

Service  
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**Service**



# Service Manual



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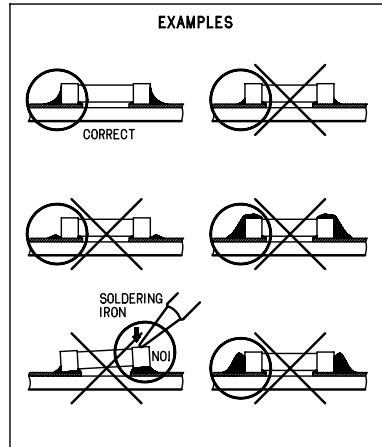
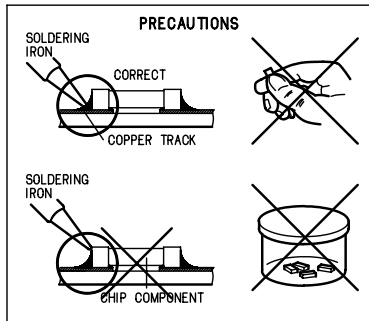
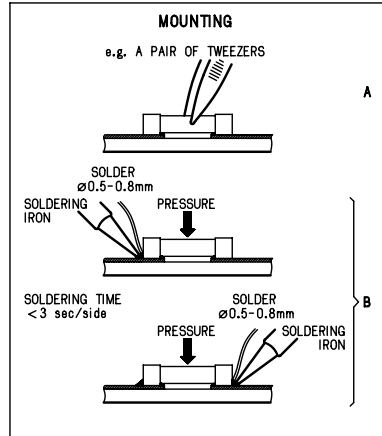
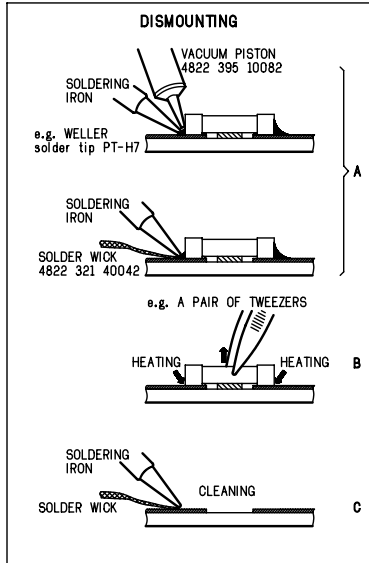
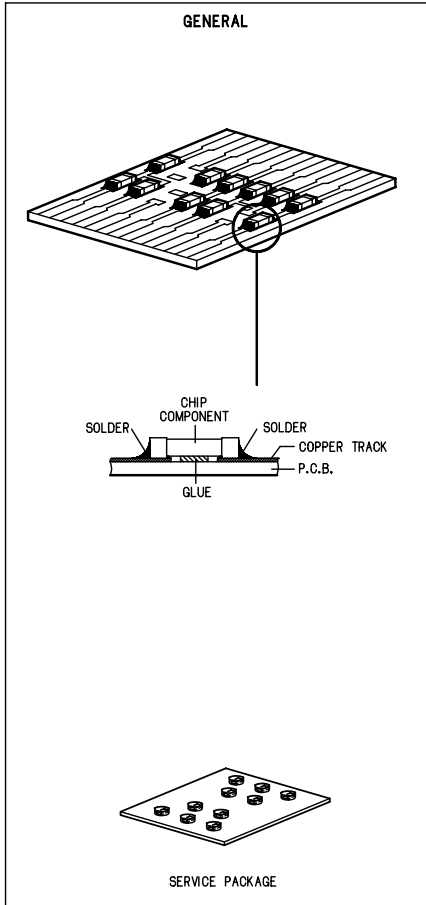
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# PHILIPS

# 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.



**(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 enfiler le bracelet senti 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 Puls-armband 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 ▲



**(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 ▲

**(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 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 spårren är urkopplad. Betrakta ej strålen.

**(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.

**(DK) Advarsel !**  
 Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

**(FIN) Varoitus !**  
 Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen !

**(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         | -/00/05/14    | : 230 V             |
|                       | -/10          | : 240 V             |
|                       | -/01          | : 120 / 230 V       |
| Mains frequency       | -/00/05/10/14 | : 50 Hz             |
|                       | -/01          | : 50 / 60 Hz        |
| Battery               |               | : 9 V (R14 x 6)     |
| Power consumption     |               | : 5 W               |
| Dimension (W x H x D) |               | : 400 x 235 x 173mm |
| Weight                |               | : 3 Kg              |

### AMPLIFIER

|                    |         |                               |
|--------------------|---------|-------------------------------|
| Output power       | mains   | : 2 x 1 W                     |
|                    | battery | : 2 x 1 W                     |
| Speaker impedance  |         | : 2 x 8 ohm                   |
| Frequency response |         | : 70 Hz - 3 kHz ( $\pm 3$ dB) |

### TUNER - FM SECTION

|                 |                          |
|-----------------|--------------------------|
| Tuning range    | : 87.35 - 108.25 MHz     |
| IF frequency    | : 10.7 MHz $\pm$ 0.2 MHz |
| Sensitivity     | : 17 dB at 26dB S/N      |
| Selectivity     | : 24 dB at 300kHz        |
| IF rejection    | : 65 dB                  |
| Image rejection | : 26 dB                  |

### TUNER - AM SECTION

|                 |                              |
|-----------------|------------------------------|
| Tuning range    | : 512 - 1635 kHz             |
| IF frequency    | : 468 kHz $\pm$ 3 kHz        |
| Sensitivity     | : 1500 $\mu$ V/m at 26dB S/N |
| Selectivity     | : 20 dB                      |
| IF rejection    | : 70 dB                      |
| Image rejection | : 32 dB                      |

### CASSETTE RECORDER

|                      |                        |
|----------------------|------------------------|
| Number of tracks     | : stereo               |
| Tape speed           | : 4.76 cm/sec $\pm$ 3% |
| Wow & flutter        | : < 0.35% JIS WTD      |
| Fast wind/rewind C60 | : 130 sec.             |
| Frequency response   | P/B : 125 - 8000 Hz    |
| S/N ratio            | : 36 dB                |

### COMPACT DISC

|                    |               |
|--------------------|---------------|
| S/N ratio          | : 55 dB       |
| Channel difference | 1 kHz : 2 dB  |
| Channel crosstalk  | 1 kHz : 40 dB |
| THD                | 1 kHz : 0.2 % |

## SERVICE TOOLS

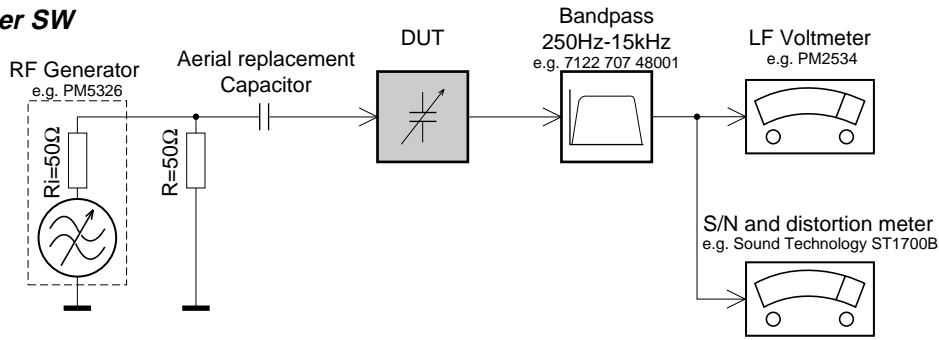
|  |                |
|--|----------------|
| Audio signal disc SBC 429.....   | 4822 397 30184 |
| Playability test disc SBC 444.....   | 4822 397 30245 |
| Test disc 5 (disc without errors) +  |                |
| Test disc 5A (disc with dropout errors, black spots and fingerprints)        |                |
| 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 600x650x1.25m   | 4822 466 10958 |
| anti-static wristband  |                       | 4822 395 10223 |
| connection box (3 press stud connections, 1M $\Omega$ )                        |                       | 4822 320 11307 |
| extendible cable (2m, 2M $\Omega$ , to connect wristband to connection box)    |                       | 4822 320 11305 |
| connecting cable (3m, 2M $\Omega$ , to connect table mat to connection box)    |                       | 4822 320 11306 |
| earth cable (1M $\Omega$ , 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 |

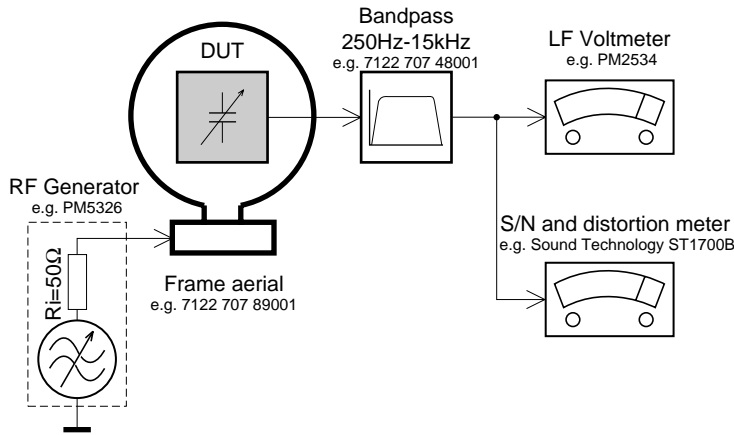
## SERVICE MEASUREMENT

### 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).

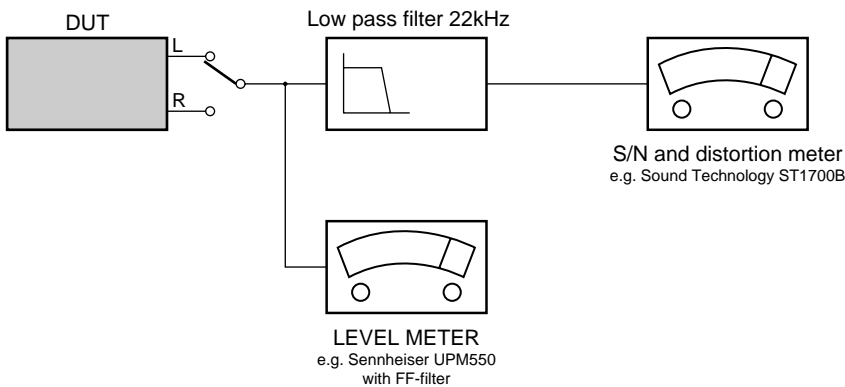
### Tuner AM (MW,LW)



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. = 13<sup>th</sup> order filter 4822 395 30204



# CONNECTIONS AND CONTROLS

## Controls

### Top and front panels

- 1 **LIFT TO OPEN** – opens/ closes the CD door
- 2 **Source selector: CD, MW, FM, TAPE/OFF** – selects CD source of sound, tuner waveband or tape source of sound – power on/ off switch
- 3 **CASSETTE RECORDER: PAUSE II** – pauses recording or playback
- STOP•OPEN** **■▲** – stops the tape; opens the cassette door
- SEARCH** **◀◀** or **▶▶** – fast rewinds / winds the tape
- PLAY** **▶** – starts playback
- RECORD** **●** – starts recording
- 4 **CD display** – shows the CD functions
- 5 **TUNING**
- 6 **PLAY•PAUSE** **▶II** – starts or pauses CD playback
- 7 **STOP** **■** – stops CD playback
- 8 **SEARCH** **◀◀, ▶▶** – skips or searches a passage/track backwards or forward
- 9 **DBB (Dynamic Bass Boost)** – enhances bass response
- 10 **REPEAT** – repeats a track/CD
- 11 **SHUFFLE** – plays all CD tracks in random order
- 12 **VOLUME** – adjusts volume level

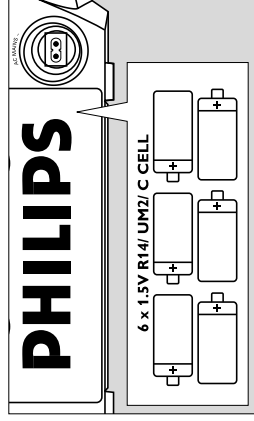
## Power Supply

### Back Panel

- 13 **Telescopic aerial** – to improve FM reception
- 14 **Battery door** – open to insert 6 x 1.5V R14/UMZ/ C-cell batteries
- 15 **AC MAINS** – inlet for mains lead

### Power Supply

Whenever convenient, use the power supply if you want to conserve battery life.

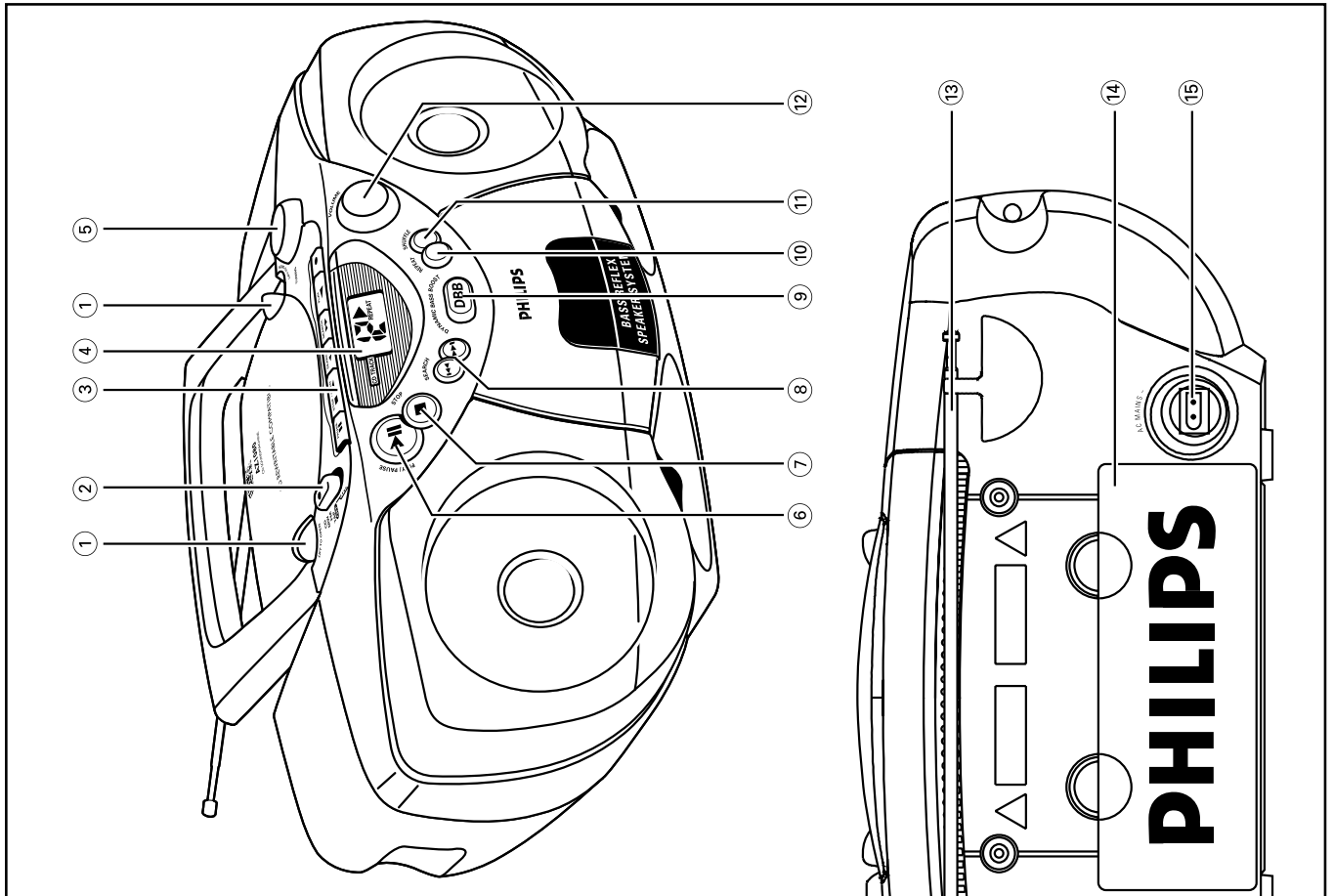


Make sure you remove the plug from the set and wall socket before inserting batteries.

### Batteries (not included)

- 1 Open the battery compartment and insert six batteries, type **R-14, UM-2** or **C-cells**, (preferably alkaline) with the correct polarity as indicated by the "+" and "-" symbols inside the compartment.
- 2 Close the compartment door, and make sure the batteries are firmly and correctly in place. The set is now ready to operate.

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



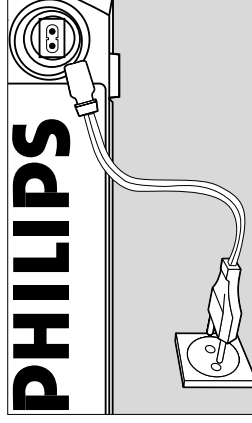
## Power Supply

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 carbon zinc. Only use batteries of the same type for the set.
- When inserting new batteries, do not try to mix old batteries with the new ones.
- Remove the batteries if the set is not to be used for a long time.

### Using AC Mains

- 1 Check if the mains voltage, as shown on the type plate located on the bottom of the set, corresponds to your local mains supply. If it does not, consult your dealer or service centre.

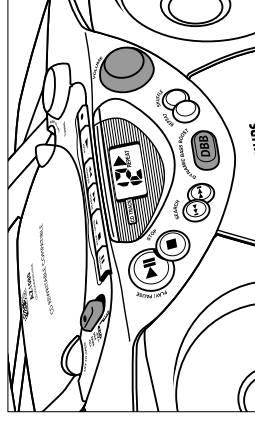


- 2 Connect the mains lead to the AC MAINS inlet and the wall socket. The mains supply is now connected and ready for use.
- 3 To switch off completely, unplug the mains lead from the wall socket.
- Unplug the mains lead from the wall socket to protect your set during heavy thunderstorms.

**The type plate is located on the bottom of the set.**

### Switching power on/off: Save energy

Whether you are using mains or battery supply, to avoid unnecessary energy consumption always adjust the source selector to **TAPE/OFF** and check if the cassette keys are released.



### General operation

- 1 To select your sound source adjust the source selector to **CD, MW, FM** or **TAPE/OFF**.
- 2 Adjust the sound with the **VOLUME** and **DBB** (Dynamic Bass Boost) controls.
- 3 To switch off the set, adjust the source selector to **TAPE/OFF** position and check the cassette keys are released.

## Troubleshooting

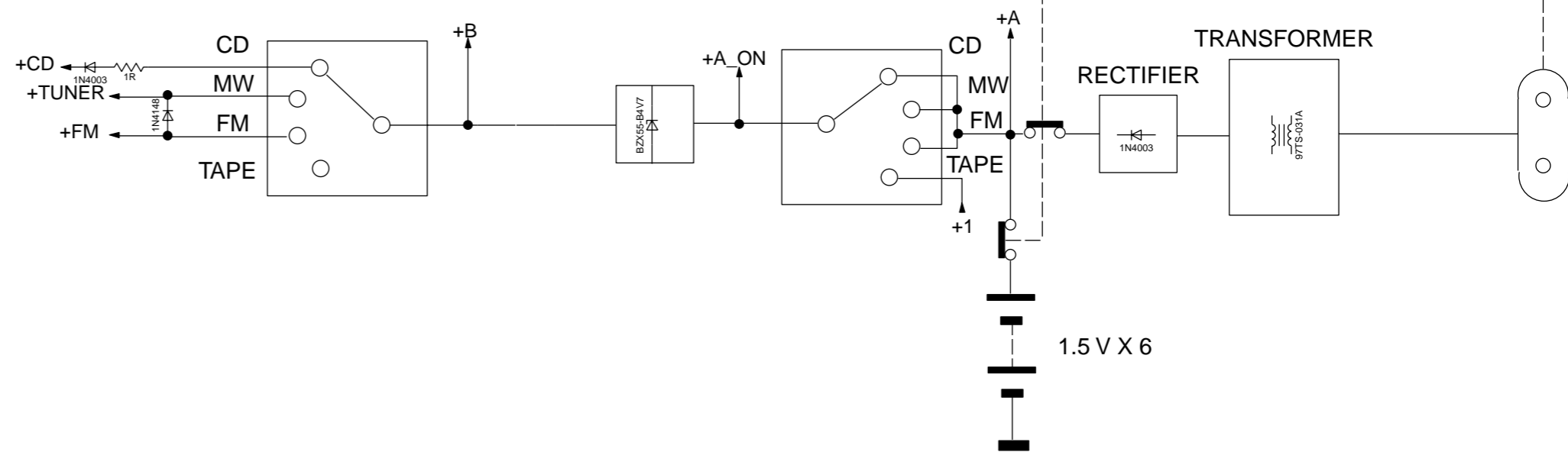
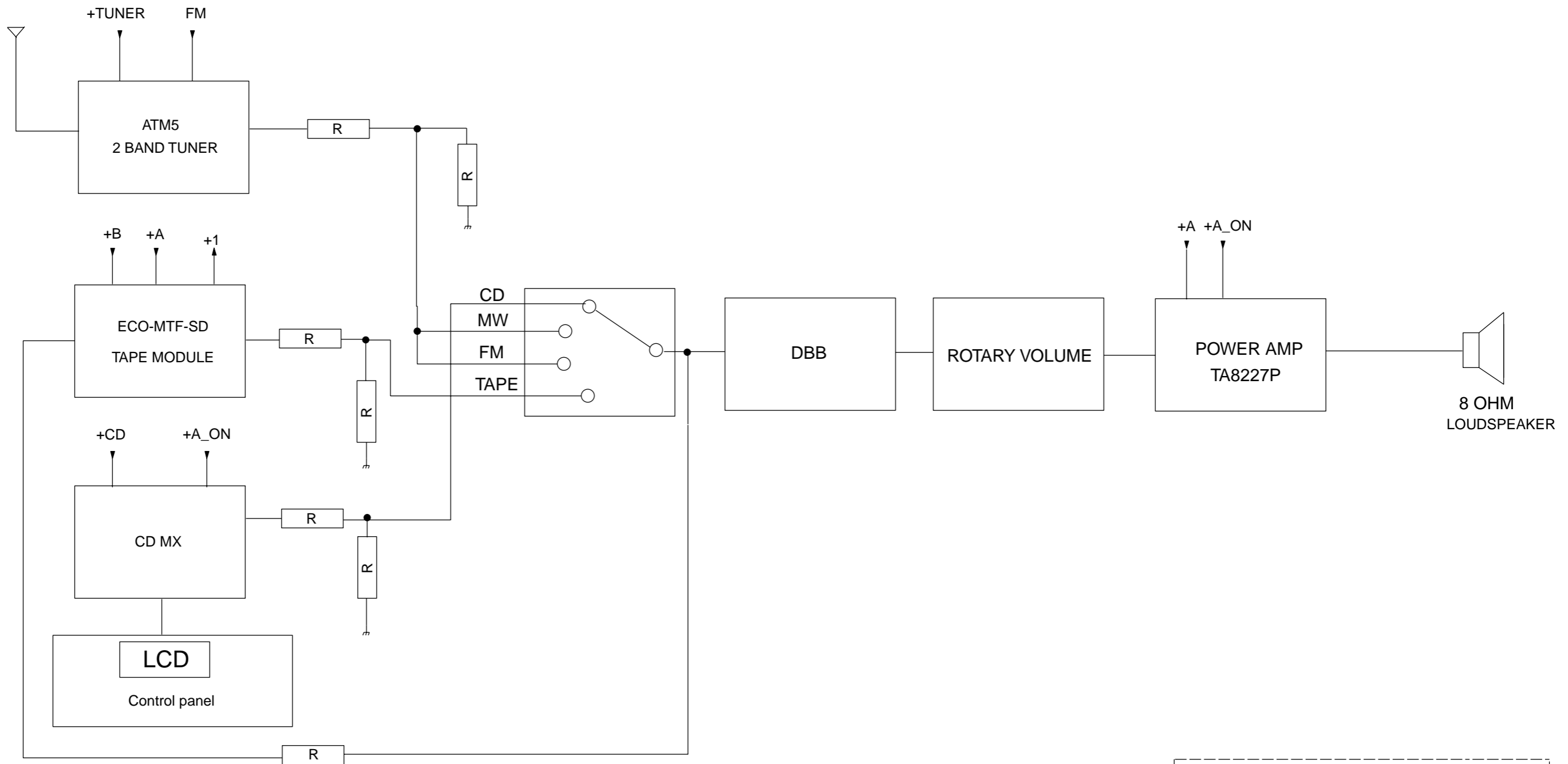
**If a fault occurs, first check the points listed below before taking the set for repair. Do not open the set as there is a risk of electric shock.**

**If you are unable to remedy a problem by following these hints, consult your dealer or service centre.**

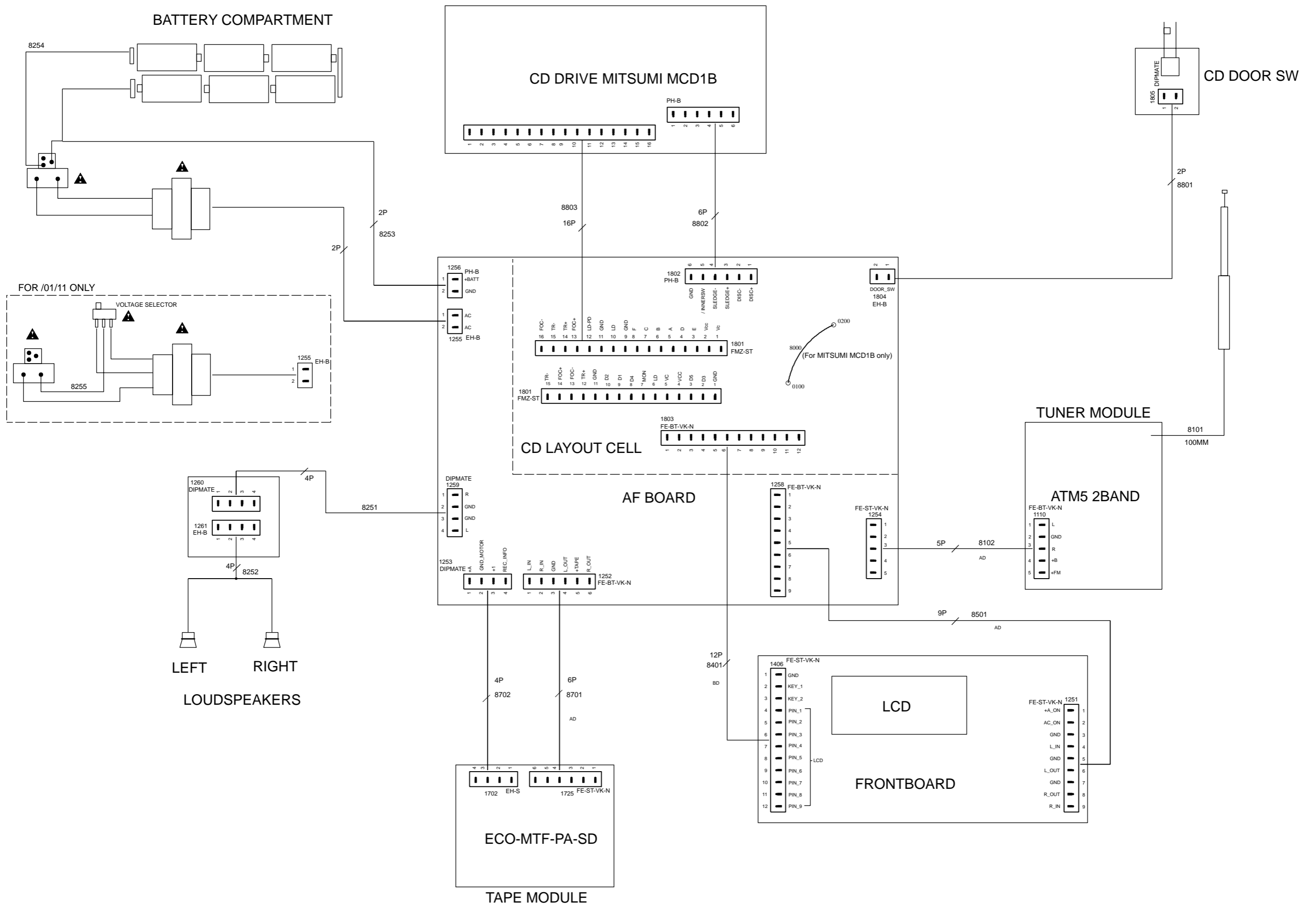
**WARNING: Under no circumstances should you try to repair the set yourself, as this will invalidate the guarantee.**

| Problem  | Solution  |
|--|---|
| <b>No sound</b>  | – Adjust the <b>VOLUME</b>  |
| <b>No power</b>  | – Mains lead not securely connected.<br>Connect AC mains lead properly<br>– Batteries exhausted /incorrectly inserted.<br>Insert (fresh) batteries correctly  |
| <b>Display does not function properly/ No reaction to operation of any of the controls</b> | – Electrostatic discharge<br>Switch off and unplug the set. Reconnect after a few seconds.  |
| <b>indication</b>  | – No CD inserted, insert a CD<br>– CD badly scratched/ dirty.<br>Replace/ clean CD (see maintenance)<br>– CD-R(W) is blank or the disc is not finalized.<br>Use a finalized CD-R(W)<br>– Laser lens steamed up.<br>Wait until lens has cleared/acclimatized |
| <b>CD playback does not work</b>   | – CD badly scratched/ dirty.<br>Replace/ clean CD (see maintenance)   |
| <b>The CD skips tracks</b>   | – CD damaged or dirty. Replace or clean CD.<br>– Shuffle is active. Quit shuffle mode   |
| <b>Poor cassette sound quality</b>   | – Dust and dirt on the heads, etc.<br>Clean deck parts; see maintenance.<br>– Use of incompatible cassette types (METAL or CHROME). Only use <b>NORMAL (IEC I)</b> for recording  |
| <b>Recording does not work</b>   | – Cassette tab(s) may be broken. Apply a piece of adhesive tape over the missing tab space.   |

### BLOCK DIAGRAM

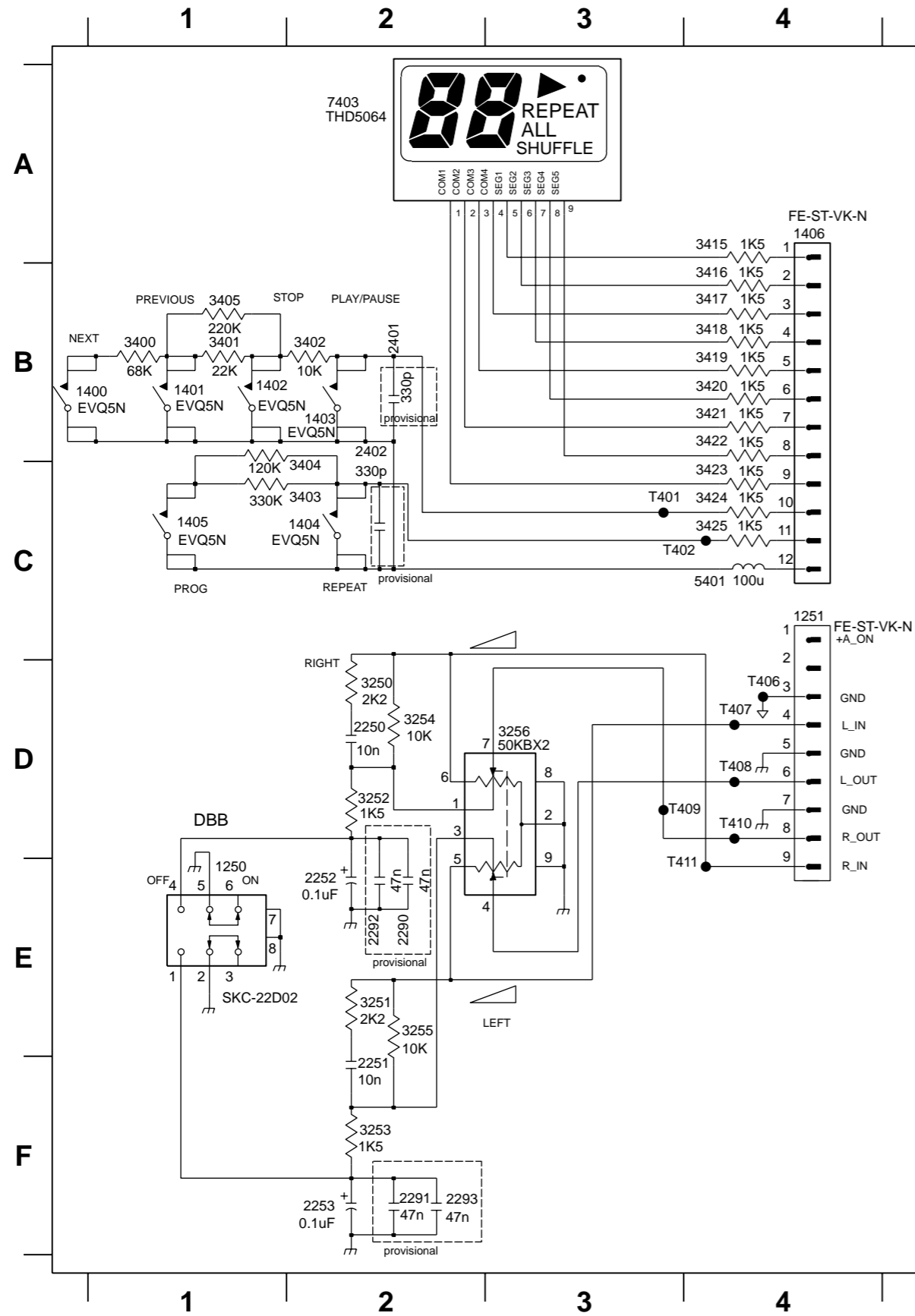


# WIRING DIAGRAM



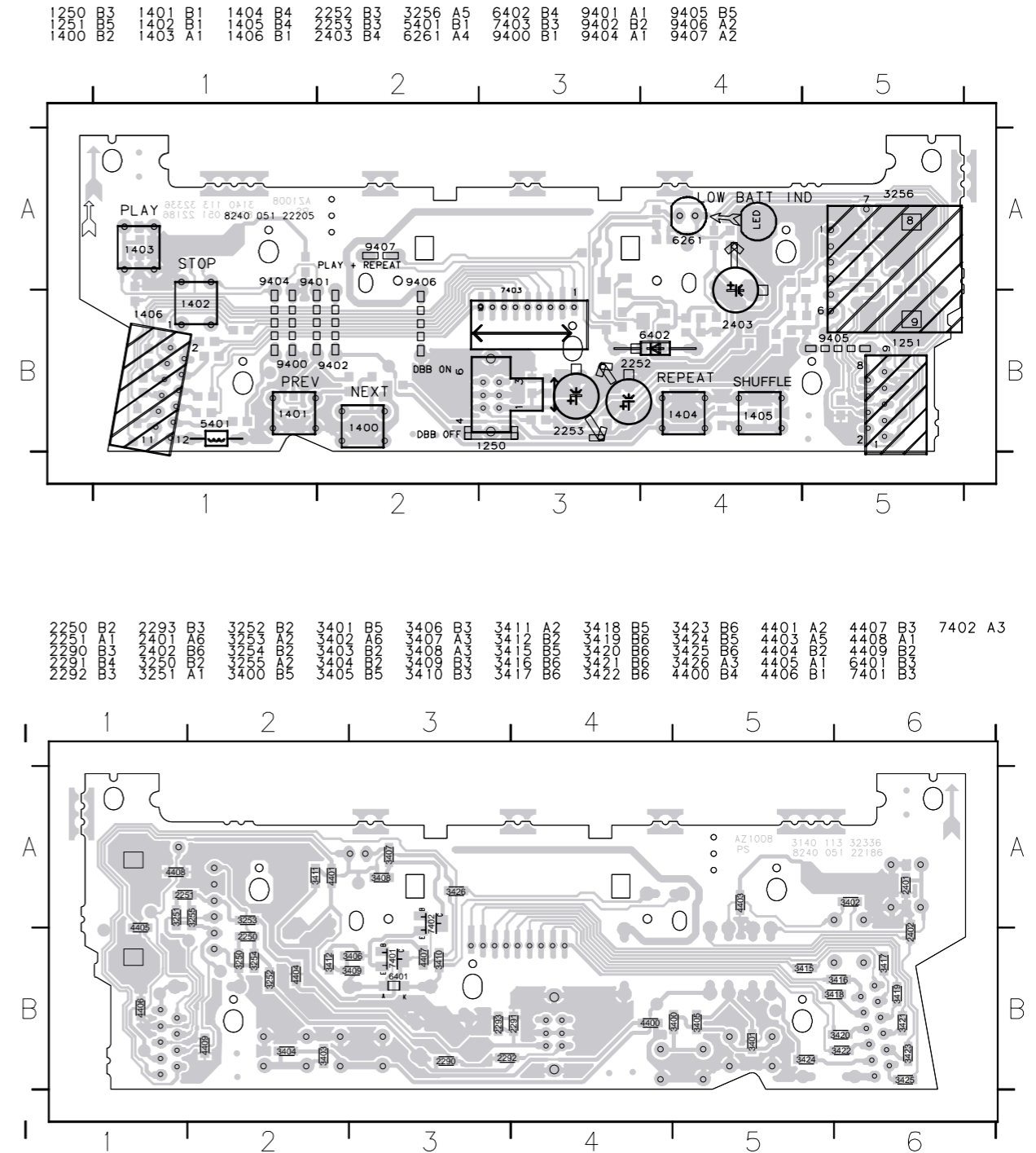


FRONT BOARD - CIRCUIT DIAGRAM



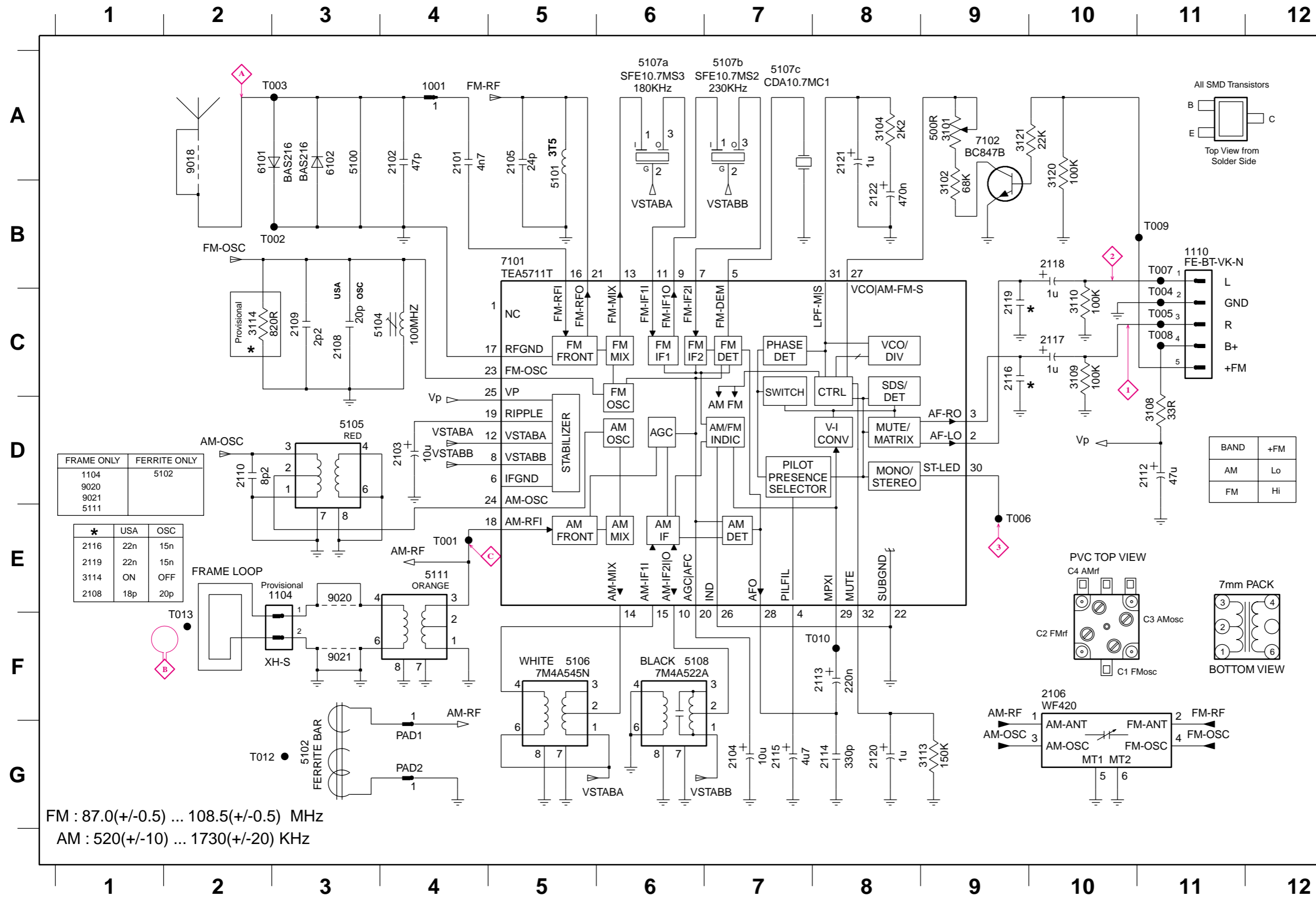
- 1250 E1
- 1251 C4
- 1400 B1
- 1401 B1
- 1402 B1
- 1403 B2
- 1404 C2
- 1405 C1
- 1406 A4
- 2250 D2
- 2251 F2
- 2252 E2
- 2253 F2
- 2290 E2
- 2291 F2
- 2292 E2
- 2293 F2
- 2401 B2
- 2402 C2
- 2403 F4
- 3250 D2
- 3251 E2
- 3252 D2
- 3253 F2
- 3254 D2
- 3255 E2
- 3256 D3
- 3400 B1
- 3401 B1
- 3402 B2
- 3403 C2
- 3404 C2
- 3405 B1
- 3406 F4
- 3407 E4
- 3408 E4
- 3409 F3
- 3410 E3
- 3411 E4
- 3412 F4
- 3415 A4
- 3416 B4
- 3417 B4
- 3418 B4
- 3419 B4
- 3420 B4
- 3421 B4
- 3422 B4
- 3423 C4
- 3424 C4
- 3425 C4
- 3426 E4
- 5401 C4
- 6261 E4
- 6401 F3
- 6402 F3
- 7401 E4
- 7402 F4
- 7403 A2
- 9407 E3
- T401 C3
- T402 C3
- T406 D4
- T407 D4
- T408 D4
- T409 D4
- T410 D4
- T411 E3
- T412 C3
- T413 C3

FRONT BOARD - LAYOUT DIAGRAM



- 1250 B3
  - 1251 B5
  - 1400 B2
  - 1401 B1
  - 1402 B1
  - 1403 A1
  - 1404 B4
  - 1405 B4
  - 1406 B1
  - 2252 B3
  - 2253 B3
  - 2403 B4
  - 3256 A5
  - 3401 B1
  - 3402 B1
  - 6261 A4
  - 6402 B4
  - 7403 B3
  - 9400 B1
  - 9401 A1
  - 9402 B2
  - 9404 A1
  - 9405 B5
  - 9406 A2
  - 9407 A2
- 
- 2250 B2
  - 2251 A1
  - 2290 B3
  - 2291 B4
  - 2292 B3
  - 2293 B3
  - 2401 B1
  - 2402 B6
  - 2403 B6
  - 2404 B2
  - 2405 B2
  - 2406 B2
  - 2407 B2
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  - 2498 B2
  - 2499 B2
  - 2500 B2

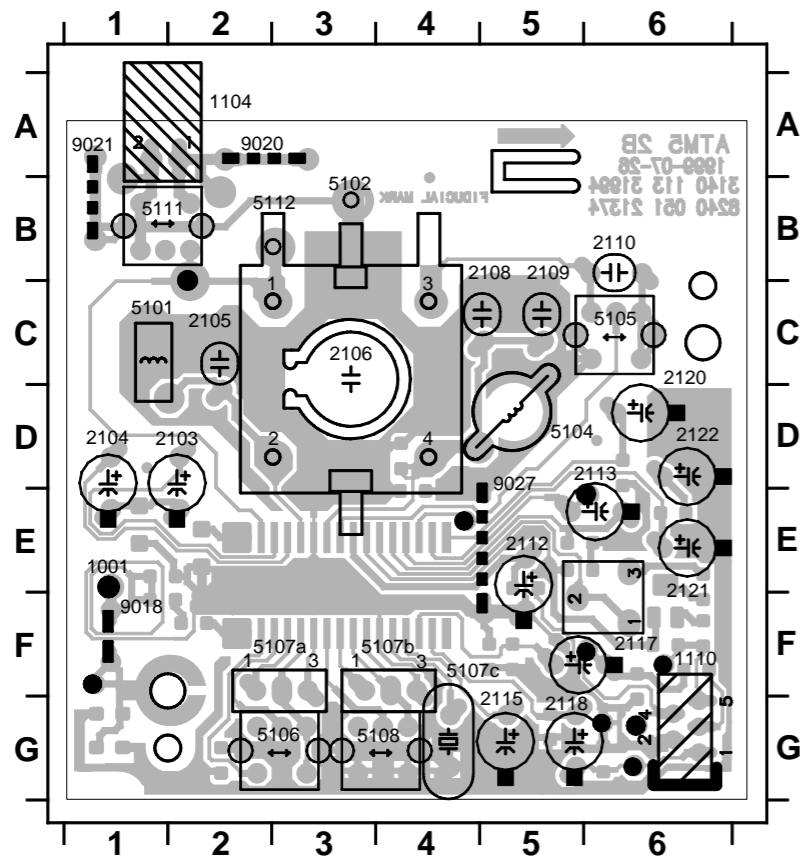
TUNER BOARD (ATM-5) - CIRCUIT DIAGRAM



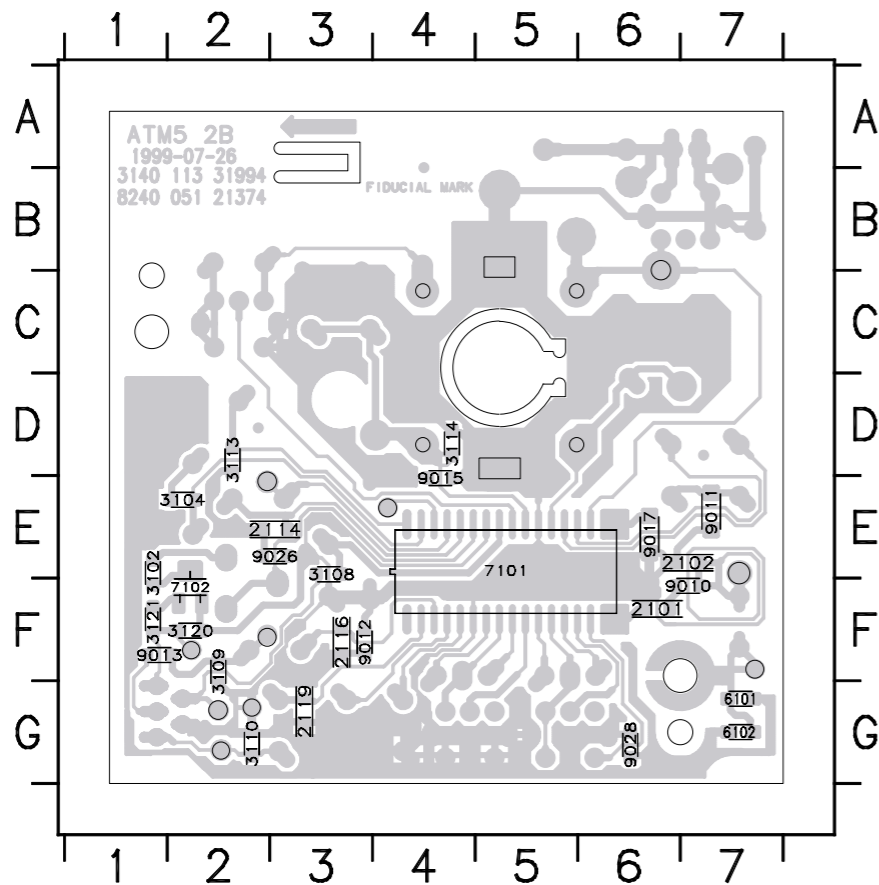
- 1001 A4
- 1104 E3
- 1110 B11
- 2101 A4
- 2102 A4
- 2103 D4
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- 2105 A5
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- 2108 C3
- 2109 C3
- 2110 D2
- 2112 D11
- 2113 F8
- 2114 G8
- 2115 G7
- 2116 C9
- 2117 C10
- 2118 B10
- 2119 C9
- 2120 G8
- 2121 A8
- 2122 B8
- 3101 A9
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- T004 B11
- T005 C11
- T006 E9
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- T008 C11
- T009 B11
- T010 F8
- T012 G2
- T013 F2

FM : 87.0(+/-0.5) ... 108.5(+/-0.5) MHz  
 AM : 520(+/-10) ... 1730(+/-20) KHz

TUNER BOARD (ATM-5) - LAYOUT DIAGRAM



- |      |     |       |     |
|------|-----|-------|-----|
| 1001 | E 1 | 5104  | D 5 |
| 1104 | A 2 | 5105  | C 6 |
| 1110 | F 6 | 5106  | G 3 |
| 2103 | D 2 | 5107a | F 3 |
| 2104 | D 1 | 5107b | F 4 |
| 2105 | C 2 | 5107c | F 4 |
| 2106 | C 3 | 5108  | G 4 |
| 2108 | B 5 | 5111  | B 1 |
| 2109 | B 5 | 5112  | B 3 |
| 2110 | B 6 | 9018  | F 1 |
| 2112 | E 5 | 9020  | A 2 |
| 2113 | D 6 | 9021  | A 1 |
| 2115 | G 5 | 9027  | D 5 |
| 2117 | F 6 |       |     |
| 2118 | G 5 |       |     |
| 2120 | C 6 |       |     |
| 2121 | E 6 |       |     |
| 2122 | D 6 |       |     |
| 3101 | F 6 |       |     |
| 5101 | C 1 |       |     |
| 5102 | B 3 |       |     |



- |      |     |
|------|-----|
| 2101 | F 6 |
| 2102 | E 7 |
| 2114 | E 3 |
| 2116 | F 3 |
| 2119 | G 3 |
| 3102 | E 1 |
| 3104 | E 1 |
| 3108 | E 3 |
| 3109 | F 2 |
| 3110 | G 2 |
| 3113 | D 2 |
| 3114 | D 4 |
| 3120 | F 2 |
| 3121 | F 1 |
| 6101 | F 7 |
| 6102 | G 7 |
| 7101 | E 5 |
| 7102 | E 2 |
| 9010 | E 7 |
| 9011 | E 7 |
| 9012 | F 3 |
| 9013 | F 1 |
| 9015 | D 4 |
| 9017 | E 6 |
| 9026 | E 3 |
| 9028 | G 6 |

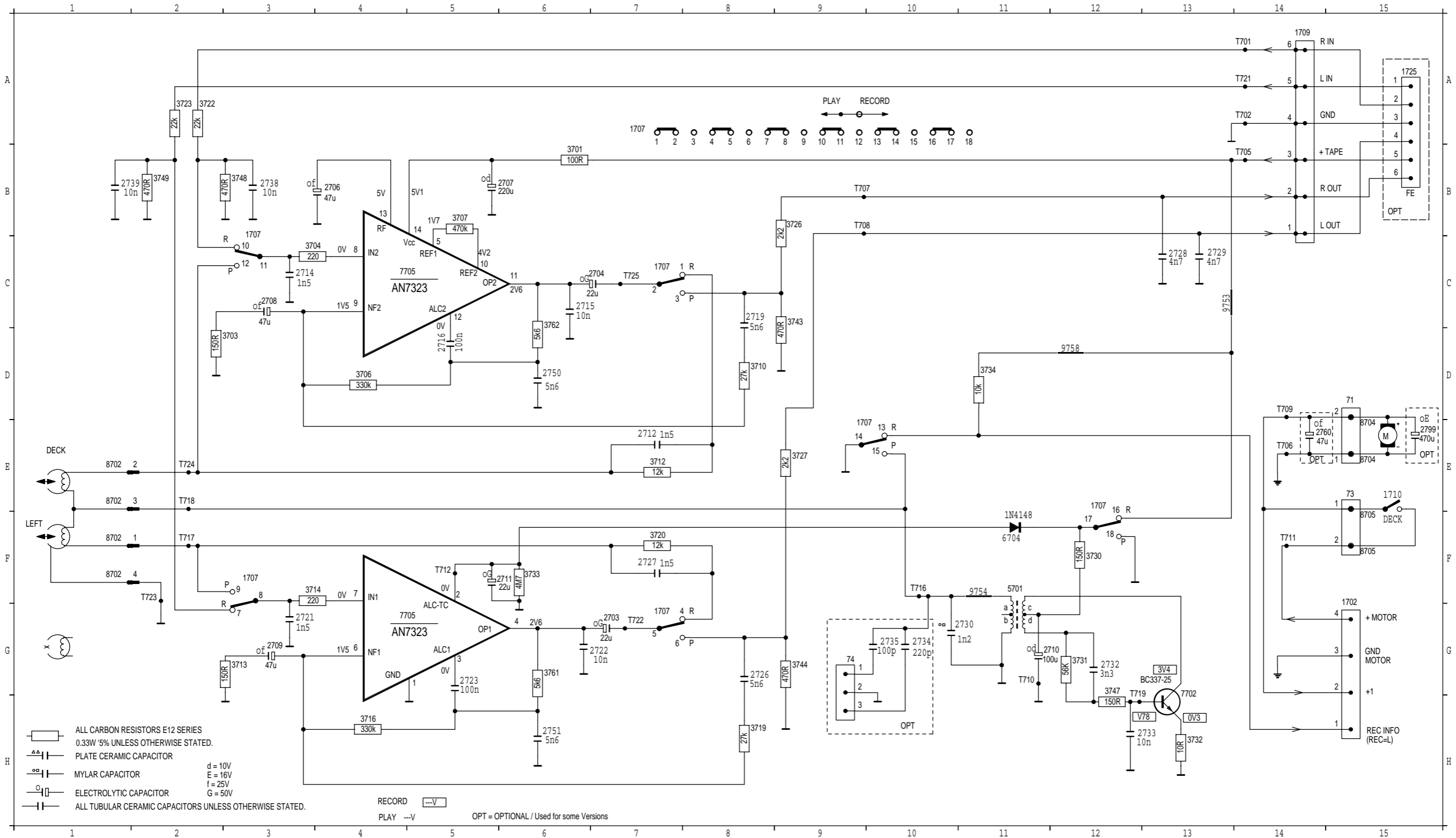
TUNER ADJUSTMENT TABLE

| Waverange   | Input Frequency   | Input   | Set tuned to      | Adjust           | Measure on           | Scope / Counter |
|---|---|---|-------------------|------------------|----------------------|-----------------|
| <b>OSCILLATOR</b>   |   |   |                   |                  |                      |                 |
| <b>FM</b><br>87,5 - 108 MHz                                   | 87,35 MHz   | <b>A</b>  | lower band end    | 5104             | <b>1</b> or <b>2</b> |                 |
|   | 108,25 MHz  | $\Delta f = \pm 500\text{kHz}$<br>$V_{RF} = 100\mu\text{V}$         | upper band end    | 2106 C1          |                      |                 |
| <b>MW</b><br>525 - 1607 kHz<br>(530 - 1710 kHz) <sup>1)</sup> | 512 kHz<br>(520 kHz)  | <b>C</b>  | lower band end    | 5105             | <b>1</b> or <b>2</b> |                 |
|   | 1635 kHz<br>(1730 kHz)  | $\Delta f = \pm 30\text{kHz}$<br>$V_{RF} = 100\mu\text{V}$          | upper band end    | 2106 C3          |                      |                 |
| <b>FM - RF</b>  |   |   |                   |                  |                      |                 |
| <b>FM</b><br>87,5 - 108 MHz                                   | 87,5 MHz  | <b>A</b>  | 87,5 MHz          | 5101             | <b>1</b> or <b>2</b> |                 |
|   | 108 MHz   | $\Delta f = \pm 500\text{kHz}$<br>$V_{RF} = 10\mu\text{V}$          | 108 MHz           | 2106 C2          |                      |                 |
| <b>VCO</b>  |   |   |                   |                  |                      |                 |
| <b>FM</b>   | 98 MHz  | <b>A</b><br>continuous wave<br>$V_{RF} = 1\text{ mV}$               | 98 MHz            | 3101             | <b>3</b>             | <br>152 ±1 kHz  |
| <b>AM - IF</b>  |   |   |                   |                  |                      |                 |
| <b>AM</b>   | 468 kHz<br>connect pin 24 of IC 7101 (AM Osc) with short wire to ground | <b>C</b><br>$\Delta f = \pm 15\text{kHz}$<br>$V_{RF} = 10\text{mV}$ | <br>see remark 2) | 5106<br><br>5108 | <b>1</b> or <b>2</b> |                 |
| <b>AM - RF</b>  |   |   |                   |                  |                      |                 |
| <b>MW</b>   | 560 kHz   | <b>B</b>  | 560 kHz           | 5111             | <b>1</b> or <b>2</b> |                 |
|   | 1500 kHz  | $\Delta f = \pm 30\text{kHz}$<br>$V_{RF}$ as low as possible        | 1500 kHz          | 2106 C4          |                      |                 |

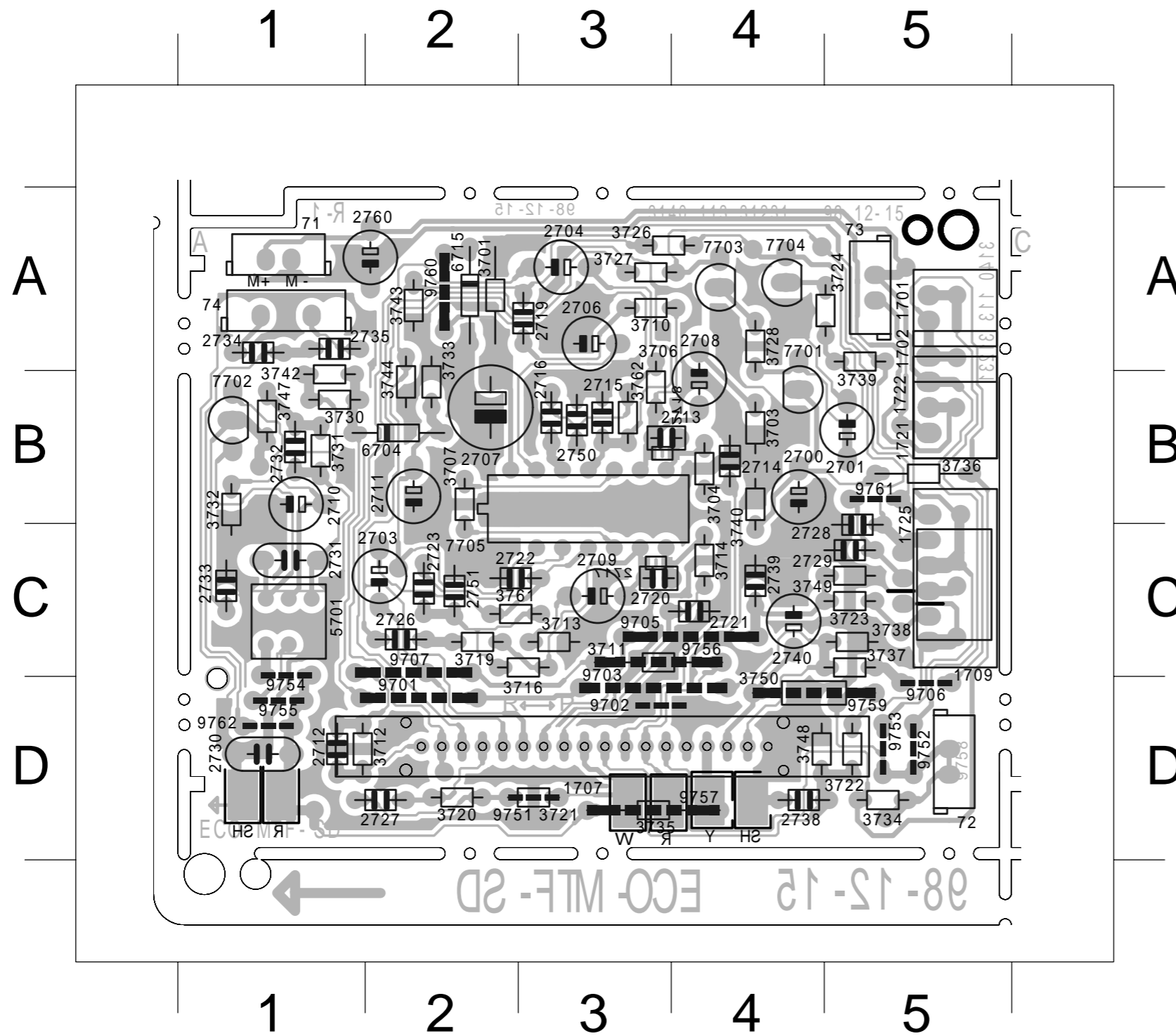
↑ repeat  
<sup>1)</sup> for USA /17  
<sup>2)</sup> RC-network serves for damping the IF-filter while adjusting the other one.

# RECORDER BOARD- CIRCUIT DIAGRAM

|      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|
| 71   | D15 | 1707 | C 3 | 1709 | A14 | 2706 | B 4 | 2711 | F 6 | 2719 | C 8 | 2727 | F 7 | 2733 | H13 | 2750 | D 6 | 3703 | D 3 | 3712 | E 7 | 3720 | F 7 | 3730 | F12 | 3743 | C 9 | 3761 | G 6 | 7705 | G 4 | 8702 | E 1 | 9753 | C13 | T705 | B14 | T710 | G11 | T718 | E 2 | T724 | E 2 |
| 73   | E15 | 1707 | G 7 | 1710 | E15 | 2707 | B 6 | 2712 | E 7 | 2721 | G 3 | 2728 | C13 | 2734 | G10 | 2751 | H 6 | 3704 | C 3 | 3713 | G 3 | 3722 | A 2 | 3731 | G12 | 3744 | G 9 | 3762 | D 6 | 7705 | C 4 | 8704 | E15 | 9754 | F11 | T706 | E14 | T711 | F14 | T719 | H13 | T725 | C 7 |
| 74   | G 9 | 1707 | C 7 | 1725 | A15 | 2708 | C 3 | 2714 | C 3 | 2722 | G 7 | 2729 | C13 | 2735 | G10 | 2760 | E14 | 3706 | D 4 | 3714 | F 3 | 3723 | A 2 | 3732 | H13 | 3747 | G12 | 5701 | F11 | 8702 | F 1 | 8704 | E15 | 9758 | D12 | T707 | B10 | T712 | F 5 | T721 | A14 |      |     |
| 1702 | G15 | 1707 | E 9 | 2703 | G 7 | 2709 | G 3 | 2715 | C 6 | 2723 | G 5 | 2730 | G11 | 2738 | B 3 | 2799 | E15 | 3707 | B 5 | 3716 | H 4 | 3726 | B 9 | 3733 | F 6 | 3748 | B 3 | 6704 | F11 | 8702 | F 1 | 8705 | F15 | T701 | A14 | T708 | B10 | T716 | F10 | T722 | G 7 |      |     |
| 1707 | F 3 | 1707 | E12 | 2704 | C 7 | 2710 | G12 | 2716 | D 5 | 2726 | G 8 | 2732 | G12 | 2739 | B 1 | 3701 | B 6 | 3710 | D 8 | 3719 | H 8 | 3727 | E 9 | 3734 | D11 | 3749 | B 2 | 7702 | H13 | 8702 | E 1 | 8705 | F15 | T702 | A14 | T709 | D14 | T717 | F 2 | T723 | F 2 |      |     |



RECORDER BOARD - LAYOUT DIAGRAM



- |          |          |          |           |
|----------|----------|----------|-----------|
| 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 |           |

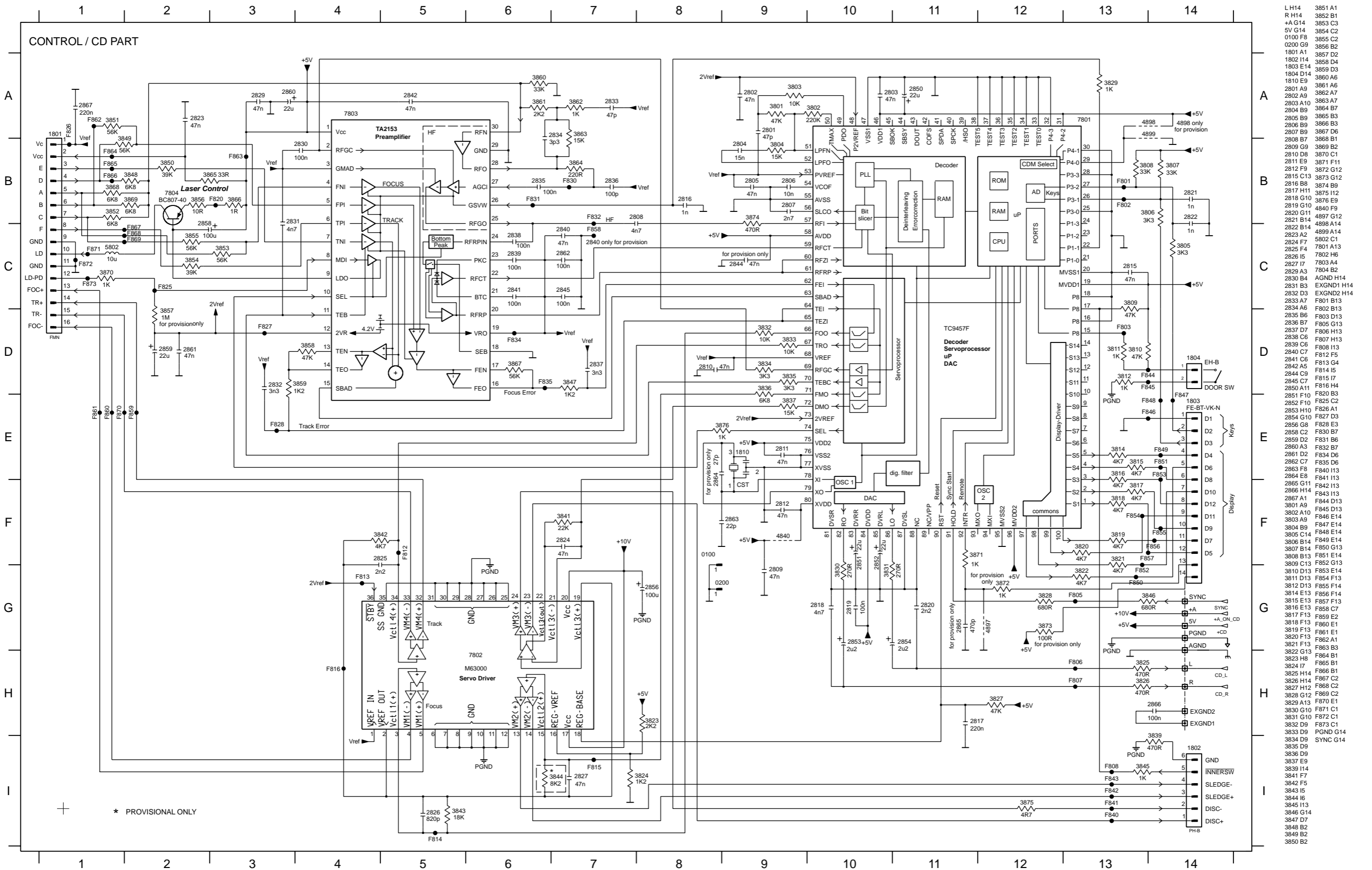
CASSETTE ADJUSTMENT

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

\* SBC420 : 4822 397 30071

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

# COMBI BOARD (CONTRAL / CD PART) - CIRCUIT DIAGRAM

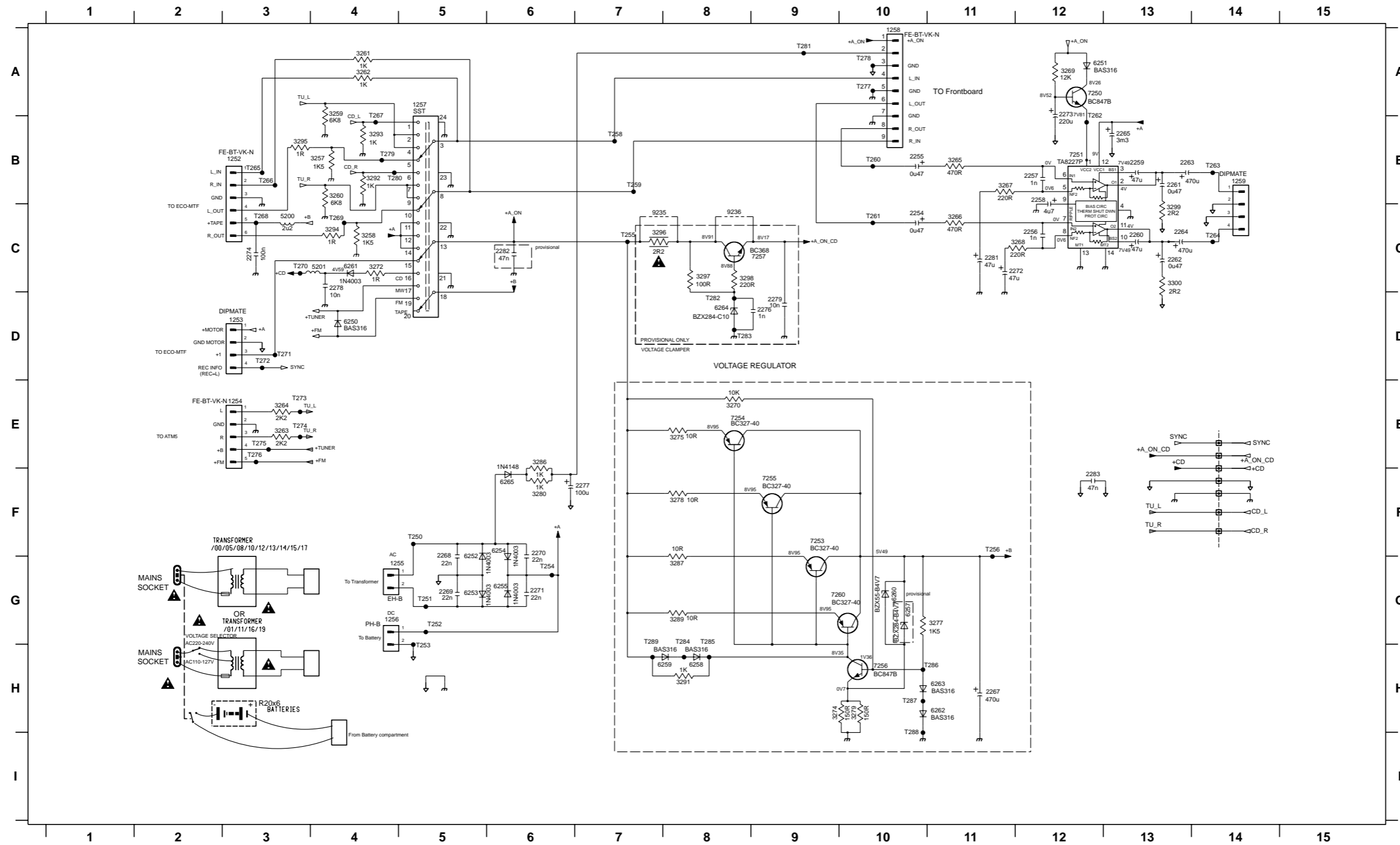


|          |          |
|----------|----------|
| LH14     | 3851 A1  |
| R H14    | 3852 B1  |
| +A G14   | 3853 C3  |
| 5V G14   | 3854 C2  |
| 0100 F8  | 3855 C2  |
| 0200 G9  | 3856 B2  |
| 1801 A1  | 3857 D2  |
| 1802 I14 | 3858 D4  |
| 1803 E14 | 3859 D3  |
| 1804 D14 | 3860 A6  |
| 1810 E9  | 3861 A6  |
| 2801 A9  | 3862 A7  |
| 2802 A9  | 3863 A7  |
| 2803 A10 | 3864 B7  |
| 2804 B9  | 3865 B3  |
| 2805 B9  | 3866 B3  |
| 2806 B9  | 3867 D6  |
| 2808 B7  | 3868 B1  |
| 2809 G9  | 3869 B2  |
| 2810 D8  | 3870 C1  |
| 2811 E9  | 3871 F11 |
| 2812 F9  | 3872 G12 |
| 2815 C13 | 3873 G12 |
| 2816 B8  | 3874 B9  |
| 2817 H11 | 3875 I12 |
| 2818 G10 | 3876 E9  |
| 2819 G10 | 3877 F9  |
| 2820 G11 | 3878 F9  |
| 2821 B14 | 3879 G12 |
| 2822 B14 | 3880 A14 |
| 2823 A2  | 3881 A14 |
| 2824 F7  | 3882 A13 |
| 2825 F4  | 3883 A6  |
| 2826 I5  | 3884 H4  |
| 2827 I7  | 3885 A4  |
| 2829 A3  | 3886 B2  |
| 2830 B4  | 3887 H12 |
| 2831 B3  | 3888 H14 |
| 2832 D3  | 3889 D14 |
| 2833 A7  | 3890 B13 |
| 2834 A6  | 3891 B13 |
| 2835 B6  | 3892 D13 |
| 2836 B7  | 3893 G13 |
| 2837 D7  | 3894 H13 |
| 2838 C6  | 3895 H13 |
| 2839 C6  | 3896 H13 |
| 2840 C7  | 3897 F5  |
| 2841 C6  | 3898 G4  |
| 2842 A5  | 3899 I5  |
| 2843 C9  | 3900 C7  |
| 2844 C7  | 3901 A13 |
| 2845 A5  | 3902 B3  |
| 2846 C9  | 3903 C2  |
| 2847 H10 | 3904 A1  |
| 2848 G10 | 3905 D3  |
| 2849 G8  | 3906 E3  |
| 2850 D2  | 3907 B7  |
| 2851 D2  | 3908 B7  |
| 2852 D2  | 3909 B7  |
| 2853 D2  | 3910 D6  |
| 2854 D2  | 3911 D6  |
| 2855 D2  | 3912 D6  |
| 2856 D2  | 3913 D6  |
| 2857 D2  | 3914 D6  |
| 2858 D2  | 3915 D6  |
| 2859 D2  | 3916 D6  |
| 2860 A3  | 3917 D6  |
| 2861 D2  | 3918 D6  |
| 2862 C7  | 3919 D6  |
| 2863 F8  | 3920 D6  |
| 2864 E8  | 3921 D6  |
| 2865 G11 | 3922 D6  |
| 2866 H14 | 3923 D6  |
| 2867 A1  | 3924 D6  |
| 2868 A9  | 3925 D6  |
| 2869 A10 | 3926 D6  |
| 2870 A9  | 3927 D6  |
| 2871 A9  | 3928 D6  |
| 2872 A9  | 3929 D6  |
| 2873 A9  | 3930 D6  |
| 2874 A9  | 3931 D6  |
| 2875 A9  | 3932 D6  |
| 2876 A9  | 3933 D6  |
| 2877 A9  | 3934 D6  |
| 2878 A9  | 3935 D6  |
| 2879 A9  | 3936 D6  |
| 2880 A9  | 3937 D6  |
| 2881 A9  | 3938 D6  |
| 2882 A9  | 3939 D6  |
| 2883 A9  | 3940 D6  |
| 2884 A9  | 3941 D6  |
| 2885 A9  | 3942 D6  |
| 2886 A9  | 3943 D6  |
| 2887 A9  | 3944 D6  |
| 2888 A9  | 3945 D6  |
| 2889 A9  | 3946 D6  |
| 2890 A9  | 3947 D6  |
| 2891 A9  | 3948 D6  |
| 2892 A9  | 3949 D6  |
| 2893 A9  | 3950 D6  |

\* PROVISIONAL ONLY

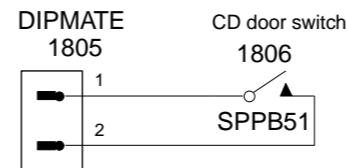
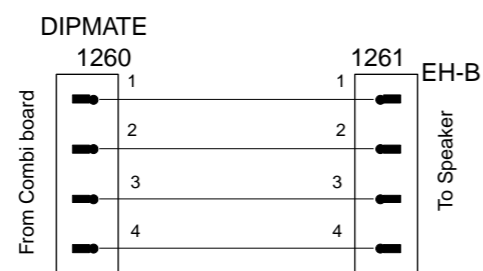
# COMBI BOARD (Audio part) - CIRCUIT DIAGRAM

|        |         |          |          |          |          |          |          |         |          |         |          |          |         |          |         |         |          |          |          |          |          |          |          |          |          |         |          |          |          |         |         |          |         |          |
|--------|---------|----------|----------|----------|----------|----------|----------|---------|----------|---------|----------|----------|---------|----------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------|----------|----------|----------|---------|---------|----------|---------|----------|
| LF14   | 1252 B3 | 1256 G5  | 2254 C10 | 2258 B12 | 2262 C13 | 2267 H11 | 2271 G6  | 2276 D9 | 2281 C11 | 3258 C4 | 3262 A4  | 3266 C11 | 3270 E8 | 3277 G10 | 3286 E6 | 3292 B4 | 3296 C7  | 3300 C13 | 6251 A12 | 6255 G6  | 6260 G10 | 6264 D8  | 7253 F9  | 7257 C9  | AGND F14 | T251 G5 | T255 C7  | T260 B10 | T264 C14 | T268 C3 | T272 D3 | T276 E3  | T280 B4 | T284 G8  |
| RF14   | 1253 D3 | 1257 A5  | 2255 B10 | 2259 B13 | 2263 B13 | 2268 G5  | 2272 C11 | 2277 F6 | 2282 C6  | 3259 A4 | 3263 E3  | 3267 B11 | 3272 C4 | 3278 F8  | 3287 G8 | 3293 B4 | 3297 C8  | 5200 C3  | 6252 G6  | 6257 G10 | 6261 C4  | 6265 F6  | 7254 E8  | 7260 G10 | PGND F14 | T252 G5 | T256 F11 | T261 C10 | T265 B3  | T269 C4 | T273 E3 | T277 A10 | T281 A9 | T285 G8  |
| +A E14 | 1254 E3 | 1258 A10 | 2256 C12 | 2260 C13 | 2264 C13 | 2269 G5  | 2273 B12 | 2278 C4 | 2283 F12 | 3260 B4 | 3264 E3  | 3268 C12 | 3274 H9 | 3279 H10 | 3289 G8 | 3294 C4 | 3298 C8  | 5201 C3  | 6253 G6  | 6258 H8  | 6262 H10 | 7250 A12 | 7255 F9  | 9235 C7  | SYNC E14 | T253 H5 | T258 B7  | T262 B12 | T266 B3  | T270 C4 | T274 E3 | T278 A10 | T282 D8 | T286 H11 |
| 5V E14 | 1255 G4 | 1259 B14 | 2257 B12 | 2261 B13 | 2265 B13 | 2270 F6  | 2274 C3  | 2279 D9 | 3257 B4  | 3261 A4 | 3265 B11 | 3269 A12 | 3275 E8 | 3280 F6  | 3291 H8 | 3295 B3 | 3299 C13 | 6250 D4  | 6254 F6  | 6259 H8  | 6263 H10 | 7251 B12 | 7256 H10 | 9236 C8  | T250 F5  | T254 G6 | T259 B7  | T263 B14 | T267 B4  | T271 D3 | T275 E3 | T279 B4  | T283 D8 |          |

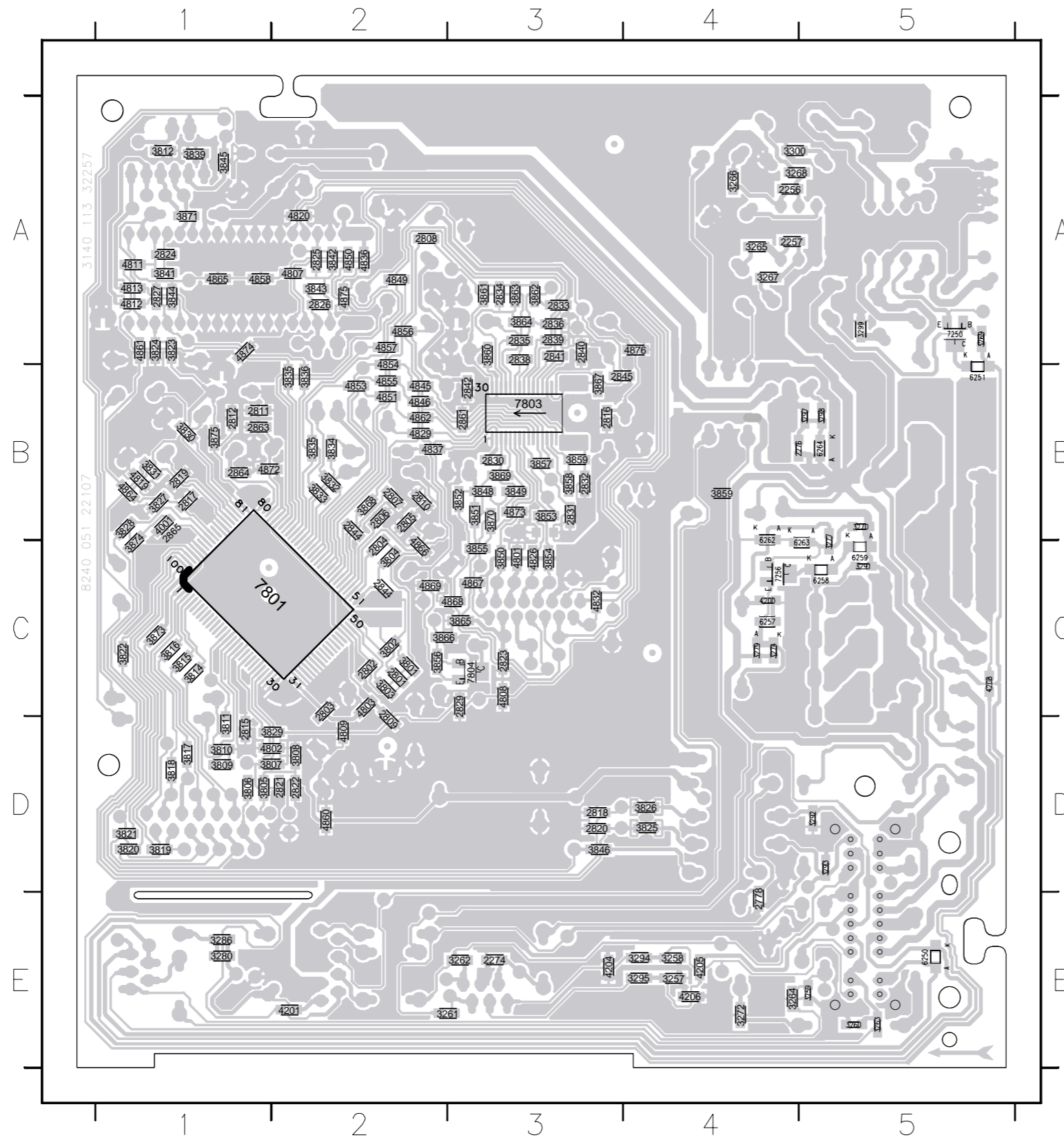


LOUDSPEAKER BOARD

CD DOOR SWITCH BOARD



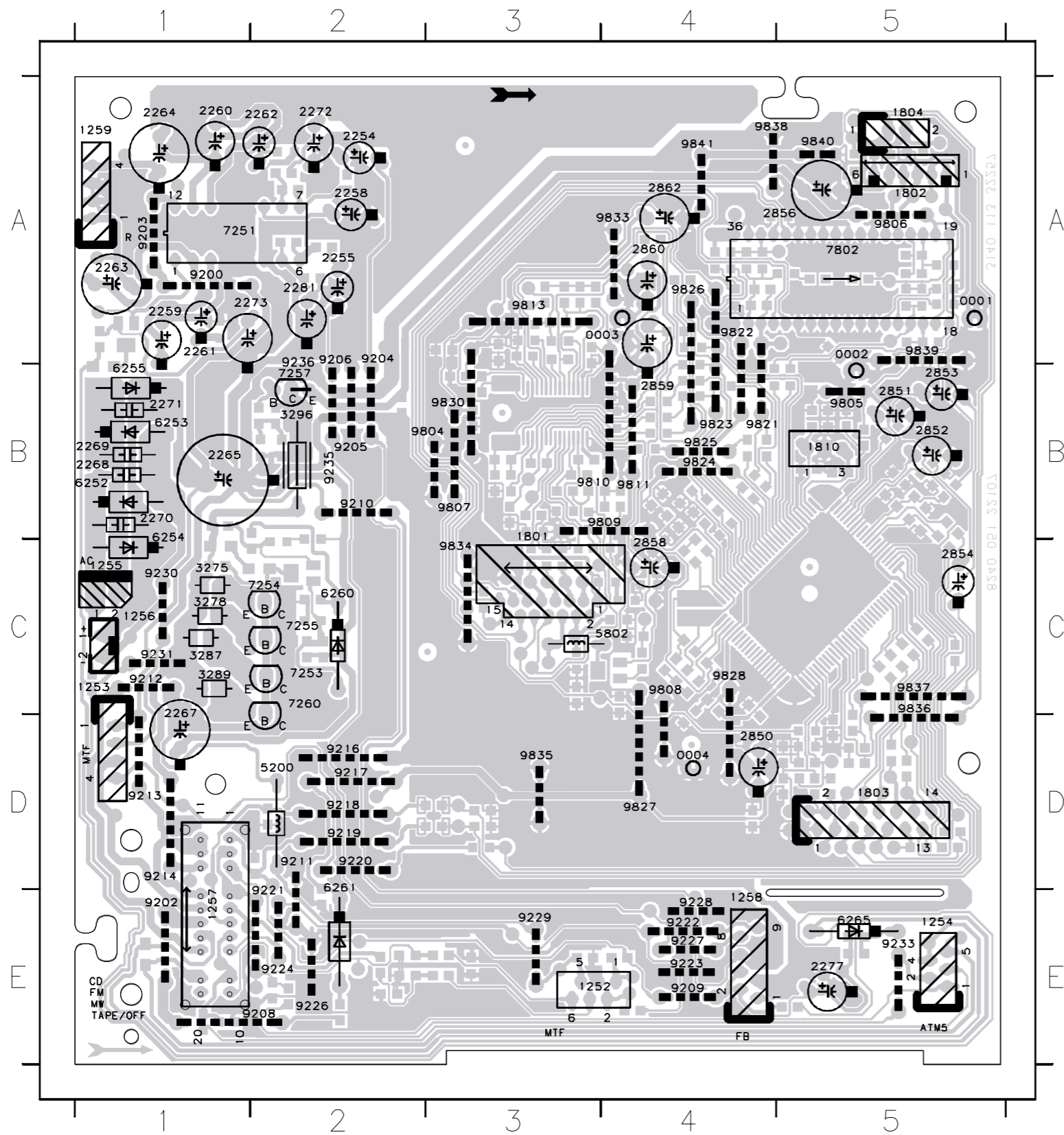
# COMBI BOARD (Solder Side) - LAYOUT DIAGRAM



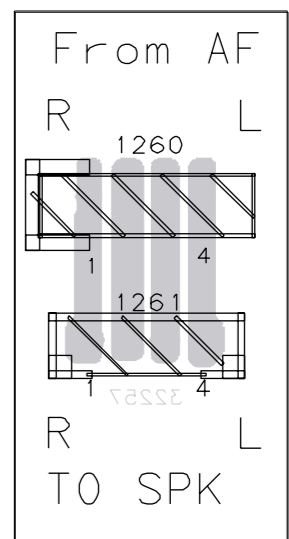
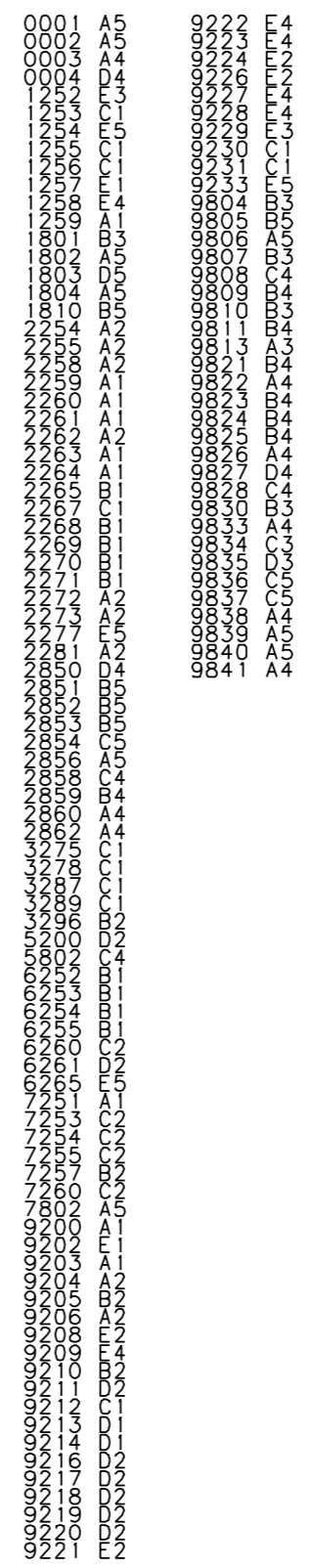
|      |    |   |
|------|----|---|
| 7801 | A1 | 1 |
| 7802 | A1 | 1 |
| 7803 | A1 | 1 |
| 7804 | A1 | 1 |
| 7805 | A1 | 1 |
| 7806 | A1 | 1 |
| 7807 | A1 | 1 |
| 7808 | A1 | 1 |
| 7809 | A1 | 1 |
| 7810 | A1 | 1 |
| 7811 | A1 | 1 |
| 7812 | A1 | 1 |
| 7813 | A1 | 1 |
| 7814 | A1 | 1 |
| 7815 | A1 | 1 |
| 7816 | A1 | 1 |
| 7817 | A1 | 1 |
| 7818 | A1 | 1 |
| 7819 | A1 | 1 |
| 7820 | A1 | 1 |
| 7821 | A1 | 1 |
| 7822 | A1 | 1 |
| 7823 | A1 | 1 |
| 7824 | A1 | 1 |
| 7825 | A1 | 1 |
| 7826 | A1 | 1 |
| 7827 | A1 | 1 |
| 7828 | A1 | 1 |
| 7829 | A1 | 1 |
| 7830 | A1 | 1 |
| 7831 | A1 | 1 |
| 7832 | A1 | 1 |
| 7833 | A1 | 1 |
| 7834 | A1 | 1 |
| 7835 | A1 | 1 |
| 7836 | A1 | 1 |
| 7837 | A1 | 1 |
| 7838 | A1 | 1 |
| 7839 | A1 | 1 |
| 7840 | A1 | 1 |
| 7841 | A1 | 1 |
| 7842 | A1 | 1 |
| 7843 | A1 | 1 |
| 7844 | A1 | 1 |
| 7845 | A1 | 1 |
| 7846 | A1 | 1 |
| 7847 | A1 | 1 |
| 7848 | A1 | 1 |
| 7849 | A1 | 1 |
| 7850 | A1 | 1 |
| 7851 | A1 | 1 |
| 7852 | A1 | 1 |
| 7853 | A1 | 1 |
| 7854 | A1 | 1 |
| 7855 | A1 | 1 |
| 7856 | A1 | 1 |
| 7857 | A1 | 1 |
| 7858 | A1 | 1 |
| 7859 | A1 | 1 |
| 7860 | A1 | 1 |
| 7861 | A1 | 1 |
| 7862 | A1 | 1 |
| 7863 | A1 | 1 |
| 7864 | A1 | 1 |
| 7865 | A1 | 1 |
| 7866 | A1 | 1 |
| 7867 | A1 | 1 |
| 7868 | A1 | 1 |
| 7869 | A1 | 1 |
| 7870 | A1 | 1 |
| 7871 | A1 | 1 |
| 7872 | A1 | 1 |
| 7873 | A1 | 1 |
| 7874 | A1 | 1 |
| 7875 | A1 | 1 |
| 7876 | A1 | 1 |
| 7877 | A1 | 1 |
| 7878 | A1 | 1 |
| 7879 | A1 | 1 |
| 7880 | A1 | 1 |
| 7881 | A1 | 1 |
| 7882 | A1 | 1 |
| 7883 | A1 | 1 |
| 7884 | A1 | 1 |
| 7885 | A1 | 1 |
| 7886 | A1 | 1 |
| 7887 | A1 | 1 |
| 7888 | A1 | 1 |
| 7889 | A1 | 1 |
| 7890 | A1 | 1 |
| 7891 | A1 | 1 |
| 7892 | A1 | 1 |
| 7893 | A1 | 1 |
| 7894 | A1 | 1 |
| 7895 | A1 | 1 |
| 7896 | A1 | 1 |
| 7897 | A1 | 1 |
| 7898 | A1 | 1 |
| 7899 | A1 | 1 |
| 7900 | A1 | 1 |



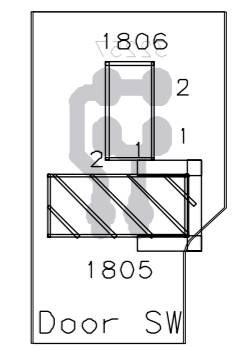
COMBI BOARD (Componet Side) - LAYOUT DIAGRAM



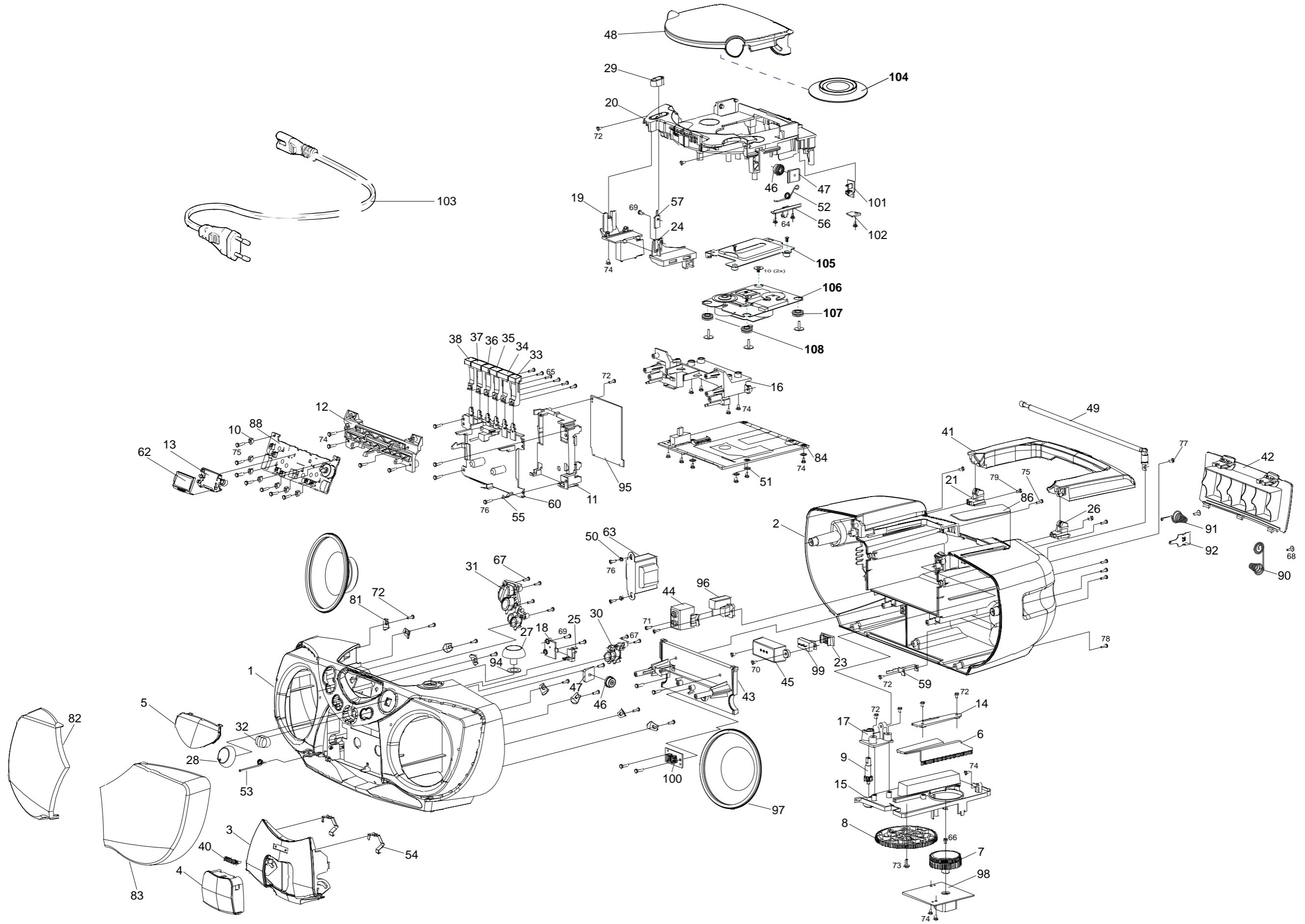
LOUDSPEAKER BOARD - LAYOUT DIAGRAM



CD DOOR SWITCH - LAYOUT DIAGRAM



EXPLODED VIEW DIAGRAM - CABINET



**MECHANICAL PARTSLIST - CABINET**

**AZ1080**

|    |                |                          |
|----|----------------|--------------------------|
| 3  | 3140 114 44770 | Cass Door                |
| 4  | 3140 114 44760 | Cass Door Lens           |
| 6  | 3140 114 38750 | Pointer                  |
| 7  | 3140 114 38760 | Gear PVC                 |
| 8  | 3140 114 38770 | Gear Big                 |
| 9  | 3140 114 38780 | Gear Tuning Knob         |
| 11 | 3140 114 20430 | Bracket ECO-MTF-SD       |
| 13 | 3140 114 38810 | LCD Bracket              |
| 14 | 3140 114 38820 | Pointer Holder           |
| 18 | 3140 114 38860 | DBB Knob Plate           |
| 21 | 3140 114 38890 | Handle Hinge Adaptor(L)  |
| 22 | 3140 114 32910 | Ring                     |
| 26 | 3140 114 38930 | Handle Hinge Adaptor(R)  |
| 27 | 3140 114 44790 | Tuning Knob              |
| 28 | 3140 114 44800 | Volume Knob              |
| 29 | 3140 114 44740 | Selector Knob            |
| 30 | 3140 114 44680 | Repeat/Shuffle Key       |
| 31 | 3140 114 44690 | Play/Stop/FF/Rew Key     |
| 32 | 3140 114 44700 | DBBS Knob                |
| 33 | 3140 114 44810 | Cass Knob(Record)        |
| 34 | 3140 114 44820 | Cass Knob(Play)          |
| 35 | 3140 114 44830 | Cass Knob(Rewind)        |
| 36 | 3140 114 44840 | Cass Knob(F.FWD)         |
| 37 | 3140 114 44850 | Cass Knob(Stop/Eject)    |
| 38 | 3140 114 44860 | Cass Knob(Pause)         |
| 39 | 3140 114 29070 | Clamper Ring             |
| 41 | 3140 114 44780 | Handle                   |
| 42 | 3140 114 39090 | Battery Door             |
| 46 | 3140 114 32910 | Cass Door Gear           |
| 47 | 3140 114 29070 | Cass Door Gear Holder    |
| 48 | 3140 114 44730 | CD Door                  |
| 49 | 3140 118 71790 | Rod Antenna              |
| 52 | 3140 111 00990 | CD Door Spring           |
| 53 | 3140 111 01000 | Cass Door Spring         |
| 54 | 3140 111 21780 | Cass Tape Spring         |
| 60 | 3140 118 71104 | Tape Deck                |
| 61 | 3103 309 05350 | CD MCD1B Drive           |
| 89 | 3140 114 13902 | Damper Rubber(35 DEG)    |
| 89 | 3140 114 13892 | Damper Rubber(30 DEG)    |
| 90 | 3140 111 01010 | Battery Sping"+,-"       |
| 91 | 3140 111 01020 | Battery Sping"-"         |
| 92 | 3140 111 21850 | Battery Contact Plate"+" |
| 93 | 3103 307 68260 | Magnet                   |

**MECHANICAL PARTSLIST - TAPE DECK**

|     |                |                      |
|-----|----------------|----------------------|
| 10  | 4822 528 70849 | Pinch Roller Arm(B)  |
| 11  | 4822 528 70695 | Pinch Roller Assy    |
| 74  | 4822 403 70968 | Eject Hook(A)        |
| 106 | 4822 358 31325 | Main Belt 45.2 x 1.2 |
| 107 | 4822 358 31124 | Sub Belt 44.7 x 1.2  |

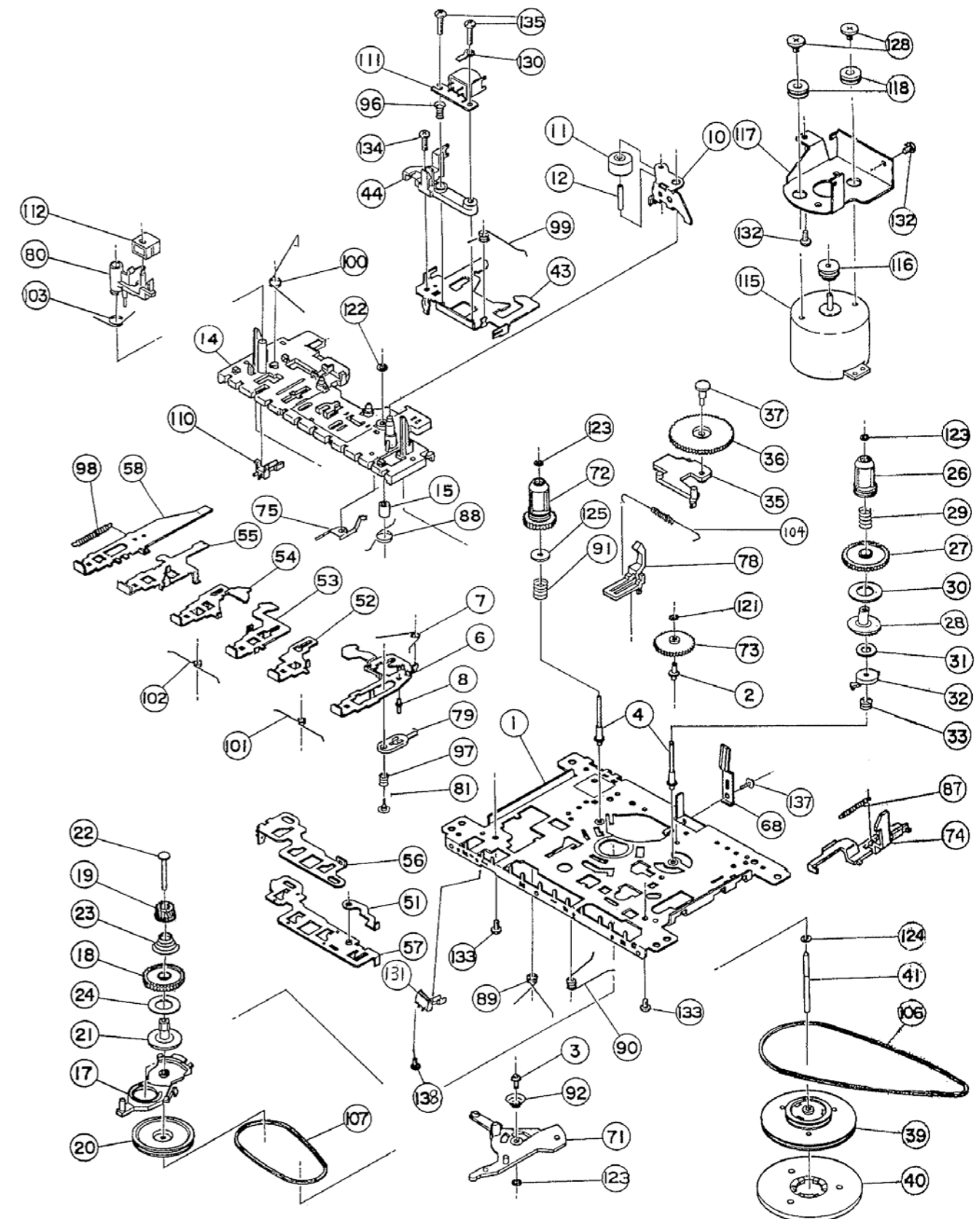
**AZ1081**

|    |                |                          |
|----|----------------|--------------------------|
| 3  | 3140 114 45120 | Cass Door                |
| 4  | 3140 114 44760 | Cass Door Lens           |
| 6  | 3140 114 45080 | Pointer                  |
| 7  | 3140 114 38760 | Gear PVC                 |
| 8  | 3140 114 38770 | Gear Big                 |
| 9  | 3140 114 38780 | Gear Tuning Knob         |
| 11 | 3140 114 20430 | Bracket ECO-MTF-SD       |
| 13 | 3140 114 38810 | LCD Bracket              |
| 14 | 3140 114 45660 | Pointer Holder           |
| 18 | 3140 114 38860 | DBB Knob Plate           |
| 21 | 3140 114 38890 | Handle Hinge Adaptor(L)  |
| 22 | 3140 114 32910 | Ring                     |
| 26 | 3140 114 38930 | Handle Hinge Adaptor(R)  |
| 27 | 3140 114 38940 | Tuning Knob              |
| 28 | 3140 114 45140 | Volume Knob              |
| 29 | 3140 114 38960 | Selector Knob            |
| 30 | 3140 114 45030 | Repeat/Shuffle Key       |
| 31 | 3140 114 45040 | Play/Stop/FF/Rew Key     |
| 32 | 3140 114 44700 | DBBS Knob                |
| 33 | 3140 114 39000 | Cass Knob(Record)        |
| 34 | 3140 114 39010 | Cass Knob(Play)          |
| 35 | 3140 114 39020 | Cass Knob(Rewind)        |
| 36 | 3140 114 39030 | Cass Knob(F.FWD)         |
| 37 | 3140 114 39040 | Cass Knob(Stop/Eject)    |
| 38 | 3140 114 39050 | Cass Knob(Pause)         |
| 39 | 3140 114 29070 | Clamper Ring             |
| 41 | 3140 114 45130 | Handle                   |
| 42 | 3140 114 45060 | Battery Door             |
| 46 | 3140 114 39140 | Cass Door Gear           |
| 47 | 3140 114 39150 | Cass Door Gear Holder    |
| 48 | 3140 114 45090 | CD Door                  |
| 49 | 3140 118 71790 | Rod Antenna              |
| 52 | 3140 111 00990 | CD Door Spring           |
| 53 | 3140 111 01000 | Cass Door Spring         |
| 54 | 3140 111 21780 | Cass Tape Spring         |
| 60 | 3140 118 71104 | Tape Deck                |
| 61 | 3103 309 05350 | CD MCD1B Drive           |
| 89 | 3140 114 13902 | Damper Rubber(35 DEG)    |
| 89 | 3140 114 13892 | Damper Rubber(30 DEG)    |
| 90 | 3140 111 01010 | Battery Sping"+,-"       |
| 91 | 3140 111 01020 | Battery Sping"-"         |
| 92 | 3140 111 21850 | Battery Contact Plate"+" |
| 93 | 3103 307 68260 | Magnet                   |

|     |                |                   |
|-----|----------------|-------------------|
| 110 | 4822 278 90721 | Leaf Switch       |
| 111 | 4822 249 30218 | MS18R-AKONI       |
| 112 | 4822 249 40306 | E.Head            |
| 115 | 4822 361 21656 | EG-530AD-9B       |
|     | 4822 528 11189 | Pinch Roller Assy |

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

**EXPLODED VIEW DIAGRAM - TAPE DECK**



## ELECTRICAL PARTSLIST - FRONT BOARD

**- MISCELLANEOUS -**

|      |                |                   |
|------|----------------|-------------------|
| 1250 | 9965 000 07513 | SLIDE-SWITCH 2P2T |
| 1251 | 4822 267 10956 | CONNECTOR 7-PINS  |
| 1400 | 2422 128 02997 | SWITCH-TACT       |
| 1401 | 2422 128 02997 | SWITCH-TACT       |
| 1402 | 2422 128 02997 | SWITCH-TACT       |
| 1403 | 2422 128 02997 | SWITCH-TACT       |
| 1404 | 2422 128 02997 | SWITCH-TACT       |
| 1405 | 2422 128 02997 | SWITCH-TACT       |
| 1406 | 4822 267 51453 | CONNECTOR 12-PINS |
| 7403 | 3140 110 51580 | DISPLAY, LCD      |

**- CAPACITORS -**

|      |                |                  |
|------|----------------|------------------|
| 2250 | 5322 126 11583 | 10nF 10% X7R 50V |
| 2251 | 5322 126 11583 | 10nF 10% X7R 50V |
| 2290 | 3198 017 34730 | 47nF 10% X7R 16V |
| 2291 | 3198 017 34730 | 47nF 10% X7R 16V |
| 2292 | 3198 017 34730 | 47nF 10% X7R 16V |
| 2293 | 3198 017 34730 | 47nF 10% X7R 16V |

**- RESISTORS -**

|      |                |                    |
|------|----------------|--------------------|
| 3250 | 4822 051 30222 | 2,2K 5% 0,062W     |
| 3251 | 4822 051 30222 | 2,2K 5% 0,062W     |
| 3252 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3253 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3254 | 4822 051 30103 | 10K 5% 0,062W      |
| 3255 | 4822 051 30103 | 10K 5% 0,062W      |
| 3256 | 2120 354 90029 | POTM CAR LIN 50KX2 |
| 3400 | 4822 051 30683 | 68K 5% 0,062W      |
| 3401 | 4822 051 30223 | 22K 5% 0,062W      |
| 3402 | 4822 051 30103 | 10K 5% 0,062W      |
| 3403 | 4822 051 30334 | 330K 5% 0,062W     |
| 3404 | 4822 051 30333 | 33K 5% 0,062W      |
| 3405 | 4822 117 12891 | 220K 1%            |
| 3415 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3416 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3417 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3418 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3419 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3420 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3421 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3422 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3423 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3424 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 3425 | 4822 051 30152 | 1,5K 5% 0,062W     |
| 4400 | 4822 051 30008 | OR JUMPER (0603)   |

**- RESISTORS -**

|      |                |                  |
|------|----------------|------------------|
| 4401 | 4822 051 30008 | OR JUMPER (0603) |
| 4403 | 4822 051 30008 | OR JUMPER (0603) |
| 4404 | 4822 051 30008 | OR JUMPER (0603) |
| 4405 | 4822 051 30008 | OR JUMPER (0603) |
| 4406 | 4822 051 30008 | OR JUMPER (0603) |
| 4407 | 4822 051 30008 | OR JUMPER (0603) |
| 4408 | 4822 051 30008 | OR JUMPER (0603) |
| 4409 | 4822 051 30008 | OR JUMPER (0603) |

**- COILS & FILTERS -**

|      |                |          |
|------|----------------|----------|
| 5401 | 4822 157 11228 | 100μH 5% |
|------|----------------|----------|

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

## ELECTRICAL PARTSLIST - TUNER BOARD (ATM5-2B)

**- MISCELLANEOUS -**

|      |                |                     |
|------|----------------|---------------------|
| 1110 | 4822 267 10954 | CONNECTOR 5-PINS    |
| 1201 | 2422 549 44211 | FERRITE BAR 5X13X55 |

**- CAPACITORS -**

|      |                |                       |
|------|----------------|-----------------------|
| 2101 | 4822 126 13193 | 4,7nF 10% X7R 63V     |
| 2102 | 4822 122 33777 | 47pF 5% NP0 63V       |
| 2103 | 4822 124 40248 | 10μF 20% 63V          |
| 2104 | 4822 124 40248 | 10μF 20% 63V          |
| 2105 | 4822 126 12814 | 24pF 5% N220 50V      |
| 2106 | 4822 125 50681 | VARIABLE CAP.         |
| 2108 | 2020 552 92746 | 20pF 5% N1000 50V     |
| 2109 | 2020 552 95949 | 2,2pF 0.25% N1000 50V |
| 2110 | 4822 126 12229 | 8,2pF 1% N750 50V     |
| 2112 | 4822 124 40433 | 47μF 20% 25V          |
| 2113 | 4822 124 40746 | 0,22μF 20% 63V        |
| 2114 | 4822 126 14241 | 330pF 5% NPO 50V      |
| 2115 | 4822 124 40769 | 4,7μF 20% 100V        |
| 2116 | 3198 017 31530 | 15nF 10% X7R 50V      |
| 2117 | 4822 124 21913 | 1μF 20% 63V           |
| 2118 | 4822 124 21913 | 1μF 20% 63V           |
| 2119 | 3198 017 31530 | 15nF 10% X7R 50V      |
| 2120 | 4822 124 21913 | 1μF 20% 63V           |
| 2121 | 4822 124 21913 | 1μF 20% 63V           |
| 2122 | 4822 124 41407 | 0,47μF 20% 63V        |

**- RESISTORS -**

|      |                |                  |
|------|----------------|------------------|
| 3101 | 4822 100 20167 | 50K 30% LIN 0,1W |
| 3102 | 4822 051 30683 | 68K 5% 0,062W    |
| 3104 | 4822 051 30222 | 2,2K 5% 0,062W   |
| 3108 | 4822 051 20339 | 33R 5% 0,1W      |
| 3109 | 4822 117 13632 | 100K 1% 0,62W    |
| 3110 | 4822 117 13632 | 100K 1% 0,62W    |
| 3113 | 4822 051 30154 | 150K 5% 0,062W   |
| 3120 | 4822 117 13632 | 100K 1% 0,62W    |
| 3121 | 4822 051 30223 | 22K 5% 0,062W    |
| 9010 | 4822 051 30008 | OR JUMPER (0603) |
| 9011 | 4822 051 20008 | OR JUMPER (0805) |
| 9012 | 4822 051 30008 | OR JUMPER (0603) |
| 9013 | 4822 051 30008 | OR JUMPER (0603) |
| 9015 | 4822 051 30008 | OR JUMPER (0603) |
| 9017 | 4822 051 20008 | OR JUMPER (0805) |
| 9018 | 4822 051 20008 | OR JUMPER (0805) |
| 9026 | 4822 051 30008 | OR JUMPER (0603) |

**- COILS & FILTERS -**

|      |                |                       |
|------|----------------|-----------------------|
| 5101 | 4822 157 70513 | FM RF COIL            |
| 5102 | 2422 535 94985 | MW ANT. COIL          |
| 5104 | 3103 308 20990 | FM OSC COIL           |
| 5105 | 4822 157 71145 | MW OSC COIL           |
| 5106 | 4822 157 70499 | AM IFT WHITE          |
| 5107 | 4822 242 81154 | CER FILTER KMFC5058-Z |
| 5108 | 4822 156 11146 | AM IFT BLACK          |

**- DIODES -**

|      |                |         |
|------|----------------|---------|
| 6101 | 4822 130 83757 | MCL4148 |
| 6102 | 4822 130 83757 | MCL4148 |

**- TRANSISTOR & IC -**

|      |                |             |
|------|----------------|-------------|
| 7101 | 4822 209 32746 | TEA5711T/N2 |
| 7102 | 5322 130 60159 | BC846B      |

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

**ELECTRICAL PARTSLIST - RECORDER BOARD (ECO-MTF)****- MISCELLANEOUS -**

|      |                |                  |
|------|----------------|------------------|
| 1707 | 4822 277 11504 | PUSH SWITCH 6P2T |
| 1725 | 4822 265 11207 | CONNECTOR 6-PINS |

**- CAPACITORS -**

|      |                |                       |
|------|----------------|-----------------------|
| 2703 | 4822 124 81151 | 22µF 20% 50V          |
| 2704 | 4822 124 81151 | 22µF 20% 50V          |
| 2706 | 4822 124 40433 | 47µF 20% 25V          |
| 2707 | 4822 124 40196 | 220µF 20% 16V         |
| 2708 | 4822 124 40433 | 47µF 20% 25V          |
| 2709 | 4822 124 40433 | 47µF 20% 25V          |
| 2710 | 4822 124 41584 | 100µF 20% 10V         |
| 2711 | 4822 124 81151 | 22µF 20% 50V          |
| 2712 | 4822 126 12878 | 1,5nF 10% 16V         |
| 2714 | 4822 126 12878 | 1,5nF 10% 16V         |
| 2715 | 4822 121 51387 | 10nF 20% 16V          |
| 2716 | 2020 561 90365 | 100nF +80-20% Y5V 50V |
| 2719 | 4822 126 13098 | 5,6nF 20% 16V         |
| 2721 | 4822 126 12878 | 1,5nF 10% 16V         |
| 2722 | 4822 121 51387 | 10nF 20% 16V          |
| 2723 | 2020 561 90365 | 100nF +80-20% Y5V 50V |
| 2726 | 4822 126 13098 | 5,6nF 20% 16V         |
| 2727 | 4822 126 12878 | 1,5nF 10% 16V         |
| 2728 | 4822 126 11714 | 4,7nF 20% 50V         |
| 2729 | 4822 126 11714 | 4,7nF 20% 50V         |
| 2730 | 2020 300 90561 | 1,2nF 10% 50V         |
| 2732 | 4822 122 10577 | 3,3nF 10% 16V         |
| 2733 | 4822 121 51387 | 10nF 20% 16V          |
| 2738 | 4822 121 51387 | 10nF 20% 16V          |
| 2739 | 4822 121 51387 | 10nF 20% 16V          |
| 2750 | 4822 126 13098 | 5,6nF 20% 16V         |
| 2751 | 4822 126 13098 | 5,6nF 20% 16V         |

**- RESISTORS -**

|      |                |              |
|------|----------------|--------------|
| 3701 | 4822 116 52175 | 100R 5% 0,5W |
| 3703 | 4822 116 83868 | 150R 5% 0,5W |
| 3704 | 4822 116 83872 | 220R 5% 0,5W |
| 3706 | 4822 116 52272 | 330K 5% 0,5W |
| 3707 | 4822 116 52285 | 470K 5% 0,5W |
| 3710 | 4822 116 52264 | 27K 5% 0,5W  |
| 3712 | 4822 116 52238 | 12K 5% 0,5W  |
| 3713 | 4822 116 83868 | 150R 5% 0,5W |
| 3714 | 4822 116 83872 | 220R 5% 0,5W |
| 3716 | 4822 116 52272 | 330K 5% 0,5W |
| 3719 | 4822 116 52264 | 27K 5% 0,5W  |
| 3720 | 4822 116 52238 | 12K 5% 0,5W  |
| 3722 | 4822 116 52257 | 22K 5% 0,5W  |
| 3723 | 4822 116 52257 | 22K 5% 0,5W  |
| 3726 | 4822 116 52256 | 2,2K 5% 0,5W |

**- RESISTORS -**

|      |                |              |
|------|----------------|--------------|
| 3727 | 4822 116 52256 | 2,2K 5% 0,5W |
| 3730 | 4822 116 83868 | 150R 5% 0,5W |
| 3731 | 4822 116 52291 | 56K 5% 0,5W  |
| 3732 | 4822 116 52182 | 15R 5% 0,5W  |
| 3733 | 4822 111 30893 | 4,7M 5% 0,2W |
| 3734 | 4822 050 21003 | 10K 1% 0,6W  |
| 3743 | 4822 116 83883 | 470R 5% 0,5W |
| 3744 | 4822 116 83883 | 470R 5% 0,5W |
| 3747 | 4822 116 83868 | 150R 5% 0,5W |
| 3748 | 4822 116 83883 | 470R 5% 0,5W |
| 3749 | 4822 116 83883 | 470R 5% 0,5W |
| 3761 | 4822 116 52289 | 5,6K 5% 0,5W |
| 3762 | 4822 116 52289 | 5,6K 5% 0,5W |

**- COILS & FILTERS -**

|      |                |               |
|------|----------------|---------------|
| 5701 | 4822 157 10371 | BIAS OSC COIL |
|------|----------------|---------------|

**- DIODES -**

|      |                |        |
|------|----------------|--------|
| 6704 | 4822 130 30621 | 1N4148 |
|------|----------------|--------|

**- TRANSISTOR & IC -**

|      |                |          |
|------|----------------|----------|
| 7702 | 4822 130 40981 | BC337-25 |
| 7705 | 4822 209 17498 | AN7323   |

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

**ELECTRICAL PARTSLIST - COMBI BOARD (CD PART)****- MISCELLANEOUS -**

|      |                |                   |
|------|----------------|-------------------|
| 1801 | 2422 025 17389 | CONNECTOR 16-PINS |
| 1803 | 4822 267 10732 | CONNECTOR 12-PINS |
| 1806 | 4822 276 12889 | MICRO SWITCH      |

**- CAPACITORS -**

|      |                |                  |
|------|----------------|------------------|
| 2801 | 4822 122 33777 | 47pF 5% NP0 63V  |
| 2802 | 3198 024 44730 | 47nF 20% Y5V 50V |
| 2803 | 3198 024 44730 | 47nF 20% Y5V 50V |
| 2804 | 3198 017 31530 | 15nF 10% X7R 50V |
| 2805 | 3198 024 44730 | 47nF 20% Y5V 50V |

|      |                |                   |
|------|----------------|-------------------|
| 2806 | 5322 126 11583 | 10nF 10% X7R 50V  |
| 2807 | 4822 122 32627 | 2,7nF 10% X7R 50V |
| 2808 | 5322 126 10223 | 4,7nF 10% X7R 63V |
| 2809 | 3198 024 44730 | 47nF 20% Y5V 50V  |
| 2810 | 3198 024 44730 | 47nF 20% Y5V 50V  |

|      |                |                   |
|------|----------------|-------------------|
| 2811 | 3198 024 44730 | 47nF 20% Y5V 50V  |
| 2812 | 3198 024 44730 | 47nF 20% Y5V 50V  |
| 2815 | 3198 024 44730 | 47nF 20% Y5V 50V  |
| 2816 | 3198 016 31020 | 1nF 10% NP0 25V   |
| 2817 | 4822 126 13879 | 220nF +80-20% 16V |

|      |                |                   |
|------|----------------|-------------------|
| 2818 | 4822 126 13193 | 4,7nF 10% X7R 63V |
| 2819 | 4822 126 14585 | 100nF 10% X7R 50V |
| 2820 | 4822 126 14238 | 2,2nF 10% X7R 50V |
| 2821 | 5322 126 11578 | 1nF 10% X7R 50V   |
| 2822 | 3198 016 31020 | 1nF 10% NP0 25V   |

|      |                |                   |
|------|----------------|-------------------|
| 2823 | 3198 024 44730 | 47nF 20% Y5V 50V  |
| 2824 | 3198 024 44730 | 47nF 20% Y5V 50V  |
| 2825 | 4822 122 33127 | 2,2nF 10% X7R 63V |
| 2826 | 3198 016 38210 | 820pF 5% NP0 25V  |
| 2827 | 4822 126 13751 | 47nF 10% X7R 63V  |

|      |                |                       |
|------|----------------|-----------------------|
| 2829 | 3198 024 44730 | 47nF 20% Y5V 50V      |
| 2830 | 2238 586 59812 | 100nF +80-20% Y5V 50V |
| 2831 | 4822 126 13193 | 4,7nF 10% X7R 63V     |
| 2832 | 5322 126 11579 | 3,3nF 10% X7R 63V     |
| 2833 | 4822 126 13692 | 47pF 1% NP0 63V       |

|      |                |                       |
|------|----------------|-----------------------|
| 2834 | 3198 016 33380 | 3,3pF 1% NP0 50V      |
| 2835 | 4822 126 14585 | 100nF 10% X7R 50V     |
| 2836 | 5322 122 32531 | 100pF 5% NP0 50V      |
| 2837 | 5322 126 11579 | 3,3nF 10% X7R 63V     |
| 2838 | 2238 586 59812 | 100nF +80-20% Y5V 50V |

|      |                |                       |
|------|----------------|-----------------------|
| 2839 | 4822 126 14585 | 100nF 10% X7R 50V     |
| 2841 | 4822 126 14585 | 100nF 10% X7R 50V     |
| 2842 | 3198 024 44730 | 47nF 20% Y5V 50V      |
| 2845 | 2238 586 59812 | 100nF +80-20% Y5V 50V |
| 2850 | 4822 124 81151 | 22µF 20% 50V          |

|      |                |               |
|------|----------------|---------------|
| 2851 | 4822 124 81151 | 22µF 20% 50V  |
| 2852 | 4822 124 81151 | 22µF 20% 50V  |
| 2853 | 4822 124 22652 | 2,2µF 20% 50V |
| 2854 | 4822 124 22652 | 2,2µF 20% 50V |
| 2856 | 4822 124 40207 | 100µF 20% 25V |

**- CAPACITORS -**

|      |                |                       |
|------|----------------|-----------------------|
| 2858 | 4822 124 40207 | 100µF 20% 25V         |
| 2859 | 4822 124 81151 | 22µF 20% 50V          |
| 2860 | 4822 124 81151 | 22µF 20% 50V          |
| 2861 | 4822 126 13751 | 47nF 10% X7R 63V      |
| 2862 | 2238 586 59812 | 100nF +80-20% Y5V 50V |

|      |                |                       |
|------|----------------|-----------------------|
| 2863 | 4822 122 33761 | 22pF 5% NP0 50V       |
| 2866 | 2238 586 59812 | 100nF +80-20% Y5V 50V |
| 2867 | 4822 126 13879 | 220nF +80-20% 16V     |

**- RESISTORS -**

|      |                |                |
|------|----------------|----------------|
| 3801 | 4822 117 12925 | 47K 1% 0,063W  |
| 3802 | 4822 117 12891 | 220K 1%        |
| 3803 | 4822 051 30103 | 10K 5% 0,062W  |
| 3804 | 4822 051 30153 | 15K 5% 0,062W  |
| 3805 | 4822 051 30332 | 3,3K 5% 0,062W |

|      |                |                |
|------|----------------|----------------|
| 3806 | 4822 051 30332 | 3,3K 5% 0,062W |
| 3807 | 4822 051 30333 | 33K 5% 0,062W  |
| 3808 | 4822 051 30333 | 33K 5% 0,062W  |
| 3809 | 4822 117 12925 | 47K 1% 0,063W  |
| 3810 | 4822 117 12925 | 47K 1% 0,063W  |

|      |                |                |
|------|----------------|----------------|
| 3811 | 4822 051 30102 | 1K 5% 0,062W   |
| 3812 | 4822 051 30102 | 1K 5% 0,062W   |
| 3814 | 4822 051 30472 | 4,7K 5% 0,062W |
| 3815 | 4822 051 30472 | 4,7K 5% 0,062W |
| 3816 | 4822 051 30472 | 4,7K 5% 0,062W |

|      |                |                |
|------|----------------|----------------|
| 3817 | 4822 051 30472 | 4,7K 5% 0,062W |
| 3818 | 4822 051 30472 | 4,7K 5% 0,062W |
| 3819 | 4822 051 30472 | 4,7K 5% 0,062W |
| 3820 | 4822 051 30472 | 4,7K 5% 0,062W |
| 3821 | 4822 051 30472 | 4,7K 5% 0,062W |

|      |                |                |
|------|----------------|----------------|
| 3822 | 4822 051 30472 | 4,7K 5% 0,062W |
| 3823 | 4822 117 11449 | 2,2K 5% 0,1W   |
| 3824 | 4822 051 20122 | 1,2K 5% 0,1W   |
| 3825 | 4822 051 30183 | 18K 5% 0,062W  |
| 3826 | 4822 051 30183 | 18K 5% 0,062W  |

|      |                |                |
|------|----------------|----------------|
| 3827 | 4822 117 10834 | 47K 1% 0,1W    |
| 3828 | 4822 051 30681 | 680R 5% 0,062W |
| 3829 | 4822 051 10102 | 1K 2% 0,25W    |
| 3830 | 4822 117 11504 | 270R 1% 0,1W   |
| 3831 | 4822 051 30271 | 270R 5% 0,062W |

|      |                |                |
|------|----------------|----------------|
| 3832 | 4822 117 10833 | 10K 1% 0,1W    |
| 3833 | 4822 117 10833 | 10K 1% 0,1W    |
| 3834 | 4822 051 30332 | 3,3K 5% 0,062W |
| 3835 | 4822 051 30332 | 3,3K 5% 0,062W |
| 3836 | 4822 117 11507 | 6,8K 1% 0,1W   |

|      |                |                |
|------|----------------|----------------|
| 3837 | 4822 116 83933 | 15K 1% 0,1W    |
| 3839 | 4822 051 30471 | 470R 5% 0,062W |
| 3841 | 4822 051 30223 | 22K 5% 0,062W  |
| 3842 | 4822 051 20332 | 3,3K 5% 0,1W   |
| 3843 | 4822 051 30183 | 18K 5% 0,062W  |

**ELECTRICAL PARTSLIST - COMBI BOARD (CD PART)****- RESISTORS -**

|      |                |                  |
|------|----------------|------------------|
| 3844 | 4822 051 20822 | 8,2K 5% 0,1W     |
| 3845 | 4822 051 10102 | 1K 2% 0,25W      |
| 3846 | 4822 117 10361 | 680R 1% 0,1W     |
| 3847 | 4822 117 11817 | 1,2K 1% 0,063W   |
| 3848 | 4822 051 30682 | 6,8K 5% 0,062W   |
| 3849 | 4822 117 11148 | 56K 1% 0,1W      |
| 3850 | 4822 051 20273 | 27K 5% 0,1W      |
| 3851 | 4822 117 11148 | 56K 1% 0,1W      |
| 3852 | 4822 051 30682 | 6,8K 5% 0,062W   |
| 3853 | 4822 051 30563 | 56K 5% 0,062W    |
| 3854 | 4822 051 20273 | 27K 5% 0,1W      |
| 3855 | 4822 051 30563 | 56K 5% 0,062W    |
| 3856 | 4822 051 20109 | 10R 5% 0,1W      |
| 3858 | 4822 117 12925 | 47K 1% 0,063W    |
| 3859 | 4822 117 11817 | 1,2K 1% 0,063W   |
| 3860 | 4822 051 30333 | 33K 5% 0,062W    |
| 3861 | 4822 051 30222 | 2,2K 5% 0,062W   |
| 3862 | 4822 051 30102 | 1K 5% 0,062W     |
| 3863 | 4822 051 30153 | 15K 5% 0,062W    |
| 3864 | 4822 051 30221 | 220R 5% 0,062W   |
| 3865 | 4822 051 30339 | 33R 5% 0,062W    |
| 3866 | 4822 117 12917 | 1R 5% 0,062W     |
| 3867 | 4822 051 30563 | 56K 5% 0,062W    |
| 3868 | 4822 051 30682 | 6,8K 5% 0,062W   |
| 3869 | 4822 051 30682 | 6,8K 5% 0,062W   |
| 3870 | 4822 051 10102 | 1K 2% 0,25W      |
| 3871 | 4822 051 30102 | 1K 5% 0,062W     |
| 3874 | 4822 051 30471 | 470R 5% 0,062W   |
| 3875 | 4822 117 13608 | 4,7R 5% 0,062W   |
| 3876 | 4822 051 10102 | 1K 2% 0,25W      |
| 4801 | 4822 051 20008 | 0R JUMPER (0805) |
| 4802 | 4822 051 20008 | 0R JUMPER (0805) |
| 4803 | 4822 051 30008 | 0R JUMPER (0603) |
| 4807 | 4822 051 20008 | 0R JUMPER (0805) |
| 4809 | 4822 051 20008 | 0R JUMPER (0805) |
| 4810 | 4822 051 20008 | 0R JUMPER (0805) |
| 4811 | 4822 051 20008 | 0R JUMPER (0805) |
| 4812 | 4822 051 20008 | 0R JUMPER (0805) |
| 4813 | 4822 051 20008 | 0R JUMPER (0805) |
| 4819 | 4822 051 20008 | 0R JUMPER (0805) |
| 4820 | 4822 051 20008 | 0R JUMPER (0805) |
| 4825 | 4822 051 20008 | 0R JUMPER (0805) |
| 4836 | 4822 051 20008 | 0R JUMPER (0805) |
| 4837 | 4822 051 20008 | 0R JUMPER (0805) |
| 4840 | 4822 051 30008 | 0R JUMPER (0603) |
| 4845 | 4822 051 20008 | 0R JUMPER (0805) |
| 4846 | 4822 051 20008 | 0R JUMPER (0805) |
| 4849 | 4822 051 30008 | 0R JUMPER (0603) |
| 4850 | 4822 051 20008 | 0R JUMPER (0805) |
| 4851 | 4822 051 20008 | 0R JUMPER (0805) |

**- RESISTORS -**

|      |                |                  |
|------|----------------|------------------|
| 4853 | 4822 051 20008 | 0R JUMPER (0805) |
| 4854 | 4822 051 20008 | 0R JUMPER (0805) |
| 4855 | 4822 051 20008 | 0R JUMPER (0805) |
| 4856 | 4822 051 20008 | 0R JUMPER (0805) |
| 4857 | 4822 051 20008 | 0R JUMPER (0805) |
| 4858 | 4822 051 30008 | 0R JUMPER (0603) |
| 4860 | 4822 051 30008 | 0R JUMPER (0603) |
| 4861 | 4822 051 20008 | 0R JUMPER (0805) |
| 4862 | 4822 051 20008 | 0R JUMPER (0805) |
| 4864 | 4822 051 20008 | 0R JUMPER (0805) |
| 4865 | 4822 051 30008 | 0R JUMPER (0603) |
| 4866 | 4822 051 20008 | 0R JUMPER (0805) |
| 4870 | 4822 051 30008 | 0R JUMPER (0603) |
| 4872 | 4822 051 20008 | 0R JUMPER (0805) |
| 4874 | 4822 051 20008 | 0R JUMPER (0805) |
| 4875 | 4822 051 20008 | 0R JUMPER (0805) |
| 4876 | 4822 051 20008 | 0R JUMPER (0805) |
| 4877 | 4822 051 20008 | 0R JUMPER (0805) |
| 4881 | 4822 051 20008 | 0R JUMPER (0805) |
| 4882 | 4822 051 20008 | 0R JUMPER (0805) |
| 4883 | 4822 051 20008 | 0R JUMPER (0805) |
| 4884 | 4822 051 20008 | 0R JUMPER (0805) |
| 4885 | 4822 051 20008 | 0R JUMPER (0805) |
| 4897 | 4822 051 30008 | 0R JUMPER (0603) |
| 4899 | 4822 051 30008 | 0R JUMPER (0603) |

**- COILS & FILTERS -**

|      |                |                         |
|------|----------------|-------------------------|
| 1810 | 4822 242 81865 | CER. FTR CST16,93MXW0C3 |
| 5802 | 4822 157 11706 | 10µH 5%                 |

**- IC & TRANSISTORS -**

|      |                |                  |
|------|----------------|------------------|
| 7801 | 3103 308 84310 | TC9457F-014-907B |
| 7802 | 9322 158 56682 | M63000SP         |
| 7803 | 9322 171 88668 | TA2153FN         |
| 7804 | 5322 130 60123 | BC807-40         |

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

**ELECTRICAL PARTSLIST - COMBI BOARD (AUDIO PART)****- COILS & MISCELLANEOUS -**

|      |                |                   |
|------|----------------|-------------------|
| 1252 | 4822 267 10731 | CONNECTOR 6-PINS  |
| 1254 | 4822 267 10958 | CONNECTOR 5-PINS  |
| 1257 | 2422 127 00538 | SWITCH-SLIDE 4P4T |
| 1258 | 4822 267 10953 | CONNECTOR 7-PINS  |
| 5200 | 4822 157 62552 | 2,2µH 10%         |
| 5201 | 4822 157 11411 | FER. BEAD 100MHZ  |

**- CAPACITORS -**

|      |                |                       |
|------|----------------|-----------------------|
| 2254 | 4822 124 41407 | 0,47µF 20% 63V        |
| 2255 | 4822 124 41407 | 0,47µF 20% 63V        |
| 2256 | 5322 126 11578 | 1nF 10% X7R 50V       |
| 2257 | 5322 126 11578 | 1nF 10% X7R 50V       |
| 2258 | 4822 124 40769 | 4,7µF 20% 100V        |
| 2259 | 4822 124 40433 | 47µF 20% 25V          |
| 2260 | 4822 124 40433 | 47µF 20% 25V          |
| 2261 | 4822 124 41407 | 0,47µF 20% 63V        |
| 2262 | 4822 124 41407 | 0,47µF 20% 63V        |
| 2263 | 4822 124 80195 | 470µF 20% 10V         |
| 2264 | 4822 124 80195 | 470µF 20% 10V         |
| 2265 | 4822 124 40784 | 3300µF 20% 16V        |
| 2267 | 4822 124 80195 | 470µF 20% 10V         |
| 2268 | 4822 126 11585 | 22nF +80-20% Y5V 25V  |
| 2269 | 4822 126 11585 | 22nF +80-20% Y5V 25V  |
| 2270 | 4822 126 11585 | 22nF +80-20% Y5V 25V  |
| 2271 | 4822 126 11585 | 22nF +80-20% Y5V 25V  |
| 2272 | 4822 124 40433 | 47µF 20% 25V          |
| 2273 | 4822 124 40196 | 220µF 20% 16V         |
| 2274 | 2238 586 59812 | 100nF +80-20% Y5V 50V |
| 2278 | 5322 126 11583 | 10nF 10% X7R 50V      |
| 2281 | 4822 124 40433 | 47µF 20% 25V          |
| 2283 | 3198 024 44730 | 47nF 20% Y5V 50V      |

**- RESISTORS -**

|      |                |                |
|------|----------------|----------------|
| 3257 | 4822 051 30152 | 1,5K 5% 0,062W |
| 3258 | 4822 051 30152 | 1,5K 5% 0,062W |
| 3259 | 4822 051 30682 | 6,8K 5% 0,062W |
| 3260 | 4822 051 30682 | 6,8K 5% 0,062W |
| 3261 | 4822 051 30102 | 1K 5% 0,062W   |
| 3262 | 4822 051 30102 | 1K 5% 0,062W   |
| 3263 | 4822 051 30222 | 2,2K 5% 0,062W |
| 3264 | 4822 051 30222 | 2,2K 5% 0,062W |
| 3265 | 4822 051 30471 | 470R 5% 0,062W |
| 3266 | 4822 051 30471 | 470R 5% 0,062W |
| 3267 | 4822 051 30221 | 220R 5% 0,062W |
| 3268 | 4822 051 30221 | 220R 5% 0,062W |
| 3269 | 4822 051 30123 | 12K 5% 0,062W  |
| 3270 | 4822 051 30103 | 10K 5% 0,062W  |
| 3272 | 4822 117 12917 | 1R 5% 0,062W   |

**- RESISTORS -**

|      |                |                  |
|------|----------------|------------------|
| 3274 | 4822 051 30151 | 150R 5% 0,062W   |
| 3275 | 4822 116 52176 | 10R 5% 0,5W      |
| 3277 | 4822 051 30152 | 1,5K 5% 0,062W   |
| 3278 | 4822 116 52176 | 10R 5% 0,5W      |
| 3279 | 4822 051 30151 | 150R 5% 0,062W   |
| 3287 | 4822 116 52176 | 10R 5% 0,5W      |
| 3289 | 4822 116 52176 | 10R 5% 0,5W      |
| 3291 | 4822 051 30102 | 1K 5% 0,062W     |
| 3292 | 4822 051 30102 | 1K 5% 0,062W     |
| 3293 | 4822 051 30102 | 1K 5% 0,062W     |
| 3294 | 4822 117 12917 | 1R 5% 0,062W     |
| 3295 | 4822 117 12917 | 1R 5% 0,062W     |
| 3299 | 4822 051 20228 | 2,2R 5% 0,1W     |
| 3300 | 4822 051 20228 | 2,2R 5% 0,1W     |
| 4200 | 4822 051 30008 | OR JUMPER (0603) |
| 4201 | 4822 051 30008 | OR JUMPER (0603) |
| 4204 | 4822 051 30008 | OR JUMPER (0603) |
| 4205 | 4822 051 30008 | OR JUMPER (0603) |
| 4206 | 4822 051 30008 | OR JUMPER (0603) |
| 4208 | 4822 051 30008 | OR JUMPER (0603) |
| 4209 | 4822 051 30008 | OR JUMPER (0603) |

**- DIODES -**

|      |                |            |
|------|----------------|------------|
| 6250 | 4822 130 11397 | BAS316     |
| 6251 | 4822 130 11397 | BAS316     |
| 6252 | 4822 130 31878 | 1N4003G    |
| 6253 | 4822 130 31878 | 1N4003G    |
| 6254 | 4822 130 31878 | 1N4003G    |
| 6255 | 4822 130 31878 | 1N4003G    |
| 6258 | 4822 130 11397 | BAS316     |
| 6259 | 4822 130 11397 | BAS316     |
| 6260 | 4822 130 34174 | BZX79-B4V7 |
| 6261 | 4822 130 31878 | 1N4003G    |
| 6262 | 4822 130 11397 | BAS316     |
| 6263 | 4822 130 11397 | BAS316     |

**- IC & TRANSISTORS -**

|      |                |          |
|------|----------------|----------|
| 7250 | 5322 130 60159 | BC846B   |
| 7251 | 4822 209 31544 | TA8227P  |
| 7253 | 4822 130 41327 | BC327-40 |
| 7254 | 4822 130 41327 | BC327-40 |
| 7255 | 4822 130 41327 | BC327-40 |
| 7256 | 5322 130 60159 | BC846B   |



**ELECTRICAL PARTSLIST - MISCELLANEOUS****- MISCELLANEOUS -**

|      |                  |                         |
|------|------------------|-------------------------|
| 1005 | 2422 264 00428   | LOUDSPEAKER 8R 3W       |
| 1006 | 2422 264 00428   | LOUDSPEAKER 8R 3W       |
| 1007 | ⚠ 3140 118 33100 | TRANSF. MAINS 230V      |
| 1007 | ⚠ 3140 118 33110 | TRANSF. MAINS 110/220V  |
| 1009 | ⚠ 2422 030 00333 | MAINS SOCKET            |
| 1009 | ⚠ 4822 265 20318 | MAINS SOCKET (/05)      |
| 1011 | ⚠ 4822 277 21794 | VOLTAGE SELECTOR SW.    |
| 8102 | 3139 110 35690   | FFC FOIL 05P/140/05P AD |
| 8401 | 3139 110 35680   | FFC FOIL 12P/340/12P BD |
| 8501 | 4822 320 12752   | FFC FOIL 7P/180/7P      |
| 8701 | 3139 110 35210   | FFC FOIL 6P/80/6P AD    |
| 8803 | 3103 308 92890   | FFC FOIL 16P/80/16P BD  |

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