

KUNDENDIENST

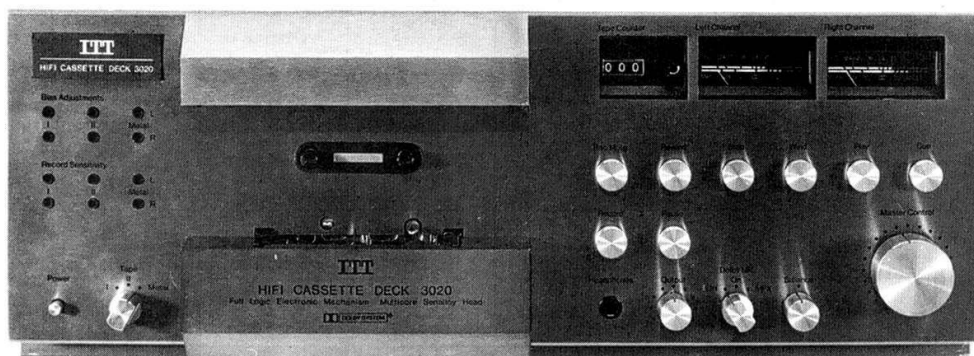


Graetz

S E R V I C E

MANUAL HIFI 3020

**TB
118
1983**



HIFI 3020: 5553 61 88

Herausgegeben von:
Standard Elektrik Lorenz Aktiengesellschaft
Kundendienst für die Marken ITT Schaub-Lorenz und Graetz
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Änderungen vorbehalten
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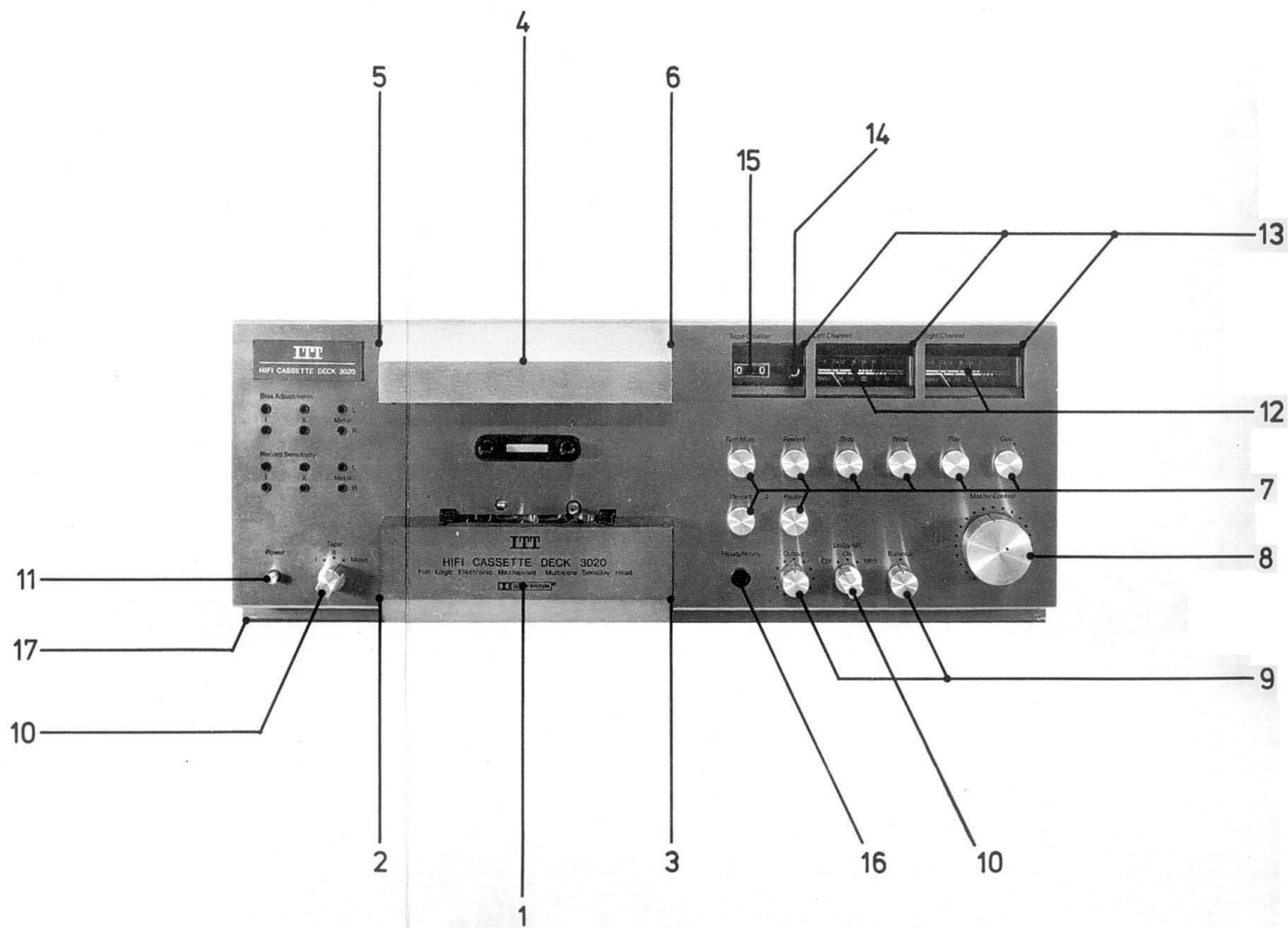
			Line Out L, R	3150 Hz PLAY	Capstan motor	3103–3197 Hz	
	Line Out L, R			10 kHz PLAY		max. (L) max. (R)	
		U 101, Pin 2, 		400 Hz Dolby *) PLAY	R 114	580 mV $\approx$ ± 10 mV	TAPE „I“ DOLBY „OFF“ OUTPUT control max. MASTER CONTROL max.
				"	R 308	– 2 dB LEFT Instrument	
		U 201, Pin 2 		"	R 214	580 mV $\approx$ ± 10 mV	
				"	R 408	– 2 dB RIGHT Instrument	
19,00 kHz Line In (L, R)		R 370 $\bullet$ C 361 R 470 $\bullet$ C 461 		RECORD	L 102 (L) L 202 (R)	min. $\approx$ "	TAPE „I“ DOLBY „MPX“
		"		RECORD	L 351 (L) L 451 (R)	min. $\approx$ "	TAPE „METAL“ MASTER CONTROL min.
333 Hz/15 kHz 150 mV Line In (L, R)		Line Out L, R		RECORD (30 sec.) REWIND PLAY	R 381 (L) BIAS R 481 (R)	± 1 dB/15 kHz (PLAY) "	TAPE „I“ DOLBY „OFF“
"		"		"	R 382 (L) BIAS R 482 (R)	" "	TAPE „II“ DOLBY „OFF“
"		"		"	R 383 (L) BIAS R 483 (R)	" "	TAPE „METAL“ DOLBY „OFF“
333 Hz/150 mV Line In (L, R)		U 101 Pin 2 (L) U 201 Pin 2 (R) 		RECORD	MASTER CONTROL BALANCE CONTROL	580 mV $\approx$ (L) ± 5 mV (R)	TAPE „I“ DOLBY „OFF“
"		"		RECORD (30 sec.) REWIND PLAY	R 377 (L) SENSITIVITY R 477 (R)	580 mV $\approx \pm 20$ mV (PLAY) "	"
"		"		"	R 378 (L) SENSITIVITY R 478 (R)	" "	TAPE „II“ DOLBY „OFF“
"		"		"	R 379 (L) SENSITIVITY R 479 (R)	" "	TAPE „METAL“ DOLBY „OFF“
333 Hz/20 kHz 150 mV Line In (L, R)		"		RECORD	MASTER CONTROL BALANCE CONTROL	39 mV $\approx$ (L) (580 mV – 23,4 dB) " (R)	TAPE „II“ DOLBY „OFF“
"		Line Out L, R		RECORD (30 sec.) REWIND PLAY	R 374 (L) R 474 (R)	$\pm 1,5$ dB/20 kHz (L) $\updownarrow$ (PLAY) $\pm 1,5$ dB/20 kHz (R)	"
"		U 101 Pin 2 (L) U 201 Pin 2 (R)		RECORD	MASTER CONTROL BALANCE CONTROL	70 mV $\approx$ (L) (580 mV – 18,4 dB) " (R)	TAPE „METAL“ DOLBY „OFF“
"		Line Out L, R		RECORD (30 sec.) REWIND PLAY	R 375 (L) R 475 (R)	$\pm 1,5$ dB/20 kHz $\updownarrow$ (PLAY) $\pm 1,5$ dB/20 kHz	TAPE „METAL“ DOLBY „OFF“

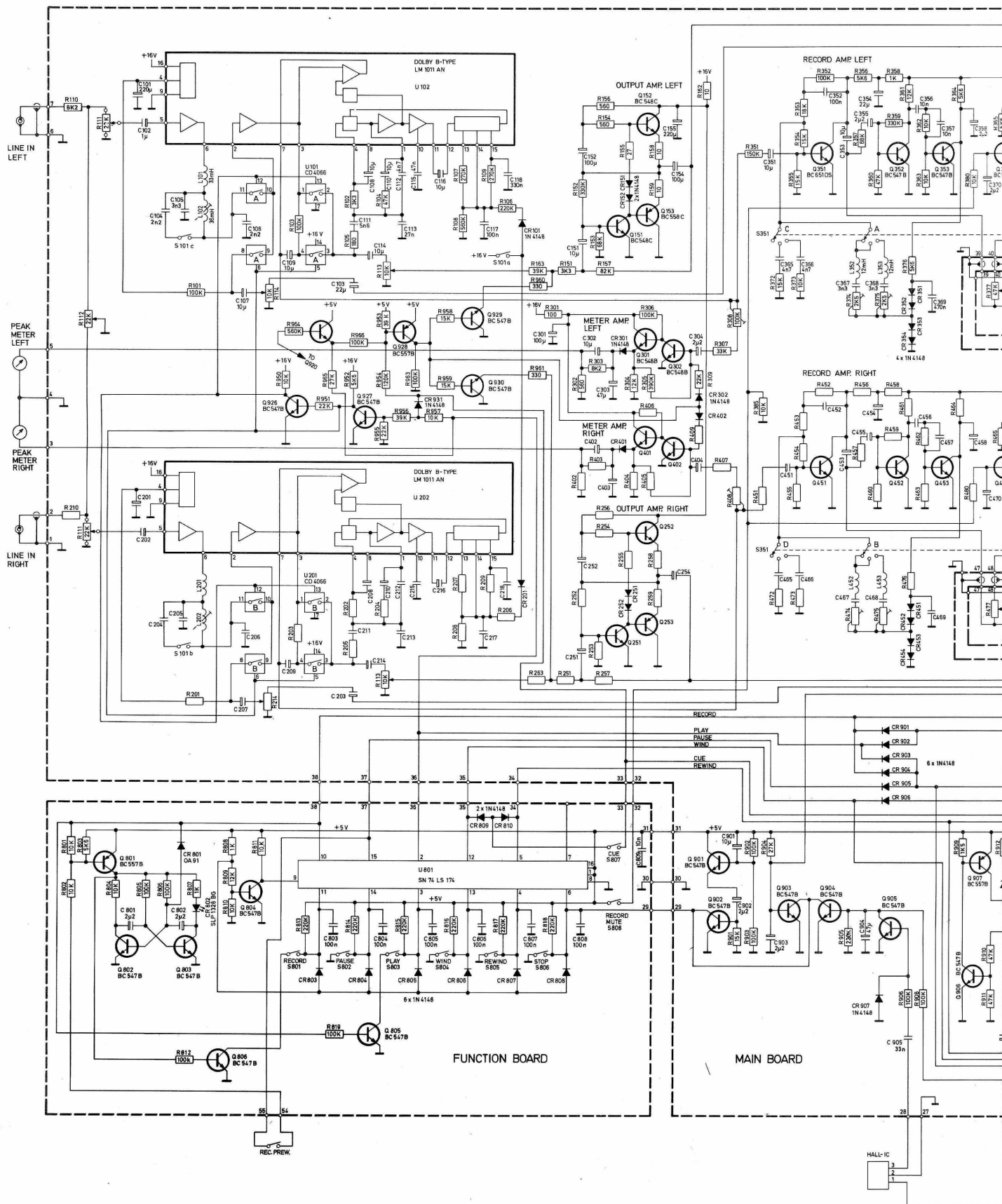
* Geräuscherdrückungssystem unter Lizenz von Dolby Laboratories Licensing Corporation hergestellt. Das Wort „Dolby“ und das Symbol des doppelten D sind die Warenzeichen von Dolby Laboratories Licensing Corporation.

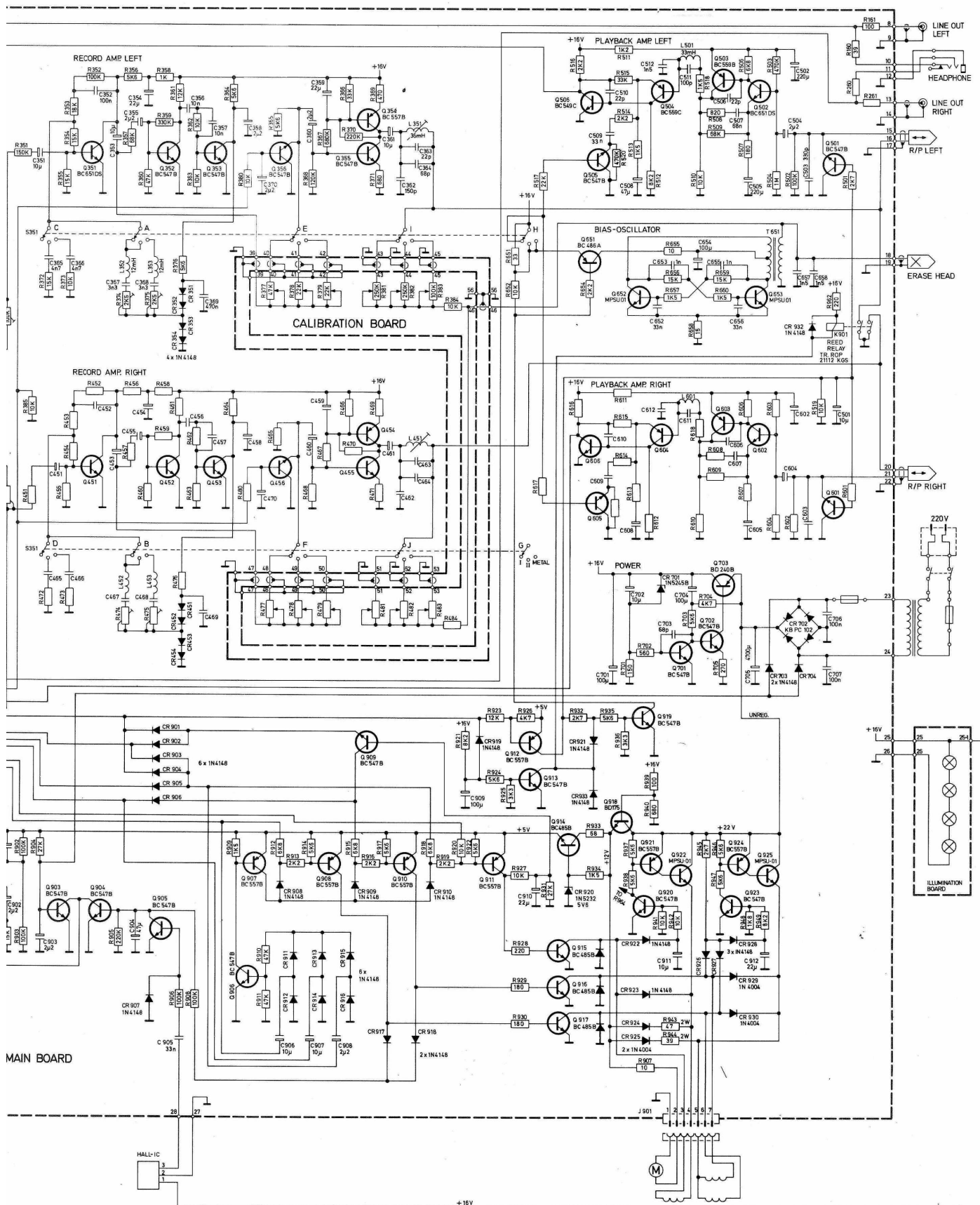
* Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

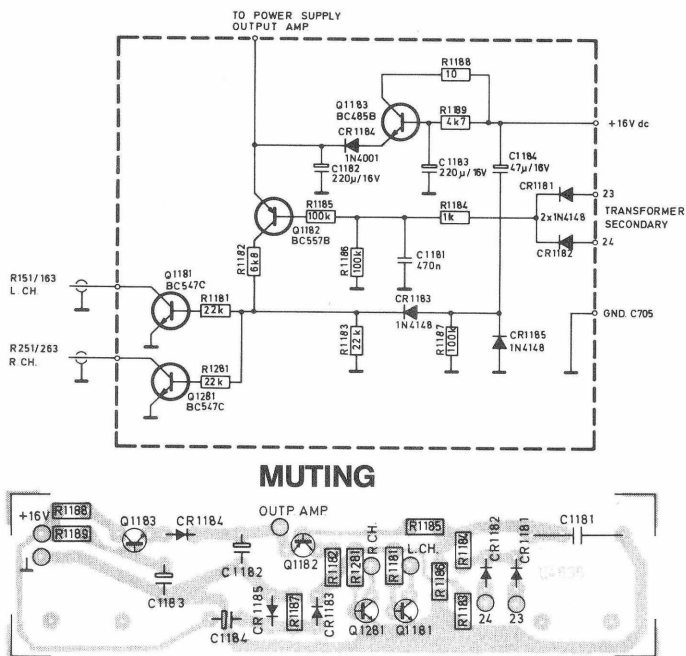
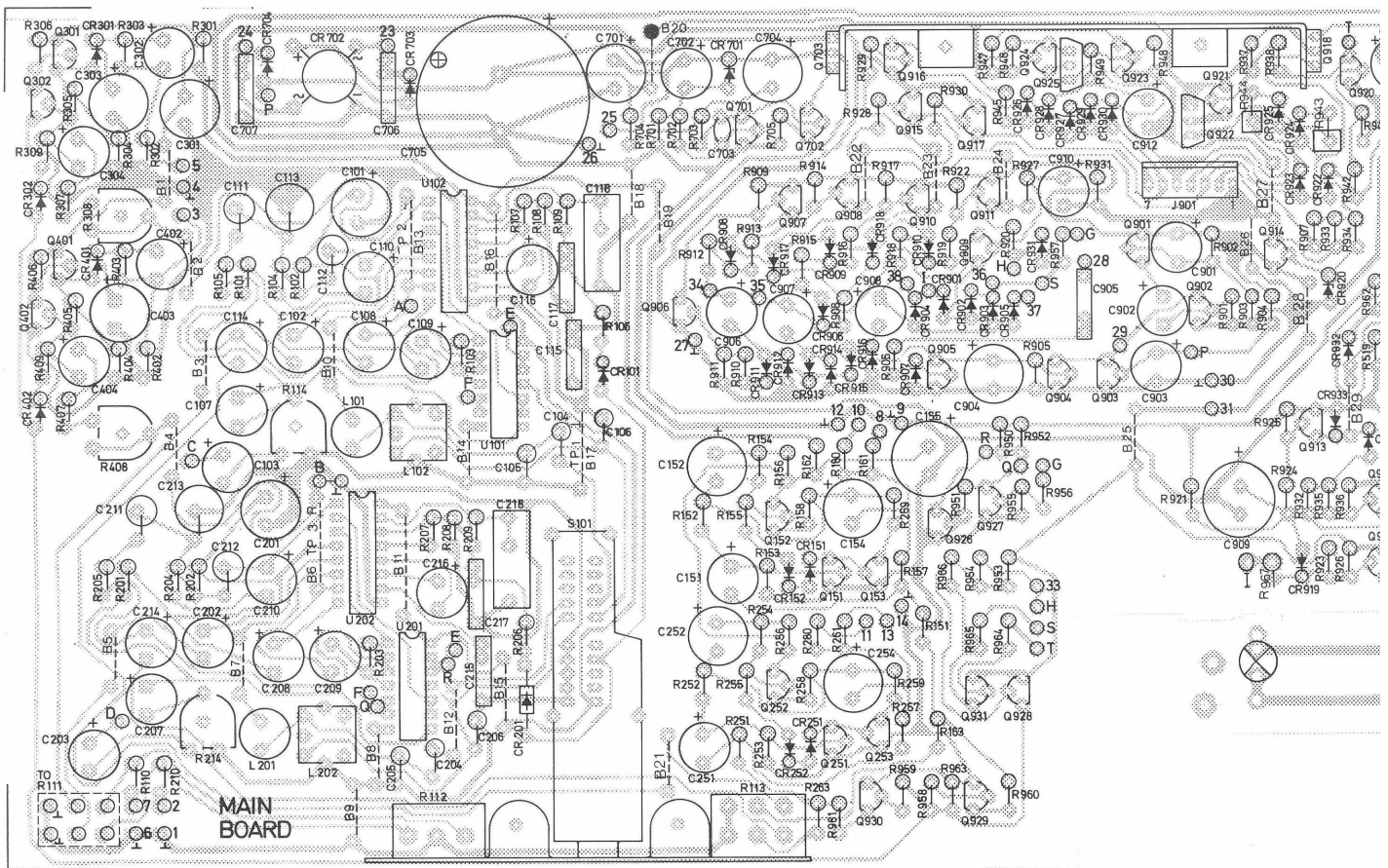
* Réducteur de bruits Dolby: Circuit fabriqué sous licence des Dolby Laboratories Licensing Corporation. Le mot „Dolby“ et le symbole double D sont des marques déposées des Dolby Laboratories Licensing Corporation.

Pos.		No.
1	Abdeckung/Cover/Couvercle	6134 37 06
2	Blende/Dummy plate/Ecran	8681 24 83
3	Blende/Dummy plate/Ecran	8681 24 82
4	Abdeckung/Cover/Couvercle	6134 38 99
5	Blende/Dummy plate/Ecran	8681 24 85
6	Blende/Dummy plate/Ecran	8681 24 84
7	Taste/Pushbutton/Bouton poussoir (STOP, PLAY, REC. ...)	6328 11 79
8	Knopf/Knob/Bouton (MASTER)	6328 11 83
9	Knopf/Knob/Bouton (OUTPUT, BALANCE)	6328 11 81
10	Knopf/Knob/Bouton (TAPE, DOLBY)	6328 11 82
11	Taste/Pushbutton/Bouton poussoir (POWER)	6328 11 80
12	Instrument	4427 91 17
13	Rahmen f. Instrument/Instrument frame/Ecran pour Instrument	8681 24 81
14	Zähler/Counter/Compteur	6467 16 76
15	Zählerfenster/Counter window/Fenêtre de compteur	6462 56 89
16	Buchse/Socket/Prise (HEADPHONES)	4145 03 49
17	Fußgummi/Foot rubber/Piedestal au caoutchouc	8868 06 94
	Gehäusefront/Cabinet front/Panneau frontal	6134 38 96
	Gehäuseboden/Cabinet bottom/Semelle	6134 38 97
	Gehäuseoberteil/Cabinet top/Partie superieure de boîtier	6134 38 98
	Netztrafo/Mains transformer/Transformateur d'alimentation	4511 33 19
	Netzschalter/Mains switch/Interrupteur secteur	4112 94 79
	Halter hierzu/Holder for this item/Support	8318 45 17
	Laufwerk/Drive mechanism/Platine	5863 11 34
	Zähler-Antriebsrolle/Counter driving wheel/ Roue d'entraînement pour compteur	7548 41 76

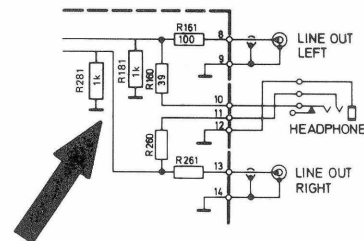








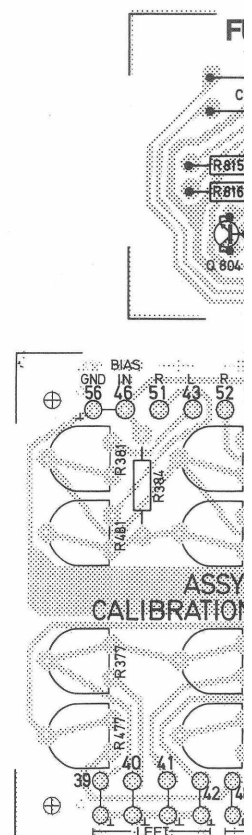
MAIN BOARD

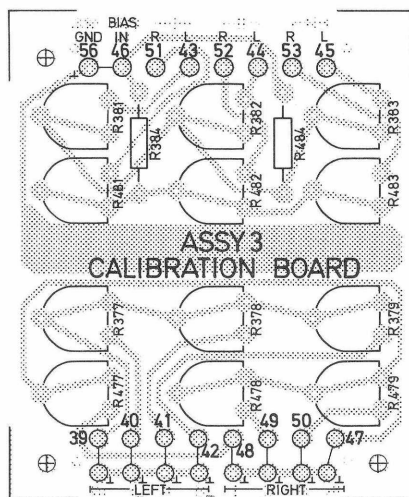
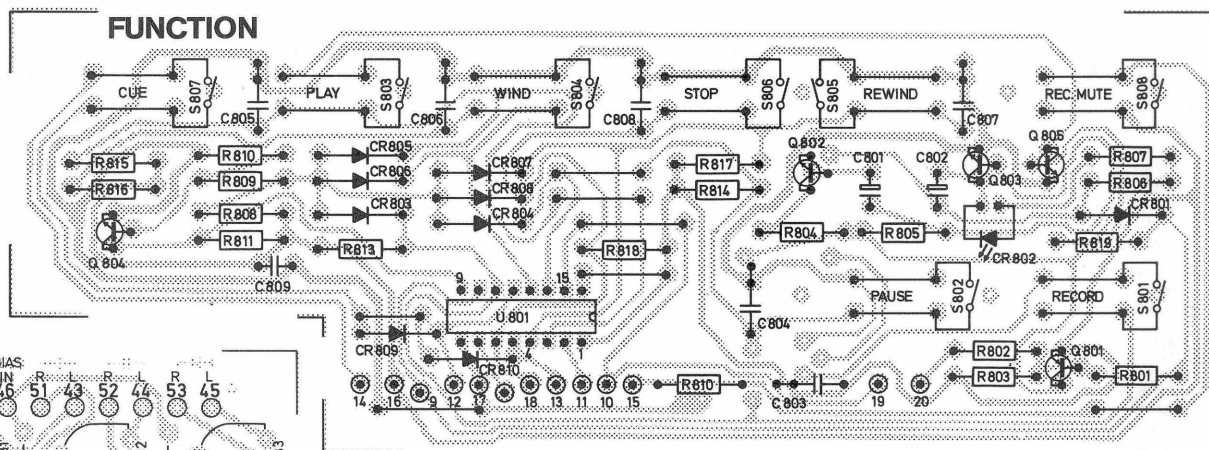
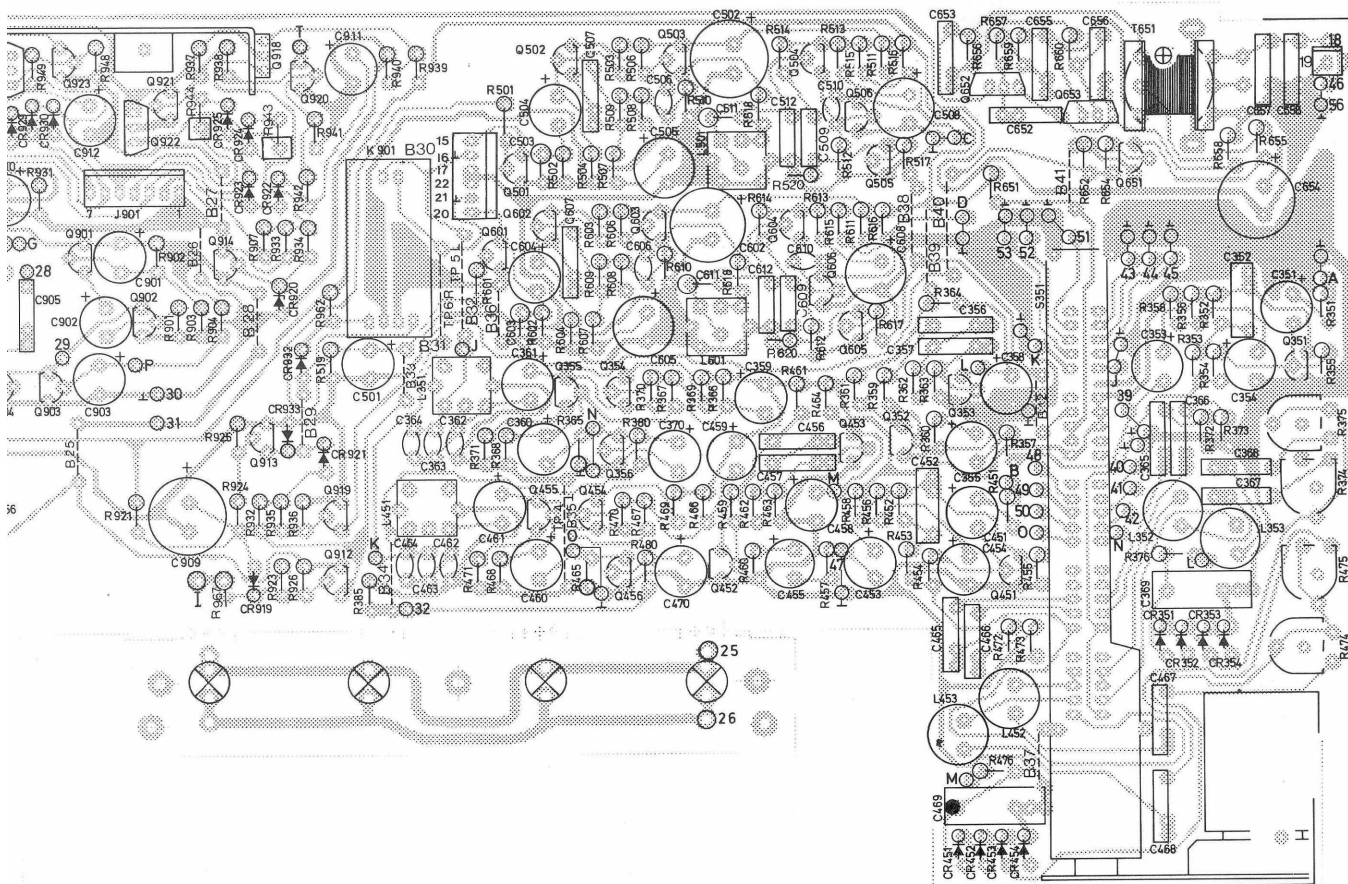


Bei Verwendung einer Muting-Schaltung dieses Typs sind R 181/281 auf der Hauptplatte eingelötet.

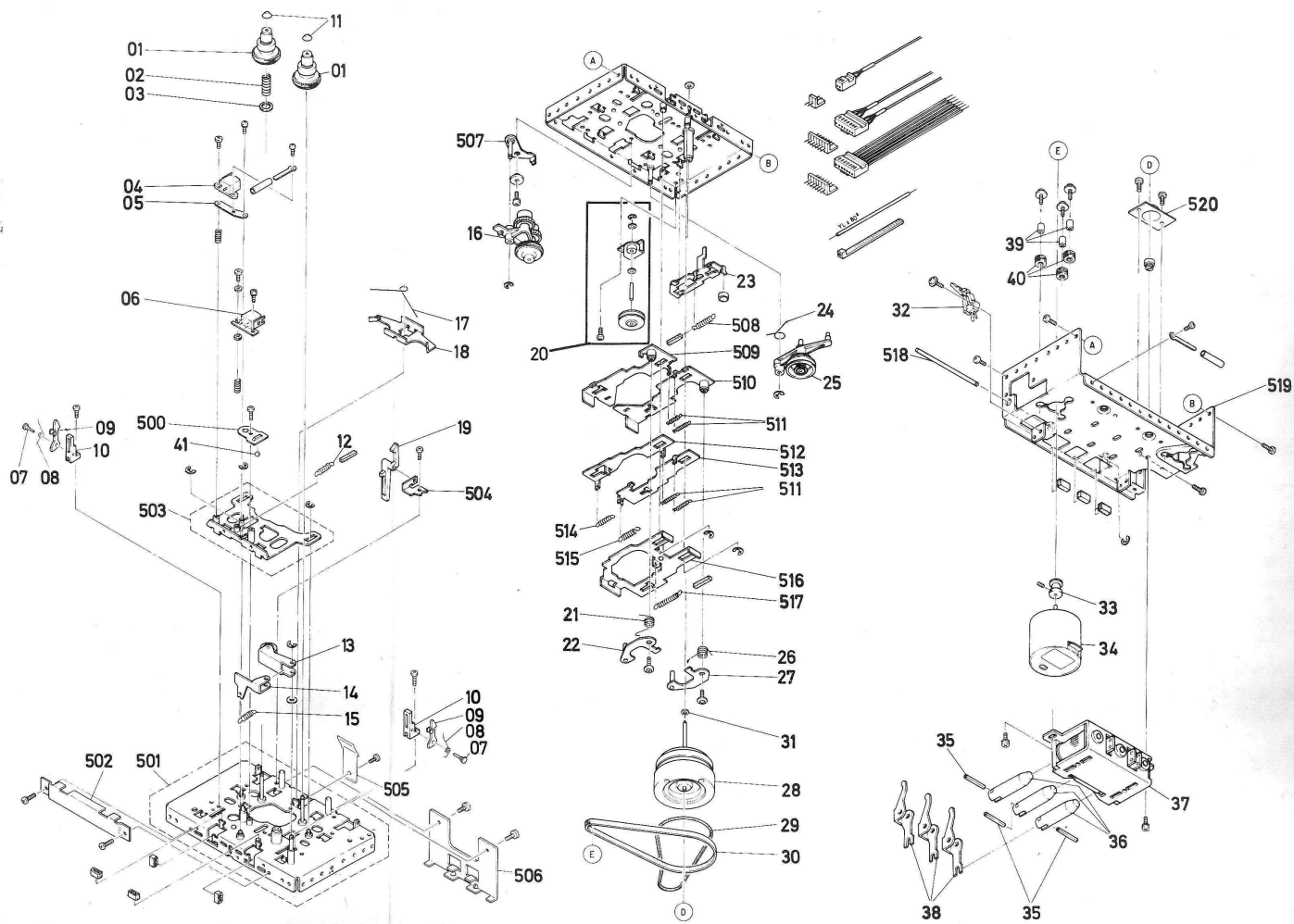
If this type of muting circuit is installed, R 181, 281 are soldered on the main board.

En utilisant un muting-circuit de ce type, R 181, 281 sont soudés sur la plaque centrale.





Pos.	No.
1	6253 41 37
2	7358 25 84
3	7726 05 27
4	4337 91 50
5	8318 45 26
6	4335 91 99
7	8318 45 22
8	7358 25 79
9	8318 45 20
10	8681 24 87
11	8681 20 54
12	7358 25 80
13	7538 33 33
14	7358 25 87
15	7358 25 81
16	2424 01 15
17	7358 25 85
18	8318 45 23
19	8681 24 88
20	7424 01 16
21	7358 25 83
22	8318 45 19
23	8318 45 25
24	7358 25 86
25	7424 01 14
26	7358 25 82
27	8318 45 18
28	7518 40 85
29	7618 42 06
30	7618 42 05
31	7726 59 69
32	4188 04 24
33	7548 41 77
34	4432 01 41
35	7971 01 05
36	8318 45 21
37	4672 40 04
38	8318 45 24
39	6568 10 07
40	8188 03 97
41	7651 11 09
Pos.	
500	
501	
502	
503	
504	
505	
506	
507	
508	
509	
510	
511	
512	
513	
514	
515	
516	
517	
518	
519	
520	
Die Teile mit Pos. Nr. 500 ... 520 sind nur während der Fertigungsperiode des Gerätes verfügbar. The parts numbered from 500 to 520 are available only during the manufacturing period of the unit. Les pièces avec numéro de position 500 ... 520 sont uniquement à disposition pendant la période de fabrication.	





U 101, 201	CD 4066 MOS	3772 02 75
U 102, 202	LM 1011 N	3771 41 21
U 801	74 LS 174 N	3771 40 01



Q 151, 152, 251, 252	BC 548 C	3614 13 25
Q 153, 253	BC 558 C	3614 20 25
Q 301, 302, 352, 353, 355, 356, 401, 402, 452, 453, 455, 456, 501, 505, 601, 605, 701, 702, 802... 807, 901... 906, 909, 913, 919, 920, 923, 926, 927, 929... 931, 1181, 1281	BC 547 B	3614 12 12
Q 351, 451, 502, 602	BC 651 DS	3614 49 31
Q 354, 454, 901, 907, 908, 910, 911, 912, 921, 924, 928	BC 557 B	3614 19 24
Q 503, 504, 603, 604	BC 559 B	3614 38 68
Q 506, 606	BC 549 C	3614 14 13
Q 651	BC 486 A	3614 49 34
Q 652, 653, 922, 925	MPSU 01	3614 49 32
Q 703	BD 176	3616 14 20
Q 801, 1182	BC 557 B	3614 19 24
Q 914... 917, 1183	BC 485 B	3614 49 33
Q 918	BD 175	3616 15 20



CR 101, 151, 152, 201, 251, 252, 301, 302, 351... 354, 401, 402, 451... 454, 703, 704, 803... 810, 901... 919, 921... 923, 926... 928, 931... 933, 1181... 1183, 1185	1 N 4148	3656 08 10
CR 701	1 N 5245 B	3656 28 32
CR 702	WO 005	3674 01 51
CR 801	1 N 60	3662 08 01
CR 802	SLP 132 B	3681 16 51
CR 920	1 N 5232 B	3653 17 24
CR 924, 925, 929, 930, 934... 936, 1184	1 N 4004	3657 11 02



R 111	20 k	3112 97 21
R 112	25 k	3112 97 20
R 113	10 k	3112 97 19
R 114, 214	10 k	3111 80 44
R 308, 408	100 k	3111 80 30
R 374, 375, 474, 475	2,2 k	3111 52 27
R 377, 477	47 k	3111 48 60
R 378, 379, 478, 479	22 k	3111 50 68
R 383, 483	100 k	3111 80 30



C 101, 155, 201, 502, 505, 602, 605, 1182, 1183	220 μ F	16 V	3422 26 50
C 102, 202	1 μ F	50 V	3422 08 14
C 103, 203, 354, 359, 454, 459	22 μ F	16 V	3422 30 08
C 107... 110, 114, 116, 151, 207... 210, 214, 216, 251, 351, 353, 361, 451, 453, 461, 501	10 μ F	16 V	3422 09 98
C 152, 154, 252, 254, 301, 701, 704	100 μ F	16 V	3422 27 84
C 302, 402, 702, 901, 906... 908, 911	10 μ F	35 V	3422 09 09
C 303, 403, 904	47 μ F	50 V	3422 58 25
C 304, 404, 801, 802, 902, 903	2,2 μ F	50 V miniatur	3422 85 09
C 355, 358, 360, 370, 455, 458, 460, 470	2,2 μ F	25 V miniatur	3422 86 57
C 504, 604	1000 μ F	10 V miniatur	3422 85 40
C 508, 608, 1184	47 μ F	16 V	3422 30 11
C 654	100 μ F	25 V	3422 86 34
C 705	4700 μ F	25 V	3422 86 62
C 909	100 μ F	10 V	3422 23 84
C 910, 912	22 μ F	50 V	3422 58 82
C 1181	0,47 μ F	50 V	3422 61 02



L 101, 201, 501, 601	33 mH	4543 96 66
L 102, 202, 351, 451	36 mH	4543 94 66
L 352, 353, 452, 453	12 mH	4543 98 09
T 651	BIAS OSC.	4552 92 23
K 901	Relais	4124 10 27



Taster/Key switch/ Commutateur à touche	4115 86 34
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GEDR. PLATTE / PCB / CIRCUIT IMPRIME	
Hauptplatte / Main board / Centrale	6913 31 82
Regler / Potentiometers / Potentiomètre	6913 31 83
Beleuchtung / Illumination	6913 31 84
Function	6913 31 85
Muting	6913 52 12
Q 807	6913 52 13