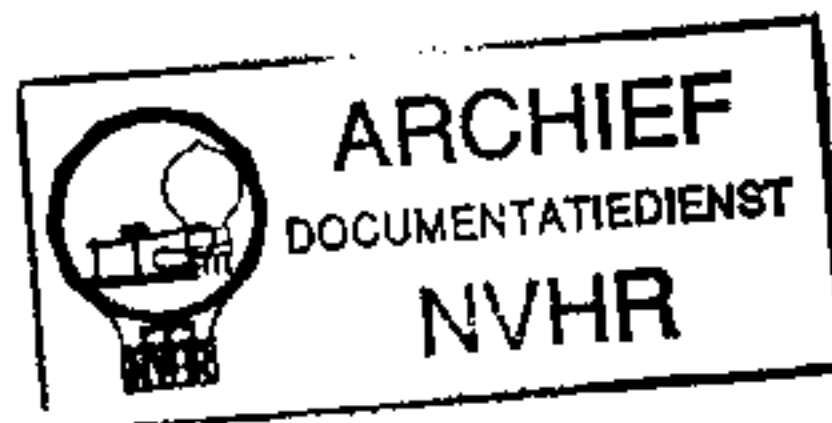


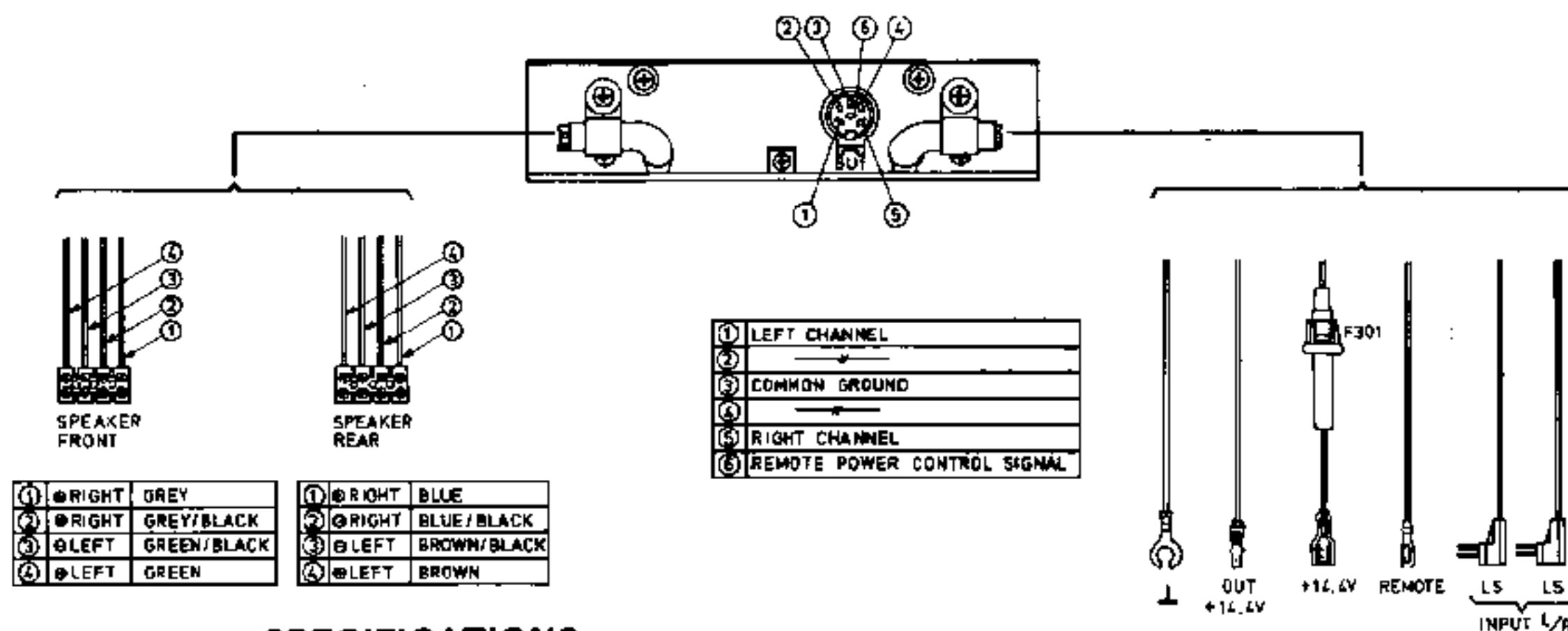
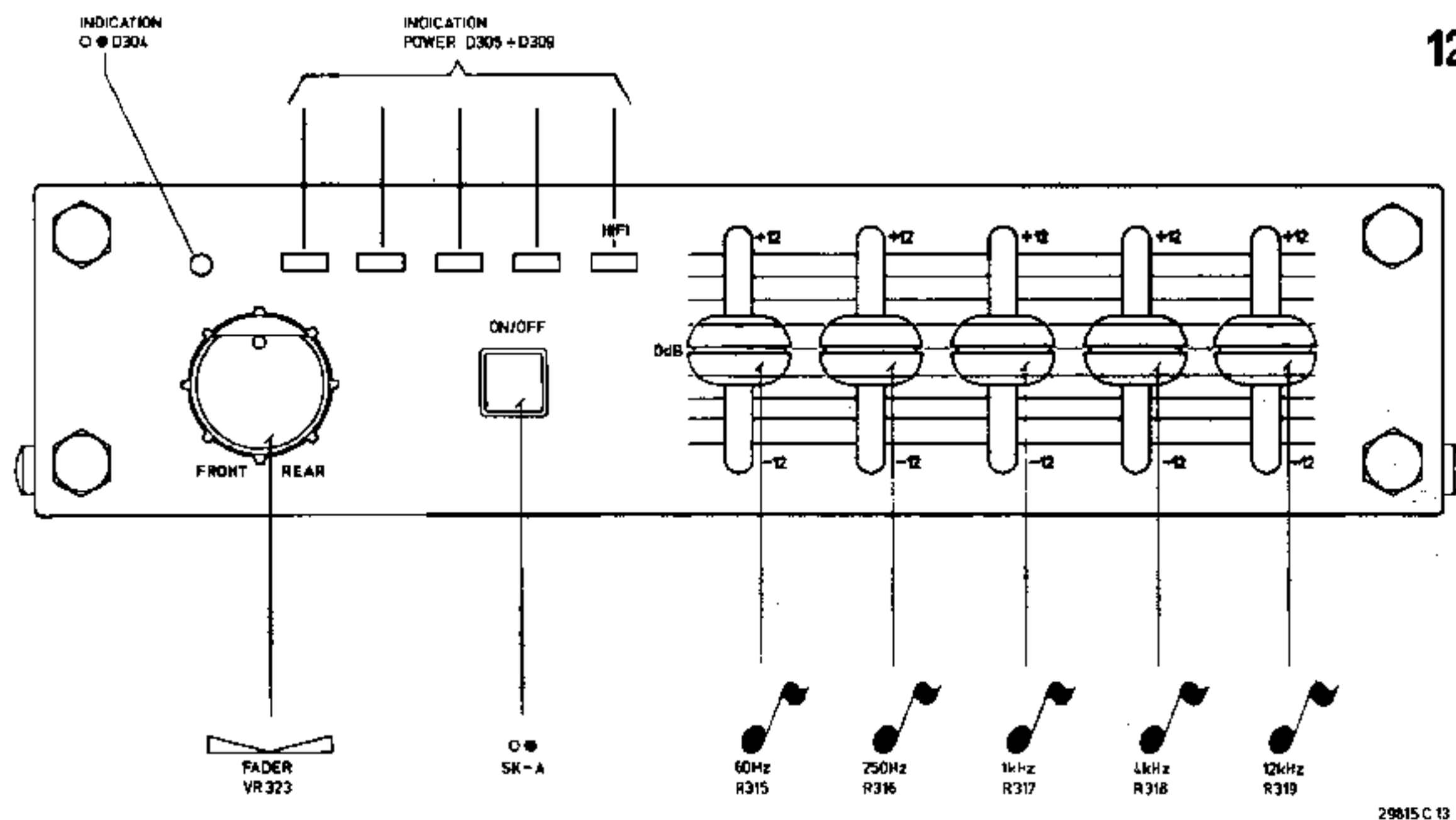
Service  
Service  
Service

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

Ned. Ver. v. Historie v/d Radio



# Service Manual



### SPECIFICATIONS

$4 \Omega / 14.4 \text{ V} > 2 \times 18 \text{ W}$   
 $> 4 \times 5 \text{ W}$  } ( $d \leq 10\%$ )

150x 135 x 35 mm



## **GB** SERVICING HINT

- In case of a defective fuse holder the entire cable may be replaced by power-supply cable 4822 321 20334; the fuse should be replaced by a 8A (T) (delayed) fuse, code number 4822 253 20029.

## **NL** REPARATIEWENK

- Bij een defect aan de zekeringhouder kan men de gehele kabel vervangen door de voedingskabel met codenr. 4822 321 20334 en de zekering te vervangen door een van 8A (T) met kodenr. 4822 253 20029.

## **F** CONSEIL DE DEPANNAGE

- En cas de defectuosité du porte-fusible, on peut remplacer le câble complet par le câble d'alimentation 4822 321 20334; le fusible doit alors être remplacé par un fusible de 8A (T), code 4822 253 20029.

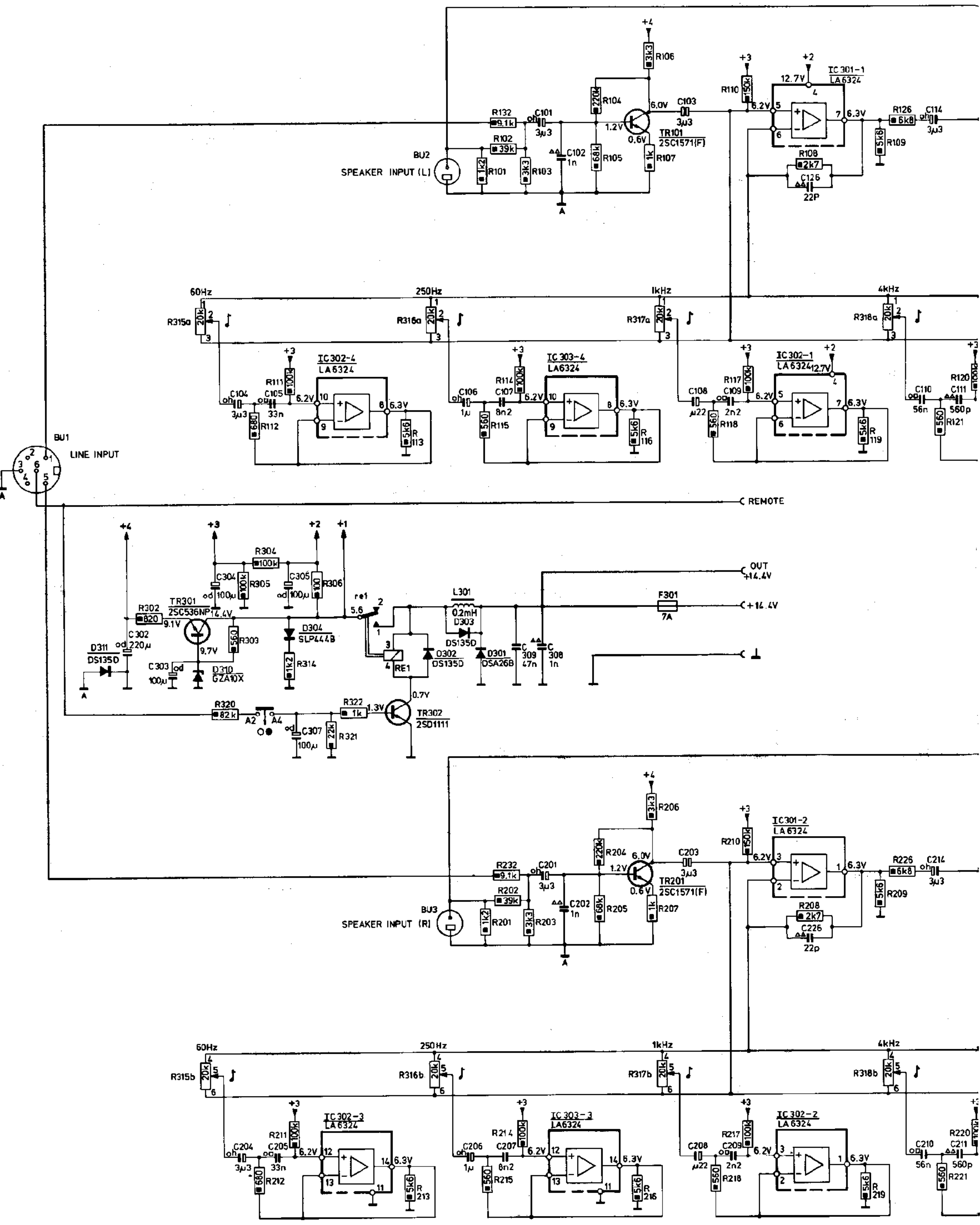
## **D** REPARATURHINWEIS

- Ist der Sicherungshalter schadhaft, lässt sich das ganze Kabel ersetzen durch das Stromversorgungskabel mit der Codenummer 4822 321 20334 und lässt sich die Sicherung ersetzen durch eine von 8A (träge) mit der Codenummer 4822 253 20029.

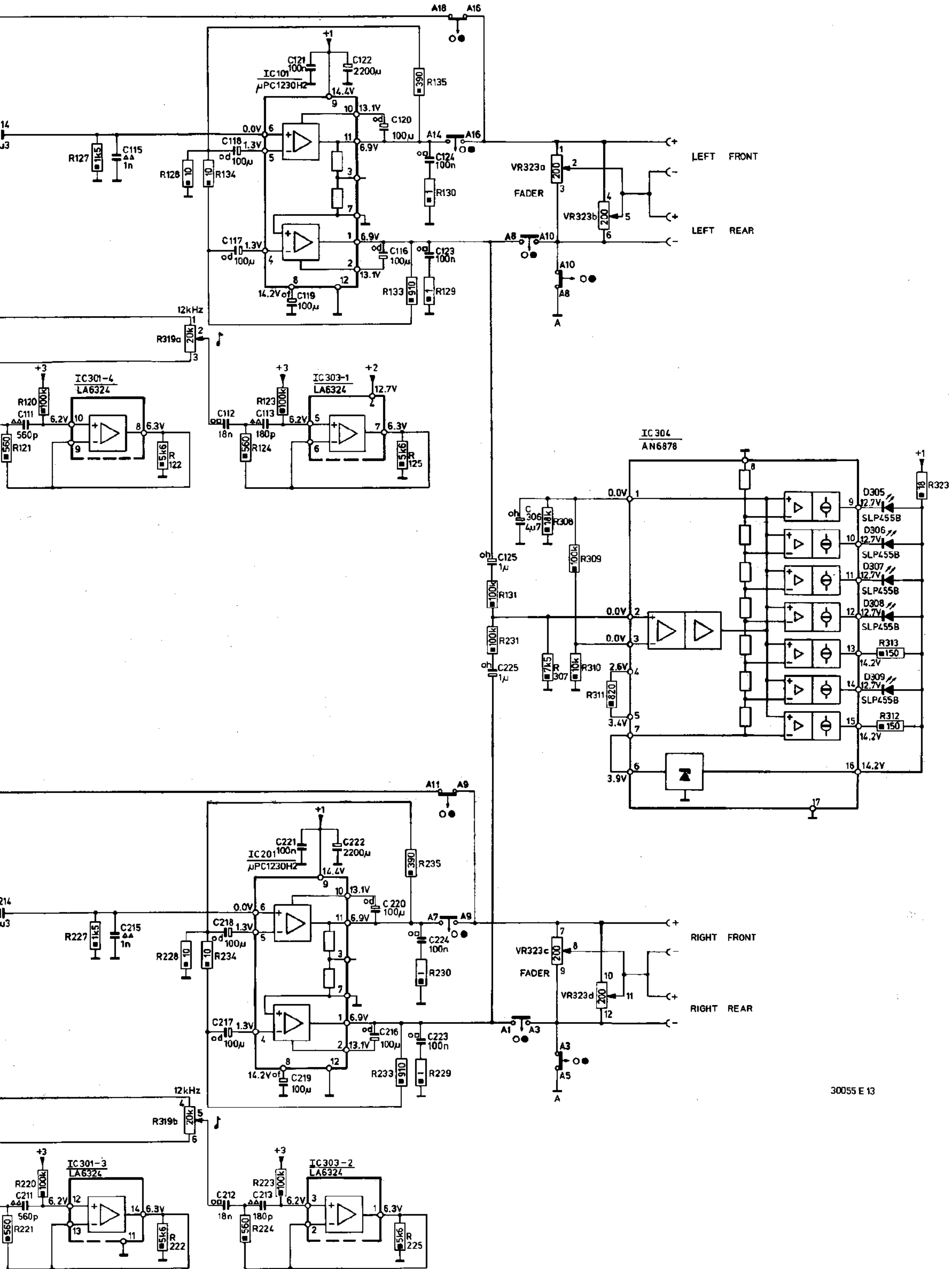
## **I** CONSIGLI PER IL SERVIZIO

- Nel caso in cui vi sia un porta-fusibile difettoso, si deve sostituire il cavo completo codice 4822 321 20334; il fusibile deve essere sostituito con uno da 8A (T) ritardato, codice 4822 253 20029.

MISC.	BU1	IC 302-4										BU2	IC 303-4					TR101	IC 301-1 IC 302-1														
	D311	TR301	D310	D304		IC 302-3					RE1	TR302	D302	BU3	L301	D303	D301	IC 303-3		F301	TR102	IC 301-2		IC 302-2									
C	302	303	204	304	105	305						106	107	101	102			103	108	109			126										
R	302	315a	303	320	212	314	211	321	322	213	316a	201	215	232	202	203	214	204	205	216	206	207	317a	218	217	210	208	219	209	318a	126	121	120

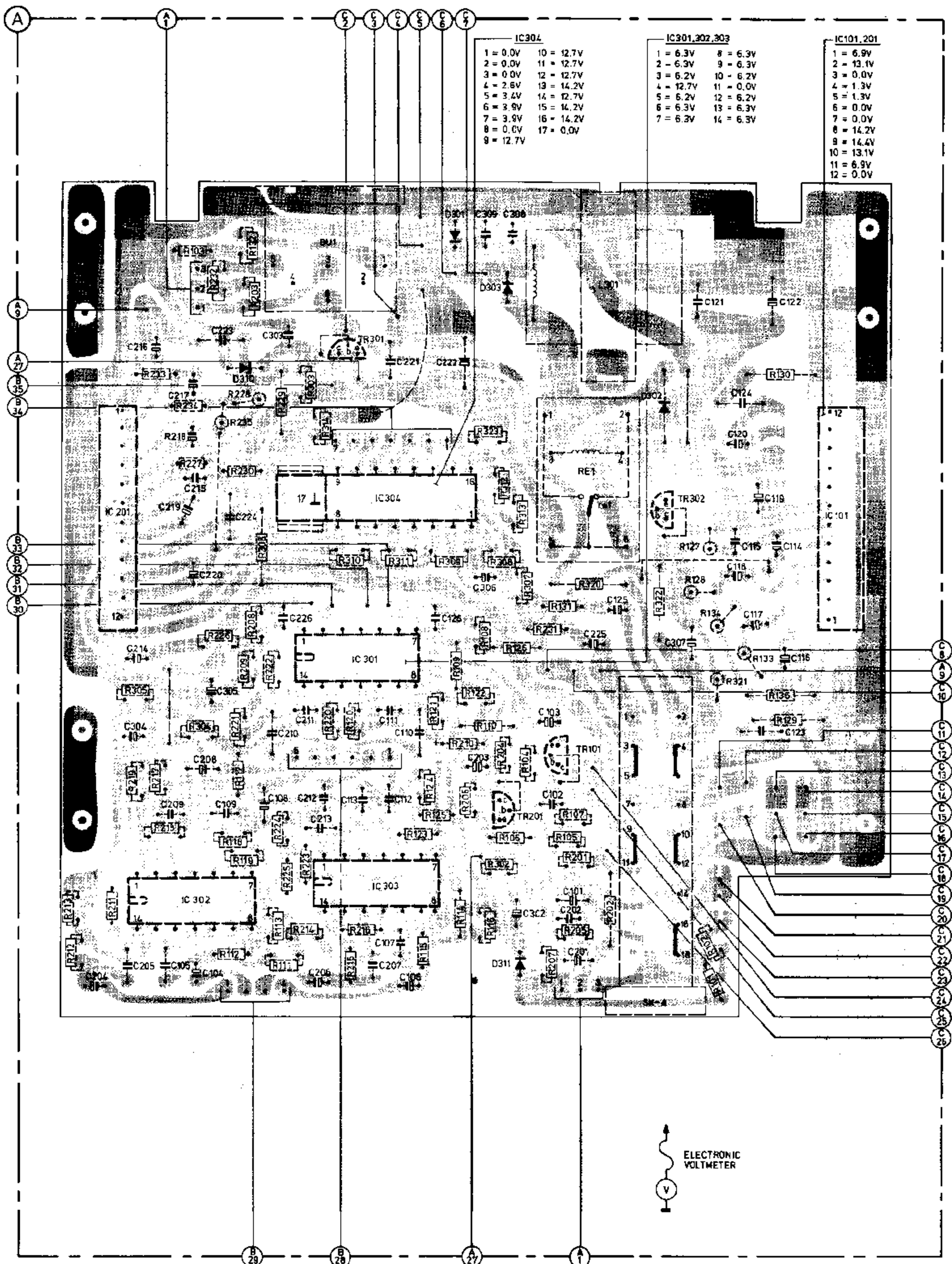


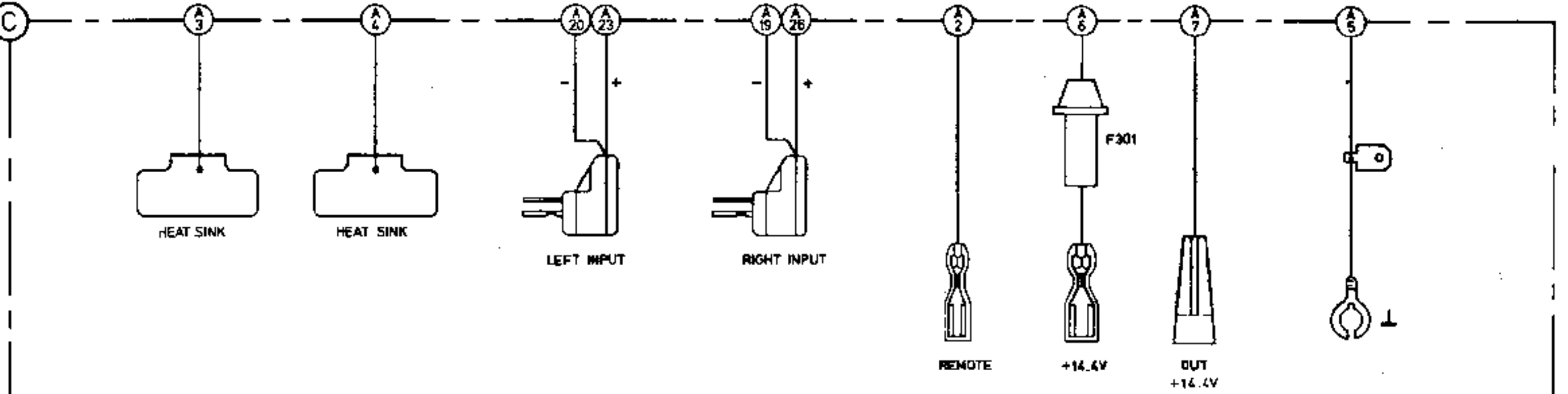
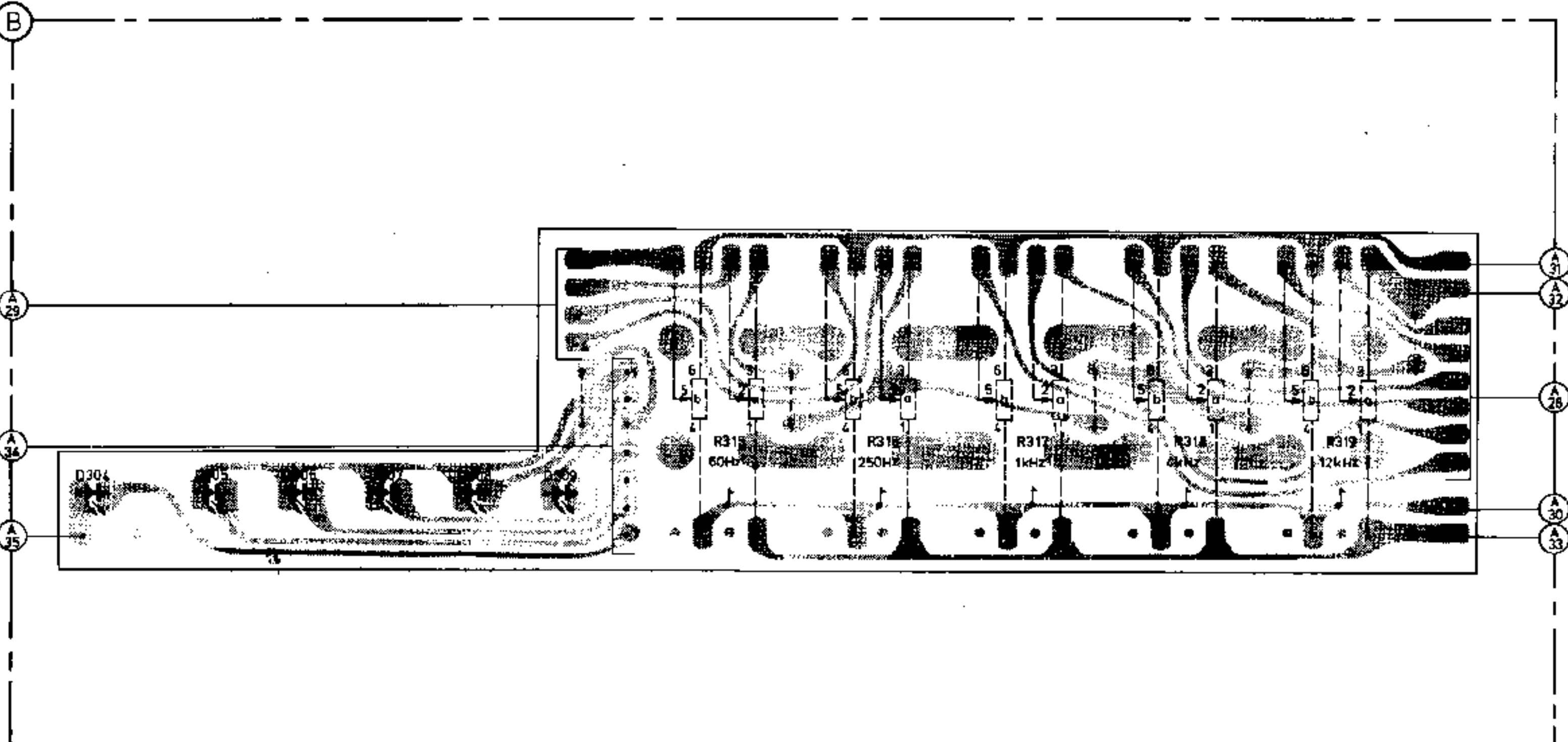
IC301-4	IC101	IC303-1	VR323a-b	IC304	D305... D308
IC301-3	IC201	IC303-2	VR323c-d		D309
115	112 117 118 113	119 117 121	122 120 116	123 124	125 306
215	212 217 218 213	219 217 221	222 220 216	223 224	225
127	122 128 319a 134 128 124	123	125 133 135 130 129	131	308 309
227	222 228 319b 234 228 224	223	225 233 235 230 229	231	307 310 311
					312 313



**FROM SERIAL NUMBER XXXXX 4001 ONWARDS:**

IC, TR	IC 201	IC 302	310	BU1 TR301	IC 301, 303, 304	TR 201	TR 101	RE1	L 301	TR 302	IC 101
D	204 205	105 209 104 109 223 305 108	310	206	107 207 221 222	306 308 103 101	225			302	116 124 114
C		304 214 220 208 224		303 210 213	110 113 106	125 309 203 302 102		201	125	307	
R	312 213 211 305	103 203 117 119 221 230 306 303 134 310 220 311			121 126 206 204 302 323 207 231 131 201 320			322			127 131 321 128 130
		217 219 304 232 235 112 131 132 208 209 111 113 214 120 215 216			114 116 210 104 110 122 307 308 312 313 205 202						101 102 134 133 135

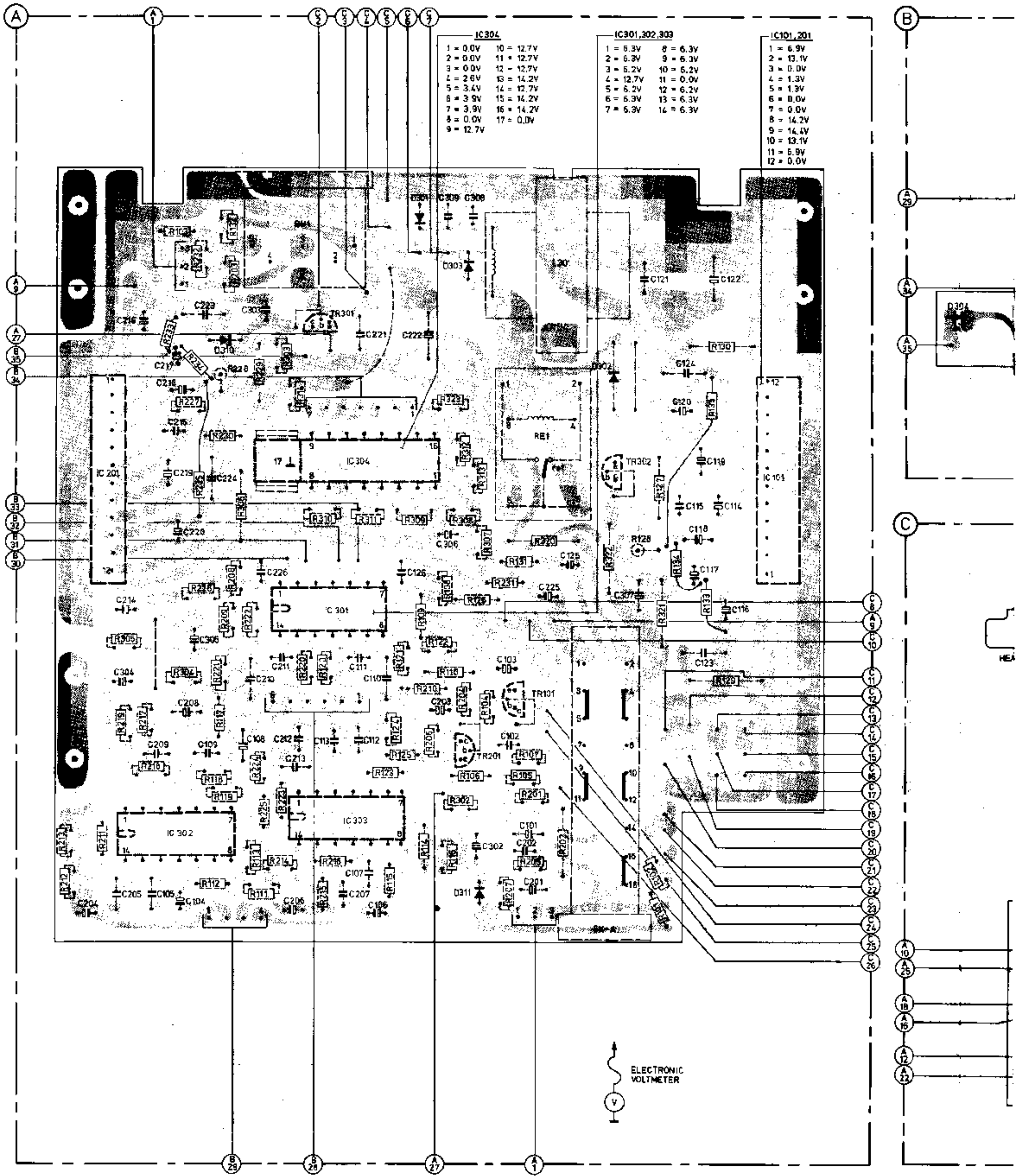






UNTIL SERIAL NUMBER XXXXX 4000:

IC, TR	IC 201	IC 302	BU1 TR301	IC 301, 303, 304	TR 201	TR 301	RE1	L 301	TR 302	IC 101	
D			310		301	303 311			302		304
C	204 205	105 209 104 109 223 305 108	206	107 207 221 222	306 308 103 109	225				116, 124 114	
R	312 213 211 305	103 203 117 119 221 230 306	303 134 310 220 311	121 126 206 204 302 323 207 231 131 201 320	322	127 131 321 128 130				101 102 134 133 136	
		217...219 304 232...235 112 131 132 208 209	111 113 214 120 215 216	114...116 210 104 110 122 307 309 312 313 205 202							



IC 304

1 = 0.0V	10 = 12.7V
2 = 0.0V	11 = 12.7V
3 = 0.0V	12 = 12.7V
4 = 2.6V	13 = 14.2V
5 = 3.4V	14 = 12.7V
6 = 3.9V	15 = 14.2V
7 = 3.9V	16 = 14.2V
8 = 0.0V	17 = 0.0V
9 = 12.7V	

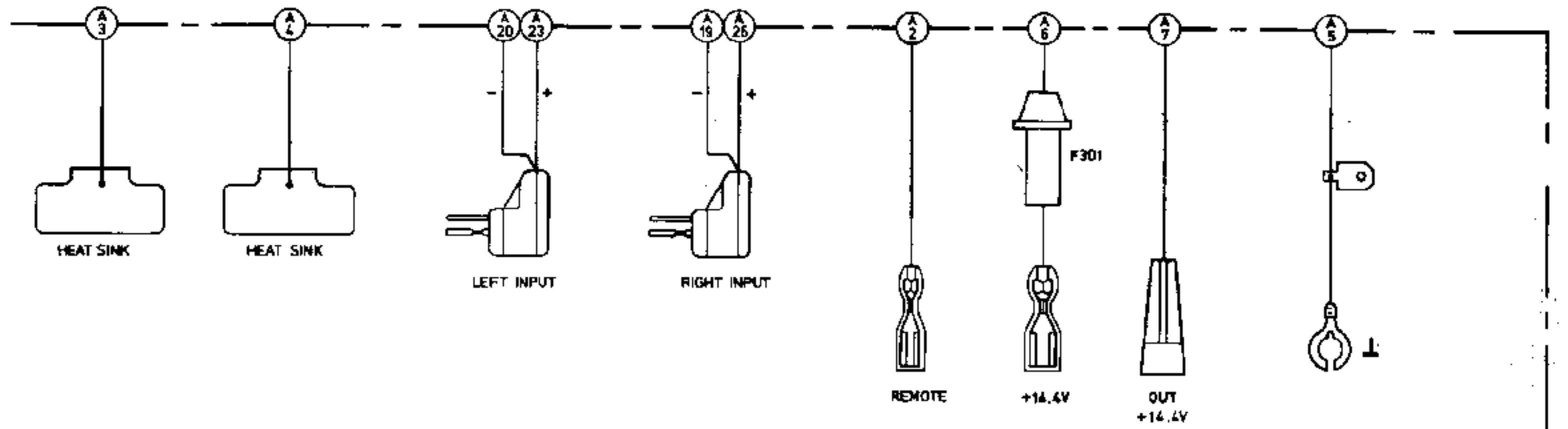
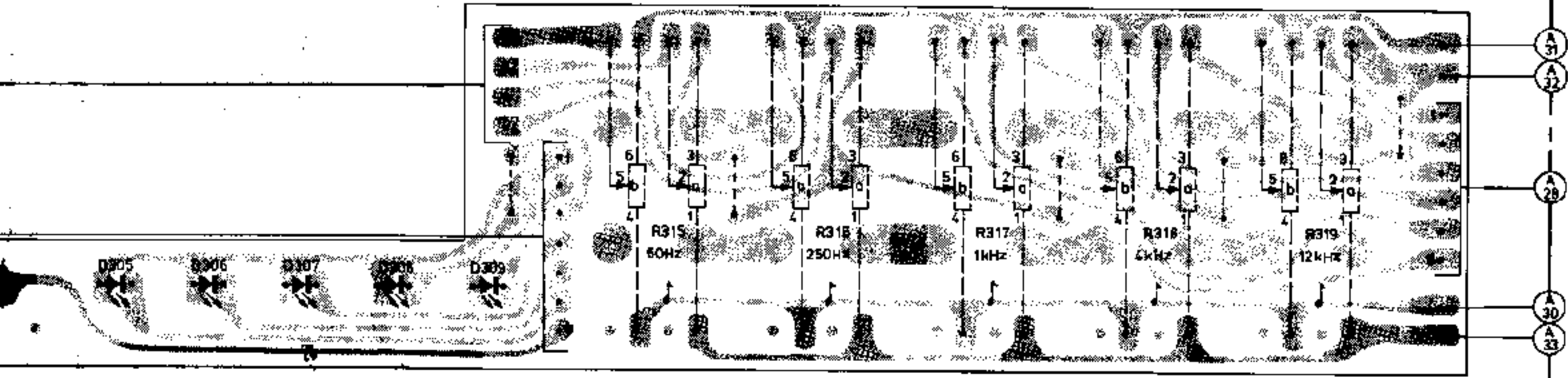
IC 301, 302, 303

1 = 6.3V	8 = 6.3V
2 = 6.3V	9 = 6.3V
3 = 5.2V	10 = 6.2V
4 = 12.7V	11 = 0.0V
5 = 6.2V	12 = 6.2V
6 = 6.3V	13 = 6.3V
7 = 6.3V	14 = 6.3V

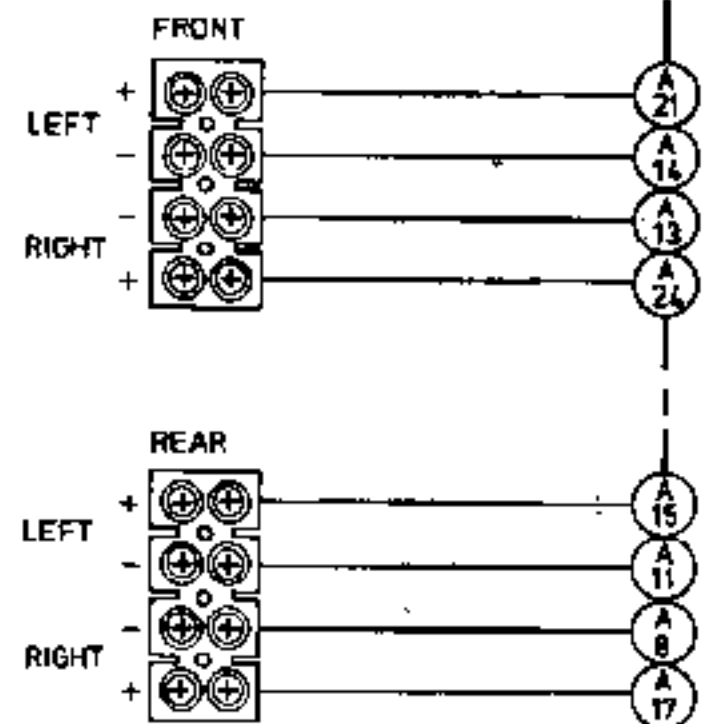
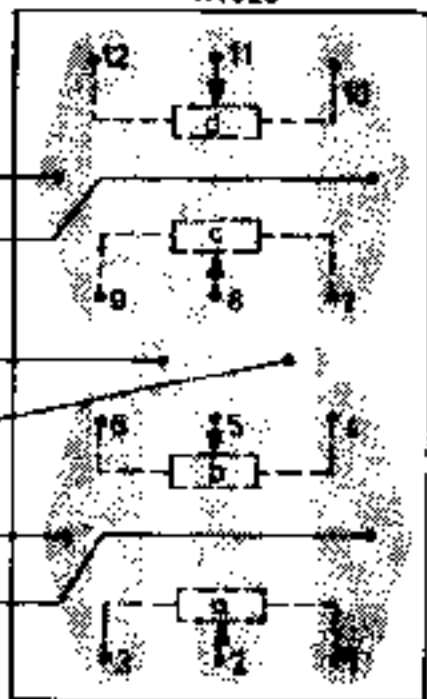
IC 101, 201

1 = 6.9V	
2 = 13.1V	
3 = 0.0V	
4 = 1.3V	
5 = 1.3V	
6 = 0.0V	
7 = 0.0V	
8 = 14.4V	
9 = 14.4V	
10 = 13.1V	
11 = 6.9V	
12 = 0.0V	

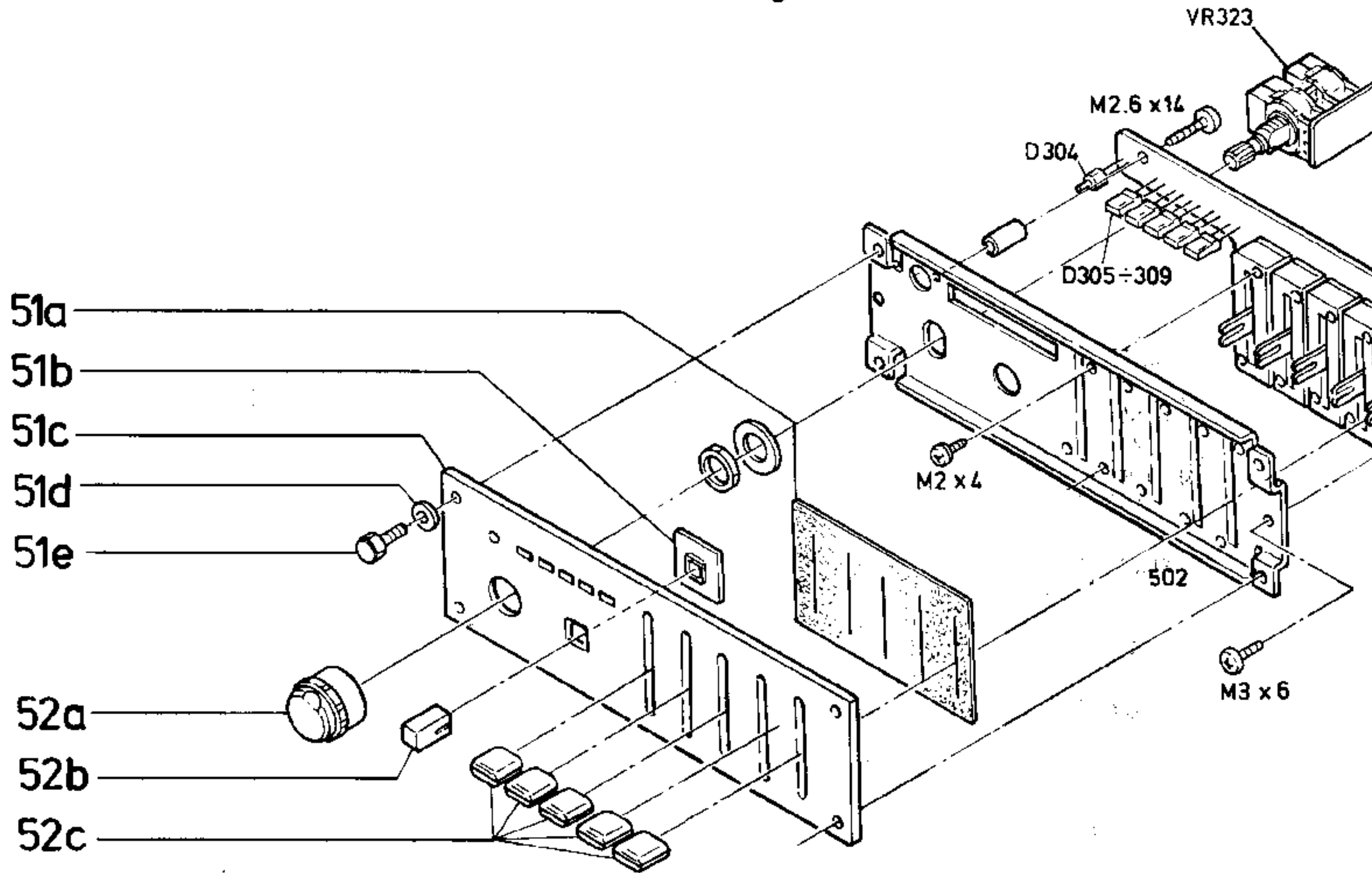
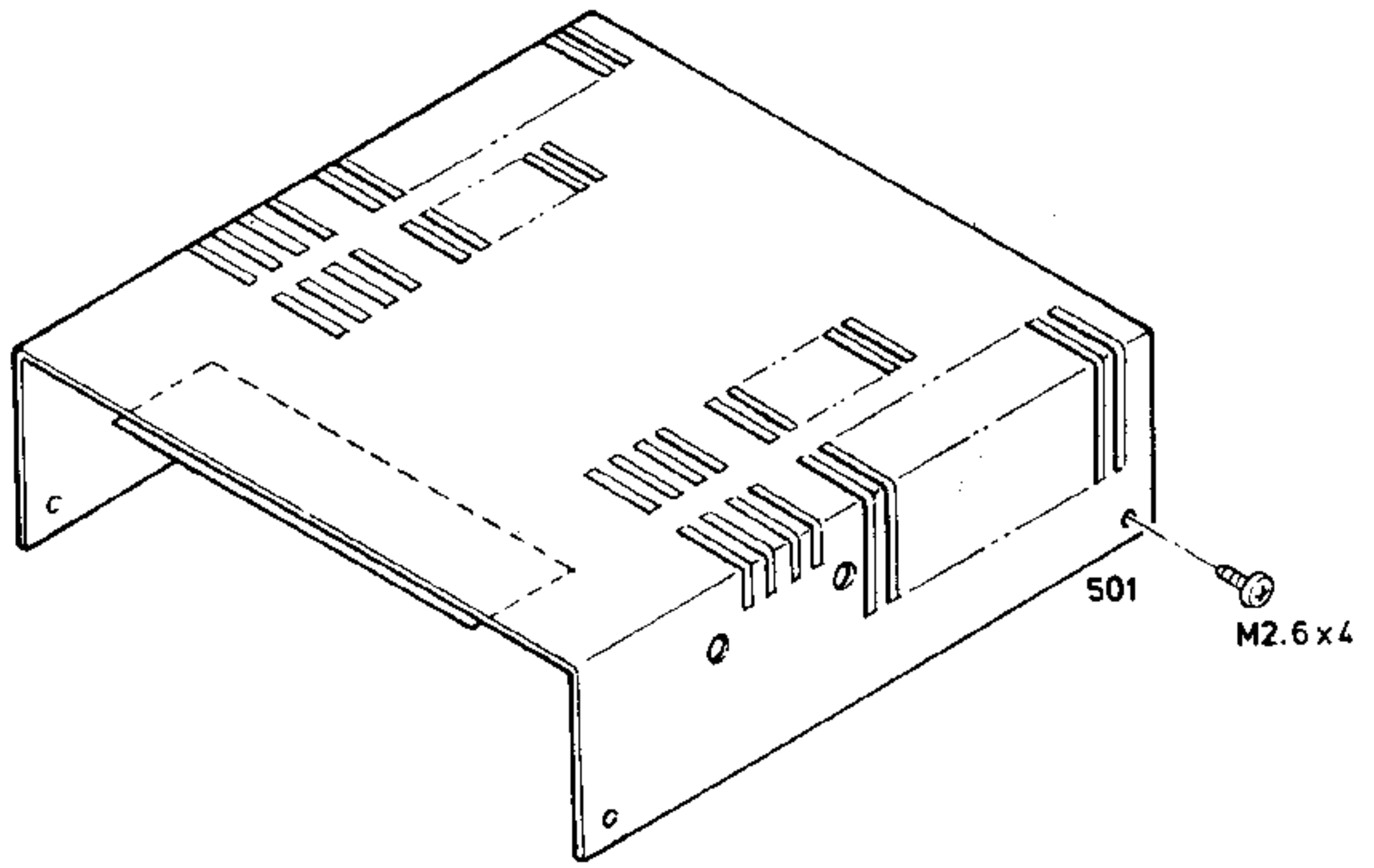




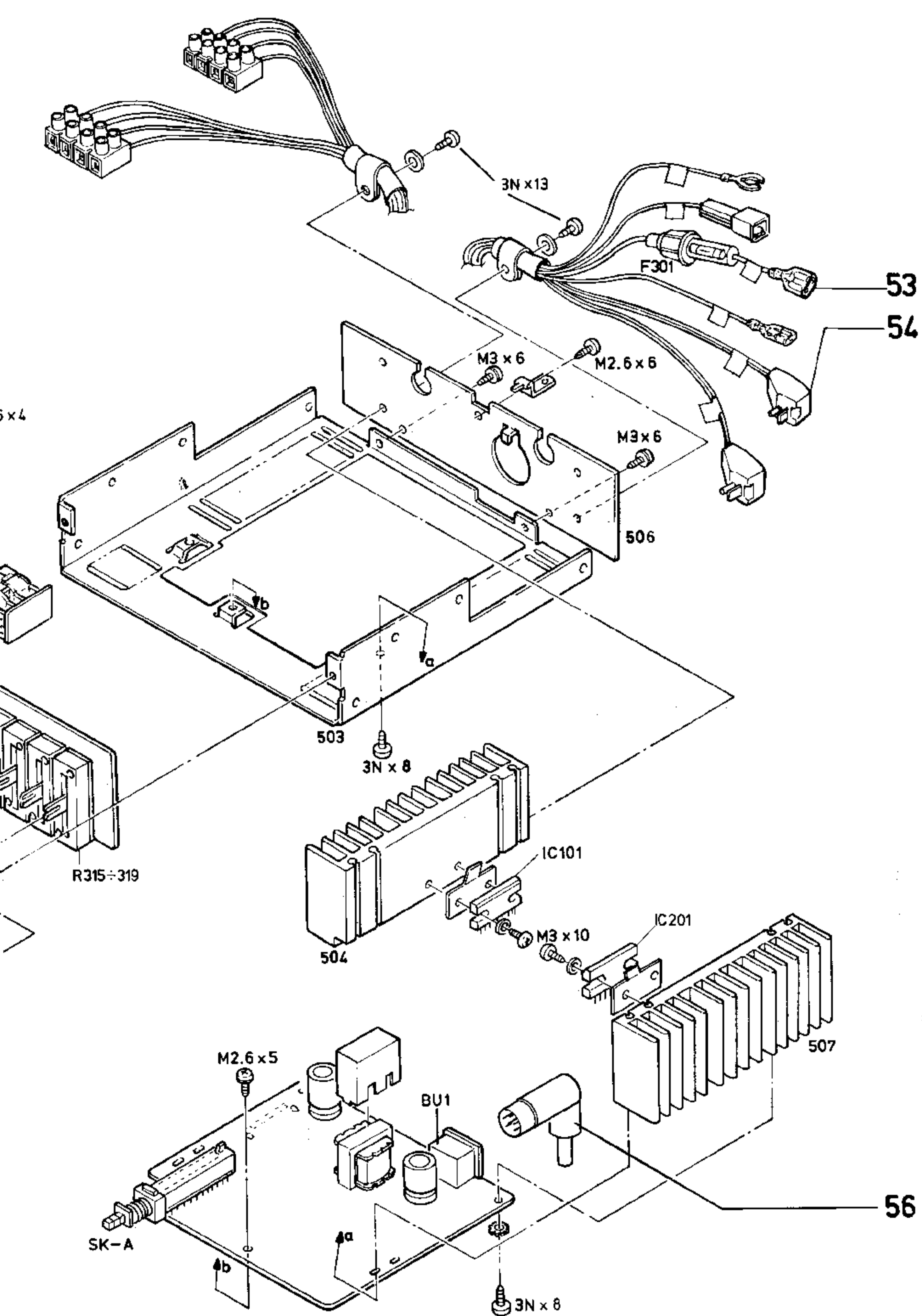
FADER VR323





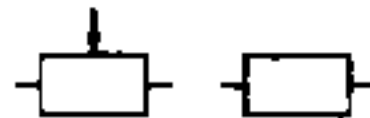
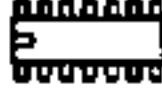




51	4822 459 80182
52	4822 310 10151
53	4822 321 20334
54	4822 267 40235
56	4822 264 40027



29 617 D12

<p><b>-D-</b> </p>	<p><b>-II-</b></p>
<p>DSA26B 4822 130 31858  DS135D 4822 130 31563  Zener GZA10X 4822 130 31859  LED SLP444B 4822 130 31862  LED SLP455B 4822 130 31861</p>	<p>C107 Mylar 8.2 nF/50V/10% 4822 121 41613  C108 Elco 0.22 <math>\mu</math>F/50V/20% 4822 124 40601  C121 Cercap. 100 nF/25 V/10% 4822 122 31802  C122 Elco 2200 <math>\mu</math>F/16 V/20% 4822 124 40602  C207 Mylar 8.2 nF/50 V/10% 4822 121 41613  C208 Elco 0.22 <math>\mu</math>F/50 V/20% 4822 124 40601  C221 Cercap. 100 nF/25 V/10% 4822 122 31802  C222 Elco 2200 <math>\mu</math>F/16 V/20% 4822 124 40602  C309 Cercap. 47 nF/50 V/20% 4822 122 31801</p>
<p><b>-TS-</b> </p>	<p></p>
<p>2SC1571(F) 4822 130 41925  2SC536NP(F) 4822 130 41397  2SD1111 4822 130 41972</p>	<p>R315 Slide potm. 20K(B)x2 4822 105 10478  R316 Slide potm. 20K(B)x2 4822 105 10478  R317 Slide potm. 20K(B)x2 4822 105 10478  R318 Slide potm. 20K(B)x2 4822 105 10478  R319 Slide potm. 20K(B)x2 4822 105 10478  VR323 Fader potm. 200(V)x4 4822 102 50038</p>
<p><b>-IC-</b> </p>	<p><b>Miscellaneous</b></p>
<p>AN6878 4822 209 81374  LA6324 4822 209 81372  UPC1230H2 4822 209 81373</p>	<p>SK-A Switch ON/OFF 4822 276 11039  BU-1 6P socket (DIN) 4822 267 40284  RE1 Relay 12 V/3A 4822 280 70208  F301 Fuse 8A (20 mm) 4822 253 20029  L301 Choke 4822 156 10669</p>