSGESEHEN

4 PC 8009021

- R** 
R1 5110028 8R2 Ohm 10% 1W
- C** 
C1 4010041 10 nF - 20 + 100% 40 V
C2 4010041 10 nF - 20 + 100% 40 V



Beogram 4002 Type 5501 from no. 257556

Beogram 6000 Type 5502 from no. 260028

DIAGRAM 1

INDEX							
8320097	BC207B	BC107B	BC182BL	BC547B BC237B BC182B BC171B			
8320103					2N5034 2N5035		
8320135		MM3005/ MM4005 BC143/ BC144 BC143/ BC142					
8320161		BC261B	BC212BL	BC212B BC251B			
8320222					BD182 2N3055		
8320232		BC142 BC144					
8320265						TIP32	
8320266						TIP31	
8320295			BFR41	BC337			
8320312						TIP41A	

OTR 1	8320103	1TR 7	8320232	1TR 19	8320097
OTR 1	8320222	1TR 8	8320232	1TR 20	8320097
OTR 2	8320266	1TR 9	8320097	1TR 21	8320097
OTR 3	8320265	1TR 10	8320161	1TR 22	8320097
OTR 4	8320312	1TR 11	8320295	1TR 23	8320097
		1TR 12	8320097	1TR 24	8320097
1TR 1	8320232	1TR 13	8320097	1TR 25	8320135
1TR 2	8320161	1TR 14	8320097	1TR 26	8320161
1TR 3	8320097	1TR 15	8320097	1TR 27	8320135
1TR 4	8320097	1TR 16	8320232	1TR 28	8320135
1TR 5	8320161	1TR 17	8320097	1TR 29	8320097
1TR 6	8320161	1TR 18	8320097	1TR 30	8320135
				1TR 31	8320161

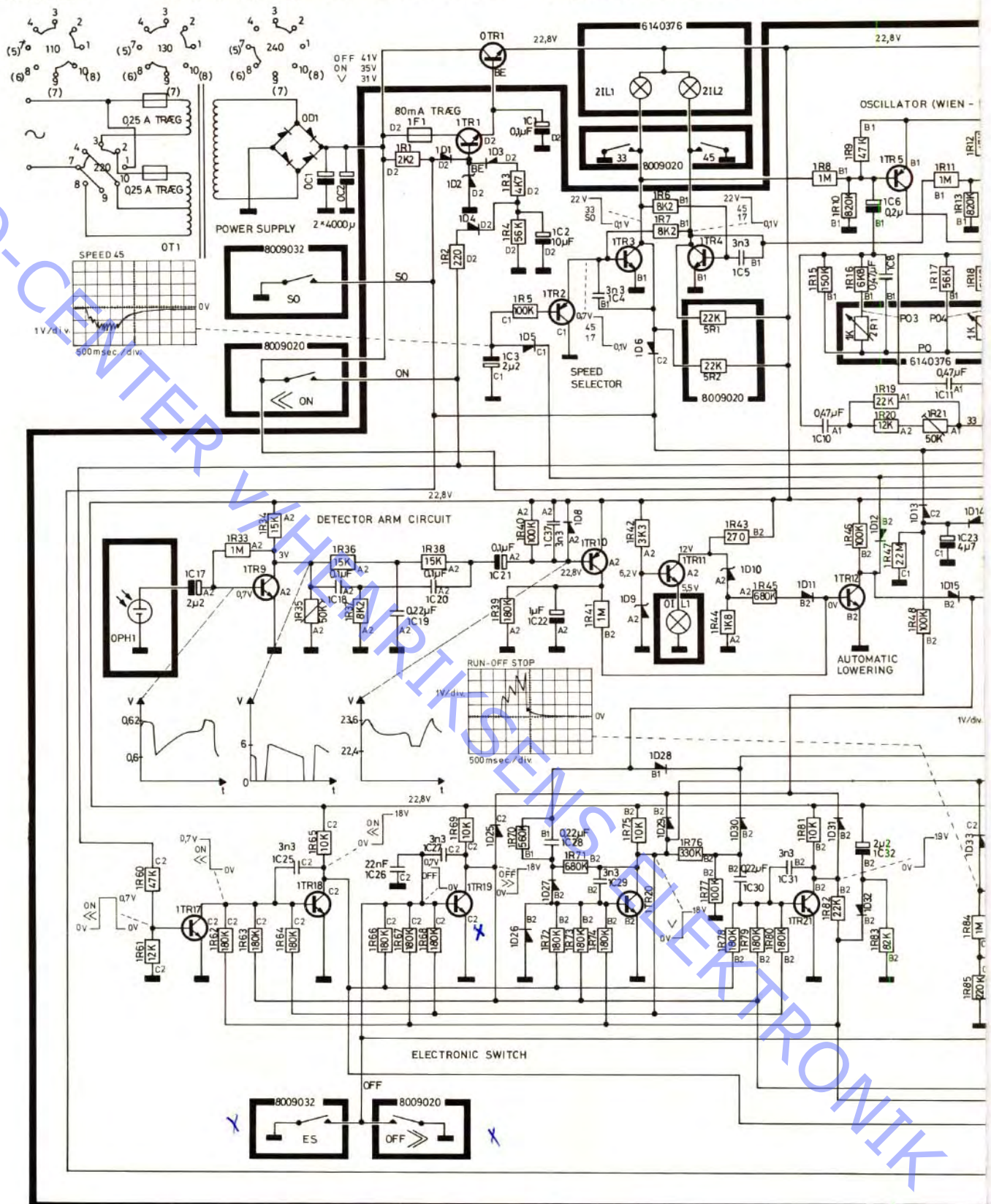
0D1	8310020	B80C2200		
1D2	8300054	ZPD24V±5%	BZX79C24V0	
1D9	8300201	ZPD6V2±5%	BZX79C6V2	
1D10	8300053	ZPD15V±5%	BZX79C15V0	BZY88C15
1D13	8300101	BAX16		
3D1	8300102	IN4004	EM504	
Other diodes	8300058	IN4148	SFD184	

Bang & Olufsen

DIAGRAM 1

Beogram 4002 Type 5501 from no. 257556

Beogram 6000 Type 5502 from no. 260028



Alle DC spændinger er positive i forhold til stel, og de er målt med roterende pladetallerken, med hævet pick-up arm og med detektorarmen inde over en plade. Spændingerne er målt med voltmeter med en indre modstand på mindst 2 Mohm.

De angivne impulser i detektorarmskredsløbet er målt med roterende pladetallerken og med detektorarmen inde over ribberne uden plade på.

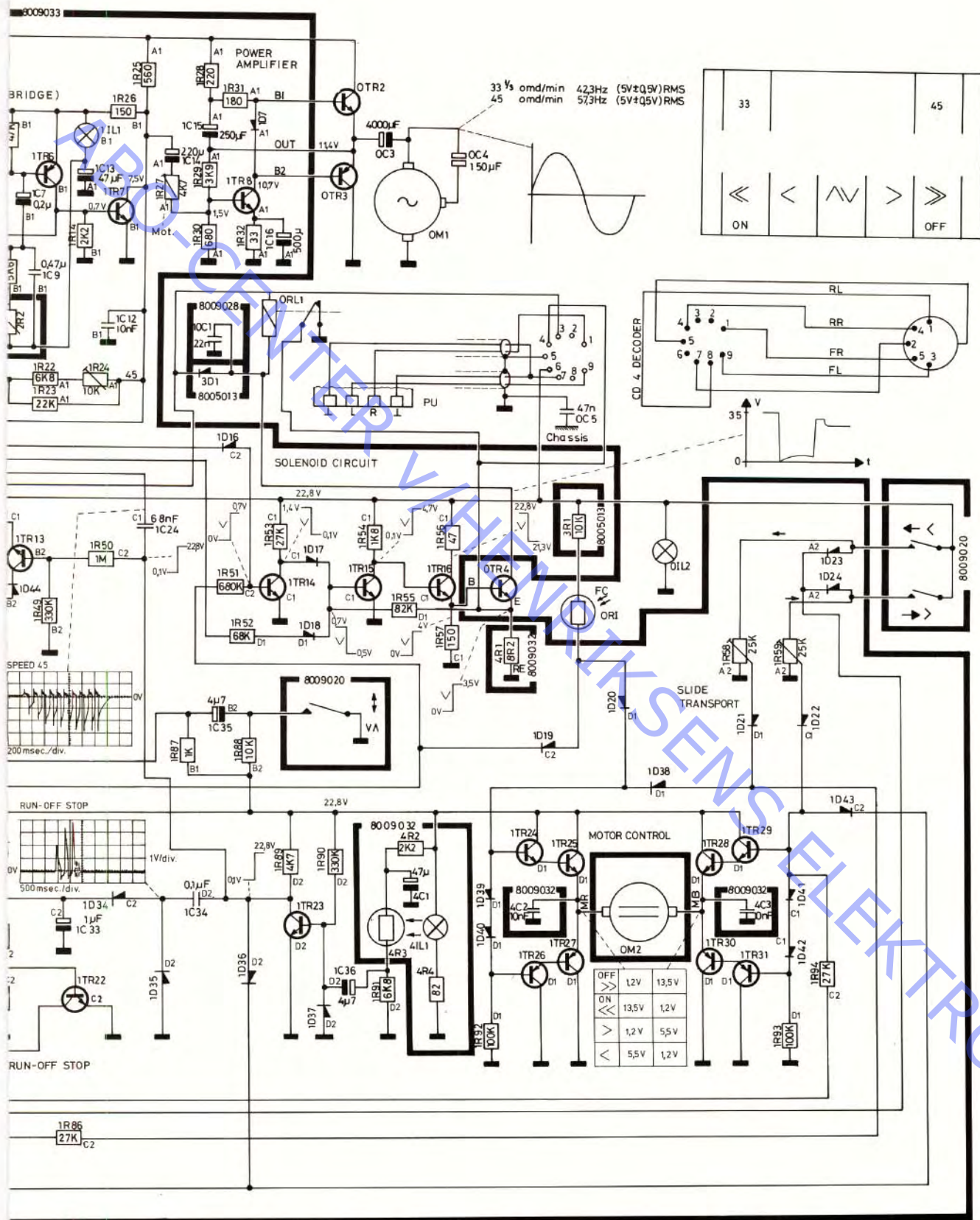
Oscillogrammer mærket SPEED 45 er målt med hævet pick-up arm under hurtig-ind transport, medens slædeskalaens speed 45 afsnit passerer fotomodstand og lampe.

Oscillogrammer mærket RUN-OFF STOP er målt med pick-up sænket i en udløbsrille, stigning ca. 3 mm/omdr., 30 cm plade.

All DC voltages are positive in proportion to the turntable and raised pick-up arm and with the detector arm measured by voltmeter with an inner resistor of

Oscillograms marked SPEED 45 are measured with transport while the speed 45 part of the carrier

Oscillograms marked RUN-OFF STOP are measured with pick-up lowered in a groove, rise approx. 3 mm/turns, 30 cm record



assis and they are measured with rotating letector arm over a record. The voltages are at least 2 M ohms.

with raised pick-up arm during fast inward dial passes photo-resistor and lamp.

ured with pick-up arm lowered into an out-ord.

Alle DC Spannungen sind positiv im Verhältnis zu Masse und sie sind mit rotierendem Plattenteller, mit gehobenem Tonarm und mit dem Detektorarm über einer Platte gemessen. Die Spannungen sind mit Voltmeter gemessen (Innenwiderstand min. 2 M ohm).

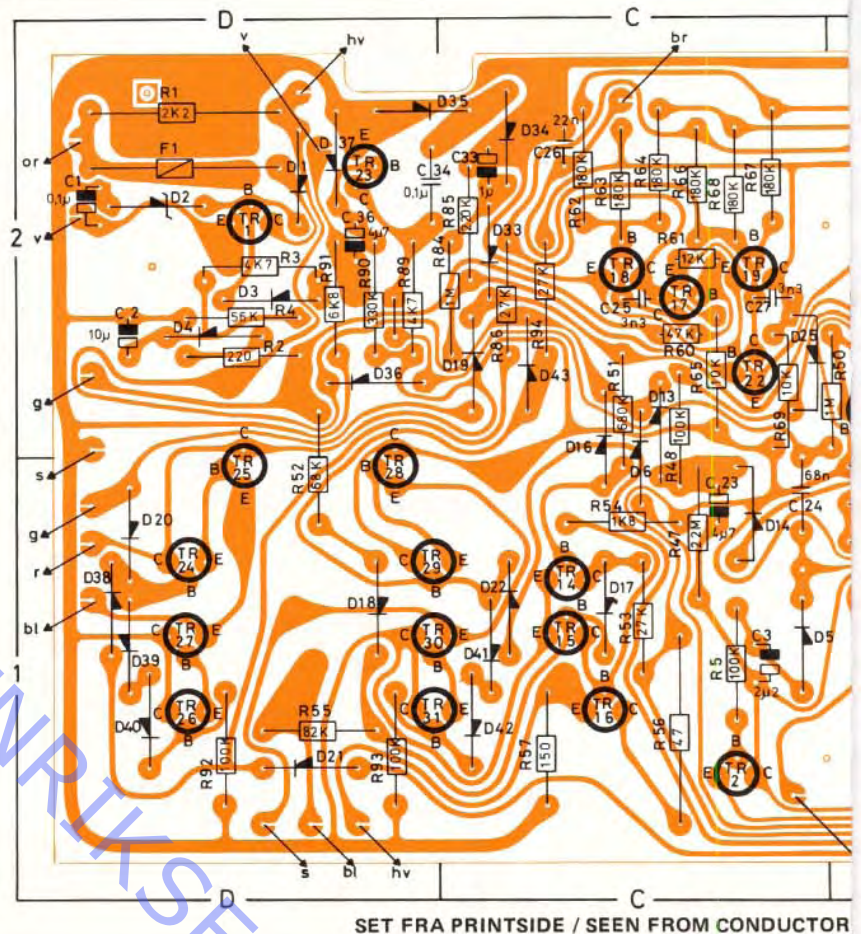
Oszillogramme gezeichnet SPEED 45 sind mit gehobenem Tonarm während schnellen Hineintransports gemessen, während Abschnitt speed 45 der Schlitzeskala Photowiderstand und Lampe passiert.

Oszillogramme gezeichnet RUN-OFF STOP sind mit dem Tonarm in einer Auslaufrille gesenkt, Steigung etwa 3 mm/Umdrehungen, 30 cm Platte, gemessen.

3-6

DIAGRAM 1

Beogram 4002 Type 5501 from no. 257556
 Beogram 6000 Type 5502 from no. 260028

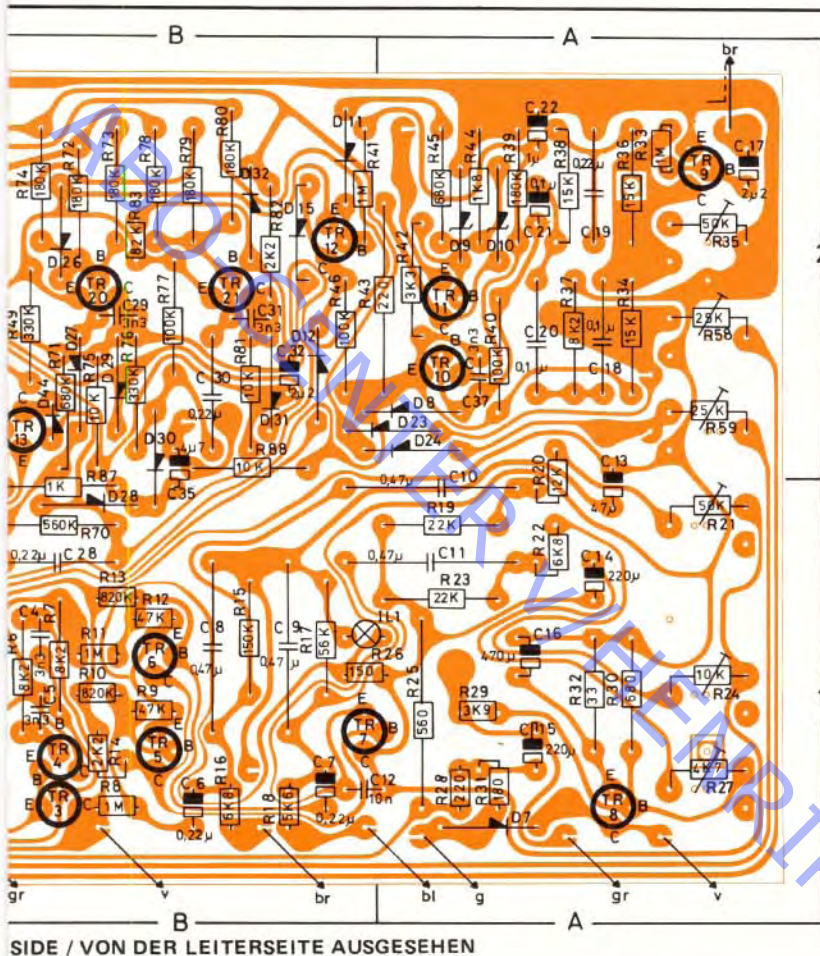


1 PC 8009033

R




R1	5002028	2K2 Ohm 10% 1 W	R30	5010144	680 Ohm 5% 1/8 W	R62	5010072	180 KOhm 5% 1/8 W
R2	5010092	220 Ohm 5% 1/8 W	R31	5010362	180 Ohm 5% 1/8 W	R63	5010072	180 KOhm 5% 1/8 W
R3	5010048	4K7 Ohm 5% 1/8 W	R32	5010253	33 Ohm 5% 1/8 W	R64	5010072	180 KOhm 5% 1/8 W
R4	5010061	56 KOhm 5% 1/8 W	R33	5010054	1 MOhm 5% 1/8 W	R65	5010059	10 KOhm 5% 1/8 W
R5	5010049	100 KOhm 5% 1/8 W	R34	5010053	15 KOhm 5% 1/8 W	R66	5010072	180 KOhm 5% 1/8 W
R6	5010154	8K2 Ohm 5% 1/8 W	R35	5370061	50 KOhm 20% LIN	R67	5010072	180 KOhm 5% 1/8 W
R7	5010154	8K2 Ohm 5% 1/8 W	R36	5010053	15 KOhm 5% 1/8 W	R68	5010072	180 KOhm 5% 1/8 W
R8	5010054	1 MOhm 5% 1/8 W	R37	5010154	8K2 Ohm 5% 1/8 W	R69	5010059	10 KOhm 5% 1/8 W
R9	5010640	47 KOhm 5% 1/8 W	R38	5010053	15 KOhm 5% 1/8 W	R70	5010071	560 KOhm 5% 1/8 W
R10	5010505	820 KOhm 5% 1/8 W	R39	5010072	180 KOhm 5% 1/8 W	R71	5010074	680 KOhm 5% 1/8 W
R11	5010054	1 MOhm 5% 1/8 W	R40	5010049	100 KOhm 5% 1/8 W	R72	5010072	180 KOhm 5% 1/8 W
R12	5010640	47 KOhm 5% 1/8 W	R41	5010054	1 MOhm 5% 1/8 W	R73	5010072	180 KOhm 5% 1/8 W
R13	5010505	820 KOhm 5% 1/8 W	R42	5010076	3K3 Ohm 5% 1/8 W	R74	5010072	180 KOhm 5% 1/8 W
R14	5010064	2K2 Ohm 5% 1/8 W	R43	5002018	270 Ohm 10% 1 W	R75	5010059	10 KOhm 5% 1/8 W
R15	5010063	150 KOhm 5% 1/8 W	R44	5010066	1K8 Ohm 5% 1/8 W	R76	5010117	330 KOhm 5% 1/8 W
R16	5010052	6K8 Ohm 5% 1/8 W	R45	5010074	680 KOhm 5% 1/8 W	R77	5010049	100 KOhm 5% 1/8 W
R17	5010061	56 KOhm 5% 1/8 W	R46	5010049	100 KOhm 5% 1/8 W	R78	5010072	180 KOhm 5% 1/8 W
R18	5010041	5K6 Ohm 5% 1/8 W	R47	5001085	22 MOhm 10% 1/2 W	R79	5010072	180 KOhm 5% 1/8 W
R19	5010079	22 KOhm 5% 1/8 W	R48	5010049	100 KOhm 5% 1/8 W	R80	5010072	180 KOhm 5% 1/8 W
R20	5010042	12 KOhm 5% 1/8 W	R49	5010117	330 KOhm 5% 1/8 W	R81	5010059	10 KOhm 5% 1/8 W
R21	5370061	50 KOhm 20% LIN	R50	5010054	1 MOhm 5% 1/8 W	R82	5010079	22 KOhm 5% 1/8 W
R22	5010052	6K8 Ohm 5% 1/8 W	R51	5010074	680 KOhm 5% 1/8 W	R83	5010091	82 KOhm 5% 1/8 W
R23	5010079	22 KOhm 5% 1/8 W	R52	5010062	68 KOhm 5% 1/8 W	R84	5010054	1 MOhm 5% 1/8 W
R24	5370074	10 KOhm 20% LIN	R53	5010141	27 KOhm 5% 1/8 W	R85	5010120	220 KOhm 5% 1/8 W
R25	5002022	560 Ohm 10% 1 W	R54	5010066	1K8 Ohm 5% 1/8 W	R86	5010141	27 KOhm 5% 1/8 W
R26	5010057	150 Ohm 5% 1/8 W	R55	5010091	82 KOhm 5% 1/8 W	R87	5010040	1 KOhm 5% 1/8 W
R27	5370058	4K7 Ohm 20% LIN	R56	5002008	47 Ohm 10% 1 W	R88	5010059	10 KOhm 5% 1/8 W
R28	5010092	220 Ohm 5% 1/8 W	R57	5010057	150 Ohm 5% 1/8 W	R89	5010048	4K7 Ohm 5% 1/8 W
R29	5010069	3K9 Ohm 5% 1/8 W	R58	5370068	25 KOhm 20% LIN	R90	5010117	330 KOhm 5% 1/8 W
			R59	5370068	25 KOhm 20% LIN	R91	5010052	6K8 Ohm 5% 1/8 W
			R60	5010640	47 KOhm 5% 1/8 W	R92	5010049	100 KOhm 5% 1/8 W
			R61	5010042	12 KOhm 5% 1/8 W			




SIDE / VON DER LEITERSEITE AUSGESEHEN


R93 5010049 100 KOhm 5% 1/8 W
 R94 5010141 27 KOhm 5% 1/8 W

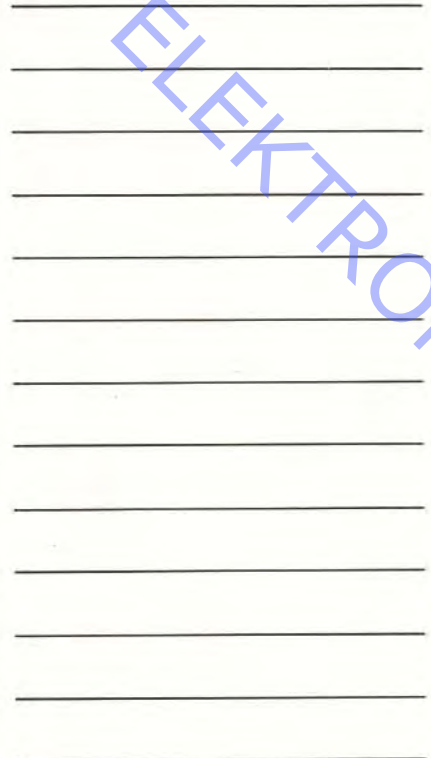
C 

C1 4200169 0,1 µF 35 V
 C2 4201065 10 µF 63 V
 C3 4201069 2µ2 F 35 V
 C4 4011025 3n3 F 10% 100 V
 C5 4011025 3n3 F 10% 100 V
 C6 4201072 0,22 µF 35 V
 C7 4201072 0,22 µF 35 V
 C8 4130029 470 nF 10% 250 V
 C9 4130029 470 nF 10% 250 V
 C10 4130029 470 nF 10% 250 V
 C11 4130029 470 nF 10% 250 V
 C12 4010041 10 nF - 20% + 100% 40 V
 C13 4201074 47 µF 40 V
 C14 4200183 220 µF 25 V
 C15 4200183 220 µF 25 V
 C16 4200109 470 µF 6 V
 C17 4201069 2µ2 F 35 V
 C18 4130075 100 nF 20% 250 V
 C19 4130082 220 nF 20% 250 V
 C20 4130075 100 nF 20% 250 V
 C21 4200169 0,1 µF 35 V
 C22 4201057 1 µF 35 V
 C23 4200108 4µ7 F 25 V
 C24 4130100 68 nF 10% 250 V
 C25 4011025 3n3 F 10% 100 V
 C26 4010060 22 nF - 20% + 100% 40 V

C27 4011025 3n3F 10% 100 V
 C28 4130082 220 nF 20% 250 V
 C29 4011025 3n3F 10% 100 V
 C30 4130082 220 nF 20% 250 V
 C31 4011025 3n3F 10% 100 V
 C32 4201069 2µ2 F 35 V
 C33 4201057 1 µF 35 V
 C34 4130075 100 nF 20% 250 V
 C35 4200108 4µ7F 25 V
 C36 4200108 4µ7F 25 V
 C37 4011025 3n3F 10% 100 V

IL 
 IL1 8230041 6 V 30 mA

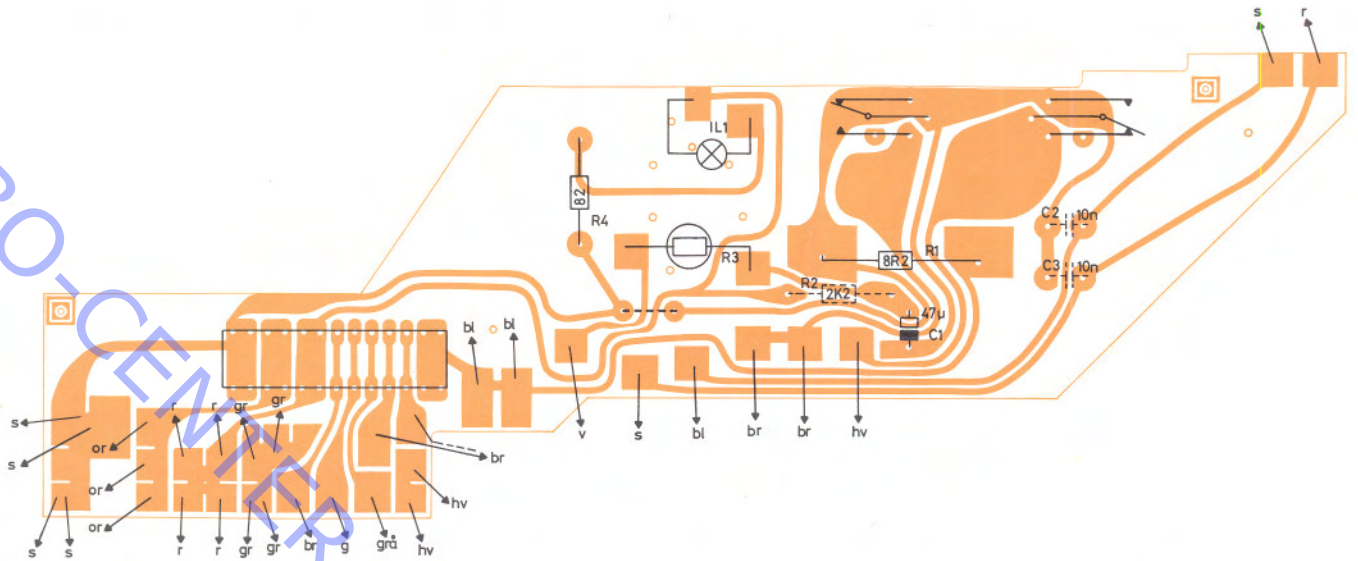
F 
 F1 6600023 80 mA-T/250 V



ELEXSENS ELEKTRONIK

~~Beogram 4002 Type 5501 from no. 257556~~
~~Beogram 6000 Type 5502 from no. 260028~~

Beogram 4002 Type 5501 from no. 257556
 Beogram 6000 Type 5502 from no. 260028



SET FRA PRINTSIDE / SEEN FROM CONDUCTOR SIDE / VON DER LEITERSEITE AUSGESEHEN

4 PC 8009032



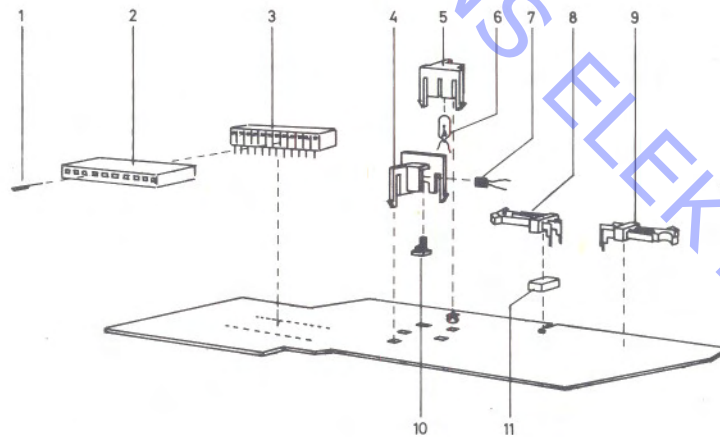
R1	5110028	8R2 Ohm 10% 1 W
R2	5010064	2K2 Ohm 5% 1/8 W
R3	5210005	RPY 58
R4	5010056	82 Ohm 5% 1/8 W



C1	4201074	47 uF 40 V
C2	4010041	10 nF - 20% + 100% 40 V



IL1	8230044	24 V 25 mA
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MEKANISK STYKLISTE FOR PC 8009032

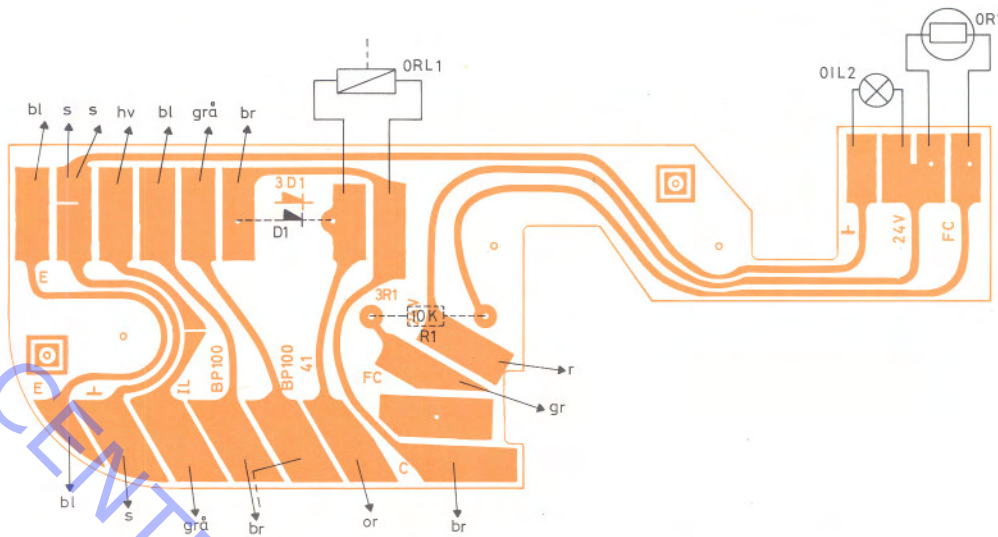
1	7500105	Stikben
2	7220060	Hus for stikben
3	7210072	Fatning
4	3131099	Hus
5	3131098	Hus
6	8230044	Lampe 24V - 25 mA
7	5210005	Fotomodstand RPY 58
8	7400115	Mikroomskifter
9	7400115	Mikroomskifter
10	3454170	Bundstykke
11	3103077	Fod

MECHANICAL PARTS LIST FOR PC 8009032

Pin
Housing for pin
Socket
Housing
Housing
Lamp 24 V - 25 mA
Photoresistor RPY 58
Switch
Switch
Bottom
Insert

MECHANISCHE STÜCKLISTE FÜR PC 8009032

Stift
Gehäuse für Stift
Fassung
Gehäuse
Gehäuse
Lampe 24 V - 25 mA
Fotowiderstand RPY 58
Umschalter
Umschalter
Bodenstück
Zwischeneinlegstück

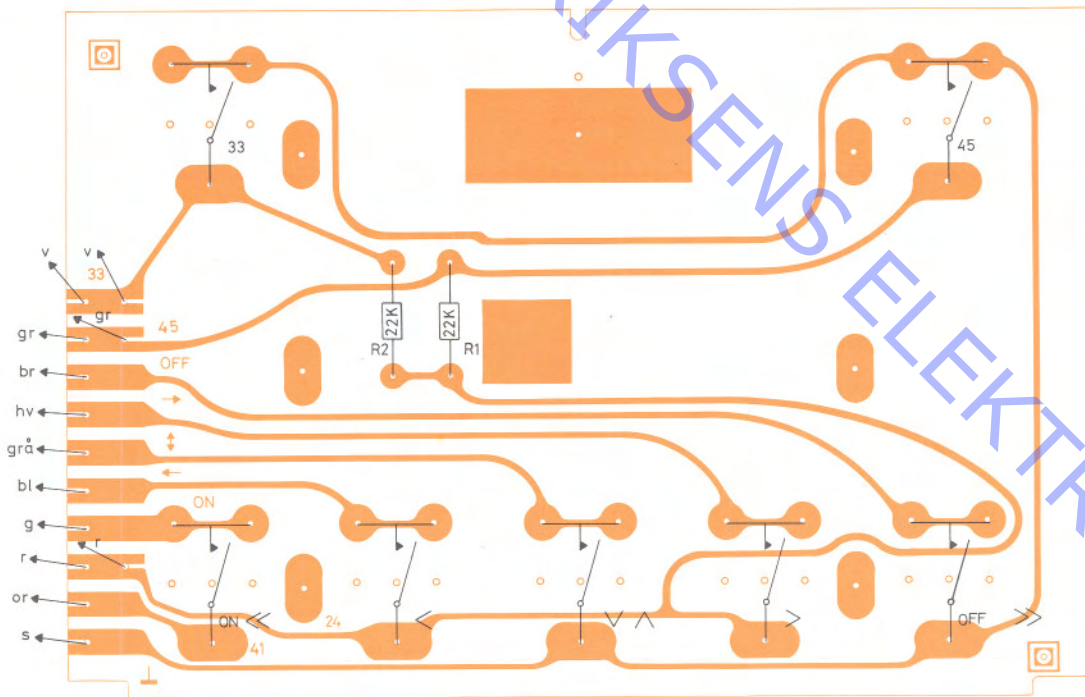


SET FRA PRINTSIDE / SEEN FROM CONDUCTOR SIDE / VON DER LEITERSEITE AUSGESEHEN

3 PC 8005013



R1 5010059 10 KOhm 5% 1/8 W



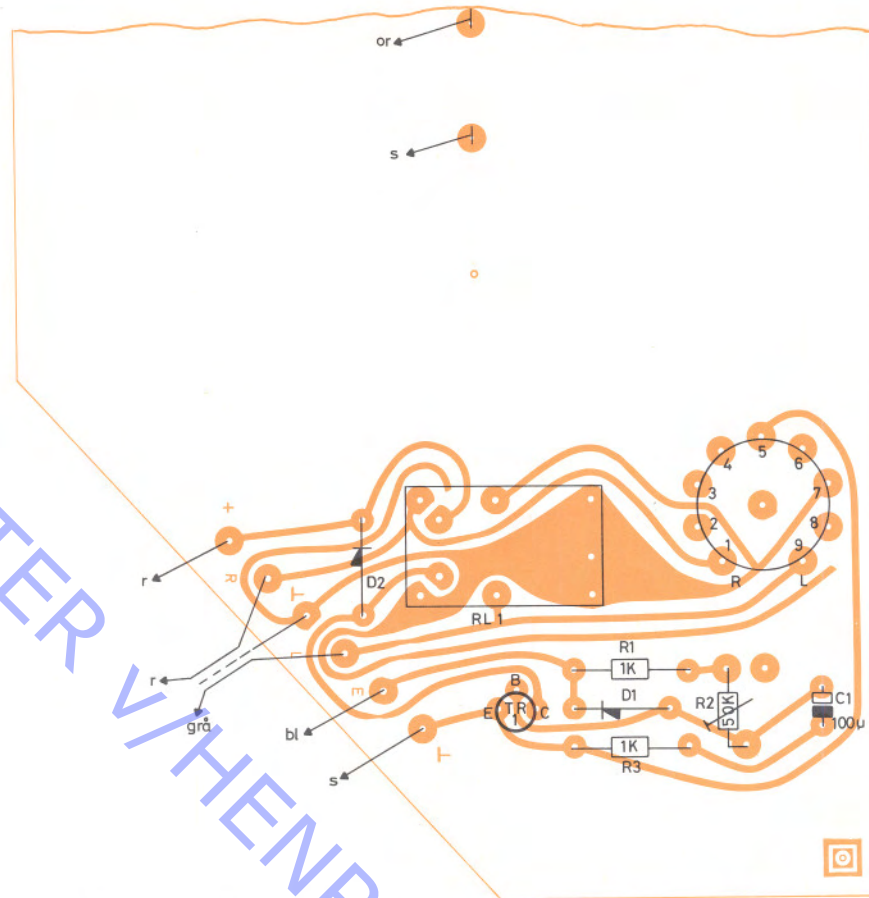
SET FRA PRINTSIDE / SEEN FROM CONDUCTOR SIDE / VON DER LEITERSEITE AUSGESEHEN

5 PC 8009020






R1 5010079 22 KOhm 5% 1/8 W
R2 5010079 22 KOhm 5% 1/8 W

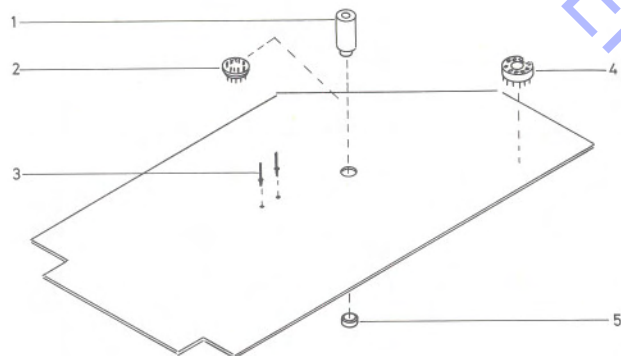
DIAGRAM 2



SET FRA PRINTSIDE / SEEN FROM CONDUCTOR SIDE / VON DER LEITERSEITE AUSGESEHEN

8 PC 8009029

R		C		RL	
R1	5370169 50 KOhm 20% LIN.	C1	4200098 100 µF 6 V 3	RL1	7600007
R2	5010040 1 KOhm 5% 1/8 W				
R3	5010040 1 KOhm 5% 1/8 W				



MEKANISK STYKLISTE FOR PC 8009029

MECHANICAL PARTS LIST FOR PC 8009029

MECHANISCHE STÜCKLISTE FÜR PC 8009029

1	2938092	Bøsning for dekoder	Bushing for decoder	Buchse für Dekoder
2	7220066	Noval stik	Noval plug	Novalstecker
3	7500013	Kontaktspyd	Contact spear	Kontaktstift
4	7203003	Noval fatning	Noval socket	Novalfassung
5	2938093	Bøsning, støtterør	Bushing, brace piping	Buchse, Rohranker

DIAGRAM 2

INDEX									
8320136	U1981E	3C2P	2N5245 3C2 TIS88A						
8320137				BC182B					
8320258						TIP31A	2N4922	2N5296	
8340028					MPSA 13 SPS5418				

6TR1 (201)	8320137	6TR10	8320137	6TR18	8320258
6TR3 (203)	8320137	6TR11	8320137		
6TR4 (204)	8320137	6TR12	8320137	7TR1 (201)	8320137
6TR5 (205)	8320136	6TR13	8320137	7TR2 (202)	8320354
6TR6 (206)	8320137	6TR14	8320137		
6TR7 (207)	8320137	6TR15	8320137	8TR1	8340028
6TR8 (208)	8320136	6TR16	8320137		
6TR9	8320137	6TR17	8320137		

INDEX		
8340038	LM381	
8340039		LM307
8340040	LM565	

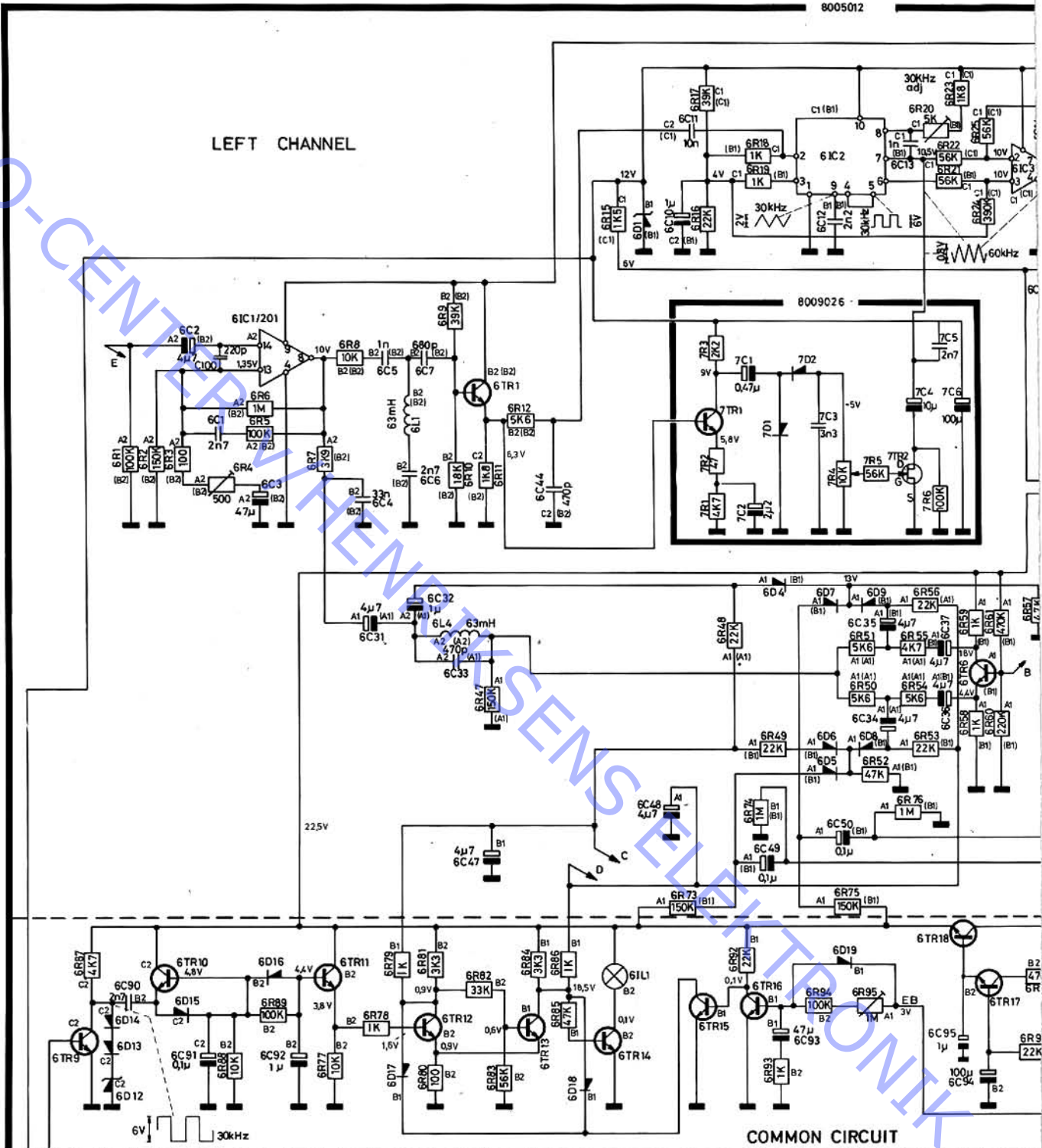
6IC1/201	8340038
6IC2 (202)	8340040
6IC3 (203)	8340039

6D1	8300029	ZF 12V±5%	BZX79 C12V0
6D2 (202)	8300009	OA90	
6D3 (203)	8300009	OA 90	
6D10 (210)	8300009	OA 90	
6D11 (211)	8300009	OA 90	
6D12	8300036	ZF 4;7V±5%	BZX79 C4V7
6D19	8300009	OA 90	
7D1 (201)	8300042	OA 91	
7D2 (202)	8300042	OA 91	
8D1	8300042	OA 91	
Other diodes	8300131	IN4148	

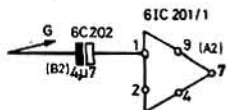
DIAGRAM 2

8005012

LEFT CHANNEL

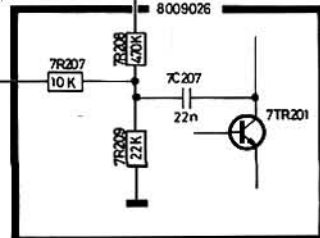


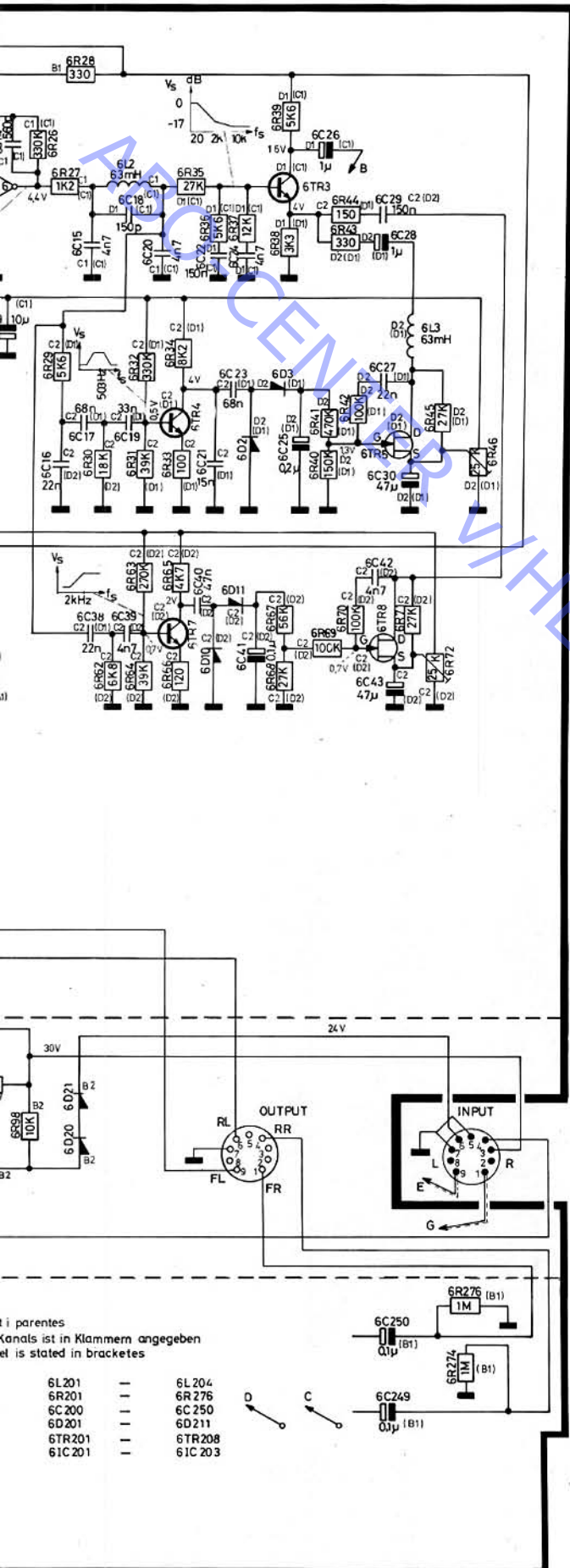
RIGHT CHANNEL



COMMON CIRCUIT

Højre kanals komponentplacering er angivet.
Die Komponentenabringung des rechten Kanals ist angegeben.
The component position of the right channel is indicated.

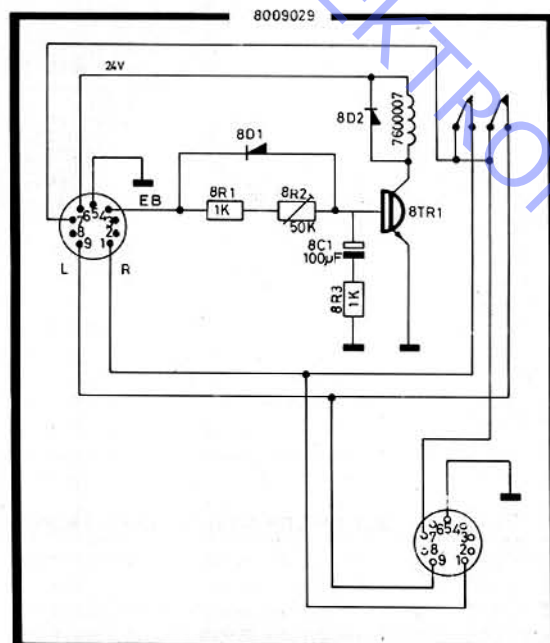


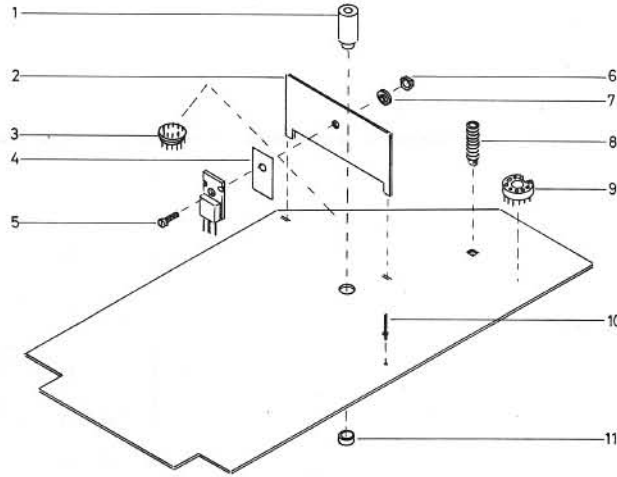


De angivne spændinger er positive i forhold til stel, og er målt med CD-4 signal på indgangen.
 Input – 60 dBm (775 μ V rms).
 f mod. = 1 kHz; Δf = 1,3 kHz.

The stated voltages are positive in proportion to the chassis, and measured with CD-4 signal at the inputs.
 Input – 60 dBm (775 μ V rms).
 f mod. = 1 kHz; Δf = 1,3 kHz.

Die angegebenen Spannungen sind positiv im Verhältnis zu dem Chassis und sind mit CD-4 Signal auf dem Eingang gemessen.
 Input – 60 dBm (775 μ V rms).
 f mod. = 1 kHz; Δf = 1,3 kHz.





MEKANISK STYKLISTE FOR PC 8005012

1	2938093	Bøsning, støtterør
2	3358096	Køleplade
3	7220056	Noval stik
4	3170121	Glimmerskive
5	2038954	Skrue AM 3 x 6 DIN 963
6	2380011	Møtrik M 3
7	2938097	Isolationsbøsning
8	0514075	Spoleform
9	7203003	Noval fatning
10	7500013	Stikben
11	2938092	Bøsning for decoder

MECHANICAL PARTSLIST FOR PC 8005012

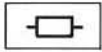
Bushing, brace piping
Heat sink
Noval plug
Mica sheet
Screw, AM 3 x 6 DIN 963
Nut M 3
Insulating bushing
Coil form
Noval socket
Contact plug
Bushing for decoder

MECHANISCHE STÜCKLISTE FÜR PC 8005012

Buchse, Rohranke
Kühlblech
Novalstecker
Glimmerscheibe
Schraube, AM 3 x 6 DIN 963
Mutter M 3
Isolierbuchse
Spuleform
Novalfassung
Stiftstecker
Buchse für Dekoder

6 PC 8005012

DECODER

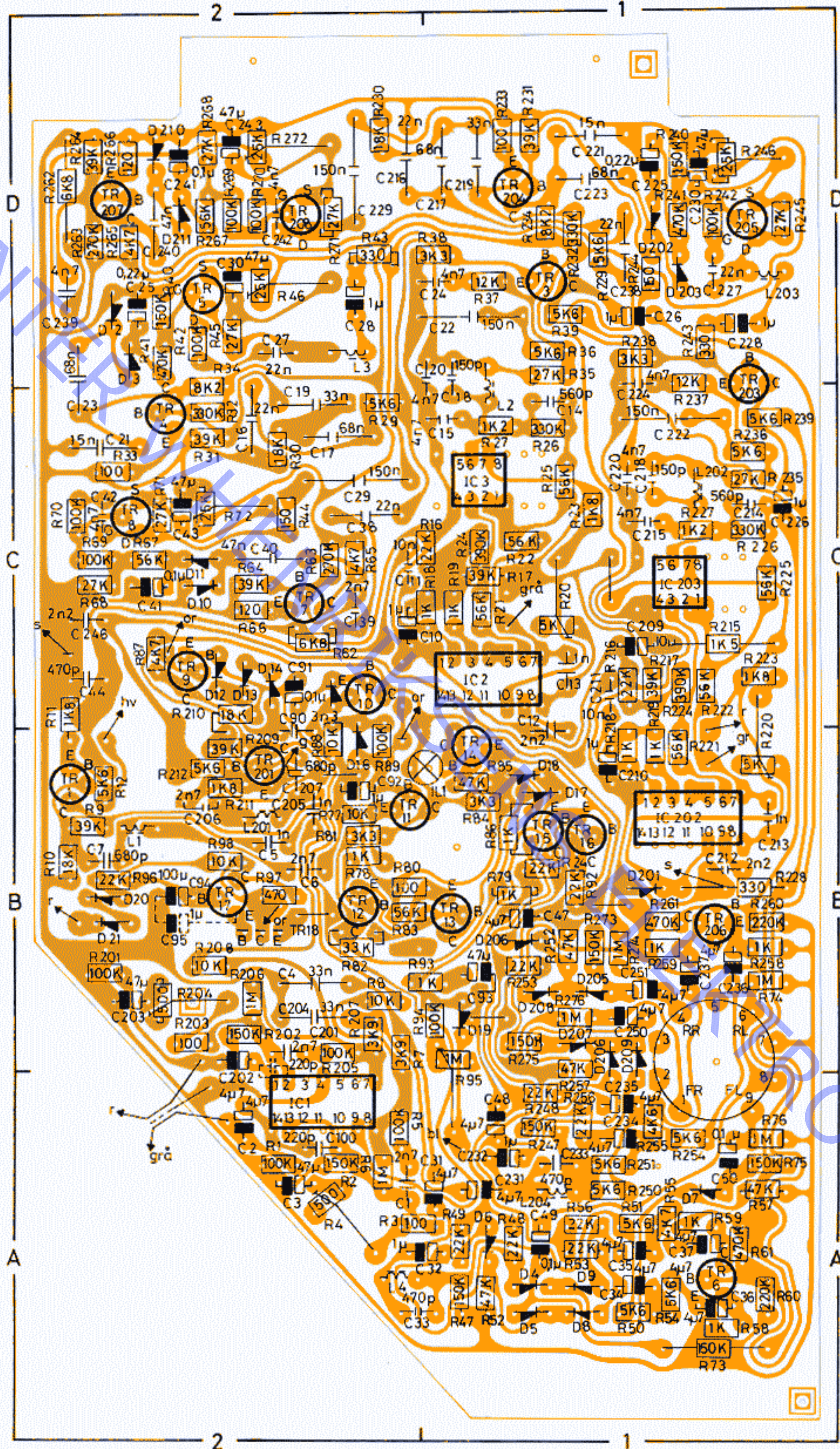


R

R1 (R201)	5010049	100 KOhm 5% 1/8 W
R2 (R202)	5010063	150 KOhm 5% 1/8 W
R3 (R203)	5010065	100 Ohm 5% 1/8 W
R4 (R204)	5370186	500 Ohm 20% LIN.
R5 (R205)	5010049	100 KOhm 5% 1/8 W
R6 (R206)	5010054	1 MOhm 5% 1/8 W
R7 (R207)	5010069	3K9 Ohm 5% 1/8 W
R8 (R208)	5010059	10 KOhm 5% 1/8 W
R9 (R209)	5010060	39 KOhm 5% 1/8 W
R10 (R210)	5010135	18 KOhm 5% 1/8 W
R11 (R211)	5010066	1K8 Ohm 5% 1/8 W
R12 (R212)	5010041	5K6 Ohm 5% 1/8 W
(R215)	5010247	1K5 Ohm 5% 1/8 W
R16 (R216)	5010079	22 KOhm 5% 1/8 W
R17 (R217)	5010060	39 KOhm 5% 1/8 W
R18 (R218)	5010040	1 KOhm 5% 1/8 W
R19 (R219)	5010040	1 KOhm 5% 1/8 W
R20 (R220)	5370058	5 KOhm 20% LIN.
R21 (R221)	5010061	56 KOhm 5% 1/8 W
R22 (R222)	5010061	56 KOhm 5% 1/8 W
R23 (R223)	5010066	1K8 Ohm 5% 1/8 W
R24 (R224)	5010073	390 KOhm 5% 1/8 W
R25 (R225)	5010061	56 KOhm 5% 1/8 W
R26 (R226)	5010117	330 KOhm 5% 1/8 W
R27 (R227)	5010153	1K2 Ohm 5% 1/8 W
(R228)	5001028	330 Ohm 10% 1/2 W
R29 (R229)	5010041	5K6 Ohm 5% 1/8 W
R30 (R230)	5010135	18 KOhm 5% 1/8 W
R31 (R231)	5010060	39 KOhm 5% 1/8 W
R32 (R232)	5010117	330 KOhm 5% 1/8 W
R33 (R233)	5010065	100 Ohm 5% 1/8 W
R34 (R234)	5010154	8K2 Ohm 5% 1/8 W
R35 (R235)	5010141	27 KOhm 5% 1/8 W
R36 (R236)	5010041	5K6 Ohm 5% 1/8 W
R37 (R237)	5010042	12 KOhm 5% 1/8 W

R38 (R238)	5010076	3K3 Ohm 5% 1/8 W
R39 (R239)	5010041	5K6 Ohm 5% 1/8 W
R40 (R240)	5010063	150 KOhm 5% 1/8 W
R41 (R241)	5010077	470 KOhm 5% 1/8 W
R42 (R242)	5010049	100 KOhm 5% 1/8 W
R43 (R243)	5010044	330 Ohm 5% 1/8 W
R44 (R244)	5010452	150 Ohm 5% 1/8 W
R45 (R245)	5010141	27 KOhm 5% 1/8 W
R46 (R246)	5370068	25 KOhm 20% LIN.
R47 (R247)	5010063	150 KOhm 5% 1/8 W
R48 (R248)	5010079	22 KOhm 5% 1/8 W
R49 (R249)	5010079	22 KOhm 5% 1/8 W
R50 (R250)	5010041	5K6 Ohm 5% 1/8 W
R51 (R251)	5001041	5K6 Ohm 5% 1/8 W
R52 (R252)	5010045	47 KOhm 5% 1/8 W
R53 (R253)	5010079	22 KOhm 5% 1/8 W
R54 (R254)	5010041	5K6 Ohm 5% 1/8 W
R55 (R255)	5010048	4K7 Ohm 5% 1/8 W
R56 (R256)	5010079	22 KOhm 5% 1/8 W
R57 (R257)	5010045	47 KOhm 5% 1/8 W
R58 (R258)	5010040	1 KOhm 5% 1/8 W
R59 (R259)	5010040	1 KOhm 5% 1/8 W
R60 (R260)	5010120	220 KOhm 5% 1/8 W
R61 (R261)	5010077	470 KOhm 5% 1/8 W
R62 (R262)	5010052	6K8 Ohm 5% 1/8 W
R63 (R263)	5010083	270 KOhm 5% 1/8 W
R64 (R264)	5010060	39 KOhm 5% 1/8 W
R65 (R265)	5010048	4K7 Ohm 5% 1/8 W
R66 (R266)	5010128	120 Ohm 5% 1/8 W
R67 (R267)	5010061	56 KOhm 5% 1/8 W
R68 (R268)	5010141	27 KOhm 5% 1/8 W
R69 (R269)	5010049	100 KOhm 5% 1/8 W
R70 (R270)	5010049	100 KOhm 5% 1/8 W
R71 (R271)	5010141	27 KOhm 5% 1/8 W
R72 (R272)	5370068	25 KOhm 20% LIN.
R73 (R273)	5010063	150 KOhm 5% 1/8 W
R74 (R274)	5010054	1 MOhm 5% 1/8 W
R75 (R275)	5010063	150 KOhm 5% 1/8 W
R76 (R276)	5010054	1 MOhm 5% 1/8 W
R77	5010059	10 KOhm 5% 1/8 W
R78	5010040	1 KOhm 5% 1/8 W
R79	5010040	1 KOhm 5% 1/8 W

DIAGRAM 2



SET FRA PRINTSIDE / SEEN FROM CONDUCTOR SIDE / VON DER LEITERSEITE AUSGESEHEN

R80	5010065	100 Ohm 5% 1/8 W
R81	5010076	3K3 KOhm 5% 1/8 W
R82	5010075	33 KOhm 5% 1/8 W
R83	5010061	56 KOhm 5% 1/8 W
R84	5010076	3K3 Ohm 5% 1/8 W
R85	5010045	47 KOhm 5% 1/8 W
R86	5010040	1 KOhm 5% 1/8 W
R87	5010048	4K7 Ohm 5% 1/8 W
R88	5010059	10 KOhm 5% 1/8 W
R89	5010049	100 KOhm 5% 1/8 W
R92	5010079	22 KOhm 5% 1/8 W
R93	5010040	1 KOhm 5% 1/8 W
R94	5010049	100 KOhm 5% 1/8 W
R95	5010054	1 MOhm 5% 1/8 W
R96	5010079	22 KOhm 5% 1/8 W
R97	5010058	470 KOhm 5% 1/8 W
R98	5010059	10 KOhm 5% 1/8 W

C24 (C224)	4010063	4n7F 10% 63 V
C25 (C225)	4201072	0,22 µF 35 V
C26 (C226)	4201057	1 µF 35 V
C27 (C227)	4010060	22 nF - 20 + 100% 40 V
C28 (C228)	4201057	1 µF 35 V
C29 (C229)	4130097	15 nF 10% 250 V
C30 (C230)	4200317	47 µF 6 V 3
C31 (C231)	4200108	4 µF 25 V
C32 (C232)	4201057	1 µF 35 V
C33 (C233)	4010024	470 pF 10% 100 V
C34 (C234)	4200108	4 µF 25 V
C35 (C235)	4200108	4µ7F 25 V
C36 (C236)	4200108	4µ7F 25 V
C37 (C237)	4200108	4µ7F 25 V
C38 (C238)	4130089	22 nF 10% 250 V
C39 (C239)	4010063	4n7F 10% 63 V
C40 (C240)	4130087	47 nF 10% 270 V
C41 (C241)	4200169	0,4 µF 35 V
C42 (C242)	4010063	4n7F 10% 63 V
C43 (C243)	4200317	47 µF 6 V 3
C44 (C244)	4010024	470 pF 10% 100 V
C47	4200108	4µ7F 25 V
C48	4200108	4µ7F 25 V
C49	4200169	0,1 µF 35 V
C50	4200169	0,1 µF 35 V
C90	4010065	2n7 10% 63 V
C91	4200169	0,1 µF 35 V
C92	4201057	1 µF 35 V
C93	4200317	47 µF 6 V 3
C94	4201060	100 µF 35 V
C95	4201057	1 µF 35 V
C100	4010021	220 pF 10% 100 V

C



C1 (C201)	4010065	2n7F 10% 63 V
C2 (C202)	4200108	4µ7F 25 V
C3 (C203)	4200327	47 µF 6 V 3
C4 (C204)	4130088	33 nF 10% 250 V
C5 (C205)	4010027	1nF 10% 100 V
C6 (C206)	4010065	2n7 F 10% 63 V
C7 (C207)	4010031	680 pF 10% 100 V
C10 (C210)	4201057	1µF 35 V
C11 (C211)	4010041	10 nF - 20 + 100% 40 V
C12 (C212)	4010061	2n2 10% 63 V
C13 (C213)	4010027	1 nF 10% 100 V
C14 (C214)	4010064	560 pF 100% 63 V
C15 (C215)	4010063	4n7F 10% 63 V
C16 (C216)	4030089	22 nF 10% 250 V
C17 (C217)	4130100	68 nF 10% 250 V
C18 (C218)	4000023	150 pF 5% 63 V
C19 (C219)	4130088	33 nF 10% 250 V
C20 (C220)	4010063	4n7F 10% 63 V
C21 (C221)	4130097	15 nF 10% 250 V
C22 (C222)	4130111	150 nF 20% 250 V
C23 (C223)	4130100	68 nF 10% 250 V

L

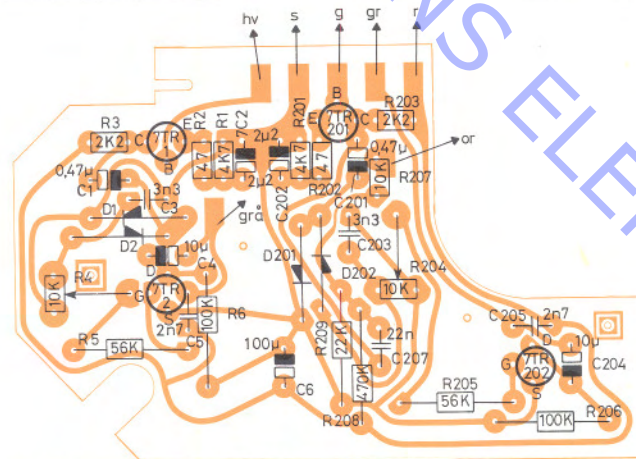


L1	8022054	100 mH 10%
L2	8022054	100 mH 10%
L3	8022054	100 mH 10%
L4	8022054	100 mH 10%

IL



IL1	8230044	24 V 25 mA
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SET FRA PRINTSIDE / SEEN FROM CONDUCTOR SIDE / VON DER LEITERSEITE AUSGESEHEN

7 PC 8009026

R

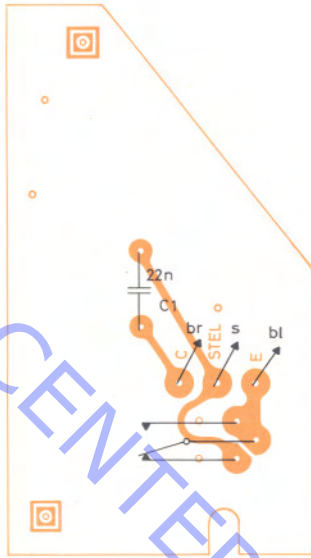


R1 (R201)	5010613	4K7 Ohm 5% 1/8 W
R2 (R202)	5010411	47 Ohm 5% 1/8 W
R3 (R203)	5010064	2K2 Ohm 5% 1/8 W
R4 (R204)	5370074	10 KOhm 20% LIN.
R5 (R205)	5010061	56 KOhm 5% 1/8 W
R6 (R206)	5010049	100 KOhm 5% 1/8 W
(R207)	5010059	10 KOhm 5% 1/8 W
(R208)	5010077	470 KOhm 5% 1/8 W
(R209)	5010079	22 KOhm 5% 1/8 W

C



C1 (C201)	4201058	0,47 µF 35 V
C2 (C202)	4201069	2 µZF 35 V
C3 (C203)	4011025	2n3F 10% 100 V
C4 (C204)	4200101	10 µF 16 V
C5 (C205)	4010065	2n7F 10% 63 V
C6	4200099	100 µF 16 V
(C207)	4010060	22 nF - 20% + 100% 40 V



10 PC 8009028



C1 4130096 22 nF 10% 400 V

7400115 Microswitch for 6140418

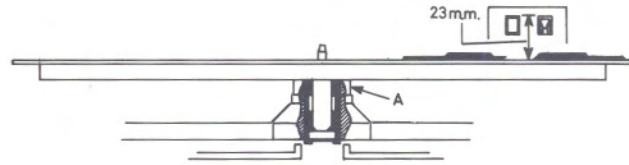


C1 4130096 22 nF 10% 400 V

7402081 Microswitch for 6140419

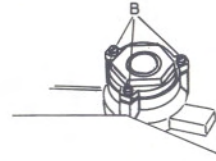
ABO-CENTER V/HENRIKSENS ELEKTRONIK

MECHANICAL ADJUSTMENT Height Adjustment of Turntable



Loosen nut A at turntable bearing and adjust the height of the bearing so that the spacing between the turntable and detector arm is 23 mm.

Tighten nut A lightly.



Vertical Adjustment of Turntable Bearing

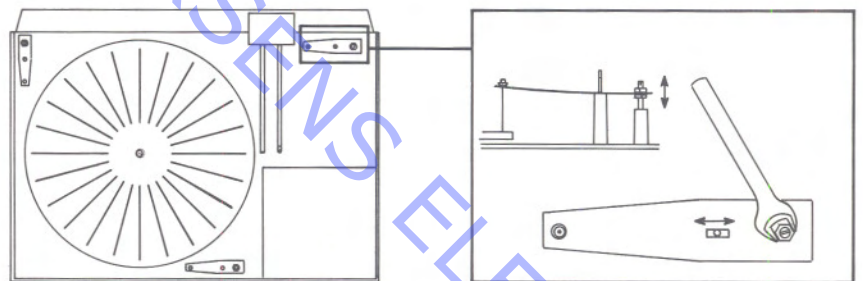
Turn transit screws to lock the floating chassis.

With screws B, adjust turntable bearing to be perpendicular to the chassis - in other words, the surface of the turntable must be parallel with the cover plate.

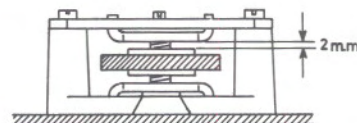
Check height adjustment (23 mm), both near the rim and near centre of the turntable.

Height and Side Adjustment of Chassis

Loosen transit screws so that chassis floats freely.



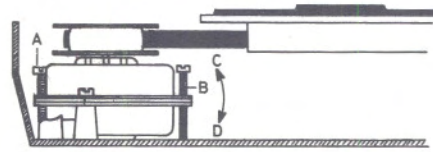
By means of the suspension springs adjust the chassis so that turntable is flush with the cover plate and so that the chassis is placed in middle of the transit screws.



Moreover slide the springs backwards or forwards so that the turntable is located in the centre of the hole in the cover plate.

To make the adjustment, first loosen the top nuts and thereafter adjust the screw to the desired height and slide the springs to the desired position. Lastly, tighten the nuts.

Adjustment of Belt Drive



The drive motor should be adjusted so that the belt runs in the middle of the pulley and the belt face on the turntable.

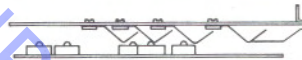
If it is desired to have the belt farther down on the pulley, loosen screw A and tighten screw B, causing the motor to tilt in the direction of arrow C.

If it is desired to have the belt farther up on the pulley, loosen screw B and tighten screw A, causing the motor to tilt in the direction of arrow D.

On completion of the adjustment tighten the loose screw. Thereafter check the adjustment.

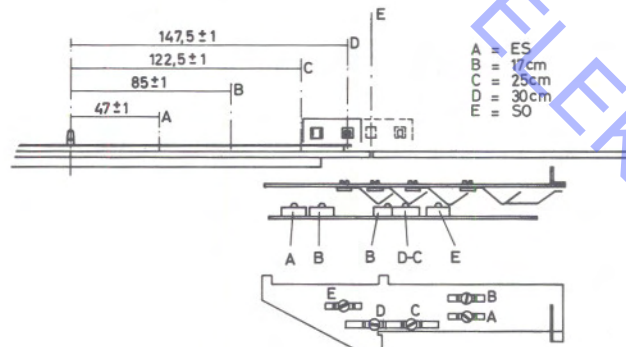
NOTE: The belt should be fitted with its ground (rough) side facing the pulley and belt face.

Adjustment of Slide Contact Springs Height



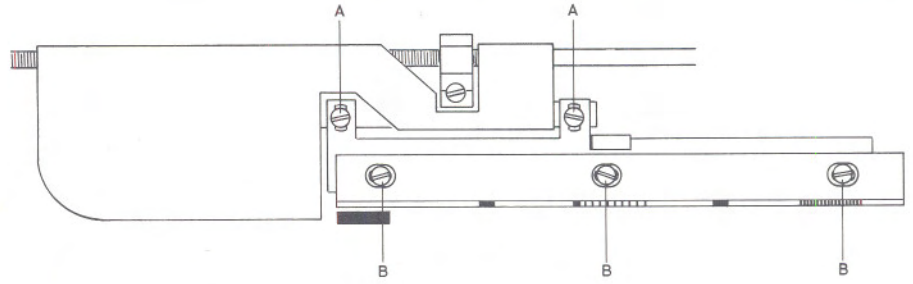
Adjust all contact springs so that they only just actuate the contacts but also so that they do not jam with the contact pins, thus blocking the slide transport.

Placement



The horizontal placement of the springs should be made so that they will actuate their respective contacts during slide transport when the pickup is spaced from the middle of the centre pin by the amount stated on the sketch.

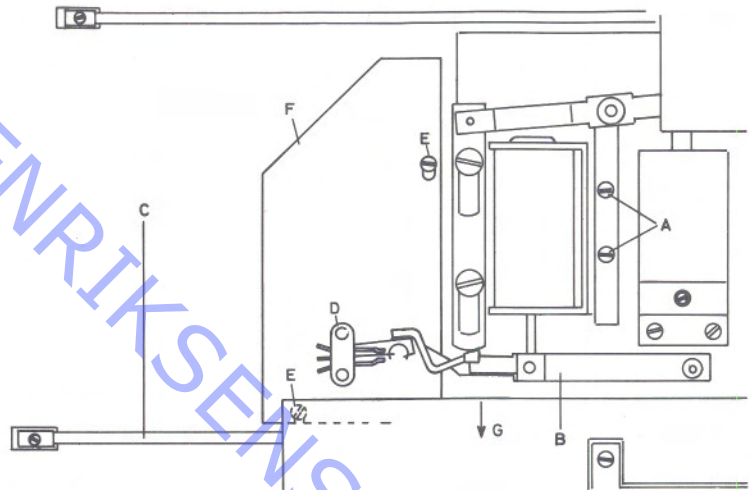
To make the adjustment, loosen the screw holding the spring in question and slide it in the oblong hole.



Adjustment of Position Marker

With the screws A loosened, the position marker bracket can be adjusted so that it runs parallel with the photoresistor housing.

With the screws B loosened, slide the position generator backwards or forwards until the arm lowers onto a 30 cm disc at a distance of between 146.5 mm and 148.25 mm from the centre of the disc.



Adjustment of Solenoid System

Solenoid.

Loosen screws A.

Slide solenoid to the place where arm B is parallel with rod C when solenoid armatur is pulled home.

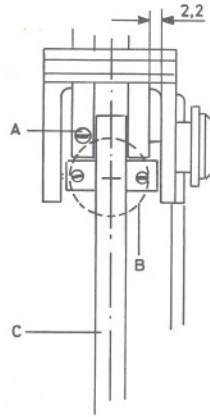
Tighten screws A.

Switch D.

NOTE: Make this adjustment without power applied to the unit.

Loosen screws E and slide plate F backwards or forwards so that positive action of switch D is only just obtained when arm B is pulled against the stop in the direction of arrow G.

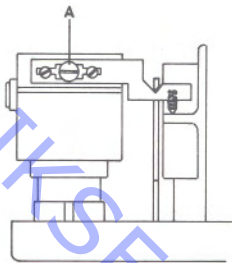
Horizontal Placement (Fixing)



Place pickup arm in pivot bracket so pickup-arm centre line C is located in the centre line of the pin B with an accuracy to $\pm 0,2$ mm. Adjustment is made by loosening screw A and sliding the pickup arm to one side or the other, thereafter retightening screw A.

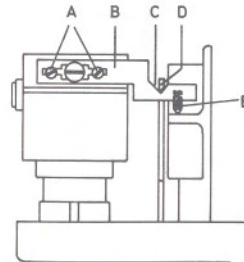
Adjustment is made by means of a plug jig (e.g. a 2.2 mm drill) placed as shown in the sketch.

Static Balance



Set stylus force adjustment screw at „0”.
Release pickup arm from lift arm.
Adjust screw A until system balance is obtained.

Parallelism



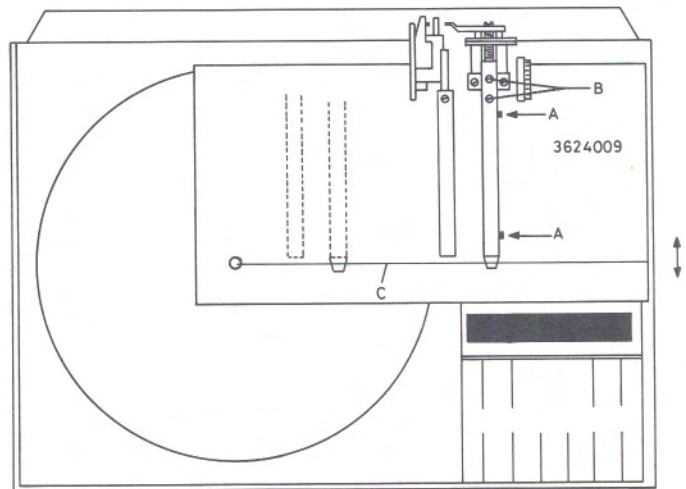
The pickup arm should be adjusted parallel with pins A in tool 3624009.

To make the adjustment, loosen screws A and thereafter slide arm B backwards or forwards. To check for parallelism, see that arm D is fully down in notch C.

Fine adjustment, if necessary, is made by bending arm C.

With screw E, adjust pickup arm to be horizontal. Reference: detector arm.

Adjustment of pickup arm Length

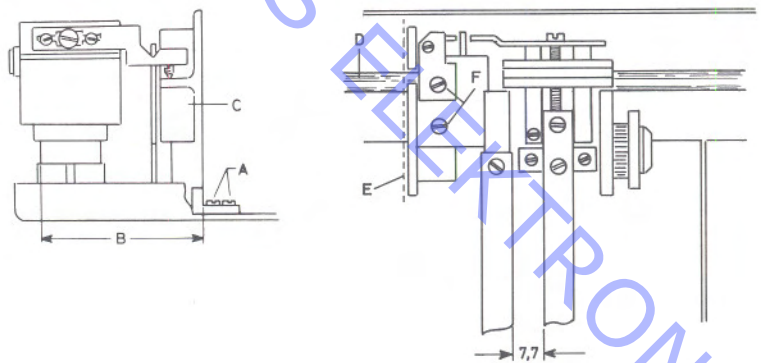


Adjust stylus force to 1 gr. Take off turntable. Run pickup arm in towards the centre.

Mount tool 3624009 on the Beogram 4002/6000 as shown by sketch. Run pickup arm out close to pins A. Lower pickup on to tool. Slide tool backwards or forwards so that stylus drops into groove C. Keep tool fixed in this position. Raise pickup and run it towards the centre. Lower pickup into the position shown in the sketch. If the stylus hits outside groove C, adjust screw B so that the deviation in question is halved. Run the pickup arm all the way out close to pins A. At this point lower the pickup and slide tool 3624009 so that the stylus is exactly in groove C. Raise the arm and now check if the arm is equally spaced from the pins A. Also make sure that the lifting arm rests in the bottom of the V-notch C on the arm B.

(See Parallelism Adjustment)

Detector Arm Adjustment



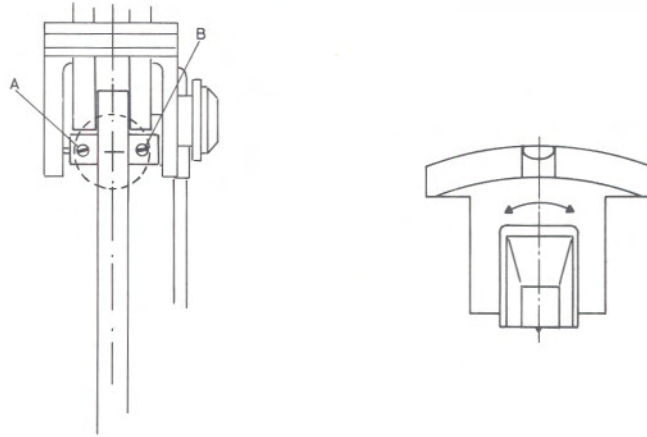
Loosen screws A.

Adjust detector arm holder C so that distance B is 49.4 mm. Make sure that surface E is at right angles to pole D.

With screws F loosened, adjust detector arm so that it is parallel with pickup arm at a distance of 7.7 mm (the pickup arm should be adjusted for horizontal placement and parallelism).

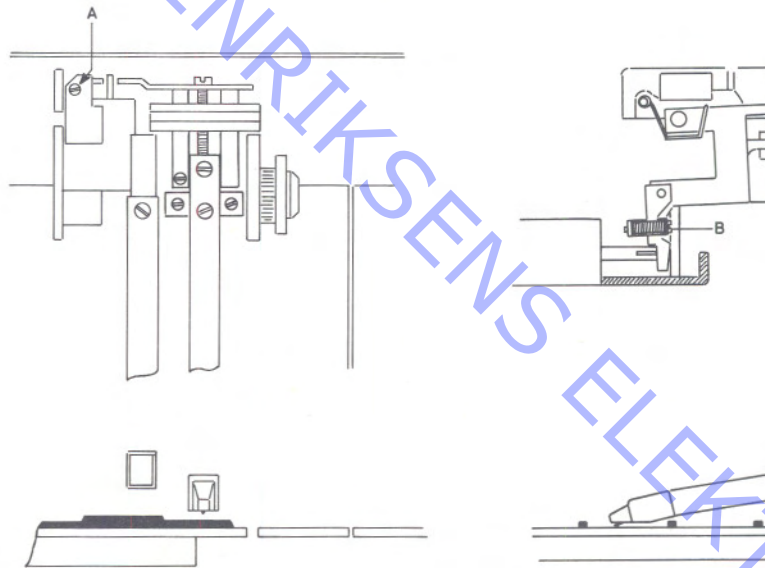
The adjustment may also be made with the pickup-arm cover plate mounted. Adjust the detector arm so that the air gap between the cover plate and the arm is the same on all three sides and the same for both arms while being parallel with the pickup arm at a distance of 7.7 mm.

Rotation



By loosening screw A and tightening screw B or vice versa adjust the rotation of the pickup arm so that its top side is parallel with the rods. Use a spirit level for checking this adjustment.

Lowering Adjustment

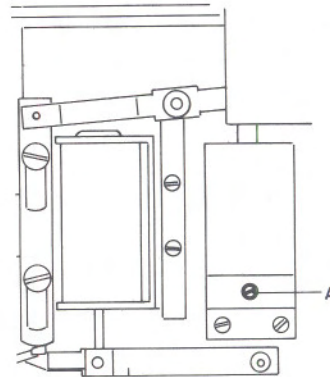


Loosen screw A.

Adjust screw B so that the pickup stylus, in the lowered condition of the pickup arm, only just touches the turntable between the ribs.

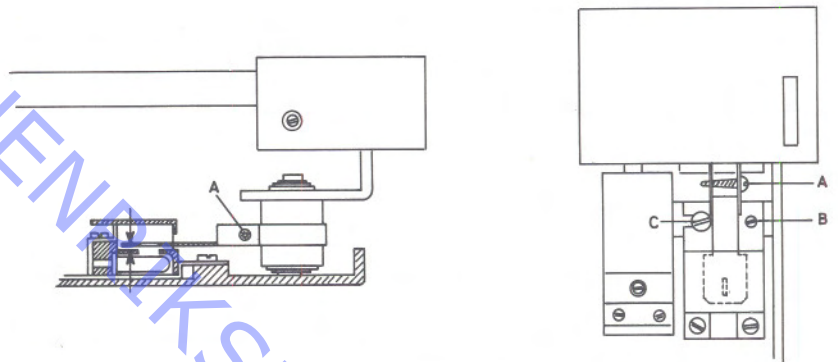
Thereafter adjust screw A, also in the lowered condition of the pickup arm, so that the pickup stylus positively clears the low portion of the turntable ribs (by approx. 0.5 mm).

Adjustment of Damper Cylinder



Adjust valve A so that pickup lowers smoothly. Lowering time: approx. 1 sec.

Adjustment of Shutter



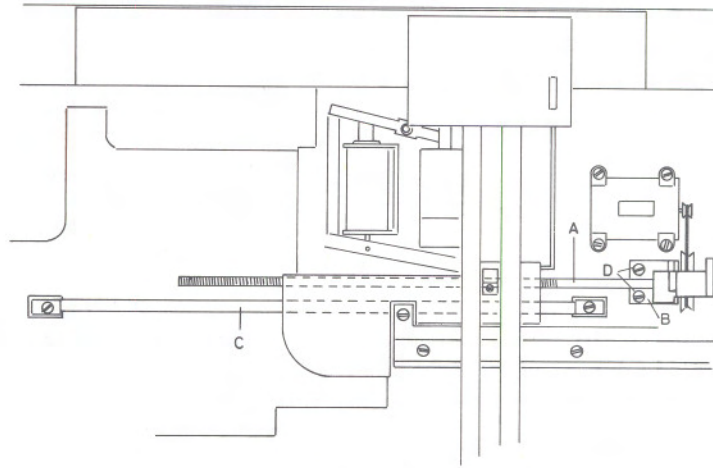
To adjust the shutter, loosen screw A and slide it on the arm pivot.

The shutter should be adjusted to be as close as possible to the housing without touching it. Also adjust the shutter so that the shutter arm will be parallel with pickup arm.

Fine adjustment of the shutter is made with a disc on turntable and with the turntable belt removed.

- 1: Run arm in across disc.
- 2: Lower pickup.
- 3: Turn turntable by hand and check to see that the servo regulates the first time after 1 - 3 revolutions and thereafter at each revolution.
- 4: If the servo does not regulate within 1 - 3 revolutions, loosen screw C and adjust eccentric B; Thereafter raise the arm and repeat items 2 to 4.
- 5: When eccentric B has been adjusted, tighten screw C.

Adjustment of Spindle



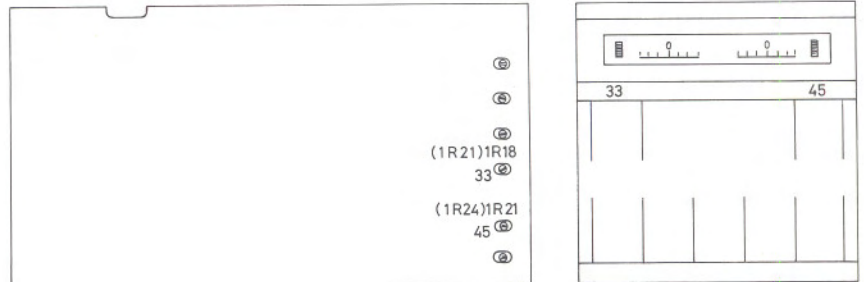
Adjust spindle A to be parallel with rod C.
To adjust, loosen screws D and turn cap B.

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ELECTRICAL ADJUSTMENT Speed

References to adjustment potentiometers without brackets apply to:
BEOGRAM 4000 until No. 257556
BEOGRAM 6000 until No. 260028

References in brackets apply to units after the above numbers.



Set 33 and 45 r.p.m. dials to 0.

33 r.p.m. is adjusted with potentiometer 1R18 (1R21)

45 r.p.m. is adjusted with potentiometer 1R21 (1R24).

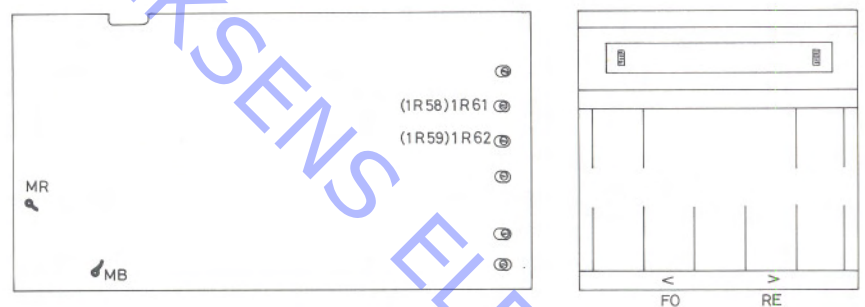
Speed may be checked in several ways:

1: Stroboscope disc and lamp connected to mains. This check involves an inaccuracy of approx. 2% due to the fact that the 50 Hz mains frequency varies by approx. ± 1 Hz.

2: Stroboscope disc and stroboscope lamp. This check provides an accuracy comparable to the tolerance of the stroboscope lamp which as a rule is considerably better than that of the mains frequency.

3: The reference to the production adjustment appears as the result of division to 50 Hz from a crystal of $1 \text{ MHz} \pm 1 \text{ Hz}$, providing an accuracy of the order of $\mu\%$.

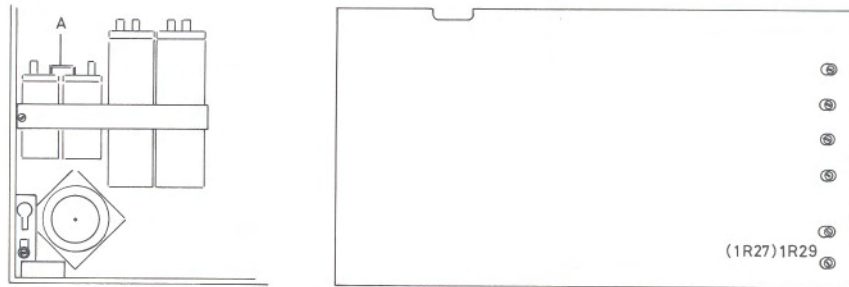
Slow slide transport



Connect vacuum-tube voltmeter at point MR. Depress FO button and adjust voltage at point MR to 5,5 V, using 1R61 (1R58).

Connect vacuum-tube voltmeter at point MB. Depress RE button, and adjust voltage at point MB to 5,5 V, using 1R62 (1R59).

Voltage for drive motor

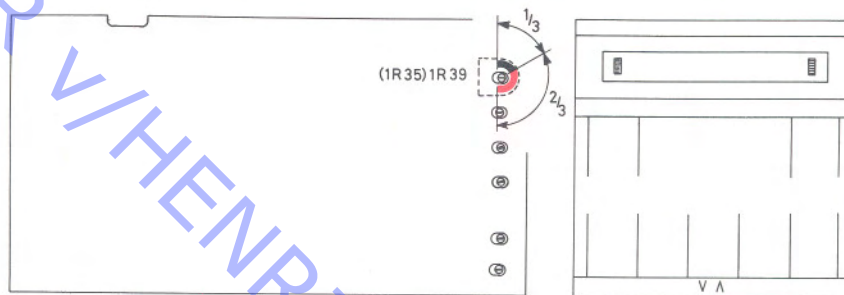


Connect LF vacuum-tube voltmeter and oscilloscope at point A so that measurements will be made with respect to chassis (zero) potential.

Adjust 1R29 (1R27) for maximum voltage and minimum 4.5 Vrms at both speeds.

No clipping (distortion) must occur.

Detector arm sensitivity



Adjustment of sensitivity on the detector arm circuit is carried out in the interest of transparent disc.

Turn 1R39 (1R35) (DRS) anti-clockwise against the stop; thereafter turn slowly clockwise until the pickup arm, by pressing LIFT, can be lowered to a transparent disc; making sure, however, that the pickup arm cannot be lowered when no disc has been placed on the turntable.

1R39 (1R35) (DRS) must be used only within the first $\frac{1}{3}$ of the mechanical adjustment range; see sketch.

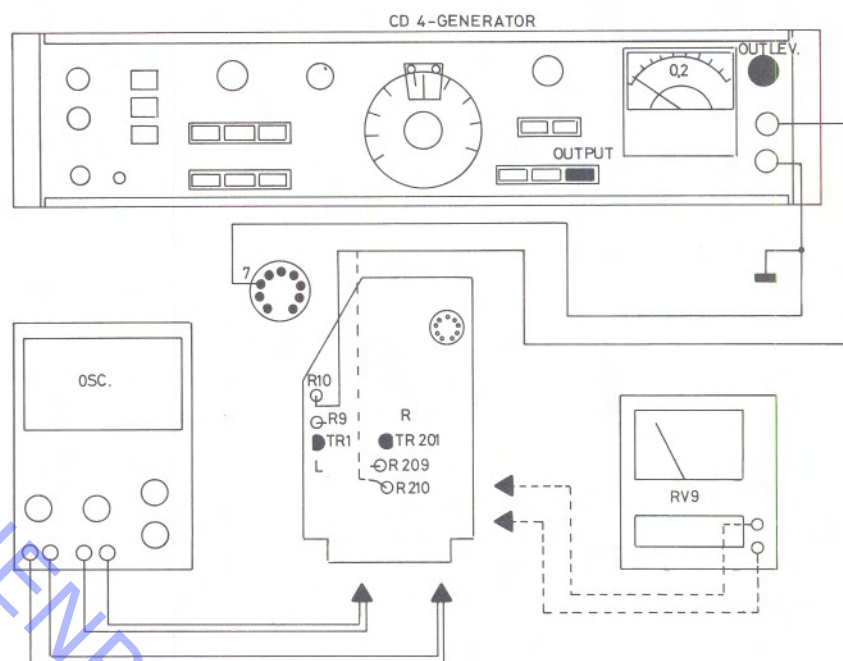
NOTE: The red sector for 1R39 (1R35) symbolises the range to which 1R39 (1R35) must not be set as it will then load the circuit.

This may have the consequence that the pickup arm can be lowered when no disc has been put on the turntable.

ADJUSTMENT OF CD-4 DECODER Instruments

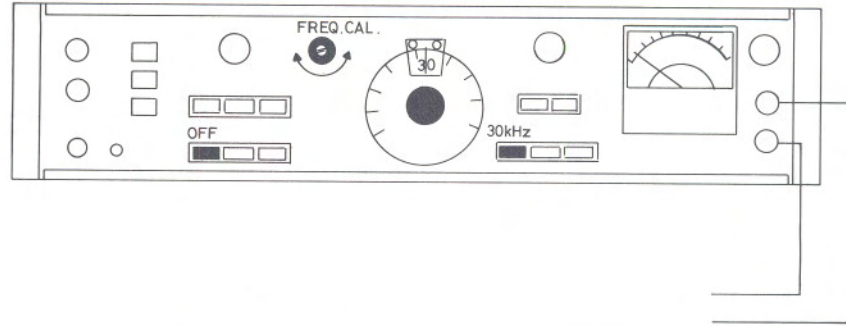
CD-4 Generator:	MSG 213, Meguro
LF Vacuum-tube voltmeter:	RV 9, B&O
Oscilloscope:	OS 1000, Advance D 65, Telequipment
Test disc:	4 DE - 205, JVC

Set-up



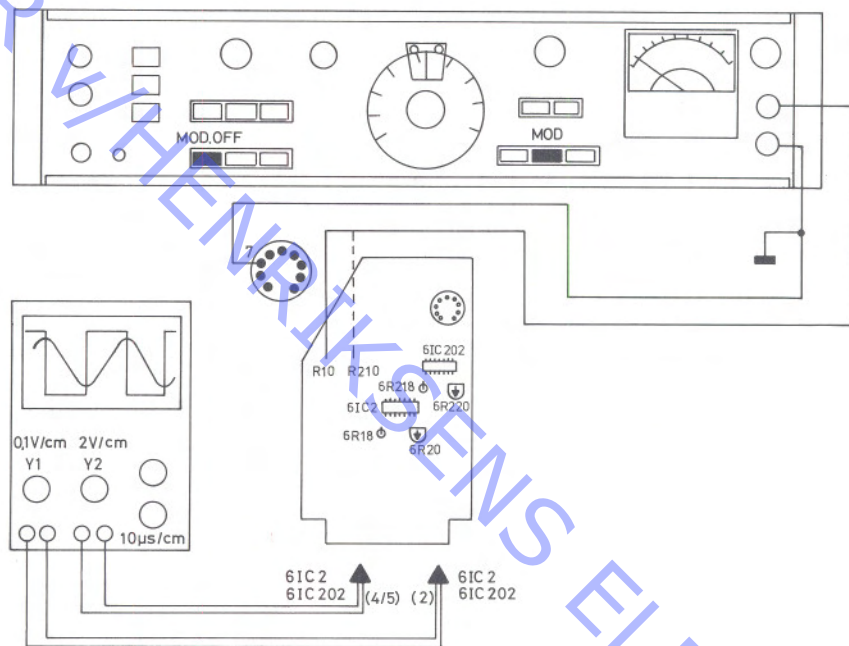
References are for left channel. Bracketed references are for right channel.
 Before connecting the generator to the decoder, adjust output voltage to
 to 400 mV (0,2 on black scale with OUTPUT depressed).
 The generator should be connected to the base of 6TR1 (6TR201).
NOTE: measuring instruments, generator and decoder should have power
 applied to them for not less than 15 mon. before making any adjustments.

Calibration of CD-4 Generator



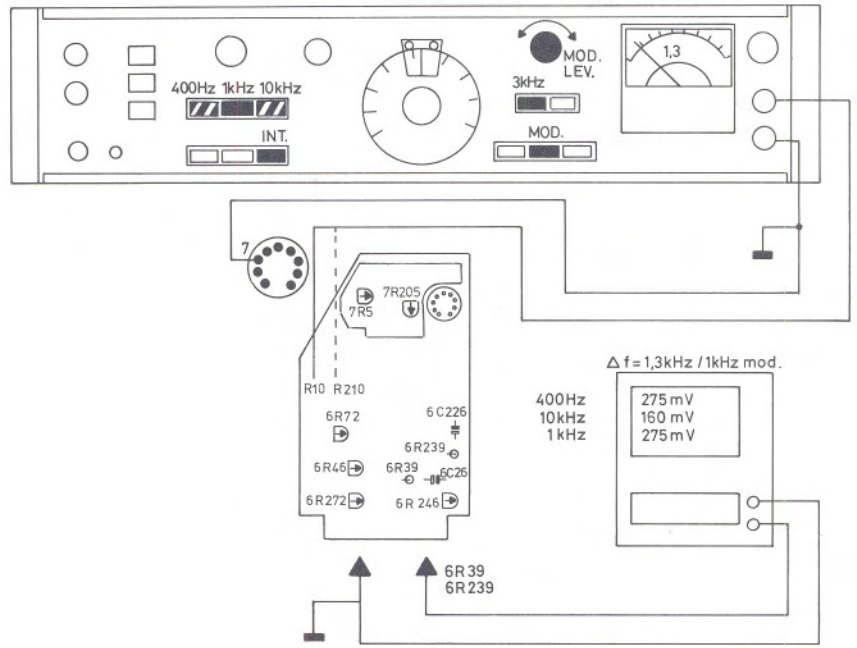
Depress MOD. SELECTOR „OFF”.
 Depress FREQ. CAL. 30 kHz.
 Set FREQUENCY dial to 30 kHz.
 Adjust FREQ. CAL. for minimum meter reading. Three dips will be noted during adjustment. Select dip giving lowest meter reading.

VCO



Depress MOD. SELECTOR „OFF”.
 Depress MOD.
 Start BEOGRAM (press „ON” and thereafter „<”).
 Connect Y 1 input of oscilloscope to pin 2 of 61C2 (61C202).
 Connect Y 2 input of oscilloscope to pins 4 and 5 of 61C2 (61C202).
 Sensitivity: Y 1 = 0,1 V/cm; Y 2 = 2 V/cm; 10 µs/cm.
 Adjust 6R20 (6R220) so that the leading and trailing edges of square-wave voltage intersect bottom and top of sine-wave voltage as shown in the sketch.

ANRS Coarse Adjustment

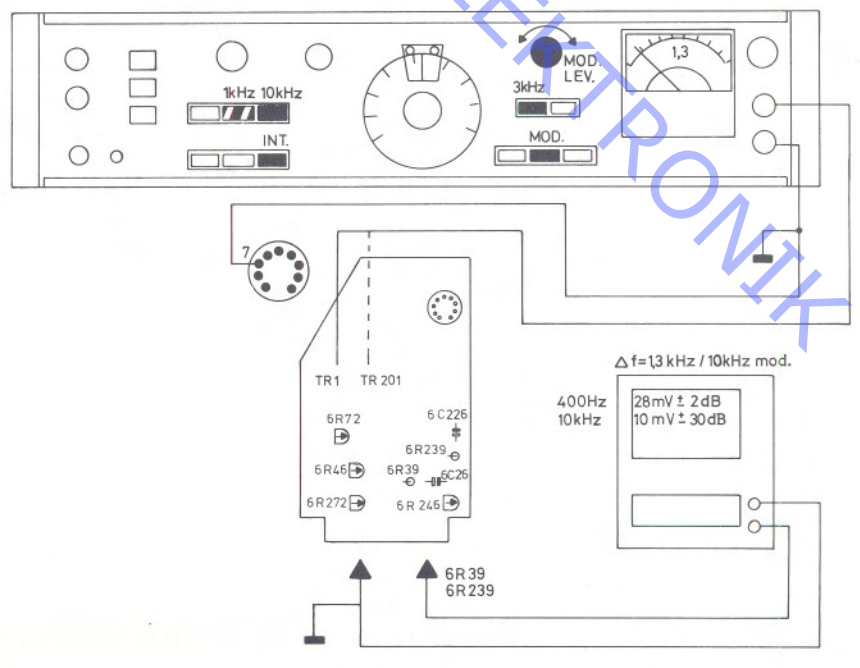


The dB values specified in the Adjustment Procedure refer to 0 dB = 1 V RMS.

- (1) Turn 7R5 (7R205) clockwise against the stop.
- (2) Turn 6R72 (6R272) anti-clockwise against the stop.
- (3) Depress MOD. SELECTOR „INT”
- (4) Depress „1 kHz”.
- (5) Depress METER RANGE „3 kHz”.
- (6) Depress „MOD”.
- (7) Adjust „MOD. LEVEL” for 1,3 on meter (0-3 scale).
- (8) Connect LF vacuum-tube voltmeter to 6R39 (6R239).
- (9) Depress „400 Hz”.
- (10) Adjust 6R46 (6R246) for 275 mV (-11 dB) at 6R39 (6R239)
- (11) Depress „10 kHz”.
- (12) Adjust 6R72 for 160 mV (-16 dB).
- (13) Depress „1 kHz”.
- (14) LF vacuum-tube-voltmeter reading should be 275 mV (-11 dB) ± 1 dB.

If tolerance is not met, check adjustment of CD-4 generator, 6R46 (6R246) and 6R72 (6R272)

Fine Adjustment



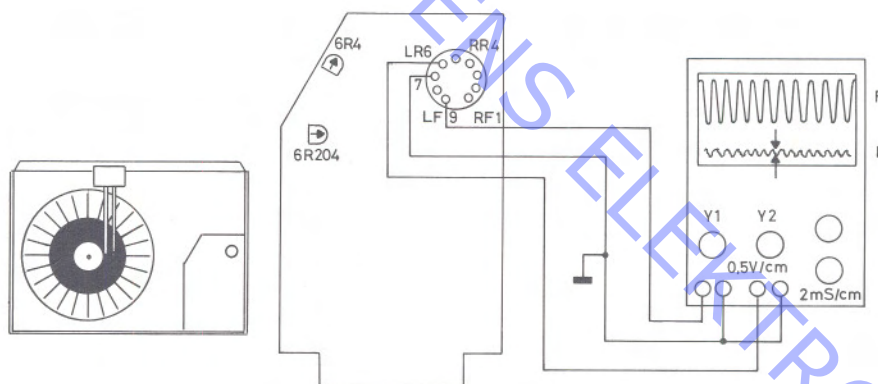
- (15) Depress „10 kHz”
- (16) Depress METER RANGE „3 kHz”
- (17) Depress MOD.
- (18) Adjust „MOD LEVEL” so that meter reads 1,3 (0-3 scale).
- (19) Voltage at 6R39 (6R239) should be 10 mV (-40 dB) \pm 3 dB.
- (20) If tolerance is not met, perform fine adjustment of 6R72 (6R272).
- (21) Depress „400 kHz”.
- (22) Voltage at 6R39 (6R239) should be 28 mV (-31 dB) \pm 2 dB.
- (23) If tolerances are not met, perform fine adjustment of 6R46 (6R246).
- (24) In the cases where fine adjustments have been performed after the coarse adjustments, recheck items (4) to (14) under Coarse Adjust ment above.
400 Hz \pm 1 dB; 10 kHz \pm 3 dB
- (25) If tolerances there are not met it may be found useful to check the gain of the ANRS circuit;
this will reveal any failures in said circuit.

The chart, which is intended as a guide, is to be used during checking of in-put level relative to output level.

	mod. freq.	*inp.		outp.	
	Hz	mV	-dB	mV	-dB
$\Delta f = 1,3 \text{ kHz v. } 1 \text{ kHz}$	400	180	15	275	11
	10 k	90	21	160	16
$\Delta f = 1,3 \text{ kHz v. } 10 \text{ kHz}$	400	40	28	28	31
	10 k	25	32	10	40

* Input level to be measured between 6L2 (6L202) and 6R35 (6R235).

Separation



Remove connections to CD-4 generator.

Separation can be measured in different ways.

1: By means of an oscilloscope.

Connect Y 1 input of oscilloscope to decoder output, pin 9 (1) (hot) and pin 7 (7) (cold) of socket.

Connect Y 2 input of oscilloscope to decoder output, pin 6 (4) (hot) and pin 7 (7) (cold) of socket.

Sensitivity: 0.5 V/cm: 2 mS/cm.

Play test record, e.g. JVC 4DE - 205, section 3, with the MMC 6000 to be used with the decoder. Adjust 6R4 (6R204) for minimum at Y 2 input of oscilloscope, corresponding to minimum in rear channel.

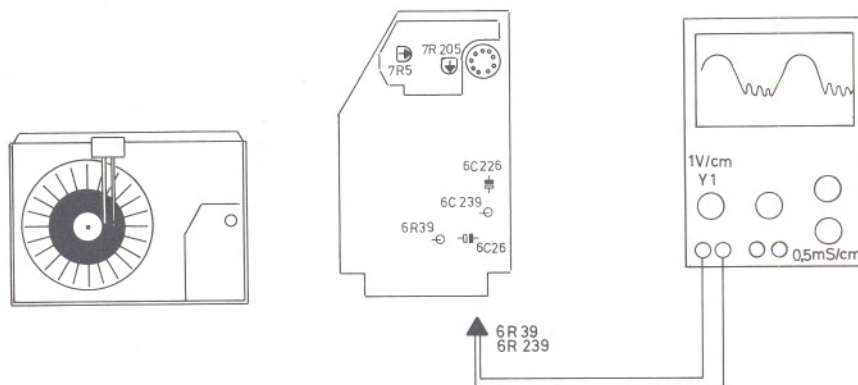
2: By means of a 4-channel amplifier.

Turn off front channels.

Play test record JVC 4DE - 205 with the MMC 6000 to be used with the decoder.

Adjust 6R4 (6R204) for minimum sound in rear channels.

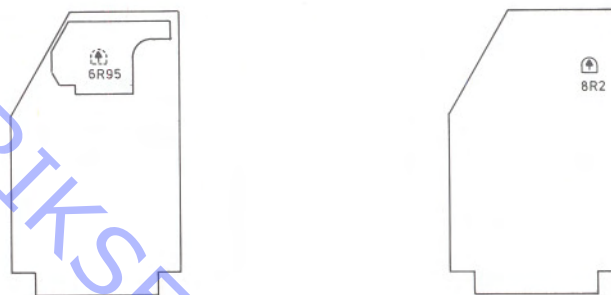
Carrier Detector



SILENT CIRCUIT

Adjust carrier detector by means of JVC test record 4DE - 205, section 2.
Adjust 7R5 (7R205) so that 400 Hz sine-wave curve is only just undistorted.

NOTE: After replacement of pickup it is necessary to perform adjustment of channel separation and carrier.



Beogram 6000

Adjust 6R95 to admit passage of pickup signal between 1 and 2 disc revolutions after pickup has been lowered (33 r.p.m.)

Beogram 4002

Adjust 8R2 as described for 6R95 above

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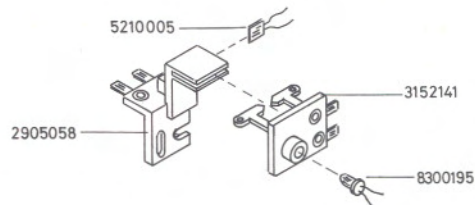
PARTS LIST FOR BEOGRAM 4002-6000
TYPE 5501 - 5502

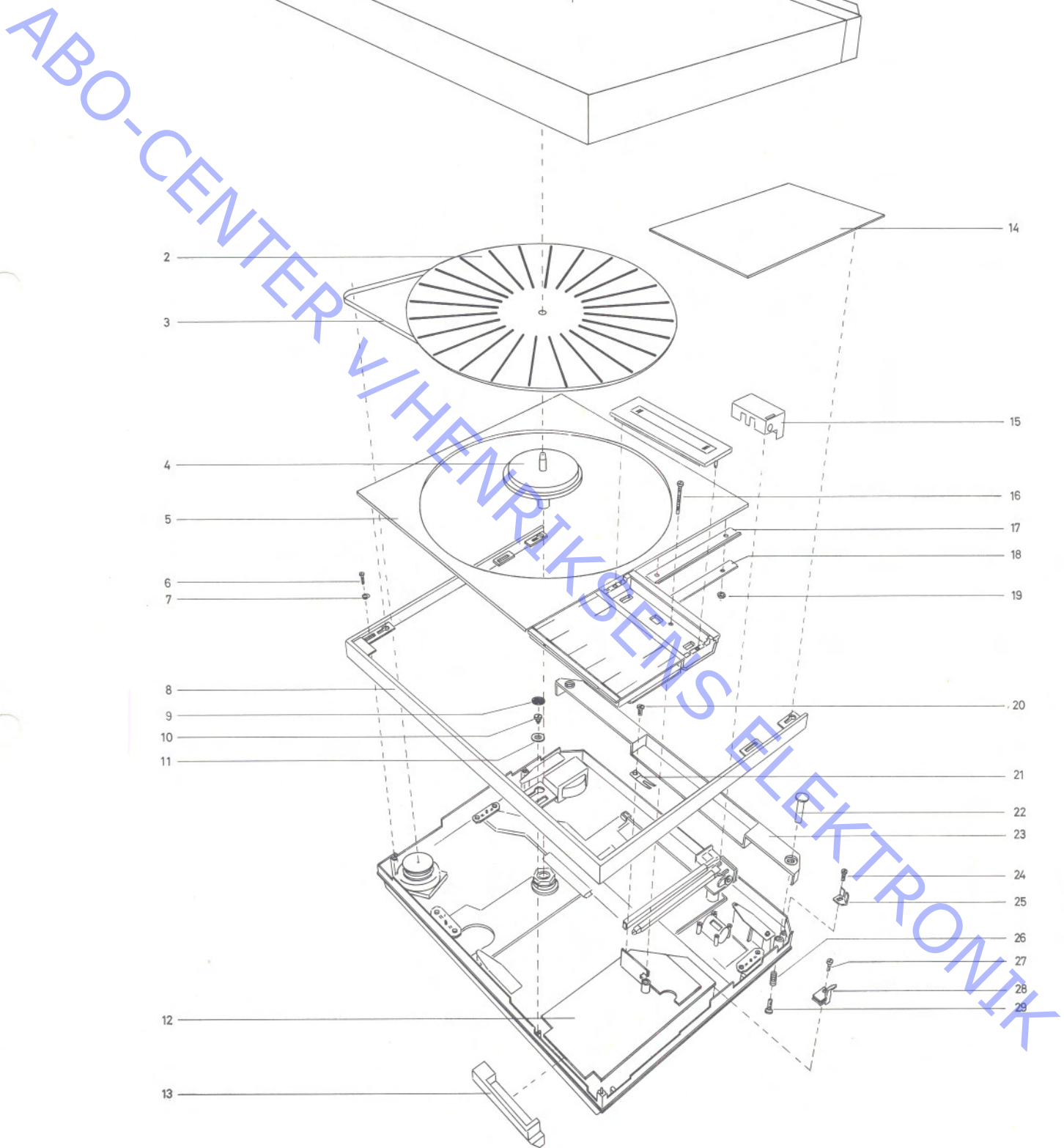
1	3164184	Lid collected - BEOGRAM 4002
	3164183	Lid collected - BEOGRAM 6000
2	2726086	Turntable
3	2732018	Driving-belt
4	2726078	Turntable lower
5	3458113	Top plate
6	2038009	Screw AM 3 x 8 mm DIN 963
7	2803004	Steering washer
8	3412051	Cabinet, teak 4002
	3412053	Cabinet, rosewood 4002 + 6000
	3412054	Cabinet, oak 4002
	3412055	Cabinet, white 6000
9	3912037	Felt washer
10	2038901	Screw
11	2620019	Washer
12	8009029	PC board muting BEOGRAM 4002
	8005012	PC board decoder BEOGRAM 6000
	8009026	PC board carrier frequency detectors BEOGRAM 6000
13	3152159	Holder
14	3458114	Top plate
15	3164142	Cover for PU-arm
16	2038237	Screw AM 3 x 30 mm DIN 84
17	2816085	Spring
18	3014023	Steering plate
19	2380093	Nut M3 nylon
20	2042205	Screw AM 4 x 6 mm DIN 84
21	2816083	Holder
22	2994012	Bushing
23	3452204	Back piece for BEOGRAM 4002
	3452205	Back piece for BEOGRAM 6000
24	2038208	Screw AM 3 x 5 mm DIN 84
25	3014028	Rule for back piece right
	3014029	Rule for back piece left
26	2810066	Spring
27	2038220	Screw AM 3 x 12 mm DIN 84
28	3152135	Lead holder
29	2042216	Screw AM 4 x 16 mm DIN 84

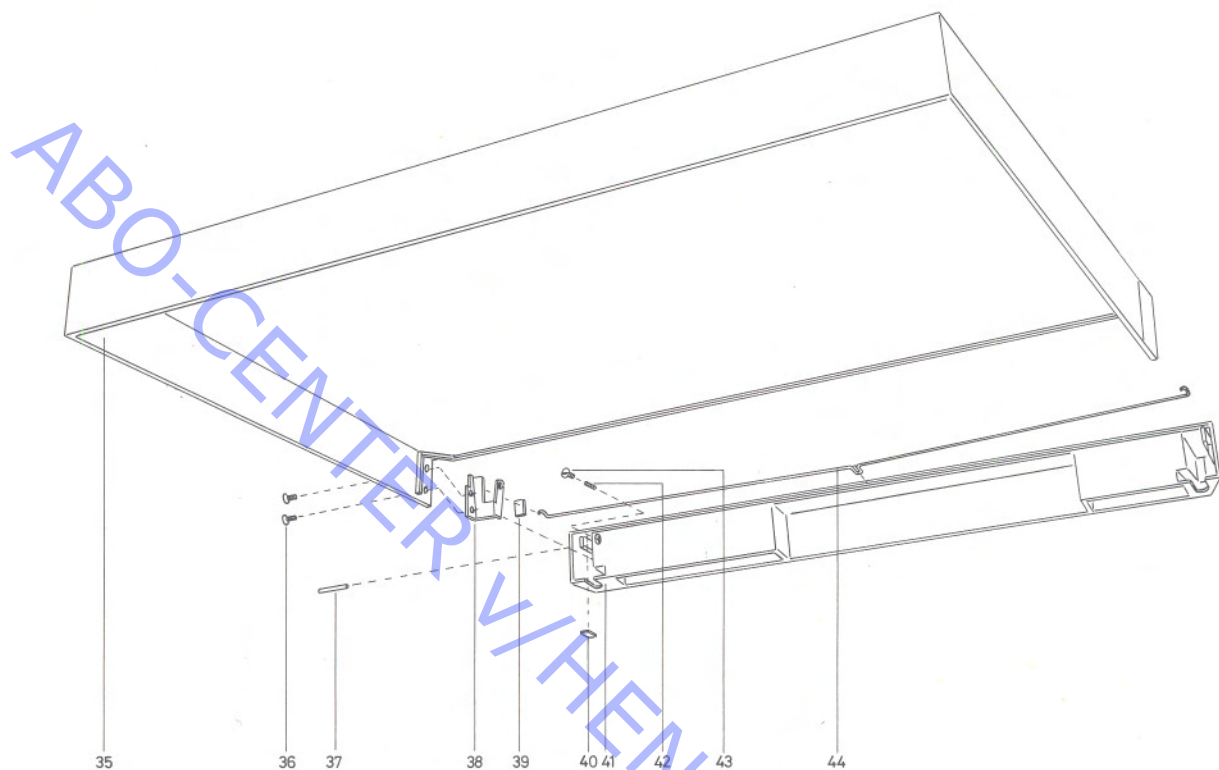
Comment on pos. 137, page 7-8:

BEOGRAM 4002, type 5501 till No.
277556
BEOGRAM 6000, type 5502 till No.
260028

When ordering parts for run-off stop please
apply the numbers shown on the sketch





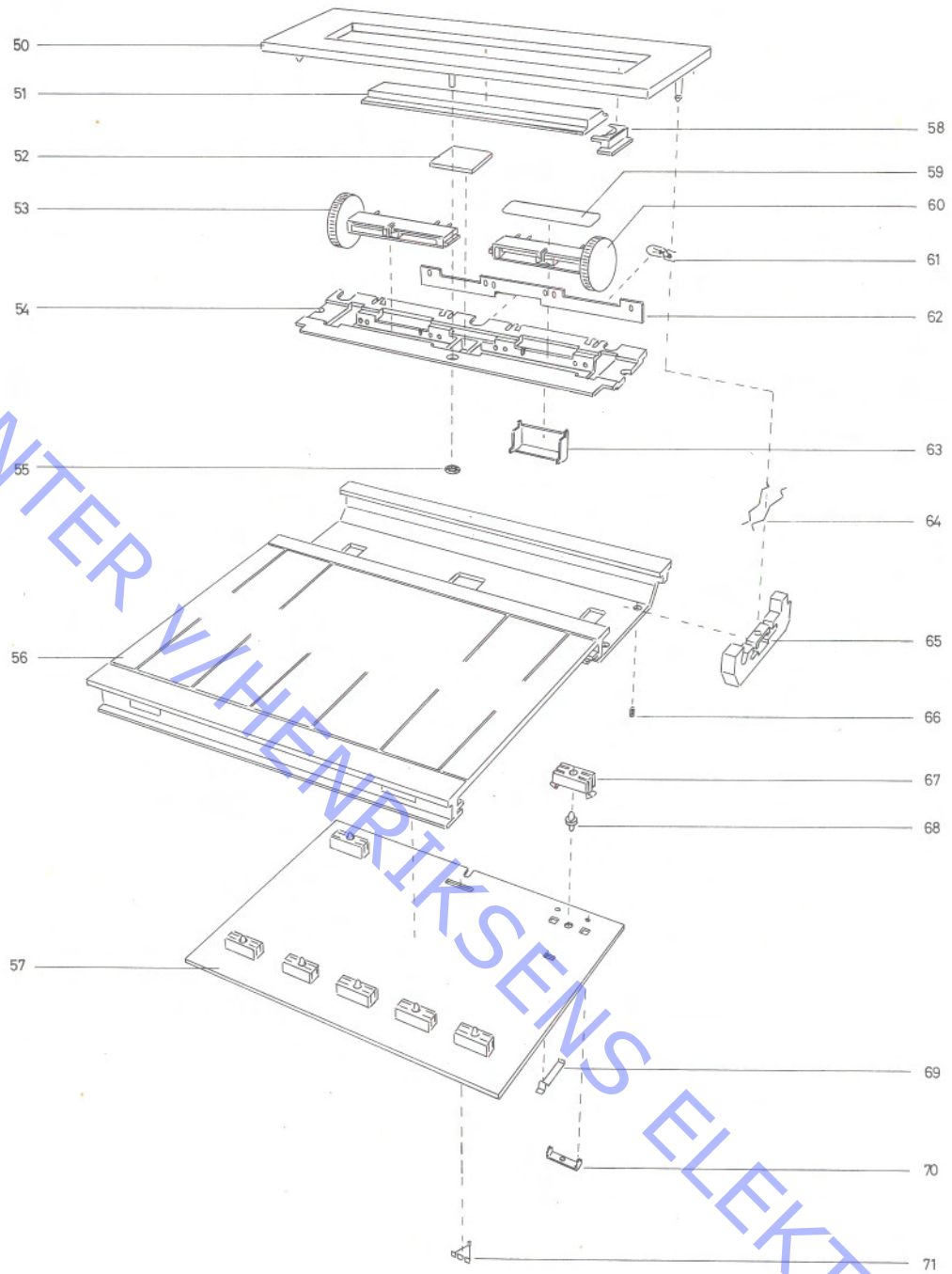


-
- | | | |
|----|---------|----------------------------------|
| 35 | 3164190 | Dust cover |
| | 3010007 | Stop for cover |
| | 2560039 | Decorative list for BEOGRAM 4002 |
| | 2560040 | Decorative list for BEOGRAM 6000 |
| 36 | 2038055 | Screw AM 3 x 6 mm DIN 63 |
| 37 | 2830014 | Bearing needle |
| 38 | 3030023 | Hinge left |
| | 3030022 | Hinge right |
| 39 | 3015030 | Guide piece |
| 40 | 3010011 | Stop for cover |
| 41 | 3452145 | Back piece |
| 42 | 2072704 | Treaded pin M3 x 2,5 mm DIN 438 |
| 43 | 2038050 | Screw AM 3 x 4 DIN 63 |
| 44 | 2819062 | Spring |
-

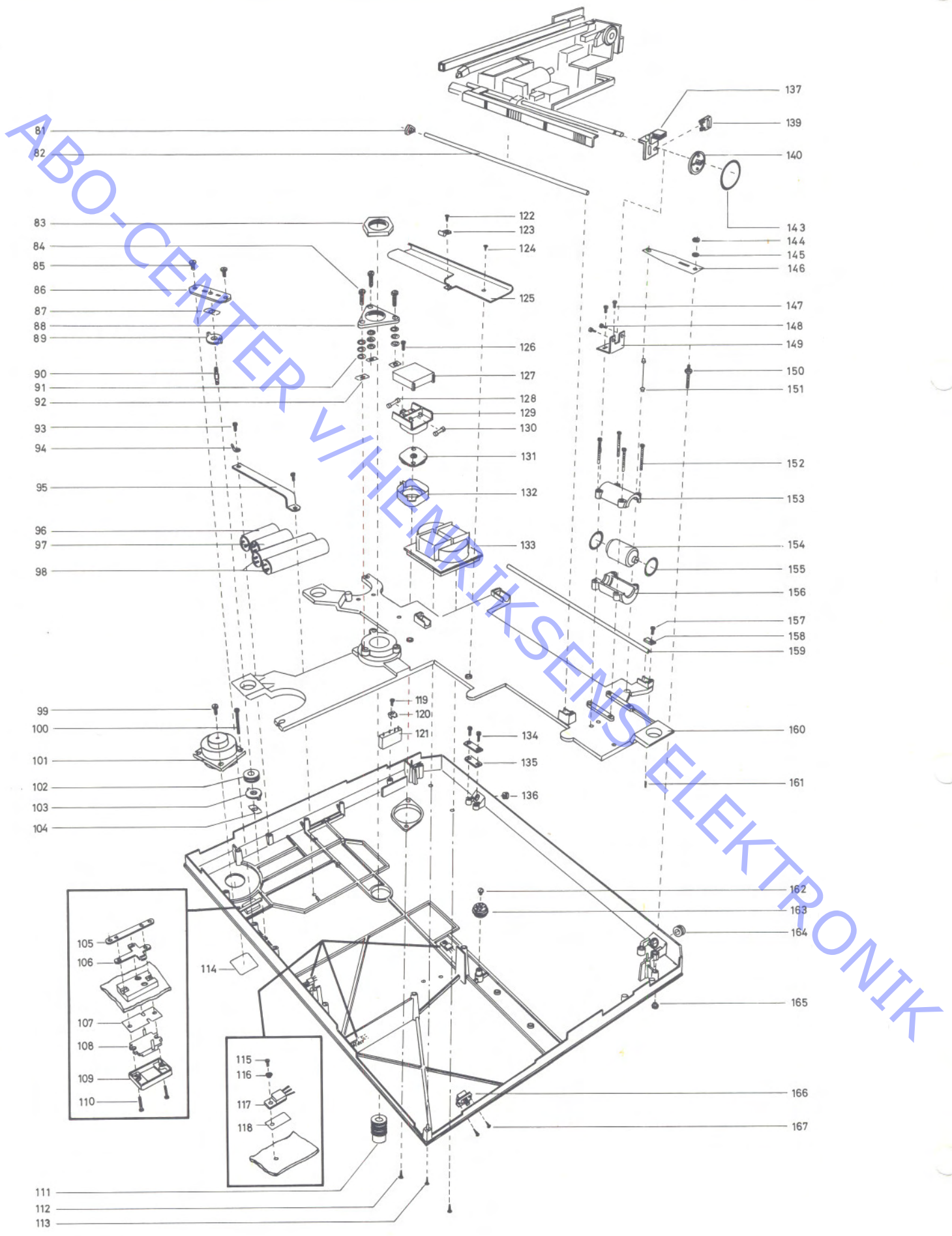
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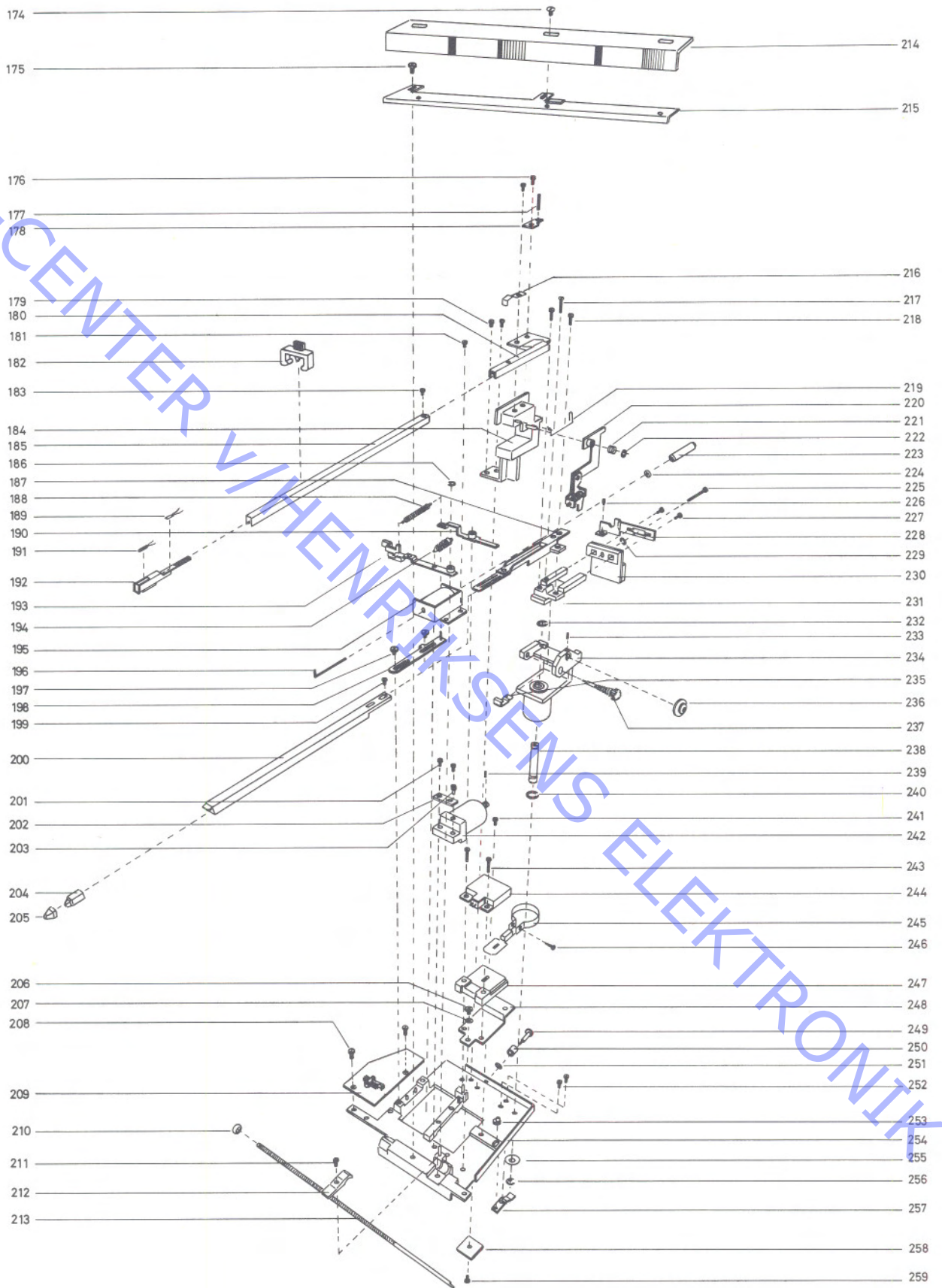
50	3458121	Top plate
51	3199046	Dial
52	3164179	Cover
53	5300090	Potentiometer, left
54	3131085	Housing for potentiometer
55	2395034	Spire
56	3168049	Chassis complete, BEOGRAM 4002
	3168048	Chassis complete, BEOGRAM 6000
	2361018	Pin 2 x 5 mm
57	8009020	PC-board, terminal print
58	3199047	End piece
59	3180621	Sticker
60	5300091	Potentiometer, right
61	8230052	Lamp
62	6140376	PC-board
63	3300044	Cover
64	2819096	Spring
65	3152129	Holder
66	2072701	Threaded pin M 3 x 4 mm DIN 438
67	3152068	Holder
68	2992059	Contact pin
69	7500075	Contact spring
70	7500050	Contact bridge
71	2816111	Locking spring

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ELEKTRONIK





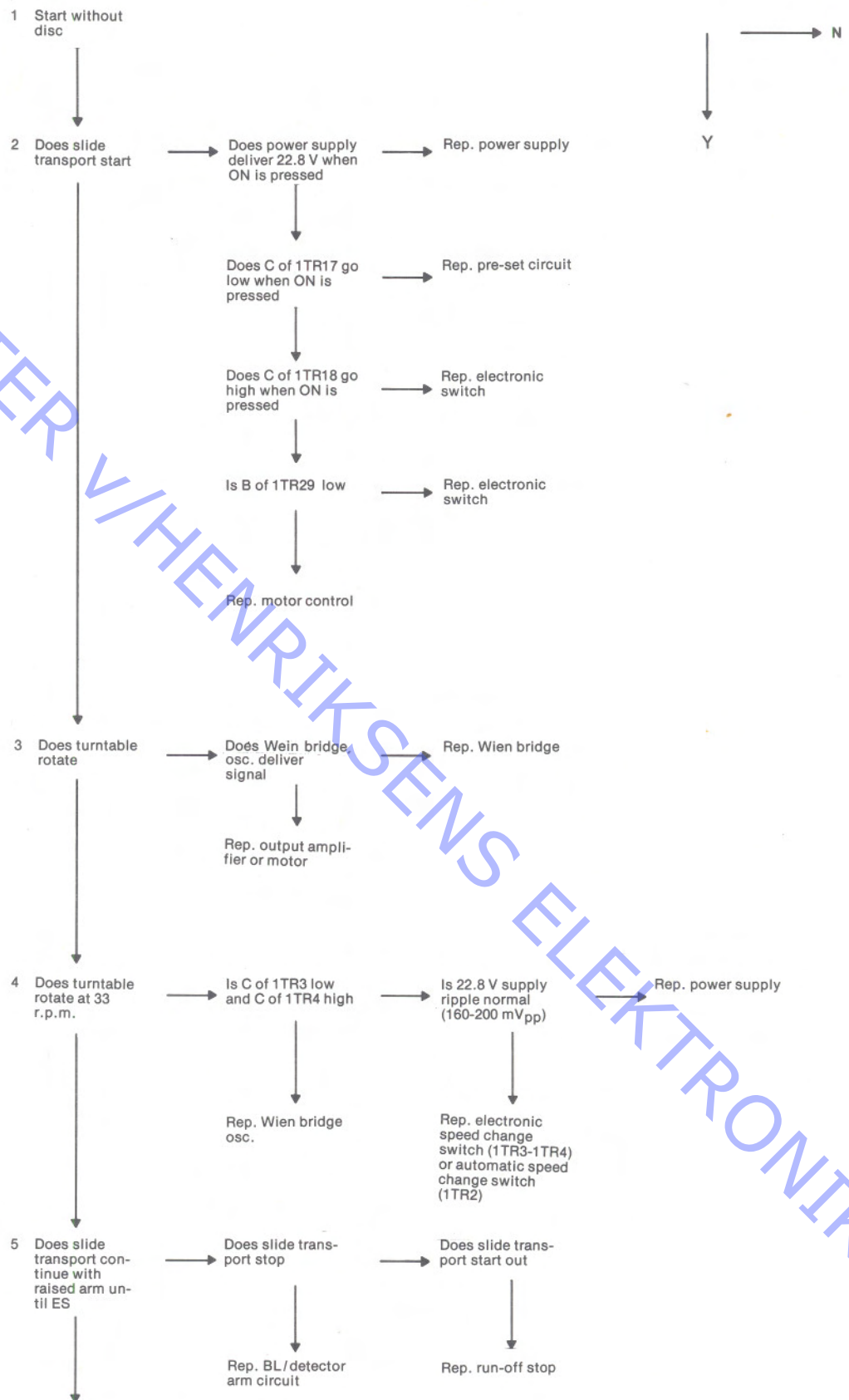
LUBRICATION

The need for relubrication is negligible.

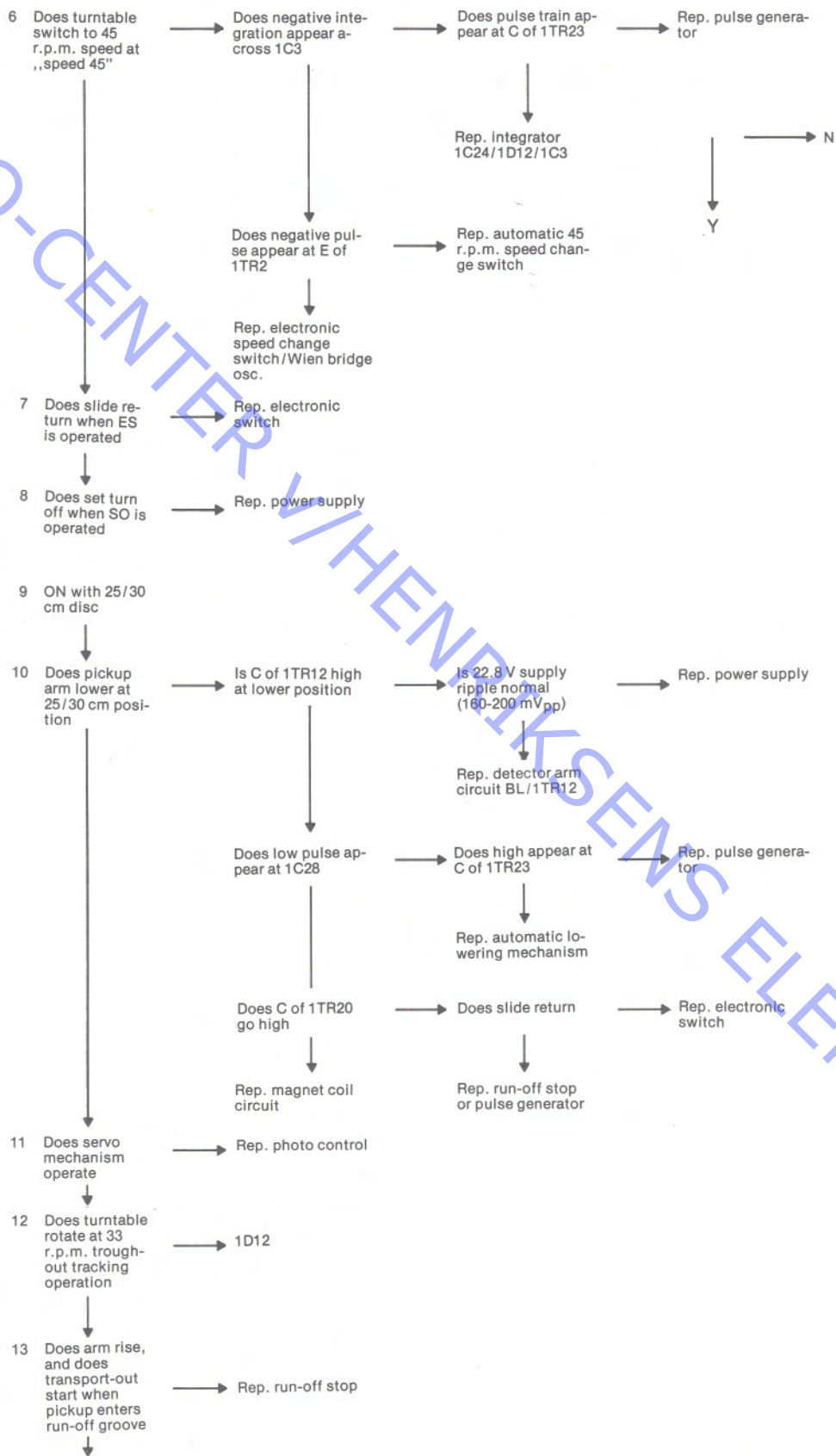
In the case of overhauls and replacement of mechanical parts the directions given below should be followed.

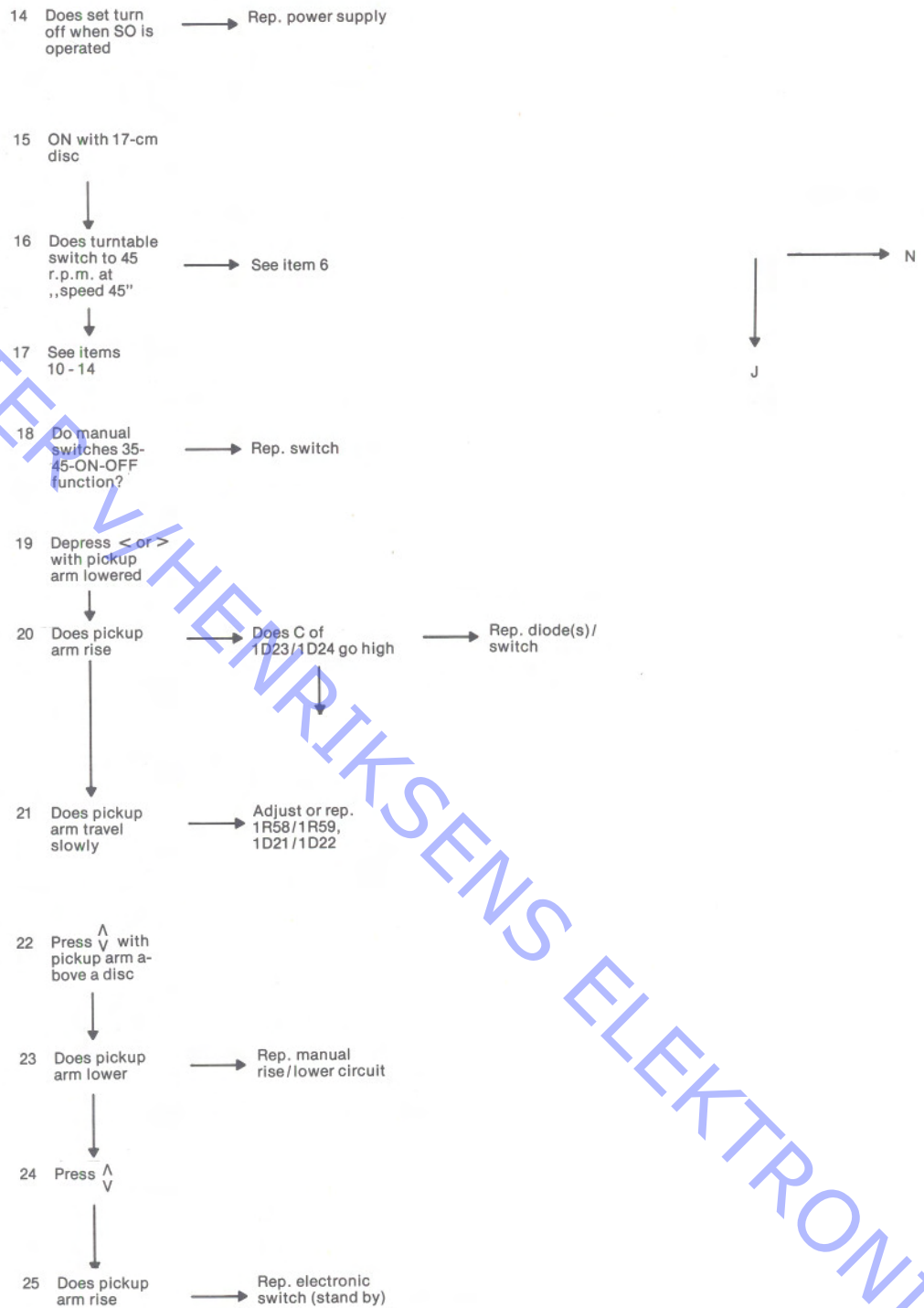
Pos. No.	Description	Lubricant
190	Arm	3984211, Castrol everyman oil
193	Arm	
198	Arm	
220	Arm	
250	Roller	
242	Damper cylinder	3984214, Dow corning 200 fluid
194	Magnet-coil spring	3984222, Valvata oil 79
137	Bearing for spindle	3984218, Mylocote DX paste (white)
213	Spindle	3984216, Rocol MTS 1000. Diluted to oily viscosity with ESSO NUTO H 44
111	Main bearing	3984221, ESSO NUTO H 44 Alternative: Teresso 43

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NOTATER/NOTES/NOTIZEN

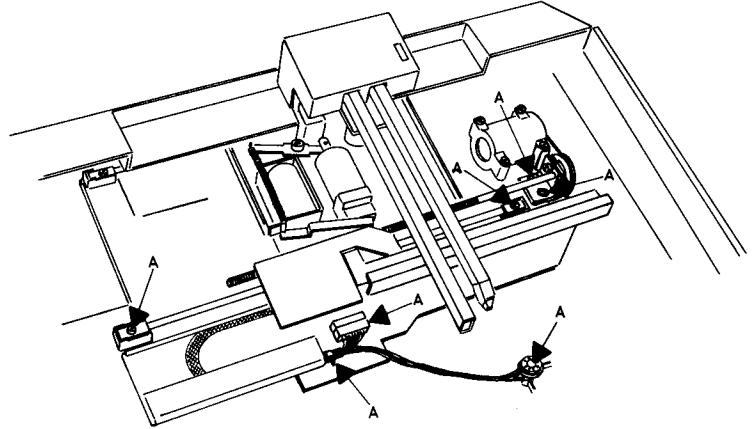
ABO-CENTER V/HENRIKSENS ELEKTRONIK

SERVICE TIPS

Demontering af slæde

Dismounting of slide

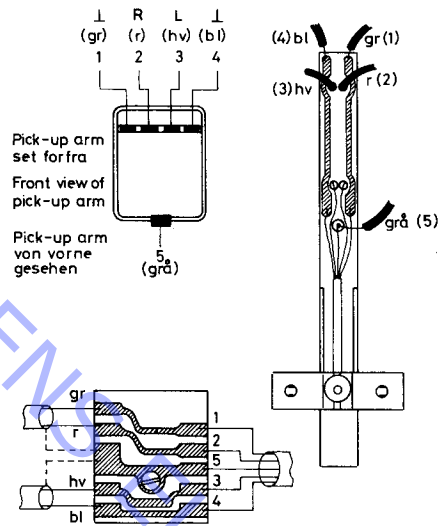
Demontierung vom Schlitten



Ledningsmontering i pick-up arm

Mounting of cable in the pick-up arm

Montierung einer Leitung im Tonabnehmerarm



NOTATER/NOTES/NOTIZEN
