Bang&Olufsen

Beomaster 7000

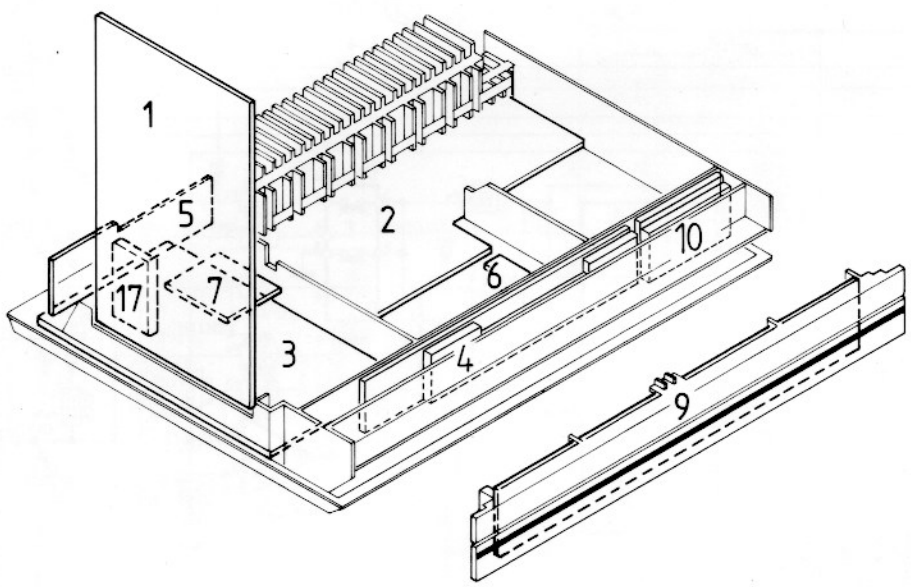
Type 2341, 2342, 2343, 2344, 2345

Beomaster 6500

Corrections

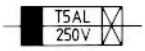
10-91 3538794

Indklæbes i Serviceanvisningen Beomaster 6500 (3538751)
Paste into Service Manual Beomaster 6500 (3538751)
In Serviceanleitung Beomaster 6500 (3538752) einkleben
A coller le Manuel d'entretien pour Beomaster 6500 (3538752)



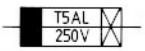
10-1

EXPLANATION DE SYMBOLES DU FUSSIBLE UTILISES DANS L'APPAREIL



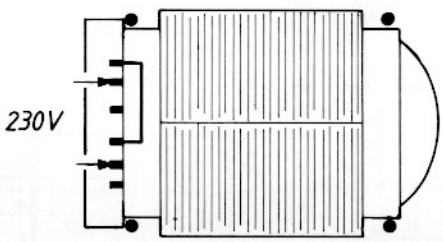
Remplacer par un fusible retardé de la même type et de 5 amperes 250 volts.

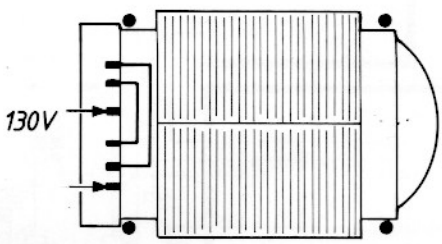
EXPLANATION OF THE FUSE SYMBOLS USED IN THE SET

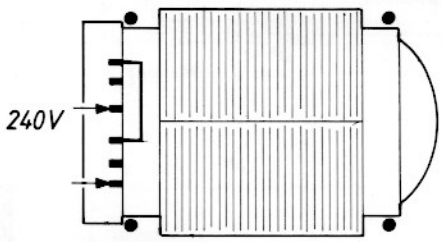


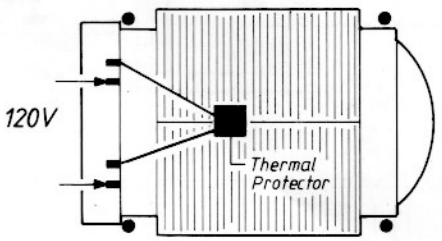
Replace with the same type of 5 amperes 250 volts slow acting fuse.

Connection of Mains Transformer

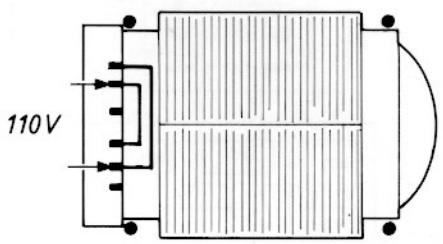


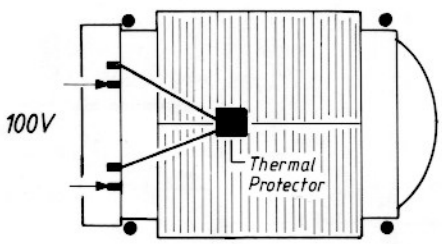






8013363 for type 2343

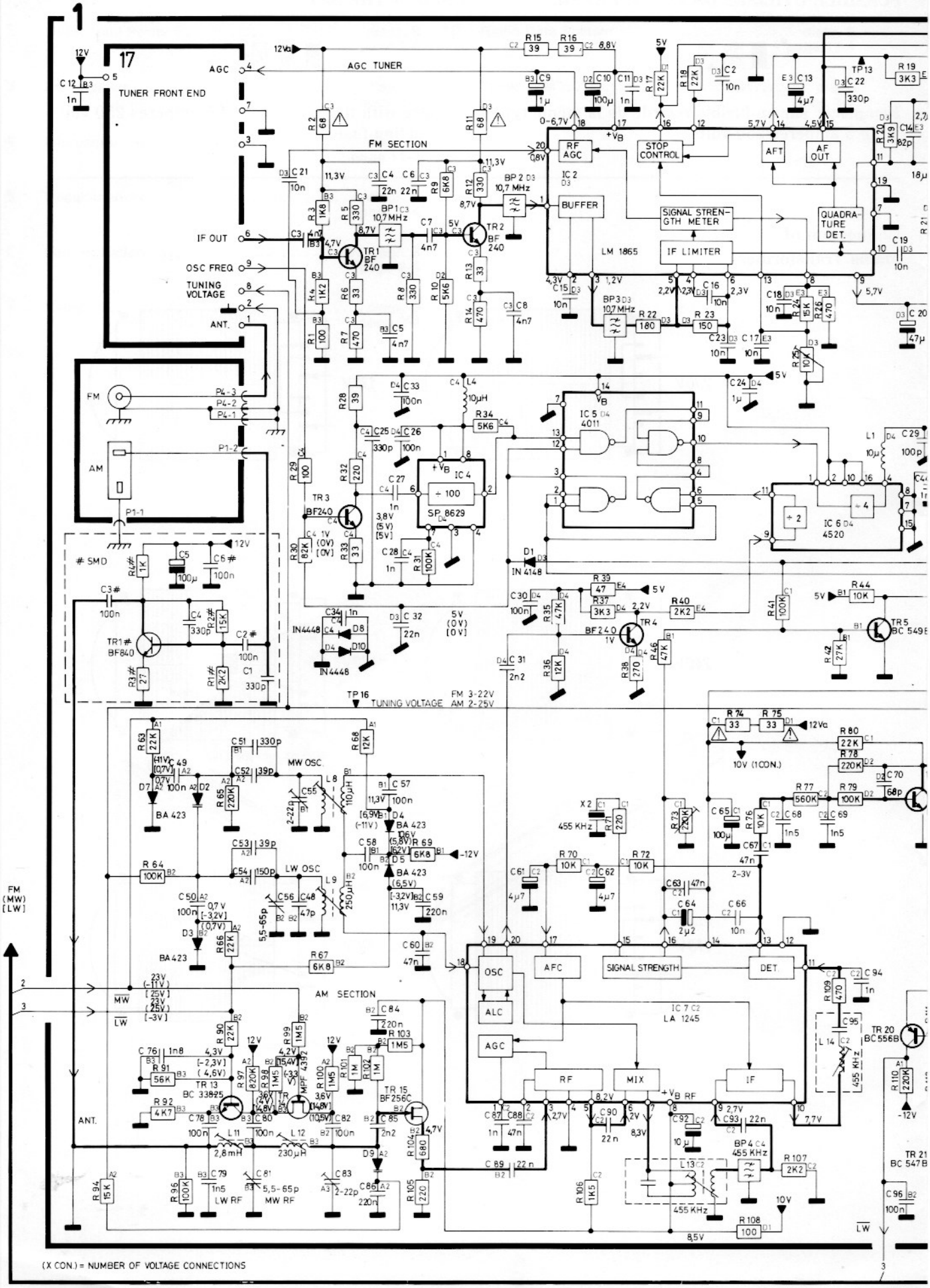




8013364 for type 2344

11-1

DIAGRAM A AM-FM, TUNER, IF, STEREO DECODER (Type 2341, 2342)



Bang&Olufsen

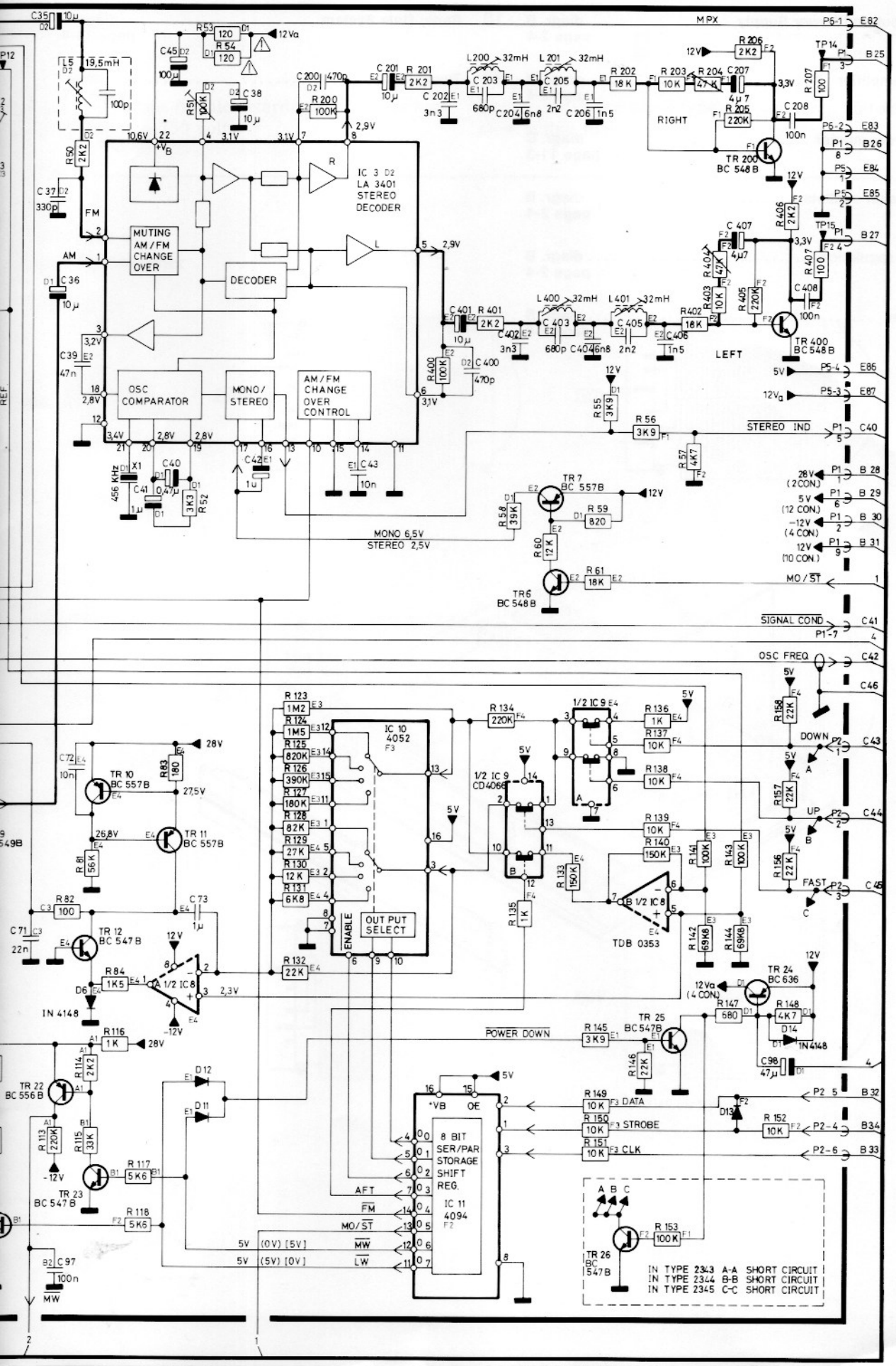
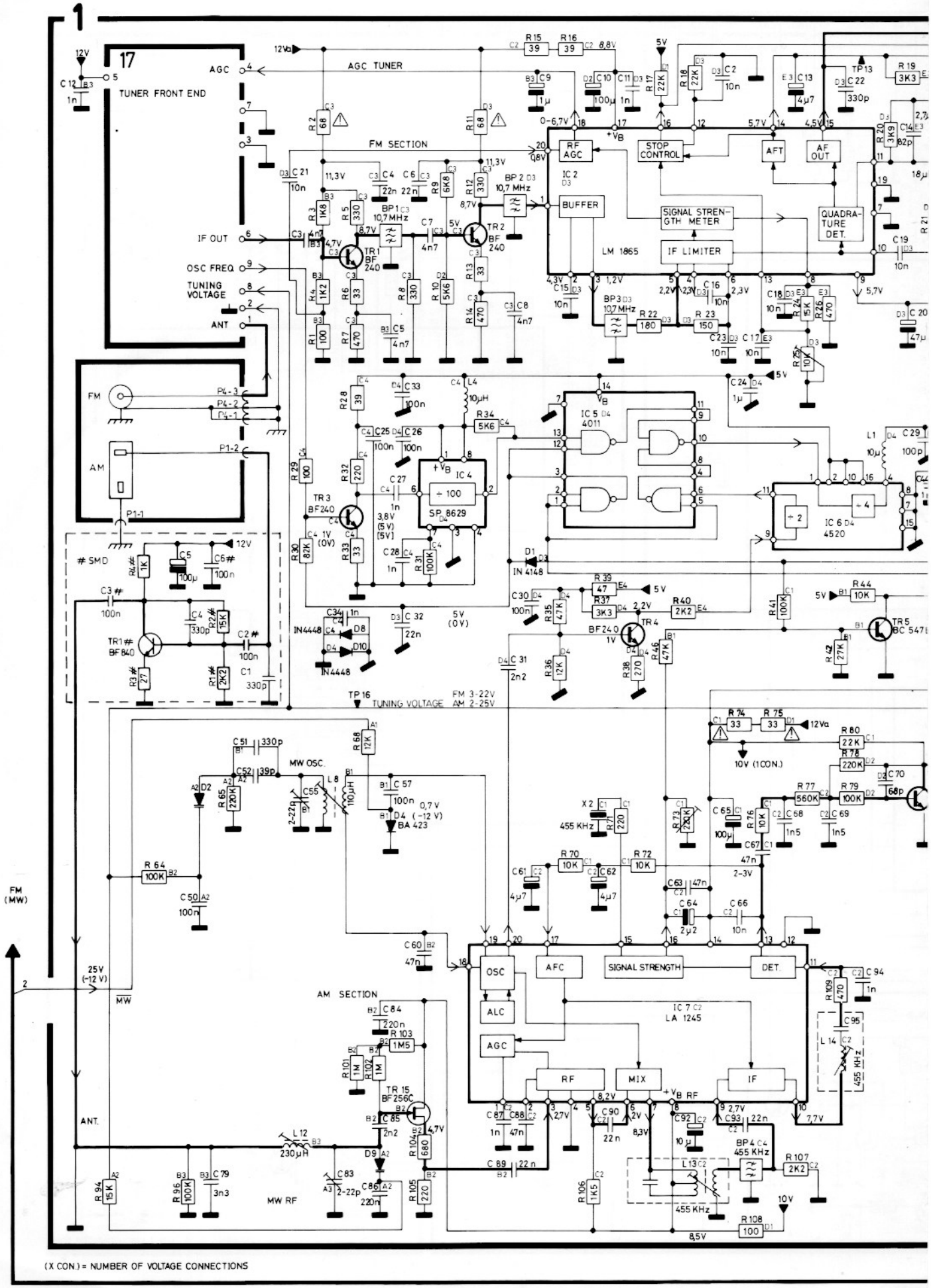
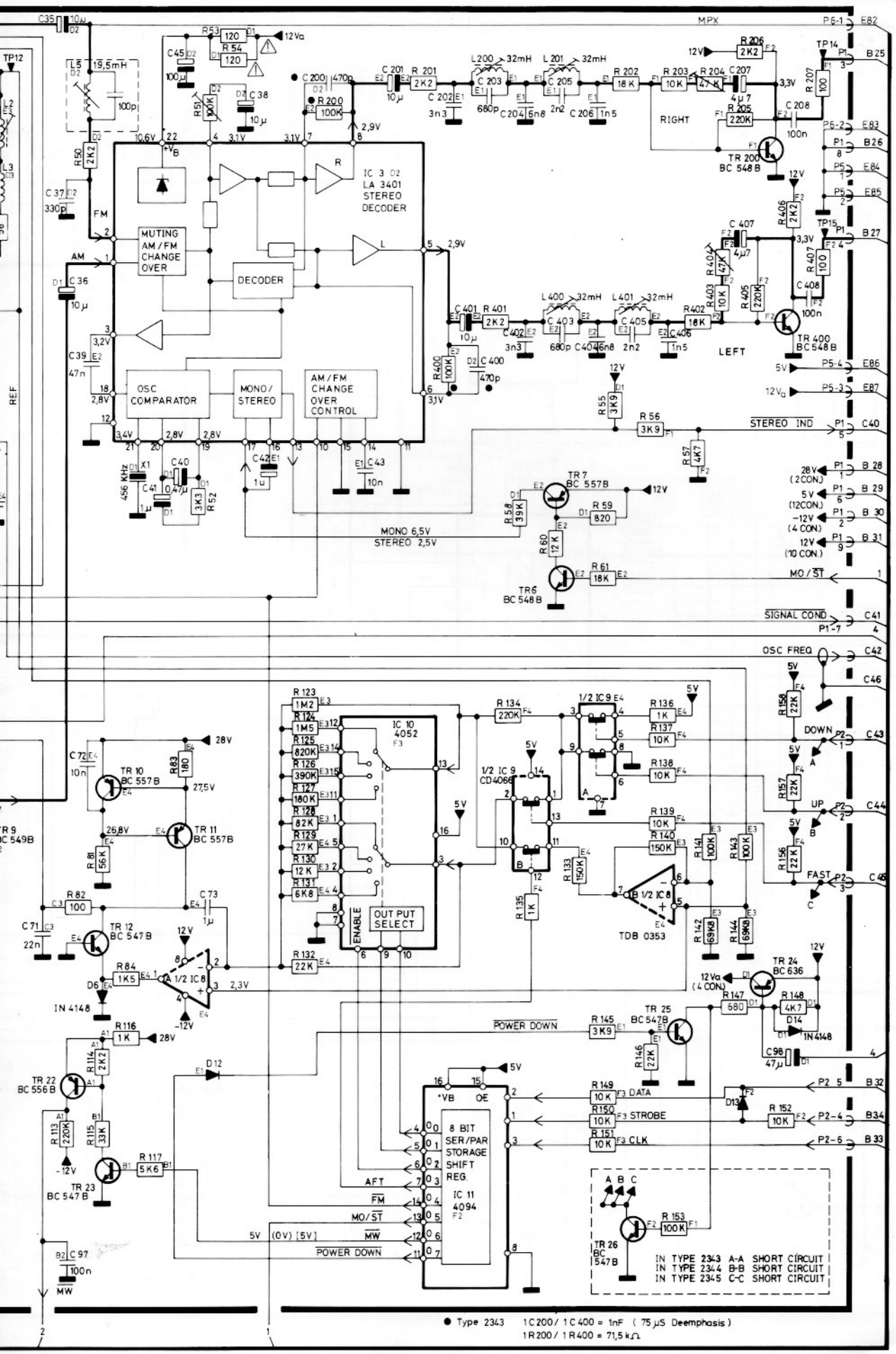


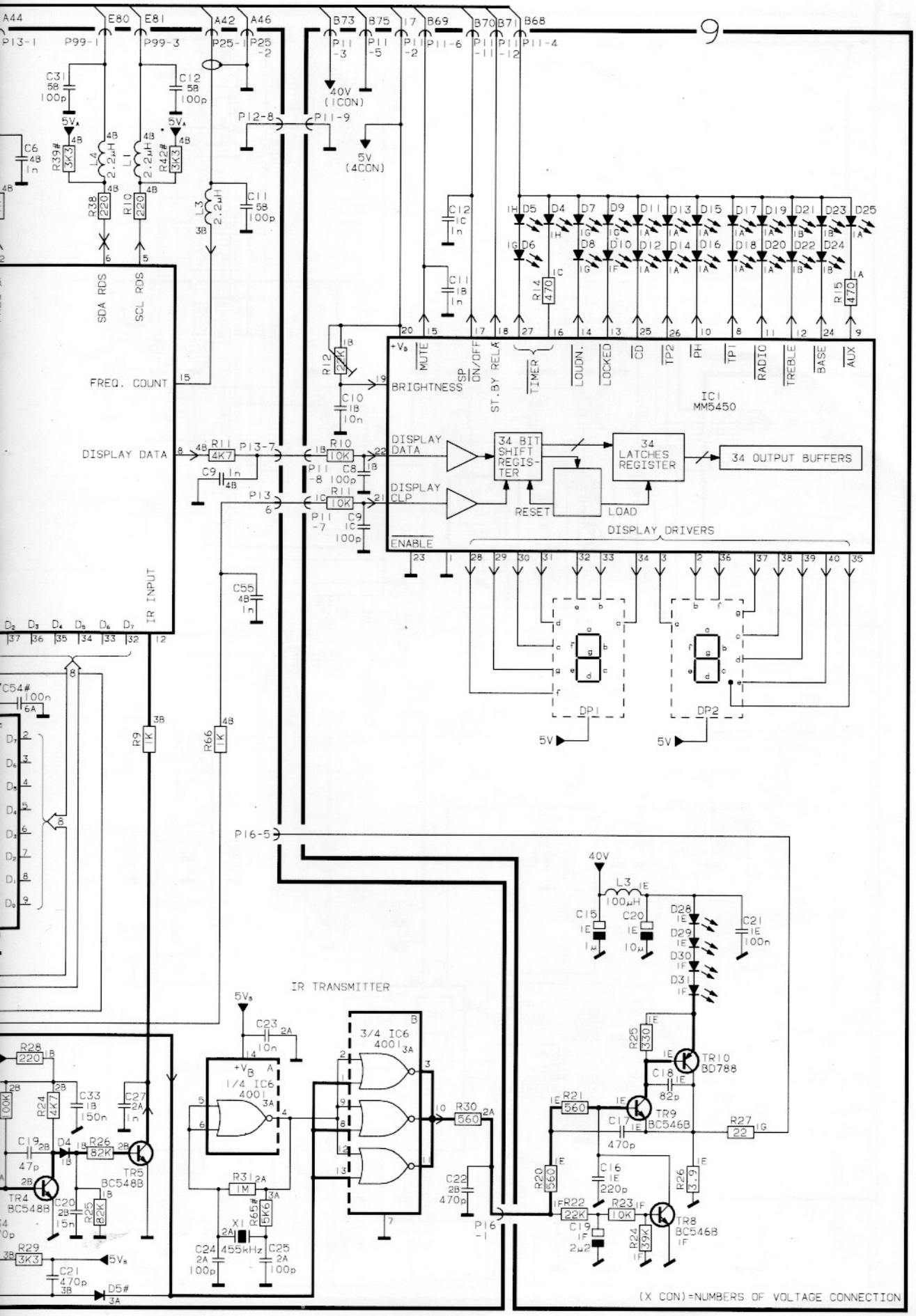
DIAGRAM A AM-FM, TUNER, IF, STEREO DECODER (Type 2343, 2344, 2345)



11-2


IC 3 D2
LA 3401
STEREO
DECODER
MUTING
AM / FM
CHANGE
OVER
DECODER
OSC
COMPARATOR
MONO /
STEREO
AM / FM
CHANGE
OVER
CONTROL
IC 10
4052
1/2 IC 9
CD4066
1/2 IC 8
TDA 0353
8 BIT
SER/PAR
STORAGE
SHIFT
REG.
IC 11
4094
ENABLE
OUT PUT
SELECT
MPX
RIGHT
LEFT
STEREO IND
SIGNAL COND
OSC FREQ
DOWN
UP
FAST
MO / ST
POWER DOWN
DATA
STROBE
CLK
AFT
FM
MW
MONO 6,5V
STEREO 2,5V
IN TYPE 2343 A-A SHORT CIRCUIT
IN TYPE 2344 B-B SHORT CIRCUIT
IN TYPE 2345 C-C SHORT CIRCUIT
● Type 2343 1C200 / 1C400 = 1nF (75 µS Deemphasis)
1R200 / 1R400 = 71,5 kΩ

Bang & Olufsen



11-3

DIAGRAM C MICROCOMPUTER, IR TRANSCEIVER, DISPLAY

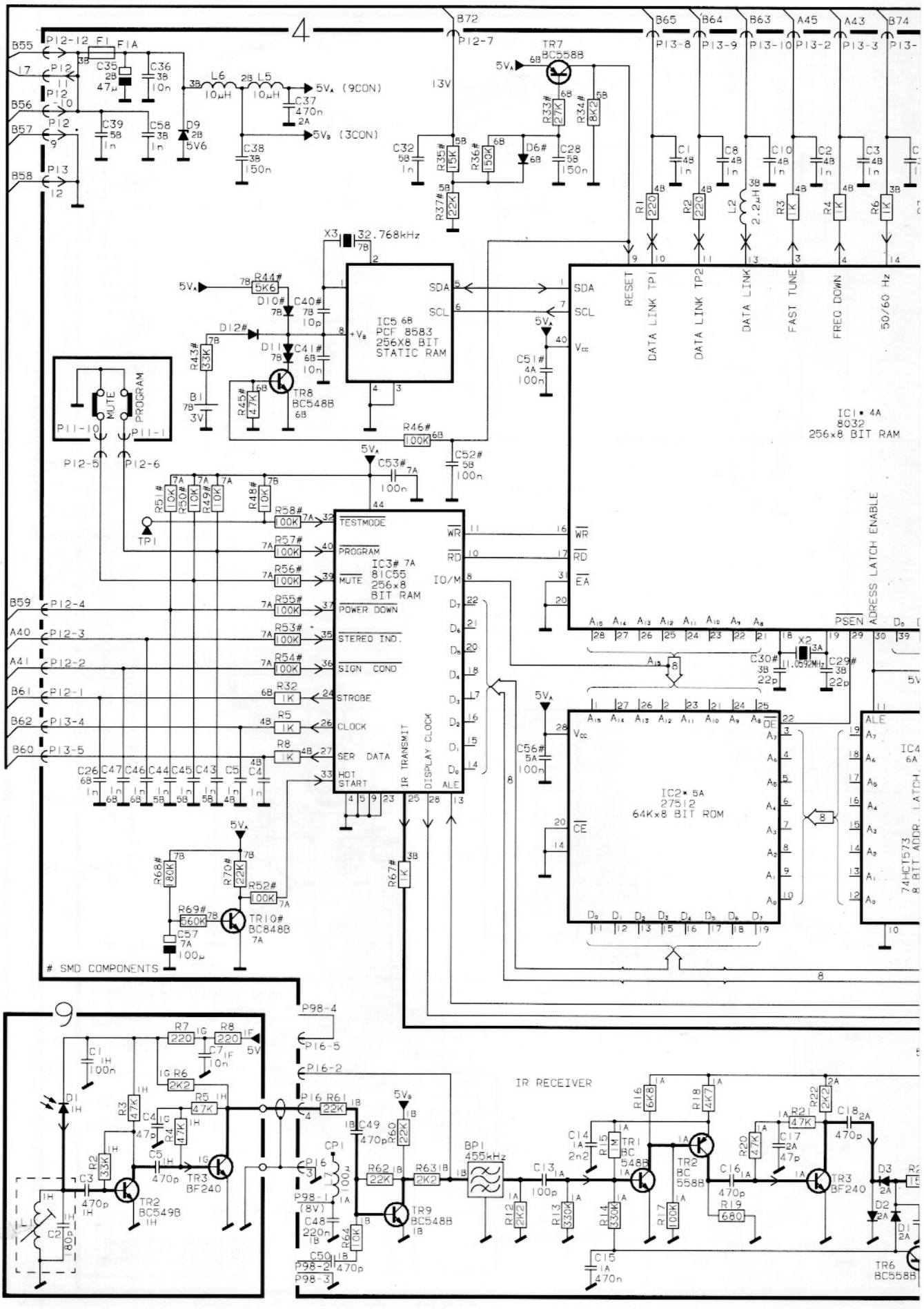
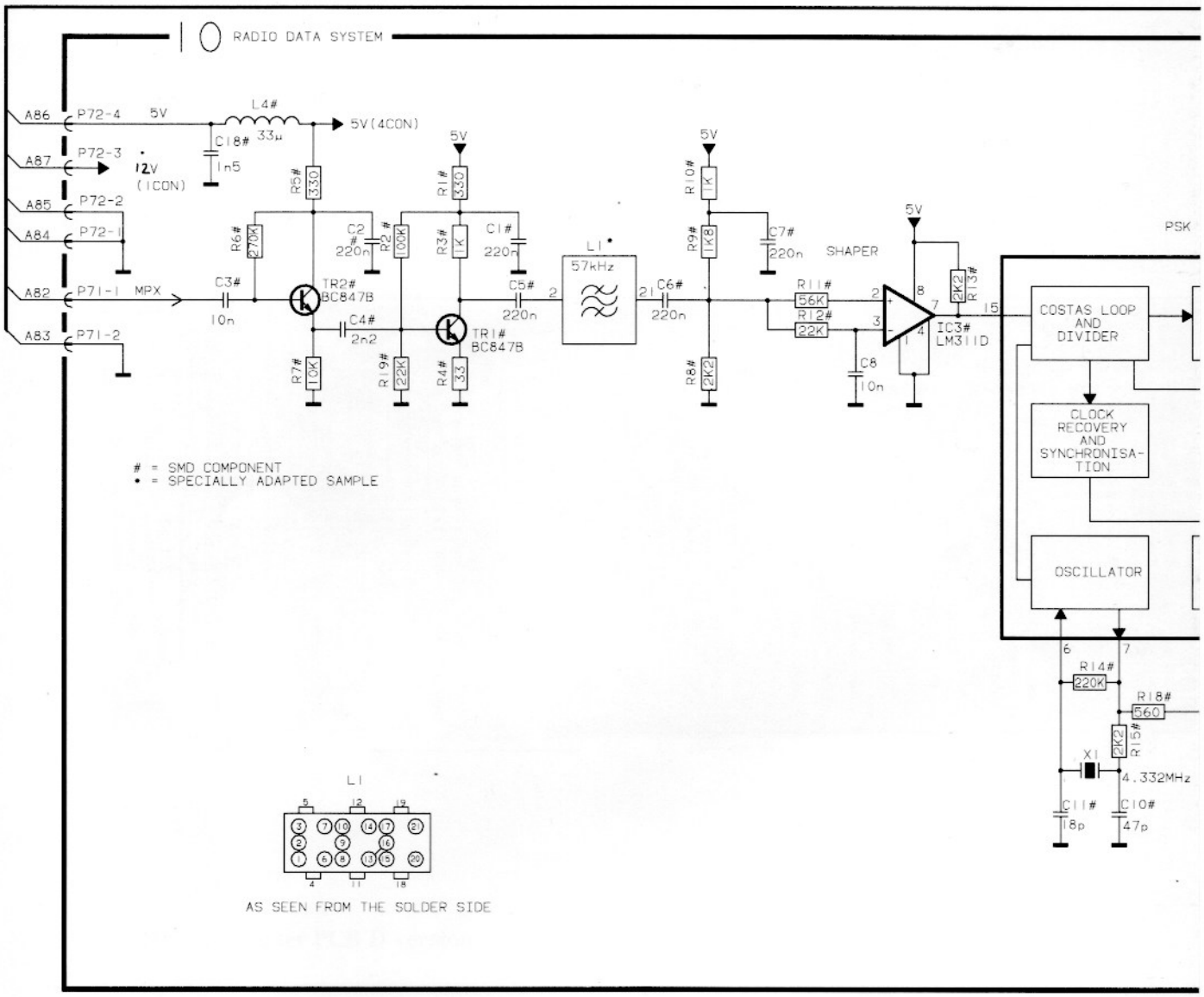


DIAGRAM E RADIO DATA SYSTEM

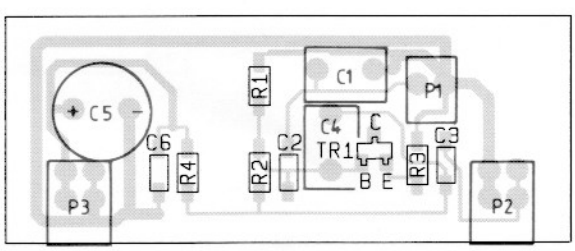


SMD Survey

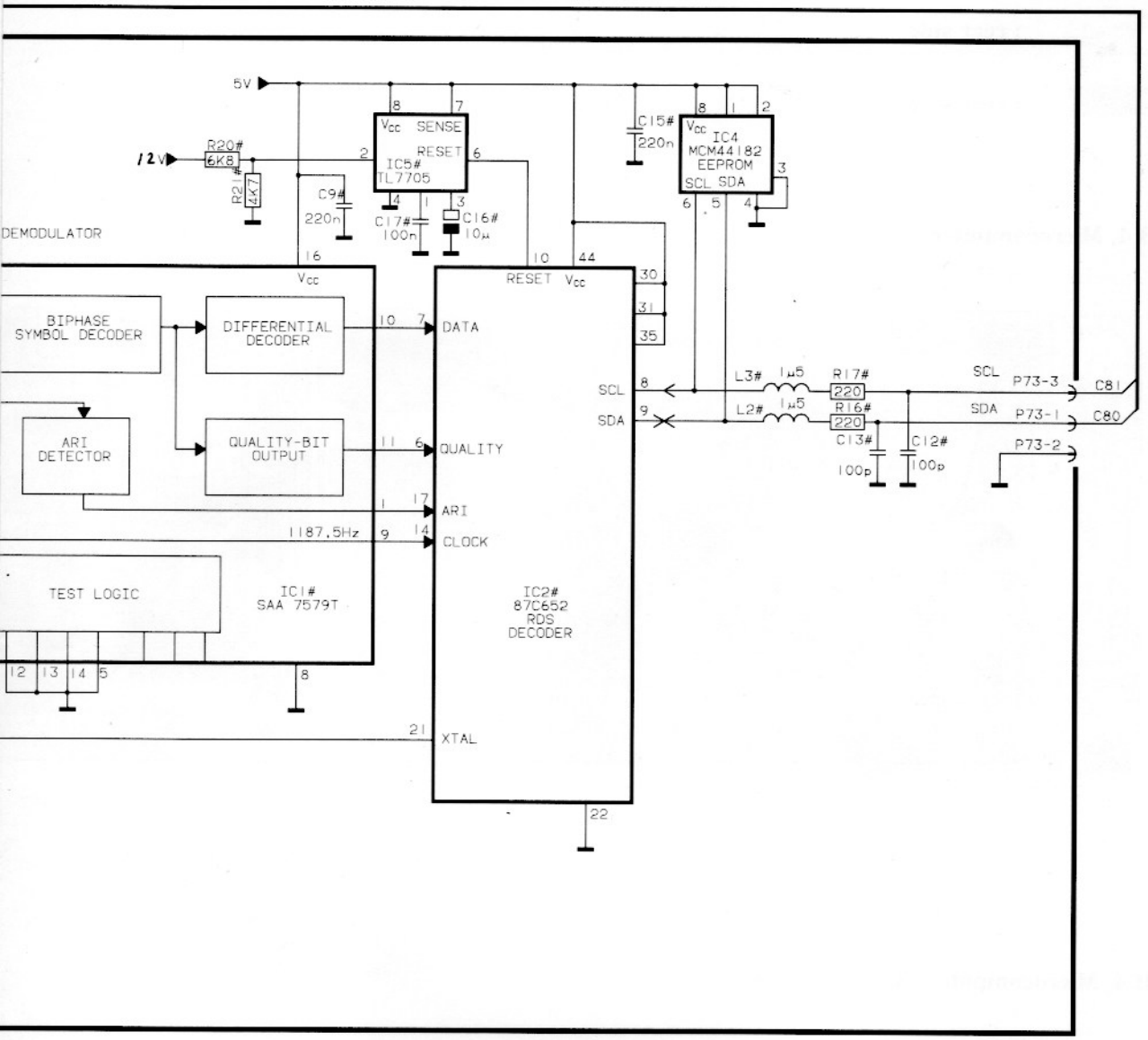
: rear side

: rear side

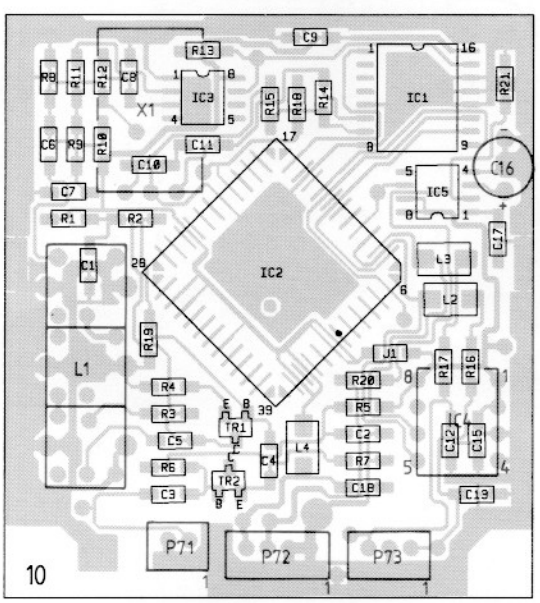
PCB 1, Amp. f. AM loop antenna

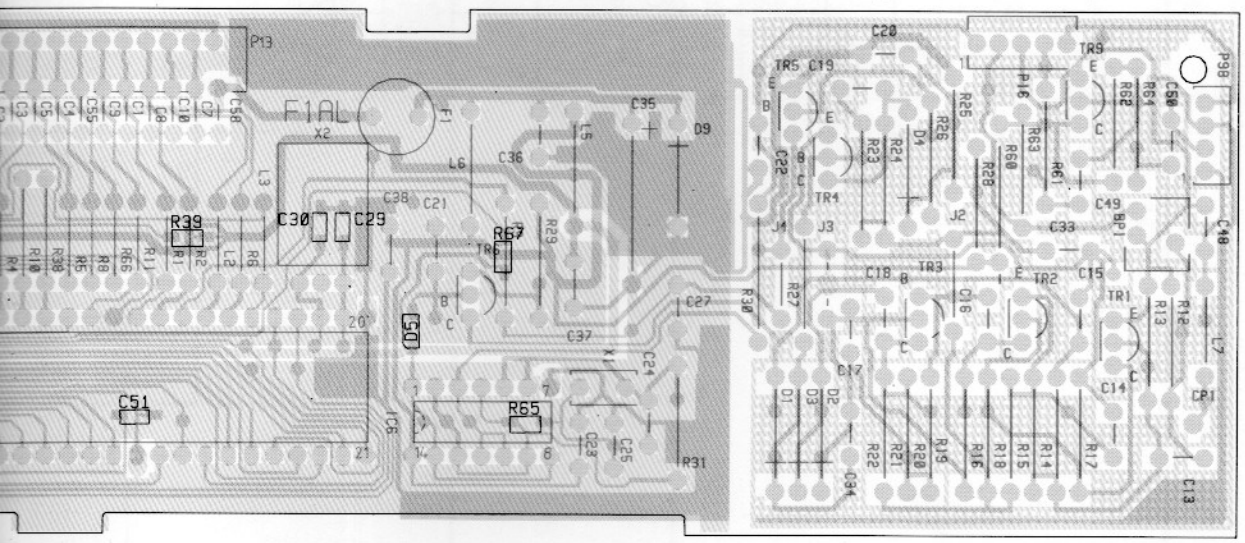


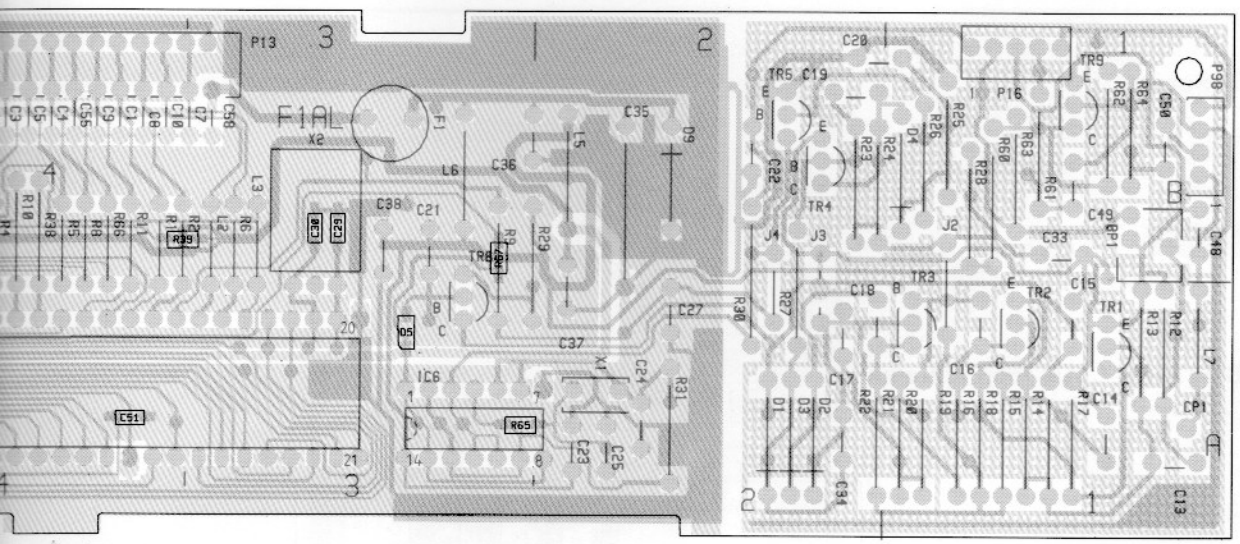
11-4



PCB 10, RDS




P13
F1AL
X2
F1
L5
C35
D9
L6
C36
L3
C38
C21
C30
C29
R39
R67
TR6
R29
C27
R30
C37
X1
C24
C51
IC6
R65
C23
C25
R31
C20
TR5
C19
TR9
P16
R25
R26
D4
R23
R21
C22
TR4
R60
R63
R61
R62
C50
P98
C49
BP1
C33
J4
J3
J2
C18
TR3
TR2
C15
C48
TR1
R13
R12
L7
C16
C17
C14
CP1
D1
D3
D2
R22
R21
R20
R19
R16
R18
R15
R14
R17
C34
C13


P13
F1AL
X2
F1
L5
C35
D9
L6
C36
L3
C38
C21
R29
C27
R30
C37
X1
C24
C51
IC6
R65
C23
C25
R31
C20
TR5
C19
TR9
P16
R25
R26
D4
R23
R21
C22
TR4
R60
R63
R61
R62
C50
P98
C49
BP1
C33
J4
J3
J2
C18
TR3
TR2
C15
C48
TR1
R13
R12
L7
C16
C17
C14
CP1
D1
D3
D2
R22
R21
R20
R19
R16
R18
R15
R14
R17
C34
C13

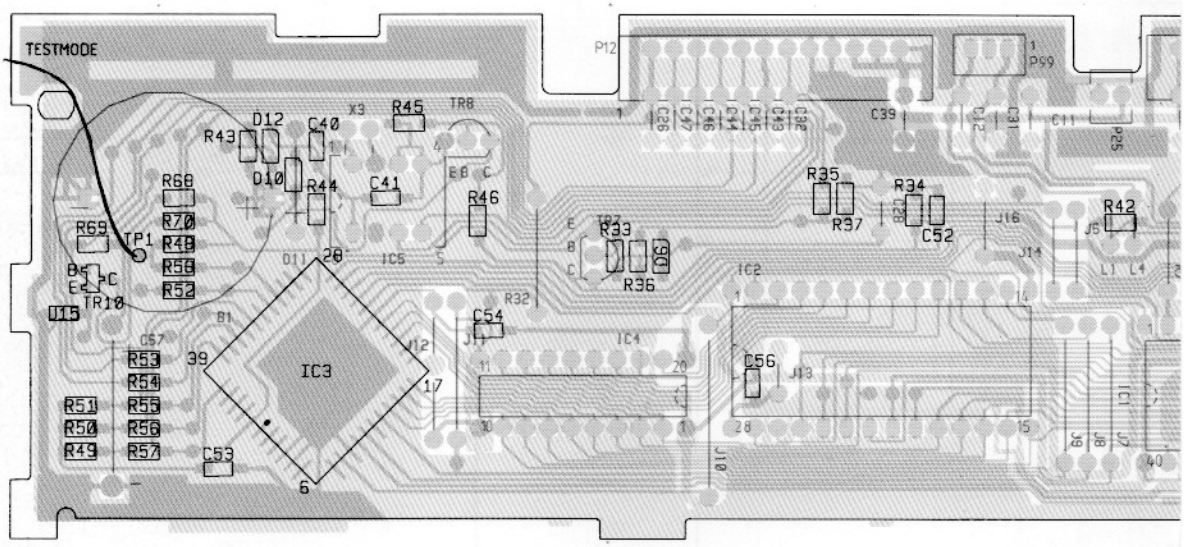
11-5

SMD Survey

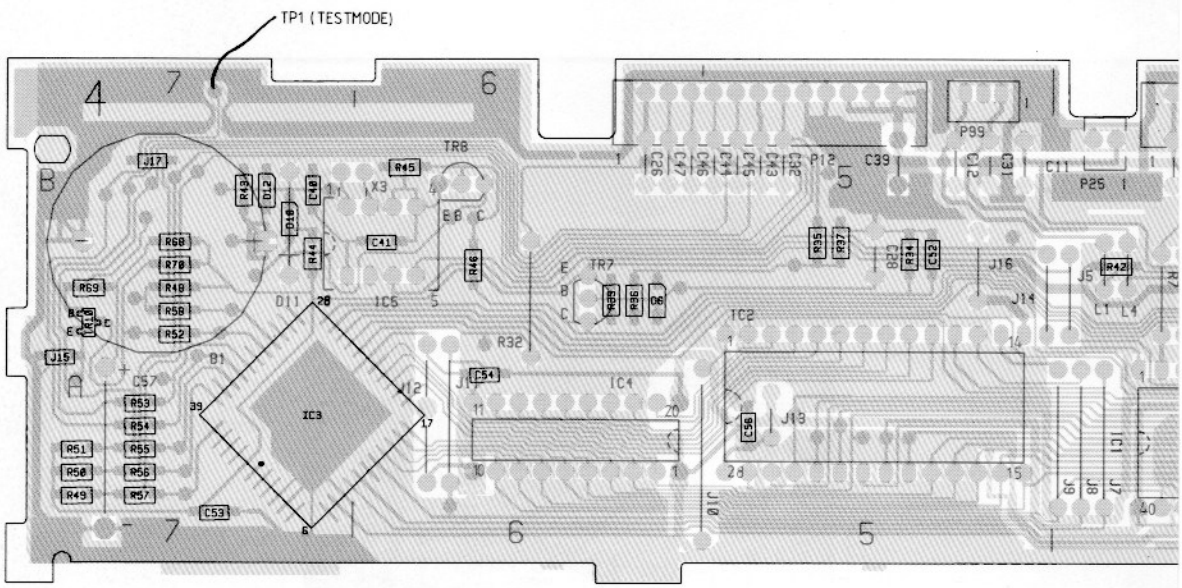
: rear side

: rear side

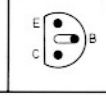
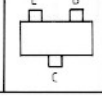
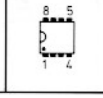
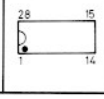
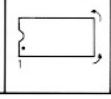
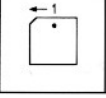
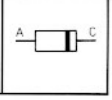
PCB 4, Microcomputer



PCB 4, Microcomputer PCB D version



LIST OF ELECTRICAL PARTS

19	20	51	103	125	136	152	209
							

250							
							

Resistors not referred to are standard, see page 3-8

△ indicates that static electricity may destroy the component.

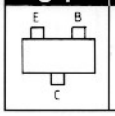
PCB 1,

8001504 RF, type 2341, 2342
8001510 RF, type 2343, 2345
8001513 RF, type 2344
8001499 Amp. f. AM loop antenna, all types

J34	5020449	1.5Ω 10% 0.3W			
C52-C53	4000193	47pF 5% 63V	C73	4130136	1µF 20% 100V
P5	7220711	Plug 4 pole	P6	7220709	Plug 2 pole
	6275679	Wire bundle HF-Prescaler			

PCB 4,8001454
Microcomputer

IC1△	8341069	**136** 8032	IC4△	8340777	**136** 74HCT573
IC2△	8341775	**125** Eprom	IC5△	8341105	**103** PCF8583
	7200056	Socket 28 pole	IC6△	8340373	**136** 4001B
IC3△	8341216	**152** 81C55			
TR1	8320509	**020** BC548B	TR6-TR7	8320510	**020** BC558B
TR2	8320510	**020** BC558B			
TR3	8320625	**019** BF240	TR8	8320509	**020** BC548B
TR4-TR5	8320509	**020** BC548B	TR9	8320108	**020** BC548B
			TR10	8320615	**051** BC848B
D1-D4	8300058	**209** 1N 4148	D9	8300128	**209** Z 5.6V 5% 0.4W
			D10	8300482	**250** 4148
D5-D6	8300482	**250** 4148	D11	8300056	**209** Z 1.5V 10% 0.2W
			D12	8300482	**250** 4148
C1-C10	4010035	1nF 10% 63V	C31	4000438	100pF 5% 63V
			C32	4010035	1nF 10% 63V
C11-C12	4000438	100pF 5% 63V	C33	4130307	150nF 10% 63V
			C34	4010128	470pF 10% 50V
C13	4000204	100pF 5% 63V	C35	4200364	47µF -20+50% 10V
C14	4010103	2.2nF 10% 50V	C36	4010106	10nF -20+80% 40V
C15	4130313	470nF 20% 63V	C37	4130313	470nF 20% 63V
C16	4010128	470pF 10% 50V	C38	4130307	150nF 10% 63V
C17	4000193	47pF 5% 63V	C39	4010035	1nF 10% 63V
C18	4010128	470pF 10% 50V	C40	4000232	10pF ±0.5pF 50V
C19	4000193	47pF 5% 63V	C41	4010157	10nF 10% 50V
C20	4130315	15nF 5% 63V	C43-C47	4010035	1nF 10% 63V
C21-C22	4010128	470pF 10% 50V			
			C48	4130226	220nF 10% 63V
C23	4010106	10nF -20+80% 40V	C49-C50	4010128	470pF 10% 50V
C24-C25	4000204	100pF 5% 63V			
			C51-C54	4010166	100nF -20+80% 50V
C26	4010035	1nF 10% 63V			
C27	4010105	1nF 10% 50V	C55	4010035	1nF 10% 63V
C28	4130307	150nF 10% 63V	C56	4010166	100nF -20+80% 50V
C29-C30	4000261	22pF 5% 50V	C57	4200539	100µF 20% 10V
			C58	4010035	1nF 10% 63V
L1-L4	8020565	Coil 2.2µH	L5-L6	8020342	Coil 10µH
			L7	8020621	Coil 100µH

51	103	138	150	152			
							

Resistors not referred to are standard, see page 3-8

△ indicates that static electricity may destroy the component.

BP1	8030056	Crystal 455kHz ±1kHz			
X1	8030024	Crystal 455kHz ±1kHz	X2	8090078	Crystal 32.768kHz
X2	8090104	Crystal 11.0592MHz			
B1	8700027	Lithium battery (Carry out test function 16 and 7 when replacing (see page 7-6))			
F1	6604009	Fuse 1AF 250V			
P12-P13	7220554	Plug 12 pole	P25	7220176	Plug 2 pole
			P98	7220565	Plug 4 pole
P16	7220585	Plug 5 pole	P99	7220710	Plug 3 pole

PCB 10, 8001523
Radio Data System

IC1△	8341453	**138** SAF7579T	IC4△	8341439	**103** MCM44182
IC2△	8341578	**152** 80C31	IC5△	8341612	**150** TL7705
IC3△	8341600	**150** LM311			
TR1-TR2	8320755	**051** BC847B			

C1-C2	4000287	220nF -20+80% 25V	C10	4000234	47pF 5% 50V
			C11	4000276	18pF 5% 50V
C3	4010157	10nF 10% 50V	C12-C13	4000241	100pF 5% 50V
C4	4010170	2.2nF 10% 50V			
C5-C7	4000287	220nF -20+80% 25V	C15	4000287	220nF -20+80% 25V
			C16	4000826	10µF -20+80% 16V
C8	4010176	10nF -20+80% 50V	C17	4010166	100nF -20+80% 50V
C9	4000287	220nF -20+80% 25V	C18	4000351	1.5nF 5% 50V

All other Electrical Parts are identical with BM 6500, chapter 3.

LIST OF MECHANICAL PARTS
Exp. view see page 4-1
and page 4-2

01 modul	8001504	PCB RF, type 2341, 2342
	8001510	PCB RF, type 2343, 2345
	8001513	PCB RF, type 2344
	8001499	PCB Amp. f. AM loop antenna, all types
04 modul	8001454	Microcomputer
	3302355	Lid
10 modul	8001523	PCB RDS (see drawing on page 10-1)
	3162339	Lid
	6276562	Wire, schielded, 2 pole
	6276563	Wire with 3 pole plug
	6276564	Wire with 4 pole plug
17 modul	8050093	Tuner FM
	8050102	Tuner FM, type 2344
9220	2569021	Rail
	2569022	Rail, white
92T1	8013491	Transformer, type 2341
	8013499	Transformer, type 2342
	8013363	Transformer, type 2343
	8013364	Transformer, type 2344
	8013500	Transformer, type 2345
	6275740	Main wire bundle

Parts not shown

3501267	Users Guide, Beosystem 7000 DK
3501267	Users Guide, Beosystem 7000 DK
3501268	Users Guide, Beosystem 7000 S
3501269	Users Guide, Beosystem 7000 SF
3501270	Users Guide, Beosystem 7000 GB
3501271	Users Guide, Beosystem 7000 D
3501272	Users Guide, Beosystem 7000 NL
3501273	Users Guide, Beosystem 7000 F
3501274	Users Guide, Beosystem 7000 I
3501275	Users Guide, Beosystem 7000 E
3502842	Setting up Guide, Beomaster 7000 DK
3502843	Setting up Guide, Beomaster 7000 S
3502844	Setting up Guide, Beomaster 7000 SF
3502845	Setting up Guide, Beomaster 7000 GB
3502846	Setting up Guide, Beomaster 7000 D
3502847	Setting up Guide, Beomaster 7000 NL
3502848	Setting up Guide, Beomaster 7000 F
3502849	Setting up Guide, Beomaster 7000 I
3502850	Setting up Guide, Beomaster 7000 E
3502851	Setting up Guide, Beomaster 7000 USA
3502852	Setting up Guide, Beomaster 7000 CDN

All other Mechanical Parts are identical with BM 6500, chapter 4.

TESTMODE

Bring Beomaster 7000 i »TESTMODE« på følgende måde:

- Tast RADIO
- Kortslut 4TP1 kortvarigt til stel (Se SMD diagram)

Vælg mellem testprocedurerne side 7-4 ved at sende de tilhørende cifferkomandoer fra en Beolink terminal.

5 ROM/RAM-test (Beomaster 7000)

Testfunktion 5 tester ROM (4IC2), intern RAM (4IC1), extern RAM (4IC3) og NV-RAM (4IC5). I NV-RAM testes tillige om hardware-uret er korrekt initialiseret.

- Sæt Beomasteren i »TESTMODE«
- Tryk [5]

Display: X,Y = Efter ca. 4 sek. vises en talværdi som viser resultatet af testen (alt OK = 3.7):

TESTMODE

Bring the Beomaster 7000 into »TESTMODE« in the following way:

- Press RADIO
- Short-circuit 4TP1 (briefly) (See SMD components)

It is now possible to choose among the test procedures mentioned on page 7-4 by transmitting the relevant digital commands from a Beolink terminal.

5 ROM/RAM test (Beomaster 7000)

Test function 5 tests the ROM (4IC2), the internal RAM (4IC1), the external RAM (4IC3) and the NV-RAM (4IC5). In NV-RAM the correct initialization of the hardware-clock is also tested.

- Bring the Beomaster 7000 into »TESTMODE«.
- Press [5]

Display: X,Y = After about 4 sec. a numerical value is displayed (3.7 = everything OK) that indicates the result of the test:

X	Y	NV-RAM	NV-RAM watch	ROM	int. RAM	ext. RAM
3		OK	OK			
2		OK	not initialized			
1		error	OK			
0		error	not initialized			
	7			OK	OK	OK
	6			OK	OK	error
	5			OK	error	OK
	4			OK	error	error
	3			error	OK	OK
	2			error	OK	error
	1			error	error	OK
	0			error	error	error

Udfør testfunktion 16 og 7 i nævnte rækkefølge ved udskiftning af NV-RAM (4IC5).

Carry out test functions 16 and 7 in this sequence when replacing the NV-RAM (4IC5)

TESTMODE

Den Beomaster 7000 folgendermaßen in die Betriebsart »TESTMODE« bringen:

- RADIO tasten
- 4TP1 (kurzzeitig) kurzschließen (Seite 11-5)

Durch Eingabe der den jeweiligen Testfunktionen zugeordneten Ziffernbefehle an einer Beolink Fernbedienung kann jetzt zwischen den auf Seite 7-4 erwähnten Testverfahren gewählt werden.

5 ROM/RAM-Test (Beomaster 7000)

Testfunktion 5 testet das ROM (4IC2), das interne RAM (4IC1), das externe RAM (4IC3) und das NV-RAM (4IC5). Im NV-RAM wird zugleich getestet, ob die Hardware-Zeituhr korrekt initialisiert worden ist.

- Den Beomaster in die Betriebsart »TESTMODE« bringen
- Danach 5 tasten

Display: X,Y = Nach ca. 4 Sekunden wird ein Wert angezeigt (3.7 = OK) welcher das Testergebnis angibt:

MODE D'ESSAI

Amener le Beomaster 7000 en mode »TESTMODE« en procédant comme suit:

- Appuyer sur RADIO
- Court-circuiter brièvement 4TP1 à la masse (page 11-5)

Sélectionner une procédure d'essai (page 7-4) en envoyant depuis un terminal Beolink les numéros de commandement correspondants.

Essai 5 ROM/RAM (Beomaster 7000)

La fonction d'essai 5 contrôle la ROM (4IC2), la RAM interne (4IC1), la RAM externe (4IC3) et la RAM rémanente (4IC5). Le contrôle de la RAM rémanente associe également une vérification de l'initialisation de l'horloge appariée au matériel.

- Amener le Beomaster en mode »TESTMODE«.
- Appuyer sur 5

Affichage: X,Y = un chiffre apparait au bout de 4 secondes environ. Il visualise le résultat de l'essai (OK = 3.7):

X	Y	NV-RAM	NV-RAM watch	ROM	int. RAM	ext. RAM
3		OK	OK			
2		OK	not initialized			
1		error	OK			
0		error	not initialized			
	7			OK	OK	OK
	6			OK	OK	error
	5			OK	error	OK
	4			OK	error	error
	3			error	OK	OK
	2			error	OK	error
	1			error	error	OK
	0			error	error	error

Beim Austauschen des NV-RAM's (4IC5) sind die Testfunktionen 16 und 7 in der genannten Reihenfolge durchzuführen.

Lors du remplacement de la RAM rémanente (4IC5), effectuer les essais 16 et 7 dans l'ordre indiqué.

Bang&Olufsen

Corrections for Beomaster 6500

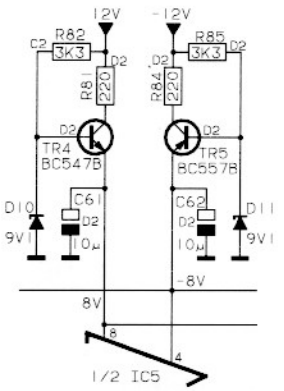
DIAGRAMS

Page 2-4:

2R18 must be 5020881 22Ω 5% 1/4W

An kondensator part no. 4200510 10µ 20% 16V has been added to the collector on 2TR16.

3R81 and 3R84 5010092 220Ω 5% 1/4W has been added:



7TR2 BC338 is an NPN transistor. Emitter to the ground.

Page 2-5:

Connection to pin 7 (TEST) on 4IC2 is deleted.

The value of 4X1 is 11.0592MHz

Part no. on 4IC1* must be 8341069

Part no. on 4IC4* must be 8341309

Part no. on PCB 9 must be 8001284

List of Electrical Parts
page 3-3

2C6, 2C7 must be 4200530 10000µF 20% 50V

2RL6 is named wrong. 2RL1 is correct

List of Mechanical Parts
page 4-3

12 Modul part no. must be 8002821

9504	2804055 Wheel
9510	2854128 Arm
9511	2576050 Spacer

Accessories
page 4-4

8087016 IR-sensor kit