22

Stereo radio recorder AW7892/00/05

Service
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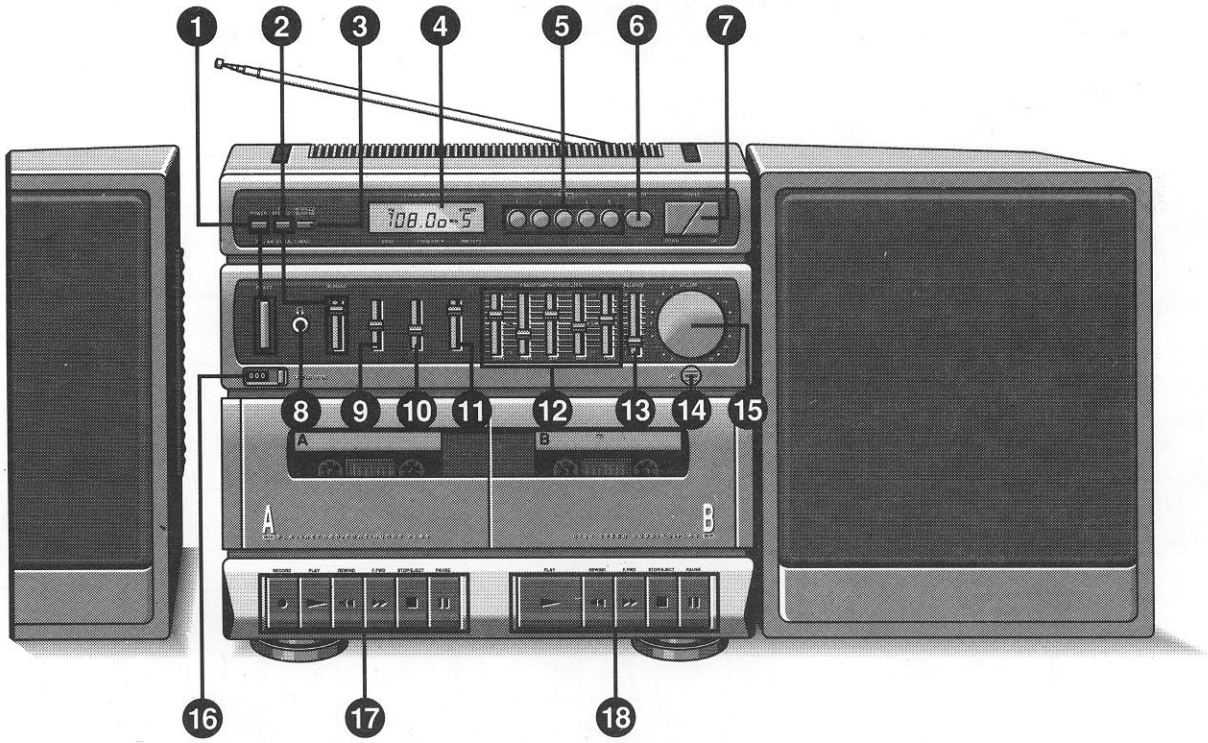
Service

For repair information of the cassette mechanism see Service Manual TN-521ZSW-506

Service Manual



Documentation Technique Service Dokumentation Documentazione di Servizio Huolte-Ohje Manual de Servicio Manual de Serviço

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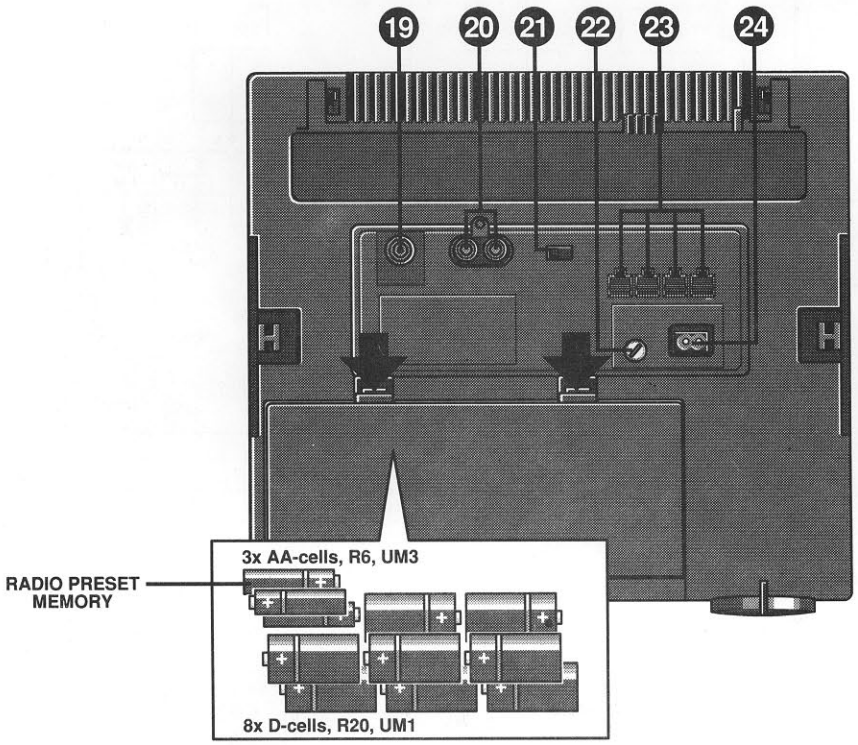


Function

1 Power on/off
2 Dubbing speed
3 Stereo indicator
4 Display
5 Preset buttons
6 Memory store
7 ▭ ▼/▲
8 Ω
9 Function select
10 Mono/Stereo
11 Bandswitch
12 Graphic Equalizer VR 301-305
13 VR 306
14
15 VR 307
16 Counter
17 Deck functions A
18 Deck functions B
19 Ext. Aerial (not for /02)
20 CD/AUX input
21 R/F Switch
22 not present
23 R/L
24 V ~ J406

Specifications:

	/00 220V/50Hz /05 240V/50Hz
	3V (2 x R6) Back-up 12V (8xR20) power
	mains operation: 2x2 W (D=10%)
AM IF	468 kHz
FM IF	10.7 MHz
MW	526.5-1606,5 kHz
LW	150-255 kHz
FM	87.5-108 MHz

Tape speed	4.76 cm/sec. ± 2%
Wow and flutter	< 0.35 %
Signal to noise ratio	≤ 40 dB ≤ 37 dB dubbing ≤ 37 dB H.S. dubbing ≤ 22 dB AM recording
Frequency response: (within ± 8 dB)	250-6300 Hz 250-6300 Hz dubbing 250-5000 Hz H.S. dubbing 250-2000 Hz AM recording
Equalizer control:	100Hz/500Hz/3000Hz /5000Hz/12000Hz -6 dB to +6 dB

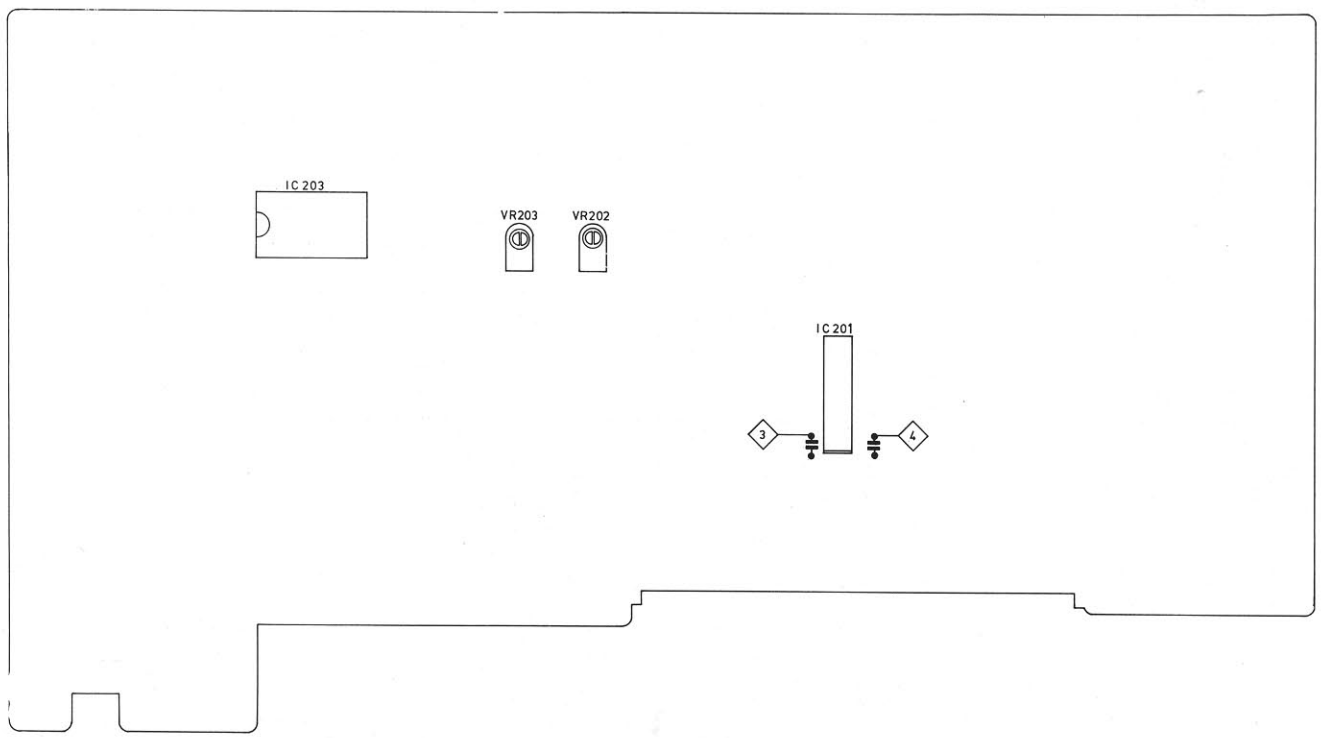
CASSETTE SPEED ALIGNMENT

POSITION	SIGNAL	TO		ADJUST	
HI-SPEED DUB	TEST TAPE 3KHz C60 BLANK TAPE	DECK B DECK A	PLAYBACK PAUSE/REC.	VR202	COUNTER 6KHz
NOR. SPEED DUB	TEST TAPE 3KHz	DECK B	PLAYBACK	VR203	COUNTER 3KHz

REMARK : ALIG. HI-SPEED FIRST, BECAUSE VALUE OF VR202 WILL AFFECT NOR. SPEED

CASSETTE ALIGNMENT & SPEC.

HEAD ANGLE	TEST TAPE 10K		PLAYBACK	HEAD ADJ. SCREW	MAX 3 4



ALIGNMENT PRODCEDURE

GENERAL :
1. SIGNAL INPUT MUST BE AS LOW AS POSSIBLE TO AVOID OVERLOAD AND ALIPPING. (USE HIGEST SENSITIVITY OF OUTPUT INDICATOR).
2. VOLUME CONTROL AT MAXIMUM, BALANCE AND TONE CONTROLS AT MECHANICA CENTER.
3. STANDARD MODULATION IS 400Hz AT 30% AMPLITUDE FOR AM 1000Hz AT 22.5KHz DEVIATION FOR FM.
4. CONNECT 8 OHM LOAD ACROSS SPEAKER JACK.

1. AM SIGNAL GENERATOR
2. FM SIGNAL GENERATOR
3. V.T.V.M
4. FREQUENCY COUNTER

RADIO ALIGNMENT

SK.....A POSITION	SIGNAL	TO	TUNE IN	ADJUST	
AM	450 KHz	B		T103 T104	
LW	281 KHz	C		T106	7.6V DC
	164 KHz 272 KHz	D	164 KHz 272 KHz	L108 CT103	MAX 1
MW	1620 KHz	C	1620 KHz	T102	7.18V DC
	603 KHz 1404 KHz	B	603 KHz 1404 KHz	L102 CT102	MAX 1
FM	10.7 MHz	A		CHECK IF CURVE	MAX 1
FM	108 MHz	C	108 MHz	L106	6.6V DC
	88 MHz 106 MHz	A	88 MHz 106 MHz	L101 CT101	MAX 1

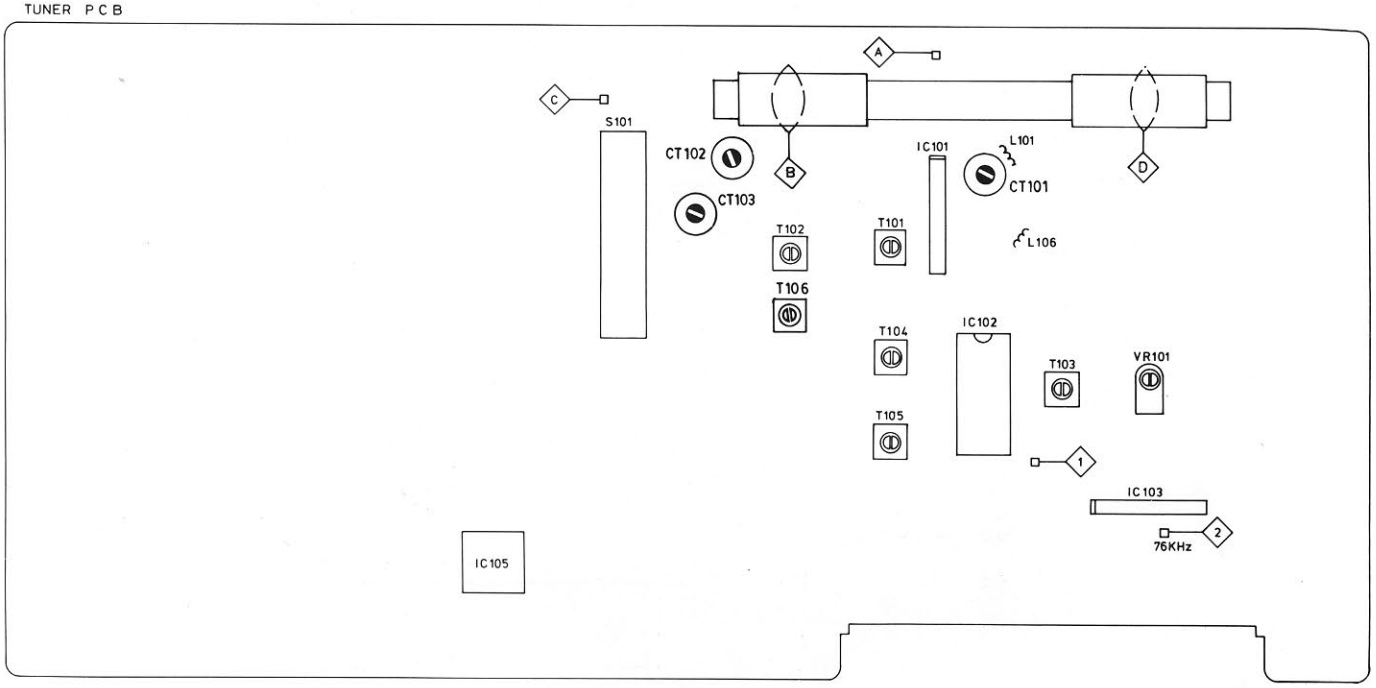
STEREO DECORDER

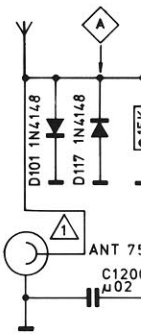
FM	NO SIGNAL	A		VR101	COUNTER 76 KHz 2

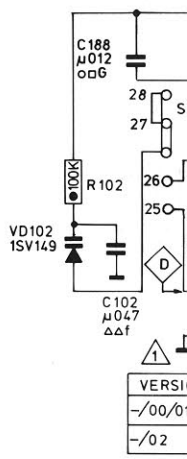
ÇASSETTE ALIGNMENT & SPEC.

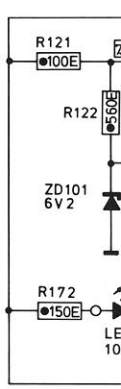
HEAD ANGLE	TEST TAPE 10K		PLAYBACK	HEAD ADJ. SCREW	MAX 3 4

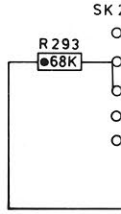
TUNER P C B

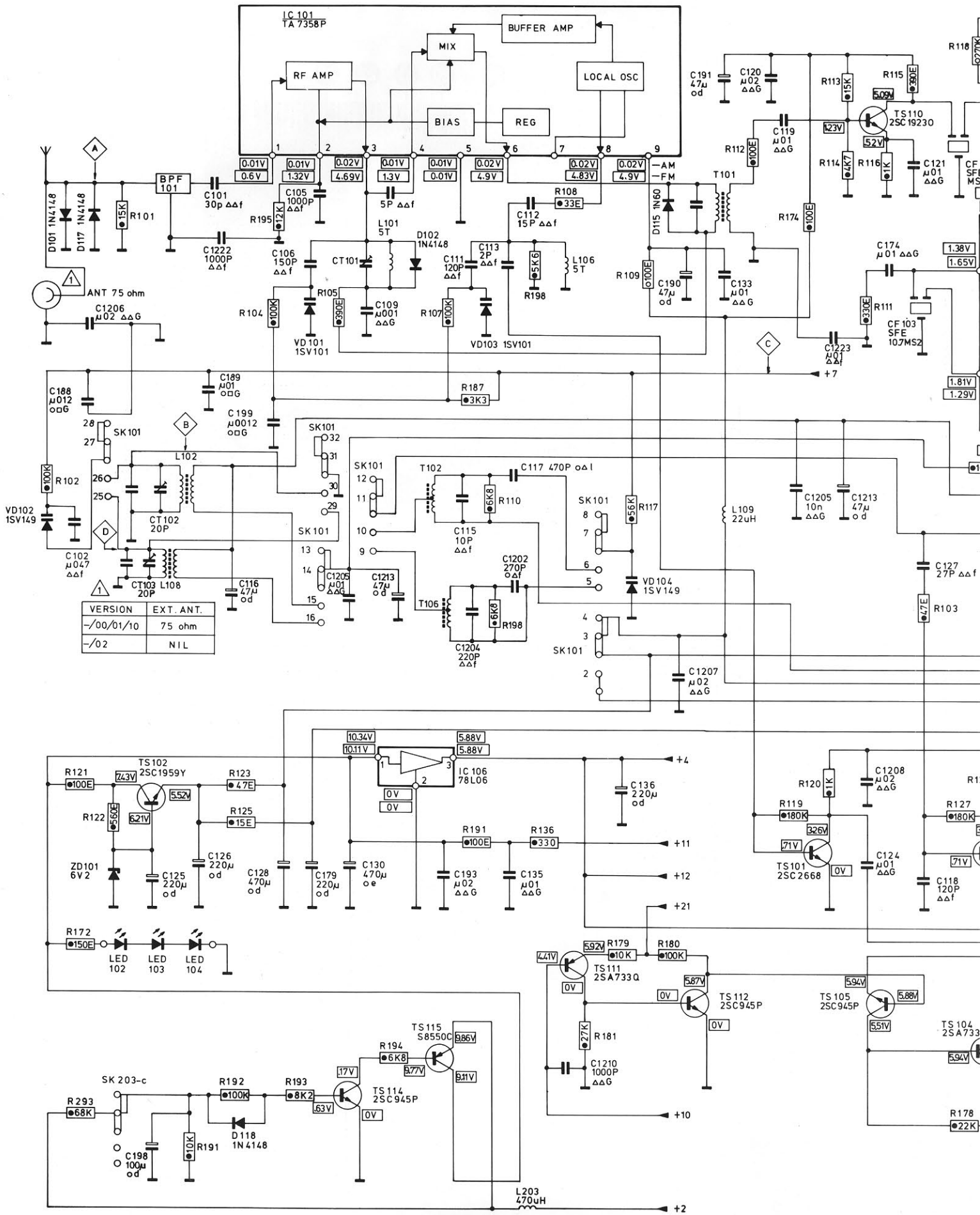






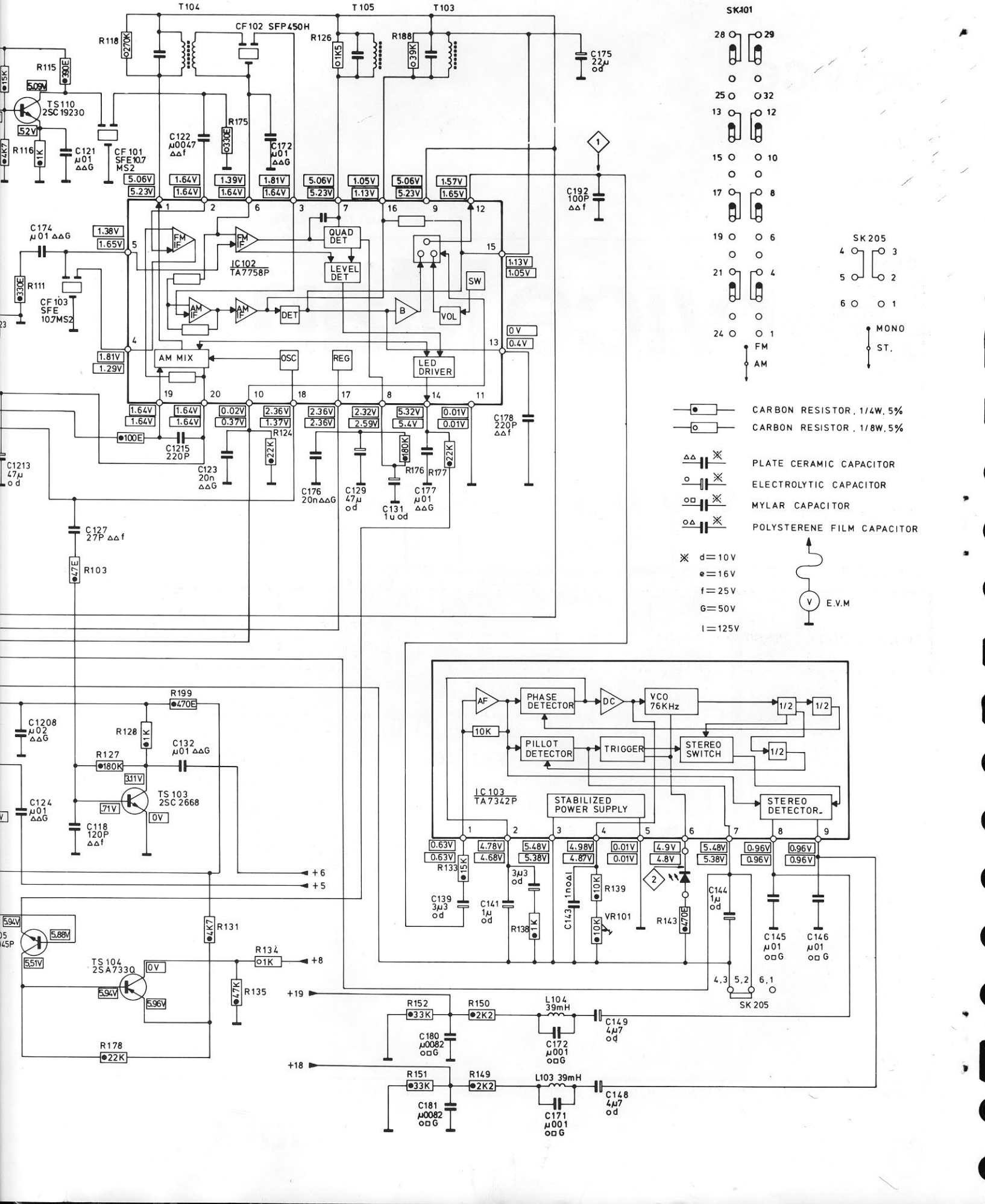


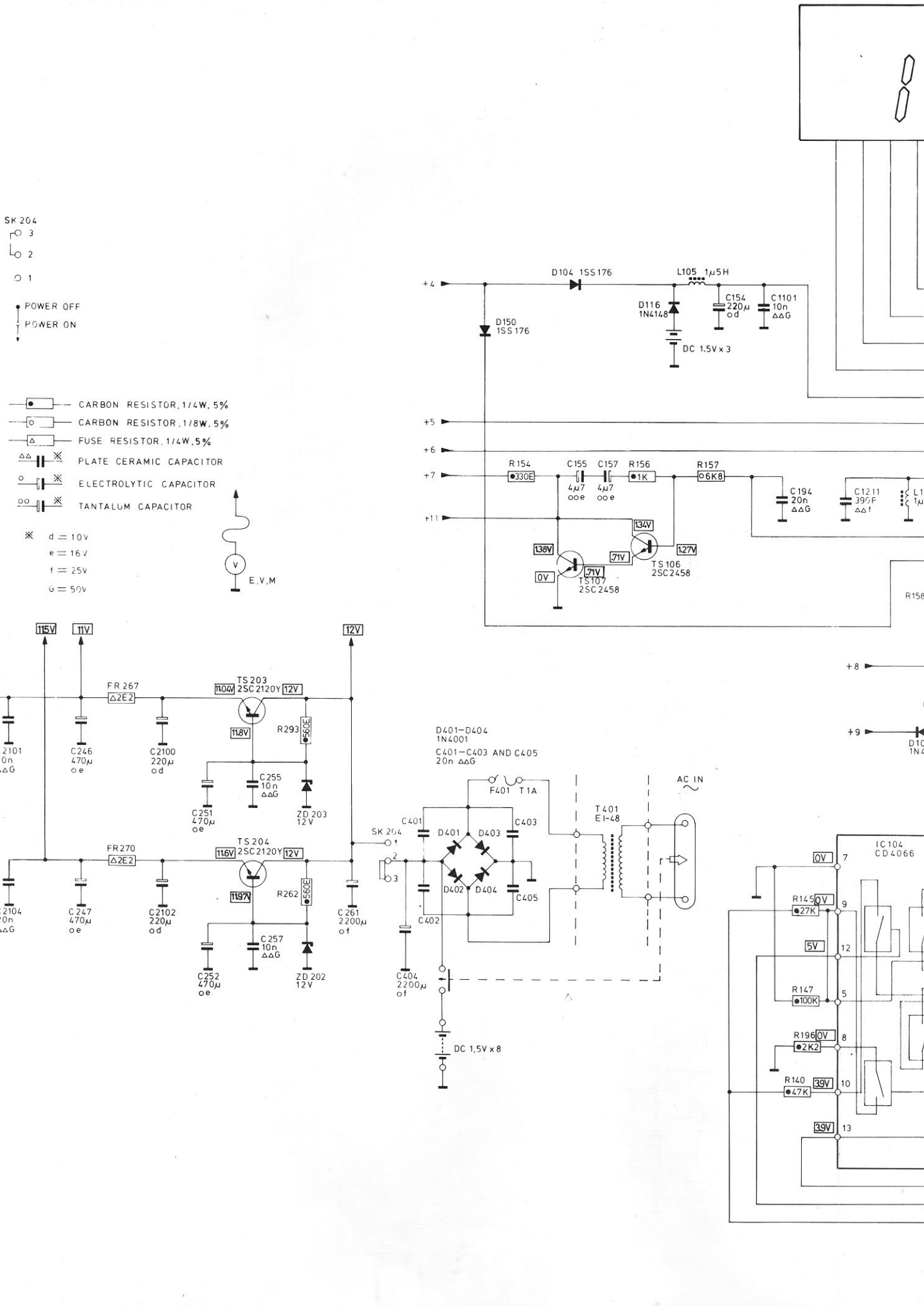


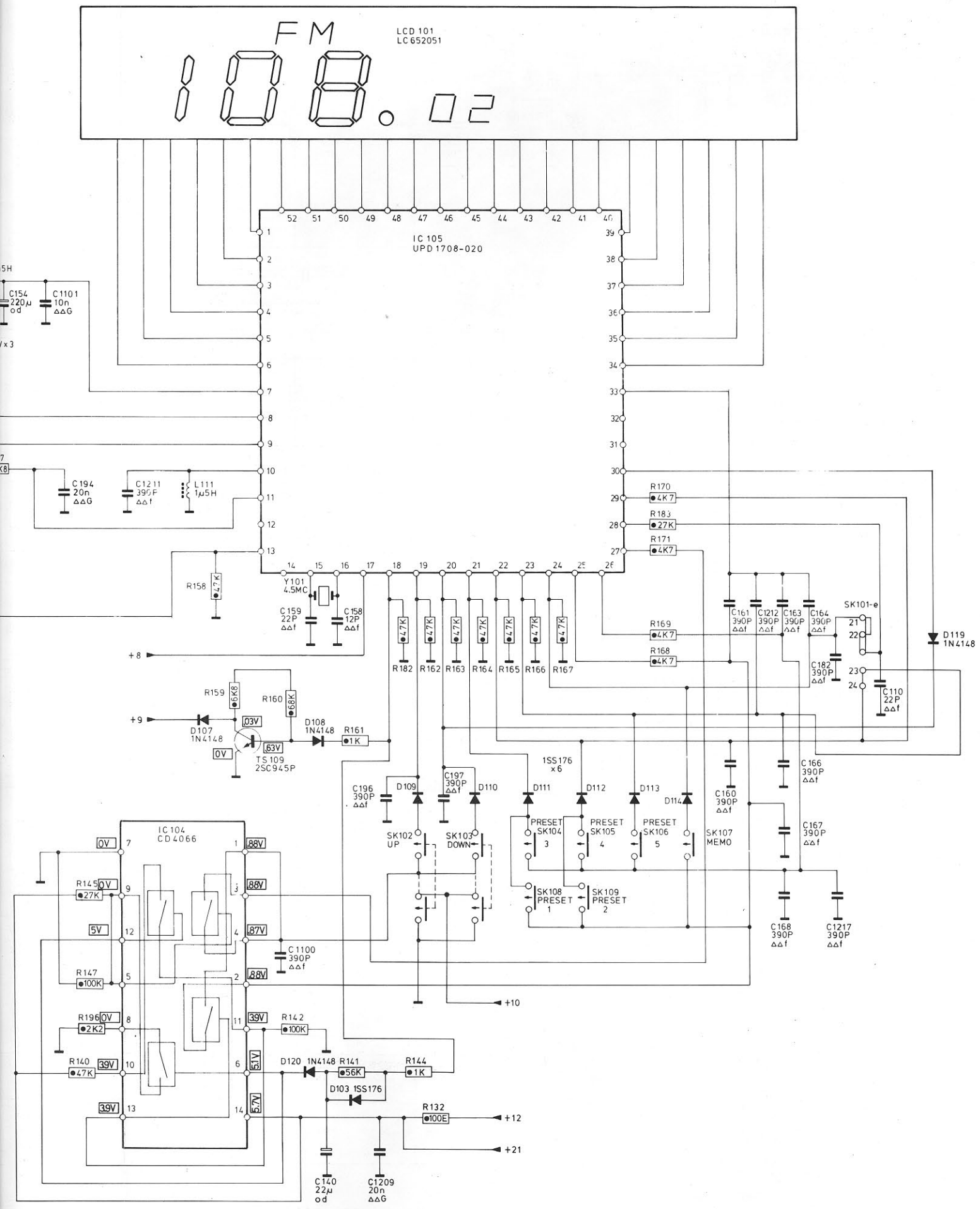


VERSION	EXT. ANT.
-/00/01/10	75 ohm
-/02	NIL

Schematic Diagram

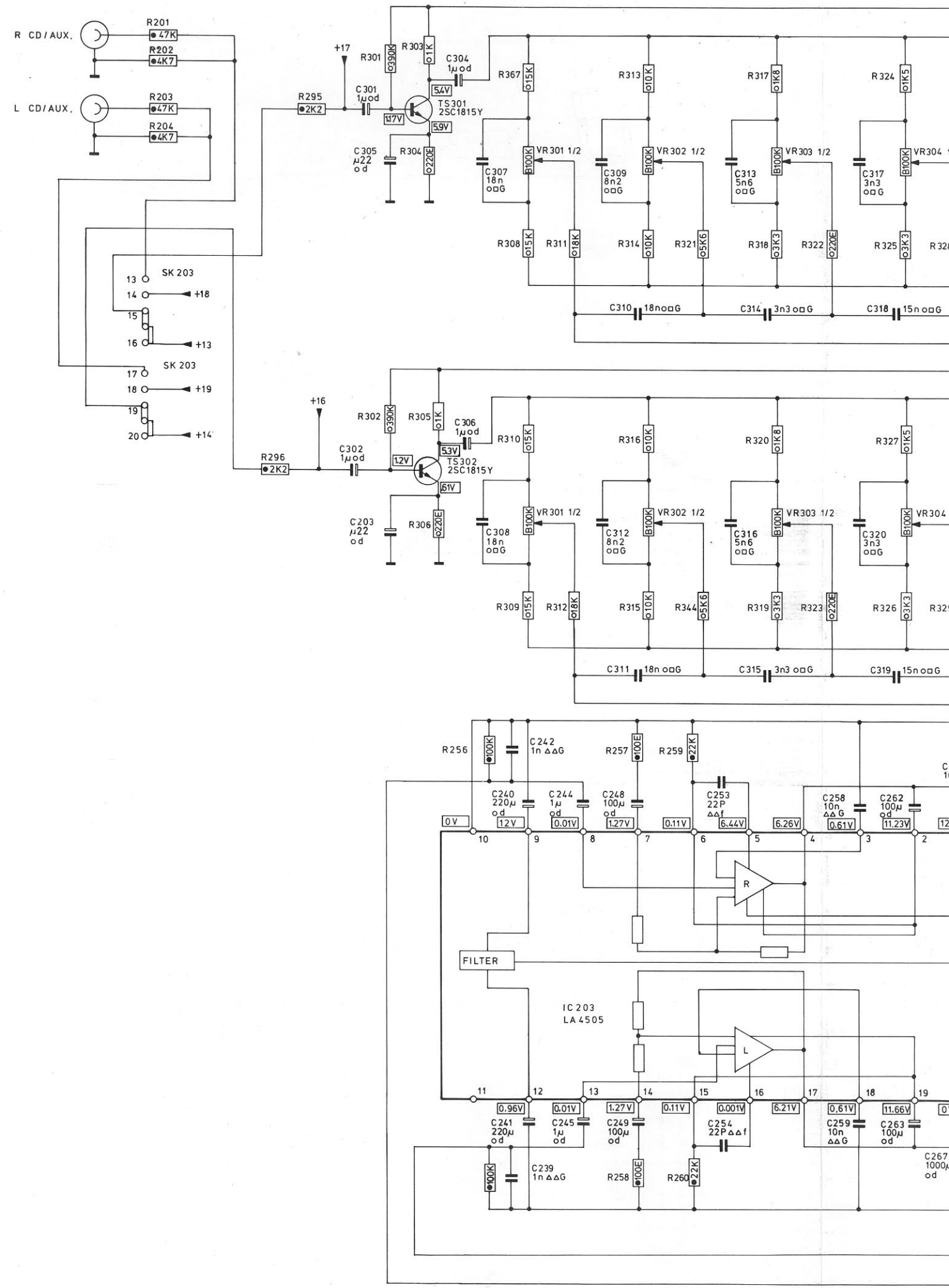



SK 204
3
2
1
POWER OFF
POWER ON
CARBON RESISTOR, 1/4W, 5%
CARBON RESISTOR, 1/8W, 5%
FUSE RESISTOR, 1/4W, 5%
PLATE CERAMIC CAPACITOR
ELECTROLYTIC CAPACITOR
TANTALUM CAPACITOR
d = 10V
e = 16V
f = 25V
G = 50V
V
E.V.M
D104 1SS176
L105 1μ5H
D116 1N4148
C154 220μ od
C1101 10n ΔΔG
D150 1SS176
DC 1.5V x 3
+4
+5
+6
+7
+11
R154 330E
C155 4μ7 ooe
C157 4μ7 ooe
R156 1K
R157 6K8
C194 20n ΔΔG
C1211 390P ΔΔf
1.38V
1.34V
1.71V
1.27V
0V
1.71V
TS107 2SC2458
TS106 2SC2458
R158
+8
+9
115V
11V
12V
FR 267 Δ2E2
TS 203 2SC2120Y
11.04V
12V
11.8V
R293 560E
R233 1K2
C2101 20n ΔΔG
C246 470μ oe
C2100 220μ od
C255 10n ΔΔG
C251 470μ oe
ZD 203 12V
LED106 POWER IND.
FR270 Δ2E2
TS 204 2SC2120Y
11.6V
12V
11.97V
R262 560E
C2104 20n ΔΔG
C247 470μ oe
C2102 220μ od
C257 10n ΔΔG
C252 470μ oe
ZD 202 12V
C261 2200μ of
D401–D404 1N4001
C401–C403 AND C405 20n ΔΔG
F401 T1A
AC IN
T401 E1-48
SK 204
C401
D401
D403
C403
D402
D404
C405
C402
C404 2200μ of
DC 1.5V x 8
IC104 CD4066
0V
7
R145 27K
9
5V
12
R147 100K
5
R196 2K2
8
R140 47K
10
3.9V
13

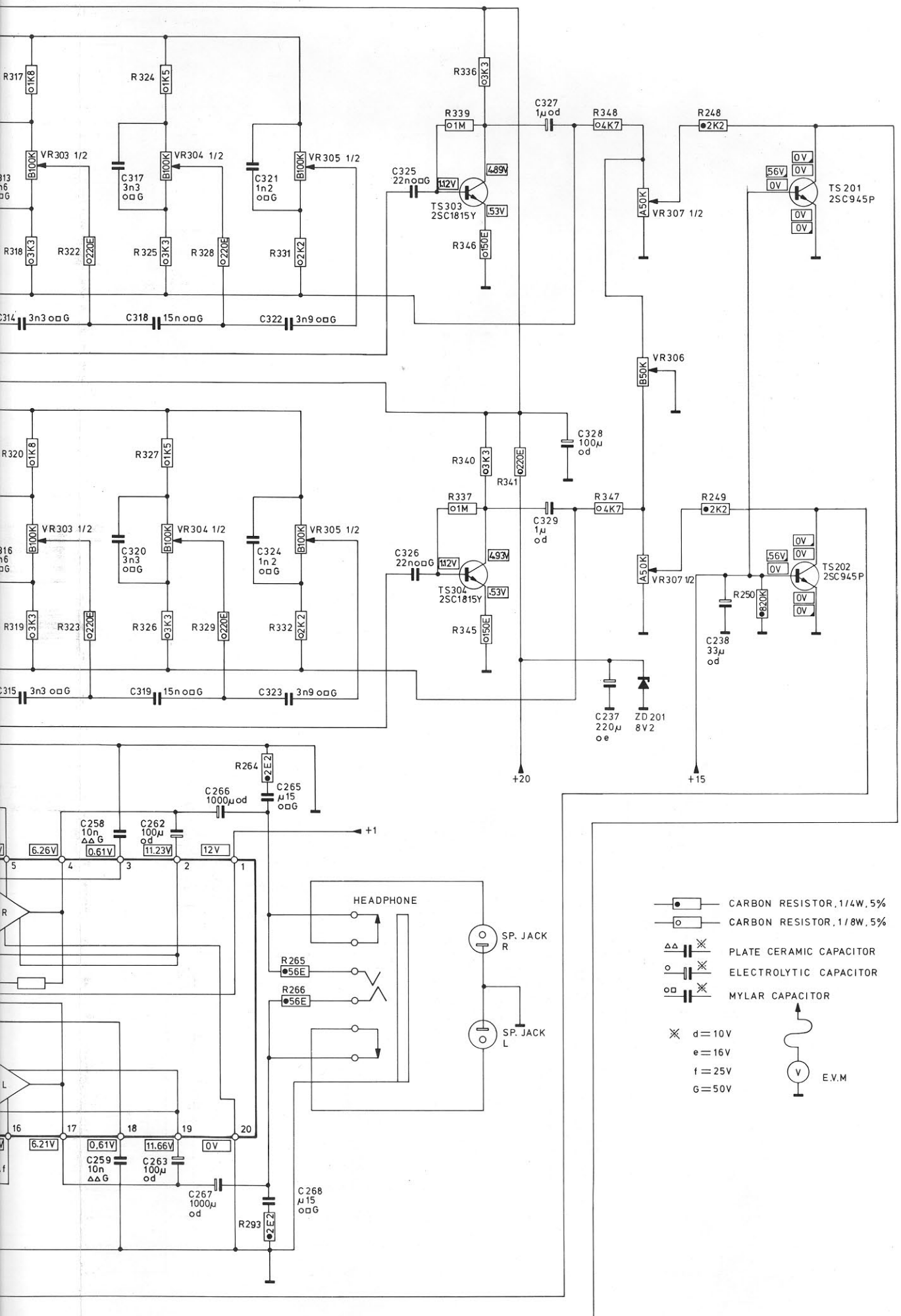

FM
108.02
LCD 101
LC652051
IC 105
UPD 1708-020
IC 104
CD4066
Y101
4.5MC
TS 109
2SC945P
D107
1N4148
D108
1N4148
D109
D110
D111
D112
D113
D114
1SS176
x6
D119
1N4148
D120
1N4148
D103
1SS176
SK101-e
SK102
UP
SK103
DOWN
SK104
PRESET
3
SK105
PRESET
4
SK106
PRESET
5
SK107
MEMO
SK108
PRESET
1
SK109
PRESET
2
C154
220µ
od
C1101
10n
ΔΔG
C194
20n
ΔΔG
C1211
390P
ΔΔf
L111
1µ5H
C159
22P
ΔΔf
C158
12P
ΔΔf
C196
390P
ΔΔf
C197
390P
ΔΔf
C1100
390P
ΔΔf
C140
22µ
od
C1209
20n
ΔΔG
C110
22P
ΔΔf
C160
390P
ΔΔf
C161
390P
ΔΔf
C1212
390P
ΔΔf
C163
390P
ΔΔf
C164
390P
ΔΔf
C166
390P
ΔΔf
C167
390P
ΔΔf
C168
390P
ΔΔf
C1217
390P
ΔΔf
C182
390P
ΔΔf
R158
R159
R160
R161
R162
R163
R164
R165
R166
R167
R168
R169
R170
R171
R182
R183
R132
R140
R141
R142
R144
R145
R147
R196
+8
+9
+10
+12
+21
0V
03V
63V
88V
87V
5V
39V
61V
6.7V

EQ & AF CIRCUIT

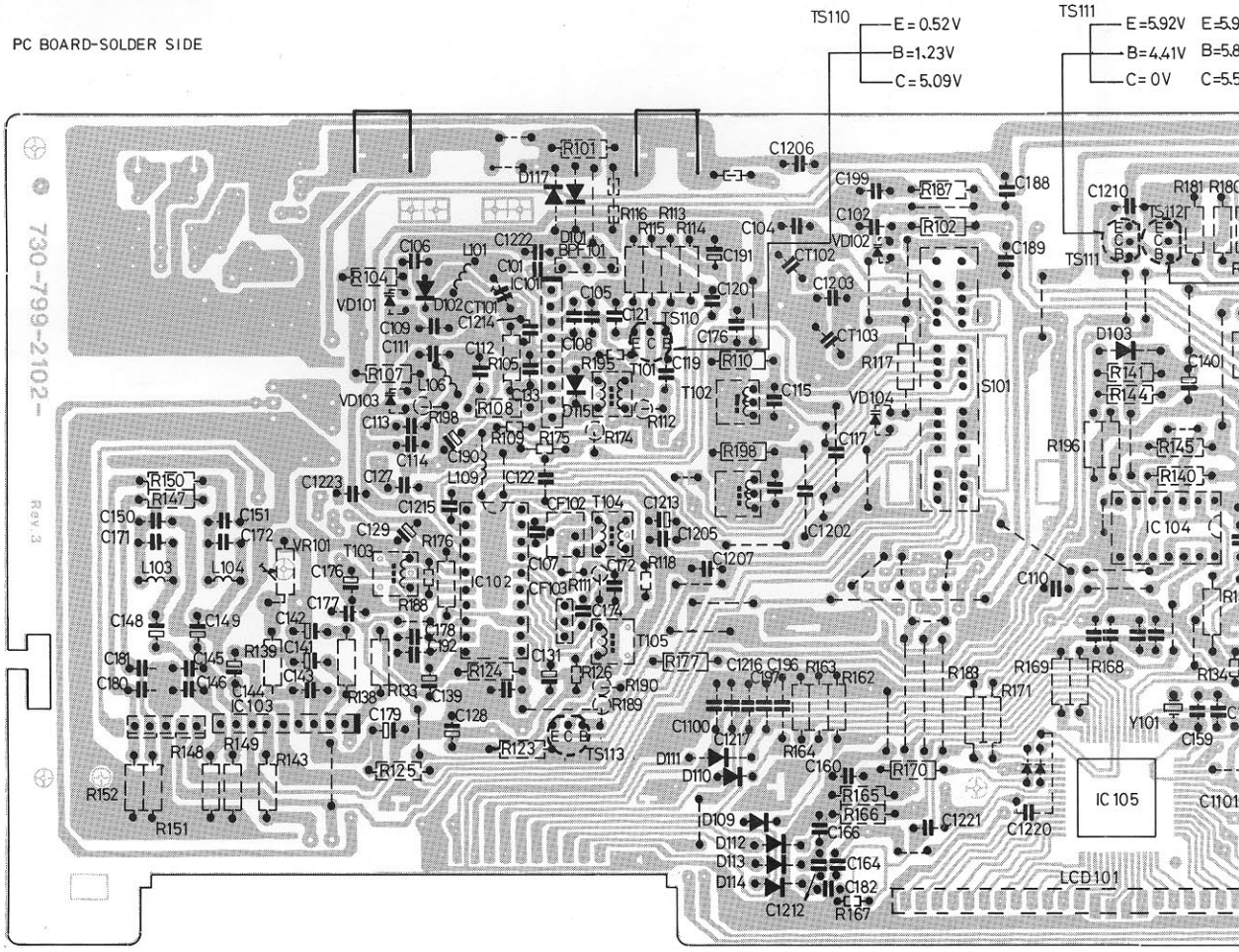
Schematic Diagram

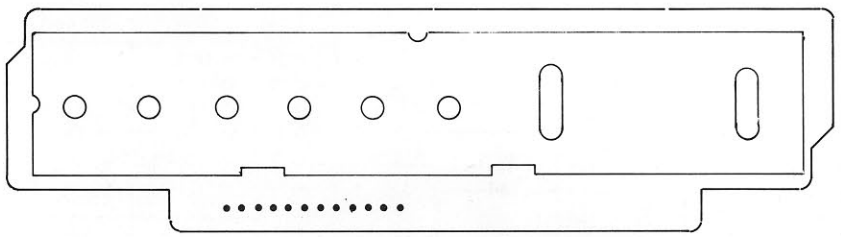


Diagram


R317 01K8
R324 01K5
R336 03K3
R339 01M
C327 1µ od
R348 04K7
R248 2K2
VR303 1/2
VR304 1/2
VR305 1/2
B100K
C317 3n3 oG
C321 1n2 oG
C325 22n oG
TS303 2SC1815Y
489V
112V
53V
R346 0150E
A50K
VR307 1/2
TS201 2SC945P
0V
56V
R318 03K3
R322 0220E
R325 03K3
R328 0220E
R331 02K2
C314 3n3 oG
C318 15n oG
C322 3n9 oG
VR306
B50K
R320 01K8
R327 01K5
R340 03K3
R341 0220E
C328 100µ od
R337 01M
C329 1µ od
R347 04K7
R249 2K2
C320 3n3 oG
C324 1n2 oG
C326 22n oG
TS304 2SC1815Y
493V
R345 0150E
TS202 2SC945P
R250 0820K
C238 33µ od
R319 03K3
R323 0220E
R326 03K3
R329 0220E
R332 02K2
C315 3n3 oG
C319 15n oG
C323 3n9 oG
C237 220µ oe
ZD201 8V2
+20
+15
R264 2E2
C265 µ15 oG
C266 1000µ od
C258 10n ΔΔG
C262 100µ od
+1
6.26V
0.61V
11.23V
12V
HEADPHONE
SP. JACK R
SP. JACK L
R265 56E
R266 56E
6.21V
11.66V
C259 10n ΔΔG
C263 100µ od
C267 1000µ od
C268 µ15 oG
R293 2E2
CARBON RESISTOR, 1/4W, 5%
CARBON RESISTOR, 1/8W, 5%
PLATE CERAMIC CAPACITOR
ELECTROLYTIC CAPACITOR
MYLAR CAPACITOR
d = 10V
e = 16V
f = 25V
G = 50V
E.V.M

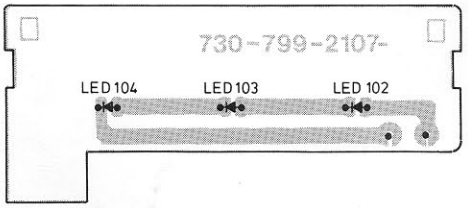
PC BOARD-SOLDER SIDE

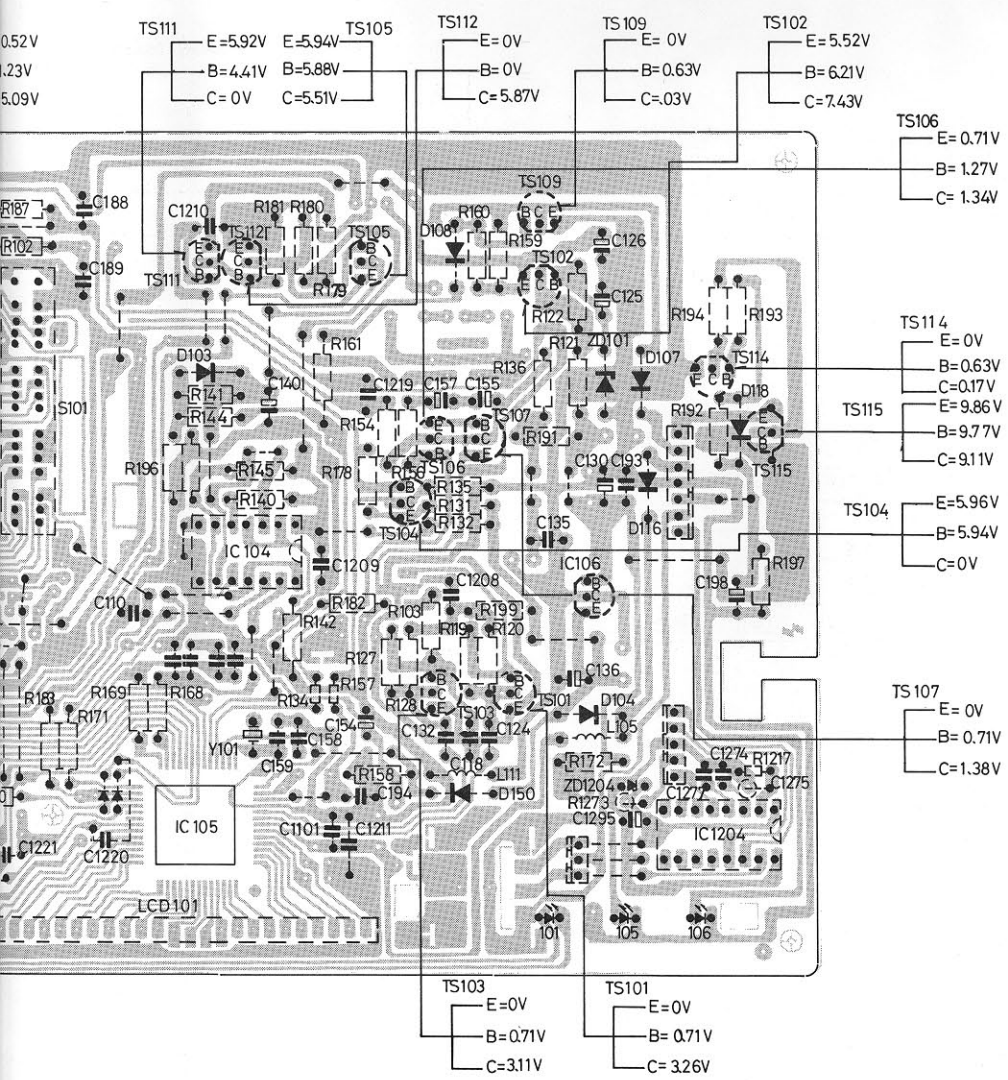




IC		1	2	
102	AM	5.23V	1.64V	1.
	FM	5.06V	1.64V	1.
101	AM	.01V	.01V	.0
	FM	0.6V	1.32V	4
106	AM	10.34V	0V	5
	FM	10.11V	0V	5
103	AM	0.63V	4.78V	5
	FM	0.63V	4.68V	5
104		0.88V	0.88V	0
601		2.14V	2.16V	1.

NOTE: VALUES INDICATE

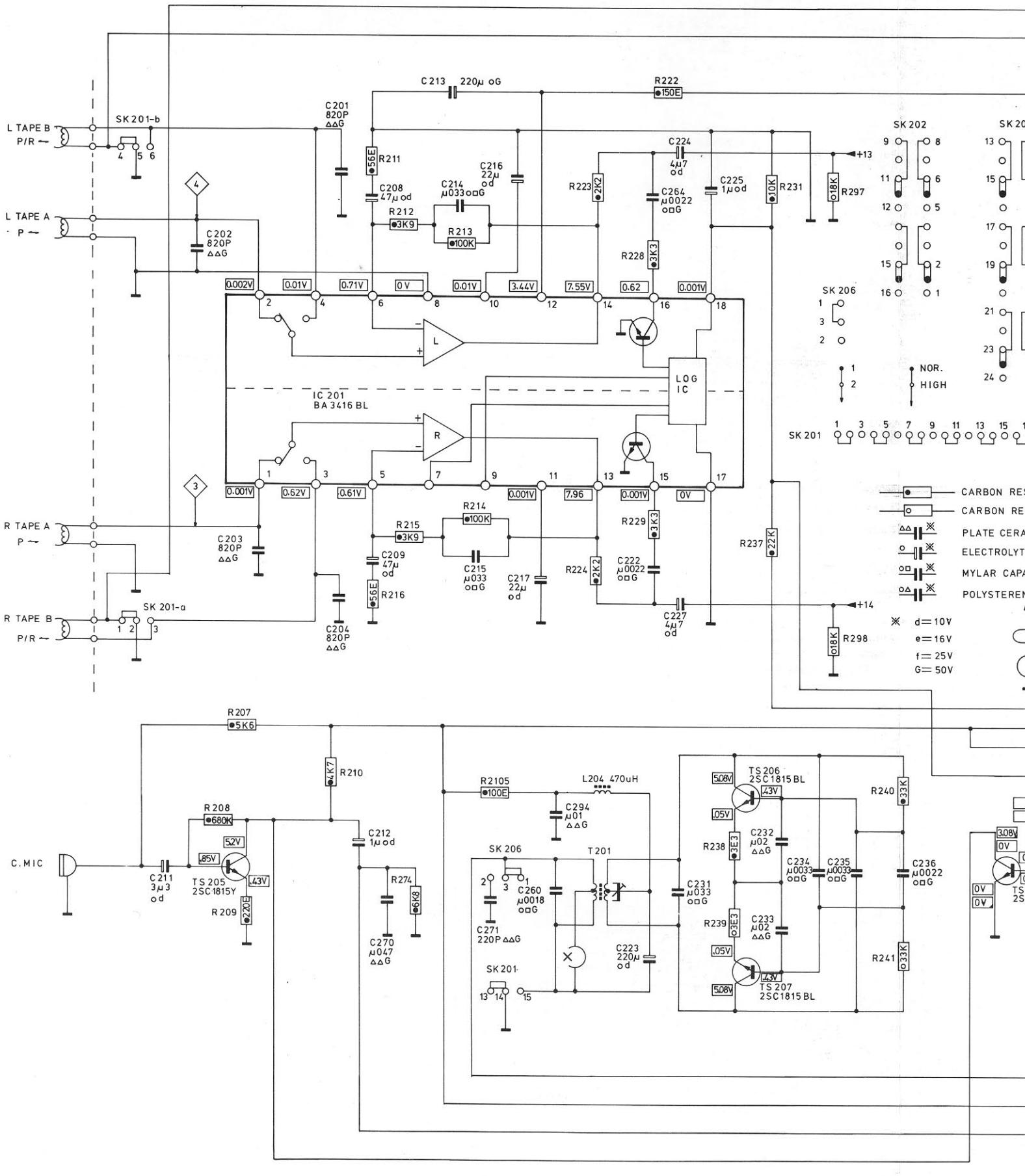




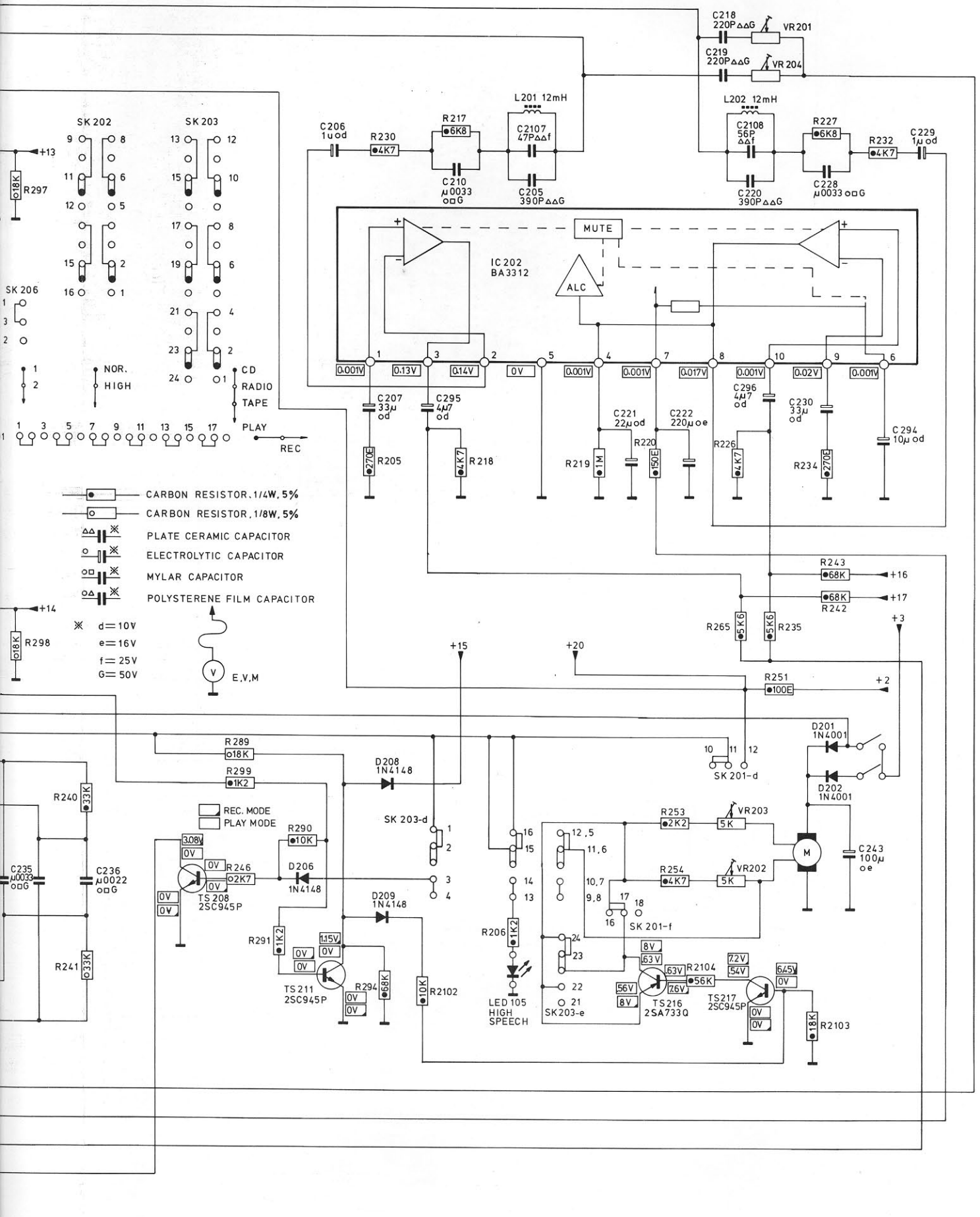
IC		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
102	AM	5.23V	1.64V	1.64V	1.81V	1.65V	1.64V	5.23V	2.32V	5.23V	.02V	.01V	1.65V	0.4V	5.32V	1.13V	1.13V	2.36V	2.36V	1.64V	1.64V
	FM	5.06V	1.64V	1.81V	1.29V	1.38V	1.39V	5.06V	2.59V	5.06V	0.37V	.01V	1.57V	0V	5.4V	1.05V	1.05V	2.36V	1.37V	1.64V	1.64V
101	AM	.01V	.01V	.02V	.01V	.01V	.02V	—	.02V	.02V											
	FM	0.6V	1.32V	4.69V	1.3V	.01V	4.9V	—	4.83V	4.9V											
106	AM	10.34V	0V	5.88V																	
	FM	10.11V	0V	5.88V																	
103	AM	0.63V	4.78V	5.48V	4.98V	.01V	4.9V	5.48V	.96V	.96V											
	FM	0.63V	4.68V	5.38V	4.87V	.01V	4.8V	5.38V	.96V	.96V											
104		0.88V	0.88V	0.88V	0.87V	0V	5.1V	0V	0V	0V	3.9V	3.9V	5V	3.9V							
601		2.14V	2.16V	1.52V	0V	1.43V	0.96V	3.99V	4.73V												

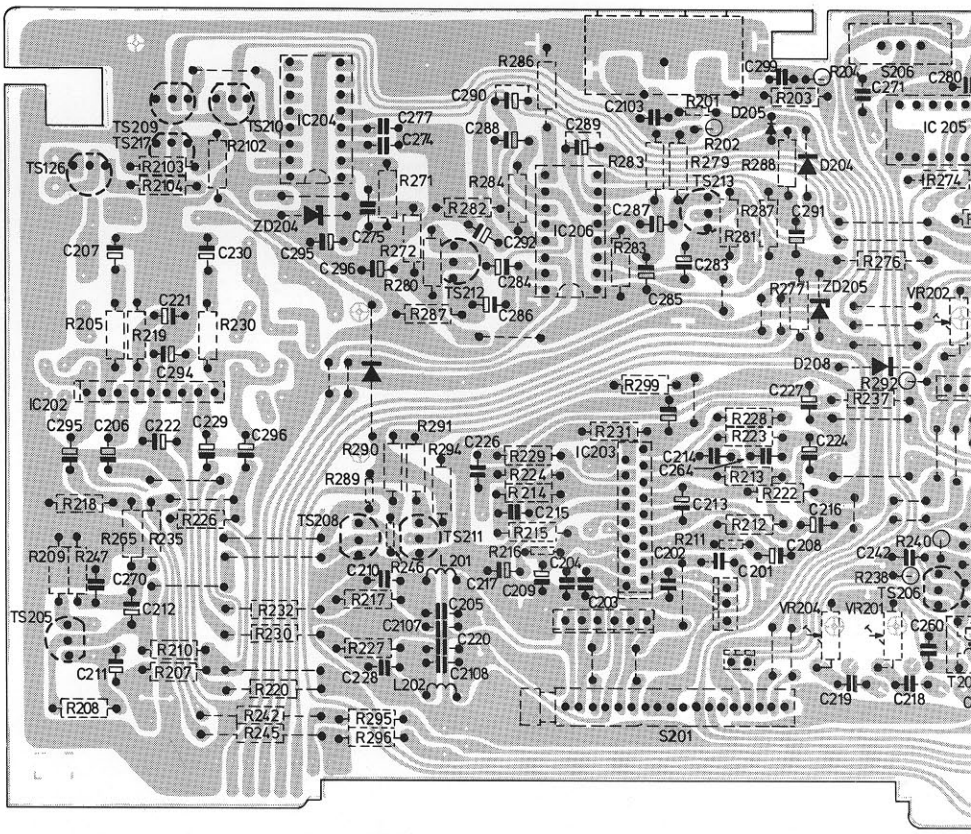
NOTE: VALUES INDICATED IN ☐ ARE DC VOITAGES BETWEEN THE CHASSIS GROUND AND THE ELECTRICAL PARTS.

CASSETTE CIRCUIT



Schematic Diagram





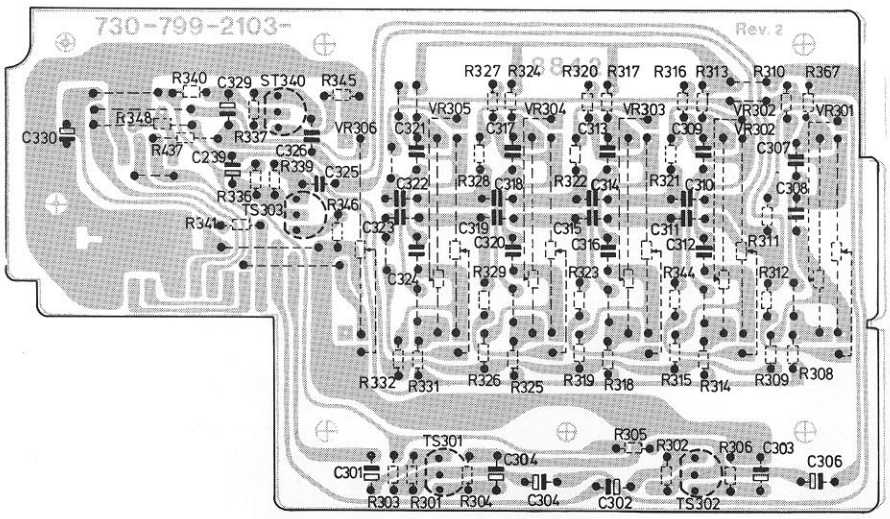
IC VOLTAGE.

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC203	0V	0V	0,62V	0,01V	0,06V	0,07V	–	0V	–	0,01V	0V	3,44V	7,96V	7,55V	0V	0,62V	0V	0V		
IC202	0V	0,14V	0,13V	0V	0V	0V	0V	0,02V	0,02V	0V										
IC201	12V	11,2V	0,61V	6,26V	6,44V	0,11V	1,27V	0V	12V	0V	–	0,96V	0,01V	1,27V	0,11V	0V	6,12V	0,61V	11,7V	0V
IC204	0V	0,12V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	5V	5V	2,57V	5V				
IC205	0V	5,37V	0V	0V	5,37V	0V	0V	–	–	–	–	–	–	5,37V						
IC206	0V	0V	0V	0V	0V	0V	5,37V	0,1V	5,31V	5,35V	0V	0V	0V	0V	0V	5,36V				
IC501	–	2,94V	2,95V	0V	0V	–	–	–	–	2,95V	2,95V	2,95V	2,93V	2,93V	2,95V	2,95V				
IC601	2,14V	2,16V	1,52V	0V	1,43V	0,96V	3,99V	4,73V												

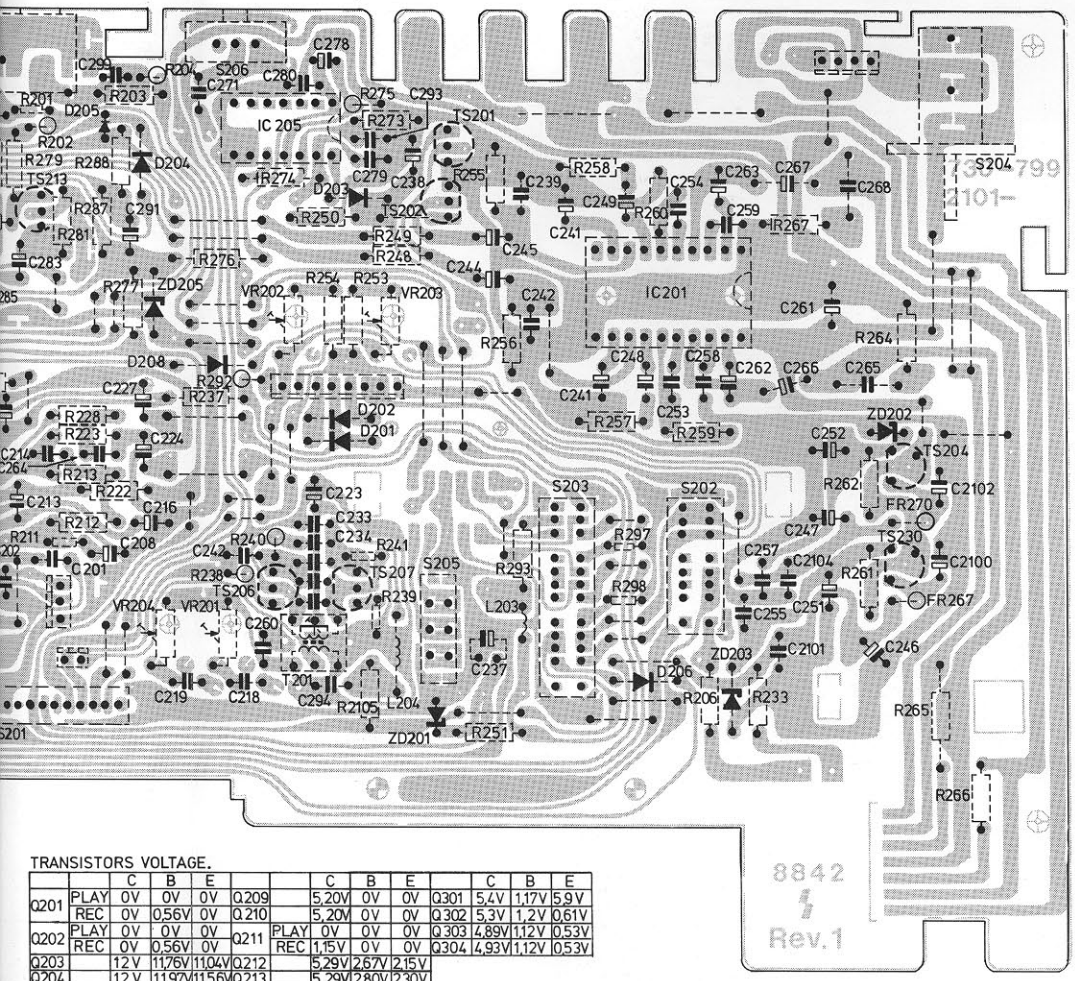
TRANSISTORS VOLTAGE.

		C	B	E		
Q201	PLAY	0V	0V	0V	Q209	
	REC	0V	0,56V	0V	Q210	
Q202	PLAY	0V	0V	0V	Q211	PLAY
	REC	0V	0,56V	0V		REC
Q203		12V	11,76V	11,04V	Q212	
Q204		12V	11,97V	11,56V	Q213	
Q205		5,2V	0,85V	0,43V	Q216	PLAY
Q206		5,08V	0,43V	0,05V		REC
Q207		5,08V	0,43V	0,05V	Q217	PLAY
Q208	PLAY	0V	0V	0V		REC
	REC	3,08V	0V	0V		

NOTE: Values indicated in □ are D



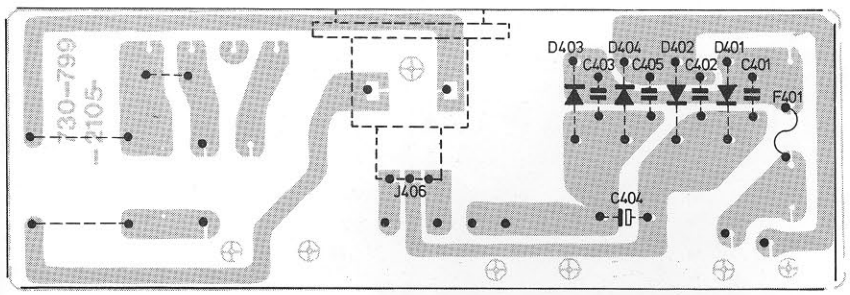
PC BOARD-SOLDER SIDE



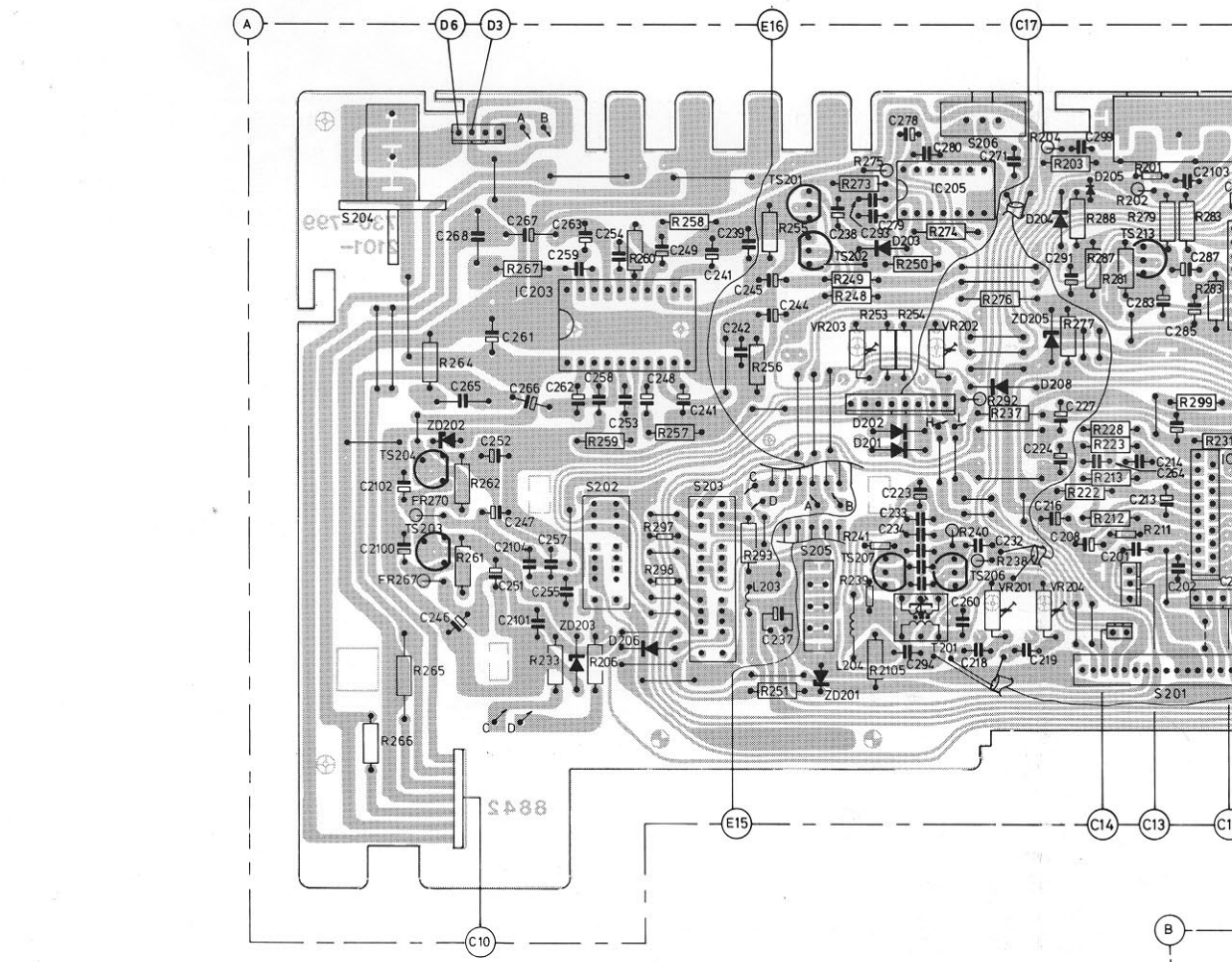
TRANSISTORS VOLTAGE.

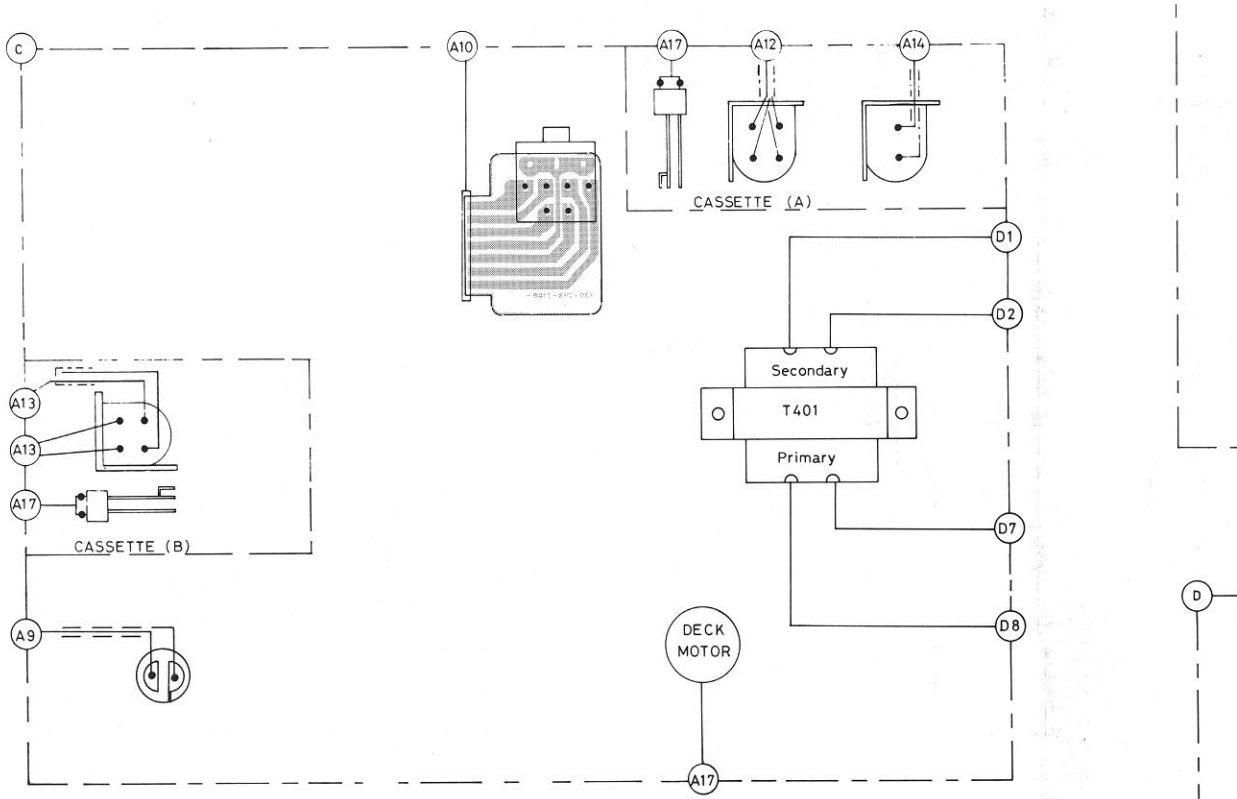
		C	B	E			C	B	E		C	B	E
Q201	PLAY	0V	0V	0V	Q209		5,20V	0V	0V	Q301	5,4V	1,17V	5,9V
	REC	0V	0,56V	0V	Q210		5,20V	0V	0V	Q302	5,3V	1,2V	0,61V
Q202	PLAY	0V	0V	0V	Q211	PLAY	0V	0V	0V	Q303	4,89V	1,12V	0,53V
	REC	0V	0,56V	0V		REC	1,15V	0V	0V	Q304	4,93V	1,12V	0,53V
Q203		12V	11,76V	11,04V	Q212		5,29V	2,67V	2,15V				
Q204		12V	11,97V	11,56V	Q213		5,29V	2,80V	2,30V				
Q205		5,2V	0,85V	0,43V	Q216	PLAY	0,63V	0,63V	0,56V				
Q206		5,08V	0,43V	0,05V		REC	8V	7,6V	8V				
Q207		5,08V	0,43V	0,05V	Q217	PLAY	0,54V	0V	0V				
Q208	PLAY	0V	0V	0V		REC	7,2V	6,45V	0V				
	REC	3,08V	0V	0V									

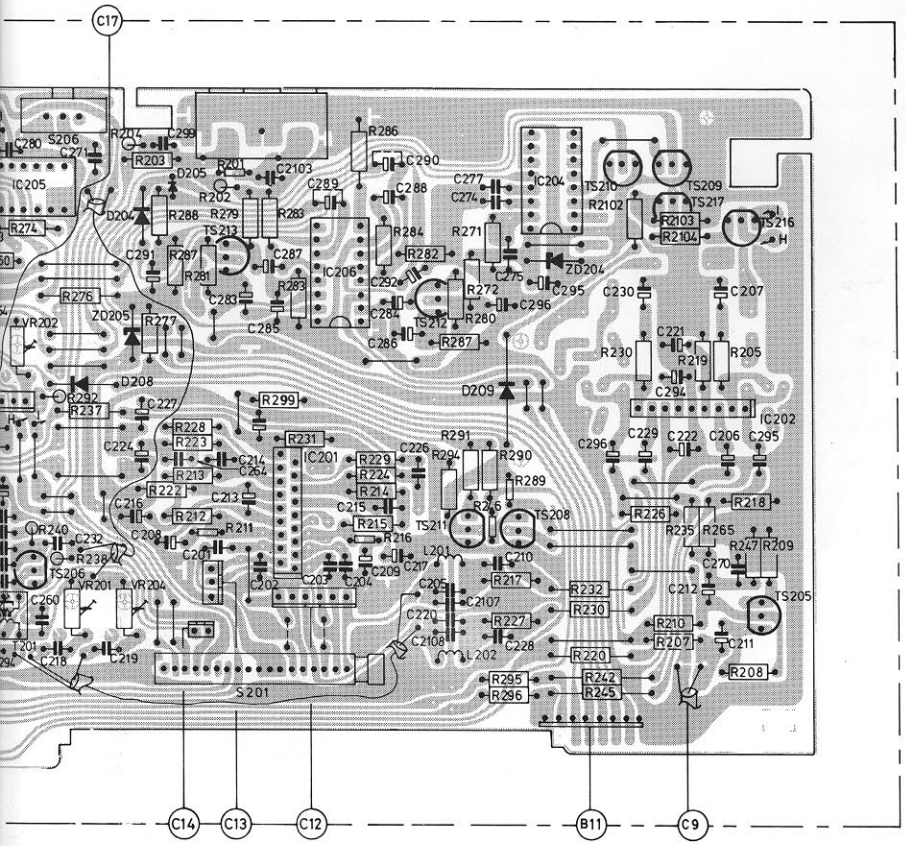
NOTE: Values indicated in □ are DC Voltage between the chassis ground and the electrical parts.

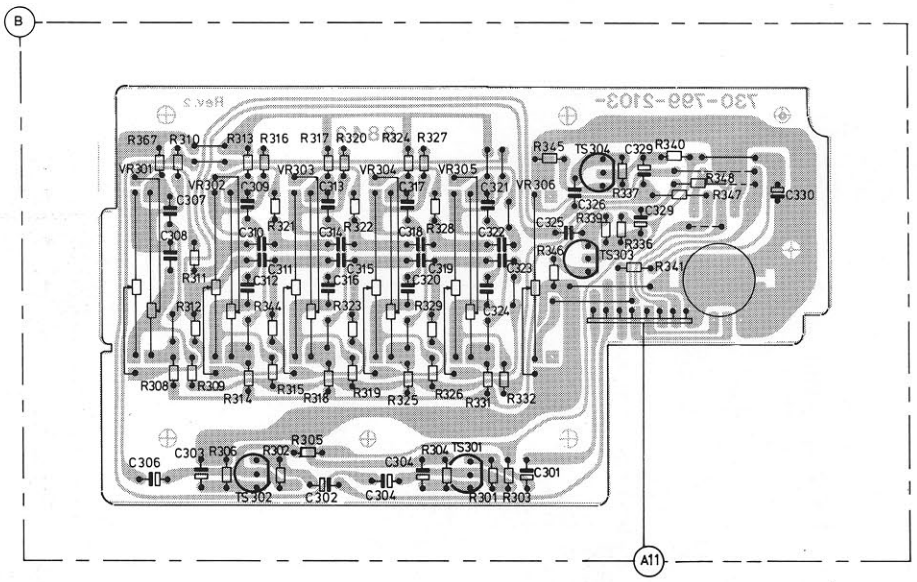


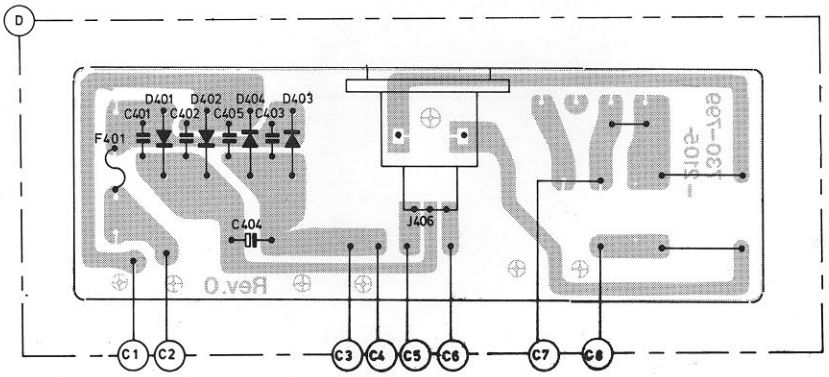
Wiring Diagram



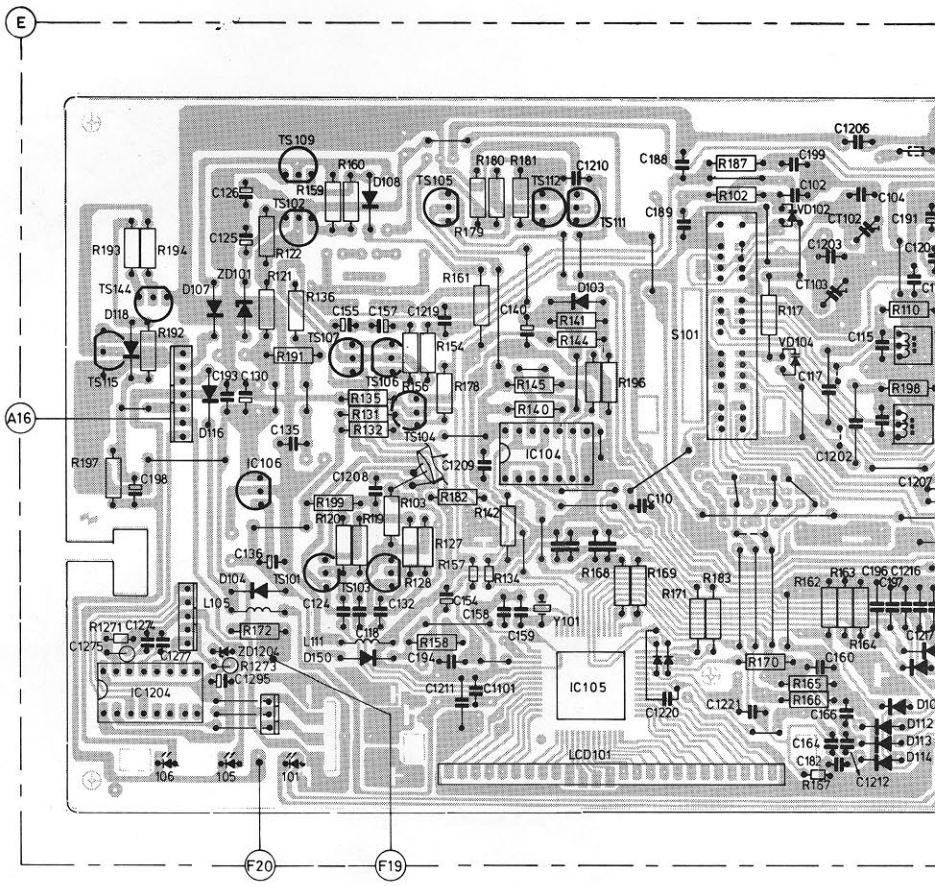


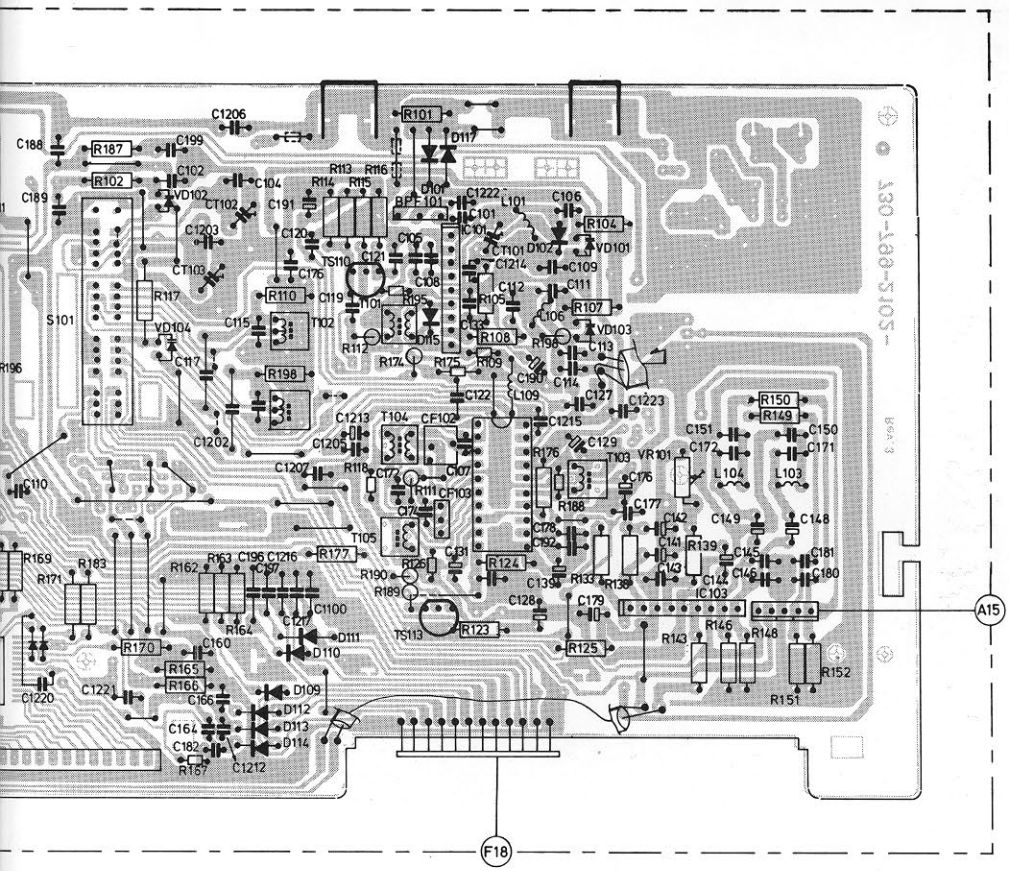

C17
C14
C13
C12
B11
C9
S206
IC205
IC206
IC204
IC201
IC202
S201
TS206
TS205
TS208
TS209
TS210
TS211
TS212
TS213
TS216
TS217
VR201
VR202
VR204
ZD204
ZD205
DZ09
D205
D208
L201
L202
C2103
C2107
C2108
R2102
R2103
R2104

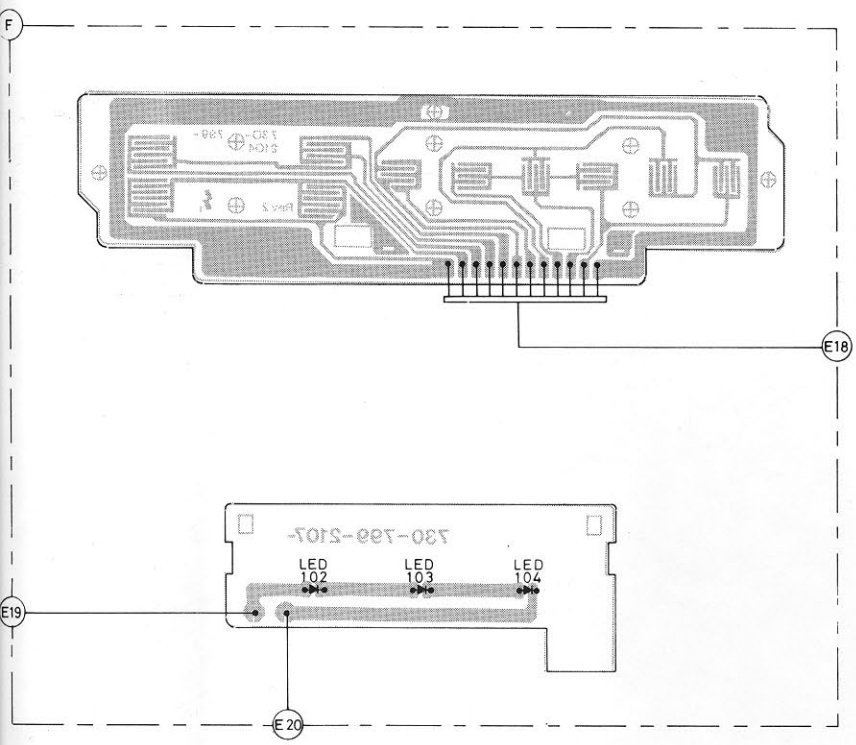

B
A11
730-799-2103-
Rev.2
VR301
VR302
VR303
VR304
VR305
VR306
TS301
TS302
TS303
TS304


D
C1
C2
C3
C4
C5
C6
C7
C8
D401
D402
D404
D403
F401
J406
Rev.0

Wiring Diagram

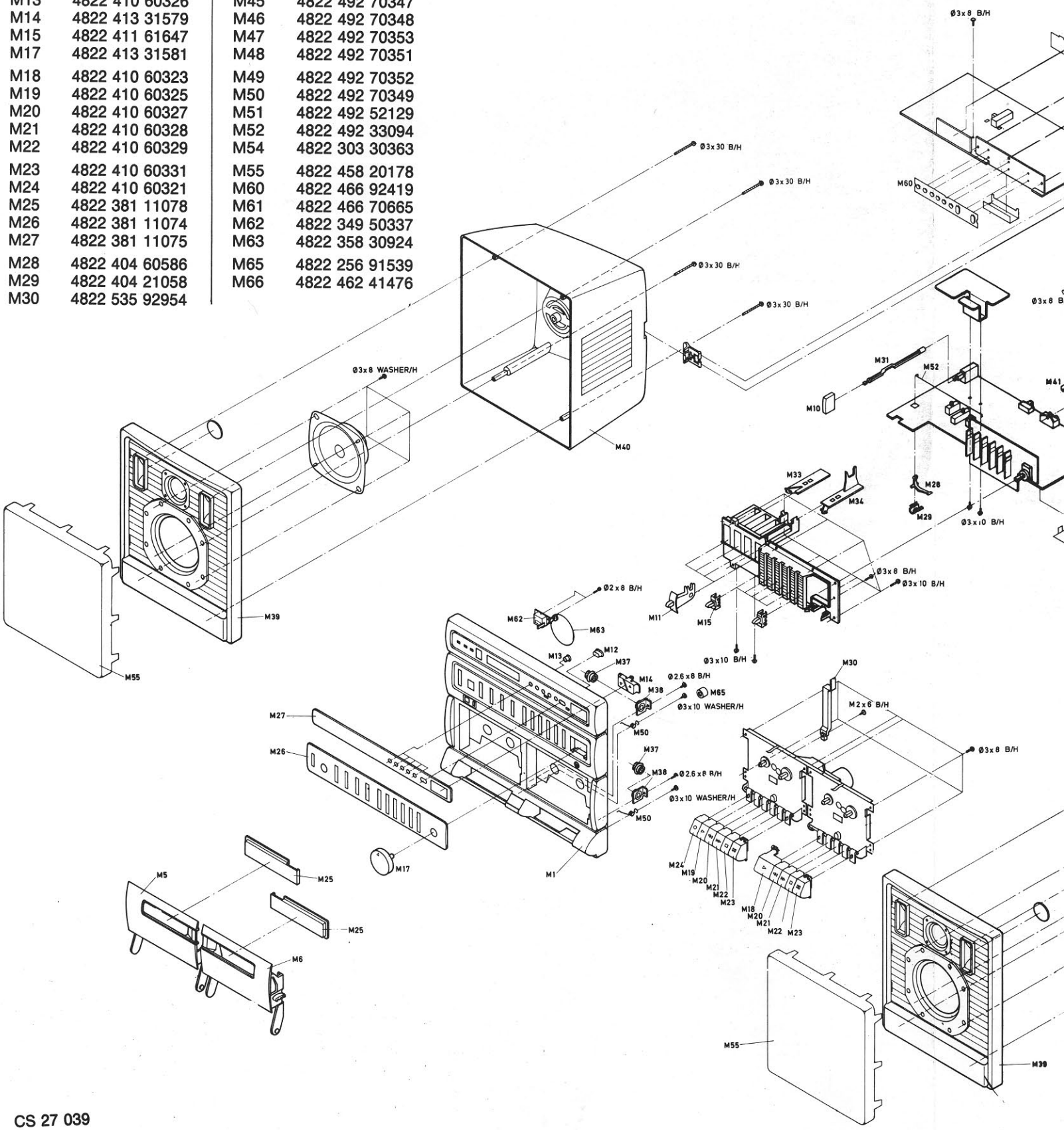


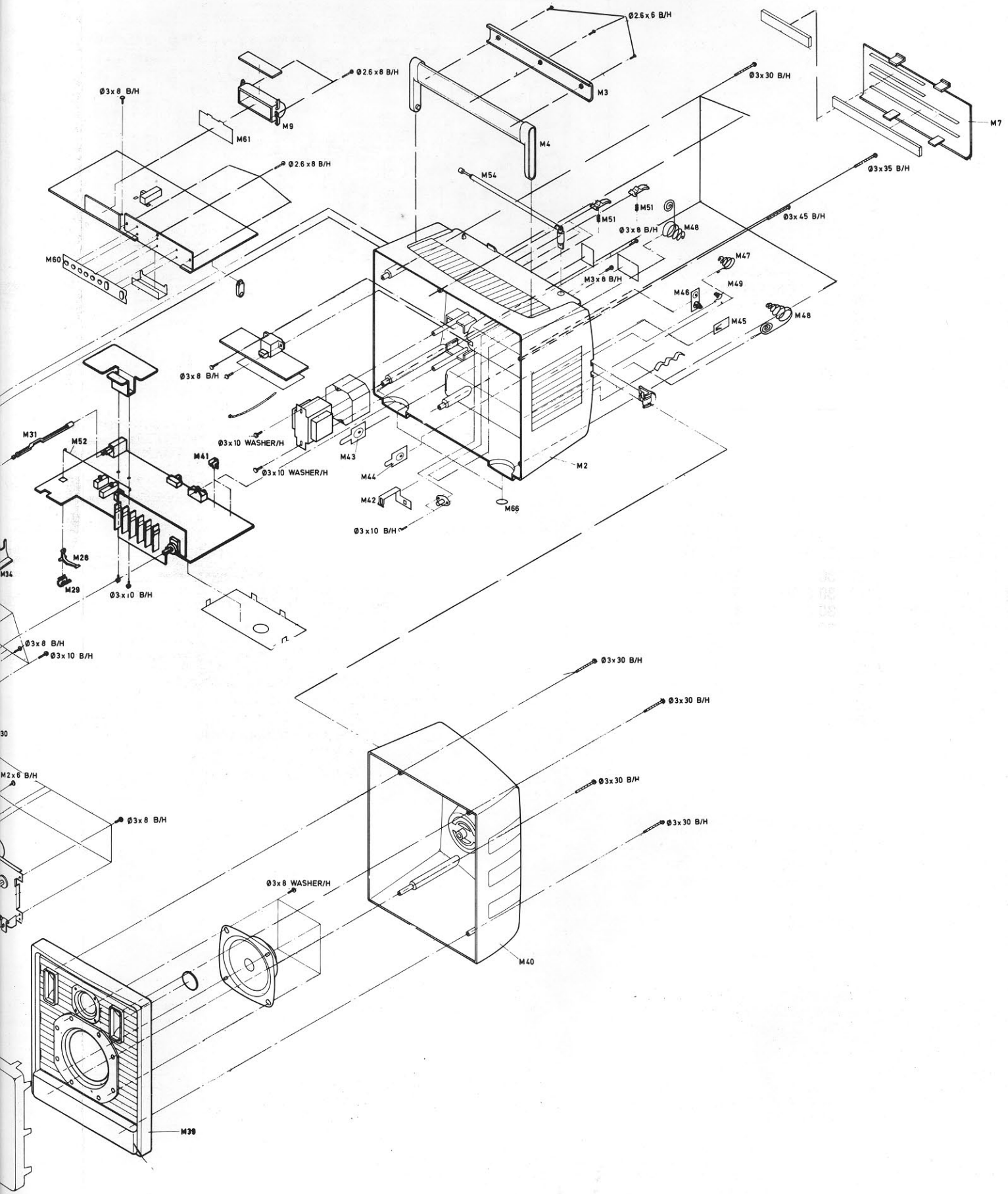

C1206
R101
C188
R187
C199
D117
R102
C102
R113
R116
C189
VD102
C104
R114
R115
C1102
C191
BPF 101
C1222
C101
L101
C106
C1203
IC101
R104
C120
TS110
C121
C105
C1101
D102
VD101
CT103
C176
C108
C1214
C109
C112
C111
R110
C119
T101
R105
R107
S101
VD104
C115
T102
R112
D115
C1208
R108
R106
VD103
C117
R174
R175
R109
C190
C114
C113
R198
C122
L109
C127
C1223
R150
R149
C1213
T104
CF102
C1215
C151
C150
C1202
C1205
C129
C172
C171
C1207
R118
C172
C107
T103
VR101
L104
L103
C110
R111
CF103
C176
R188
C177
C142
C149
C148
T105
C178
C179
C141
R139
R169
R177
C131
R124
C145
C181
R183
R171
R162
R163
C196
C1216
IC102
R125
C139
R133
R138
C143
C146
C180
R190
R189
IC103
C128
C179
C1100
R164
C127
D111
TS113
R123
R146
R148
R143
R125
R152
R170
C160
D110
R165
R166
R151
C1220
C122
C166
D109
D112
C164
D113
D114
C182
C1212
R167
A15
F18


F
E18
LED
102
LED
103
LED
104
E19
E 20

Mechanical Parts

M1	4822 426 51381	M31	4822 535 92953
M2	4822 426 10035	M33	4822 404 21056
M3	4822 426 60572	M34	4822 404 21057
M4	4822 498 40567	M37	4822 522 32793
M5	4822 443 62853	M38	4822 256 91538
M6	4822 443 62852	M39	4822 426 51379
M7	4822 443 62851	M40	4822 426 60571
M9	4822 404 21055	M41	4822 303 70086
M10	4822 410 60322	M42	4822 290 80894
M11	4822 411 50578	M43	4822 290 80893
M12	4822 410 60324	M44	4822 290 80892
M13	4822 410 60326	M45	4822 492 70347
M14	4822 413 31579	M46	4822 492 70348
M15	4822 411 61647	M47	4822 492 70353
M17	4822 413 31581	M48	4822 492 70351
M18	4822 410 60323	M49	4822 492 70352
M19	4822 410 60325	M50	4822 492 70349
M20	4822 410 60327	M51	4822 492 52129
M21	4822 410 60328	M52	4822 492 33094
M22	4822 410 60329	M54	4822 303 30363
M23	4822 410 60331	M55	4822 458 20178
M24	4822 410 60321	M60	4822 466 92419
M25	4822 381 11078	M61	4822 466 70665
M26	4822 381 11074	M62	4822 349 50337
M27	4822 381 11075	M63	4822 358 30924
M28	4822 404 60586	M65	4822 256 91539
M29	4822 404 21058	M66	4822 462 41476
M30	4822 535 92954		




Ø2.6x6 B/H
M3
M4
Ø2.6x8 B/H
M9
M61
Ø3x8 B/H
Ø3x30 B/H
M7
Ø2.6x8 B/H
M54
Ø3x35 B/H
M51
M51
Ø3x45 B/H
Ø3x8 B/H
M48
M60
M47
M3x6 B/H
M49
M46
M48
M45
Ø3x8 B/H
M31
M52
Ø3x10 WASHER/H
M41
M43
Ø3x10 WASHER/H
M44
M2
M42
M66
Ø3x10 B/H
M28
M29
M34
Ø3x10 B/H
Ø3x8 B/H
Ø3x10 B/H
Ø3x30 B/H
Ø3x30 B/H
Ø3x30 B/H
Ø3x30 B/H
M2x6 B/H
Ø3x8 B/H
Ø3x8 WASHER/H
M40
M39

U201	4822 209 71951	BA3416BL
U202	4822 209 61512	BA3312
U203	4822 209 61513	LA4505
U101	4822 209 72753	TA7358P
U102	4822 209 61514	TA7758P
U103	4822 209 81659	TA7342P
U104	4822 209 61515	CD4066
U105	4822 209 61511	UPD1708-020
U106	4822 209 60528	78L06

Q101,103	4822 130 61748	2SC2668
Q102	4822 130 42286	2SC1959Y
Q104,111,216	4822 130 41732	2SA7339
Q105 etc.	4822 130 41198	2SC945P
Q106,107	4822 130 62837	2SC245B
Q110	4822 130 60166	2SC19230
Q115	4822 130 61838	JE8550D
Q203,204	4822 130 61836	2SC120Y
Q205,301-304	4822 130 41947	2SC1815Y
Q206,207	4822 130 41319	2SC1815BL

D101 etc.	4822 130 30621	IN4148
D101 etc.	4822 130 81524	ISS176
D115	4822 130 80562	IN60
D201,202	4822 130 31438	IN4001
D401-404	5322 130 81527	IN4004
LCD101	4822 130 90726	LC65205
LED101	4822 130 32915	TLG208
LED102-104	4822 130 81652	LTR234
LED105,106	4822 130 31911	TLR208
VD101,103	4822 130 81656	V101
VD102,104	4822 130 81657	V149
ZD101	4822 130 81653	ZENER 6,2V
ZD201	4822 130 81654	ZENER 8,2V
ZD202,203	4822 130 81655	ZENER 12V

VR101	4822 100 11551	trim. potm. 10K
VR201,204	4822 100 11553	trim. potm. 50K
VR202,203	4822 100 11552	trim. potm. 5K
VR301-305	4822 105 11037	potm. slide 100K
VR306	4822 105 11041	potm. slide 50K
VR307	4822 102 10411	potm. vol. 50K

L102	4822 156 11133	MW-ANT coil
L103,104	4822 157 60358	choke 39mH
L105,111	4822 157 60356	choke 1.54µH
L108	4822 158 60599	LW-ANT coil
L109	4822 157 60361	choke 22µH
L110	4822 157 60357	choke 470µH
L201,202	4822 157 60359	choke 12µH
L203-205	4822 157 60357	choke 470µH
T101	4822 157 60355	FM-OSC coil
T102	4822 157 60349	MW-OSC coil
T103	4822 157 60352	AM-IF
T104	4822 157 60351	AM-IF
T105	4822 157 60354	FM-IF
T106	4822 156 11132	LW OSC coil
T201	4822 157 60353	IF-coil
T401	4822 146 21451	Mainstransformer 220V
T401/05	4822 146 21484	Mainstransformer 240V

S101	4822 277 21342	slide switch
S201	4822 276 12645	push switch
S202	4822 277 21347	slide switch
S203	4822 277 21349	slide switch
S204	4822 276 12646	push switch
S205	4822 277 21346	slide switch
S206	4822 277 21345	slide switch

Miscellaneous

BPF101	4822 242 72889	cer.filter BPMM6A
CF101,103	4822 242 72887	cer.filter 10.7MHz
CF102	4822 242 72888	cer.filter 450kHz
Y101	4822 242 72891	crystal 4.5MHz
J406	4822 267 31116	AC socket
	4822 267 31115	antenna socket 75Ω
	4822 267 10234	headphone socket
	4822 267 10233	line socket
	4822 242 30198	microphone
	4822 240 90093	loudsp. piezo
	4822 240 40178	loudsp. 5W, 5"
	4822 526 10463	antenna bar

(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 in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

(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 pezzi di ricambiago identici a quelli specificati.

(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.

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD).
Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

ESD

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD).
Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern.
Sorgen sie dafür, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.