

Service
Service
Service



Service Manual

TABLE OF CONTENTS

	Page
Handling chip components	1-1
Technical Specifications	2-1
Service Tool	2-1
Measurement setup.....	2-2
Connections and Controls	3-1.. 3-2
Set Block diagram	4-1
Set Wiring diagram.....	4-2
Disassembly diagram	5-1
Main board - Circuit diagram	
CD part	6-1
Tuner part	6-2
Main board - Layout diagram.....	6-3 .. 6-4
Display board - Circuit diagram	7-1
Display board - Layout diagram.....	7-2 .. 7-3
Set Mechanical Exploded view	8-1
Mechanical Service parts list	8-2
Electrical Service parts list.....	9-1 .. 9-2
Revision list.....	10-1



© Copyright 2006 Philips Consumer Electronics B.V. Eindhoven, The Netherlands
 All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise without the prior permission of Philips.

Published by LX 0 715- Service Audio Printed in The Netherlands Subject to modification

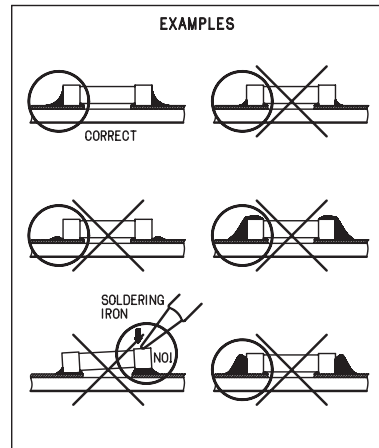
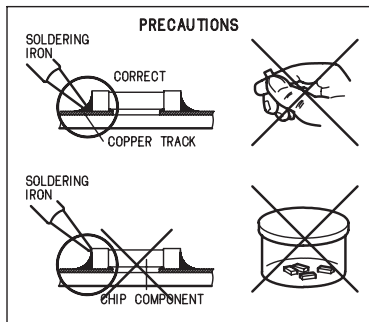
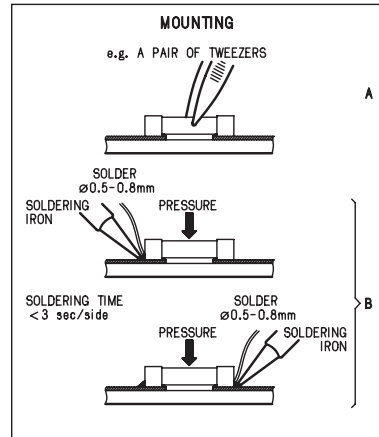
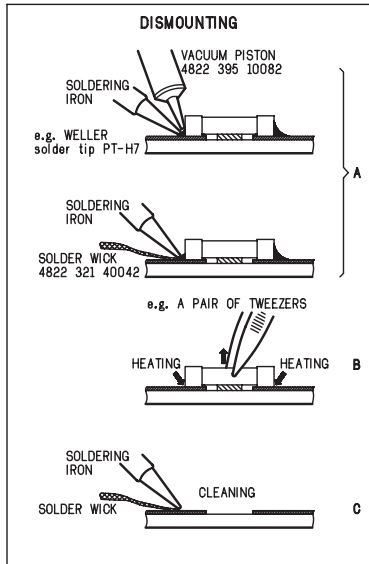
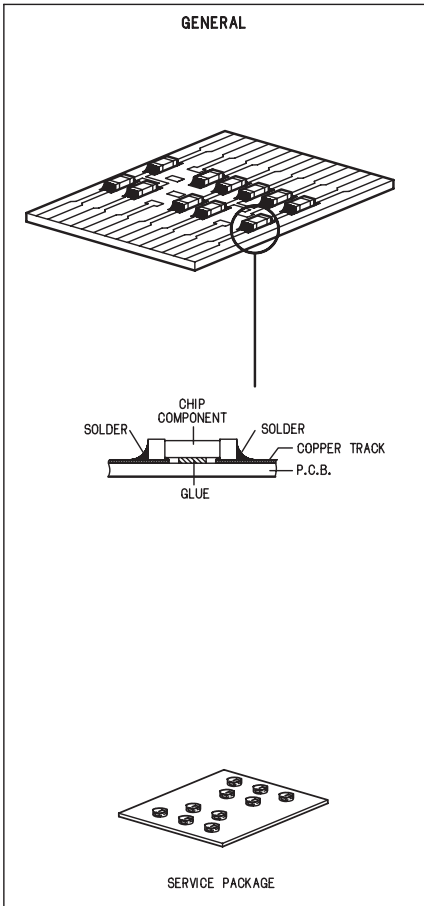
GB 3141 785 30992

Version 1.2



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 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.

(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 enfilez le bracelet seré d'une résistance de sécurité. Veillez 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). Unvorsichtige 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 ridotta in caso di non osservazione della più grande cautela alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un bracciale a resistenza. Assicurarci che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

(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 ▲

(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 ▲

SAFETY



(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.

(NL)

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

(I)

Le norme di sicurezza estigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati. Componenti di sicurezza sono marcati con ▲

(GB)

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

(S)

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

(NL)

Advarsel !
Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse 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 sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

TECHNICAL SPECIFICATIONS

GENERAL

Mains voltage	-/05 : 230 V -/85 : 110 -127 / 220 - 240 V -/93 : 220V
Mains frequency	-/05 : 50 Hz -/85 : 50 / 60 Hz -/93 : 50Hz
power consumption	: < 3 W
Dimension (W x H x D)	:150 x 150 x 220 mm
Weight(without speakers)	: 2.3 Kg

AMPLIFIER

Output power	mains : 2 x 2W : 4W + 4W MPO
Signal to noise ratio	: 62 dBA
Frequency response	: 60-16000Hz, 3 dB
Impedance loudspeakers	: 8 ohm
Bass reflex system	

TUNER - FM SECTION

Tuning range	: 87.5 -108 MHz
IF frequency	: 10.7 0.1MHz
Sensitivity	: < 22 dBf at 26 S/N
Selectivity	300kHz : > 16 dB
IF rejection	: > 50 dB
Image rejection	: > 20 dB
Distortion (RF 1mV, Feq Dev.40kHz)	: < 2%
-3 dB Limiting Point	: < 20 dBf
Separation (RF 1mV, Feq Dev.40kHz)	: > 22 dB

TUNER - AM SECTION

Tuning range	: 531-1602 kHz
IF frequency	: 455 3 kHz
Sensitivity	: < 71dB at 26dB
Selectivity	300kHz : >16dB
IF rejection	: >40dB
Distortion at RF 50mV, M 80%	: < 5%
Image rejectin	: > 40dB

AUDIO CASSETTE RECORDER

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

DISC PLAYER

Frequency response	: 20-20000 Hz
S/N ratio (A-wght.)	: > 75 dBA
Total harmonic distortion	: < 1.5 %
Outband attenuation	: > 35 dB for Freq > 40kHz
Emphasis	: 15/50 μ S
Channel separation	1 kHz : 35 dB
Channel unbalance	: < \pm 1 dB

SERVICE TOOLS

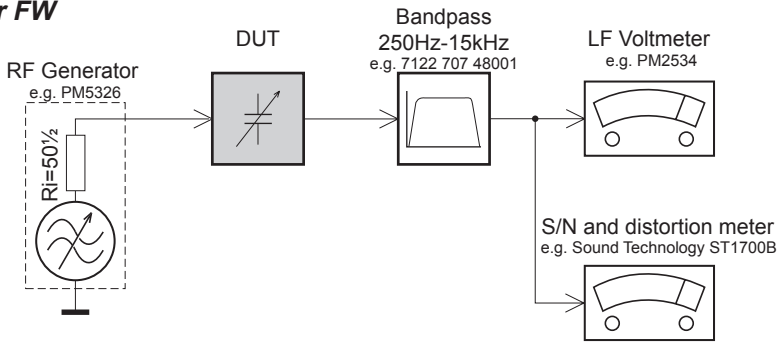
TORX T10 screwdriver with shaftlength 150mm.....	4822 395 50423
TORX screwdriver set SBC 163.....	4822 295 50145
Audio signal disc SBC 429.....	4822 397 30184
Playability test disc SBC 444.....	4822 397 30245
Test disc 5 (disc without errors) +	
Test disc 5A (disc with dropout errors, black spots and 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, 1M Ω)	4822 320 11307
extendible cable (2m, 2M Ω , to connect wristband to connection box)	4822 320 11305
connecting cable (3m, 2M Ω , to connect table mat to connection box)	4822 320 11306
earth cable (1M Ω , 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

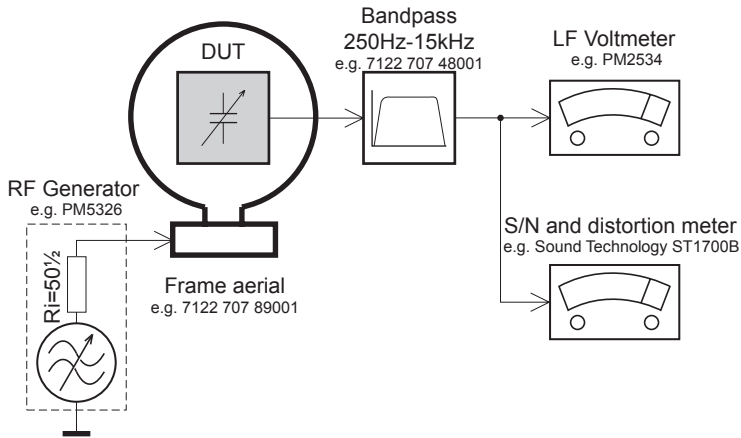
SERVICE MEASUREMENT

Tuner FW



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

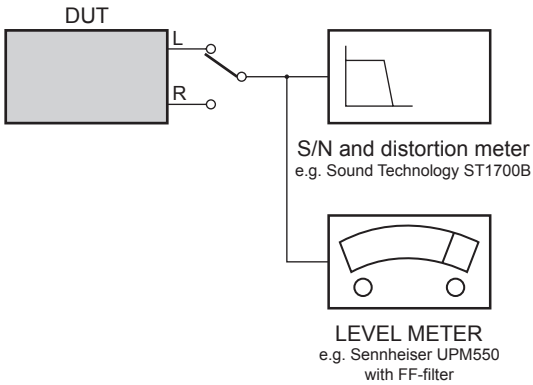
Tuner AM (MW,LW)



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).

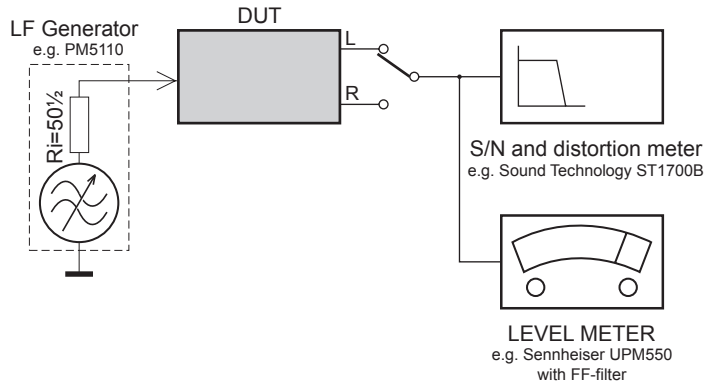
CD

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



RECORDER

Use Universal Test Cassette Fe SBC420 4822 397 30071



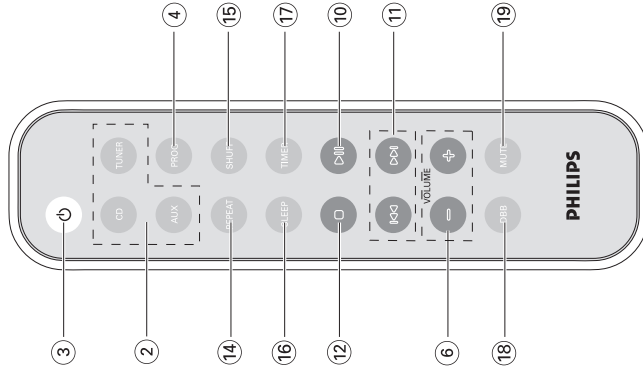
CONNECTION AND CONTROLS

Controls (illustrations on page 3)

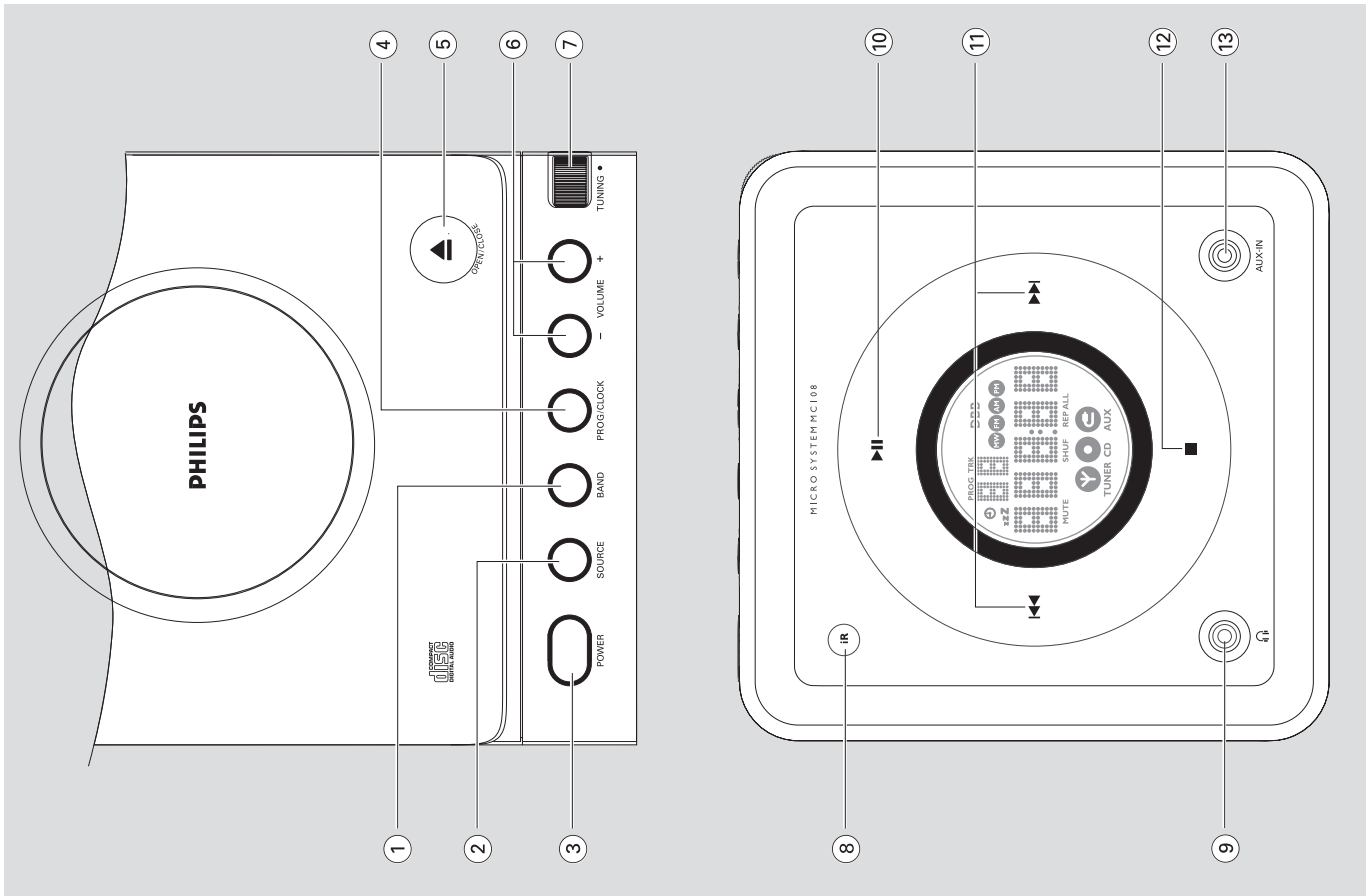
Controls on the system and remote control

- ① **BAND**
 - for Tuner (on the set only) selects waveband.
- ② **SOURCE (CD/TUNER/AUX)**
 - switches on the system.
 - selects the respective sound source for CD/ FM/ MW/ AUX.
- ③ **POWER / ⏻**
 - switches the system to standby/on.
- ④ **PROG/CLOCK**
 - for CD programs tracks and reviews the program.
 - for clock sets the clock function.
- ⑤ **OPEN•CLOSE**
 - opens/closes the CD door.
- ⑥ **VOLUME - / +**
 - adjusts volume level.
- ⑦ **TUNING ●**
 - tunes to radio stations.
- ⑧ **IR SENSOR**
 - infrared sensor for remote control.
- ⑨ **📶**
 - connect headphones.
- ⑩ **⏸**
 - for CD starts or pauses CD playback.
- ⑪ **⏮ / ⏭**
 - skips to the beginning of a current track/ previous/ next track.
 - fast searches back and forward within a track/ CD.
- ⑫ **STOP ■**
 - stops CD playback or erase a CD program.
- ⑬ **AUX IN**
 - connects to external audio source.
- ⑭ **REPEAT**
 - repeats a track/CD program/ entire CD.
- ⑮ **SHUFF (SHUFFLE)**
 - plays CD tracks in random order.
- ⑯ **SLEEP**
 - activates/deactivates or selects the sleeper time.
- ⑰ **TIMER**
 - activates/deactivates or sets the timer function.

- ⑱ **DBB**
 - (Dynamic Bass Boost) enhances the bass.
- ⑲ **MUTE**
 - switches playback sound off and on.



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 ▶, ⏮, ⏭).



Troubleshooting

CONNECTION AND CONTROLS

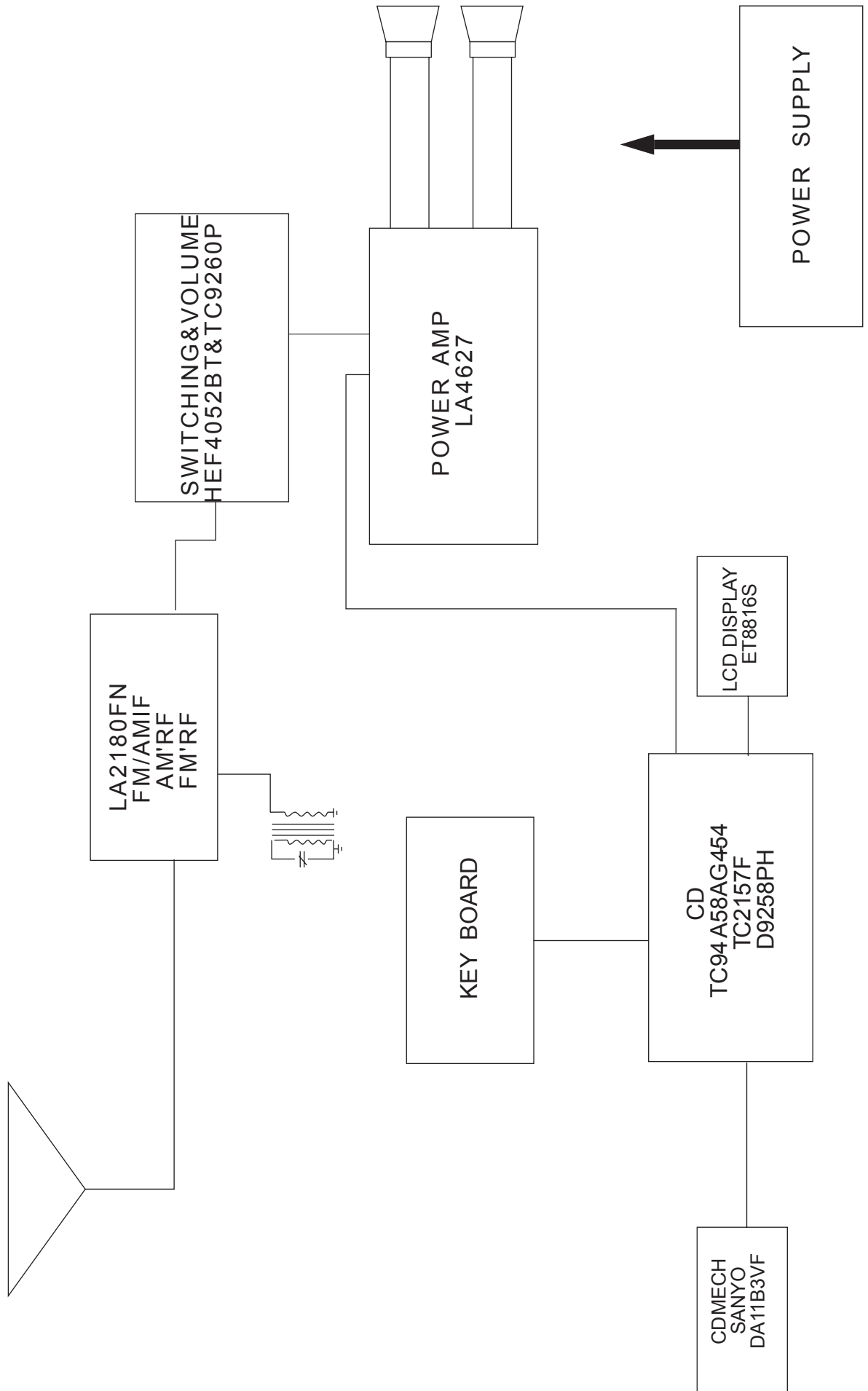
WARNING

Under no circumstances should you try to repair the system yourself, as this will invalidate the warranty. Do not open the system as there is a risk of electric shock.

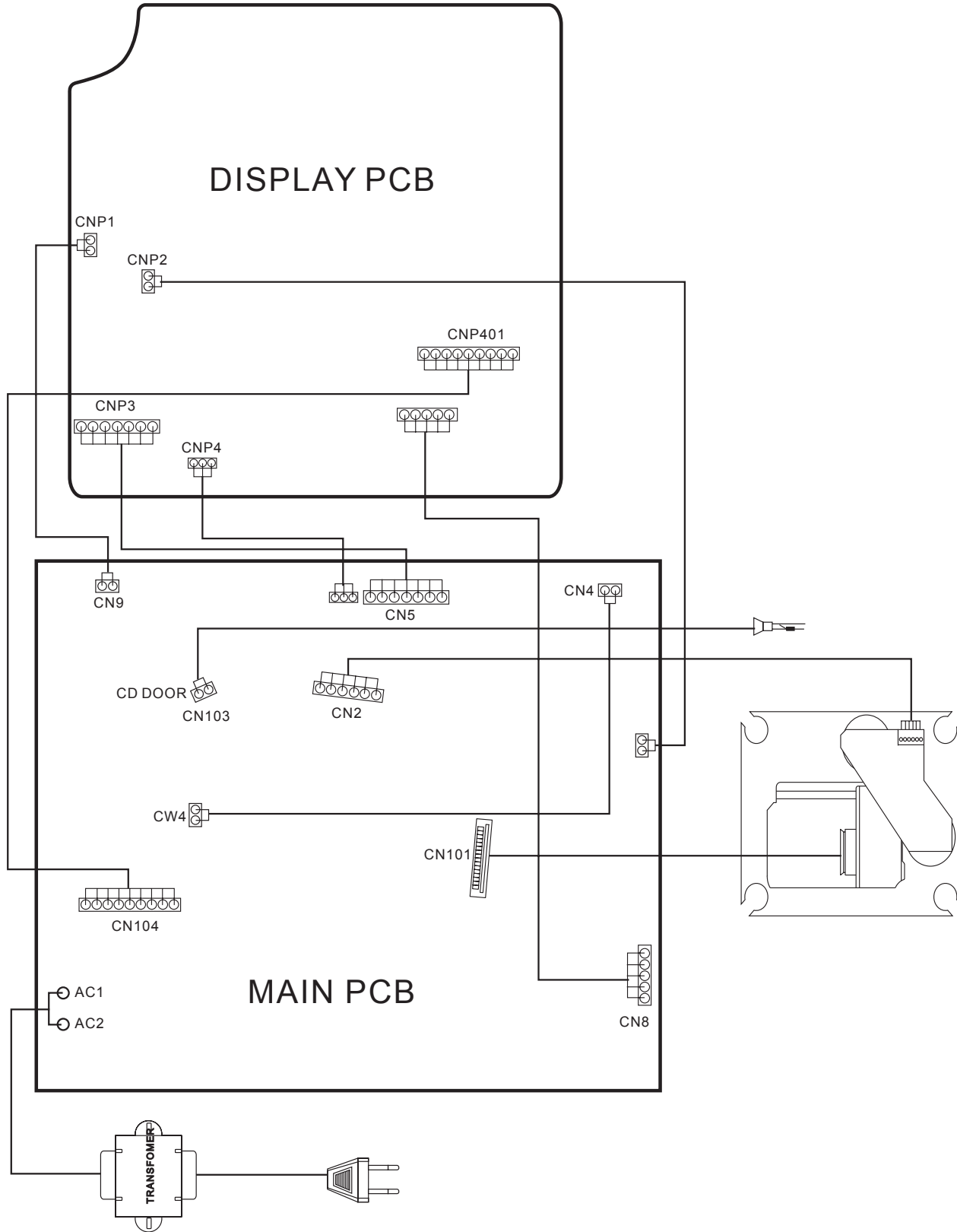
If a fault occurs, first check the points listed below before taking the system for repair. If you are unable to remedy a problem by following these hints, consult your dealer or service centre.

Problem	Solution
CD OPERATION "no cd" is displayed.	<ul style="list-style-type: none"> - Insert a disc. - Check if the disc is inserted upside down. - Wait until the moisture condensation at the lens has cleared. - Replace or clean the disc, see "Maintenance". - Use a finalised CD-RW or CD-R.
RADIO RECEPTION Radio reception is poor.	<ul style="list-style-type: none"> - If the signal is too weak, adjust the antenna or connect an external antenna for better reception. - Increase the distance between the Micro HiFi System and your TV or VCR.
GENERAL The system does not react when buttons are pressed. Sound cannot be heard or is of poor quality. The left and right sound outputs are reversed.	<ul style="list-style-type: none"> - Remove and reconnect the AC power plug and switch on the system again. - Adjust the volume. - Disconnect the headphones. - Check that the speakers are connected correctly. - Check if the stripped speaker wire is clamped. - Check the speaker connections and location.
The remote control does not function properly.	<ul style="list-style-type: none"> - Select the source (CD or TUNER, for example) before pressing the function button (▶, ◀, ►, ◄). - Reduce the distance between the remote control and the system. - Insert the batteries with their polarities (+/- signs) aligned as indicated. - Replace the batteries. - Point the remote control directly toward IR sensor on the front of the system.
The timer is not working.	<ul style="list-style-type: none"> - Set the clock correctly. - Press TIMER to switch on the timer. - If a recording is in progress, stop the recording.
The Clock/Timer setting is erased.	<ul style="list-style-type: none"> - Power has been interrupted or the power cord has been disconnected. Reset the clock/timer.

SET BLOCK DIAGRAM



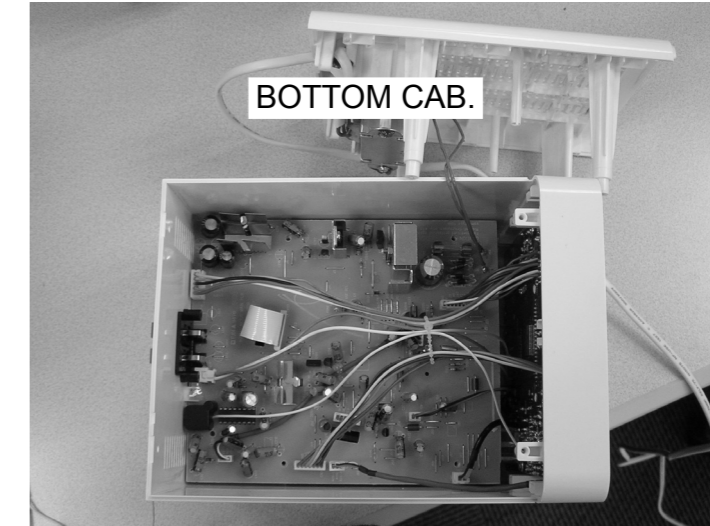
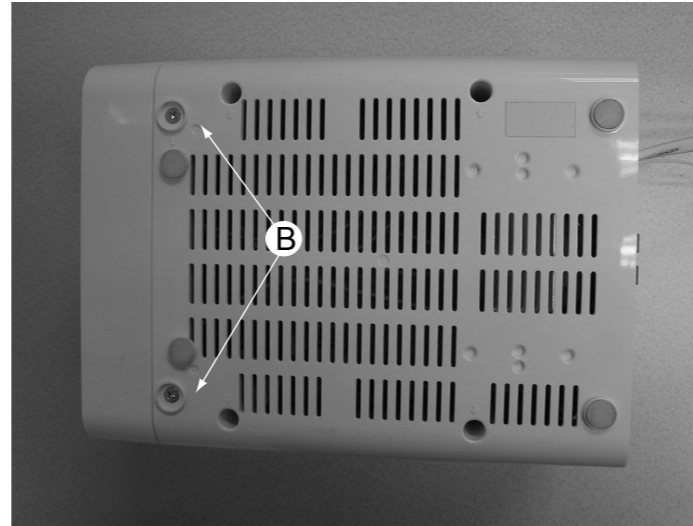
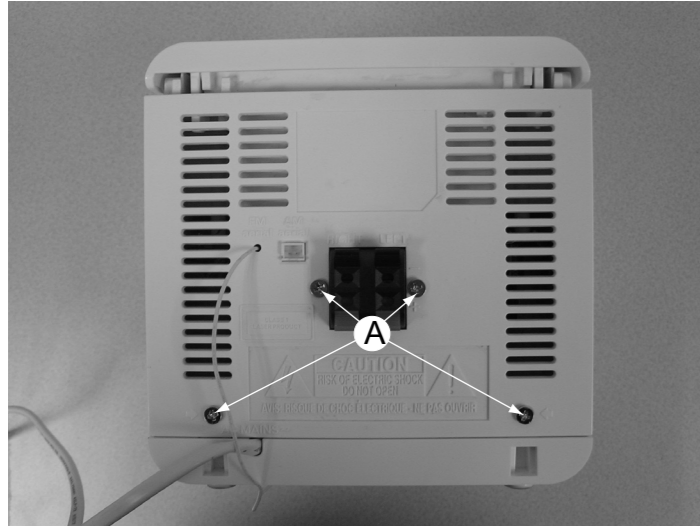
SET WIRING DIAGRAM



DISASSEMBLY DIAGRAM

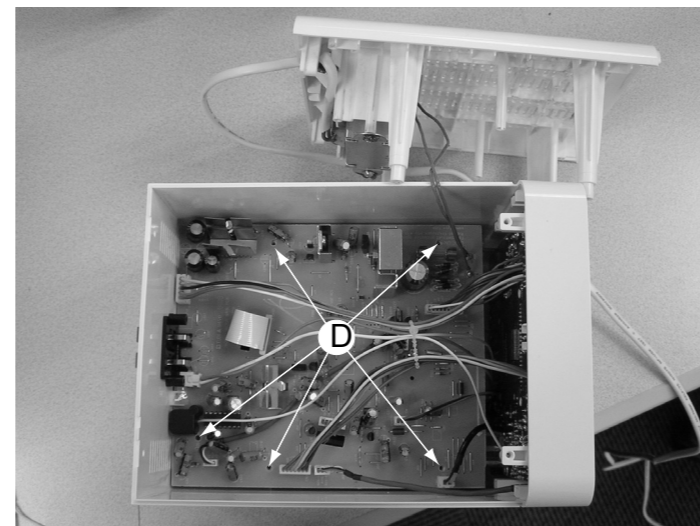
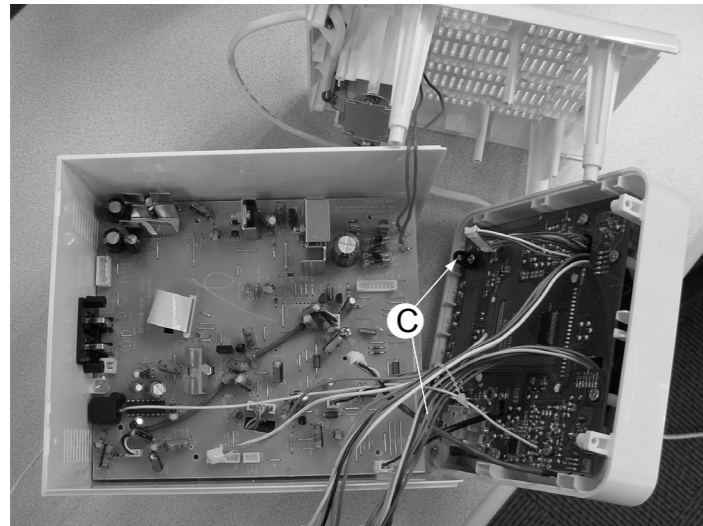
Dismantling of the Bottom Cabinet

- 1) Remove 4 screws A as indicated to loosen the Rear Cabinet.
- 2) Remove 2 screws B as indicated to loosen the Bottom Cabinet.

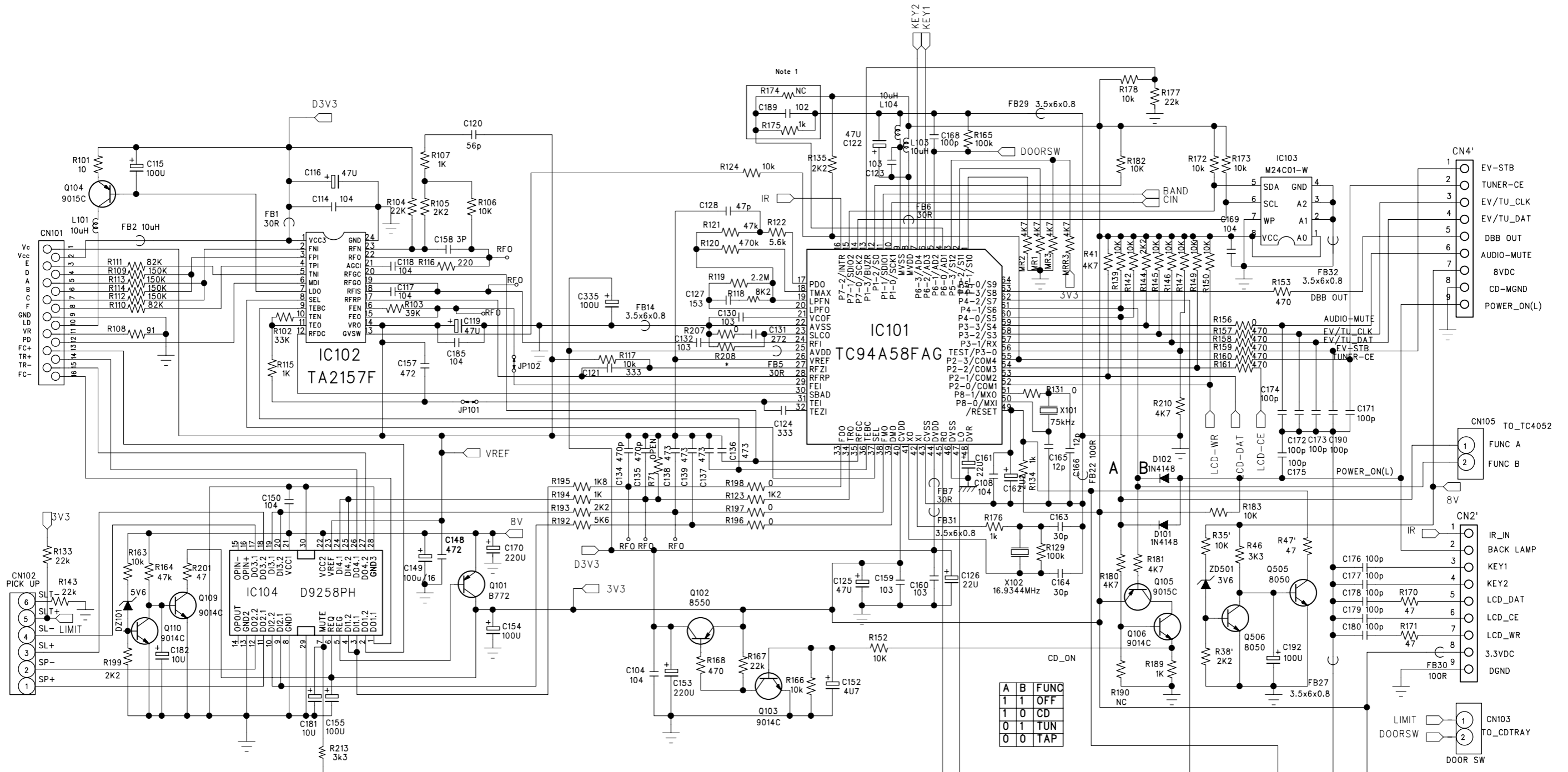


Dismantling of the Front Cabinet and Main Board

- 1) Remove 2 screws C as indicated to loosen the Front Cabinet.
- 2) Remove 5 screws D as indicated to loosen the Main Board.



CIRCUIT DIAGRAM - MAIN BOARD CD PART



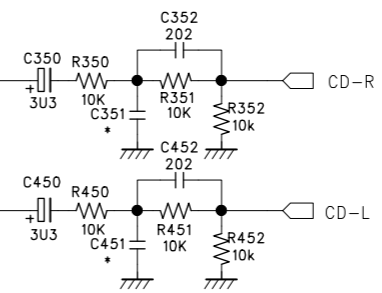
AREA	HOUR	MR3	MRR3
USA	12H	4K7	X
EUR	24H	X	4K7

AREA	BAND	FR.RANGE(Hz)	STEP	IF(Hz)
USA	FM	87.50-108.00M	100K	10.7M
	AM	530-1700K	10K	450K
EUR	FM	87.50-108.00M	50K	10.7M
	MW	531-1602K	9K	450K

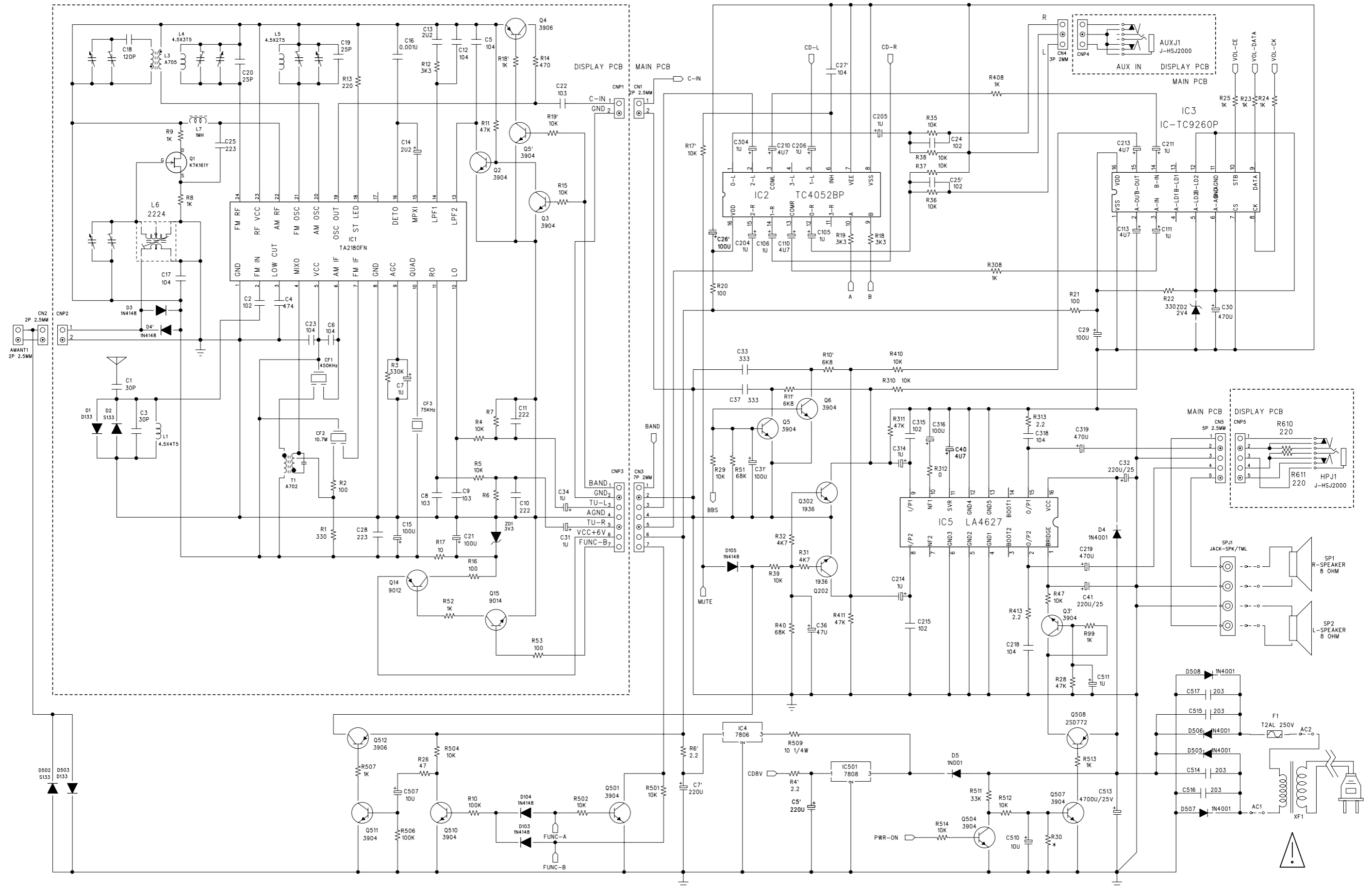
NOTES: PIN4 PUH&CLK SELECT (R174,R175)

A/D VAULE	PICKUP MECHANISM	AREA	R174	R175
0.00-0.28V	SONY KSS-213C	EURO	OPEN	1K
0.28-0.70V	SONY KSS-213C	USA	10K	1K8
0.70-1.11V	SONY KSS-213C	APEC	10K	3K9
1.13-1.57V	SONY KSS-213C	APEC	10K	6K8
1.57-2.04V	SANYO DA11	EURO	10K	12K
2.04-2.50V	SANYO DA11	USA	4K7	22K
2.50-2.96V	SANYO DA11	APEC	10K	47K
2.96-3.30V	SANYO DA11	APEC	1K	OPEN

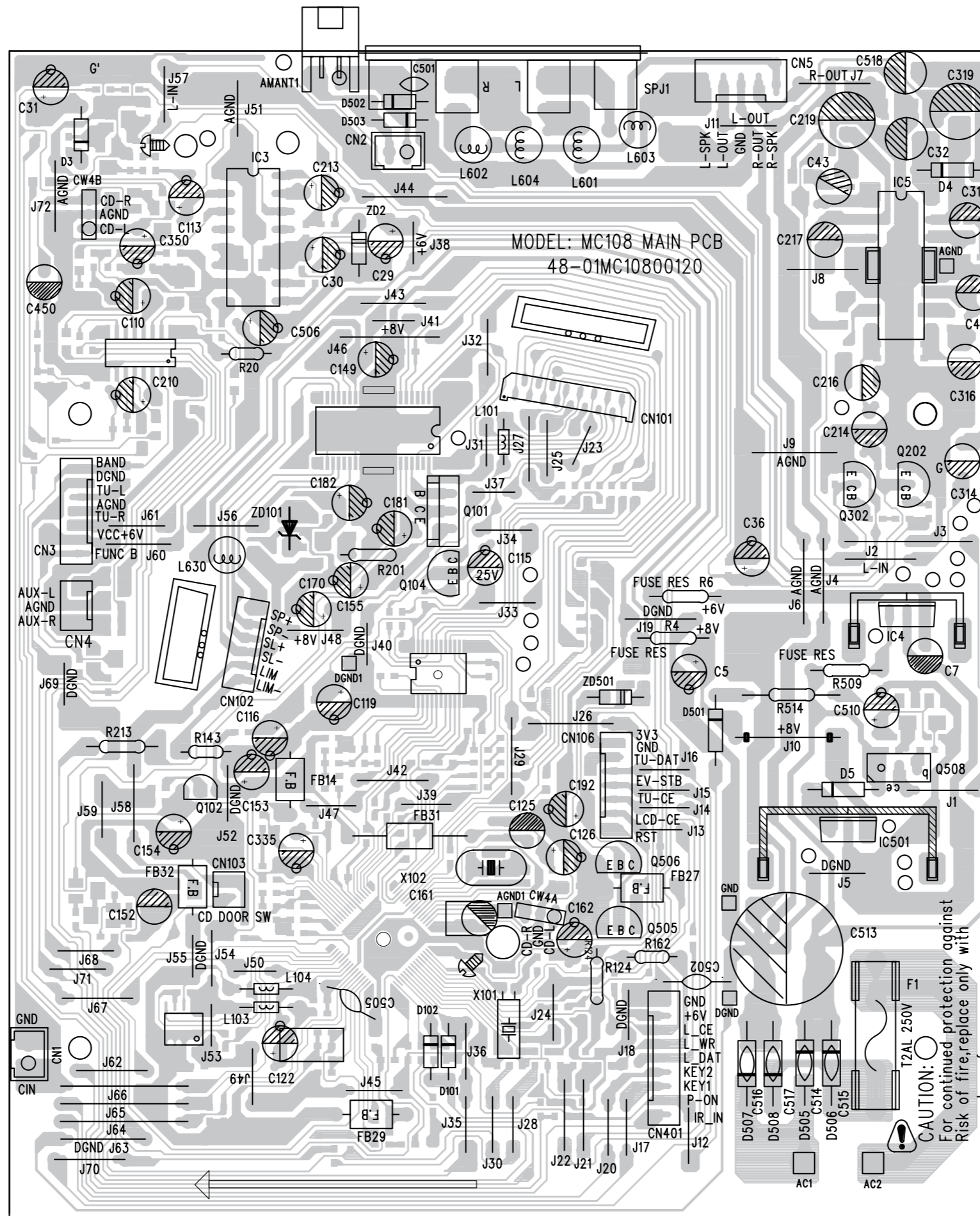
A	B	FUNC
1	1	OFF
1	0	CD
0	1	TUN
0	0	TAP



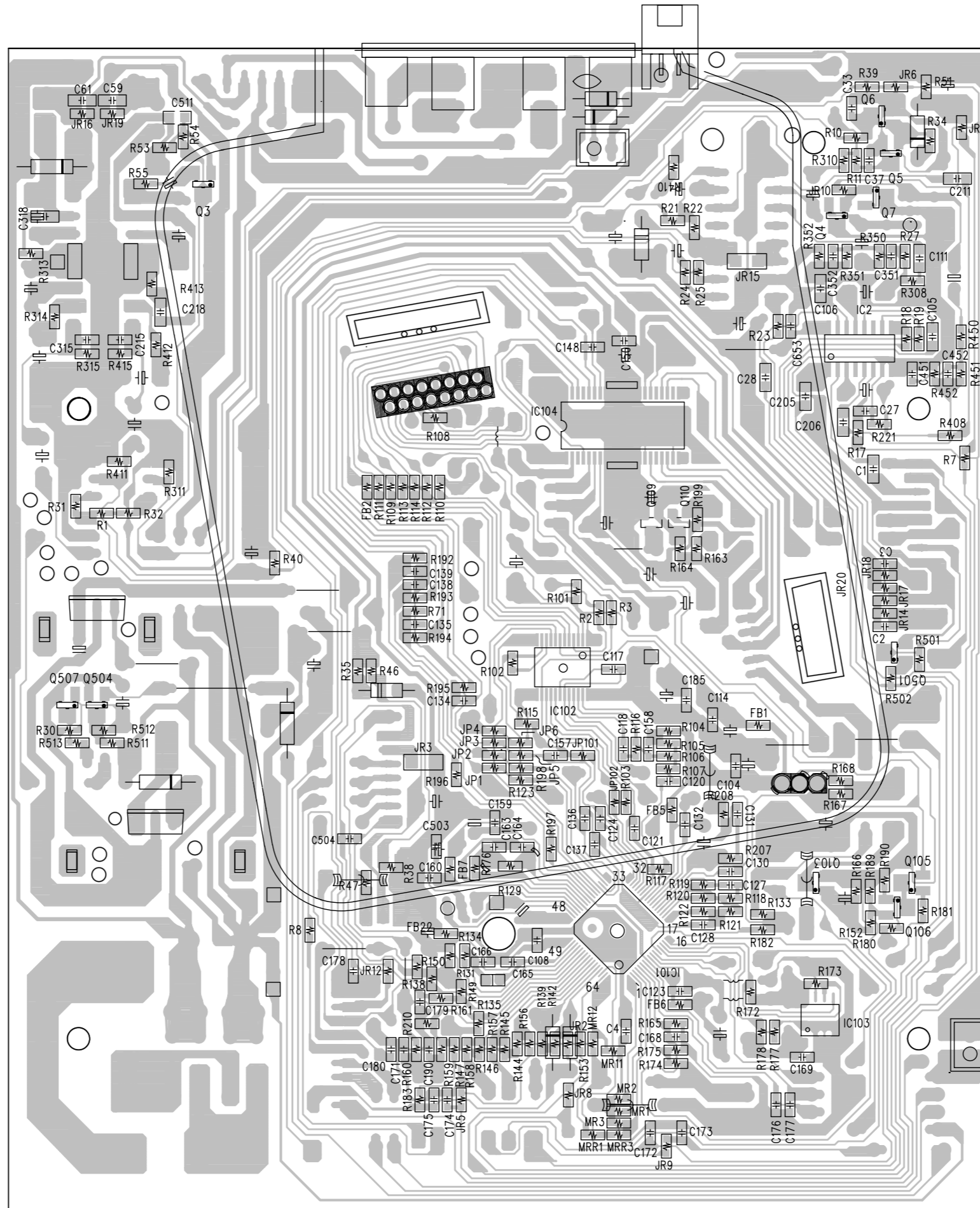
CIRCUIT DIAGRAM - MAIN BOARD TUNER PART



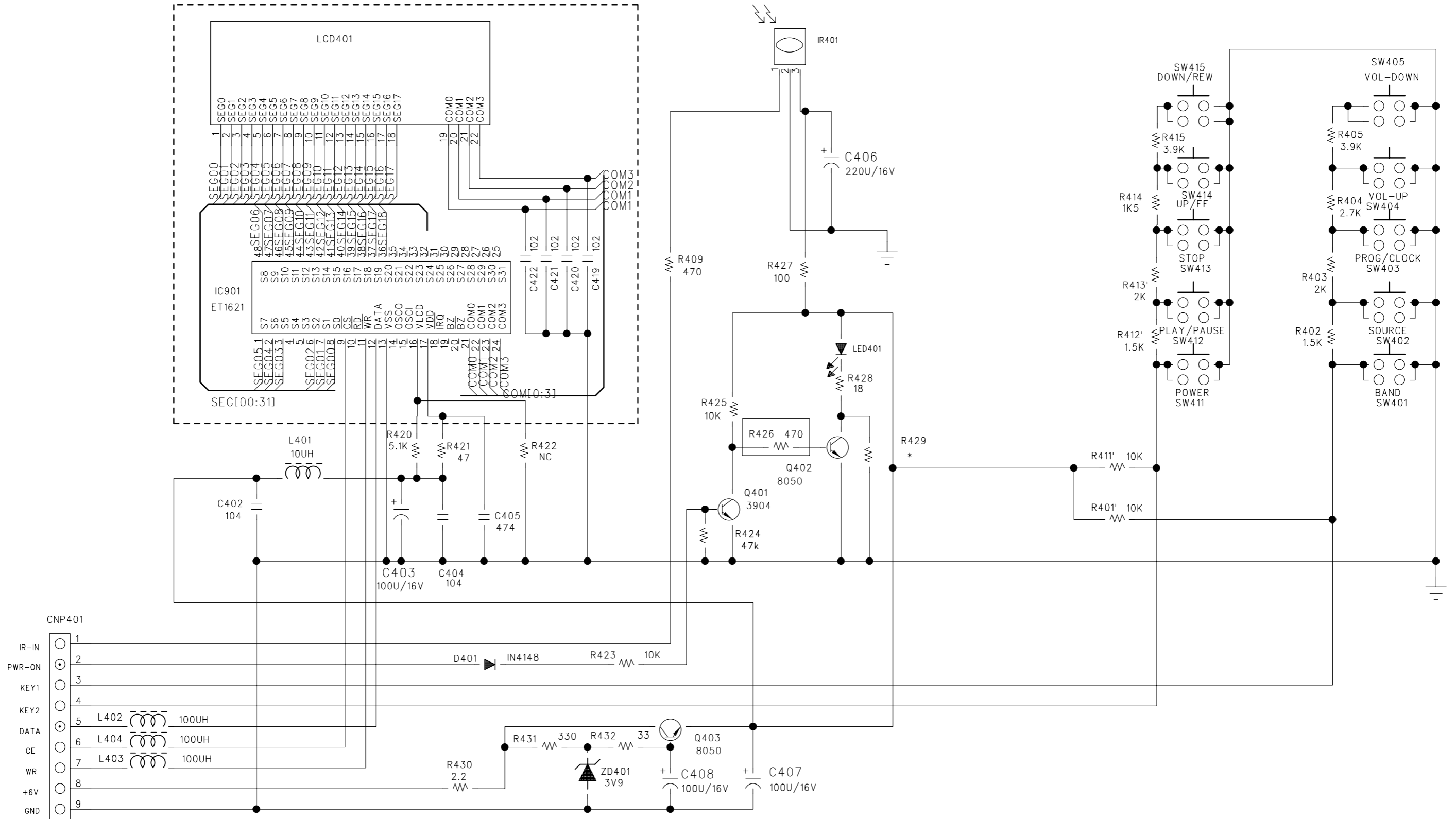
LAYOUT DIAGRAM - MAIN BOARD COMPONENT SIDE



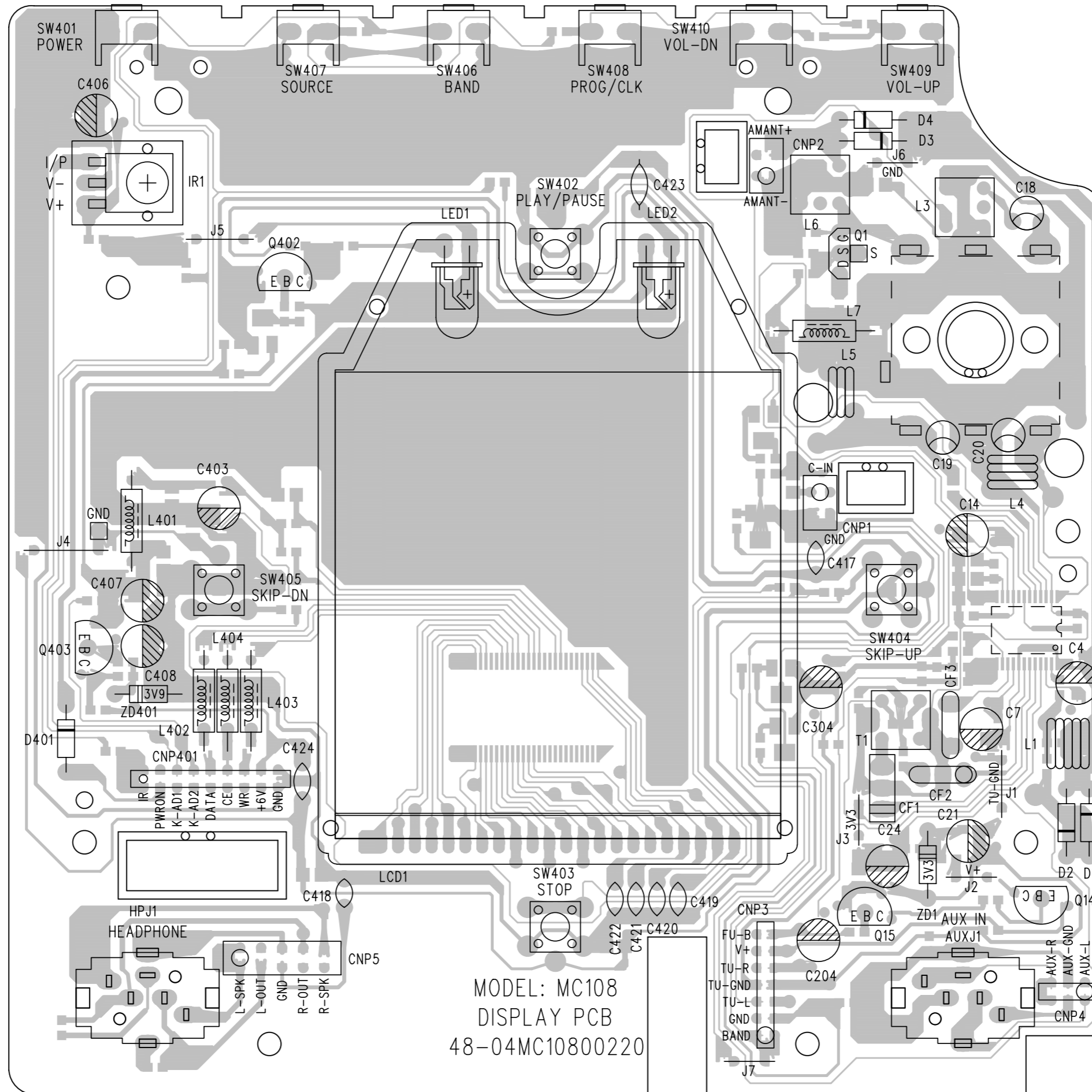
LAYOUT DIAGRAM - MAIN BOARD COPPER SIDE



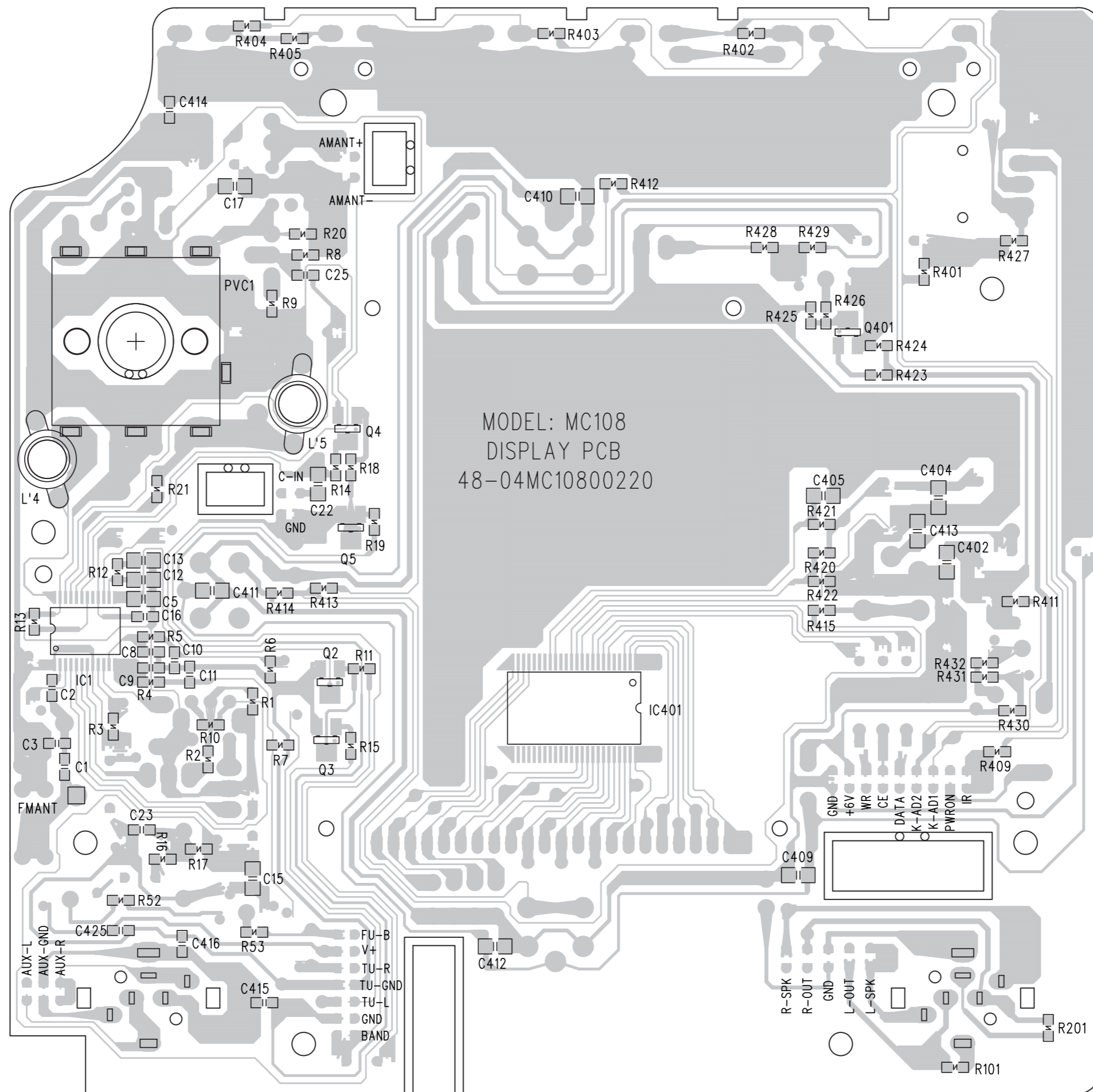
CIRCUIT DIAGRAM - DISPALY BOARD



LAYOUT DIAGRAM - DISPLAY BOARD COMPONENT SIDE

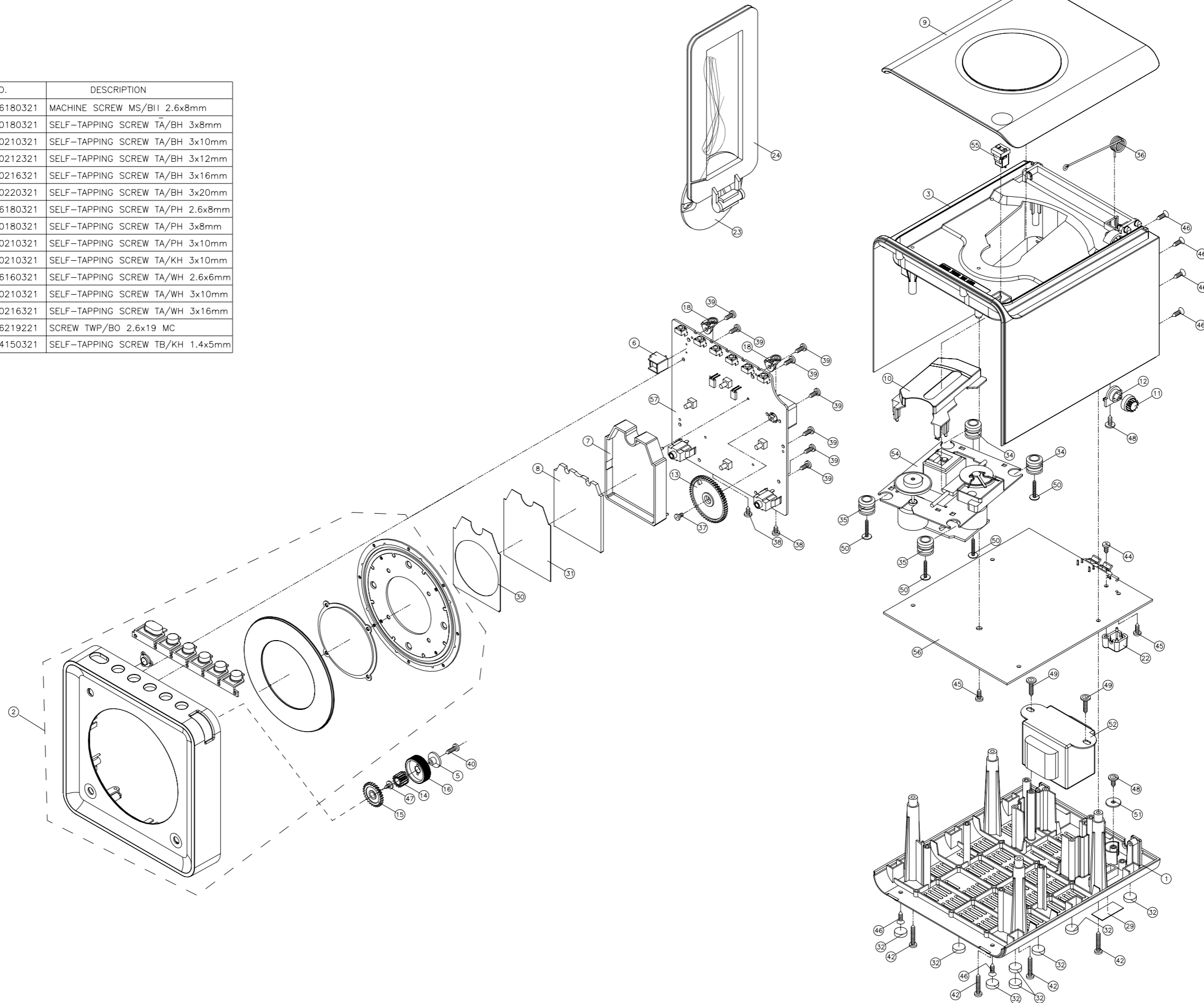


LAYOUT DIAGRAM - DISPLAY BOARD
COPPER SIDE



SET EXPLODED VIEW DIAGRAM

ITEM	PART NO.	DESCRIPTION
37	66-120226180321	MACHINE SCREW MS/BII 2.6x8mm
38	66-140230180321	SELF-TAPPING SCREW TA/BH 3x8mm
39	66-140230210321	SELF-TAPPING SCREW TA/BH 3x10mm
40	66-140230212321	SELF-TAPPING SCREW TA/BH 3x12mm
41	66-140230216321	SELF-TAPPING SCREW TA/BH 3x16mm
42	66-140230220321	SELF-TAPPING SCREW TA/BH 3x20mm
43	66-140326180321	SELF-TAPPING SCREW TA/PH 2.6x8mm
44	66-140330180321	SELF-TAPPING SCREW TA/PH 3x8mm
45	66-140330210321	SELF-TAPPING SCREW TA/PH 3x10mm
46	66-140530210321	SELF-TAPPING SCREW TA/KH 3x10mm
47	66-140826160321	SELF-TAPPING SCREW TA/WH 2.6x6mm
48	66-140830210321	SELF-TAPPING SCREW TA/WH 3x10mm
49	66-140830216321	SELF-TAPPING SCREW TA/WH 3x16mm
50	66-151426219221	SCREW TWP/BO 2.6x19 MC
66	66-150514150321	SELF-TAPPING SCREW TB/KH 1.4x5mm



MECHANICAL PARTSLIST

1	996500039693	BOTTOM CABINET (only for -/93)
1	994000005402	BOTTOM CABINET (not for -/93)
2	994000005403	FRONT CABINET ASSY (not for -/93)
2	996500042086	FRONT CABINET ASSY (only for -/93)
3	994000005404	REAR CAB (not for -/93)
3	996500039694	REAR CAB (only for -/93)
8	994000005397	BACK LIGHT LENS
9	994000005405	CD DOOR (not for -/93)
9	996500039334	CD DOOR (only for -/93)
10	994000004392	LASER COVER
11	994000005406	CD GEAR
12	994000005407	CD GEAR BRACKET
13	994000005408	PVC GEAR
14	994000005409	TUNING GEAR 1
15	994000005411	TUNING GEAR 2
16	994000005412	TUNING KNOB (not for -/93)
16	996500039335	TUNING KNOB (only for -/93)
32	994000005399	HARD RUBBER FOOT
34	994000000505	SHOCK ABSORBER (658 TA 30C)
35	994000000506	SHOCK ABSORBER (658 TB 40C)
36	994000005401	CD DOOR SPRING
52	994000005395	TRANSFORMER 230V (for -/05)
52	994000005396	TRANSFORMER 117/234V (for -/85)
52	996500042087	TRANSFORMER 220V (only for -/93)
54	994000005398	CD MECHANISM DA11B3VF
55	994000002354	CD DOOR SWITCH

ACCESSORIES

994000005376	REMOTE CONTROL ASS'Y
994000005377	SPEAKER BOX ASS'Y (2W)
994000005378	AM LOOP ANT ASS'Y WH

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - MAIN BOARD**- MISCELLANEOUS -**

X101	994000004352	CRYSTAL 75KHZ 12.5PF+-20PPM
X102	994000004354	RESONATOR CRA16.93MHz+-5%
SPJ1	994000003661	SPK JACK PT-22V11
F1	△ 994000004359	GLASS FUSE T2A/250V
	994000004376	SWITCH SL14-22AH-5AN (for -/85)
	994000005379	MAIN BOARD ASS'Y (2W)

- IC & TRANSISTORS -

Q202	994000004337	TRANSISTORS 2SD1936T-AC
Q302	994000004337	TRANSISTORS 2SD1936T-AC
Q104	994000004144	TRANSISTORS 9015C
Q101	994000001193	TRANSISTORS KSB772YS
Q508	994000001193	TRANSISTORS KSB772YS
Q105	994000003937	TRANSISTORS PMBT3906
Q512	994000003937	TRANSISTORS PMBT3906
Q505	994000004362	TRANSISTORS PSS8050D
Q506	994000004362	TRANSISTORS PSS8050D
Q506	9965 000 39345	TRANSISTORS 2W 8050D(only for -/93)
Q102	994000004339	TRANSISTORS PSS8550D
Q102	9965 000 39346	TRANSISTORS 2W 8550D(only for -/93)
IC104	994000005381	IC D9258PH
IC2	994000004344	IC HEF4052BT
IC4	994000004345	IC KA7806E (TO-220)
IC501	994000004532	IC KA7808E (TO-220)
IC5	994000004346	IC POWER AMP LA4627
IC103	994000001236	IC M24C01-WMN6
IC102	994000002844	IC TA2157FN
IC3	994000004347	IC TC9260P
IC101	994000005382	IC TC94A58FAG-454 (not for -/93)
IC101	996500042088	IC TC94A58FAG-456 (only for -/93)

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - DISPLAY BOARD**- MISCELLANEOUS -**

SW402	994000005393	TACT SWITCH
SW403	994000005393	TACT SWITCH
SW404	994000005393	TACT SWITCH
SW405	994000005393	TACT SWITCH
SW401	994000004167	V/TACT SWITCH
SW406	994000004167	V/TACT SWITCH
SW407	994000004167	V/TACT SWITCH
SW408	994000004167	V/TACT SWITCH
SW409	994000004167	V/TACT SWITCH
SW410	994000004167	V/TACT SWITCH
	994000005394	V/PHONE JACK
LED1	994000005385	LED LAMP (WHITE)
LED2	994000005385	LED LAMP (WHITE)
LCD1	994000005386	LCD DISPLAY
IR1	994000004367	OPTIC SENSER FM-6038TM2-5AN
PVC1	994000005388	P.V.C 126/20P #T443DF-1DF44Q(not for -/93)
PVC1	994000004147	P.V.C #T443DF-1DF44Q-JE(A/F)(only for -/93)
	994000001942	16P FLAT FLEX CABLE
	994000005383	DISPLAY BOARD ASS'Y

- COIL & FILTERS -

CF1	994000002857	CER. FILTER SFU450B
CF2	994000003642	CER. FILTER LT10.7MA5-A
CF3	994000005389	DISCRIMINA. FILTER JT10.7MG33-A
L6	994000004611	I.F.T #7M1A2224N (BLK)
L3	994000005391	I.F.T H=6mm 705 (RED)
T1	994000005392	I.F.T 7.6x7.6mm A702 (YELLOW)

- IC & TRANSISTORS -

Q1	994000005384	TRANSISTOR KTK161GR TO-92M
Q401	994000004338	SMD TRANSIS. PMBT3904 SOT23
Q2	994000004338	SMD TRANSIS. PMBT3904 SOT23
Q302	994000004338	SMD TRANSIS. PMBT3904 SOT23
Q5	994000004338	SMD TRANSIS. PMBT3904 SOT23
Q4	994000003937	SMD TRANSIS. PMBT3906 SOT23
Q402	994000004362	TRANSISTORS PSS8050D
Q403	994000004362	TRANSISTORS PSS8050D
IC401	994000004366	IC ET8861S (SSOP48)
IC1	994000005387	IC TA2180FN

Note: Only these parts mentioned in the list are normal service parts.

Only for MC108B/79
ELECTRICAL PARTSLIST - MAIN BOARD

- MISCELLANEOUS -

F1	△ 994000004359	GLASS FUSE 5X20MM T2A/250V VDE
IC101	994000005382	IC TC94A58FAG-456
IC102	994000002844	IC TA2157FN
IC103	994000001236	IC M24C01-WMN6
IC104	994000005381	IC D9258PH
IC2	994000004344	IC (PHILIPS) HEF4052BT
IC3	994000004347	IC (TOSHIBA) TC9260P
IC4	994000004345	IC (SAMSUNG) KA7806E (TO-220)
IC5	994000004346	IC POWER AMP (SANYO) LA4627
IC501	994000004532	IC KA7808E

- MISCELLANEOUS -

Q101	994000001193	TRANSISTORS KSB772YS
Q102	996500039346	TRANSISTORS 2W 8550D
Q104	994000004144	PNP TRANSISTORS 9015C
Q105	994000003937	SMD TRANSISTORS PMBT3906
Q202	994000004337	TRANSISTORS 2SD1936T-AC (SANY)
Q302	994000004337	TRANSISTORS 2SD1936T-AC (SANY)
Q505	996500039345	TRANSISTORS 2W 8050D
Q506	996500039345	TRANSISTORS 2W 8050D
Q508	994000001193	TRANSISTORS KSB772YS
SPJ1	994000003661	SPK JACK PT-22V11
X101	994000004352	CRYSTAL 75KHZ 12.5PF DT-381
X102	994000004354	RESONATOR CRA16.93MHZ+-5%
	994000005379	MAIN BOARD ASS'Y (2W)

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - DISPLAY BOARD

- MISCELLANEOUS -

IR1	994000004367	OPTIC SENSER FM-6038TM2-5AN
	994000001942	16P FFC 1MM L80MM
LCD1	994000005386	LCD DISPLAY
LED1	994000005385	LED LAMP (WHITE)
LED2	994000005385	LED LAMP (WHITE)
PVC1	994000004147	P.V.C #T443DF-1DF44Q-JE(A/F)
SW401	994000004167	V/TACT SWITCH 7X7.4MM 3.85MM
SW402	994000005393	TACT SWITCH
SW403	994000005393	TACT SWITCH
SW404	994000005393	TACT SWITCH
SW405	994000005393	TACT SWITCH
SW406	994000004167	V/TACT SWITCH 7X7.4MM 3.85MM
SW407	994000004167	V/TACT SWITCH 7X7.4MM 3.85MM
SW408	994000004167	V/TACT SWITCH 7X7.4MM 3.85MM
SW409	994000004167	V/TACT SWITCH 7X7.4MM 3.85MM
SW410	994000004167	V/TACT SWITCH 7X7.4MM 3.85MM
T1	994000005392	I.F.T 7.6X7.6MM A702 (YELLOW)
VP	994000005394	V/PHONE JACK
PCB	994000005383	DISPLAY BOARD ASS'Y

- COIL & FILTERS -


L1	996500039351	FM COIL 4.5x4.5T (0.8mm)
L4	994000003655	FM COIL 4.5X3.5T
L5	996500039350	FM COIL 4.5x2.5T (0.8mm)
L3	994000005391	I.F.T 7.5X7.5MM 705 (RED)
L6	994000004611	I.F.T 7MM #7M1A2224N
CF1	994000002857	CERAMIC FILTER SFU450B
CF2	996510001947	CERAMIC FILTER LT10.7MA5-A
CF3	994000005389	DISC. FILTER JT10.7MG33-A

- IC & TRANSISTORS -

IC1	994000005387	IC TA2180FN
IC401	994000004366	IC (TEK) ET8861S
Q1	994000004606	TRANSISTOR KTK161Y
Q2	994000004338	SMD TRANSISTORS PMBT3904
Q3	994000004338	SMD TRANSISTORS PMBT3904
Q4	994000003937	SMD TRANSISTORS PMBT3906
Q401	994000004338	SMD TRANSISTORS PMBT3904
Q402	996500039345	TRANSISTORS 2W 8050D
Q403	996500039345	TRANSISTORS 2W 8050D
Q5	994000004338	SMD TRANSISTORS PMBT3904

Note: Only these parts mentioned in the list are normal service parts.

MECHANICAL PARTSLIST

1	996500039695	BOTTOM CABINET
2	996510002167	FRONT CABINET ASSY
3	996500039697	REAR CABINET
8	994000005397	BACK LIGHT LENS
9	996500039698	CD DOOR(BLK)
10	994000004392	LASER COVER (FOR SANYO CD)
11	996510000865	CD GEAR BLK
12	996510000864	CD GEAR BRACKET
14	996510000866	TUNING GEAR 1 BLK
13	996510002168	
15	996510000867	TUNING GEAR 2 BLK
16	996500039699	TUNING KNOB
32	996500039360	RUBBER FOOT(BLK)
34	994000000505	CD DAMPER 658 TA 30
35	994000000506	CD DAMPER 658 TB 40
36	994000005401	CD DOOR SPRING
52	 996510002169	TRANSF.EI48 240V HF-S48F19TM
54	994000005398	CD MECHANISM DA11B3VF
55	994000002354	CD DOOR SWITCH DLS-02-W-1

ACCESSORIES

AM	996510000269	AM LOOP ANT ASS'Y
RC	996510002170	REMOTE CONTROL ASS'Y
SPEA	996510002171	SPEAKER BOX ASS'Y (2W)

Note: Only these parts mentioned in the list are normal service parts.

REVISION LIST

Version 1.0 (3141 785 30990)

- Initial Release

Version 1.1 (3141 785 30991)

- New versions MC108/93 is introduced.
- Pages 8-2 : Mechanical parts list adapted.
- Pages 9-1 and 9-2 : Electrical parts list adapted.

Version 1.2 (3141 785 30992)

- New versions MC108B/79 is introduced.