Service
Service
Service

Service Manual

TABLE OF CONTENTS

COMPACT disc DIGITAL AUDIO ReWritable

COMPACT disc DIGITAL AUDIO Recordable

COMPACT disc DIGITAL AUDIO

CLASS 1 LASER PRODUCT

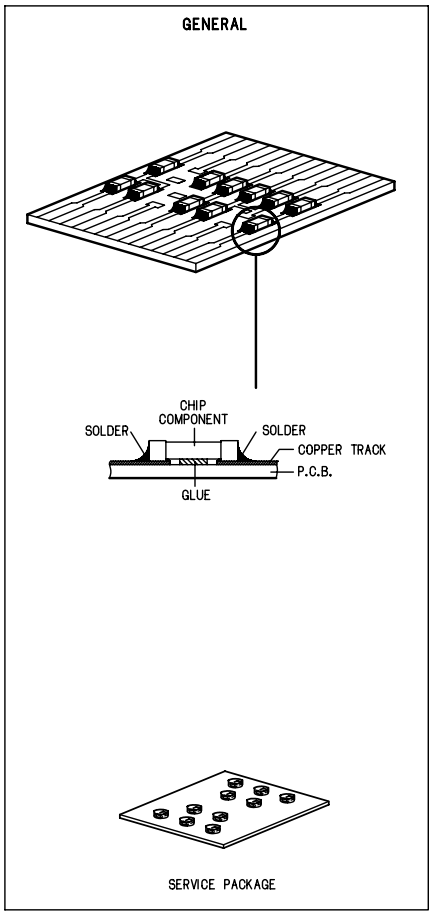
Published by YM 0519 Service Audio Printed in The Netherlands Subject to modification

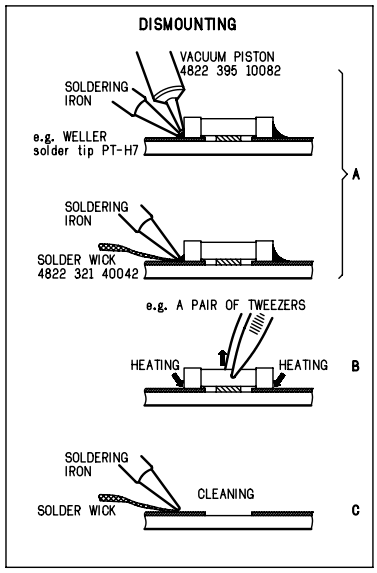
GB 3141 785 30321

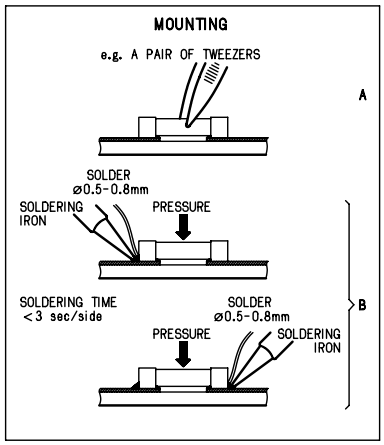
Version 1.1

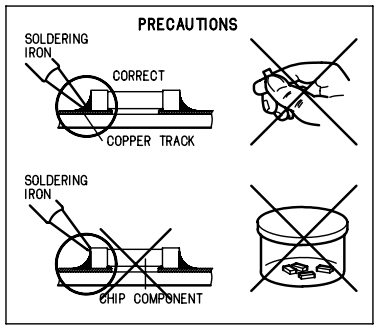
PHILIPS

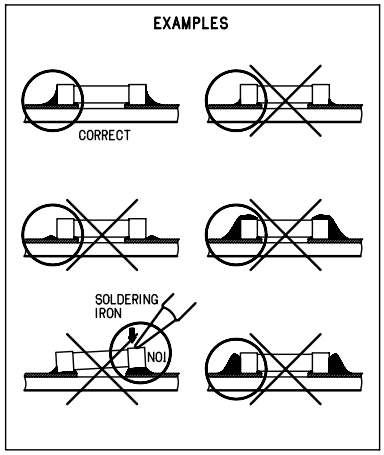
HANDLING CHIP COMPONENTS











GB WARNING
All ICs and many other semiconductors 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 wristband with resistance. Keep components and tools at this potential.

ESD

NL WAARSCHUWING
Alle IC´s en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen vermindern. 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.

F ATTENTION
Tous les IC et beaucoup d´autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévite pourrait être considérablement écourtée par le fait qu´aucune précaution nést prise à leur manipulation.
Lors de réparations, s´assurer de bien être relié au même potentiel que la masse de l´appareil et enfileer 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.

D WARNUNG
Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.
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.

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 riparationi occorre quindi essere collegato allo stesso potenziale che quello della massa delápparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

SAFETY

GB
Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.
Safety components are marked by the symbol ⚠

NL
Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkeliijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.
De Veiligheidsonderdelen zijn aangeduid met het symbool ⚠

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.
Les composants de sécurité sont marqués ⚠

D
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Originalersatzteile zu verwenden.
Sicherheitsbauteile sind durch das Symbol ⚠ markiert.

I
Le norme di sicurezza estigono che l´apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.
Componenty di sicurezza sono marcati con ⚠

CLASS 1
LASER PRODUCT

GB **DANGER**: Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

S Varning !
Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

NL Advarsel !
Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

Varoitus !
Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen !

GB
After servicing and before returning the set to customer perform a leakage current measurement test from all exposed metal parts to earth ground, to assure no shock hazard exists.
The leakage current must not exceed 0.5mA.

F
"Pour votre sécurite, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

TECHNICAL SPECIFICATIONS

GENERAL

Mains voltage	-/21/77	:	110 - 127 / 220 - 240V
	-/22/25	:	230V ± 10%
	-/37	:	120V ± 10%
Mains frequency	-/21/77	:	50 / 60 Hz Switchable
	-/22/25	:	50 Hz
	-/37	:	60 Hz
Battery	remote	:	3 V (R6 x 2)
Power consumption	normal	:	15 W
	Standby	:	< 3 W
Dimension (W x H x D)		:	156 x 222 x 216 mm
Weight (without speakers)		:	2.95 Kg

AMPLIFIER

Output power	mains	:	2 x 2.5 W RMS
Speaker impedance		:	2 x 4 ohm
Frequency response within ±3dB		:	60 Hz - 16 kHz
Dynamic Bass Boost		:	DBB1, DBB2, Off
Headphone output at 32 Ω		:	15mW ± 2dB (Max Vol.)

TUNER - FM SECTION

Tuning range		:	87.5 - 108 MHz
IF frequency		:	10.7 MHz ± 0.02 MHz
Sensitivity		:	< 22 dBf at 26dB S/N
Selectivity	300kHz	:	40 dB
IF rejection		:	65 dB
Image rejection		:	> 20 dB
Distortion at RF1mV, Dev. 75kHz		:	< 3 %
-3 dB Limiting Point		:	< 23.5 µV
Crosstalk at RF1mV, Dev. 40kHz		:	> 26 dB

TUNER - AM SECTION

Tuning range	MW	-/22/25	:	531 - 1602 kHz
		-/37	:	530 - 1700 kHz
Grid		-/22/25	:	9kHz
		-/21/77	:	9kHz/10kHz
		-/37	:	10kHz
IF frequency			:	450 kHz ± 1 kHz
Sensitivity			:	18 dB S9 / 300kHz
IF rejection			:	> 24 dB
Distortion at RF=50mV, M=80%			:	< 5%
Image rejection ratio			:	> 20 dB

AUDIO CASSETTE RECORDER

Frequency response	Normal	:	80 - 10000 Hz (8dB)
Wow & flutter		:	0.48 % JIS
Tape speed		:	4.76 cm/s ± 3 %
Fast wind/Rewind C60		:	< 130 s
Bias system		:	73 kHz ± 10
Channel separation	1kHz	:	> 18 dB
Channel difference at overall		:	4 dB
S/N ratio (unw.)	Ferro	:	36 dB

DISC PLAYER

Frequency response		:	63Hz - 14kHz < ±3dB
S/N ratio (A-wght.)		:	> 62 dBA
Total harmonic distortion		:	< 1.5 %
Outband attentuation		:	> 35 dB for Freq > 40kHz
Emphasis		:	15/50 µS
Channel separation	1 kHz	:	35 dB
Channel unbalance		:	< ± 2 dB

SERVICE TOOLS

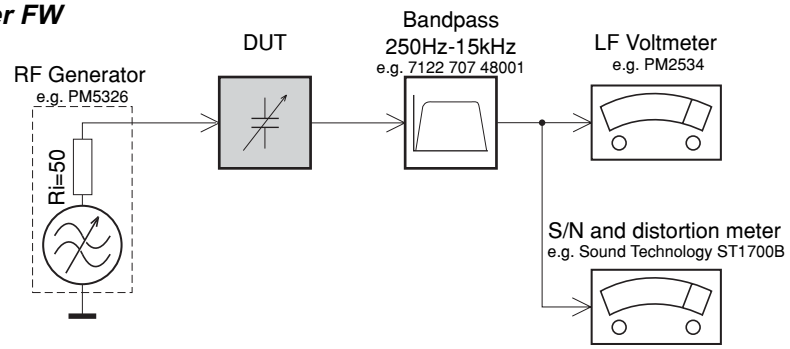
TORX T10 screwdriver with shaftlength 150mm.....4822 395 50423
TORX screwdriver set SBC 163.....4822 295 50145
Audio signal disc SBC 429.....4822 397 30184
Playability test disc SBC 444.....4822 397 30245
Test disc 5 (disc without errors) +
Test disc 5A (disc with dropout errors, black spots and fingerprints)
SBC 426/426A.....4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30 dB level without "pause") 4822 397 30155
Universal test cassette Fe SBC 420 .....4822 397 30071

AVAILABLE ESD PROTECTION EQUIPMENT

anti-static table mat	large 1200x650x1.25mm	4822 466 10953
	small 600x650x1.25mm	4822 466 10958
anti-static wristband		4822 395 10223
connection box (3 press stud connections, 1MΩ)		4822 320 11307
extendible cable (2m, 2MΩ, to connect wristband to connection box)		4822 320 11305
connecting cable (3m, 2MΩ, to connect table mat to connection box)		4822 320 11306
earth cable (1MΩ, to connect any product to mat or to connection box)		4822 320 11308
KIT ESD3 (combining all 6 prior products - small table mat)		4822 310 10671
wristband tester		4822 344 13999

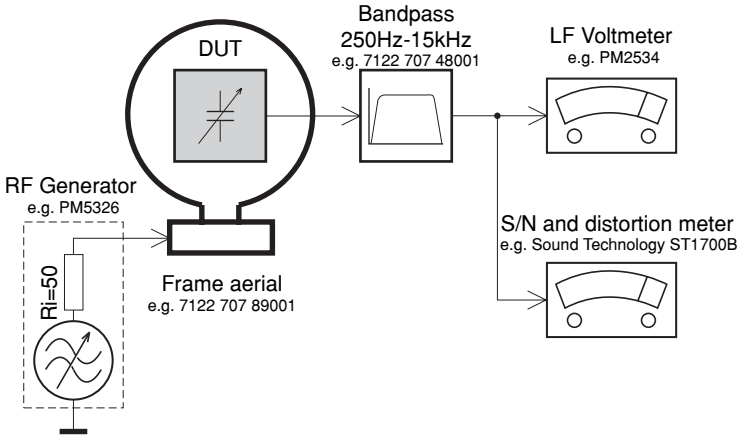
SERVICE MEASUREMENT

Tuner FW



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilottone (19kHz, 38kHz).

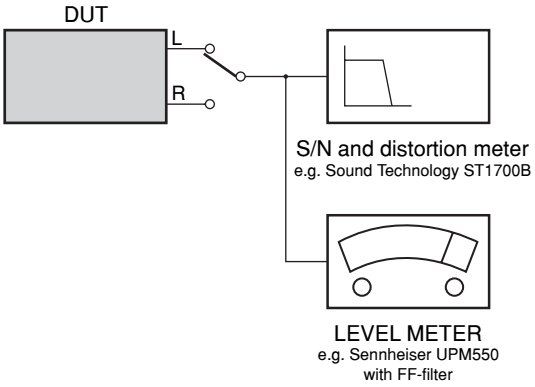
Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday«s cage.
Use a bandpass filter (or at least a high pass filter with 250kHz) to eliminate hum (50Hz, 100Hz).

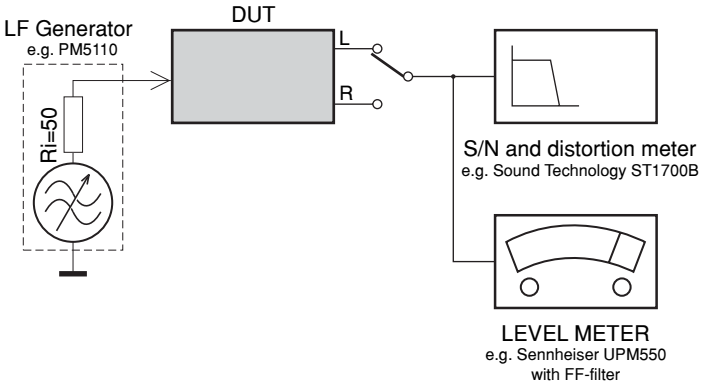
CD

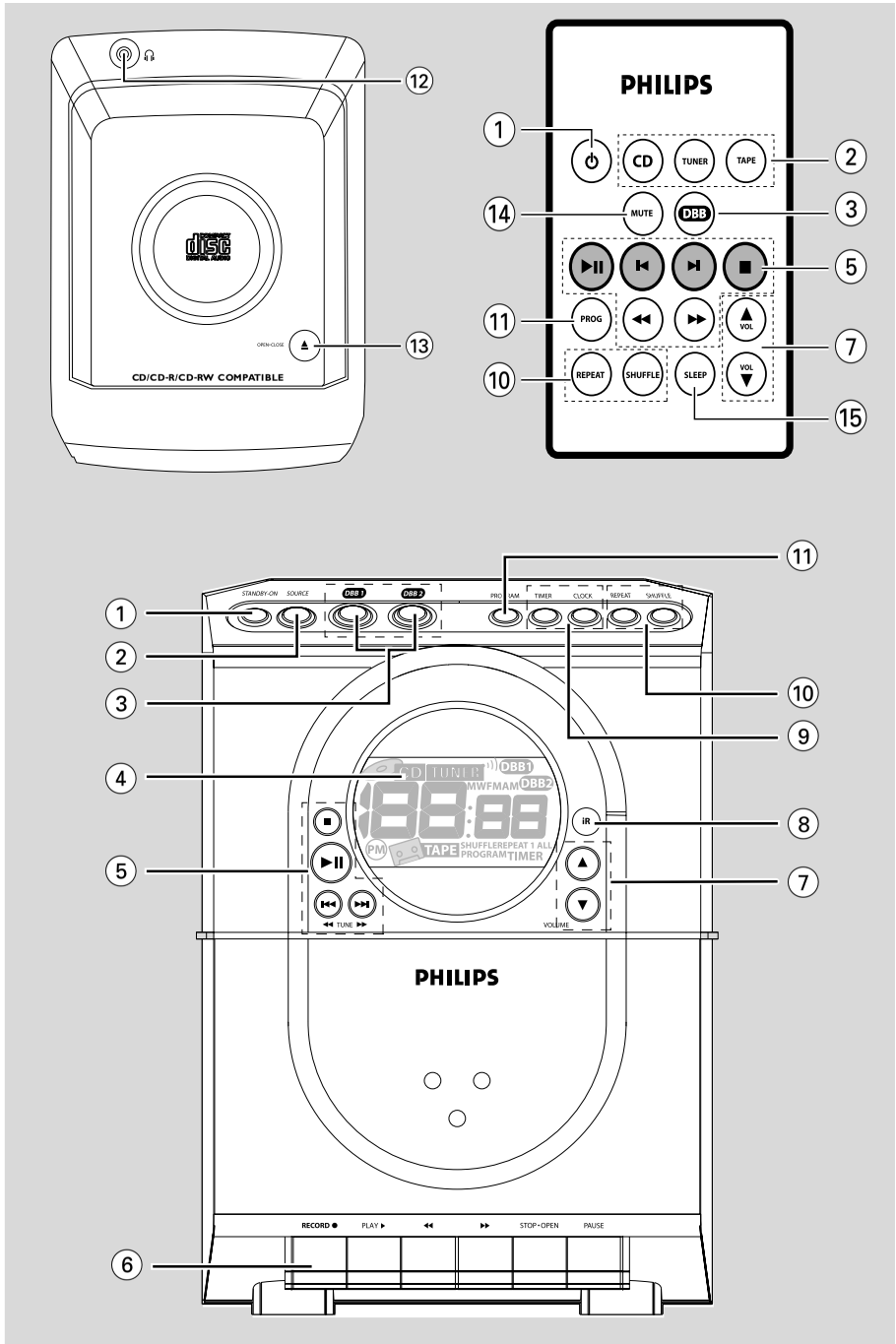
Use Audio Signal Disc SBC429 4822 397 30184
(replaces test disc 3)



RECORDER

Use Universal Test Cassette Fe SBC420 4822 397 30071





Controls

Controls on the system and remote control

① **STANDBY-ON / ⏻**
– switches the system to standby/on.

② **SOURCE (CD/ TUNER/ TAPE)**
– switches on the system.
– selects the respective sound source for CD/ FM/ AM/ TAPE.

③ **DBB1 / DBB2 (DBB)**
– (Dynamic Bass Boost) enhances the bass.

④ **Display**
– shows the status of the system.

⑤ **Mode Selection**
STOP ■
for CD ..... stops CD playback or erase a CD program.
PLAY•PAUSE ▶II
for CD ..... starts or pauses CD playback.
⏮ / ⏭ / ◀◀ TUNE ▶▶ (⏮ / ⏭)
for CD ..... skips to the beginning of a current track/previous/ next track.
fast searches back and forward within a track/CD.
for Tuner ..... tunes to radio stations.
..... selects a preset radio station.

⑥ **Tape Deck Operation**
RECORD ● ..... starts recording.
PLAY ▶ ..... starts playback.
◀◀ / ▶▶ ..... fast rewinds/forwards the tape.
STOP•OPEN ... stops the tape; opens the tape compartment.
PAUSE ..... pauses recording or playback.

⑦ **VOLUME ▲ / ▼ (VOL ▲ / ▼)**
– adjusts volume level.
– adjusts the hours and minutes for clock/ timer functions.

⑧ **iR SENSOR**
– infrared sensor for remote control.

⑨ **TIMER / CLOCK**
– activates/deactivates or sets the timer function.
– sets the clock function.
– views the clock time.

⑩ **REPEAT / SHUFFLE**
– repeats a track/CD program/ entire CD.
– plays CD tracks in random order.

⑪ **PROGRAM (PROG)**
for CD ..... programs tracks and reviews the program.
for Tuner ..... programs tuner stations manually or automatically.

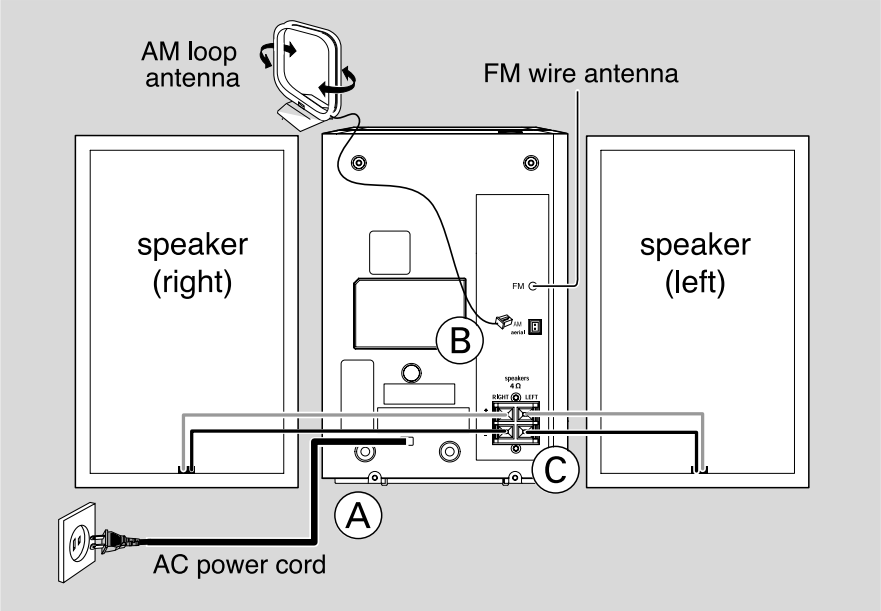
⑫ 🎧
– connect headphones.

⑬ **OPEN•CLOSE**
– opens/closes the CD door.

⑭ **MUTE**
– switches playback sound off and on.

⑮ **SLEEP**
– activates/deactivates or selects the sleeper time.

Notes for remote control:
– First select the source you wish to control by pressing one of the source select keys on the remote control (for example CD,TUNER).
– Then select the desired function (for example ▶ , ⏮ , ⏭).



Rear connections

The type plate is located at the rear of the system.
For users in the U.K.: please follow the instructions on page 2.

Ⓐ **Power**

Before connecting the AC power cord to the wall outlet, ensure that all other connections have been made.

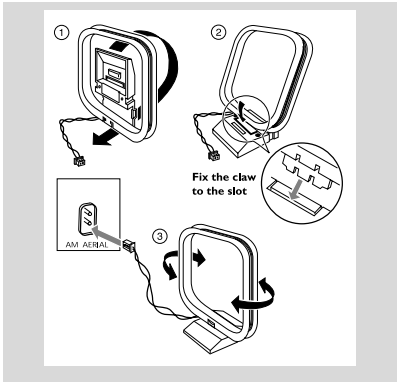
WARNING!
– For optimal performance, use only the original power cable.
– Never make or change any connections with the power switched on.

To avoid overheating of the system, a safety circuit has been built in. Therefore, your system may switch to Standby mode automatically under extreme conditions. If this happens, let the system cool down before reusing it *(not available for all versions)*.

Ⓑ **Antennas Connection**

Connect the supplied AM loop antenna and FM antenna to the respective terminals. Adjust the position of the antenna for optimal reception.

AM Antenna



Position the antenna as far as possible from a TV, VCR or other radiation source.

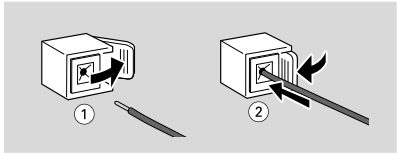
FM Antenna

Extend coil antenna at the back of the unit fully for optimum reception.

Ⓒ **Speakers Connection**

Front Speakers

Connect the speaker wires to the SPEAKERS terminals, right speaker to "**RIGHT**" and left speaker to "**LEFT**", coloured (marked) wire to "+ " and black (unmarked) wire to "- ".

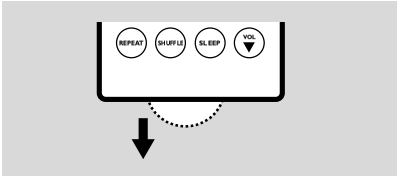


Fully insert the stripped portion of the speaker wire into the terminal as shown.

Notes:
– For optimal sound performance, use the supplied speakers.
– Do not connect more than one speaker to any one pair of + /- speaker terminals.
– Do not connect speakers with an impedance lower than the speakers supplied. Please refer to the SPECIFICATIONS section of this manual.

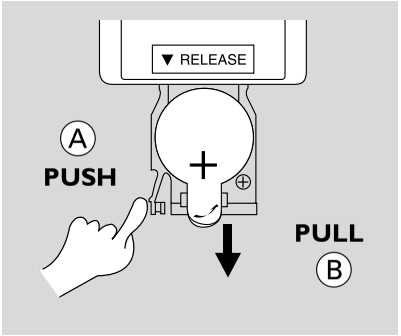
Before using the remote control

1 Pull out the plastic protective sheet.
2 Select the source you wish to control by pressing one of the source select keys on the remote control (for example CD, TUNER).
3 Then select the desired function (for example ▶ , ⏮ , ⏭).



Replacing battery (lithium CR2025) into the remote control

1 Pull out the knob Ⓐ slightly to the right.
2 Pull out the battery compartment Ⓑ .
3 Replace a new battery and fully insert the battery compartment back to the original position.

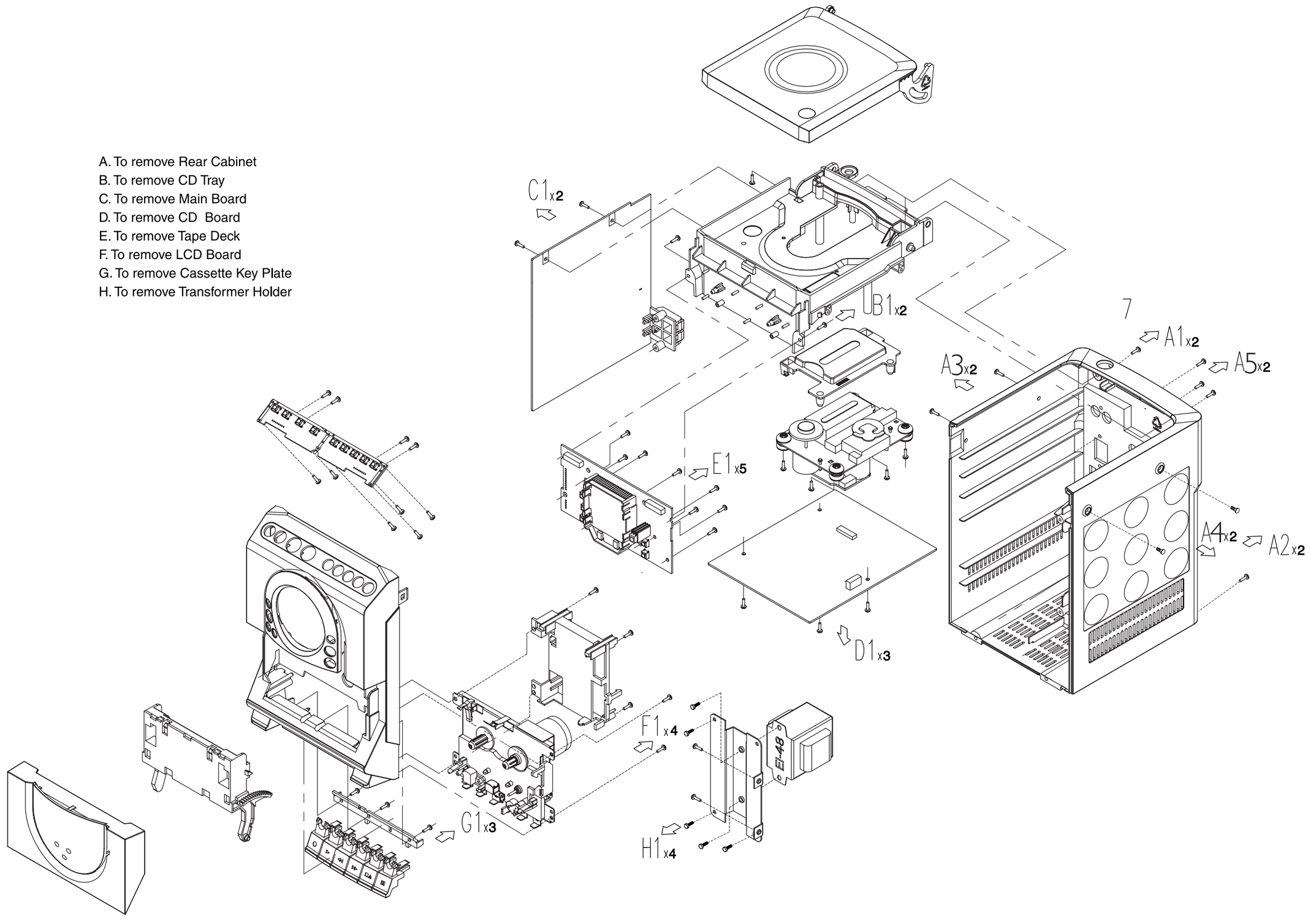


CAUTION!
Batteries contain chemical substances, so they should be disposed off properly.

4 - 1

DISASSEMBLY DIAGRAM

A. To remove Rear Cabinet
B. To remove CD Tray
C. To remove Main Board
D. To remove CD Board
E. To remove Tape Deck
F. To remove LCD Board
G. To remove Cassette Key Plate
H. To remove Transformer Holder



4 - 2

Abbreviations and Pin-description of ICs

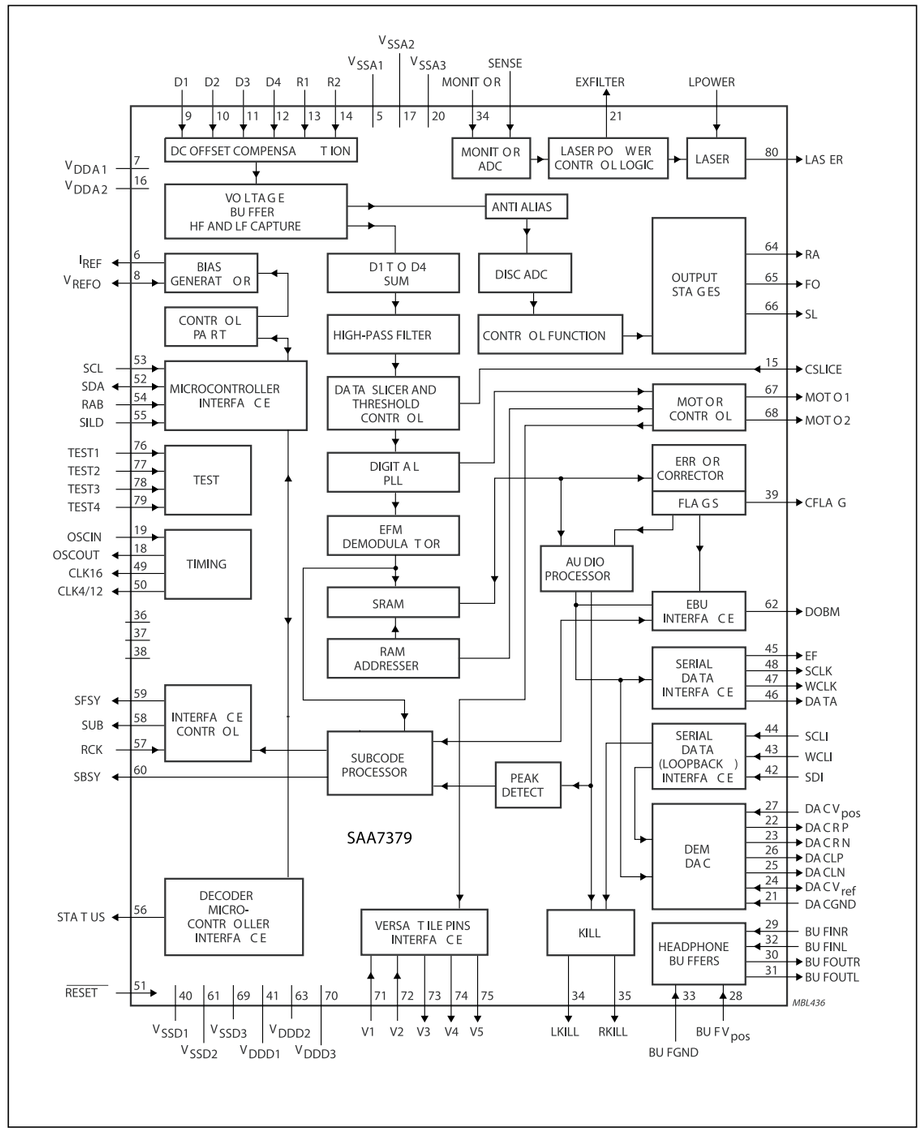
SERVO PROCESSOR SAA7379HL

SYMBOL	PIN	I/O	DESCRIPTION
LFPOWER1		I	laser power supply
EXFILTER	2	O	10 nF capacitor for laser start-up control
MONITOR3		I	laser monitor diode
SENSE4		I	OPU ground reference point for MONITOR measurement
V_{SSA1}	5	SUP	analog ground1
I_{REF}	6	O	reference current output (24k resistor connected to analog ground)
V_{DDA1}	7	SUP	analog supply voltage1
V_{REFO}	8	I/O	servo reference voltage
D1	9	I	diode voltage/current input (central diode signal input)
D2	10	I	diode voltage/current input (central diode signal input)
D3	11	I	diode voltage/current input (central diode signal input)
D4	12	I	diode voltage/current input (central diode signal input)
R1	13	I	diode voltage/current input (satellite diode signal input)
R2	14	I	diode voltage/current input (satellite diode signal input)
CSLICE	15	I/O	10nF capacitor for adaptive HF data slicer
V_{DDA2}	16	SUP	analog supply voltage2
V_{SSA2}	17	SUP	analog ground 2
OSCOUT	18	O	crystal/resonator output
OSCIN1	9	I	crystal/resonator input
V_{SSA3}	20	SUP	analog ground 3
DACGND	21	I	audio DAC ground
DACRP2	2	O	audio DAC right channel differential positive output
DACRN2	3	O	audio DAC right channel differential negative output
DAC V_{ref}	24	I/O	audio DAC decoupling point (10 µF or 100 nF to ground
DACLN2	5	O	audio DAC left channel differential negative output
DACLP2	6	O	audio DAC left channel differential positive output
DAC V_{pos}	27	I	audio DAC positive supply voltage
BUF V_{pos}	28	I	audio buffer positive supply voltage
BUFINR	29	I	audio buffer right input
BUFOUTR3	0	O	audio buffer right output
BUFOUTL3	1	O	audio buffer left output
BUFINL	32	I	audio buffer left input
BUFGND	33	I	audio buffer ground
LKILL3	4	O	KILL output for left channel (configurable as open-drain)
RKILL3	5	O	KILL output for right channel (configurable as open-drain)
N/C3	6	O	No connection
N/C3	7	O	No connection
N/C3	8	I	No connection
CFLAG3	9	O	correction flag output (open-drain)
V_{SSD1}	40	SUP	digital ground1

SYMBOL	PIN	I/O	DESCRIPTION
V_{DDD1}	41	SUP	digital supply voltage1
SDI	42	I	serial data input (loopback)
WCLI	43	I	word clock input (loopback)
SCL I	44	I	serial bit clock input (loopback)
EF	45	O	C2 error flag output
DATA	46	O	serial data output
WCLK	47	O	word clock output
SCLK	48	O	serial clock output
CLK 16	49	O	16 MHz clock output
CLK4/12	50	O	configurable 4M Hz or 12 MHz clock output
$\overline{RESET}$	51	I	power-on reset input (active LOW)
SDA	52	I/O	microcontroller interface data input/output (open-drain)
SCL	53	I	microcontroller interface clock input
RAB	54	I	microcontroller interface R/W and load control input (4-wire)
SILD	55	I	microcontroller interface R/W and load control input (4-wire)
STATUS	56	O	servo interrupt request line/decoder status register/DC offset v alue readback output
RCK	57	I	subcode clock input
SUB	58	O	P to W subcode output
SFSY	59	O	subcode frame sync output
SBSY	60	O	subcode block sync output
V_{SSD2}	61	SUP	digital ground2
DOBM	62	O	bi-phase mark output (externally buffered)
V_{DDD2}	63	SUP	digital supply voltage2
RA	64	O	radial actuator output
FO	65	O	focus actuator output
SL	66	O	sledge actuator output
MOTO1	67	O	motor output 1 output
MOTO2	68	O	motor output 2 output
V_{SSD3}	69	SUP	digital ground3
V_{DDD3}	70	SUP	digital supply voltage3
V1	71	I	versatile pin 1 input
V2	72	I	versatile pin 2 input
V3	73	O	versatile pin 3 output
V4	74	O	versatile pin 4 output
V5	75	O	versatile pin 5 output
TEST1	76	I	test pin 1 input
TEST2	77	I	test pin 2 input
TEST3	78	I	test pin 3 input
TEST4	79	I	test pin 4 input
LASER	80	O	laser drive output

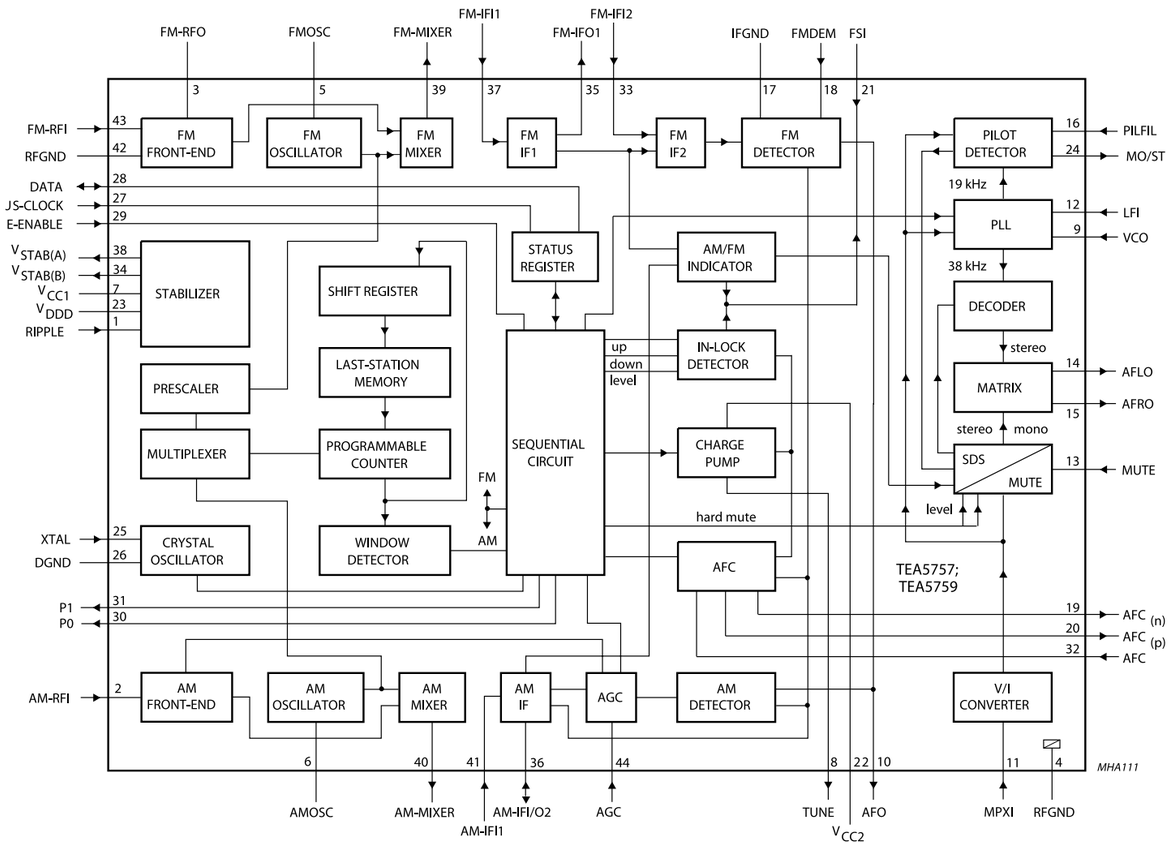
BLOCK DIAGRAM OF INTEGRATED CIRCUIT

SERVO PROCESSOR SAA7379HL



BLOCK DIAGRAM OF INTEGRATED CIRCUIT

SELF TUNED RADIO TEA5757



Abbreviations and Pin-description of ICs

SELF TUNED RADIO TEA5757

PINNING

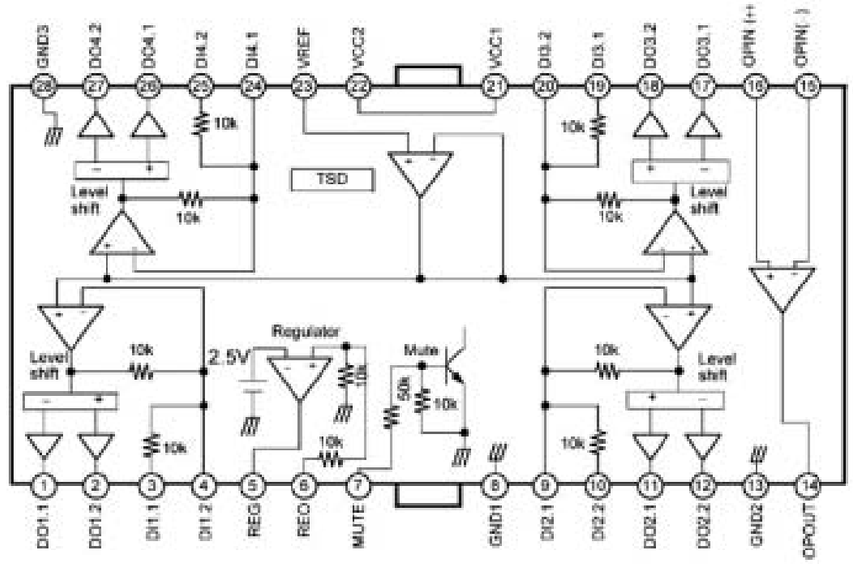
SYMBOL	PIN	DESCRIPTION
RIPPLE	1	ripple capacitor input
AM-RFI	2	AMRF input
FM-RFO	3	parallel tuned FMRF circuit to ground
RFGND	4	RF ground and substrate
FMOSC	5	parallel tuned FM-oscillator circuit to ground
AMOSC	6	parallel tuned AM-oscillator circuit to ground
V_{CC1}	7	supply voltage
TUNE	8	tuning current output
VCO	9	voltage controlled oscillator input
AFO	10	AM/FM AF output (output impedance typical 5 k)
MPXI	11	stereo decoder input (input impedance typical 150 k)
LFI	12	loop-filter input
MUTE	13	mute input
AFLO	14	left channel output (output impedance typical 4.3 k)
AFRO	15	right channel output (output impedance typical 4.3 k)
PILFIL	16	pilot detector filter input
IFGND	17	ground of IF, detector and MPX stage
FMDEM	18	ceramic discriminator input
$AFC_{(n)}$	19	AFC negative output
$AFC_{(p)}$	20	AFC positive output
FSI	21	field-strength indicator
V_{CC2}	22	supply voltage for tuning
V_{DDD}	23	digital supply voltage
MO/ST	24	mono/stereo and tuning indication output
XTAL	25	crystal input
DGND	26	digital ground
BUS-CLOCK	27	bus-clock input
DATA	28	bus data input/output
WRITE-ENABLE	29	bus write-enable input
P0	30	programmable output port (P0)
P1	31	programmable output port (P1)
AFC	32	450 kHz LC-circuit
FM-IFI2	33	FMIF input 2 (input impedance typical 330)
$V_{STAB(B)}$	34	internal stabilized supply voltage (B)
FM-IFO1	35	FMIF output 1 (output impedance typical 330)
AM-IFI/O2	36	input/output to IF-Tank (IFT); output: current source
FM-IFI1	37	FMIF input 1 (input impedance typical 330)
$V_{STAB(A)}$	38	internal stabilized supply voltage (A)
FM-MIXER	39	ceramic filter output (output impedance typical 330)
AM-MIXER	40	open-collector output to IFT

4 - 4

Abbreviations and Pin-description of ICs

4-CH MOT OR DRIVER D9258

BLOCK DIAGRAM AND PIN CONFIGURATION

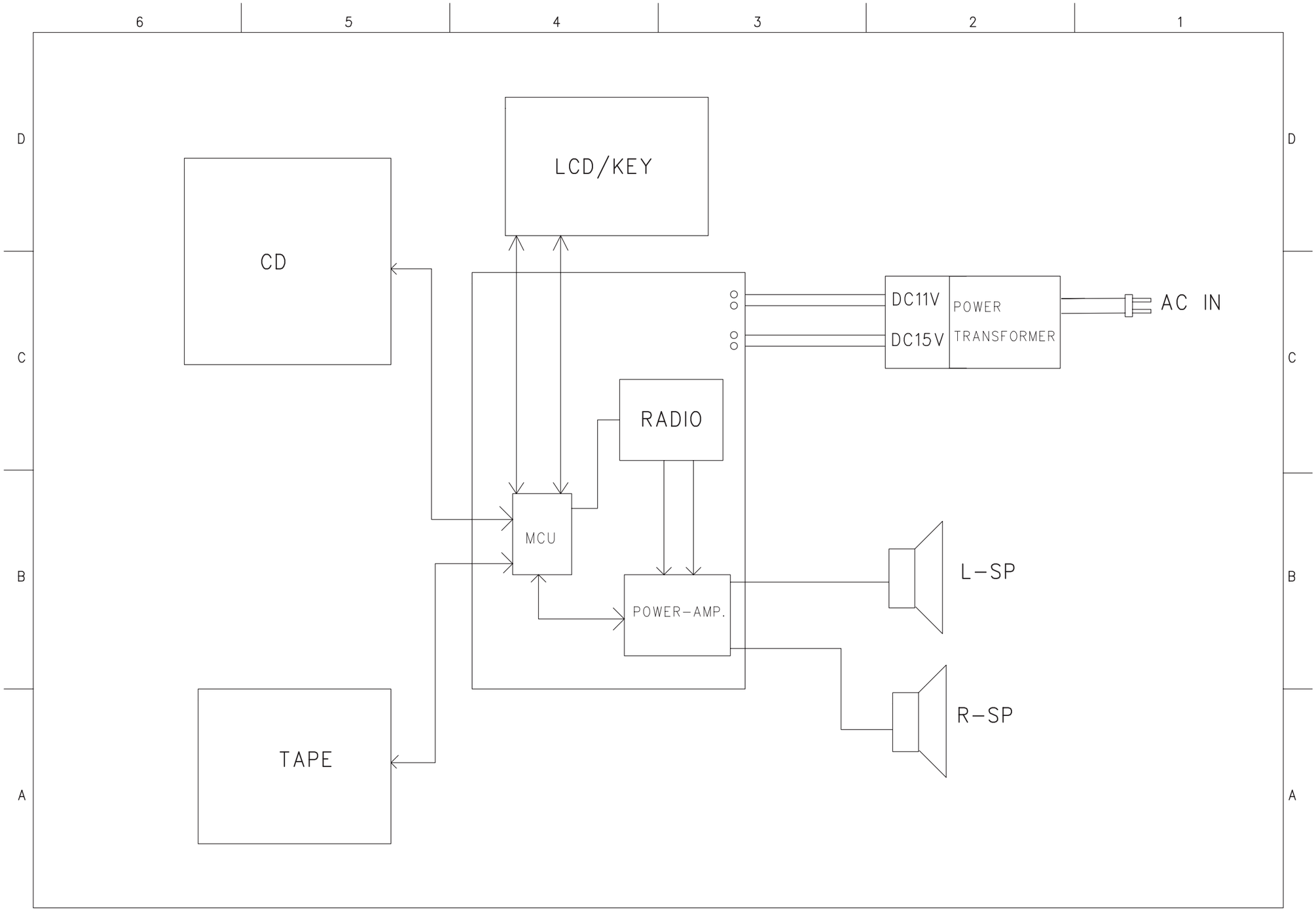


PIN DESCRIPTION

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	DO1.1	O	Drive output	15	OPIN(-)	I	Op-amp input(-)
2	DO1.2	O	Drive output	16	OPIN(+)	I	Op-amp input(+)
3	DI1.1	I	Drive input	17	DO3.1	O	Drive output
4	DI1.2	I	Drive input	18	DO3.2	O	Drive output
5	REG	-	Regulator	19	DI3.1	I	Drive input
6	REO	O	Regulator output	20	DI3.2	I	Drive input
7	MUTE	I	Mute	21	Vcc1		Supply voltage
8	GND1	-	Ground 1	22	Vcc2		Supply voltage
9	DI2.1	I	Drive input	23	V_{REF}	I	2.5V bias voltage
10	DI2.2	I	Drive input	24	DI4.1	I	Drive input
11	DO2.1	O	Drive output	25	DI4.2	I	Drive input
12	DO2.2	O	Drive output	26	DO4.1	O	Drive output
13	GND2	-	Ground 2	27	DO4.2	O	Drive output
14	OPOUT	O	Op-amp output	28	GND3		Ground 3

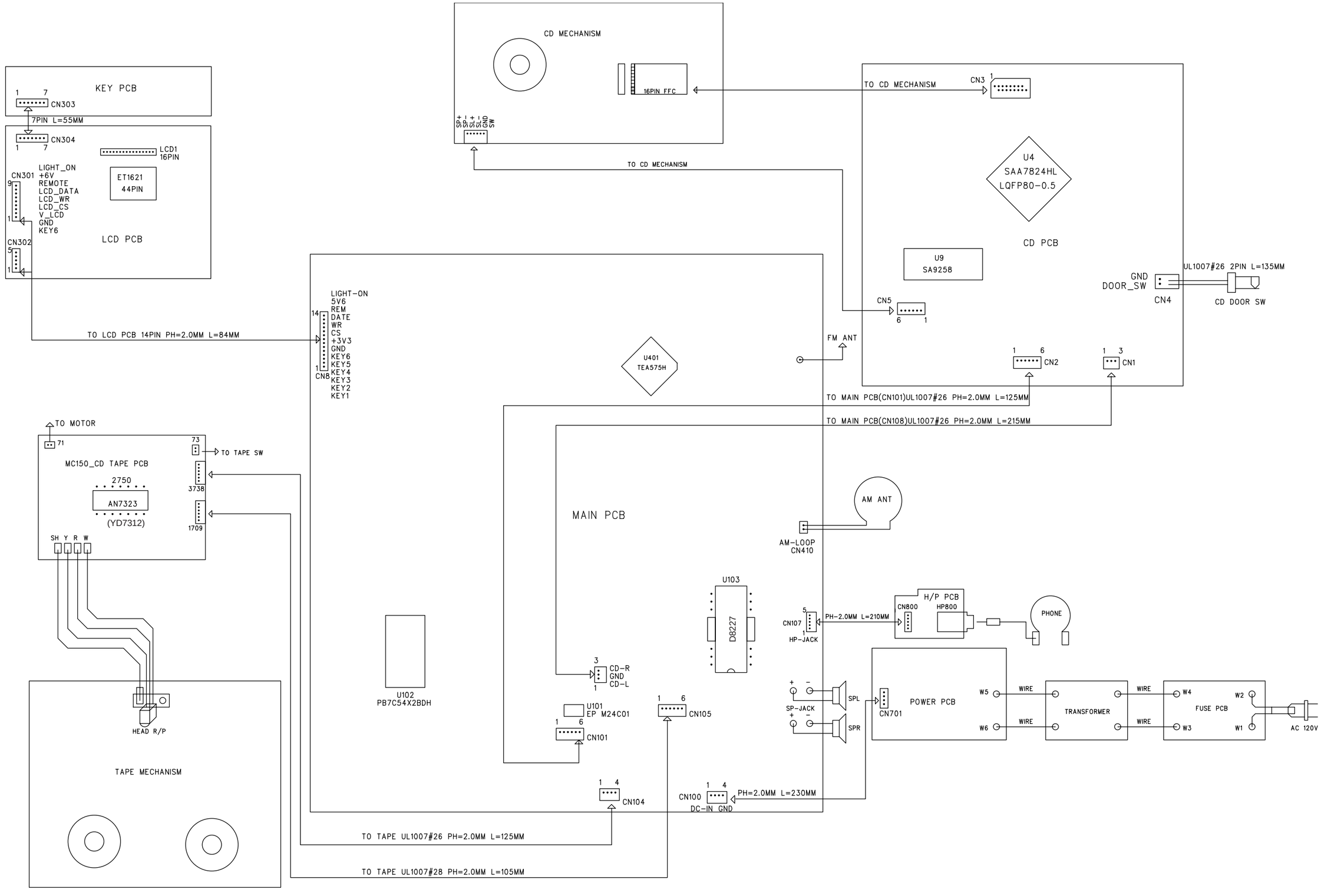
5 - 1

SET BLOCK DIAGRAM



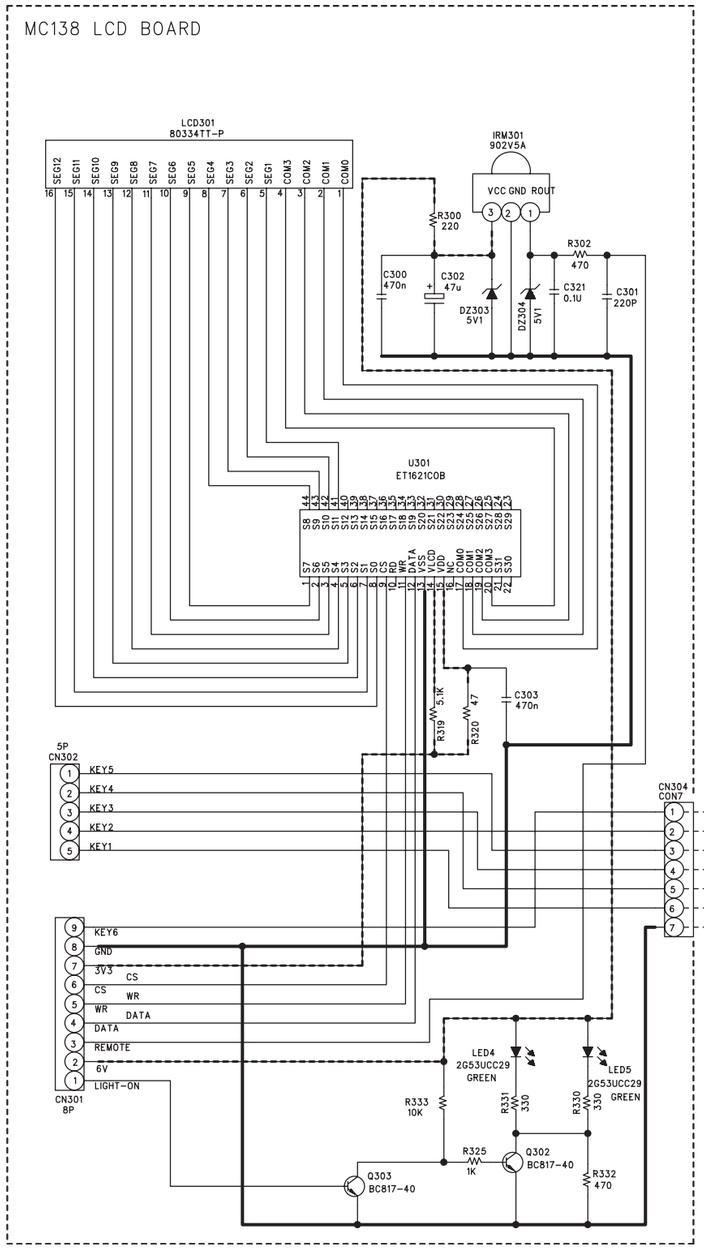
5 - 2

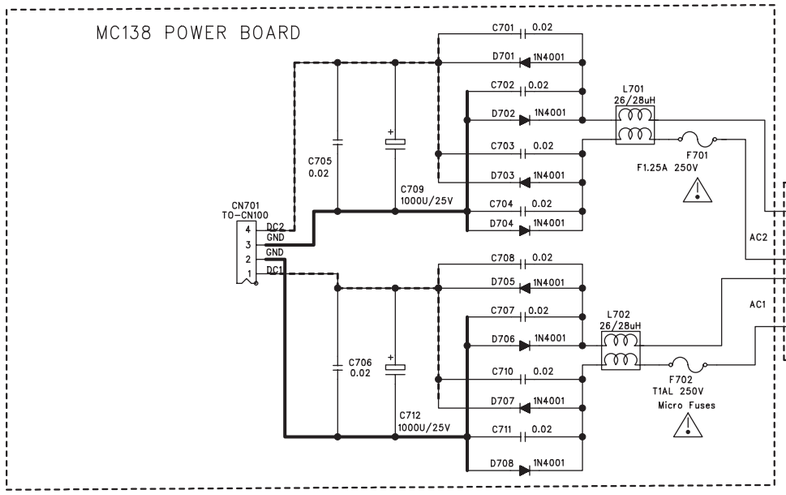
SET WIRING DIAGRAM

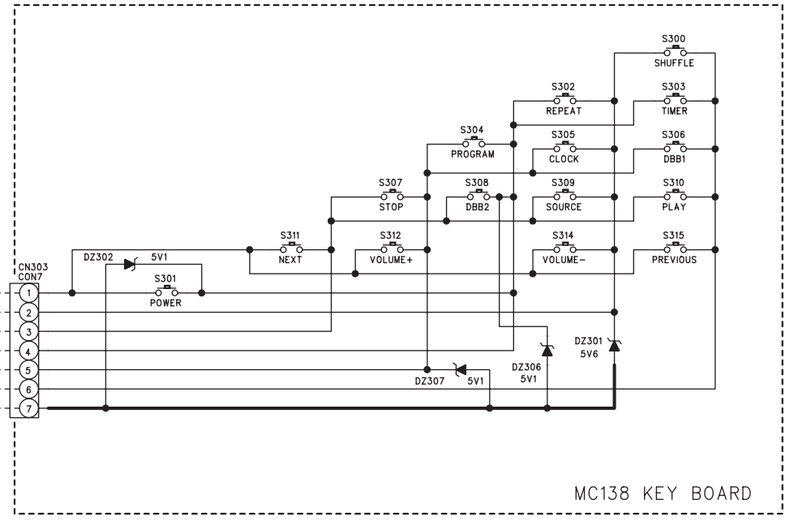


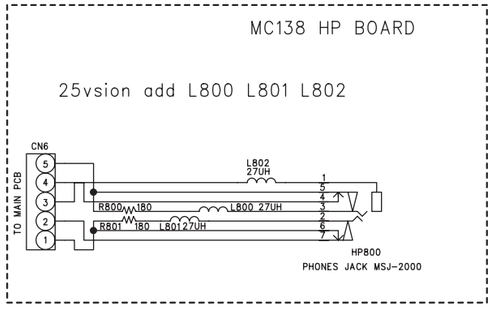
6 - 1

CIRCUIT DIAGRAM - COMBI BOARD - LCD/KEY/HP/POWER PART



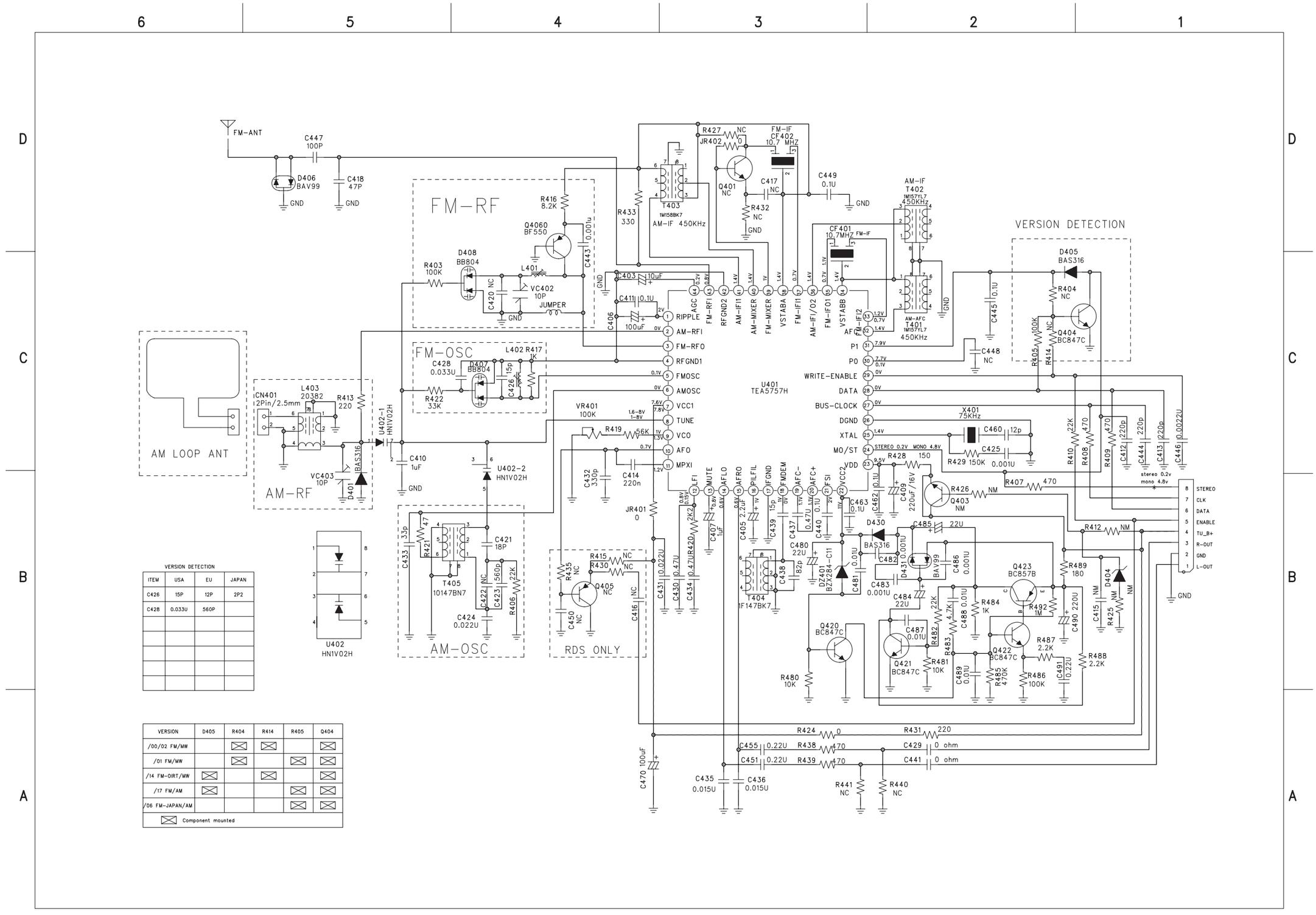






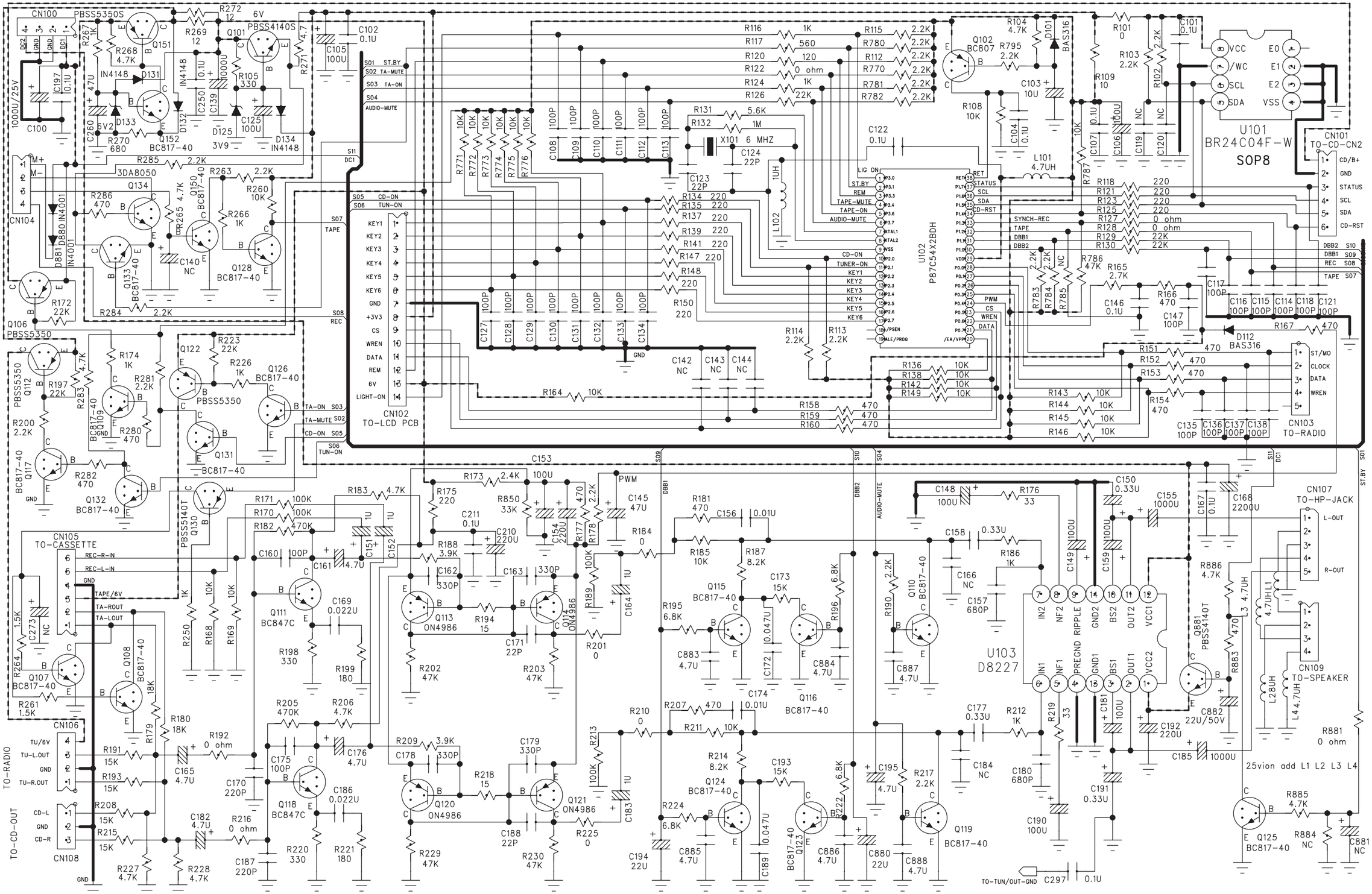
6 - 2

CIRCUIT DIAGRAM - COMBI BOARD - TUNER PART



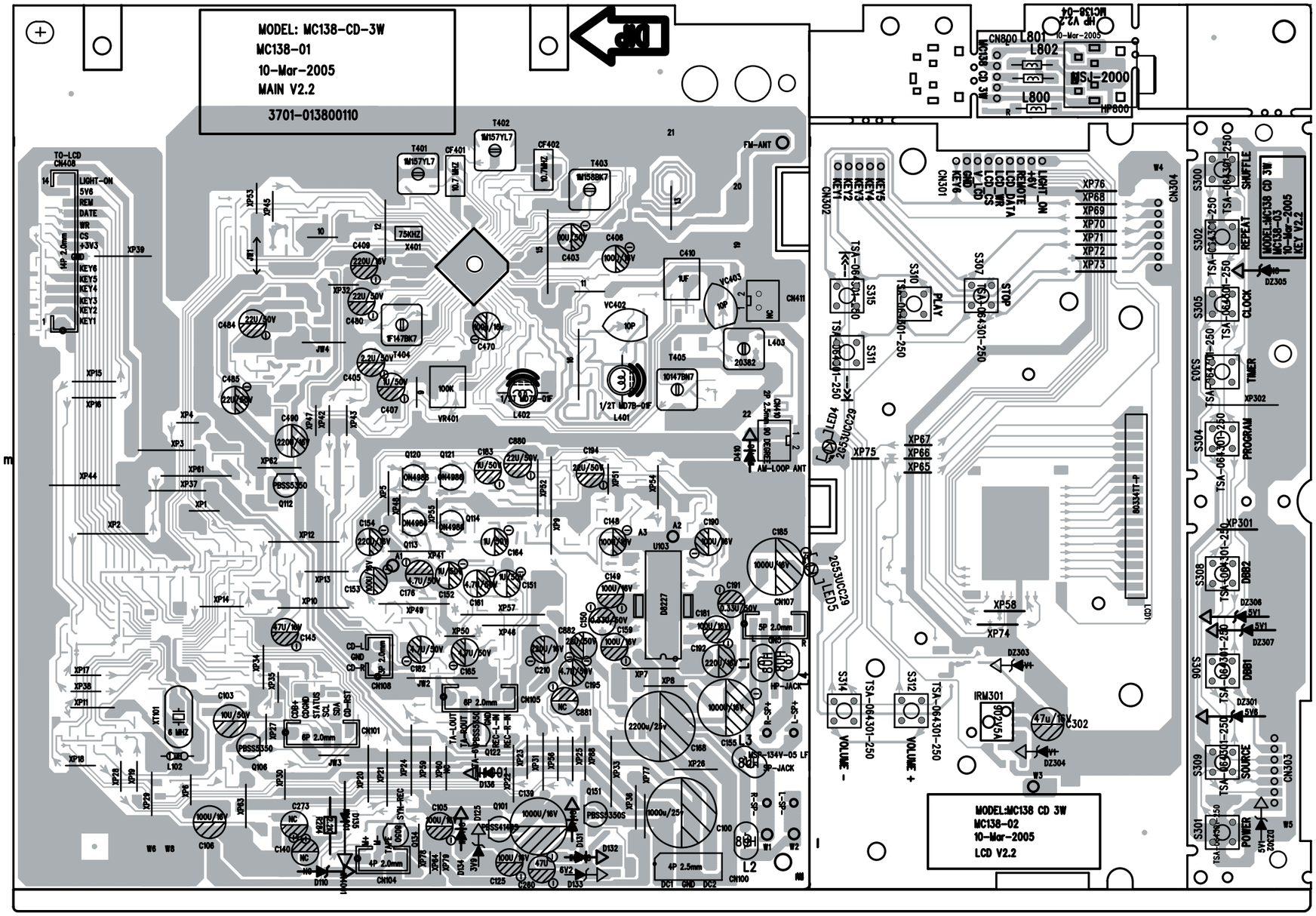
6 - 3

CIRCUIT DIAGRAM - COMBI BOARD - MAIN BOARD PART



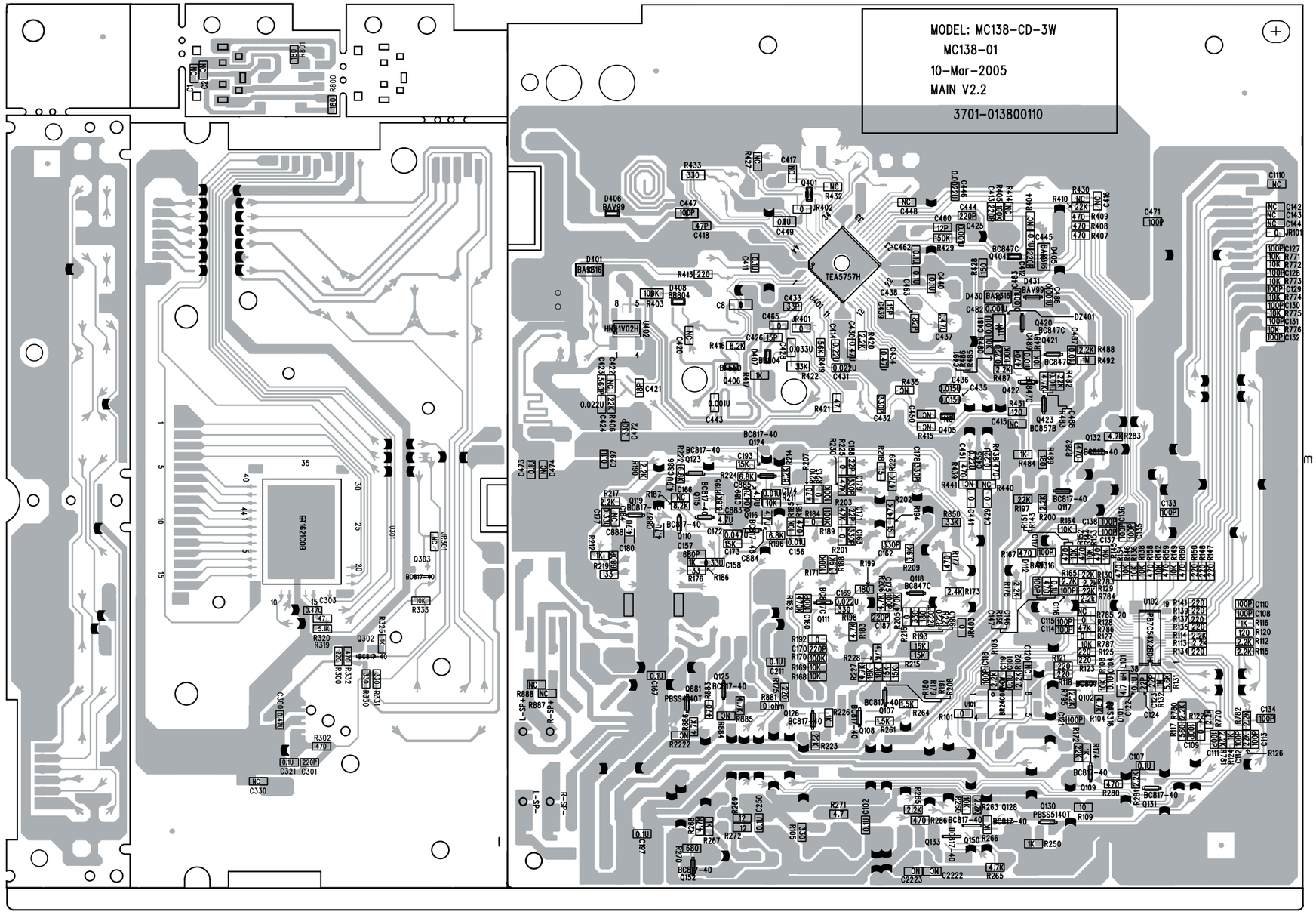
6 - 4

LAYOUT DIAGRAM - COMBI BOARD
COMPONET SIDE



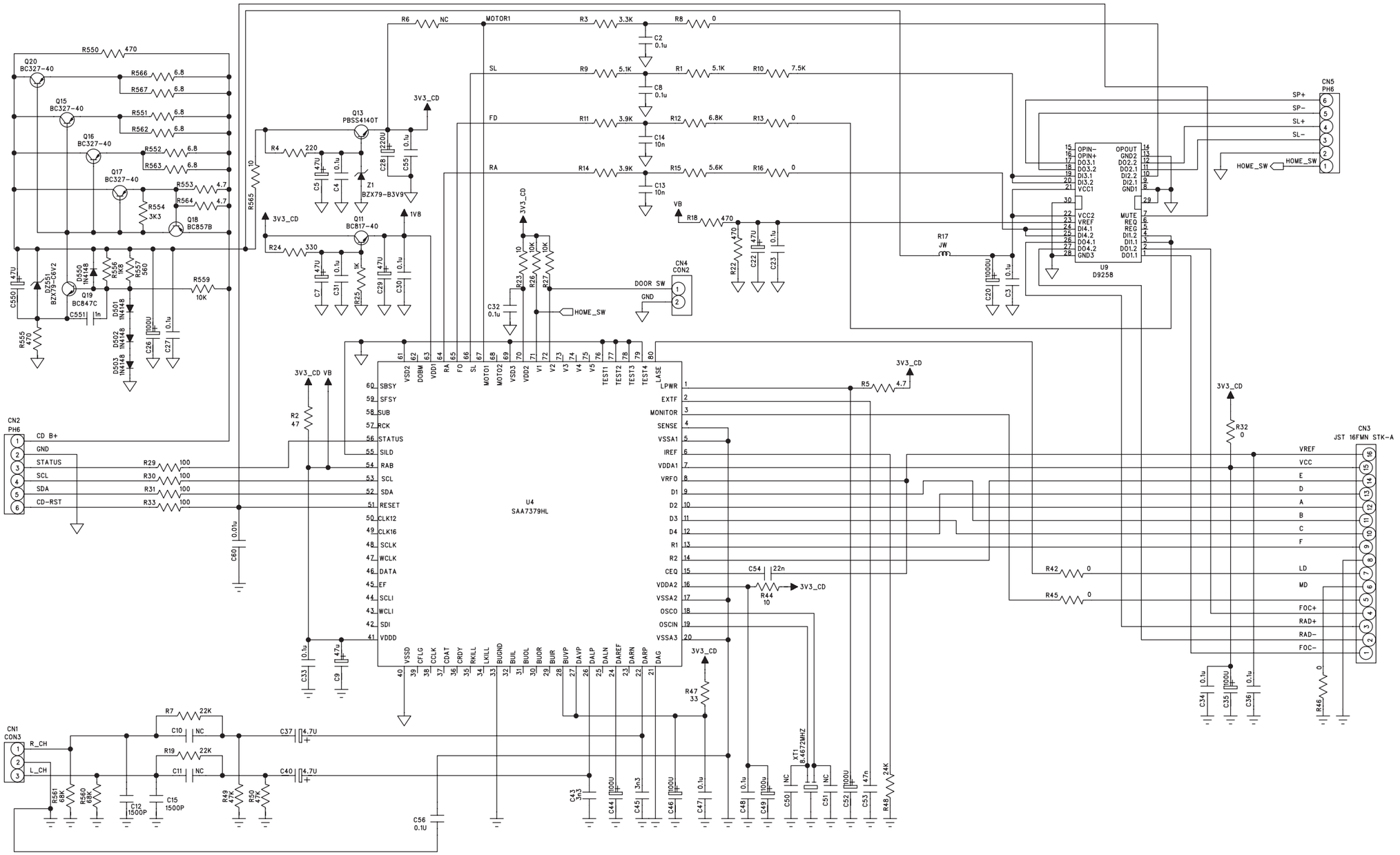
6 - 5

LAYOUT DIAGRAM - COMBI BOARD
COPPER SIDE



7 - 1

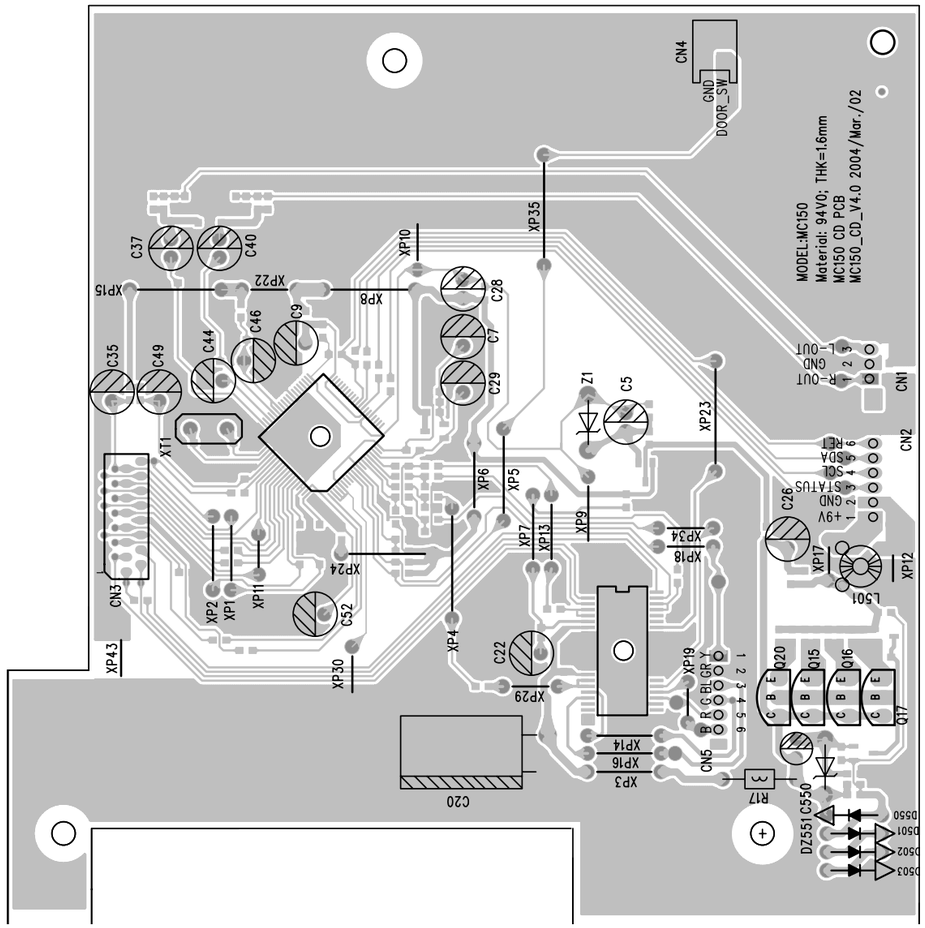
CIRCUIT DIAGRAM - CD BOARD



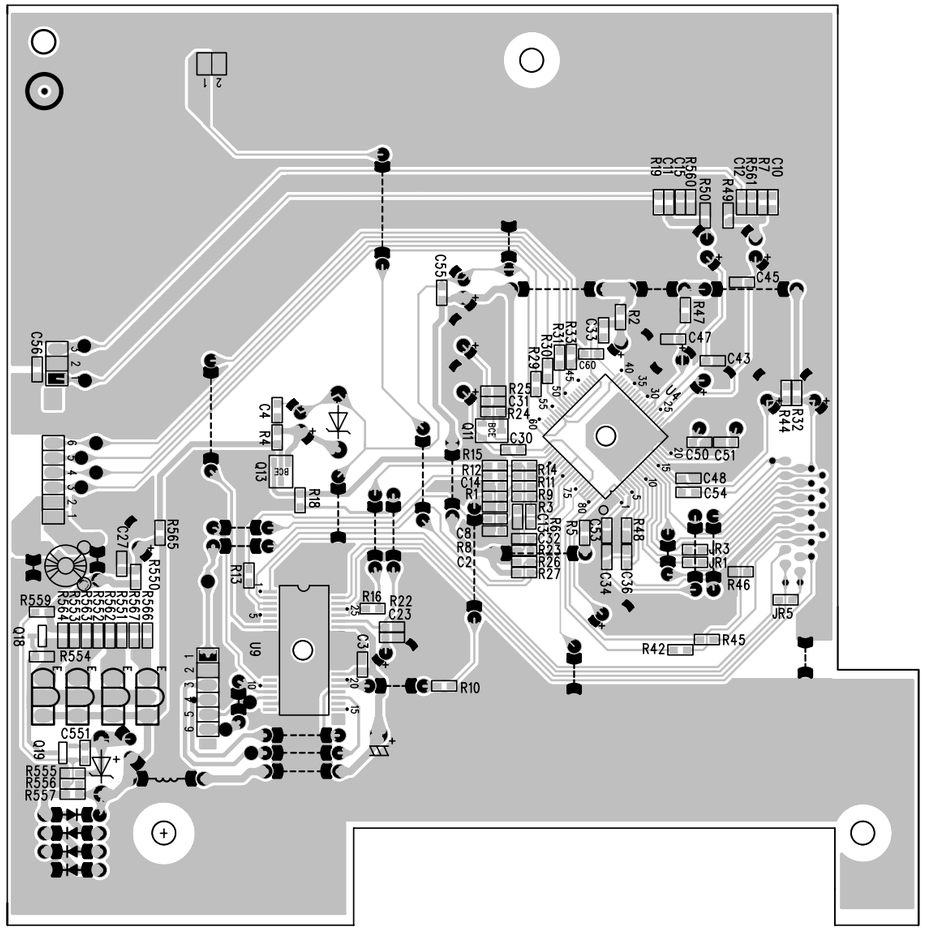
7 - 2

LAYOUT DIAGRAM - CD BOARD

COMPONENT SIDE

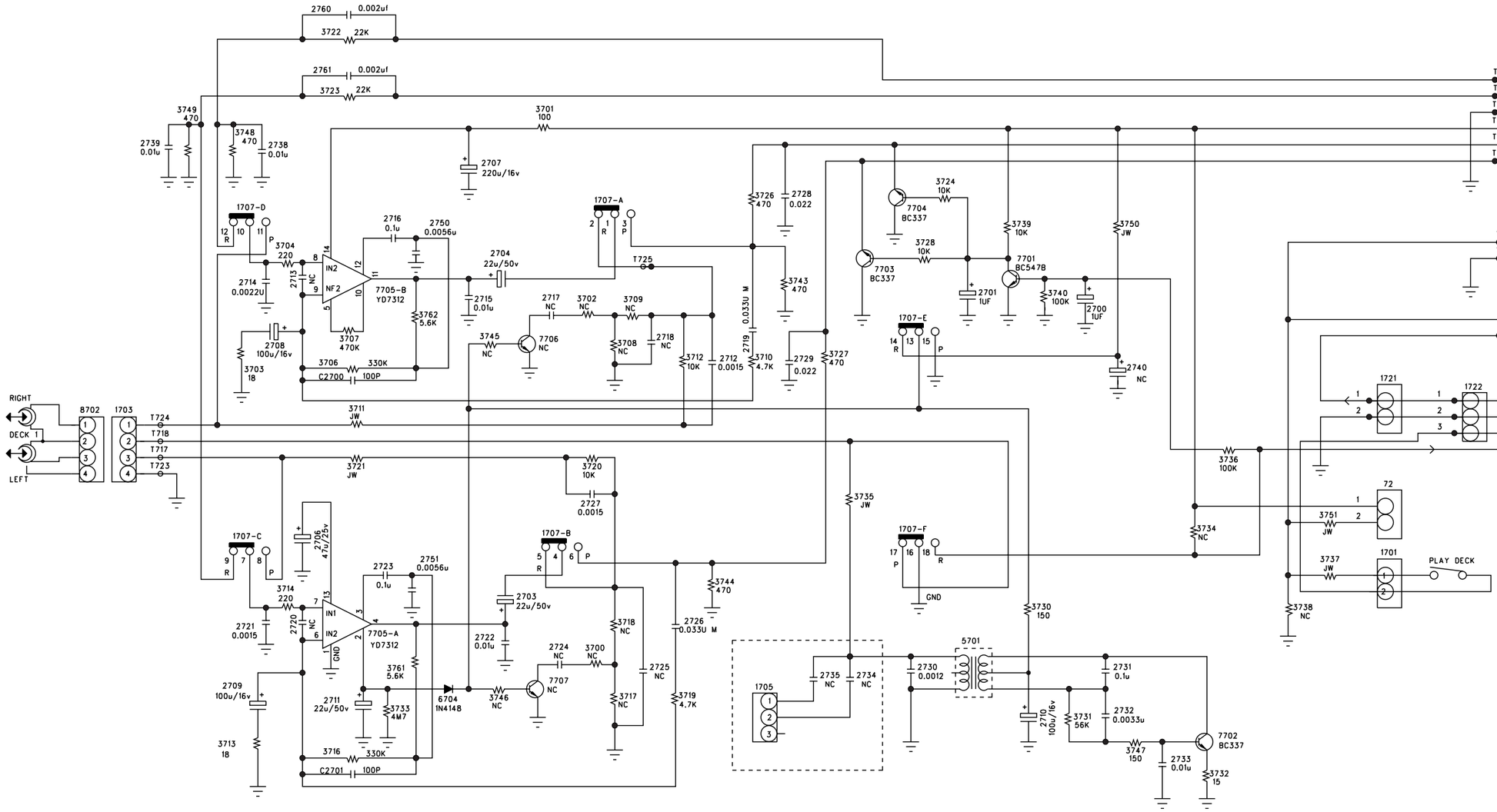


COPPER SIDE



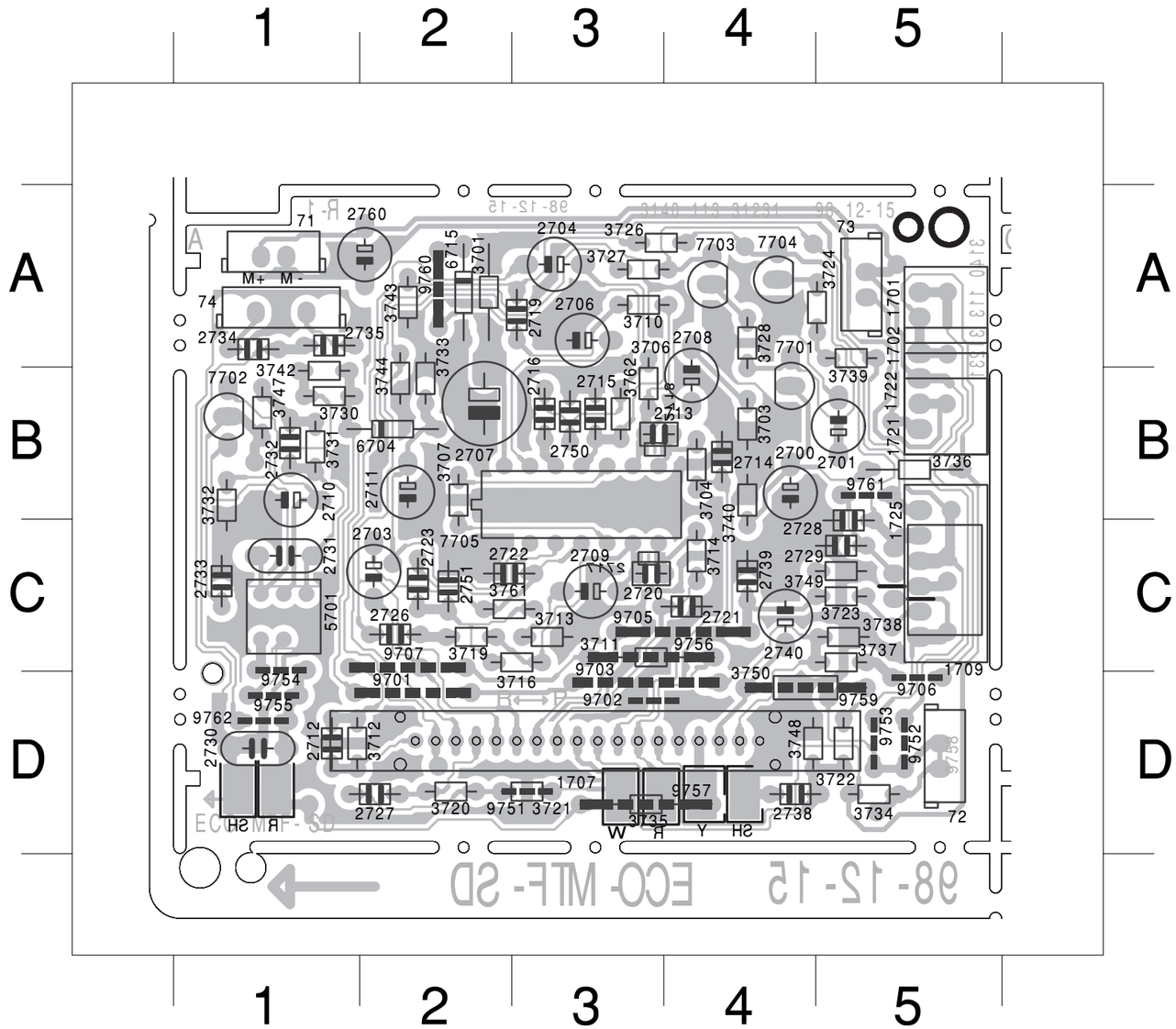
8 - 1

CIRCUIT DIAGRAM - CASSETTE BOARD



8 - 2

LAYOUT DIAGRAM - CASSETTE BOARD



71	A 1	2729	C 5	3733	B 2	9756	C 3
72	D 5	2730	D 1	3734	D 5	9757	D 3
73	A 5	2731	C 1	3735	D 3	9759	D 4
74	A 1	2732	B 1	3736	B 5	9760	A 2
1701	A 5	2733	C 1	3737	C 5	9761	B 5
1702	B 5	2734	A 1	3738	C 5	9762	D 1
1707	D 3	2735	A 1	3739	A 5	T701	C 5
1709	C 5	2738	D 4	3740	B 4	T702	C 5
1721	B 5	2739	C 4	3742	B 1	T705	B 5
1722	B 5	2740	C 4	3743	A 2	T706	B 5
1725	C 5	2750	B 3	3744	B 2	T709	A 5
2700	B 4	2751	C 2	3747	B 1	T710	C 1
2701	B 5	2760	A 2	3748	D 4	T711	B 5
2703	C 2	3701	A 2	3749	C 5	T712	C 2
2704	A 3	3703	B 4	3750	D 4	T713	A 5
2706	A 3	3704	B 4	3761	C 2	T714	D 5
2707	B 2	3706	B 3	3762	B 3	T715	D 5
2708	B 4	3707	B 2	5701	C 1	T716	D 1
2709	C 3	3710	A 3	6704	B 2	T719	B 1
2710	B 1	3711	C 3	6715	A 2	T720	A 5
2711	B 2	3712	D 1	7701	B 4	T721	C 5
2712	D 1	3713	C 3	7702	B 1	T722	C 2
2713	B 3	3714	C 4	7703	A 4	T725	D 2
2714	B 4	3716	C 3	7704	A 4	T7707	A 4
2715	B 3	3719	C 2	7705	B 3	T7708	A 4
2716	B 3	3720	D 2	9701	D 2		
2717	C 3	3721	D 3	9702	D 3		
2718	B 3	3722	D 5	9703	D 3		
2719	A 3	3723	C 5	9705	C 4		
2720	C 3	3724	A 5	9706	D 5		
2721	C 4	3726	A 3	9707	C 2		
2722	C 2	3727	A 3	9751	D 3		
2723	C 2	3728	A 4	9752	D 5		
2726	C 2	3730	B 1	9753	D 5		
2727	D 2	3731	B 1	9754	C 1		
2728	C 5	3732	B 1	9755	D 1		

CASSETTE ADJUSTMENT

Adjustment	Cassette	SK	Deck 1	Measure on	Read on	Adjust with	Adjust to
Azimuth	10 kHz SBC420*	Tape	Play	H/P Jack	mV meter	Left hand Screw R/P head	max.
Motor Speed	3150 kHz SBC420*	Tape	Play	H/P Jack	Wow and flutter meter	Preset in motor	**a

* SBC420 : 4822 397 30071

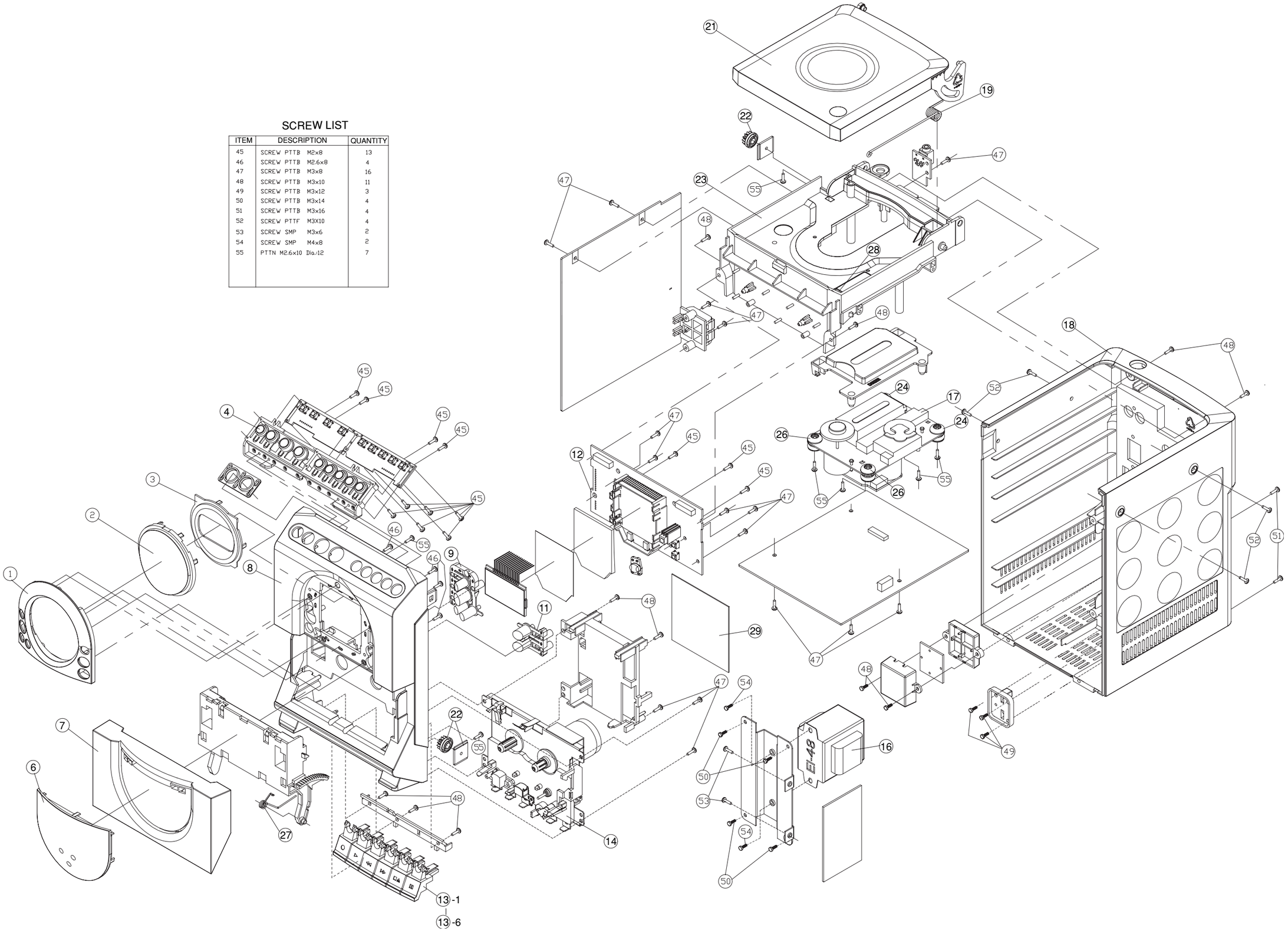
**a The maximum permissible speed deviation is 3%.
Morever, the wow and flutter value can be read.

9 - 1

SET EXPLODED VIEW DIAGRAM

SCREW LIST

ITEM	DESCRIPTION	QUANTITY
45	SCREW PTTB M2x8	13
46	SCREW PTTB M2.6x8	4
47	SCREW PTTB M3x8	16
48	SCREW PTTB M3x10	11
49	SCREW PTTB M3x12	3
50	SCREW PTTB M3x14	4
51	SCREW PTTB M3x16	4
52	SCREW PTTF M3X10	4
53	SCREW SMP M3x6	2
54	SCREW SMP M4x8	2
55	PTTN M2.6x10 Dia.12	7



MECHANICAIL & ACCESSORIES PARTSLIST

1	9940 000 01497	COSMETIC PANEL
2	9940 000 00397	LENS
3	9940 000 01496	LCD CHAMFER
4	9940 000 00395	KEYSET TOP
6	9940 000 01498	CASSETTE PANEL
7	9940 000 00402	CASSETTE DOOR
8	9940 000 01494	FRONT CABINET
9	9940 000 00399	KNOB PLAY
11	9940 000 00401	KNOB VOLUME
12	9940 000 01488	LCD PWB ASSEMBLY MC138
13-1	9940 000 00404	CASSETTE KEY RECORD
13-2	9940 000 00405	CASSETTE KEY PLAY
13-3	9940 000 00406	CASSETTE KEY REVERSE
13-4	9940 000 00407	CASSETTE KEY FORWARD
13-5	9940 000 00408	CASSETTE KEY STOP/OPEN
13-6	9940 000 00409	CASSETTE KEY PAUSE
14	9940 000 01493	CASS DECK CS-21SC-820S
16		POWER TRANSFORMER AC120V
17	9940 000 00381	CD MECHANISM DA11B3N
18	9940 000 00392	REAR CABINET
19	9940 000 00502	CD DOOR SPRING
21	9940 000 01495	CD DOOR
22	9940 000 00501	DAMPER GEAR ASSEMBLY
23	9940 000 00394	CD TRAY
24	9940 000 00505	CD DAMPER 658 TA 30
26	9940 000 00506	CD DAMPER 658 TB 40
27	9940 000 00503	CASSETTE DOOR SPRING
28	9940 000 00379	CD DOOR SW DLS-02-W-1

9940 000 01344	SPEAKER BOX 3W MC138 W/MID
9940 000 01345	REMOTE CONTROL UNIT MC138
9940 000 00509	AM LOOP ANT

ELECTRICAL PARTSLIST

VC402	9940 000 00378	TRIMMER CAP 10pF +50%-0%
VC403	9940 000 00378	TRIMMER CAP 10pF +50%-0%
D407	9940 000 00376	VARIABLE CAP DIODE, BB804
D408	9940 000 00376	VARIABLE CAP DIODE, BB804
U402	9940 000 00375	VARIABLE CAP DIODE
U100	9940 000 00369	IC L7806CV REGULATOR
U102	9940 000 00372	IC P87C54X2BDH
U4	9940 000 00564	IC SAA7379HL
U401	9351 740 80557	IC SM TEA5757H/V1
U9	9940 000 00565	IC D9258 MOTOR DRIVER
7705	9940 000 01634	IC YD7312CP PREAMP.
1707	9940 000 00389	REC SWITCH 18PIN
S300	9940 000 00568	TACT SWITCH
S301	9940 000 00568	TACT SWITCH
S302	9940 000 00568	TACT SWITCH
S303	9940 000 00568	TACT SWITCH
S304	9940 000 00568	TACT SWITCH
S305	9940 000 00568	TACT SWITCH
S306	9940 000 00568	TACT SWITCH
S307	9940 000 00568	TACT SWITCH
S308	9940 000 00568	TACT SWITCH
S309	9940 000 00568	TACT SWITCH
S310	9940 000 00568	TACT SWITCH
S311	9940 000 00568	TACT SWITCH
S312	9940 000 00568	TACT SWITCH
S314	9940 000 00568	TACT SWITCH
S315	9940 000 00568	TACT SWITCH
HP800	9940 000 00386	HP JACK MSJ-2000
SP-JK	9940 000 00511	SP TERMINAL MSP-134V-05
	9940 000 00373	FFC CABLE 16PIN P1.0 L70
F701 ⚠	9940 000 00637	FUSE PTU 1A 250V
F702 ⚠	9940 000 01492	FUSE SGP 1.25A 250V
⚠	9940 000 01491	TRANSFORMER AC120V
⚠	9940 000 02209	TRANSFORMER AC120/230V
⚠	9940 000 02224	TRANSFORMER 230V
⚠	9940 000 01489	POWER AC WIRE UL (/77)
⚠	9940 000 02223	POWER AC WIRE BS (/25)
⚠	9940 000 02225	POWER AC WIRE AR (/77)
⚠	9940 000 00382	POWER AC WIRE VDE (/21)

REVISION LIST

Version 1.0 (3140 785 30320)
· Initial Release MC138/37

Version 1.1 (3140 785 30321)
· Introduction of MC138/21 /25 /77
· Page 2-1 : Technical Specification adapted
· Page 10-1 : Service Parts List adapted