

Service
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Service Manual



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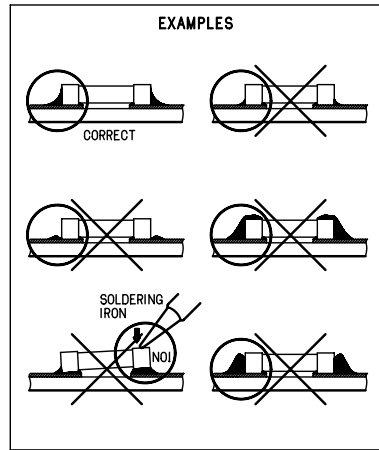
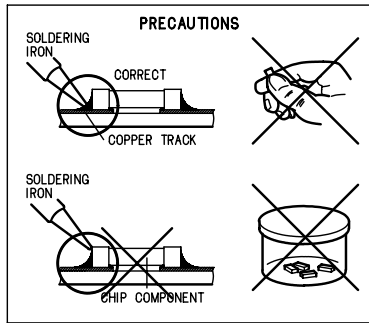
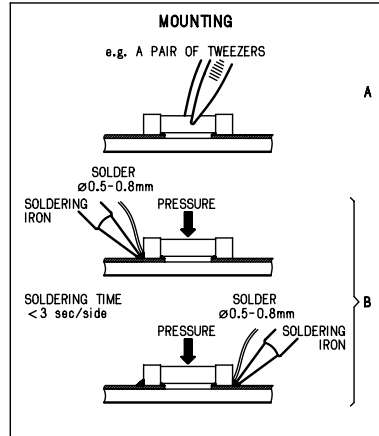
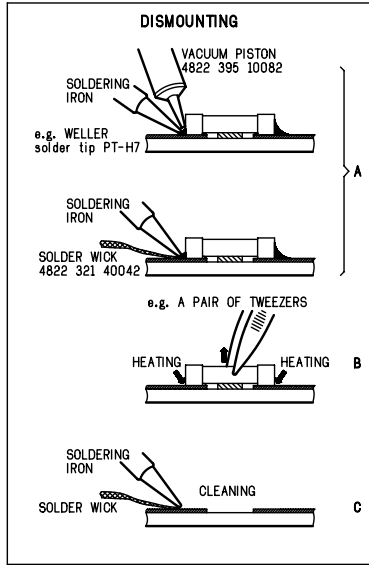
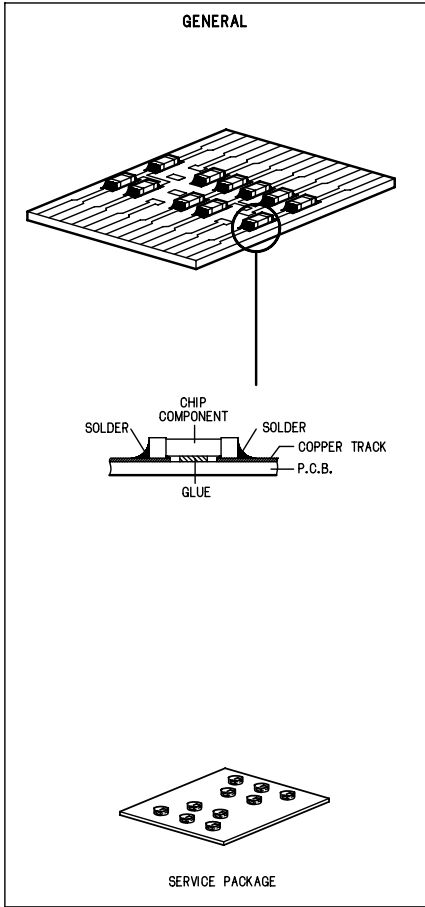
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HANDLING CHIP COMPONENTS



(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 enfilier le bracelet sert 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). 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 cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialeto a resistenza. Assicurarsi 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)

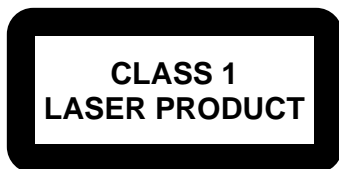
DANGER: Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

(S) Varning !

Osynlig laserstrålning när apparaten är öppnad och spärrar är urkopplad. Betrakta ej strålen.

(45) Advarsel !

Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.



(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".

(FIN) Varoitus !

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

INFORMATION ABOUT LEAD-FREE SOLDERING

Philips CE is producing lead-free sets from 1.1.2005 onwards.

IDENTIFICATION:

Regardless of special logo (not always indicated) one must treat all sets from 1 Jan 2005 onwards, according next rules:



Example S/N:



Bottom line of typeplate gives a 14-digit S/N. Digit 5&6 is the year, digit 7&8 is the week number, so in this case 2005 wk12

So from 0501 onwards = from 1 Jan 2005 onwards

Important note: In fact also products of year 2004 must be treated in this way as long as you avoid mixing solder-alloys (leaded/lead -free). So best to always use SAC305 and the higher temperatures belong to this.

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free solder alloy Philips SAC305 with order code 0622 149 00106. If lead-free solder-paste is required, please contact the manufacturer of your solder-equipment. In general use of solder-paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free solder alloy. The solder tool must be able
 - To reach at least a solder-temperature of 400°C,
 - To stabilize the adjusted temperature at the solder-tip
 - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature around 360°C – 380°C is reached and stabilized at the solder joint. Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed. To avoid wear-out of tips switch off un-used equipment, or reduce heat.
- Mix of lead-free solder alloy / parts with leaded solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed solder alloy types (leaded and lead-free).
If one cannot avoid or does not know whether product is lead-free, clean carefully the solder-joint from old solder alloy and re-solder with new solder alloy (SAC305).
- Use only original spare-parts listed in the Service-Manuals. Not listed standard-material (commodities) has to be purchased at external companies.
- Special information for BGA-ICs:
 - always use the 12nc-recognizable soldering temperature profile of the specific BGA (for de-soldering always use the lead-free temperature profile, in case of doubt)
 - lead free BGA-ICs will be delivered in so-called 'dry-packaging' (sealed pack including a silica gel pack) to protect the IC against moisture. After opening, dependent of MSL-level seen on indicator-label in the bag, the BGA-IC possibly still has to be baked dry. (MSL=Moisture Sensitivity Level). This will be communicated via AYS-website.
 - Do not re-use BGAs at all.
- For sets produced before 1.1.2005 (except products of 2004), containing leaded solder-alloy and components, all needed spare-parts will be available till the end of the service-period. For repair of such sets nothing changes.
- On our website www.atyourservice.ce.philips.com you find more information to:
 - * BGA-de-/soldering (+ baking instructions)
 - * Heating-profiles of BGAs and other ICs used in Philips-sets

You will find this and more technical information within the "magazine", chapter "workshop news".

For additional questions please contact your local repair-helpdesk.

SERVICE INSTRUCTION

Safety regulations require that after a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the AC Power lead for external damage.
- Check the strain relief of the AC Power cord for proper function.
- Check the electrical DC resistance between the AC Power Plug and the secondary side (only for sets which have a AC Power isolated power supply):
 1. Unplug the AC Power cord and connect a wire between the two pins of the AC Power plug.
 2. Set the AC Power switch to the "on" position (keep the AC Power cord unplugged!).
 3. Measure the resistance value between the pins of the AC Power plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be larger than 4.5 Mohm (For U.S. it should be between 4.2 Mohm and 12 Mohm).
 4. Switch "off" the set, and remove the wire between the two pins of the AC Power plug.
- Check the cabinet for defects, to avoid touching of any inner parts by the customer.

GENERAL

Mains voltage	-/55/98 : 120/230 V
	-/93 : 220V
	-/94 : 230 V
	-/61 : 220 V
Mains frequency	-/55/98 : 60 / 50 Hz
	-/93 : 50 Hz
	-/94 : 50 Hz
	-/61 : 50 Hz
Battery	mains : 9 V (R14 x 6)
Power consumption	: 15W

AMPLIFIER

Output power	mains : 2 x 1 W
	battery : 2 x 1 W
Speaker impedance	: 2 x 8 ohm

TUNER - FM SECTION

Tuning range	: 87.5 - 108 MHz
IF frequency	: 10.7 MHz \pm 0.3MHz
Sensitivity	: < 14 dB μ V at 26dB S/N
Selectivity S9/300kHz	: > 20 dB
IF rejection	: > 50 dB
Image rejection	: > 20 dB
-3dB limiting point	: 18dB μ V (limit)
Distortion	: 5% (nom.)
	: 10% (limit)

TUNER - MW SECTION

Tuning range	: 520 - 1600 kHz
IF frequency	: 453 kHz \pm 3 kHz
Sensitivity	: < 72 dB μ V/m at 26dB S/N
Selectivity	: > 16 dB
IF rejection	: > 24 dB
Image rejection ratio	: > 28 dB
Channel difference	: 3dB (limit)
Overall frequency response	: 120Hz (limit)
	1.1kHz

AUDIO CASSETTE RECORDER

Number of tracks	: 1 stereo
Tape speed	: 4.76 cm/sec + 3/-2%
Wow & flutter	: < 0.4 % JIS Unwtd.
Fast wind/rewind C60	: < 130 sec.
Frequency response	P/B : 100 - 8000 Hz
S/N ratio	: > 36 dB

COMPACT DISC

S/N ratio unwtd.	: > 50 dB
Channel difference	1 kHz : < 2 dB
Crosstalk	1 kHz : > 30 dB
Frequency response	: \pm 2dB at 100Hz
THD(1kHz,0dB)	: 1.5%

SERVICE TOOLS

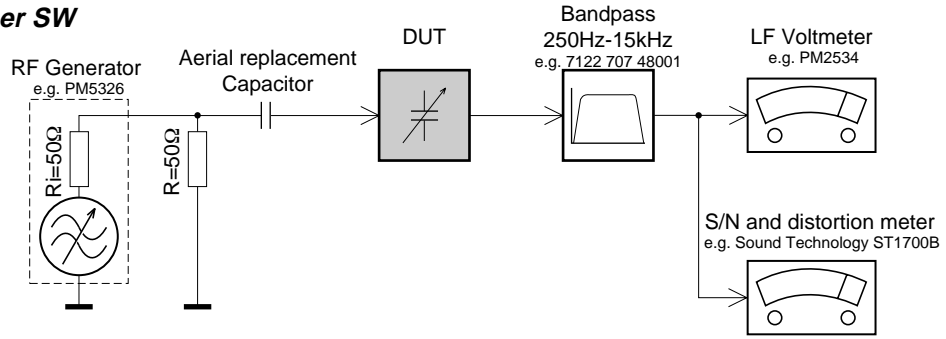
Audio signal disc SBC 429.....	4822 397 30184
Playability test disc SBC 444.....	4822 397 30245
Test disc 5 (disc without errors) +	
Test disc 5A (disc with dropout errors, black spots and fingerprints)	
SBC 426/426A.....	4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30 dB level without "pause").....	4822 397 30155

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

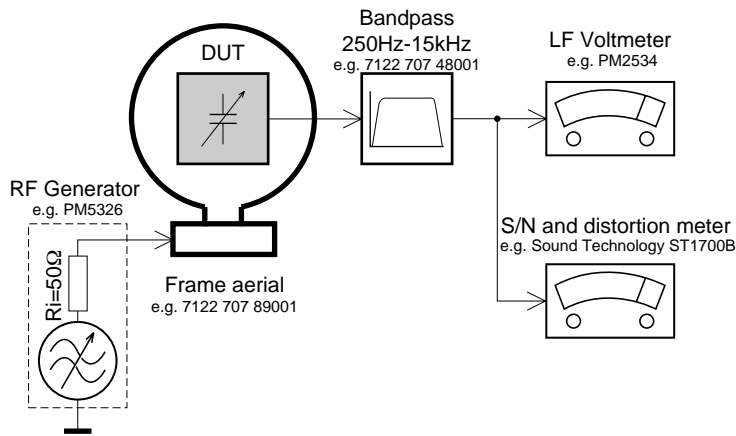
SERVICE MEASUREMENT

Tuner SW



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 250Hz) to eliminate hum (50Hz, 100Hz).

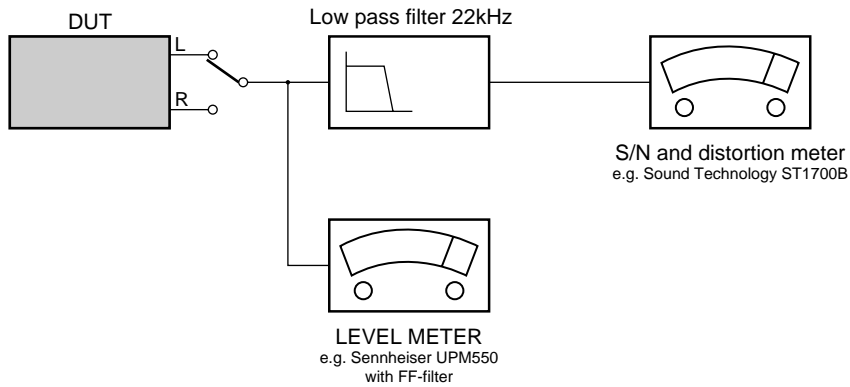
Tuner AM (MW,LW)

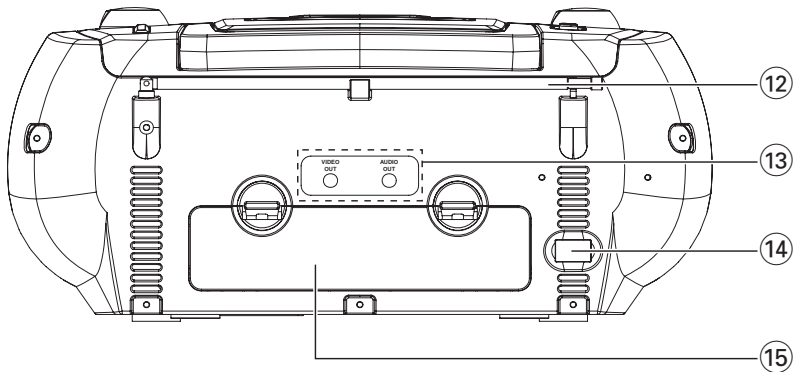
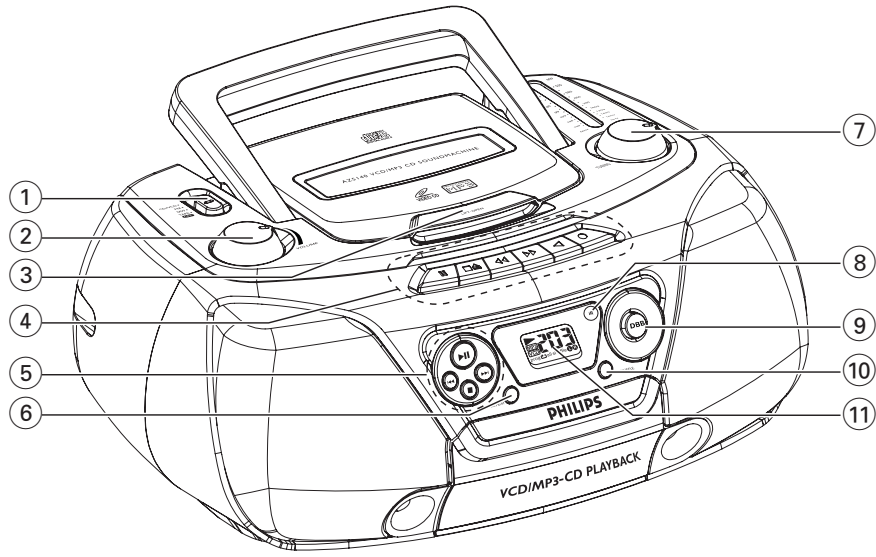


To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday«s cage.

CD

Use Audio Signal Disc SBC429 4822 397 30184 (replaces test disc 3)
L.P.F. = 13th order filter 4822 395 30204





CONTROLS

TOP AND FRONT PANEL

- ① **Source selector** - power on/off switch and to select source of sound source:
CD•VCD/MW/FM/TAPE.
- ② **VOLUME** - to adjust volume level.
- ③ **LIFT - OPEN** - to open the CD door.
- ④ **Cassette keys:**
 - ⏏ - to interrupt recording or playback.
 - ▲ - to stop the tape and to open the cassette holder.
 - ⏪ / ⏩ - to fast wind/rewind the tape.
 - ▶ - to start playback.
 - - to start recording.
- ⑤ **▶⏏** - to start or interrupt CD playback.
 - - to stop playback
 - ⏪ / ⏩ - to skip or search a passage or a track
- ⑥ **REPEAT** - to repeat a track/programme/entire CD playback
- ⑦ **TUNING** - to tune to radio stations
- ⑧ **iR** - infrared sensor for remote control
- ⑨ **DBB (Dynamic Bass Boost)** - for a more vivid bass response.
- ⑩ **SHUFFLE** - to play all tracks in random order
- ⑪ **LCD Display** - to show the VCD, MP3 functions and disc status.

BACK PANEL

- ⑫ **Telescopic aerial** - to improve FM radio reception
- ⑬ **VIDEO/AUDIO OUT** - connect to the TV or VCR VIDEO/AUDIO IN
- ⑭ **AC MAINS ~** - socket for mains lead
- ⑮ **Battery door** - to open the battery compartment

SUPPLIED ACCESSORIES

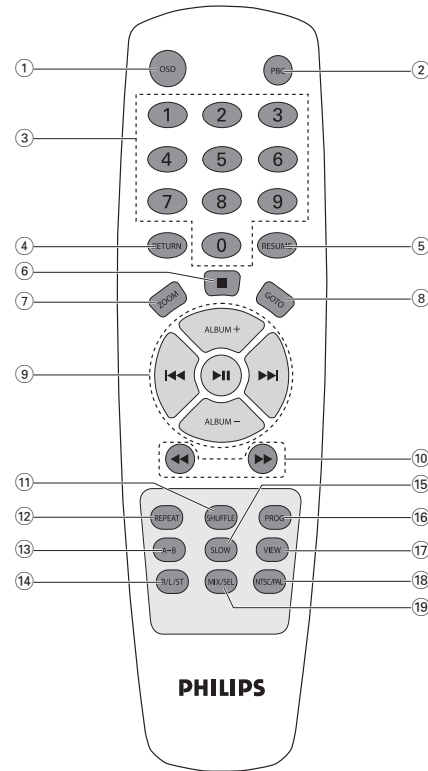
- Remote Control 1 pc
- Mains Cord 1 pc
- Audio / Video Cable 1 pc

REMOTE CONTROL

- ① **OSD** - to switch on/off the on screen display on the TV screen.
- ② **PBC (PLAYBACK CONTROL)** - to switch on or off PBC mode (for VCD version 2.0 only).
- ③ **DIGITS 0 - 9**
for CD/VCD/MP3-CD - to select a track number.
(numbers consisting more than 2 figures must be keyed in within 2 seconds)
- ④ **RETURN** - to return to the previous MENU level during playback (for VCD with PBC on).
- ⑤ **RESUME** - to resume playback in stop mode.
- ⑥ **STOP ■**
- to stop playback or to clear a programme.
- ⑦ **ZOOM**
for VCD only to zoom in or zoom out picture.
- ⑧ **GOTO** - to start playback at any chosen time on the disc (for CD/VCD operation only and PBC mode is off).

REMOTE CONTROL

- ⑨ **▶||**
- to start or interrupt playback.
◀◀ ▶▶
for MP3-CD only to select previous/next title.
for CD/VCD to search backward/forward track.
- ALBUM+/-**
for MP3-CD only to select previous / next album
- ⑩ **◀ / ▶** (for CD/VCD/MP3-CD)
- to search back or forward.
- ⑪ **SHUFFLE** - When in CD/VCD mode, press to start or stop shuffle play mode (for VCD, only available in PBC off mode)
- ⑫ **REPEAT**
for MP3-CD to repeat a track, or whole disc.
for CD/VCD to repeat a disc track or the whole disc.
- ⑬ **A - B** - to playback a certain scene or passage repeatedly (for CD/VCD operation only).
- ⑭ **R/L/ST** - to select channel left / channel right / stereo sound, or to select a language in a bilingual VCD.
- ⑮ **SLOW** - to watch a VCD at a slower speed (for VCD operation only).
- ⑯ **PROG**
for CD/VCD/MP3-CD to programme disc tracks.
- ⑰ **VIEW** - to scan through a VCD with 9 pictures display on TV screen.
- ⑱ **NTSC/PAL** - to select the video output for NTSC or PAL system.
- ⑲ **MIX/SEL** - to select disc format (CD / MP3-CD) in a mixed mode disc.



POWER SUPPLY

IMPORTANT!

- For best CD/MP3-CD/VCD playback, please plug in your set to an AC power supply where convenient.
- If operated in DC mode, see below approximate playtime. (Playtime is also varied from different brand batteries) :

Battery type	Playtime
Alkaline	approximate 9 hrs
Zinc Carbonate	approximate 45 minutes

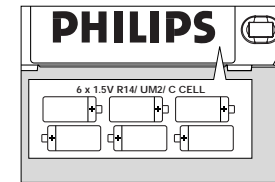
- The CD part of this system also serves as a Video CD player if you connect it to your TV set.
- Before viewing the Video CD, ensure that the set is switched to corresponding PAL or NTSC system of your TV set (exception Multi-system TV).

BATTERIES (NOT SUPPLIED)

Whenever convenient, use the mains supply if you want to conserve battery life. The battery supply will be switched off when the set is connected to the mains. Make sure you remove the plug from the set and wall outlet before inserting batteries.

Batteries

1. Open the battery compartment and insert six batteries, type **R14, UM2** or **C-cells**, (preferably alkaline) with the correct polarity as indicated by the "+" and "-" symbols inside the compartment.



Remote control

1. Open the battery door and insert two batteries, type **AAA, R03** or **UM4** (preferably alkaline).
2. Replace the compartment door, making sure the batteries are firmly and correctly in place.
3. Remove the batteries if they are exhausted or if they will not be used for a long period.

- The incorrect use of batteries can cause electrolyte leakage and will corrode the compartment or cause the batteries to burst. Therefore:
- Do not mix battery types, e.g. alkaline with zinc carbonate.
- When inserting new batteries, replace all at the same time.
- Remove the batteries if the set is not to be used for a long time.

Note :

- The battery supply is switched off when the set is connected to the mains.

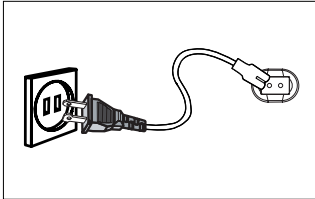
TV screen is disabled during CD / MP3-CD playing if your AZ5140 is battery powered.

Batteries contain chemical substances, so they should be disposed of properly.

GENERAL OPERATION

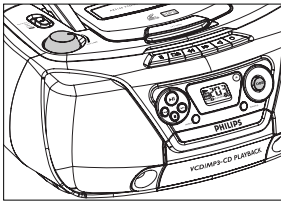
MAINS

1. Check if the mains voltage as shown on the type plate (on the bottom of the set) corresponds to your local mains voltage. If it does not, consult your dealer or service organization.
2. Connect the mains lead to the **AC MAINS ~** socket and the wall socket.
→ The set is now ready for use.
3. To switch off the mains supply completely, pull the mains plug out of the wall socket.
→ Disconnect the mains lead when you change over to battery supply, or to protect the set during heavy thunderstorms.



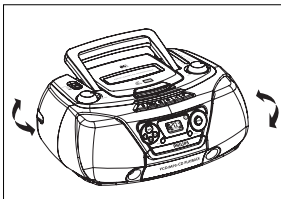
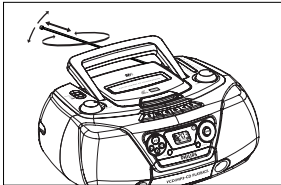
GENERAL OPERATION

1. To switch on the set, adjust the source selector.
2. Adjust the sound using the **VOLUME** and **DBB** controls.
- 3 To switch off the set, adjust the source selector to the **TAPE/OFF** position, with the cassette keys released.



RADIO RECEPTION

- 1 Set the source selector to **FM** or **MW**.
2. Adjust the sound using the **VOLUME** controls and the **DBB** switch.
3. Tune to a radio station using the **TUNING** knob.
 - For FM, pull out the telescopic aerial. To improve FM-reception, incline and turn the aerial. Reduce its length if the FM-signal is too strong (very close to a transmitter).
 - For MW, the set is provided with a built-in aerial, so the telescopic aerial is not needed. Direct the aerial by turning the whole set.
4. To switch off, set the source selector to the **TAPE/OFF** position (with the cassette keys released).



TROUBLESHOOTING

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

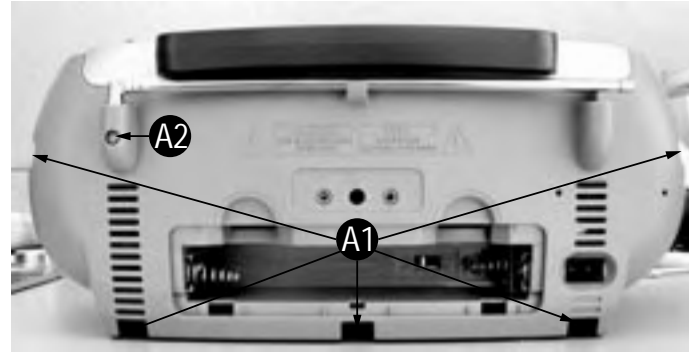
WARNING: Do not open the set as there is a risk of electric shock. Under no circumstances should you try to repair the set yourself, as this will invalidate the guarantee.

Problem	Solution
CD/VCD OPERATION	
"NO DISC" 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 readable disc or correct recorded format MP3-CD.
No picture on TV screen No colour on TV	<ul style="list-style-type: none"> – Connect the cable between the system and TV. – Change the system to the respective PAL or NTSC setting.
RADIO RECEPTION	
Radio reception is poor	<ul style="list-style-type: none"> – If the signal is too weak, adjust the antenna for better reception. – Increase the distance between the Receiver and your TV or VCR.
TAPE OPERATION/RECORDING	
Recording or playback cannot be made	<ul style="list-style-type: none"> – Clean deck parts, see "Maintenance". – Use only NORMAL (IEC I) tape. – Apply a piece of adhesive tape over the missing tab space.
GENERAL	
The system does not react when buttons pressed/set does not work/no display on LCD.	<ul style="list-style-type: none"> – Slide the source sector to TAPE/OFF. Remove and reconnect the AC power plug for 30 seconds and switch on the set again.
Sound cannot be heard or is of poor quality	<ul style="list-style-type: none"> – Adjust the volume. – Make sure the MP3-CD was recorded within 32-320 kbps (128kbps preferably) with sampling frequencies at 8 - 48 kHz (44.1kHz preferably).
The remote control does not function properly	<ul style="list-style-type: none"> – 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 in the direction of the system's IR sensor.

DISASSEMBLY DIAGRAM

A.Remove Back Cabinet

A1 remove screws M3x30 (5pcs)
A2 remove screws T3x7.5 (1pcs)



B.Remove Top Cover

A1 remove screws M3x10 (3pcs)



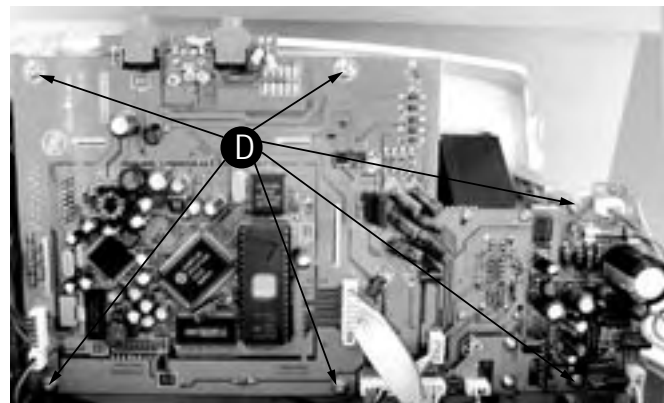
C.Remove The Handle

(press the two ribs vertical direction, and then slide)



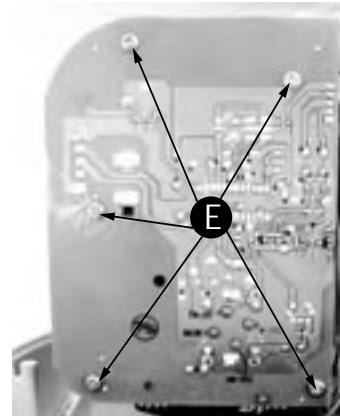
D.Remove Motherboard

D remove screws M3x11 (6pcs)



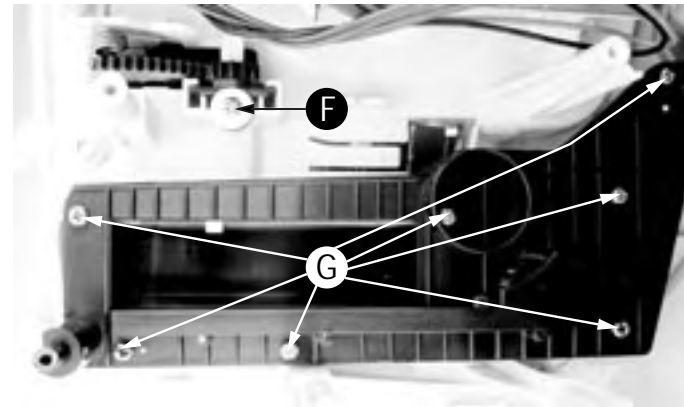
E.Remove Tuner board

E remove screws M3x10 (5pcs)



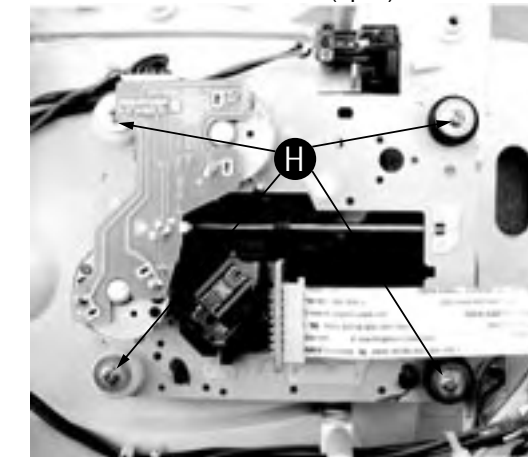
F.Remove Tuner Slider Assy and then remove cd cover

F remove screws M3x10 (5pcs)
G remove screws M3x10 (5pcs)



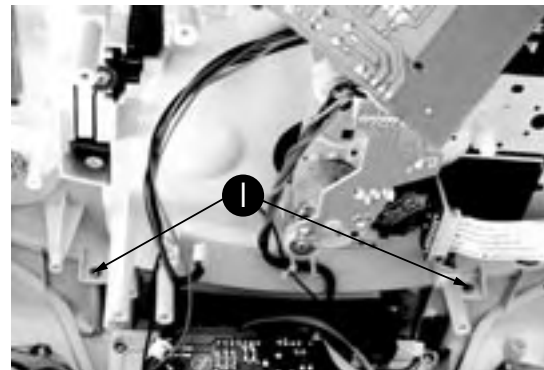
H.Remove CD Motor

H remove screws M3x10 (4pcs)



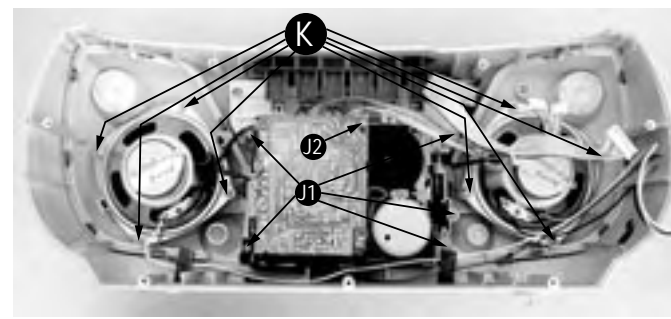
I.Detach The Top Cover

I remove screws M3x15 (2pcs)



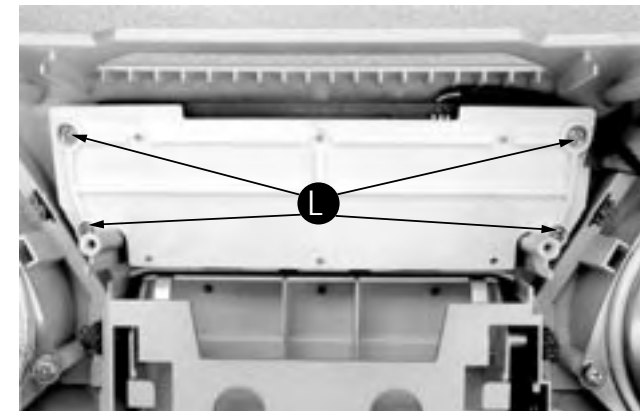
J.Remove the Tape & Speaker

J1 remove screws M3x10 (4pcs)
J2 remove screws M3x8 (1pcs)
K remove screws M3x8 (8pcs)



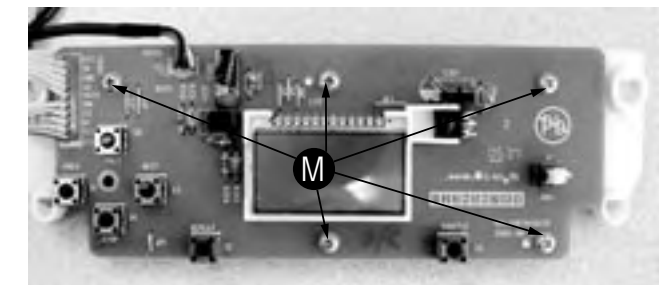
L.Remove the Key Cover

L remove screws M3x8 (4pcs)

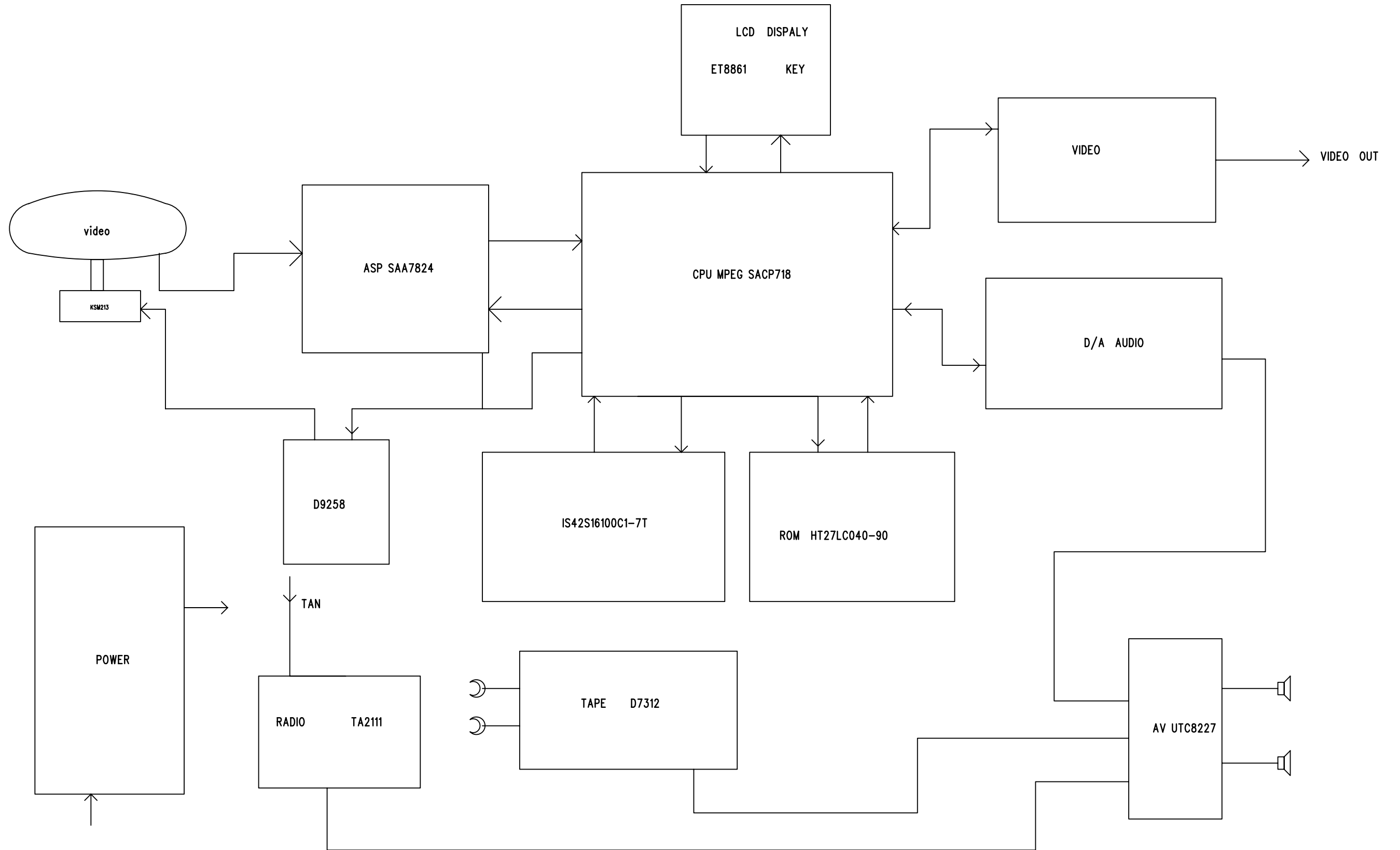


M.Remove the Key Board

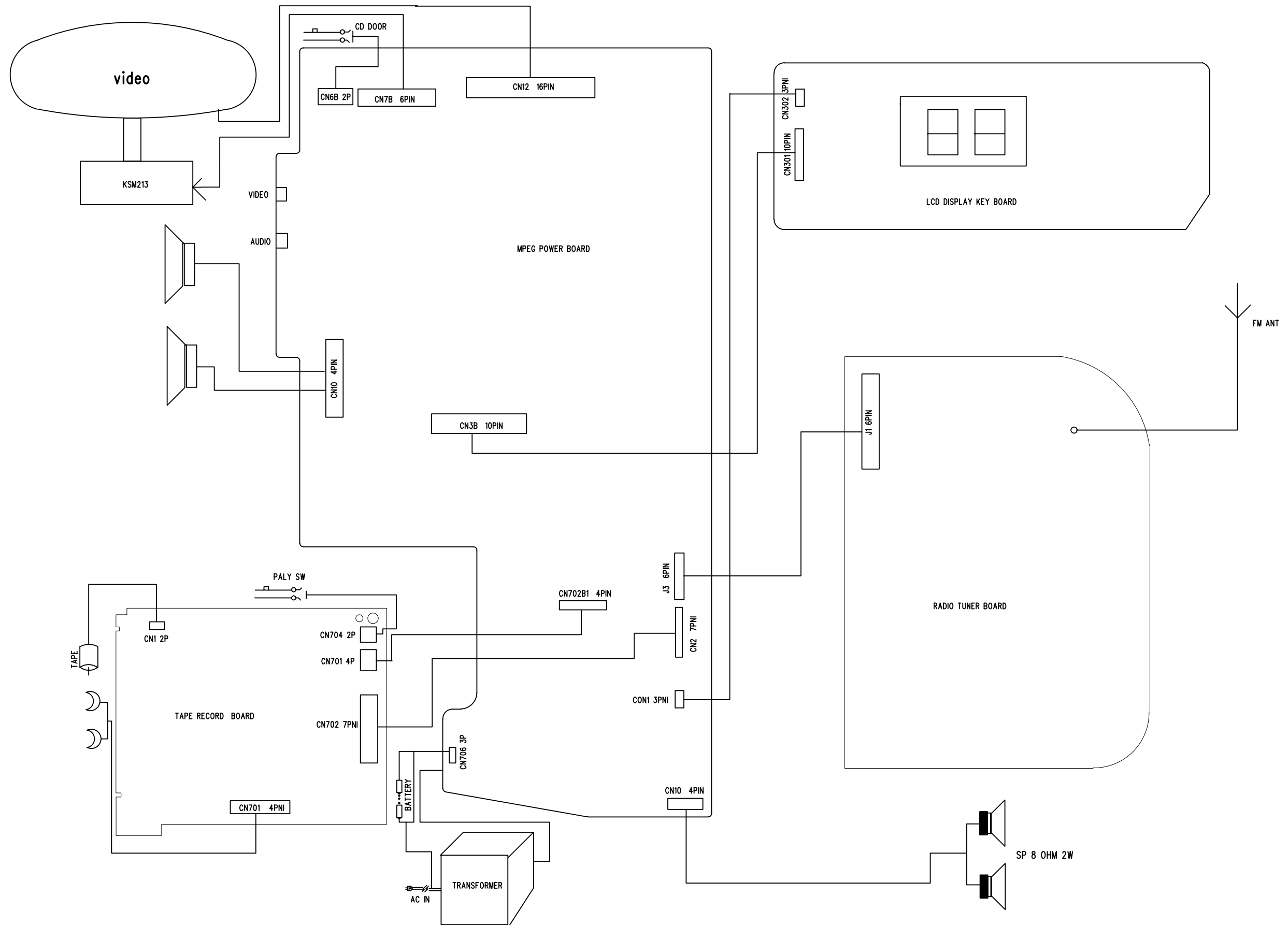
M remove screws M2.6x7 (5pcs)



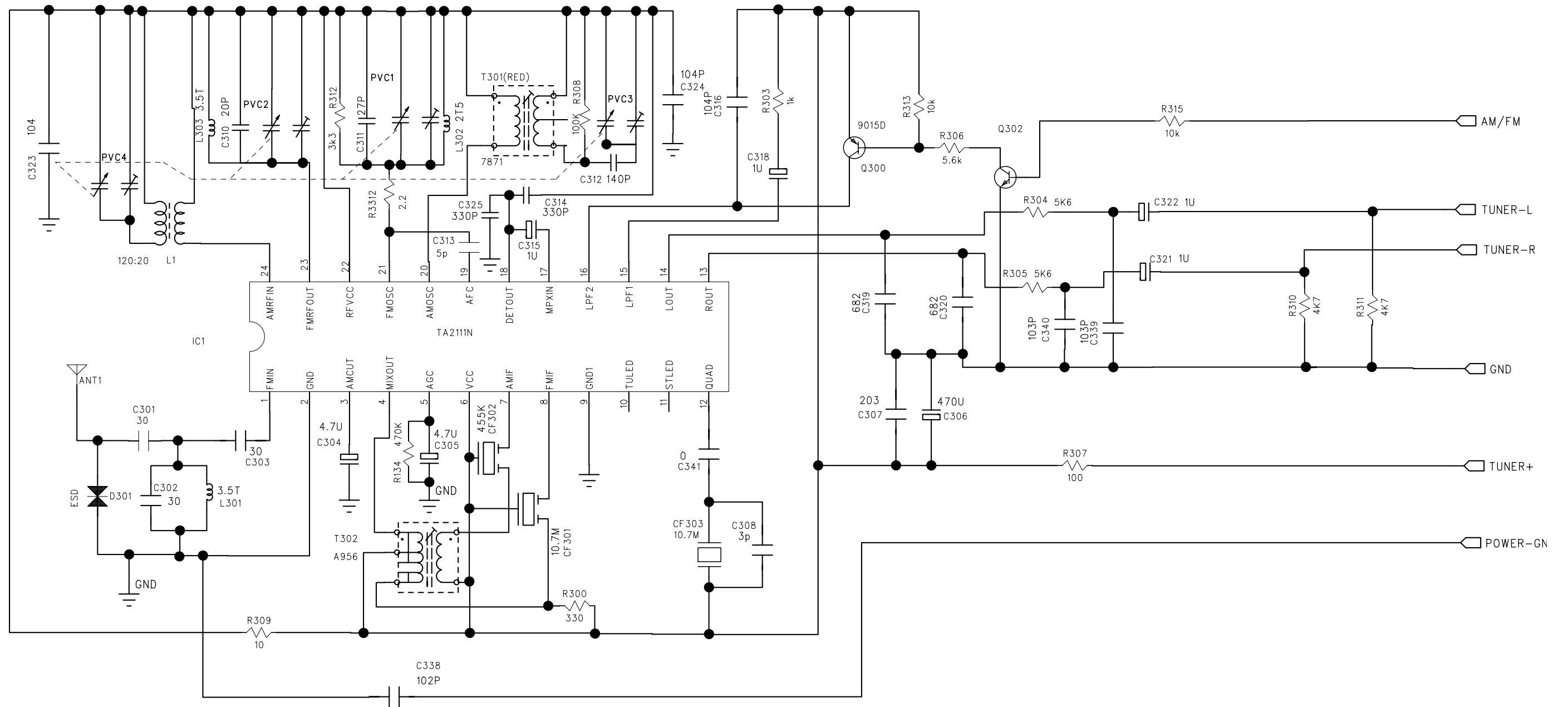
BLOCK DIAGRAM



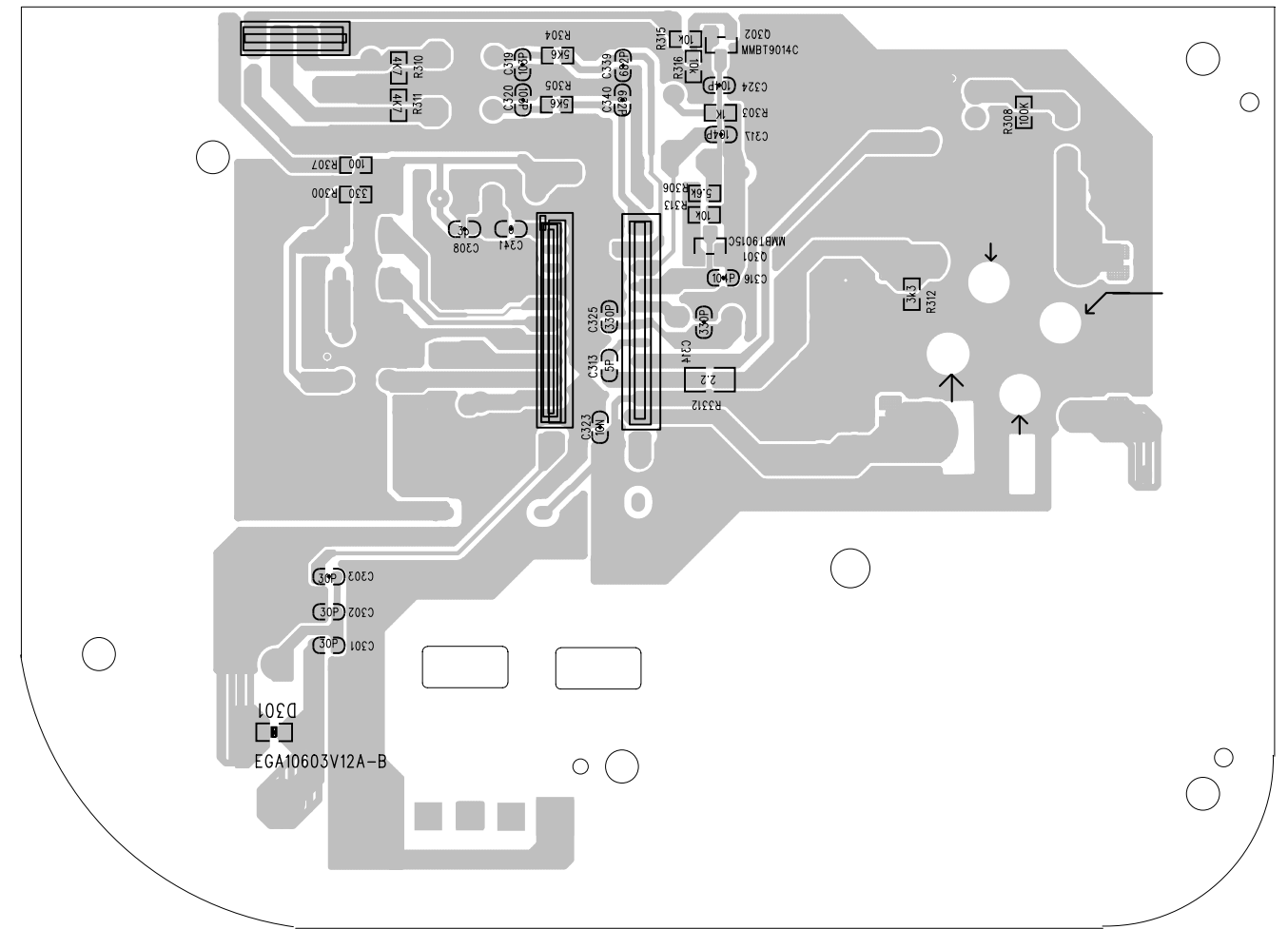
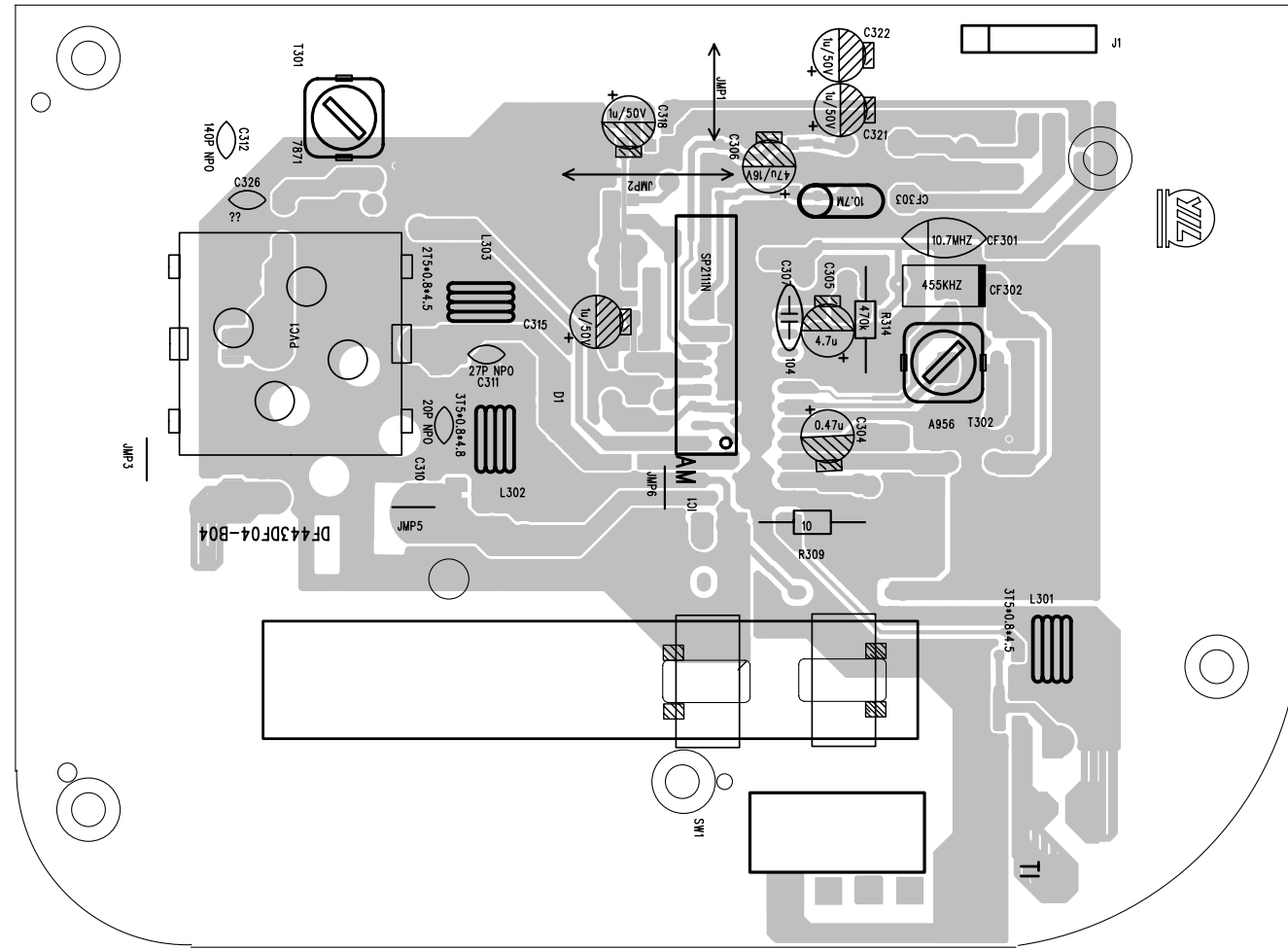
WIRING DIAGRAM



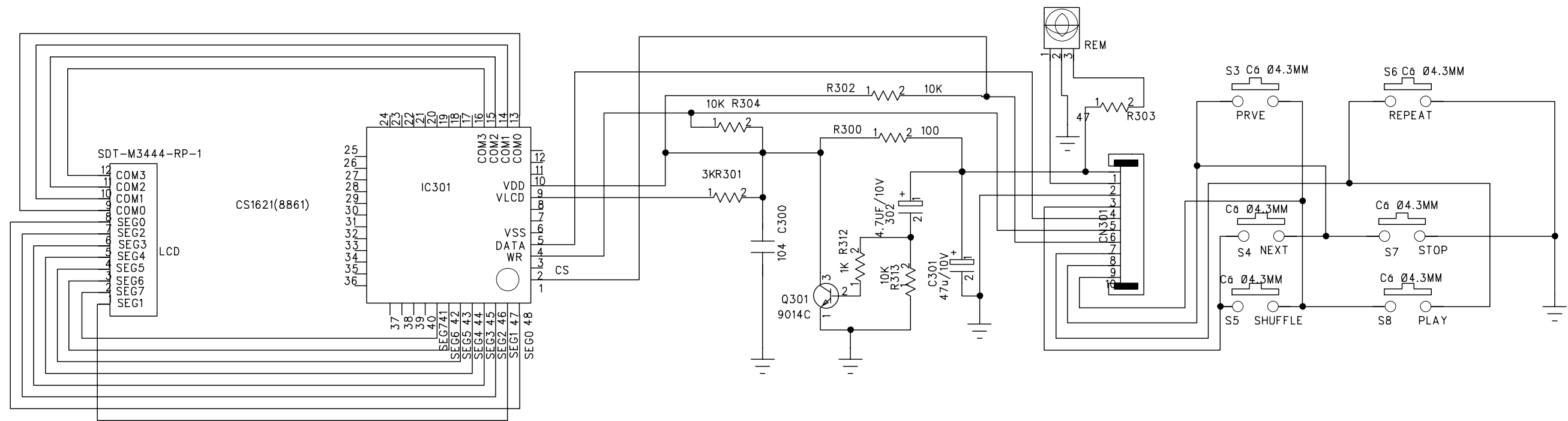
CIRCUIT DIAGRAM - TUNER BOARD



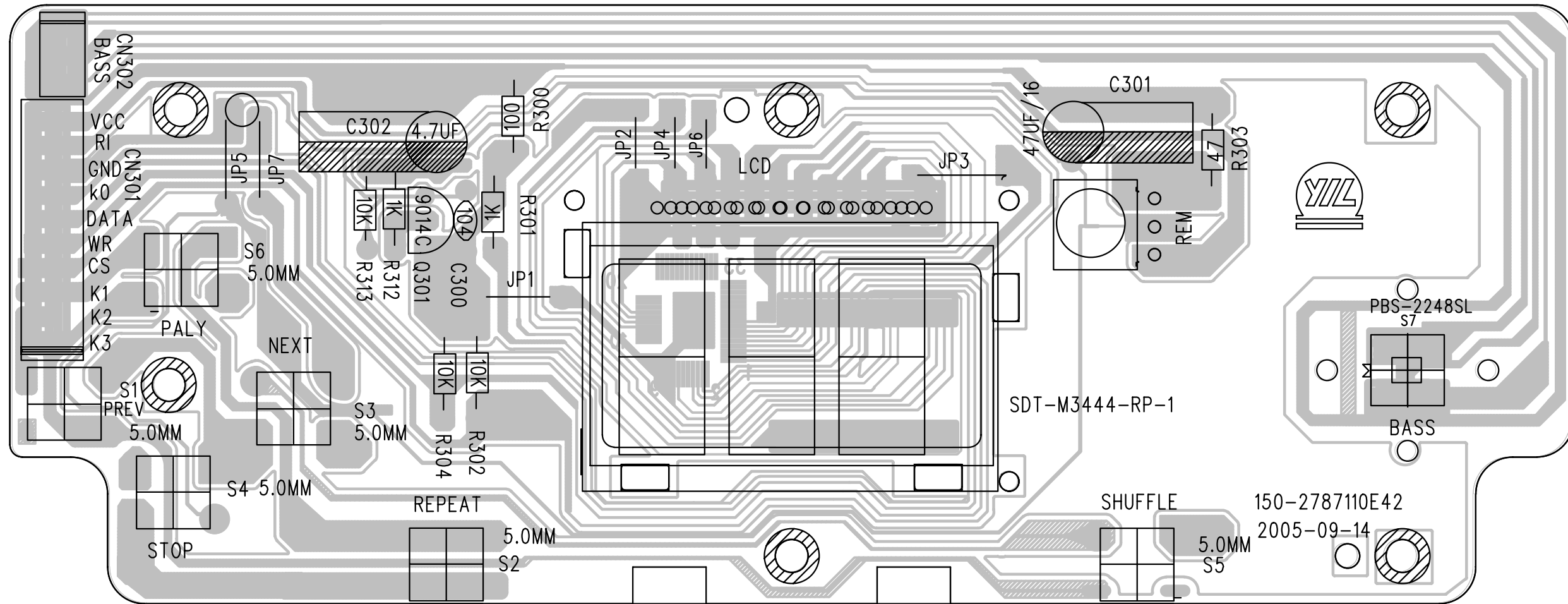
LAYOUT DIAGRAM - TUNER BOARD



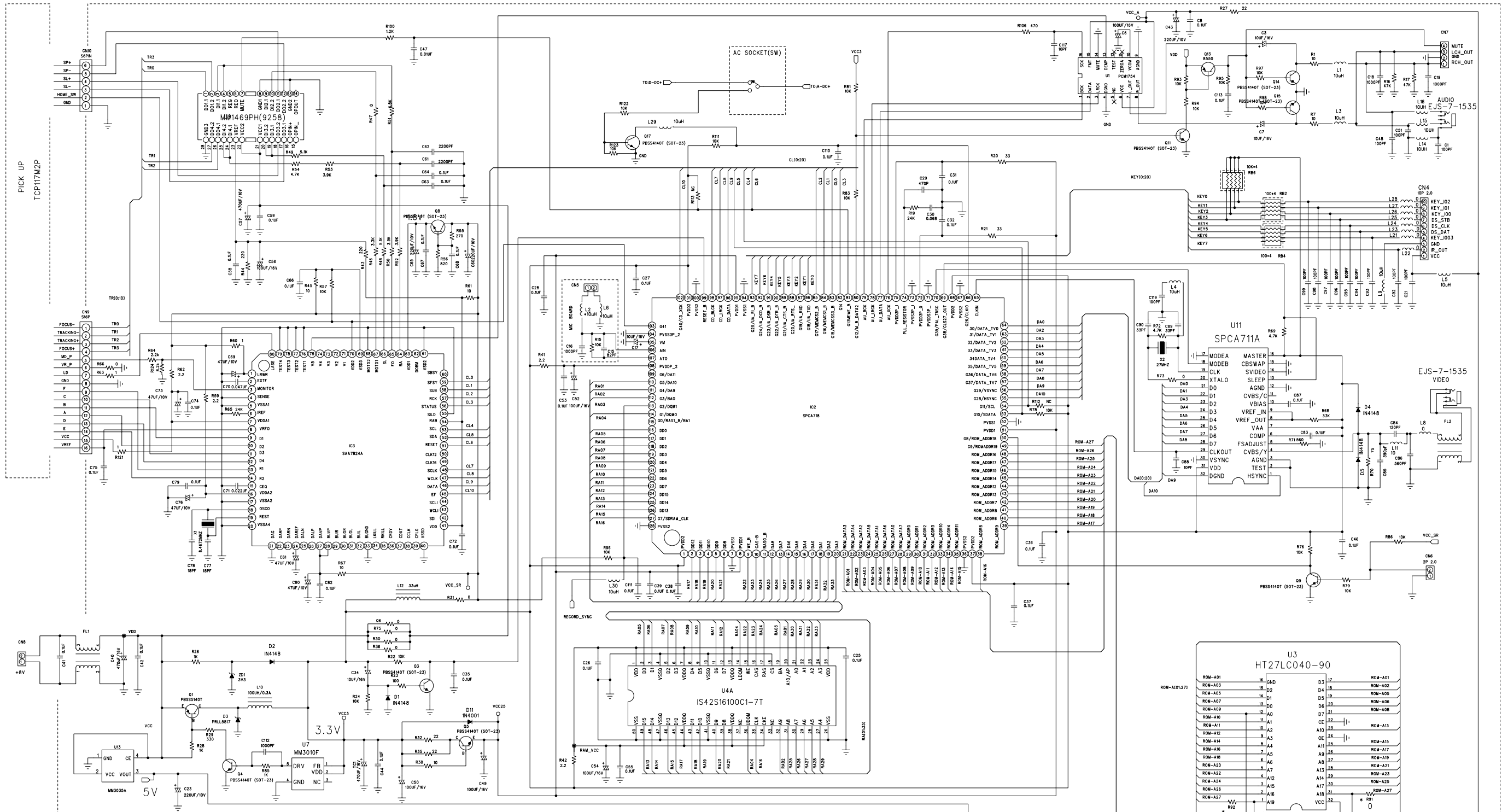
CIRCUIT DIAGRAM - LCD BOARD



LAYOUT DIAGRAM - LCD BOARD



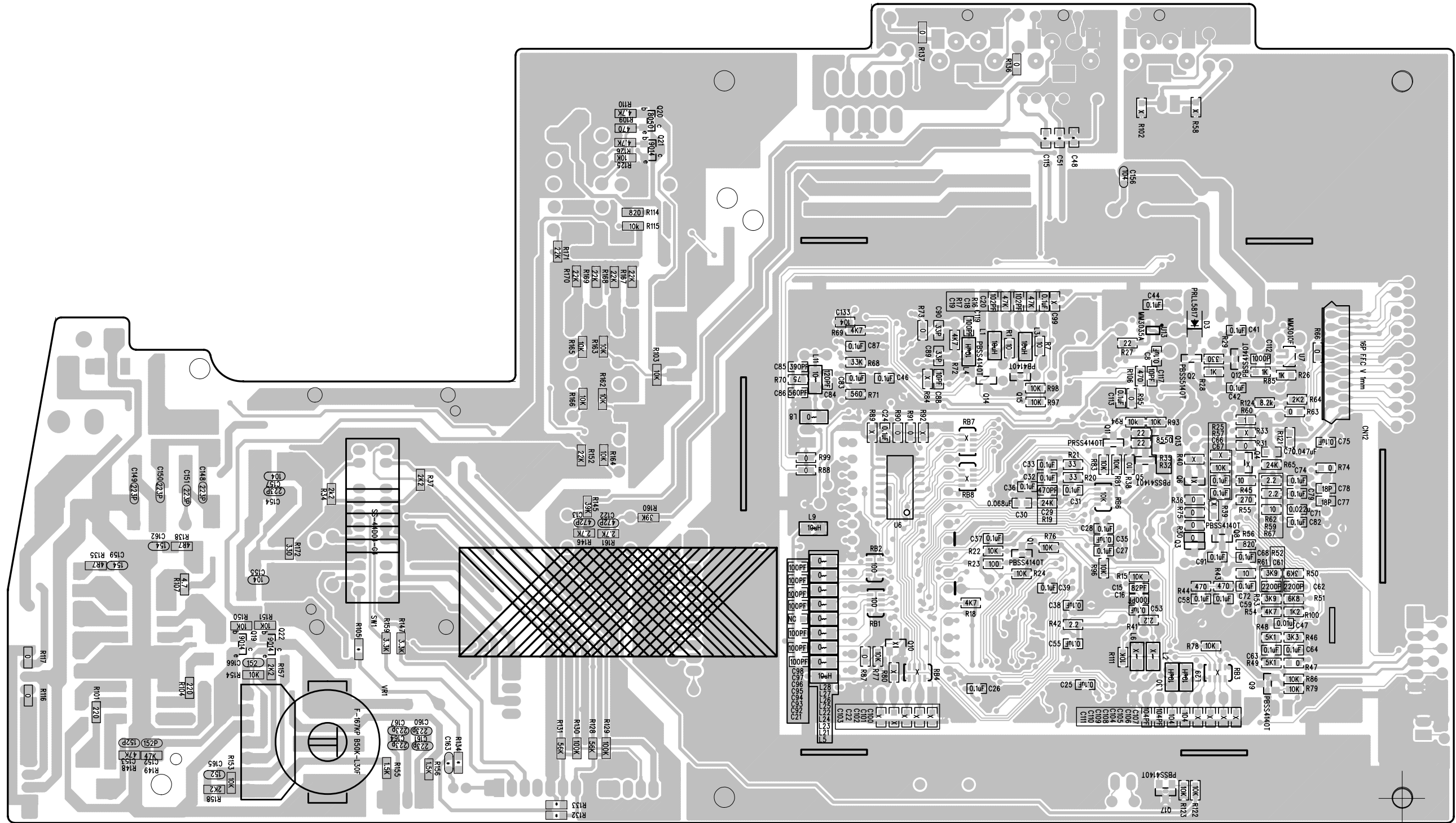
CIRCUIT DIAGRAM - MAIN BOARD
VCD PART



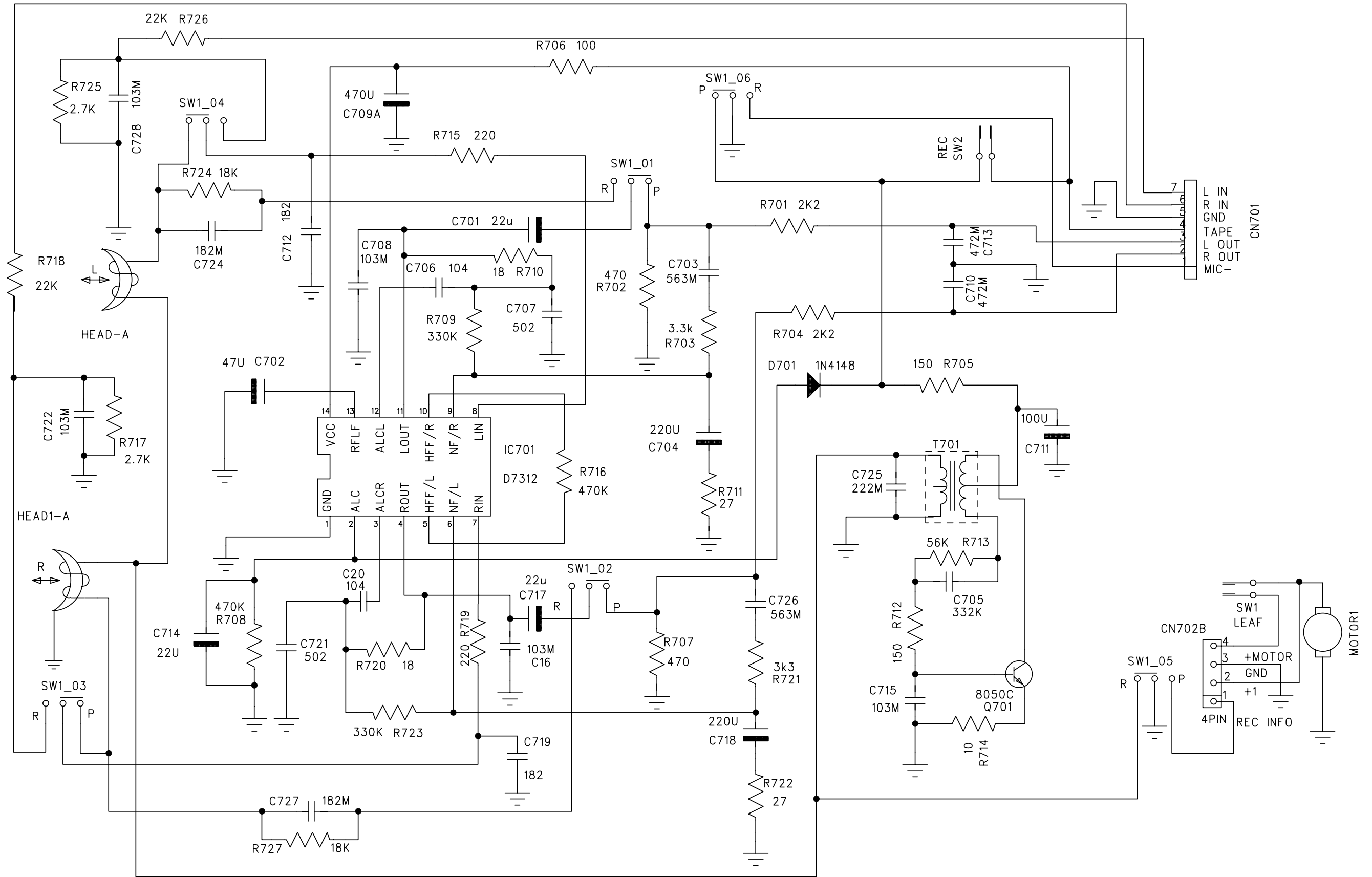
ROM TYPE SELECT:

	* 2M	4M	ATMEL	OTHERS
R89	0	NA	0	
R91	NA	0	NA	
R90	0	0	NA	
R92	NA	NA	0	

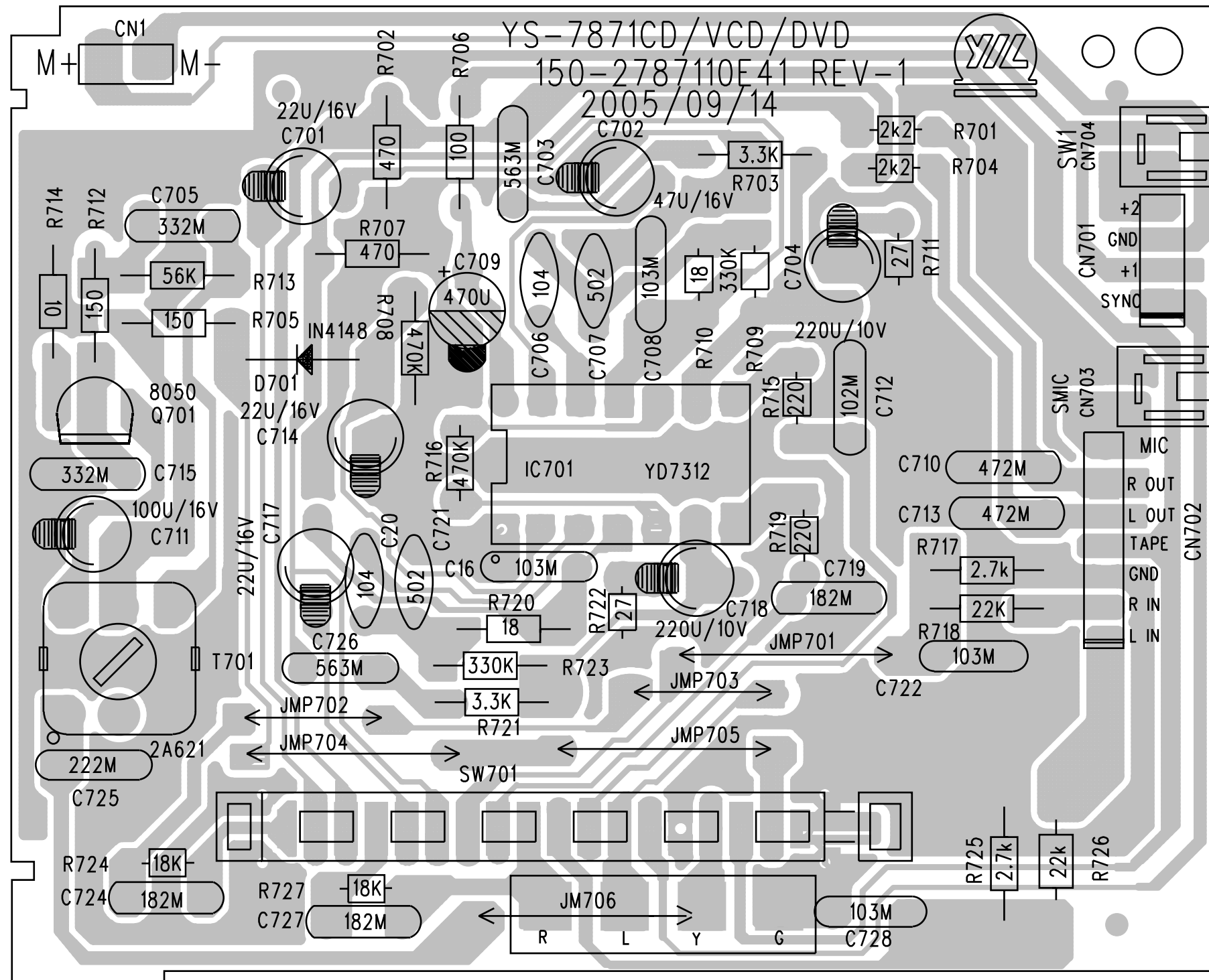
LAYOUT DIAGRAM - MAIN BOARD



CIRCUIT DIAGRAM - TAPE BOARD

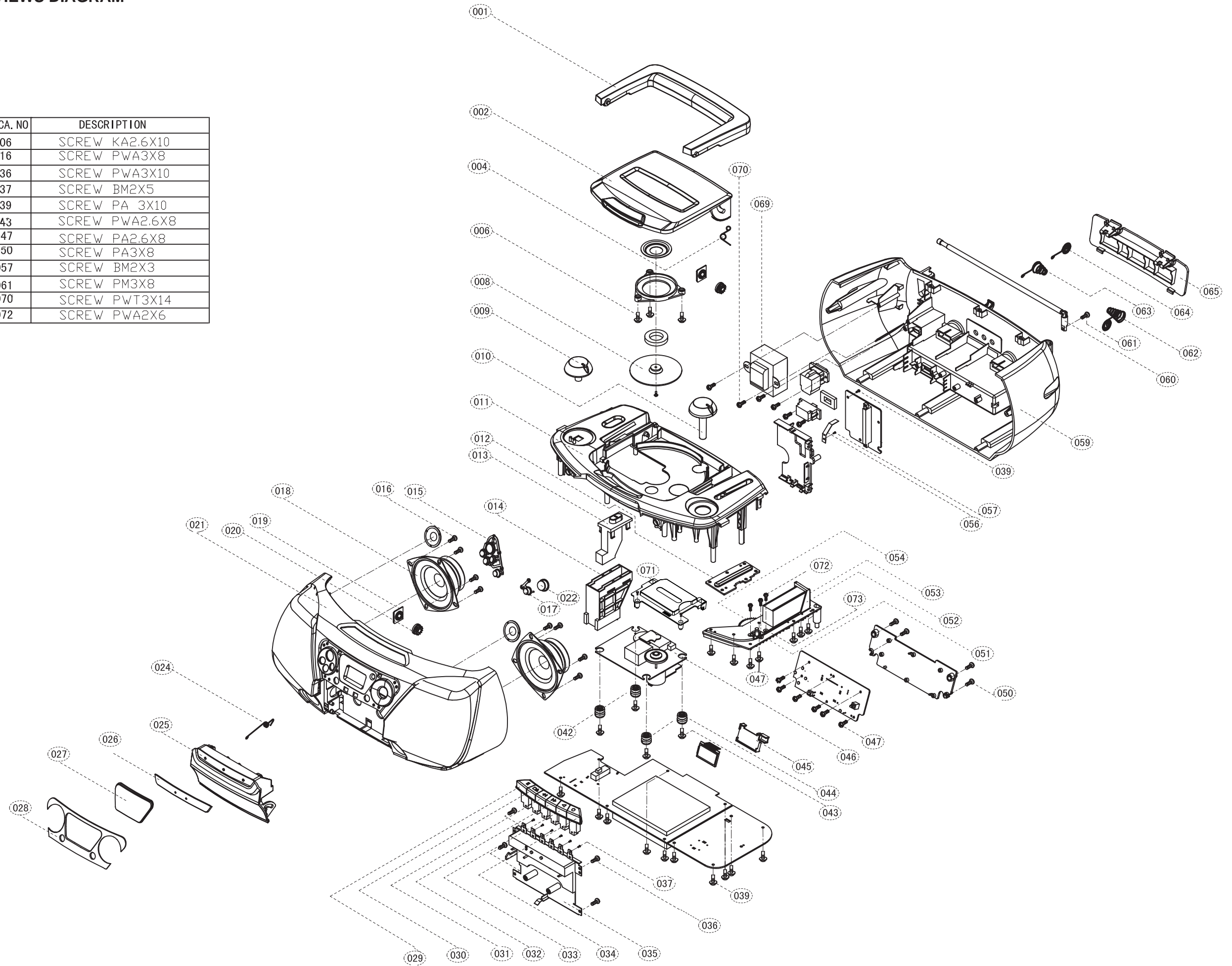


LAYOUT DIAGRAM - TAPE BOARD



EXPLODED VIEWS DIAGRAM

LOCA. NO	DESCRIPTION
006	SCREW KA2.6X10
016	SCREW PWA3X8
036	SCREW PWA3X10
037	SCREW BM2X5
039	SCREW PA 3X10
043	SCREW PWA2.6X8
047	SCREW PA2.6X8
050	SCREW PA3X8
057	SCREW BM2X3
061	SCREW PM3X8
070	SCREW PWT3X14
072	SCREW PWA2X6



MECHANICAL PARTSLIST

001	994000004023	HANDLE (not for -/93)	064	994000004053	BATT SPRING +
001	996500041068	7871 HANDLE (only for -/93)	065	994000004016	BATTERY DOOR
002	994000004018	CD DOOR	069	994000004084	TRANSFORMER 120-230V (for -/98/55)
004	994000004058	CD DOOR SPRING	069	996500041070	TRANSFORMER 220V(for -/93)
008	994000004062	CD CLAMPER PLASTIC (for -/94/55)	069	994000005195	TRANSFORMER 230V (for -/94)
008	996500038216	CD CLAMPER PLASTIC (for -/61/98)	069	996500038217	TRANSFORMER 220V (for -/61)
008	996500041069	CD CLAMPER PLASTIC (for -/93)	071	994000005191	CD DUST COVER
009	994000004031	VOLUME KNOB	994000005192	DOOR SPRING (NEW)	
010	994000004033	TUNING KNOB			
011	994000004012	CD TOP CABINET			
012	994000004015	DISPLAY LENS			
013	994000004032	SLIDE KNOB			
014	994000004045	SLIDE KNOB BRACKET	994000004083	REMOTE HANDSET	
015	994000004034	CD FUNCTION KNOB SET	996500041071	REMOTE HANDSET (only for -/93)	
015	994000004035	CD PAUSE KNOB	994000004089	RCA TRIBLE WIRE #26 2M	
015	994000004041	CD PLAY KNOB	996500041072	RCA TRIBLE WIRE 1.5M (only for -/93)	
015	994000004038	CD FWD TRACK BUTTON	994000005197	AC CORD LINE (for -/94)	
015	994000004039	CD BACK TRACK BUTTON	994000004088	AC CORD LINE (for -/55/98)	
017	994000004042	CD SHUFFLE KNOB	996500038218	AC CORD LINE (for -/61)	
018	994000004087	SPEAKER 3"8ohm 2W (for -/98/61)	996500041073	AC CORD,W/SOCKET(for -/93)	
018	994000005196	SPEAKER 3"8ohm 2W (for -/55)			
018	994000005193	SPEAKER 3"8ohm 2W (for -/94)			
019	994000004048	LOW SPEED GEAR BRACKET (not for -/98)			
019	994000004727	7831 GEAR STAND (only for -/98)			
020	994000004052	LOW SPEED GEAR (not for -/98)			
020	994000004726	7831 GEAR (only for -/98)			
021	994000004011	FRONT CABINET			
022	994000004037	BBS KNOB			
024	994000004057	CASSETTE DOOR SPRING			
025	994000004017	CASS DOOR			
026	994000004022	CASS DOOR PANEL			
027	994000004014	FRONT LENS			
028	994000004019	FRONT PANEL			
029	994000004025	STOP KNOB			
030	994000004036	OPEN KNOB			
031	994000004029	REW KNOB			
032	994000004028	F.FWD KNOB			
033	994000004026	PLAY KNOB			
034	994000004027	REC KNOB			
035	994000005194	MECHA. CS-21V-818DT			
042	994000005189	CD RUBBER CUSHION PINK			
044	994000004061	CD RUBBER CUSHION BLACK			
045	994000004046	LCD BRACKET			
046	994000004092	CD MECH SONY KSM-213			
046	996500038819	CD MECHANISM SANYO DA11VF (for -/93)			
051	994000004051	TUNING KNOB GEAR			
052	994000004024	DIAL POINTER			
053	994000004047	TUNING KNOB GEAR BRACKET			
054	994000004049	PVC GEAR			
056	994000004056	RECORDING PLATE			
059	994000004013	REAR CABINET (for -/55/98)			
059	994000005188	REAR CABINET (for -/94/61)			
060	994000004085	ROD ANTENNA 2 SEG			
062	994000004054	BATT SPRING +, -			
063	994000004055	BATT SPRING -			

ACCESSORIES

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



ELECTRICAL PARTSLIST - MAIN BOARD**- DIODES -**

ZD1	994000003981	ZENER DIODE+-5% 3V3
ZD11	994000003982	ZENER DIODE+-5% 6.8V
ZD4	994000004787	ZENER DIODE+-5% 9V1
D13	994000003984	DIODE 1N5391 50V/1.5A
D14	994000003984	DIODE 1N5391 50V/1.5A
D15	994000003984	DIODE 1N5391 50V/1.5A
D16	994000003984	DIODE 1N5391 50V/1.5A
D3	994000004066	SMD SCHOTTKY BARRIER DIODE

- IC & TRANSISTORS -

U4A	994000003995	IC IS42S16100C1-7TL
U10	994000003996	IC SAA7824 HL/MIA'157
U9	994000003997	IC D9258 4-CH MOTOR DRIVERCD
U11	994000003998	IC SPCA711A VIDEO ENCODER
U5	994000003999	IC SPCA718A SVCD DECODER
U1	994000004001	IC PCM1754DBQR 16-LEAD SSOP
U7	994000004002	IC MM3010F SOT-25A
U13	994000004003	IC MM3035A
U8	994000003977	IC D8227 HDIP-12
U3	994000005174	IC M27C4001-12F1 32P
Q16	994000003979	TR NPN 8050D
Q20	994000004004	CHIP TR NPN 8050C
Q13	994000004005	CHIP TR PNP 8550D
Q19	994000004006	CHIP TR MMBT9014C
Q22	994000004006	CHIP TR MMBT9014C
Q21	994000004006	CHIP TR MMBT9014C
Q7	994000004064	POWER TR PNP KTA1046/P
Q2	994000004065	TR PNP PBSS5140T

- MISCELLANEOUS -

X1	994000003986	CRYSTAL 8.4672MHz
X2	994000003987	CRYSTAL SM27MHz
VR1	994000003985	ROT VOL F-167KP
PHONE	994000003989	ST PHONES JACK
VIDEO	994000003991	ST PHONES JACK
F1	 994000003992	FUSE 50F D5xL20 1.6A 250V
F1	 996500041074	FUSE 50F 1.6A 250V (only for -/93)
SW2	994000003994	SILDE SWITCH

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

ELECTRICAL PARTSLIST - LCD BOARD

- IC & TRANSISTORS -

IC401	994000003955	IC ET8861S
Q401	994000003957	TR NPN 9014C

- MISCELLANEOUS -

REM	994000003956	SENSOR
LCD	994000003958	LCD DISPLAY
S401	994000005183	TACT SWITCH
S402	994000005183	TACT SWITCH
S403	994000005183	TACT SWITCH
S404	994000005183	TACT SWITCH
S405	994000005183	TACT SWITCH
S406	994000005183	TACT SWITCH
S407	994000003961	DOOR LOCK

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

ELECTRICAL PARTSLIST - CASSETTE BOARD

- IC & TRANSISTORS -

IC701	994000004007	IC D7312
Q701	994000004009	TR NPN 8050C

- MISCELLANEOUS -

T701	994000004008	IFT BRO 10mm
SW701	994000004784	REC/PLAY SWITCH

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

ELECTRICAL PARTSLIST - TUNER BOARD

- DIODES -

D301	994000003974	DIODE ESD EGA10603V12A-B
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- COILS & FILTERS -

CF302	994000003967	FILTER FM455AL
CF301	994000003968	FILTER 10.7MC
CF303	994000003969	DISCRIMINATOR J10.7C
T302	994000003964	AM IFT YEL 7mm A956
T301	994000003965	AM OSC RED 7mm

- IC & TRANSISTORS -

Q302	994000003972	CHIP TR MMBT9014C
Q301	994000003973	CHIP TR MMBT9015C
IC301	994000003962	IC TA2111NG

- MISCELLANEOUS -

PVC1	994000003963	PVC DF443DF04-B04
	994000003966	FERRITE BAR D10xL60

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

ELECTRICAL PARTSLIST

- MISCELLANEOUS -

994000004093	SLIDE SWITCH (for -/55/98)
994000004094	DETECTOR SWITCH
994000004086	AC POWER SOCKET (for -/98/55/94)
996500038220	AC POWER SOCKET (for -/61)
996500041075	AC POWER SOCKET (for -/93)
994000005179	16 PIN FLAT FLEXIBLE CABLE
996500041076	VCD BOARD ASSY (for -/93)
994000005173	VCD BOARD ASSY (for -/98/94/55)
996500038219	VCD BOARD ASSY (for -/61)

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

REVISION LIST

Version 1.0 (3141 785 30810)

* Initial Release AZ5140/98/55/94

Version 1.1 (3141 785 30811)

* New version -/61 is introduced.

* Page 12-1 : Mechanical parts list adapted.

* Page 12-2 to 12-6 : Electrical parts list adapted.

Version 1.1 (3141 785 30812)

* New version -/93 is introduced.

* Page 12-1 : Mechanical parts list adapted.

* Page 12-2 to 12-6 : Electrical parts list adapted.