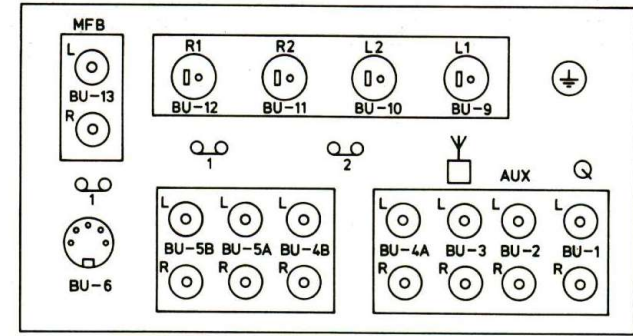
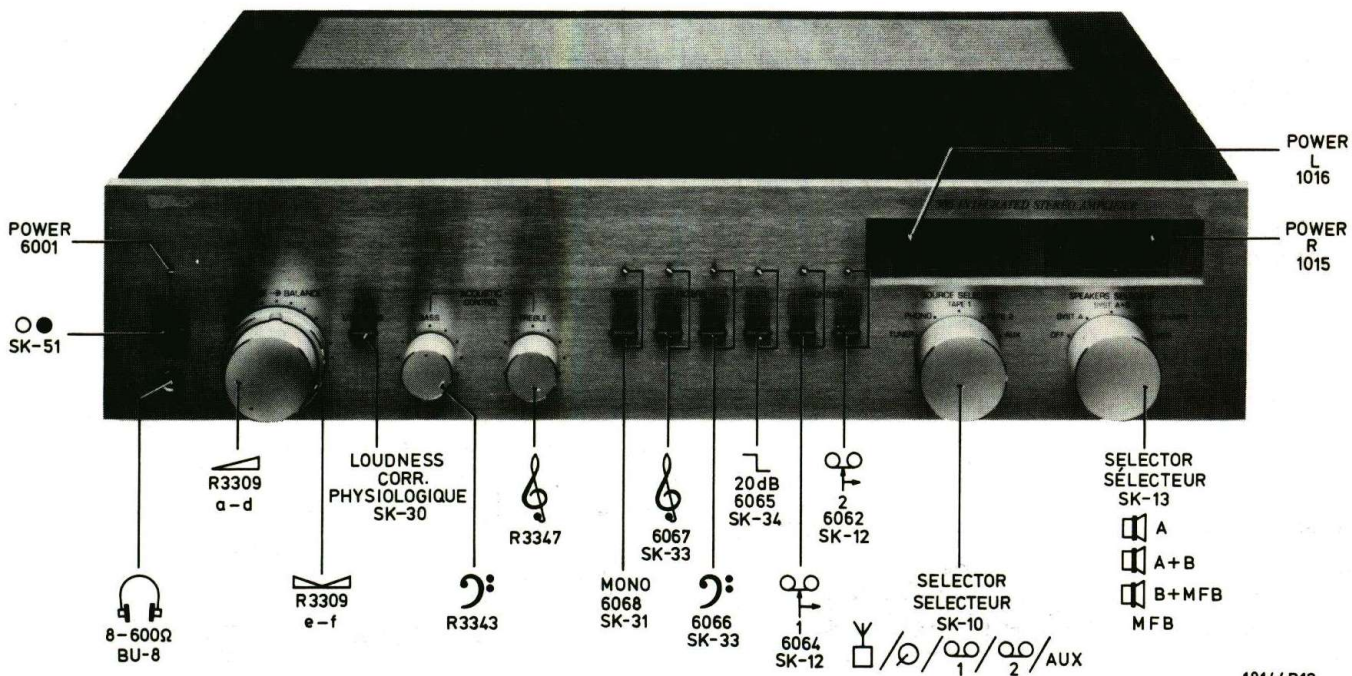


Service
Service
Service

Service Manual



BU-1	Q	⊖	2,5 mV	(47 kΩ)	BU-6	○—○	1,4	⊖	0,25 mV/kΩ	(220 kΩ)
BU-2	AUX	⊖	150 mV	(100 kΩ)			3,5	⊖	150 mV	(100 kΩ)
BU-3	□	⊖	150 mV	(100 kΩ)	BU-8	🎧		⊖	350 mV	(8 Ω)
BU-4A	○—○	⊖	150 mV	(100 kΩ)				⊖	2,5 V	(1 kΩ)
BU-4B	○—○	⊖	150 mV	(2,5 kΩ)	BU-9	🔊	L1	⊖	60 W	(8 Ω)
BU-5A	○—○	⊖	150 mV	(2,5 kΩ)	BU-10	🔊	L2	⊖		
BU-5B	○—○	⊖	150 mV	(100 kΩ)	BU-11	🔊	R2	⊖		
					BU-12	🔊	R1	⊖	60 W	(8 Ω)



(GB)

For more detailed technical specifications please consult commercial documentation.

(F)

Pour l'obtention de données techniques plus détaillées veuillez consulter la documentation commerciale.

(I)

In modo da ottenere dati tecnici più particolareggiati, vi preghiamo di riferirvi alla documentazione commerciale.

(NL)

Voor meer uitgebreide technische specificaties gelieve de commerciële documentatie te raadplegen.

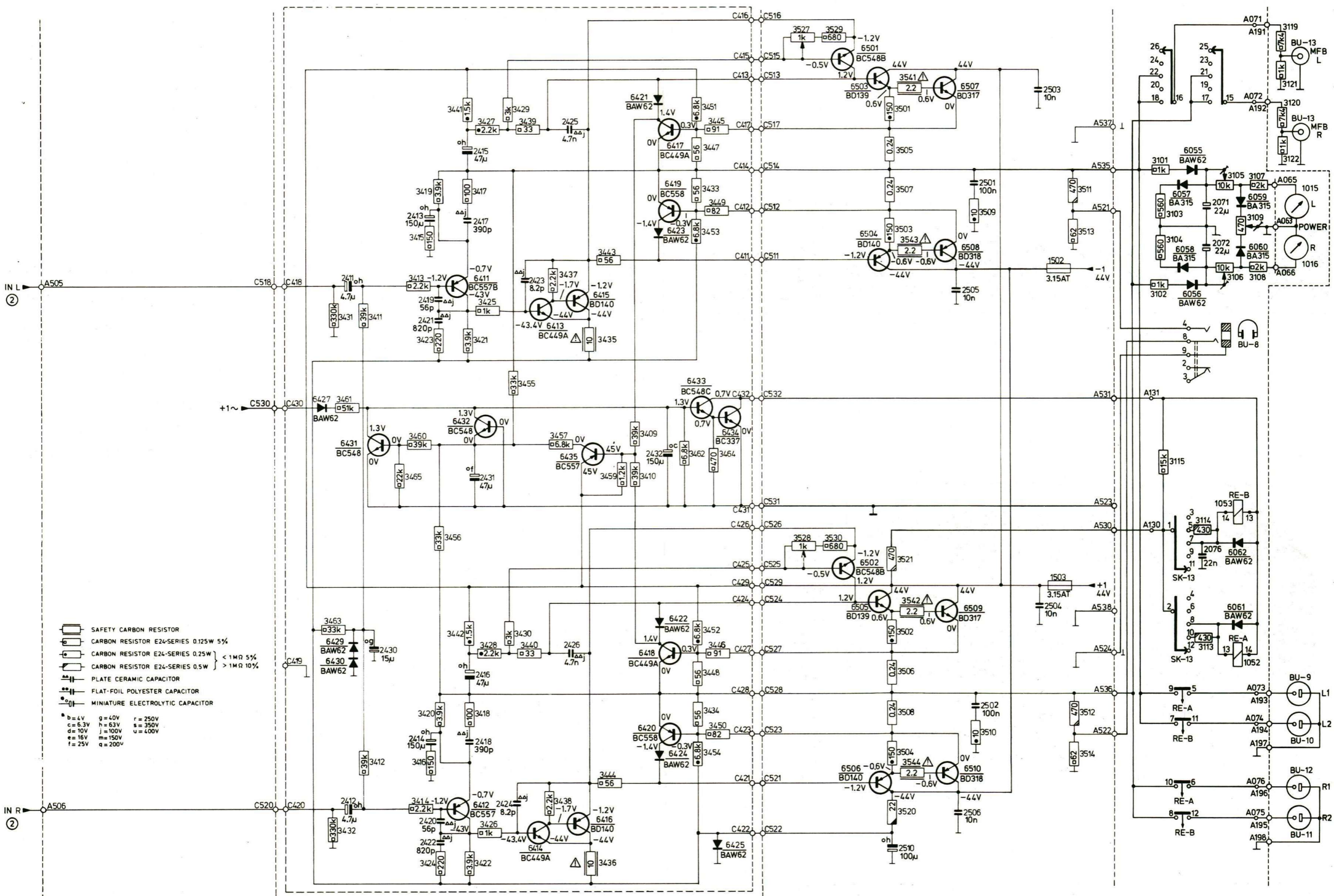
(D)

Für eine mehr detaillierte technische Spezifikation verweisen wir auf die kommerzielle Dokumentation.

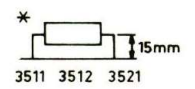
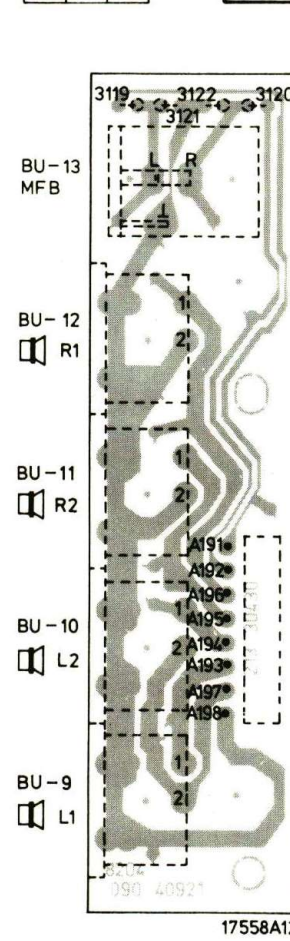
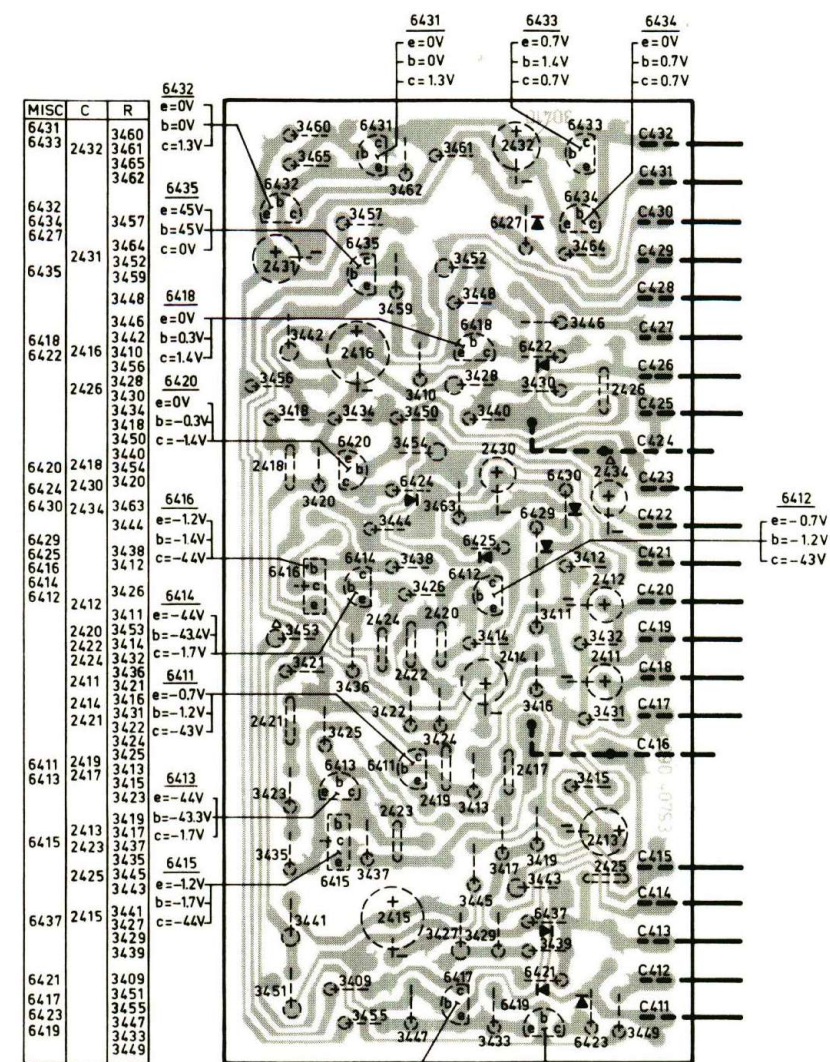
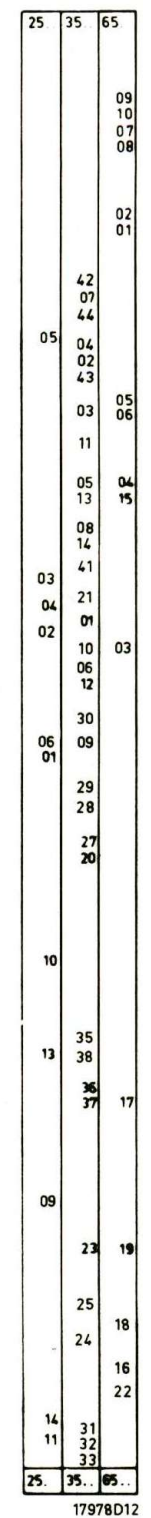
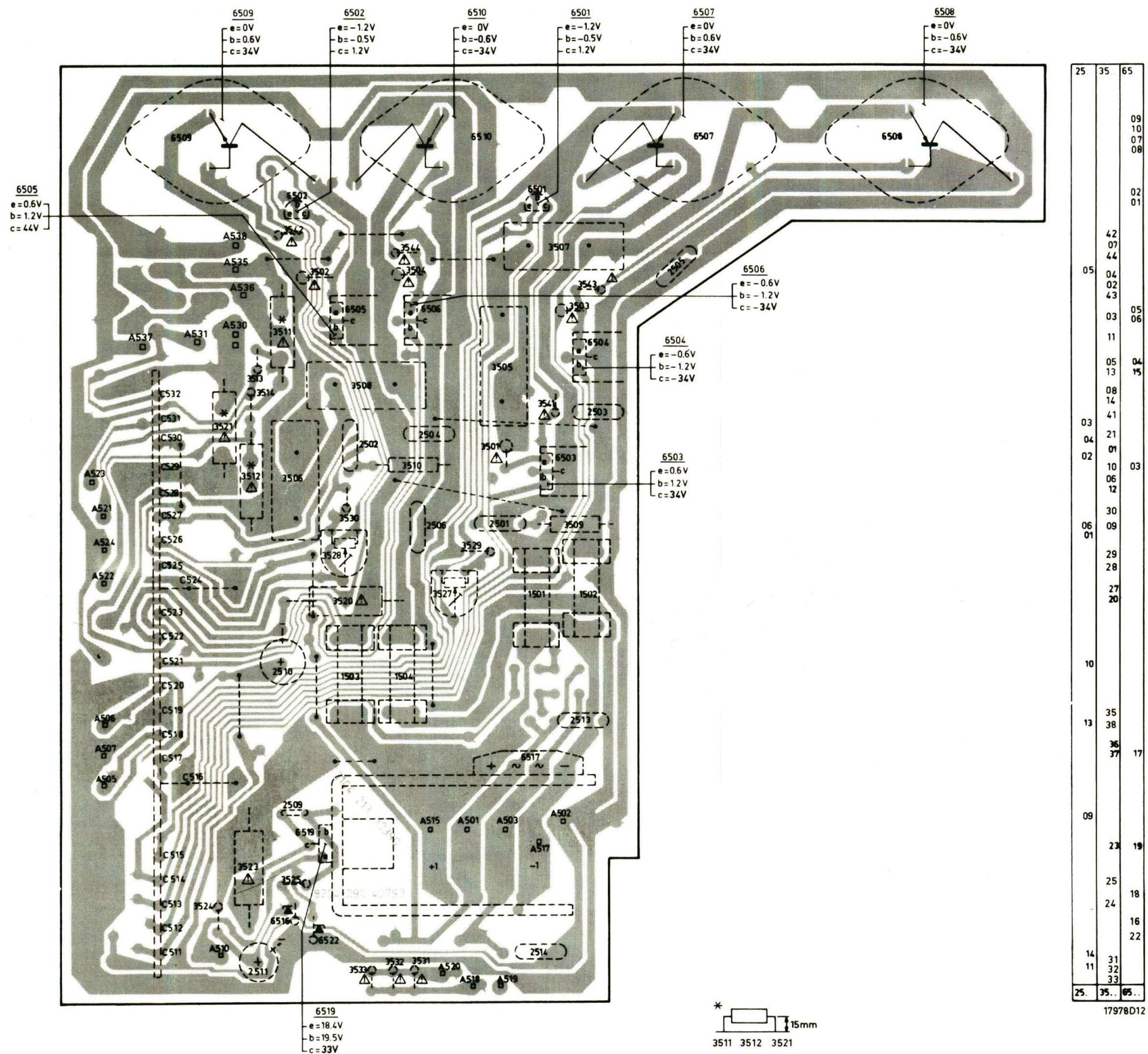
(S)

För mera detaljerade tekniska data se kommersiell dokumentation.

M	6427.6429.6430	6431	6411.6412.6432	6413+6416	6435	6421+6425.6417-6420.6433	6434	6501-6506	6507+6510	1502.1503	6055+6058.1053.1052.6059+6062
C	2411.2412	2430	2413+2422.2431	2423+2426	2432	2432	2510	2505.2506.2501.2502	2503.2504	2076.2071.2072	
R	3463.3432.3431.3461.3465	411+3424.3460.3456	3455.3425+3430.3436+3444.3457.3459.3410.3409.3462	3445+3454.3433.3434.3464	3527-3530	3520.3521.3501+3508.3541+3544.3509.3510	3511+3514	3101+3104.3113+3115.3105+3109	3119+3122		



- SAFETY CARBON RESISTOR
 - CARBON RESISTOR E24-SERIES 0.125W 5%
 - CARBON RESISTOR E24-SERIES 0.25W < 1MΩ 5%
 - CARBON RESISTOR E24-SERIES 0.5W > 1MΩ 10%
 - PLATE CERAMIC CAPACITOR
 - FLAT-FOIL POLYESTER CAPACITOR
 - MINIATURE ELECTROLYTIC CAPACITOR
- b = 4V g = 40V r = 250V
 c = 6.3V h = 63V s = 350V
 d = 10V j = 100V u = 400V
 e = 16V m = 150V
 f = 25V q = 200V



1 kHz (< 250 mV)	BU-3	BU-9 (L) (BU-12) (R) 2,83 V	3105 (3106)
1 kHz (< 250 mV)	BU-3	BU-9 (L) BU-12 (R) 25 V	3109

(GB)

Adjustment output amplifier
 Direct current adjustment – Left (Right).
 With the aid of R3527 (3523) adjust the quiescent current through the output transistors to 50 mA ± 5%. To be measured with a non-earthed mV-meter connected across the resistors 3505, 3507 (3506, 3508). The deflection shall then be 24 mV ± 5%.

Inspection DC protection

- Connect a resistor of 270 kΩ between the negative pole of C2411 and point +1 of the power supply. The relay shall then be released.
- Connect a resistor of 220 kΩ between the negative pole of C2412 and point -1 of the power supply. The relay shall then be released.

(F)

Réglage de l'amplificateur de sortie
 Ajustage courant continu – gauche (droit).
 Par action sur R3527 (3523) régler le courant de repos à travers les transistors de sortie pour avoir 50 mA ± 5%. A mesurer à l'aide d'un mV-mètre isolé de la terre, connecté aux bornes des résistances 3505, 3507 (3506, 3508). La déviation doit être alors de 24 mV ± 5%.

Contrôle de la protection contre le courant continu

- Connecter une résistance de 270 kΩ entre le pôle négatif de C2411 et le point +1 de l'alimentation. Ceci fait, le relais doit se décrocher.
- Connecter une résistance de 220 kΩ entre le pôle négatif de C2412 et le point -1 de l'alimentation. Ceci fait, le relais doit se décrocher.

(I)

Regolazione dell'amplificatore d'uscita
 Regolazione della corrente di riposo canali sinistro (destro).
 Per mezzo di R3527 (3523) regolare la corrente di riposo attraverso i transistor d'uscita a 50 mA ± 5%. Questa misura deve essere fatta con il mVoltmetro, senza il collegamento alla presa di terra, ai capi delle resistenze 3505, 3507 (3506, 3508). La variazione può quindi essere di 24 mV ± 5%.

Controllo del circuito di protezione in DC

- Collegare una resistenza di 270 kΩ tra il polo negativo di C2411 e il punto +1 dell'alimentazione. Il relè sarà quindi sganciato.
- Collegare una resistenza di 220 kΩ tra il polo negativo di C2412 e il punto -1 dell'alimentazione. Il relè sarà quindi sganciato.

(NL)

Afregelen eindversterker
 Gelijktroominstelling – L(R).
 De ruststroom door de eindtransistoren moet ingesteld worden met R3527 (3523) op 50 mA ± 5% te meten met een niet geaarde mV-meter aangesloten over de weerstanden 3505, 3507 (3506, 3508). De uitslag moet dan 24 mV ± 5% zijn.

Controle DC beveiliging

- Sluit een weerstand van 270 kΩ aan tussen de - (min pool) van C2411 en de +1 voeding. Het relais moet dan afvallen.
- Sluit een weerstand van 220 kΩ aan tussen de - van C2412 en de -1 voeding. Het relais moet dan afvallen.

(D)

Abgleich des Endverstärkers
 Gleichstromeinstellung – L(R).
 Der Ruhestrom durch die Endtransistoren soll mit R3527 (3523) auf 50 mA ± 5% eingestellt werden; zu messen mit einem nicht-geerdeten mV-Meter, über die Widerstände 3505 und 3507 (3506 und 3508) angeschlossen. Der Ausschlag soll dann 24 mV ± 5% sein.

Kontrolle der Gleichspannungssicherung

- Einen Widerstand von 270 kΩ zwischen Minusleiter von C2411 und +1-Stromversorgung anschliessen. Das Relais soll dann abfallen.
- Einen Widerstand von 220 kΩ zwischen Minusleiter von C2412 und -1-Stromversorgung anschliessen. Das Relais soll dann abfallen.

(S)

Inställning av slutsteg
 Ställ in vilostörmen för vänster (höger) kanal med hjälp av R3527 (3523) så att den blir 50 mA ± 5% genom sluttransistorerna. Mät med en ickejordad mV-meter över resistorerna 3505, 3507 (3506, 3508). Spänningen skall vara 24 mV ± 5%.

Kontroll av DC-skydd

- Anslut en resistor på 270 kΩ mellan den negativa polen på C2411 och +1 på nätspänningsaggregatet. Härvid skall reläet lösa ut.
- Anslut en resistor på 220 kΩ mellan den negativa polen på C2412 och -1 på nätspänningsaggregatet. Härvid skall reläet lösa ut.

-TS-		K	
6051-6054	BC559B	4822 130 44358	3009
6301,6302	BC559	4822 130 40963	3337,3338
6303,6304	BC548B	4822 130 40937	3339,3340
6305,6306	BC548	4822 130 40938	3343,3347
6307,6308	BC558	4822 130 40941	3435,3436
6411,6412	BC557B	4822 130 44568	3443,3444
6413,14,17,18	BC449A	4822 130 41341	3501-3504
6415,6416	BD140	4822 130 40824	3505-3508
6419,6420	BC558	4822 130 40941	3511-3512
6431,6432	BC548	4822 130 40938	3521
6433	BC548C	4822 130 44196	3523
6434	BC337	4822 130 40855	3527-3528
6435	BC557	4822 130 44256	3532-3533
6501-6502	BC548B	4822 130 40937	3541-3544
6403-6506	BD139/140	4822 130 40849	
6507,6509	BD317	4822 130 41338	
6508,6510	BD318	4822 130 41339	
6519	BD677	5322 209 85451	
-D-		II	
6001		4822 130 31137	2001-2002
6055,6056	BAW62	4822 130 30613	2071,2072
6061,6062	BA315	4822 130 30843	2076
6057-6060	GL-2AR-1	4822 130 31137	2321,2311
6063-6068	BAW62	4822 130 30613	2335,2323
6421-6430	BAW62	4822 130 30613	2327,2338
6515	BAW62	4822 130 30613	2419-2420
6516	BZX79/C20	5322 130 34499	2423-2424
6517,6518	BY225/200	4822 130 50312	2501-2502
6522	BZX79/C22	4822 130 34441	2503-2506
			2512
			2513-2514
-R-		Miscellaneous-	
5001		4822 146 80085	1010-1011
			1015
			1016
			1051
			1054,1055
			1502-1503
			1052-1053
3105,3106	10K	4822 100 10035	
3109	470 Ω	4822 100 10038	
3110	Safety 56 Ω	4822 111 30412	
3116,3117	Safety 1,6 Ω	4822 111 30471	
3301	Safety 56 Ω	4822 111 30412	

GB
Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

NL
Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

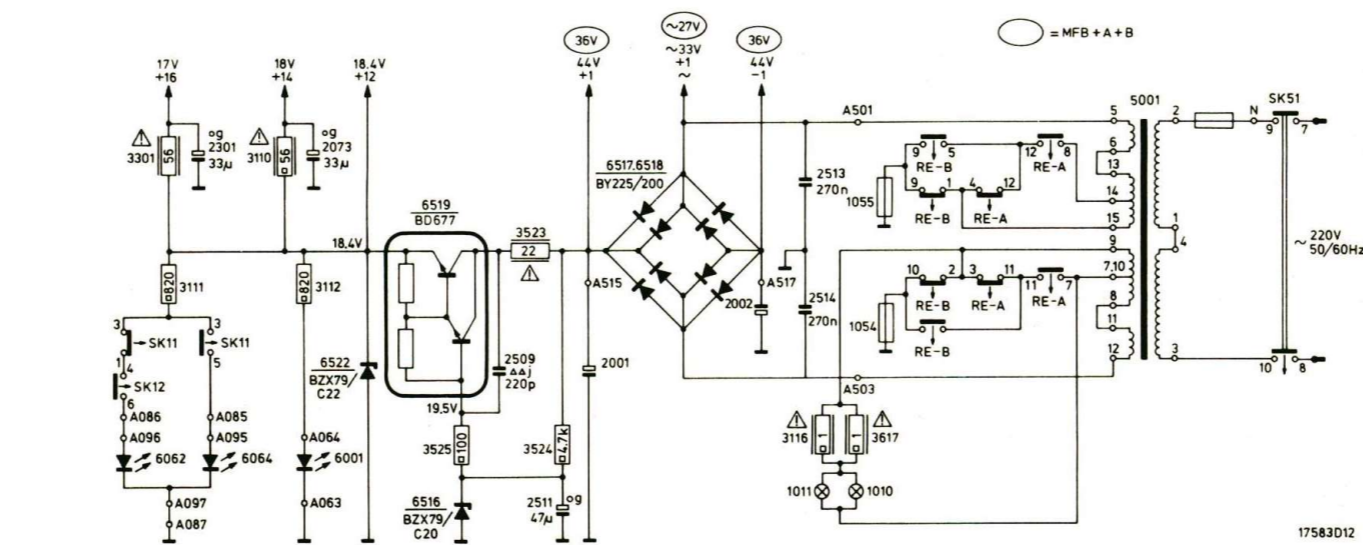
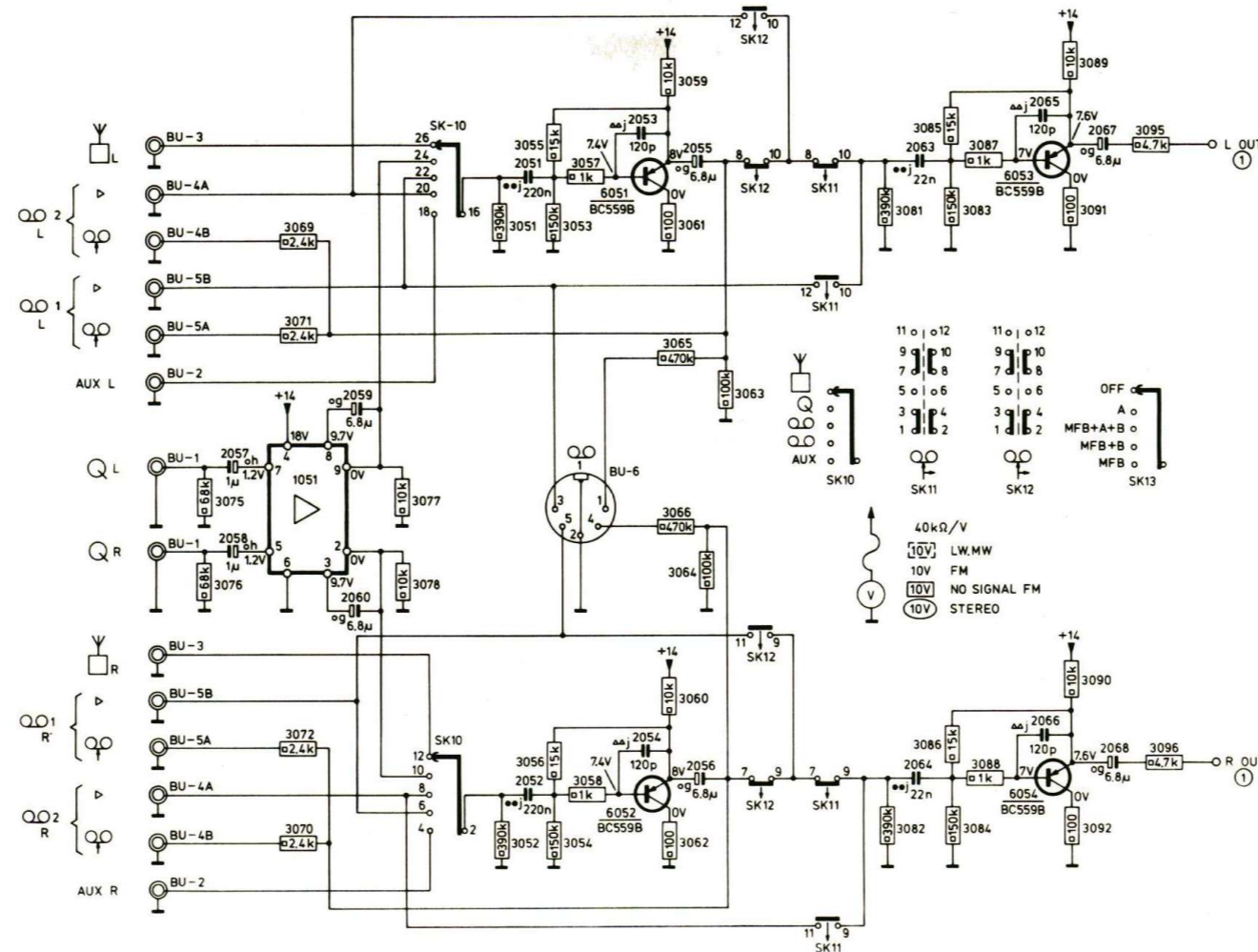
F
Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

D
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

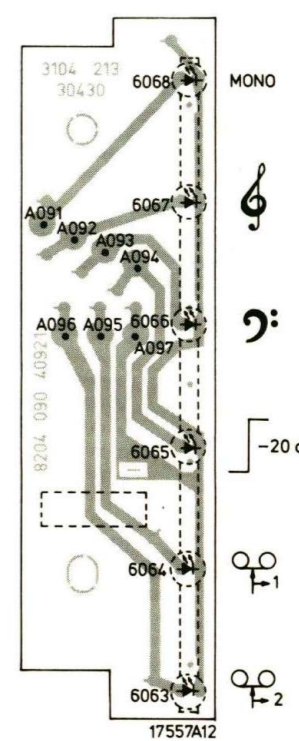
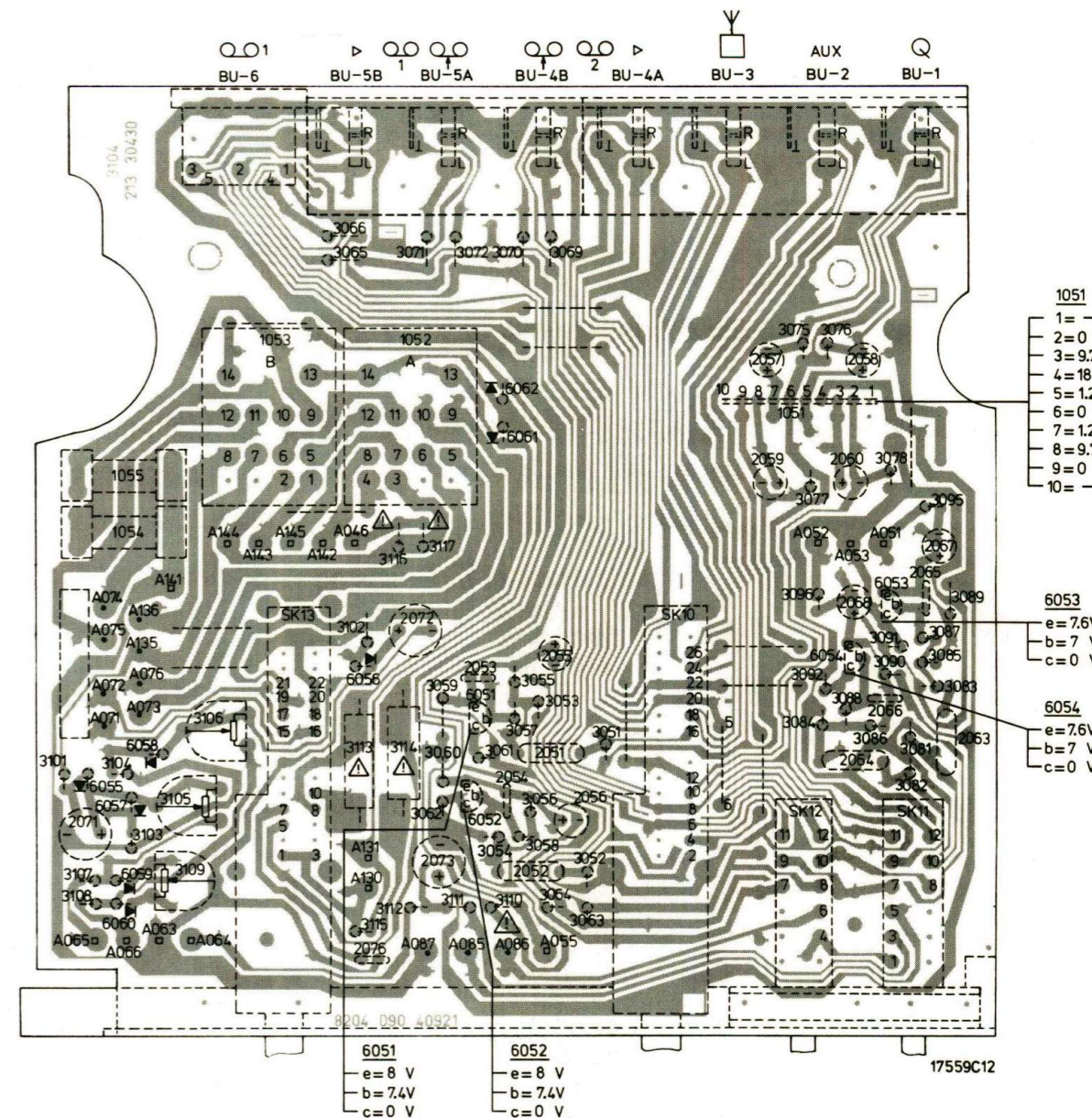
I
Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

S
Säkerhetsbestämmelserna kräver att varje reparation skall utföras korrekt med hänsyn till ursprunglig placering av komponenter, ledningar etc. och med användning av föreskrivna reservdelar.

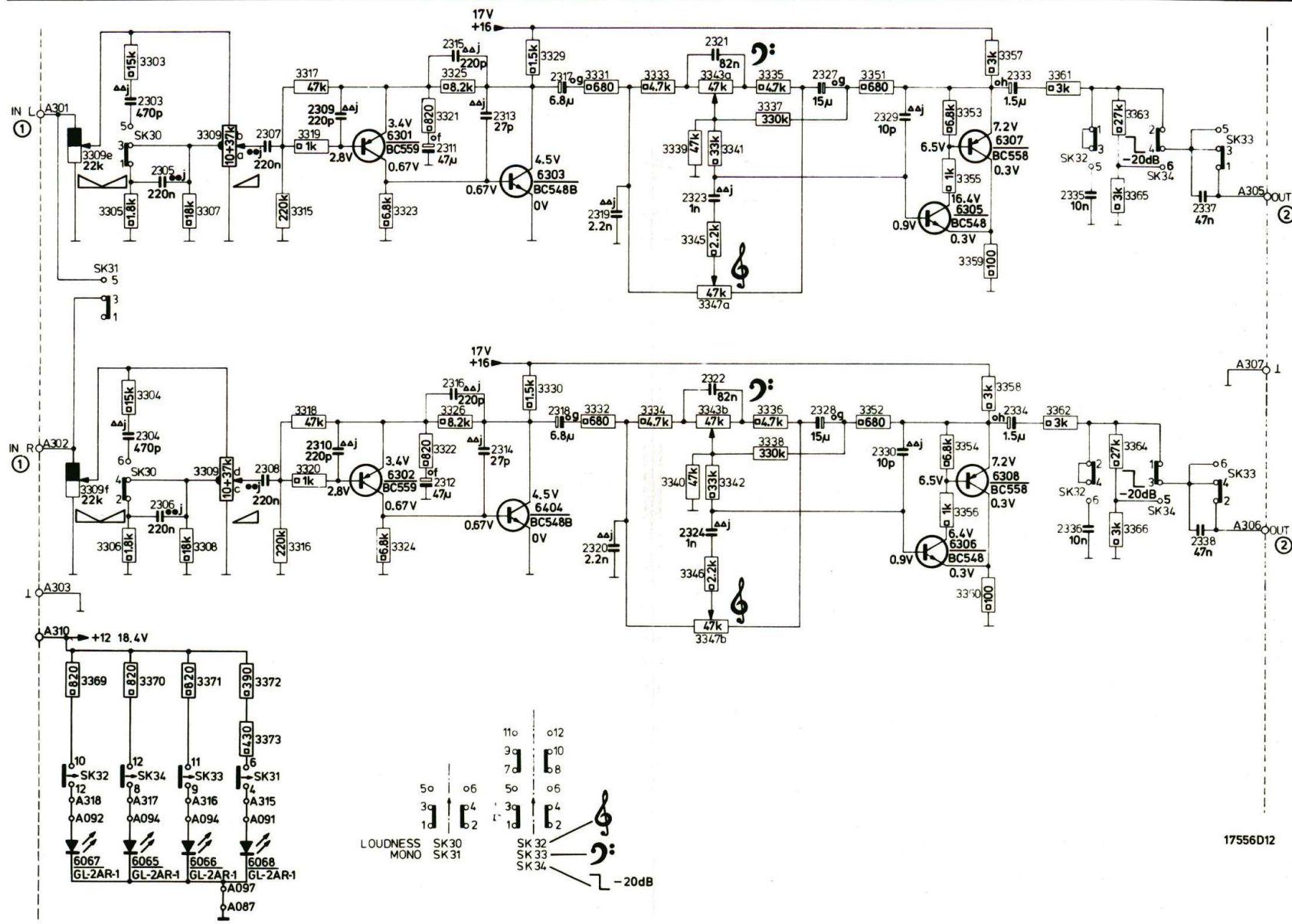
MISC.	6062	6064,6522,1051,6001	6516,6519	6517,6051,6052,6518	1011	1055,1054,1010	6053,6054, 5001	MISC.
C	2301,2057,2058	2073	2509,2511,2051,2052,2001,2053,2054,2002,2055,2056,2513,2514	2063,2064	2065,2066,2067,2068	3081...3088	3089...3092,3095,3096	C
R	3301,3111,3075,3076,3110,3069...3072,3112,3077,3078,3523...3524,3051...3058		3059...3066	3116	3617			R



20	30	60
66	72	
70	69	
65		
3119	3120	
3121	3122	
57	75	76
58		
59	77	78
60	95	
67	3116	3117
65		67
68	96	89
72		
55	87	3102
91		54
92	83	56
93	82	55
94	81	51
95	80	50
96	79	51
97	78	58
98	77	55
99	76	56
100	75	52
101	74	58
102	73	52
103	72	52
104	71	54
105	70	58
106	69	52
107	68	52
108	67	52
109	66	59
110	65	60
111	64	60
112	63	60
113	62	60
114	61	60
115	60	60
116	59	63
117	58	60
118	57	60
119	56	60
120	55	60
121	54	60
122	53	60
123	52	60
124	51	60
125	50	60
126	49	60
127	48	60
128	47	60
129	46	60
130	45	60
131	44	60
132	43	60
133	42	60
134	41	60
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139	36	60
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141	34	60
142	33	60
143	32	60
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158	17	60
159	16	60
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163	12	60
164	11	60
165	10	60
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171	4	60
172	3	60
173	2	60
174	1	60

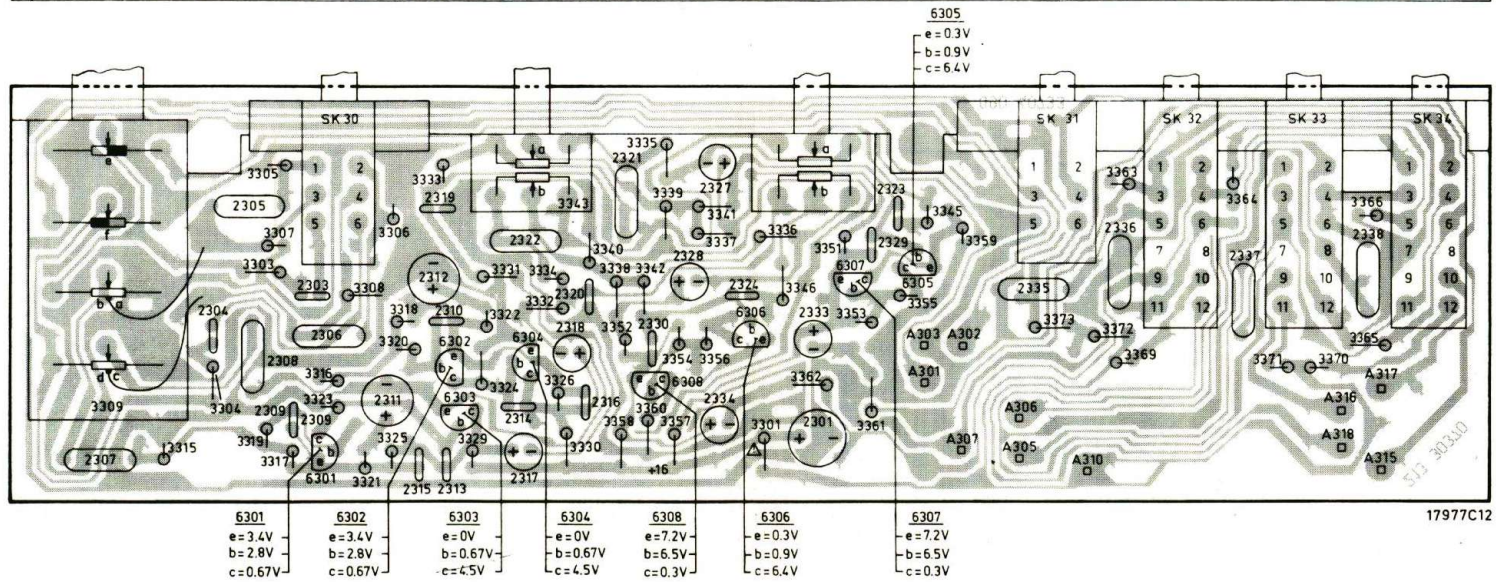


6301.6302		6305.6304		6305+6308							
2303+2306	2307+2310	2311+2316	2317+2320	2321+2424	2327+2330	2333.2334	2335.2336	2337.2338			
3303+3309	3315+3320	3321+3326	3329+3332	3345+3347.3333+3340.3341+3345	3351+3356	3357+3362	3363+3366				

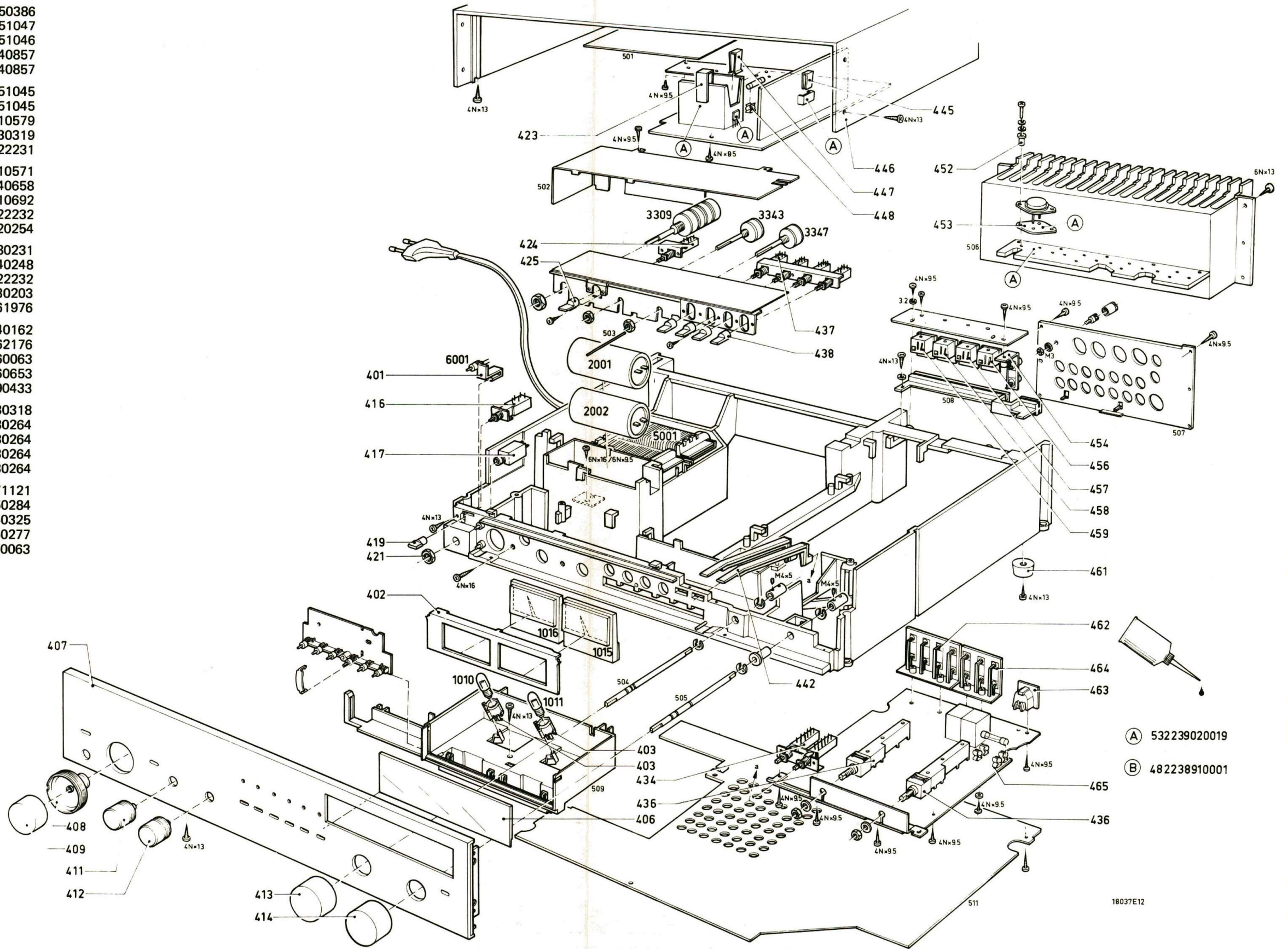


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MISC	6301 SK 30	6302 6303	6304	6308	6306	6307	6305	SK 31	SK 32	SK 33	SK 34																
C	2305	2303	2312.2319.2310	2322	2320.2321	2328.2327	2324	2329	2323	2335	2336	2337	2338														
C	2307	2304.2308	2309.2306	2311	2315	2313	2314	2316	2318	2330	2334	2301	2333														
R	3309	3303	3307.3305	3308	3306	3331	3334.3343	3335	3337	3342	3336.3346	3347	3351	3355	3345	3359	3363	3364	3366								
R		3315	3304	3323	3316	3321	3325	3329	3324	3322	3326	3330	3352	3360	3356	3358	3354	3301	3362	3353	3361	3373	3372	3369	3371	3370	3365



401	4822 256 90295
402	4822 466 70371
403	4822 255 10151
406	4822 466 70374
407	4822 426 50373
407/28	4822 426 50386
408	4822 413 51047
409	4822 413 51046
411	4822 413 40857
412	4822 413 40857
413	4822 413 51045
414	4822 413 51045
416	4822 276 10579
417	4822 267 30319
419	4822 410 22231
421	4822 505 10571
423	4822 492 40658
424	4822 276 10692
425	4822 410 22232
434	4822 276 20254
436	4822 273 80231
437	4822 276 40248
438	4822 410 22232
442	4822 410 30203
445	4822 492 61976
446	4822 426 40162
447	4822 492 62176
448	4822 492 60063
452	4822 532 60653
453	5322 466 90433
454	4822 267 30318
456	4822 267 30264
457	4822 267 30264
458	4822 267 30264
459	4822 267 30264
461	4822 462 71121
462	4822 267 50284
463	4822 267 40325
464	4822 267 50277
465	4822 492 60063



- (A) 532239020019
- (B) 482238910001

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