

Service  
Service  
Service



Manual #1878  
AZ1203/AZ1208

# Service Manual

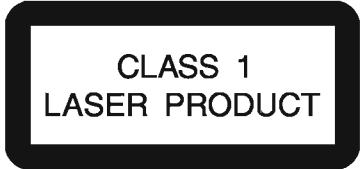


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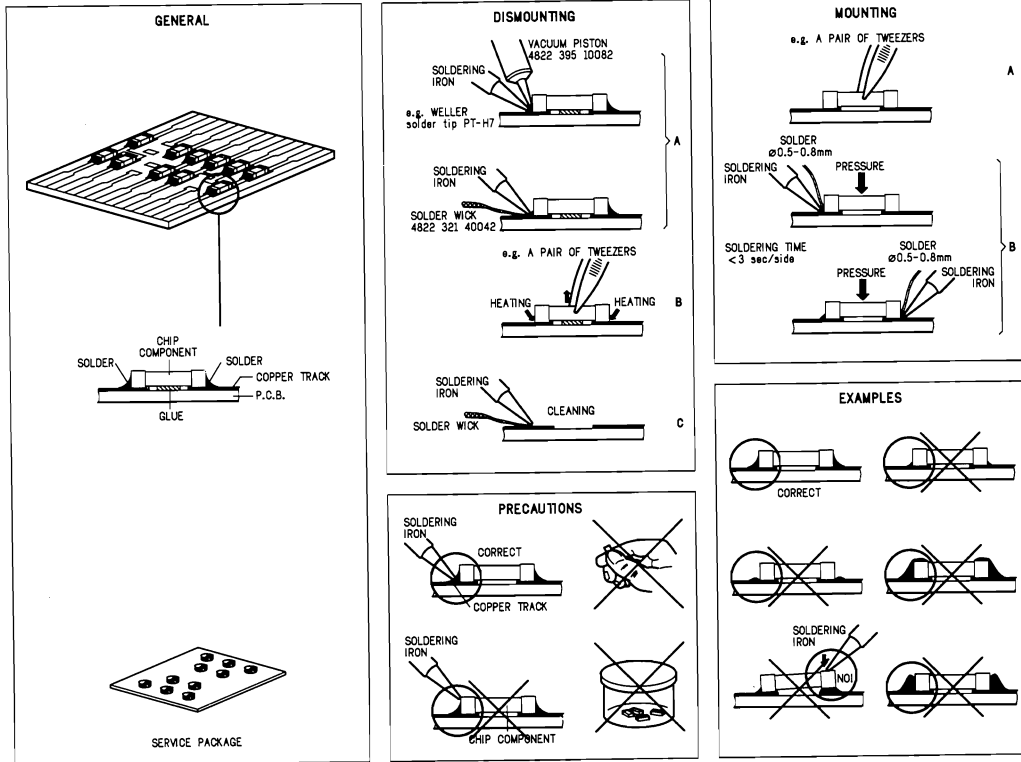
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Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

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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 wrist wrap with resistance. Keep components and tools at this potential.

## F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfilez le braceleterti d'une résistance de sécurité. Veillez à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

Anti-static table mat large 1200x650x1.25mm  
small 600x650x1.25mm

Anti-static wrist band  
Connection box (1M $\Omega$ )  
Extendible cable (to connect wrist band to conn. box)  
Connecting cable (to connect table mat to conn. box)  
Earth cable (to connect any product to mat or box)  
Complete kit ESD3 (combining all above products)  
Wristband tester

## D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Sorgen Sie dafür, daß sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind. Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

4822 466 10953  
4822 466 10958  
4822 395 10223  
4822 320 11307  
4822 320 11305  
4822 320 11306  
4822 320 11308  
4822 310 10671  
4822 344 13999

## 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 those symbol. ⚠

## S Varning !

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

## DK Advarsel !

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

## SF Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alltiina näkyvämmälle laserisäteilylle. Älä katso säteeseen!

## 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.

## 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 braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

## GB WARNING

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

## F ATTENTION

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.

## D WARNUNG

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Original-ersatzteile zu verwenden.

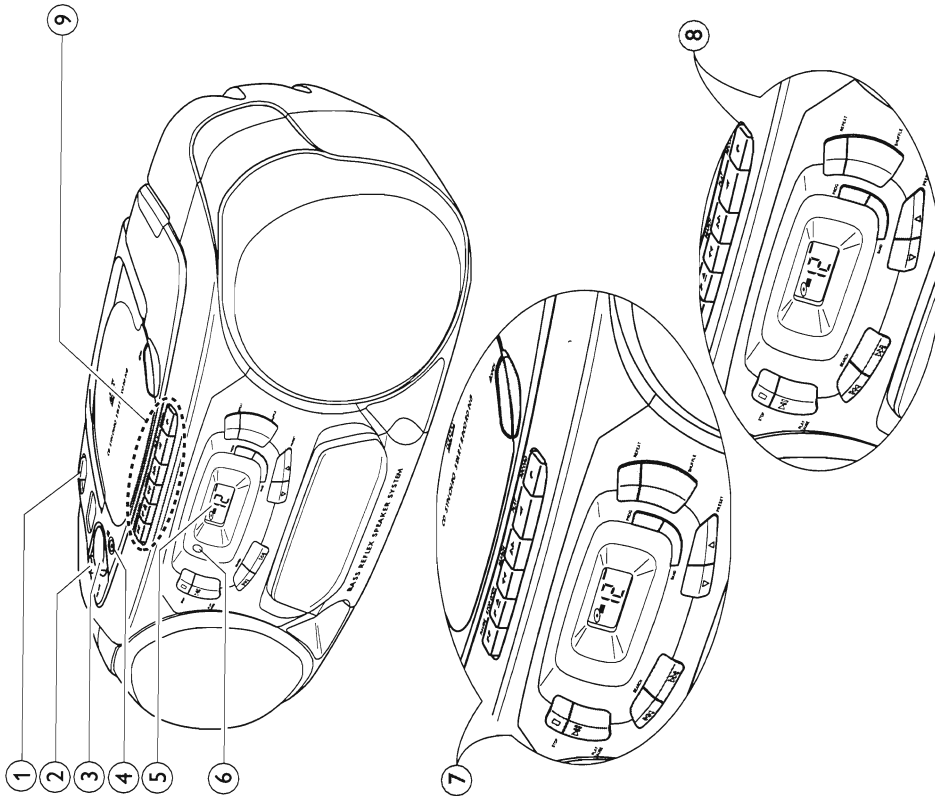
## NL WAARSCHUWING

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

## I AVVERTIMENTO

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.

# CONNECTIONS AND CONTROLS



## BASIC FUNCTIONS

- ① POWER: CD, TUNER, TAPE...selects the sound source
- ② DBB.....enhances the bass
- ③ VOLUME.....adjusts the volume level
- ④ 4F.....3.5mm headphone socket  
*Note: Connecting the headphones will switch off the speakers.*
- ⑤ Display
- ⑥ REMOTE SENSOR ..sensor for the infrared remote control (AZ 1208 only)

## ⑦ CD PLAYER

- △ OPEN.....opens the CD compartment
- STOP □.....stops CD play and erases the program
- PLAY-PAUSE ▷||.....starts and interrupts CD play
- SEARCH ◀◀ ▶▶.....skips and searches forward and backward
- PROGRAM.....programs track numbers and reviews the program
- SHUFFLE.....plays CD tracks in random order
- REPEAT.....repeats a track, the entire CD, or the program

## ⑧ RADIO

- SEARCH ◀◀ ▶▶.....tunes to radio stations
- BAND.....selects the wave band
- PROGRAM.....programs radio preset stations
- PRESET △ ▽.....selects a radio preset station

## ⑨ CASSETTE RECORDER

- PAUSE ||.....interrupts recording or playback
- STOP-OPEN □△.....stops the tape and opens the cassette compartment
- SEARCH ▶▶.....rewinds the tape
- SEARCH ◀◀.....fast forwards the tape
- PLAY ◀.....starts playback
- RECORD ○.....starts recording

## REMOTE CONTROL (AZ 1208 only)

- VOLUME ▼ ▲.....decreases or increases the volume level
- SHUFFLE.....plays CD tracks in random order
- REPEAT.....repeats a track, the entire CD or the program
- ▶||.....starts and interrupts CD play
- ◀▶.....selects the beginning of the current, a previous or a subsequent track of a CD
- .....stops CD play and erases the program
- SEARCH ◀◀ ▶▶.....searches backward/forward in a CD track
- PRESET ▲ ▼.....selects a radio preset station
- TUNING ◀◀ ▶▶.....tunes to radio stations

# CONNECTIONS AND CONTROLS

## Batteries

### For the set (optional)

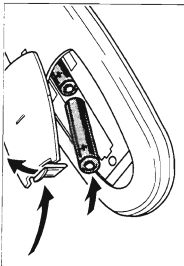
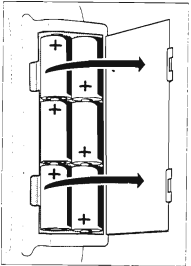
Open the battery compartment of the set and insert 6 batteries, type **R20, UM-1** or **D**-cells (preferably alkaline).

### For the remote control (AZ 1208 only)

Open the battery compartment of the remote control and insert 2 batteries, type **R03, UM-4** or **AAA**-cells (preferably alkaline).

Remove batteries if they are flat or the set is not going to be used for a longer period of time.

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



## Mains

1 Check whether the mains voltage as shown on the type plate corresponds to your local mains voltage. If it does not, consult your dealer or service organisation. **The type plate is located on the bottom side of the set.**

2 If the set is equipped with a VOLTAGE selector (⊗), set this selector to the local mains voltage.

3 Connect the mains cable to the AC MAINS inlet and the wall socket. This switches on the mains supply. **The mains cable is inside the battery compartment.**

The battery supply will be switched off when the set is connected to the mains. To change over to battery supply, pull out the plug from the unit's AC MAINS socket.

To disconnect the set from the mains completely, remove the mains plug from the wall socket.

For users in the U.K.: please follow the instructions on page 2.

## Environmental information

All redundant packing material has been omitted. We have done our utmost to make the packaging easily separable into three mono materials: cardboard (box), polystyrene foam (buffer) and polyethylene (bags, protective foam sheet).

Your set consists of materials which can be recycled if disassembled by a specialized company. Please observe the local regulations regarding the disposal of packing materials, exhausted batteries and old equipment.

## Programming radio stations (29 preset stations)

You can store up to 29 radio stations in the memory. When tuning to a preset station, the preset number (1 to 29) is indicated in the display.

1 Set the POWER slider to TUNER.

2 Press PROGRAM to enter the programming mode.

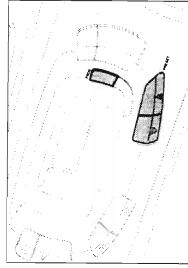
→ During programming, **PROGRAM** flashes on the display.

3 Tune to a desired station with SEARCH ◀◀ or ▶▶, as described earlier (see "Tuning to radio stations").

→ If the frequency is already stored in the memory, the preset number will be displayed.

4 Press PRESET ▽ or △ to allocate a number from 1 to 29 to the preset station.

5 Press PROGRAM to confirm the setting.



## Tuning to radio stations

1 Set the POWER slider to TUNER.

2 Select the wave band by using the BAND selector.

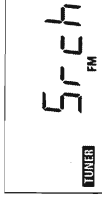
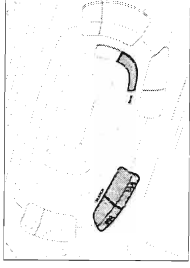
→ Display indication: the selected waveband.

3 Press SEARCH ◀◀ or ▶▶ for approx. 1 second and then release the button.

→ The radio automatically tunes to a station with sufficient strength. Display indication during automatic tuning: **SEARCH**.

4 Repeat this procedure until you find a station you desire.

To tune to a weak transmitter briefly press SEARCH ◀◀ or ▶▶ as often as necessary for optimum reception, or until the correct frequency is indicated in the display.



## Tuning to preset stations

Press PRESET ▽ or △ until the desired preset number appears on the display.





# CONNECTIONS AND CONTROLS

## Different playing modes: SHUFFLE / REPEAT

### SHUFFLE – Playing in random order

- 1 Press SHUFFLE before or during CD play.  
→ All the tracks of the CD (or program if available) will now be played in random order.
- 2 Press SHUFFLE again to return to normal CD play.

### REPEAT – Repeating the entire CD or one track of the CD

- 1 Before or during CD play, press REPEAT repeatedly to cause the display to show the different repeating modes.  
→ REPEAT: the current track is played repeatedly.  
→ REPEAT ALL: the entire CD or program is played repeatedly.
- 2 Press REPEAT until the display indication disappears to return to normal CD play.

*Note: You can activate the different playing modes at the same time, e. g. you can repeatedly play the entire CD or program in random order (SHUFFLE REPEAT ALL).*

### Search backward ◀ and forward ▶

#### Selecting another track

Briefly press the SEARCH ◀ or ▶ button once/several times to skip to the beginning of the current/previous or subsequent track(s).

#### During play:

CD play continues automatically with the selected track.

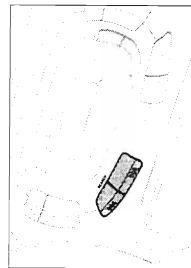
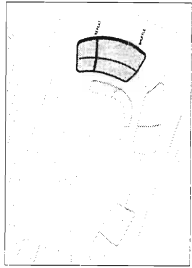
#### When CD playback is stopped:

Press PLAY-PAUSE ▷|◁ to start CD play.

→ Display indication: the selected track number.

### Searching for a passage during CD play

- 1 Hold down the SEARCH ◀ or ▶ button to find a particular passage in a forward or backward direction.  
→ CD play continues at a low volume.
  - 2 Release the button when you have reached the desired passage.
- Note: in the SHUFFLE and REPEAT modes or when playing a program, searching is only possible within the particular track.*



## Programming track numbers

You can select a number of tracks and store these in the memory in the desired sequence. You can store any track more than once. A maximum of 20 tracks can be stored in the memory.

- 1 Select the desired track with SEARCH ◀ or ▶.
- 2 As soon as the number of the desired track is displayed, press the PROGRAM button to store the track in the memory.  
→ PROGRAM appears in the display and the number of the stored track is shown. Then PROGRAM lights up briefly.
- 3 Select and store all desired tracks in this way.

You can review your settings by pressing the PROGRAM button for more than 2 seconds.

→ The display shows all stored track numbers in sequence.

If you try to store more than 20 tracks the display shows FULL.

If you press PROGRAM and there is no track selected, the display shows NO SEL.

## Playing the program

If you have selected the tracks in the stop position, press PLAY-PAUSE ▷|◁.

If you have selected the tracks during CD play, first press STOP □, then press PLAY-PAUSE ▷|◁.

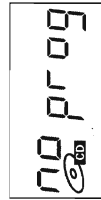
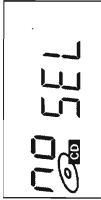
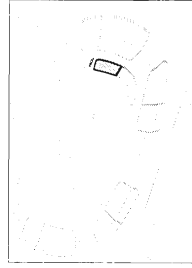
## Erasing the program when CD playback is stopped

From the stop position, press STOP □.

→ PROGRAM lights up briefly, PROGRAM disappears and your program is erased.

*Note: The program will also be erased if you*

- interrupt the power supply,
- open the CD compartment, or
- move the POWER slider to TUNER or TAPE.



# CONNECTIONS AND CONTROLS

## Playing a cassette

- 1 Set the POWER slider to TAPE.
- 2 Press STOP-OPEN  $\square \triangle$  to open the cassette compartment.
- 3 Insert a recorded cassette with the open side upwards and close the cassette compartment.
- 4 Press PLAY  $\triangleleft$  to start playback.
- 5 Press  $\Rightarrow$  or  $\Leftarrow$  to rewind or fast forward the tape.
- 6 To stop the tape press STOP-OPEN  $\square \triangle$ .

*Note: The keys are released at the end of the tape.*

## General information on recording

Recording is permissible insofar as copyright or other rights of third parties are not infringed upon.

For recording on this set you should use a cassette of the type NORMAL (IEC type I). This deck is not suitable for recording on cassettes of the type CHROME (IEC type II) or METAL (IEC type IV).

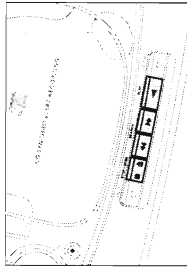
The recording level is set automatically. The controls VOLUME and DBB do not affect the recording.

At the very beginning and end of the tape, no recording will take place in the 7 seconds during which the leader tape passes the recorder heads.

## Protecting tapes from accidental erasure

Keep the cassette side to be protected in front of you and snap off the left tab. Now, recording on this side is no longer possible.

To record again on this side of the cassette, cover the aperture with a piece of adhesive tape.



## Recording from the CD player – CD synchro start

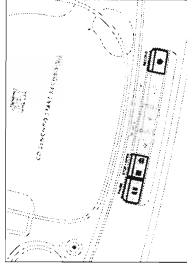
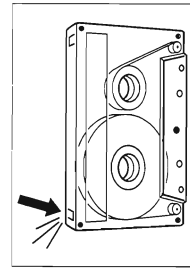
- 1 Set the POWER slider to CD.
- 2 Insert a CD and, if desired, program track numbers.
- 3 Press STOP-OPEN  $\square \triangle$  to open the cassette compartment.
- 4 Insert a blank, unprotected cassette and close the cassette compartment.
- 5 Press RECORD  $\circ$  to start recording.  
→ Playing of the CD or program starts automatically. It is not necessary to start the CD player separately.
- 6 For brief interruptions press PAUSE  $\square \square$ . Press the PAUSE  $\square \square$  key again to resume recording.
- 7 To stop recording, press STOP-OPEN  $\square \triangle$ .

*Note: the recording can be started from different positions:*

- if the CD player is in pause mode, recording will start from this very position (use SEARCH  $\Leftarrow \Leftarrow$  or  $\Rightarrow \Rightarrow$ );
- if the CD player is in stop mode, recording will start from the beginning of the CD or program.

## Recording from the radio

- 1 Set the POWER slider to TUNER.
- 2 Tune to the desired radio station (see chapter "RADIO").
- 3 Press STOP-OPEN  $\square \triangle$  to open the cassette compartment.
- 4 Insert a blank, unprotected cassette and close the cassette compartment.
- 5 Press RECORD  $\circ$  to start recording.
- 6 For brief interruptions press PAUSE  $\square \square$ . To resume recording press the PAUSE  $\square \square$  key again.
- 7 To stop recording, press STOP-OPEN  $\square \triangle$ .



## SPECIFICATIONS

### GENERAL

Mains voltage	-/00/04/05 : 230V
	-/17 : 120V
Mains frequency	-/00/04/05 : 50 Hz
	-/17 : 60 Hz
Battery	mains : 9 V (R20 x 6)
	remote : 1.5V (R03 x 2)
Power consumption	: 10 W
Dimension (W x H x D)	: 470 x 175 x 250 mm
Weight	: 4.2 Kg

### AMPLIFIER

Output power	mains : 2 x 1.6 W
	battery : 2 x 1.6 W
Speaker impedance	: 2 x 4 ohm
Frequency response	: 100 Hz - 10 kHz ( $\pm 4$ dB)

### TUNER - FM SECTION

Tuning range	: 87.5 - 108 MHz
IF frequency	: 10.7 MHz $\pm$ 0.03 MHz
Sensitivity	: < 22 dBf at 26dB S/N
Selectivity	: > 33 dB at 300kHz
IF rejection	: > 60 dB
Image rejection	: > 25 dB

### TUNER - AM SECTION

Tuning range	MW : 531 - 1602 kHz
	-/17 : 530 - 1700 kHz
	LW : 153 - 279 kHz
Sensitivity	MW : < 4000 $\mu$ V/m at 26dB S/N
	LW : < 6000 $\mu$ V/m at 26dB S/N
Selectivity	MW : > 18 dB
	LW : > 24 dB
IF rejection	MW : > 24 dB
	LW : > 26 dB
Image rejection	MW : > 28 dB
	LW : > 30 dB

### AUDIO CASSETTE RECORDER

Number of tracks	: 1 stereo
Tape speed	: 4.76 cm/sec $\pm$ 3%
Wow & flutter	: < 0.48 JIS UWTD
Fast wind/rewind C60	: < 110 sec.
Frequency response	P/B : 125 - 6300 Hz
S/N ratio	: $\geq$ 38 dB

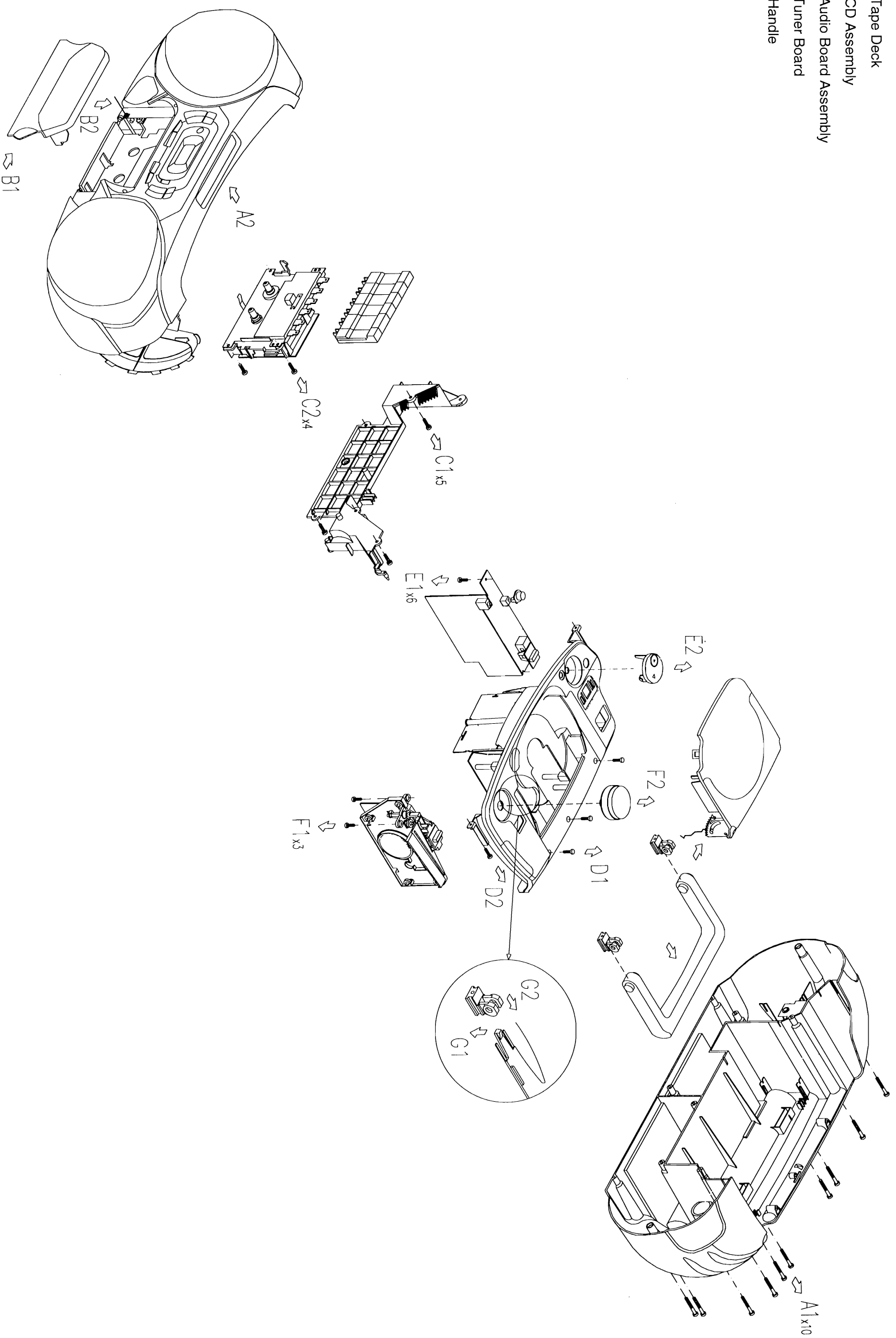
### COMPACT DISC

Frequency response	: 100 Hz - 10 kHz
S/N ratio	: < 60 dB
Channel difference	1 kHz : < 3 dB
Channel crosstalk	1 kHz : > 26 dB
Laser wavelength	: 780 $\pm$ 20 nm
Laser light power	: < 0.3 mW

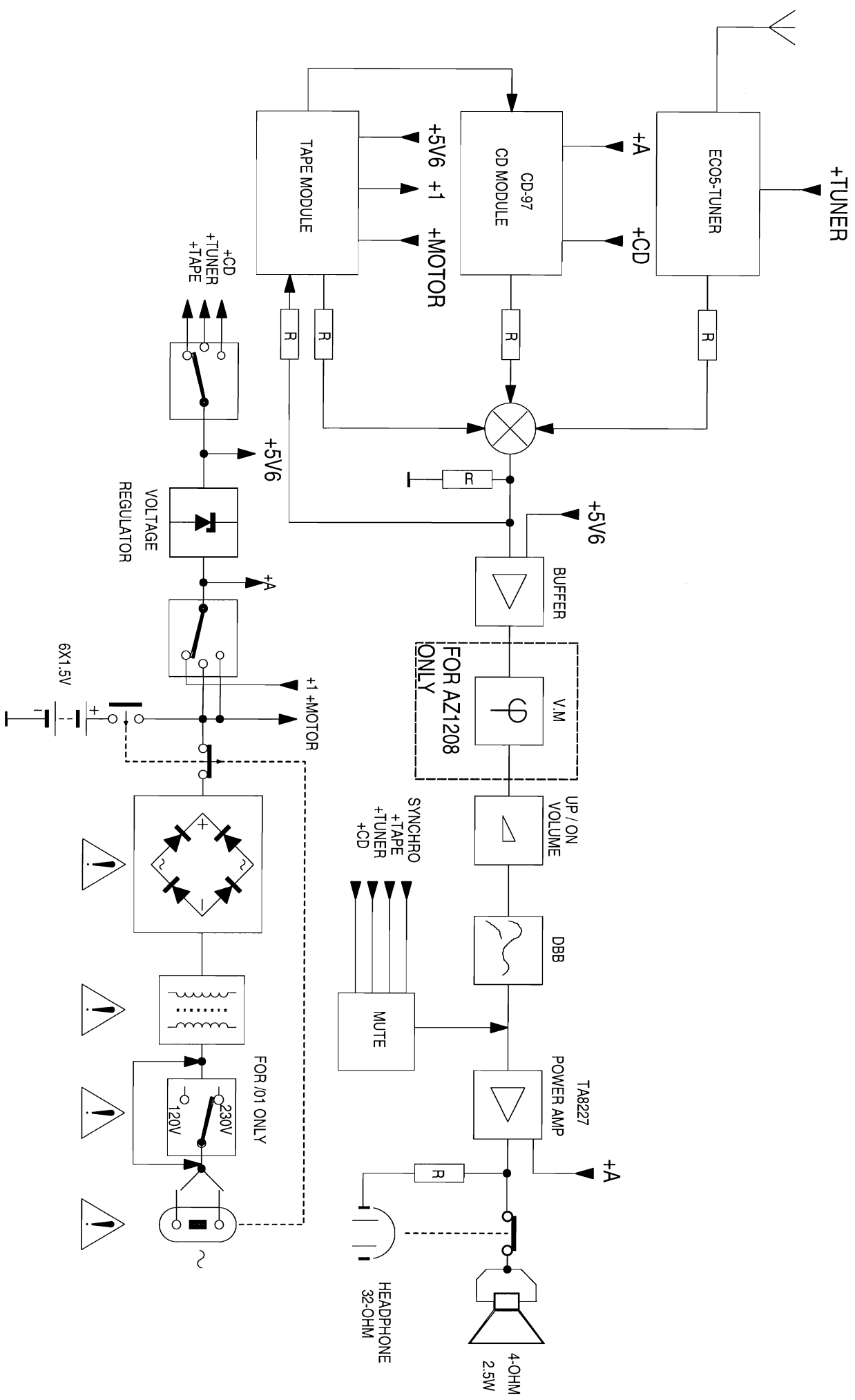


# DISASSEMBLY DIAGRAM

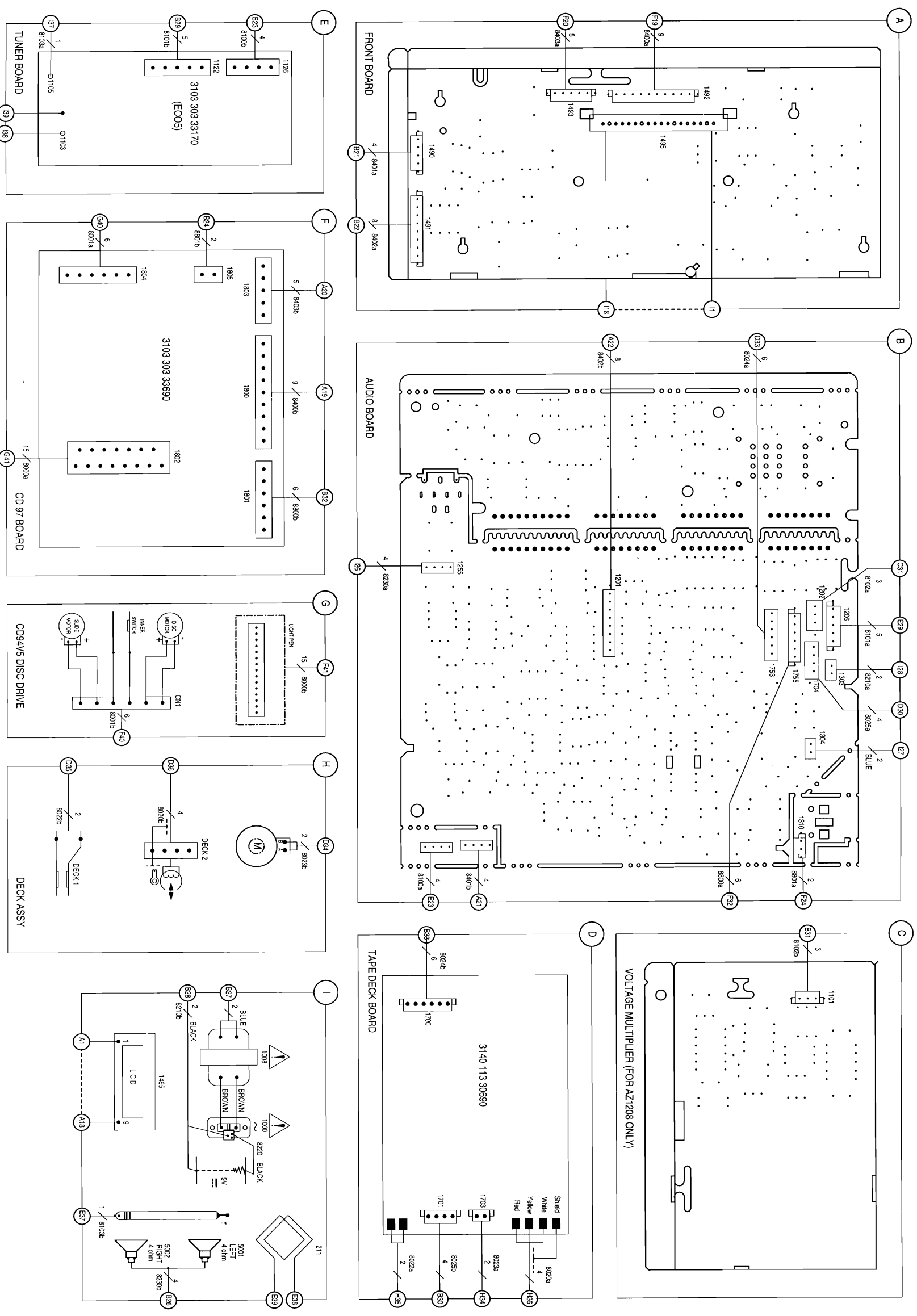
- A. To remove Front Cabinet Assembly
- B. To remove Cassette Door
- C. To remove Tape Deck
- D. To remove CD Assembly
- E. To remove Audio Board Assembly
- F. To remove Tuner Board
- G. To remove Handle



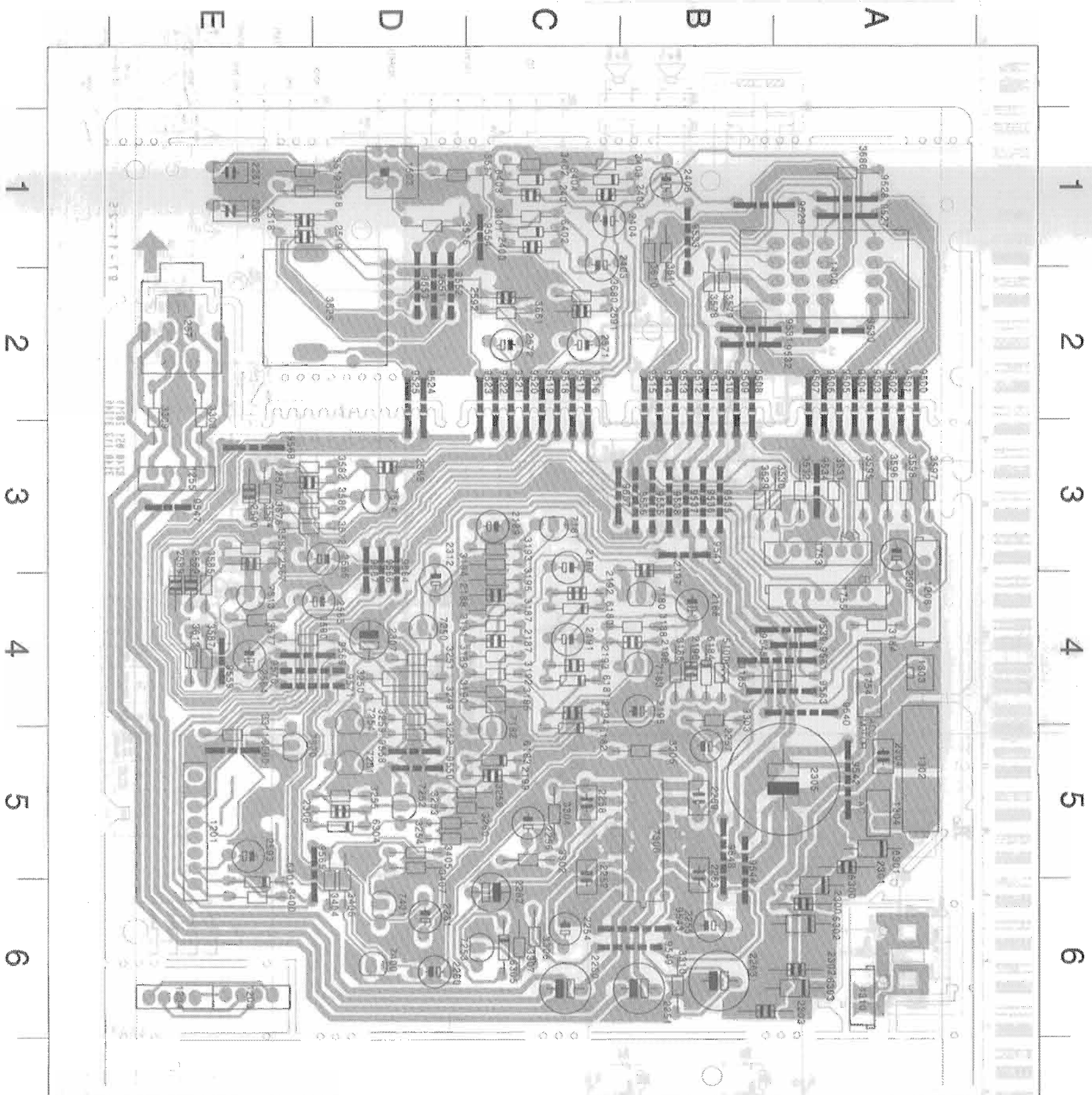
BLOCK DIAGRAM



WIRING DIAGRAM

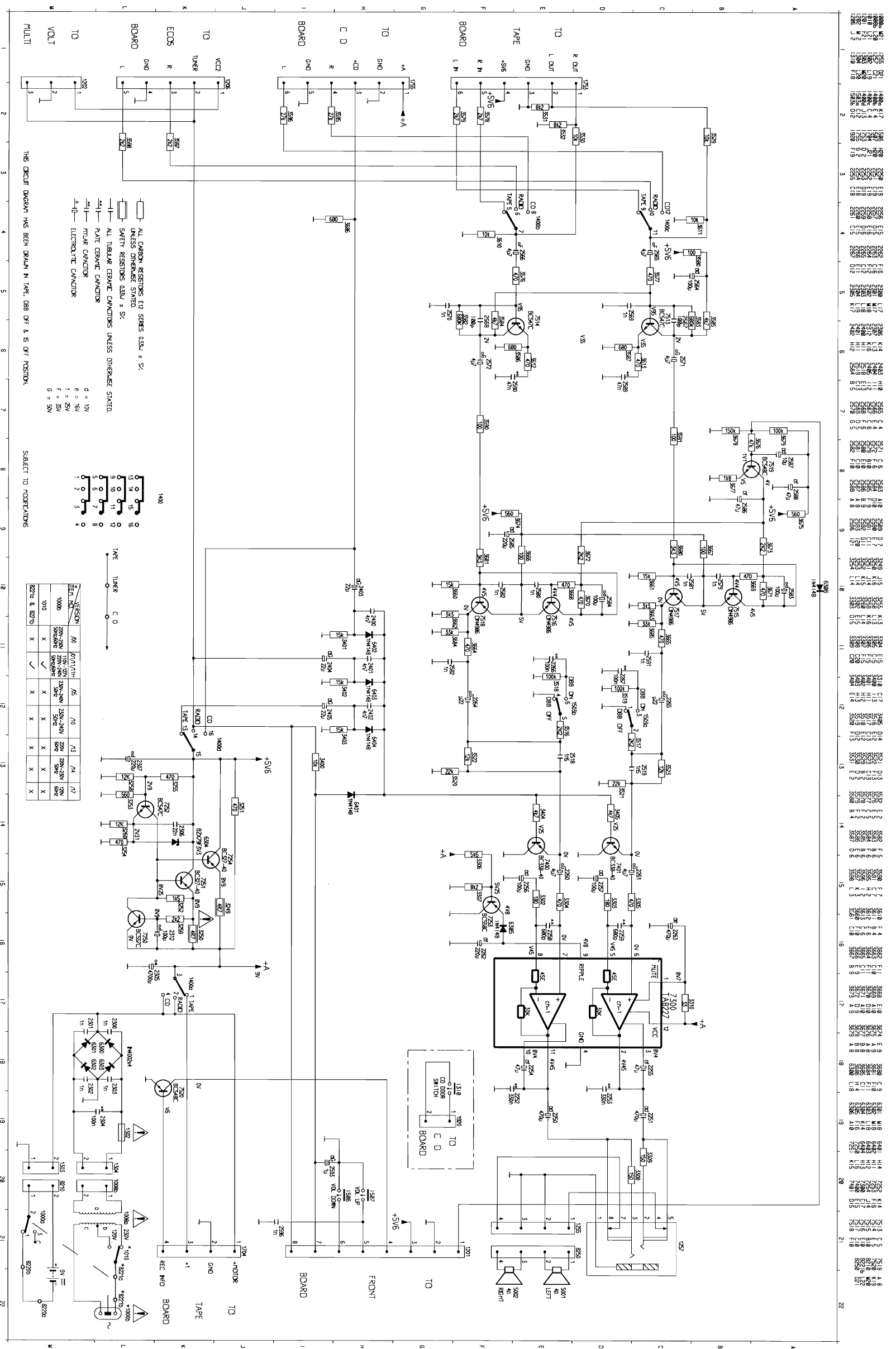






1201 E 5	2569 E 4	3584 E 3	9521 C 2
1203 E 6	2570 E 3	3585 E 4	9522 C 2
1204 E 6	2571 C 2	3586 E 3	9523 C 2
1206 A 4	2572 C 2	3587 E 4	9524 D 2
1255 E 3	2589 E 4	3595 A 3	9525 D 2
1257 E 2	2590 E 3	3596 A 3	9527 A 1
1302 A 5	2591 C 2	3597 A 3	9528 A 1
1303 A 4	2592 C 2	3598 A 3	9529 B 1
1304 A 5	2593 E 5	3610 B 1	9530 A 2
1310 A 6	2596 A 3	3611 B 1	9531 B 2
1400 A 2	3184 A 4	3612 E 3	9532 B 2
1503 D 1	3185 A 4	3613 E 4	9533 B 1
1753 A 3	3186 B 4	3680 C 2	9534 A 3
1754 A 4	3187 C 4	3681 C 2	9535 B 3
1755 A 4	3188 B 4	3686 A 1	9536 B 3
2188 B 4	3189 C 4	5100 B 4	9537 B 3
2187 C 4	3190 C 4	6180 C 4	9538 B 3
2188 C 4	3191 C 4	6181 C 4	9539 A 4
2189 C 3	3192 C 4	6182 C 5	9540 A 4
2190 C 3	3193 C 3	6183 C 5	9541 B 3
2191 C 4	3194 C 3	6184 B 4	9542 A 5
2192 C 4	3195 C 4	6300 A 6	9543 B 6
2193 C 4	3196 C 4	6301 A 5	9544 B 5
2194 C 4	3246 D 4	6302 A 6	9545 A 4
2195 B 4	3250 D 4	6303 A 6	9547 E 3
2196 B 4	3251 D 4	6304 D 5	9548 B 5
2197 B 3	3252 D 5	6305 C 6	9549 B 6
2198 B 4	3253 D 5	6401 E 6	9550 D 5
2199 C 5	3254 D 5	6402 C 1	9551 D 2
2250 C 6	3255 D 5	6403 C 1	9552 D 2
2251 B 6	3258 D 5	6404 C 1	9553 D 2
2252 C 5	3259 D 4	7180 B 4	9554 C 1
2253 B 5	3260 D 5	7181 C 3	9555 B 3
2254 C 6	3262 C 5	7182 C 5	9556 B 3
2255 B 6	3303 B 4	7183 B 4	9557 C 3
2256 C 5	3304 C 5	7250 D 4	9558 D 5
2257 B 5	3305 B 5	7251 D 5	9559 E 4
2258 C 5	3306 C 6	7252 D 5	9560 E 5
2259 B 5	3307 C 6	7253 C 6	9561 A 4
2260 D 6	3308 E 2	7254 D 4	9563 A 4
2261 D 6	3309 E 2	7300 B 5	9564 D 3
2262 C 6	3310 B 6	7400 D 6	9565 D 5
2263 B 6	3311 E 5	7401 D 6	9566 D 3
2266 E 1	3400 E 6	7513 E 4	9567 D 3
2267 E 1	3401 C 1	7514 D 3	9568 E 3
2300 A 6	3402 C 1	7520 E 5	9569 E 4
2301 A 5	3403 C 1	9500 A 2	9570 E 4
2302 A 6	3404 D 6	9501 A 2	
2303 B 6	3405 D 5	9502 A 2	
2304 A 5	3406 D 6	9503 A 2	
2305 A 5	3407 D 5	9504 A 2	
2306 D 5	3518 D 1	9505 A 2	
2307 D 4	3517 D 1	9506 A 2	
2312 D 4	3518 E 1	9507 A 2	
2400 C 1	3519 E 1	9508 B 2	
2401 C 1	3525 D 2	9509 B 2	
2402 C 1	3528 B 3	9510 B 2	
2403 C 1	3530 A 3	9511 B 2	
2404 C 1	3531 A 3	9512 B 2	
2405 B 1	3532 A 3	9513 B 2	
2518 E 1	3578 E 3	9514 B 2	
2519 E 1	3577 E 4	9515 B 2	
2564 E 4	3578 B 2	9516 C 2	
2565 D 4	3579 B 2	9517 C 2	
2566 D 3	3580 E 4	9518 C 2	
2567 E 3	3582 E 3	9519 C 2	
2568 D 3	3583 E 3	9520 C 2	

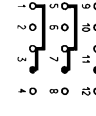
AUDIO BOARD (AZ1208) - CIRCUIT DIAGRAM



THIS CIRCUIT DIAGRAM HAS BEEN OBTAINED FROM THE MANUFACTURER'S LITERATURE.

SUBJECT TO MODIFICATIONS

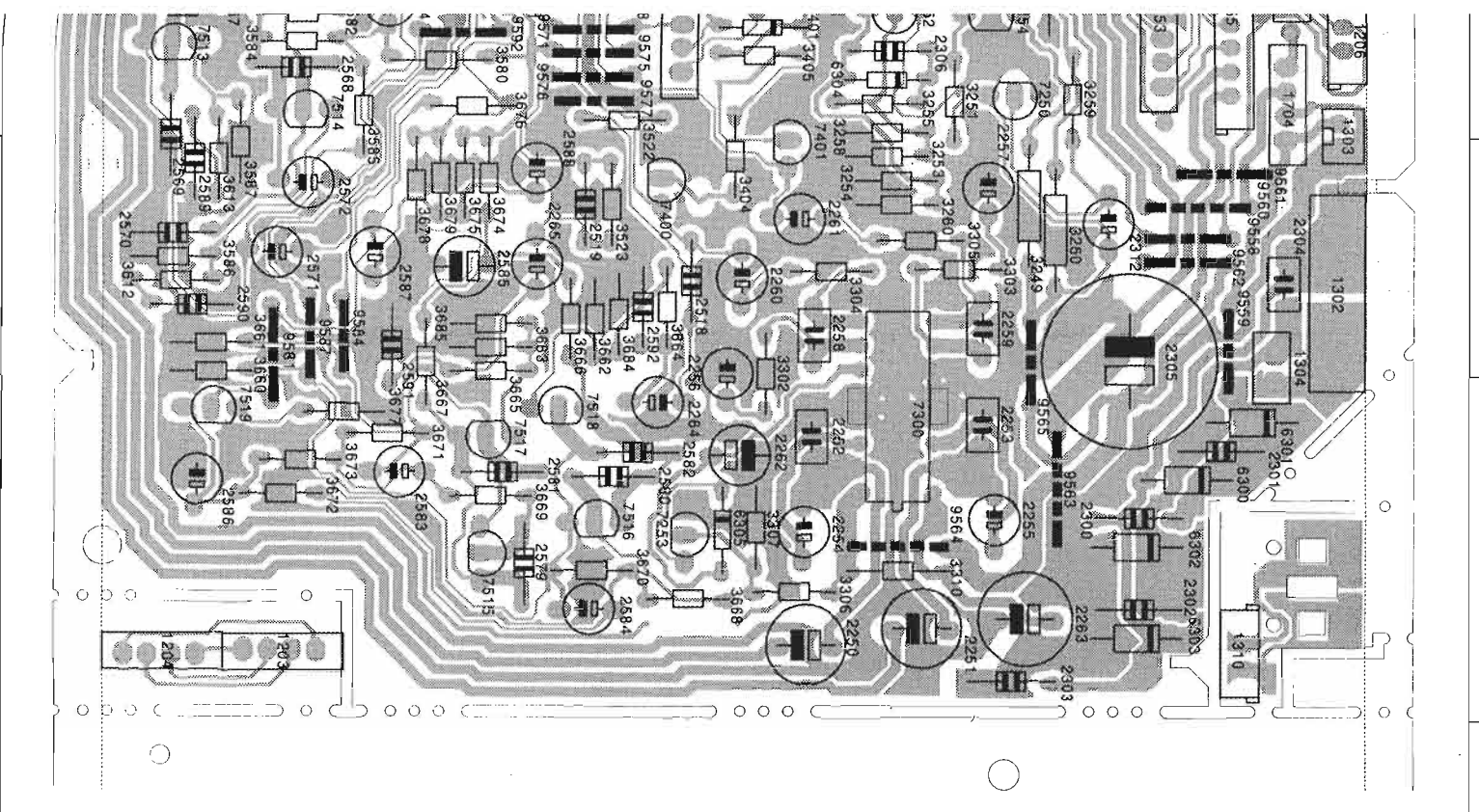
- ALL CARBON RESISTORS E12 SERIES UNLESS OTHERWISE STATED.
- ALL TUBULAR CERAMIC CAPACITORS UNLESS OTHERWISE STATED.
- PLATE CERAMIC CAPACITOR
- MYLAR CAPACITOR
- ELECTROLYTIC CAPACITOR







3 4 5



A	1201 C 3	2581 D 5	3595 A 2	9504 A 2	9577 D 3
A	1202 A 3	2582 C 5	3596 A 2	9505 A 2	9579 D 1
A	1203 E 5	2583 D 5	3597 A 2	9506 A 2	9580 D 1
A	1204 E 5	2584 D 5	3598 A 2	9507 A 2	9581 E 4
A	1206 A 3	2585 D 4	3610 B 1	9508 B 2	9582 D 2
A	1255 E 2	2586 E 5	3611 B 1	9509 B 2	9583 E 3
A	1257 E 1	2587 D 4	3612 E 4	9510 B 2	9584 E 4
A	1302 A 4	2588 D 4	3613 E 4	9511 B 2	9585 B 1
A	1303 A 3	2589 E 4	3660 E 4	9512 B 2	9587 E 4
A	1304 A 4	2590 E 4	3661 E 4	9513 B 2	9588 D 3
A	1310 A 5	2591 D 4	3662 D 4	9514 B 2	9589 D 3
A	1400 A 1	2592 C 4	3663 D 4	9515 B 2	9591 D 3
A	1503 D 1	2593 C 3	3664 C 4	9516 C 2	9592 D 3
A	1506 E 1	2596 D 1	3665 D 4	9517 C 2	9593 D 1
A	1507 D 1	3249 B 4	3666 D 4	9518 C 2	9594 D 1
A	1704 A 3	3250 B 4	3667 D 4	9519 C 2	
A	1753 A 3	3251 B 3	3668 C 5	9520 C 2	
A	1755 A 3	3252 B 3	3669 D 5	9521 C 2	
A	2250 C 5	3253 B 4	3670 D 5	9522 C 2	
A	2251 B 5	3254 B 4	3671 D 5	9523 C 2	
A	2252 C 5	3255 B 3	3672 E 5	9524 D 2	
A	2253 B 5	3256 B 3	3673 E 5	9525 D 2	
A	2254 C 5	3259 B 3	3674 D 4	9526 D 2	
A	2255 B 5	3260 B 4	3675 D 4	9527 D 2	
A	2256 C 4	3302 C 4	3676 D 3	9528 D 2	
A	2257 B 4	3303 B 4	3677 E 5	9529 D 2	
A	2258 C 4	3304 C 4	3678 D 4	9530 D 2	
A	2259 B 4	3305 B 4	3679 D 4	9531 D 2	
A	2260 C 4	3306 C 5	3680 C 1	9532 E 2	
A	2261 C 4	3307 C 5	3681 C 1	9533 E 2	
A	2262 C 5	3308 E 2	3684 C 4	9534 E 2	
A	2263 B 5	3309 E 2	3685 D 4	9542 A 1	
A	2264 C 5	3310 B 5	3686 B 2	9543 A 1	
A	2265 D 4	3400 C 3	6300 A 5	9544 B 1	
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A	2267 E 1	3402 C 1	6302 A 5	9547 B 1	
A	2300 A 5	3403 B 1	6303 A 5	9548 B 1	
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A	2306 B 3	3519 E 1	6403 C 1	9555 B 2	
A	2307 B 3	3520 D 1	6404 B 1	9556 B 2	
A	2312 A 4	3521 D 1	7250 B 3	9557 B 2	
A	2400 B 1	3522 C 3	7251 B 3	9558 A 4	
A	2401 C 1	3523 D 4	7252 B 3	9559 A 4	
A	2402 B 1	3529 A 2	7253 C 5	9560 A 4	
A	2403 A 1	3530 A 2	7254 B 3	9561 A 4	
A	2404 C 1	3531 A 2	7300 B 5	9562 A 4	
A	2405 B 1	3532 A 2	7400 C 4	9563 B 5	
A	2518 C 4	3576 E 3	7401 C 4	9564 B 5	
A	2519 D 4	3577 E 3	7513 E 3	9565 B 4	
A	2564 D 3	3578 B 1	7514 E 3	9566 C 2	
A	2565 E 3	3579 B 1	7515 D 5	9567 C 2	
A	2566 E 3	3580 D 3	7516 D 5	9568 D 3	
A	2567 E 3	3582 E 3	7517 D 5	9569 D 3	
A	2568 E 3	3583 E 3	7518 D 5	9570 C 3	
A	2569 E 3	3584 E 3	7519 E 5	9571 D 3	
A	2570 E 4	3585 E 3	7520 C 2	9572 D 2	
A	2571 E 4	3586 E 4	9500 A 2	9573 D 2	
A	2572 E 4	3587 E 4	9501 A 2	9574 D 2	
A	2579 D 5	3590 C 1	9502 A 2	9575 D 3	
A	2580 D 5	3591 C 1	9503 A 2	9576 D 3	

E

D

C

B

A

3 4 5



# TUNER ADJUSTMEN

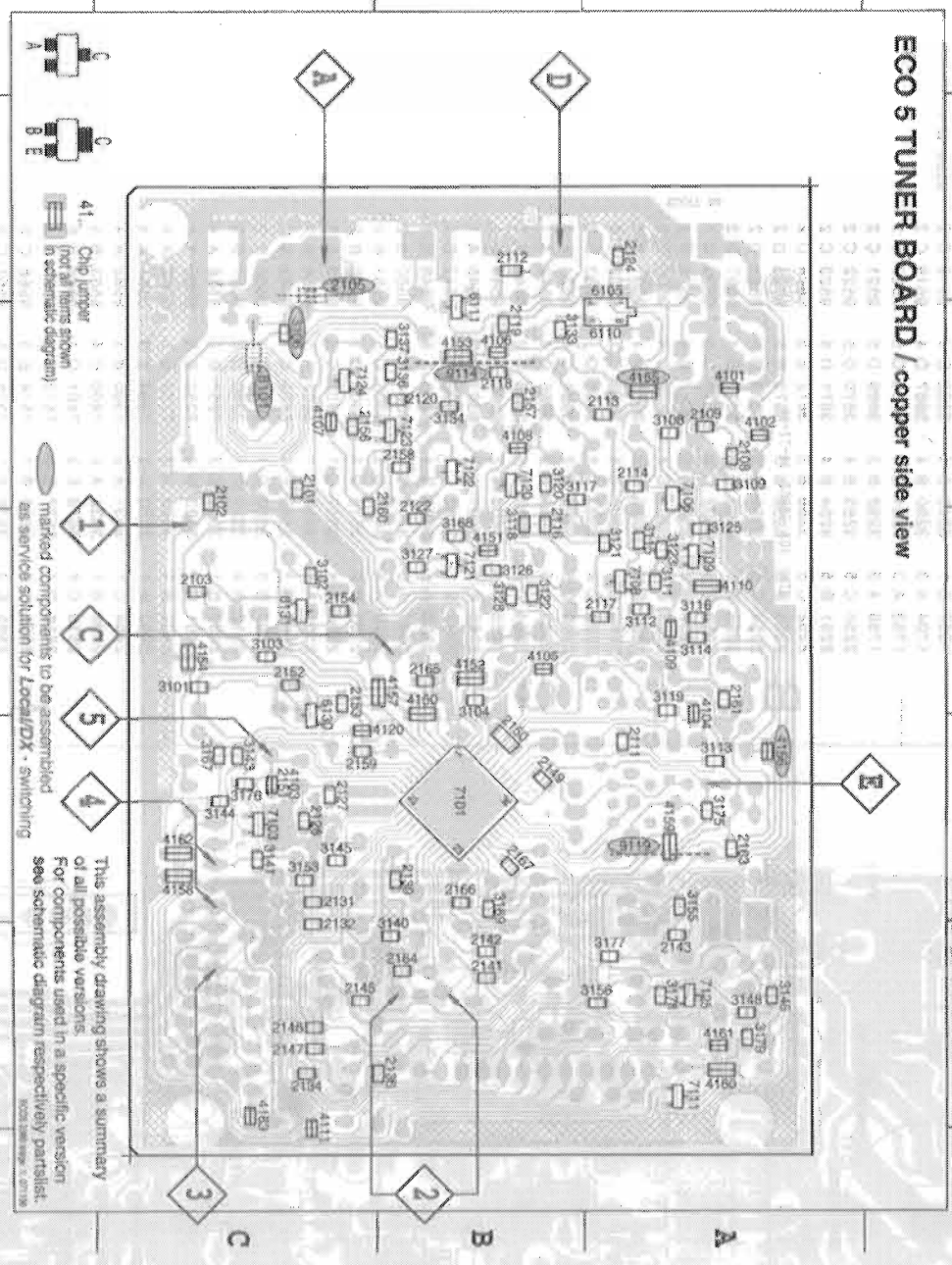
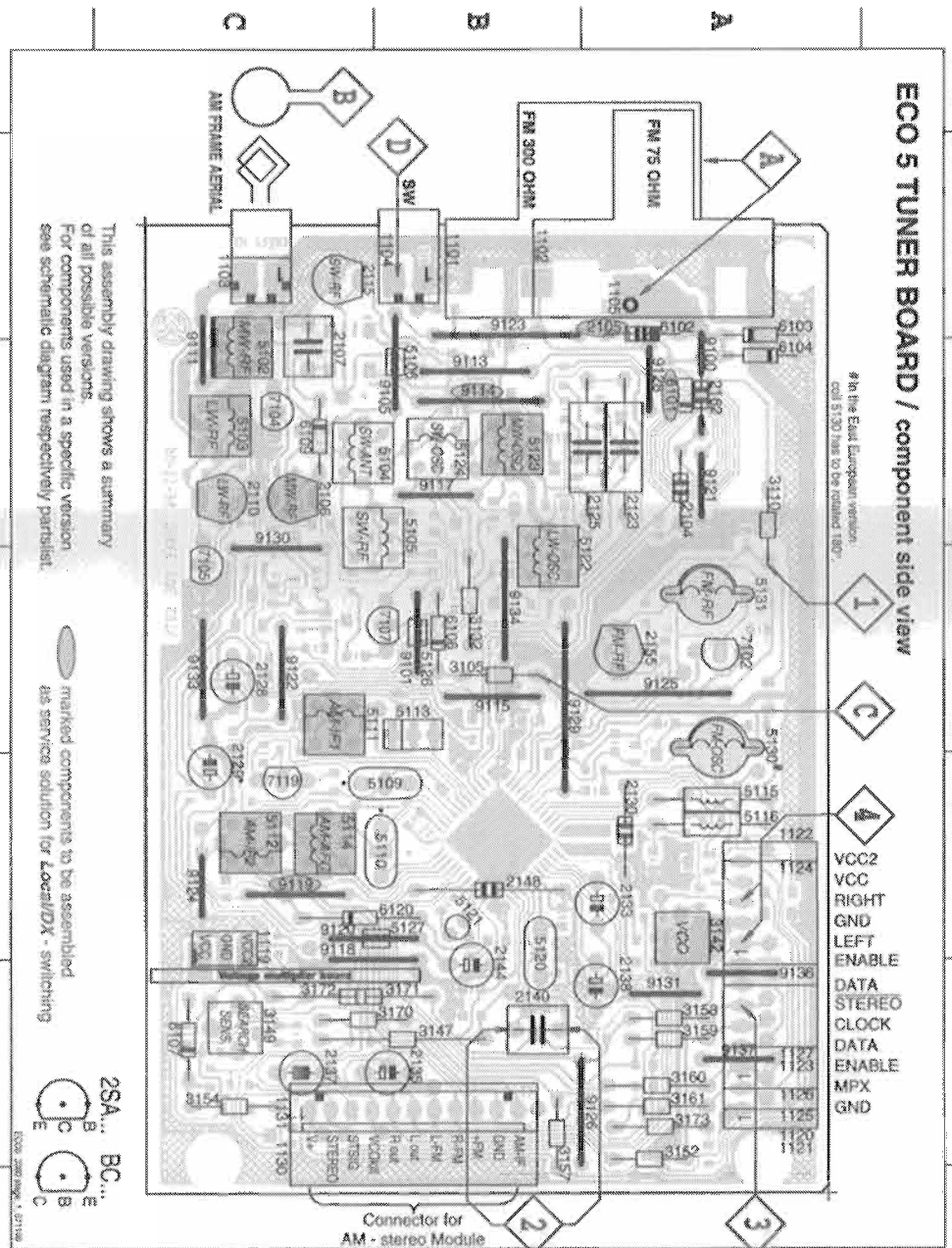
Waverange	Input
<b>VARICAP ALIGNMENT</b>	
<b>FM</b> 87.5 - 108MHz (65.81 - 74.87.5 - 108MHz)	7123 B4 7124 C4 7125 A1
<b>MW</b> FM/LW-version, 10kHz grid 530 - 1700kHz	7106 A4 7108 A3 7109 A3 7111 A1 7120 B4 7121 B3 7122 B4
<b>LW</b> FM/LW-version, 9kHz grid 531 - 1602kHz	6105 A4 6110 A4 6111 B4
<b>153 - 279kHz</b>	
<b>MW</b> FM/LW-version, 9kHz grid 531 - 1602kHz	
<b>FM RF</b>	
<b>FM</b> 87.5 - 108MHz (65.81 - 74.87.5 - 108MHz)	98 cont
<b>VCO</b>	
<b>FM IF</b>	
<b>MW</b>	cont IC 71 with grc
<b>AM AFC</b>	
<b>MW</b>	
<b>AM RF 3)</b>	
<b>MW 4)</b> FM/LW- and FM/MW-version (9kHz grid) 531 - 1602kHz	
<b>LW</b>	
<b>MW</b> FM/LW-version, 10kHz grid 530 - 1700kHz	

Use service test program. By sele

- 1) If sensitivity of frequency count (input signal: stereo left 90%+.
- 2) FC network serves for damping
- 3) For AM IF adjustments the ori
- 4) MW has to be aligned before L

1101 A1	2106 C2	2137 C5	3147 B5	3172 C6	5113 B3	5130 A3	7104 C2	9117 B2	9129 B3
1102 A1	2107 C2	2138 A5	3149 C5	3173 A5	5114 C4	5131 A3	7105 C3	9118 B4	9130 C3
1103 C1	2140 B5	2139 B5	3152 A5	3174 C2	5115 A4	5132 A2	7107 B3	9119 C4	9131 A5
1104 B1	2141 C1	2140 B5	3152 A5	3174 C2	5115 A4	5132 A2	7107 B3	9119 C4	9131 A5
1105 A1	2142 B1	2144 B5	3154 C5	3175 C2	5116 A4	5133 A3	7108 C4	9120 B4	9132 C3
1106 A1	2143 A2	2148 B4	3157 B5	3176 C2	5117 B4	5134 B4	7109 A4	9121 A2	9133 A5
1107 C5	2144 B5	2152 A2	3158 A5	3177 B4	5118 B3	5135 B4	7110 A3	9122 C3	9134 B3
1108 A5	2145 C2	2155 A3	3159 A5	3178 A1	5119 A3	5136 B3	7111 A2	9123 B1	9135 A5
1109 C5	2146 A2	2158 A2	3162 A2	3179 A1	5120 B4	5137 B4	7112 B5	9124 C4	
1120 A5	2147 C2	2162 A2	3165 A5	3180 A5	5121 B3	5138 A4	7113 A4	9125 A3	
1130 B5	2148 B4	2165 A5	3168 A5	3181 A5	5122 B3	5139 A4	7114 B2	9126 B5	
1131 B5	2149 A4	2168 A4	3170 C5	3182 A5	5123 B2	5140 B1	7115 B3	9127 A2	
2104 A2	2150 A4	2169 A4	3171 C5	3183 A4	5124 B2	5141 C2			
2105 A1	2153 A4	2170 B5	3172 C5	3184 A4	5125 B3	5142 A3			

2101 C4	2118 B4	2139 B2	2153 C3	2166 B2	3113 A2	3144 A3	3176 C2	4108 B4	4156 A2
2102 C4	2119 B4	2141 B1	2154 C3	2167 B2	3114 A3	3145 A3	3177 A1	4109 A3	4157 B3
2103 C3	2120 B4	2142 B1	2155 C4	2168 C3	3115 A3	3146 A1	3178 A1	4110 A3	6131 C3
2108 A4	2122 B3	2143 A1	2157 B4	2169 C3	3116 A3	3147 B3	3179 A1	4111 C1	7101 B2
2109 A4	2124 A5	2145 C1	2158 B4	2170 C3	3117 B4	3148 A1	4101 A4	4120 C2	7103 C2
2111 A2	2126 C2	2146 C1	2159 C2	2171 B3	3118 B3	3149 B4	4102 A4	4150 B2	7106 A4
2112 B5	2127 C2	2147 C1	2160 C4	2172 A4	3119 A3	3150 A1	4103 A2	4151 B3	7108 A3
2113 A4	2128 C2	2148 B2	2161 A3	2173 A4	3120 B4	3151 B4	4104 A2	4152 B3	7109 A3
2114 A4	2129 C1	2149 B2	2162 A2	2174 B1	3121 A3	3152 A2	4105 B3	4153 B4	7111 A1
2116 B3	2130 C1	2150 B2	2163 A1	2175 A4	3122 B3	3153 A2	4106 B4	4154 C3	7120 B4
2117 A3	2136 B1	2152 C3	2165 B3	2176 A3	3123 A3	3154 A2	4107 C4	4155 A4	7121 B3



This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partlist.

marked components to be assembled as service solution for Local/DX - switching

2SA... BC...  
B C E  
C B C

41... Chip jumper (for all items shown in schematic diagram)

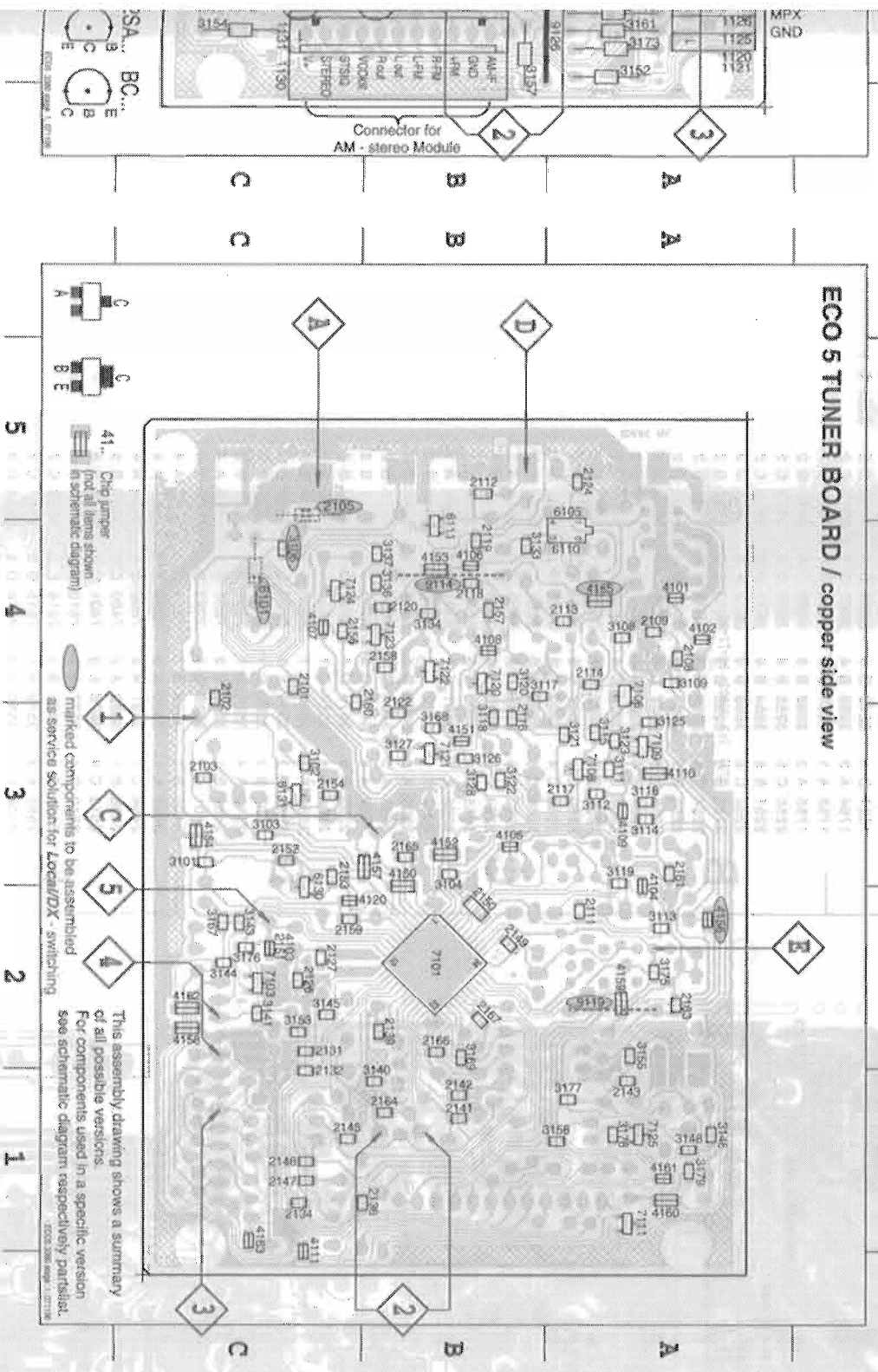
marked components to be assembled as service solution for Local/DX - switching

This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partlist.



TUNER ADJUSTMENT TABLE ( ECOS FM/MW- and FM/MW/LW - versions with AM-frame aerial )

9129 B3	2101 C4	2118 B4	2139 B2	2155 C3	2166 B2	3113 A2	3125 A3	3144 C2	3176 C2	4108 B4	4156 A2	6130 C2	7123 B4
9130 C3	2102 C4	2119 B4	2141 B1	2154 C3	2167 B2	3114 A3	3126 B3	3145 C2	3177 A1	4109 A3	4157 B3	6131 C3	7124 C4
9131 A5	2103 C3	2120 B4	2142 B1	2156 C4	2170 C3	3115 A3	3127 B3	3146 A1	3178 A1	4110 A3	4158 C2	7101 B2	7125 A1
9133 C3	2108 A4	2122 B3	2143 A1	2157 B4	2178 B4	3116 A3	3128 B3	3148 A1	3179 A1	4111 C1	4159 A2	7103 C2	
9134 B3	2109 A4	2124 A5	2145 C1	2158 B4	2182 C3	3117 B4	3133 B4	3149 A1	4101 A4	4120 C2	4160 A1	7106 A4	
9136 A5	2111 A2	2126 C2	2146 C1	2159 C2	2184 B3	3118 B3	3134 B4	3155 A2	4102 A4	4150 B2	4161 A1	7108 A3	
9137 A5	2112 B5	2127 C2	2147 C1	2160 C4	2186 C4	3119 A3	3136 B4	3156 A1	4103 C2	4151 B3	4162 C1	7109 A3	
	2113 A4	2131 C2	2149 B2	2161 A3	2188 A4	3120 B4	3137 B4	3157 C2	4104 A2	4152 B3	4163 C1	7111 A1	
	2114 A4	2132 C1	2149 B2	2163 A2	2189 A4	3121 A3	3138 A4	3158 B3	4105 B3	4153 B4	4165 A4	7120 B4	
	2116 B3	2134 C1	2151 C2	2164 B1	2194 B1	3111 A3	3122 B3	3141 C2	4108 B4	4154 C3	8110 A4	7121 B3	
	2117 A3	2136 B1	2152 C3	2165 B3	2196 B1	3112 A3	3123 A3	3143 C2	4107 C4	4155 A4	8111 B4	7122 B4	



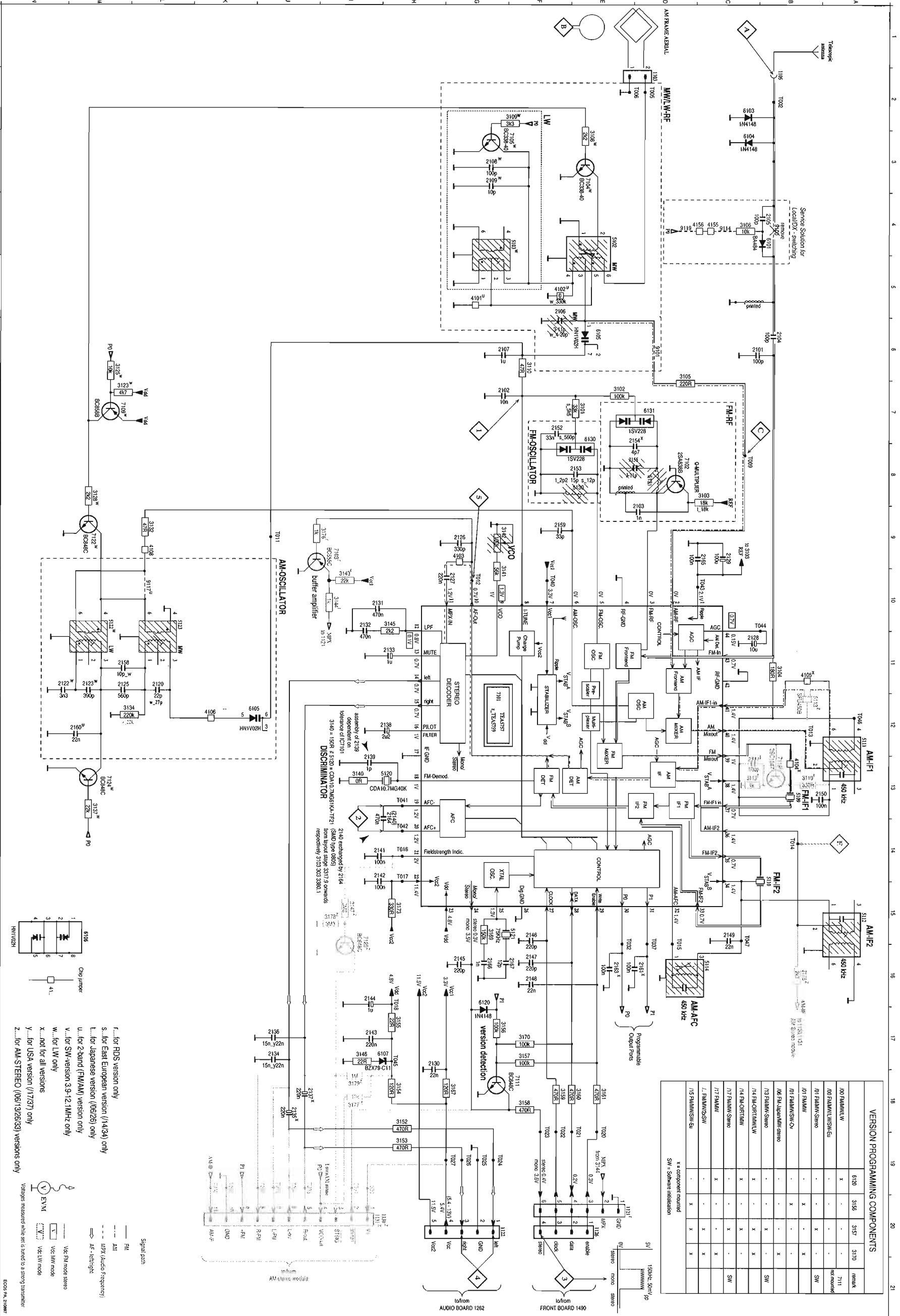
This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram, respectively partslist.

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
<b>VARICAP ALIGNMENT</b>						
FM 87.5 - 108MHz (65.81 - 74.87.5 - 108MHz)	108MHz	A	87.5MHz	5130	1	8V ±0.2V
			87.5MHz (65.81MHz)	check		4.3V ±0.5V (1.2V ±0.5V)
MW 530 - 1700kHz FM/MW-version, 10kHz grid	1700kHz	C	530kHz	5123	4	8V ±0.2V
			530kHz	check		1.1V ±0.4V
LW 153 - 279kHz FM/MW-version, 9kHz grid	279kHz	C	1602kHz	5123	1	6.9V ±0.2V
			531kHz	check		1.1V ±0.4V
MW 531 - 1602kHz FM/MW/LW-version, 9kHz grid	1602kHz	C	531kHz	5122	1	8V ±0.2V
			531kHz	check		1.1V ±0.4V
FM/RF 87.5 - 108MHz (65.81 - 74.87.5 - 108MHz)	108MHz	A	153kHz	check	4	1.1V ±0.4V
			1602kHz	5123		8V ±0.2V
VCO	98MHz, 1mV continuous wave	A	531kHz	check	4	1.1V ±0.4V
			108MHz	2155		8V ±0.2V
FM 87.5 - 108MHz (65.81 - 74.87.5 - 108MHz)	108MHz	A	87.5MHz (65.81MHz)	5131	4	MAX
			87.5MHz (65.81MHz)	Δf=22.5kHz		
AM/IF	98MHz	A	98MHz	3142	3	152kHz ±1kHz 1)
			98MHz	5111		
MW	450kHz	C	IC 7101 40	5111	4	
			IC 7101 40	5112		
AM/AFC	continuous wave	C	Δf=15kHz V <sub>RF</sub> = 3mV	5114	2	0 ± 2 mV DC
			continuous wave V <sub>RF</sub> = 10mV			
AM/RF 3)	1494kHz	B	450kHz	2106	4	
			1494kHz	5102		
MW 4)	558kHz	B	558kHz	5102	4	
			558kHz	5103		
LW	198kHz	B	198kHz	2106	4	
			198kHz	5102		
MW	1500kHz	B	1500kHz	2106	4	
			1500kHz	5102		
FM/MW-version, 10kHz grid	560kHz	B	560kHz	5102	4	
			560kHz	5102		

Use service test program. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

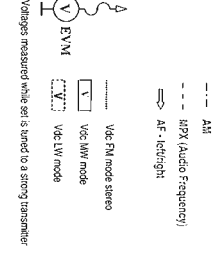
- 1) If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)
- 2) FC network serves for damping the IF-filter while adjusting the other one.
- 3) For AM RF adjustments the original frame antenna has to be used !
- 4) MW has to be aligned before LW.

# TUNER BOARD EC05 / PA

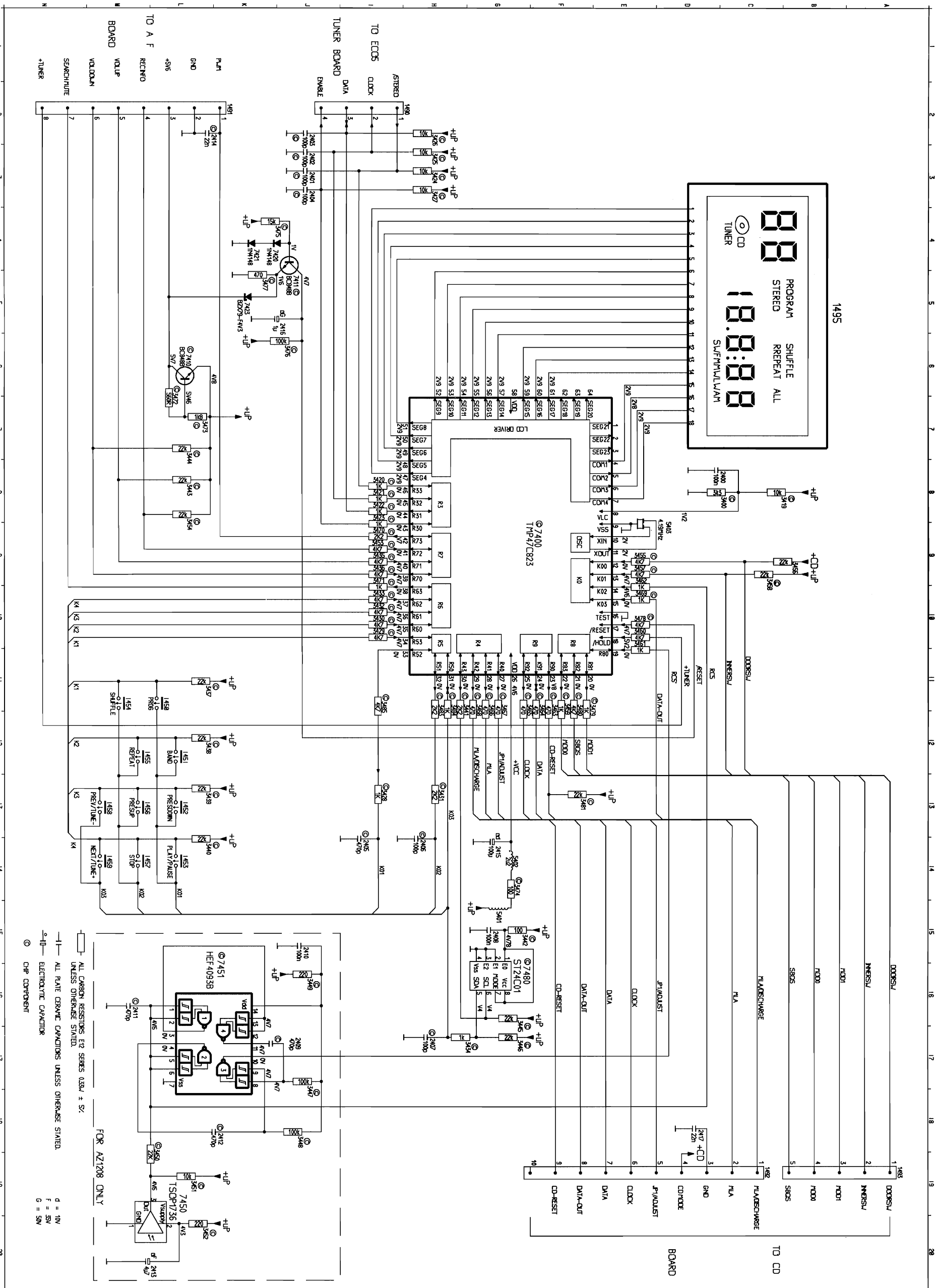


VERSION PROGRAMMING COMPONENTS					
Component	610	316	317	310	Remark
001 RALM/LW	X	-	-	-	not used
002 RALM/LW/Stereo	-	-	-	-	not used
003 RALM/Stereo	-	-	-	-	SW
004 RALM	-	-	-	-	SW
005 RALM/Stereo	-	-	-	-	SW
006 RALM/Stereo	-	-	-	-	SW
007 RALM/Stereo	-	-	-	-	SW
008 RALM/Stereo	-	-	-	-	SW
009 RALM/Stereo	-	-	-	-	SW
010 RALM/Stereo	-	-	-	-	SW
011 RALM/Stereo	-	-	-	-	SW
012 RALM/Stereo	-	-	-	-	SW
013 RALM/Stereo	-	-	-	-	SW
014 RALM/Stereo	-	-	-	-	SW
015 RALM/Stereo	-	-	-	-	SW
016 RALM/Stereo	-	-	-	-	SW
017 RALM/Stereo	-	-	-	-	SW
018 RALM/Stereo	-	-	-	-	SW
019 RALM/Stereo	-	-	-	-	SW
020 RALM/Stereo	-	-	-	-	SW
021 RALM/Stereo	-	-	-	-	SW
022 RALM/Stereo	-	-	-	-	SW
023 RALM/Stereo	-	-	-	-	SW
024 RALM/Stereo	-	-	-	-	SW
025 RALM/Stereo	-	-	-	-	SW
026 RALM/Stereo	-	-	-	-	SW
027 RALM/Stereo	-	-	-	-	SW
028 RALM/Stereo	-	-	-	-	SW
029 RALM/Stereo	-	-	-	-	SW
030 RALM/Stereo	-	-	-	-	SW
031 RALM/Stereo	-	-	-	-	SW
032 RALM/Stereo	-	-	-	-	SW
033 RALM/Stereo	-	-	-	-	SW
034 RALM/Stereo	-	-	-	-	SW
035 RALM/Stereo	-	-	-	-	SW
036 RALM/Stereo	-	-	-	-	SW
037 RALM/Stereo	-	-	-	-	SW
038 RALM/Stereo	-	-	-	-	SW
039 RALM/Stereo	-	-	-	-	SW
040 RALM/Stereo	-	-	-	-	SW
041 RALM/Stereo	-	-	-	-	SW
042 RALM/Stereo	-	-	-	-	SW
043 RALM/Stereo	-	-	-	-	SW
044 RALM/Stereo	-	-	-	-	SW
045 RALM/Stereo	-	-	-	-	SW
046 RALM/Stereo	-	-	-	-	SW
047 RALM/Stereo	-	-	-	-	SW
048 RALM/Stereo	-	-	-	-	SW
049 RALM/Stereo	-	-	-	-	SW
050 RALM/Stereo	-	-	-	-	SW
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090 RALM/Stereo	-	-	-	-	SW
091 RALM/Stereo	-	-	-	-	SW
092 RALM/Stereo	-	-	-	-	SW
093 RALM/Stereo	-	-	-	-	SW
094 RALM/Stereo	-	-	-	-	SW
095 RALM/Stereo	-	-	-	-	SW
096 RALM/Stereo	-	-	-	-	SW
097 RALM/Stereo	-	-	-	-	SW
098 RALM/Stereo	-	-	-	-	SW
099 RALM/Stereo	-	-	-	-	SW
100 RALM/Stereo	-	-	-	-	SW

- f...for RDS version only
- s...for East European version (1/14/34) only
- l...for Japanese version (06/28) only
- u...for 2-band (FM/AM) version only
- v...for LW version 3.9-12.1MHz only
- w...for LW only
- x...not for all versions
- y...for USA version (1/17/3) only
- z...for AM-STEREO (06/13/26/33) versions only



FRONT BOARD - CIRCUIT DIAGRAM

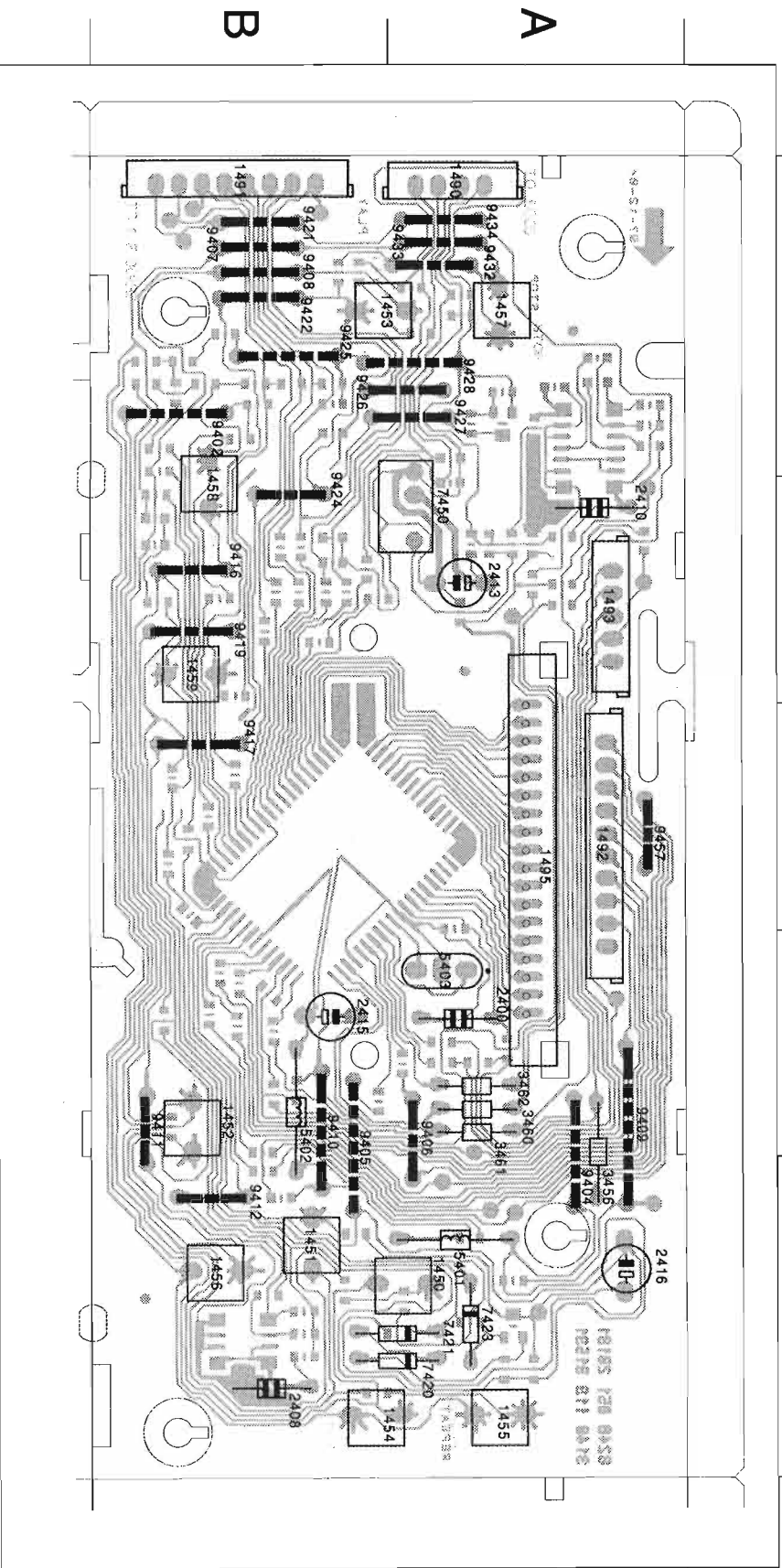




FRONT BOARD - LAYOUT DIAGRAM

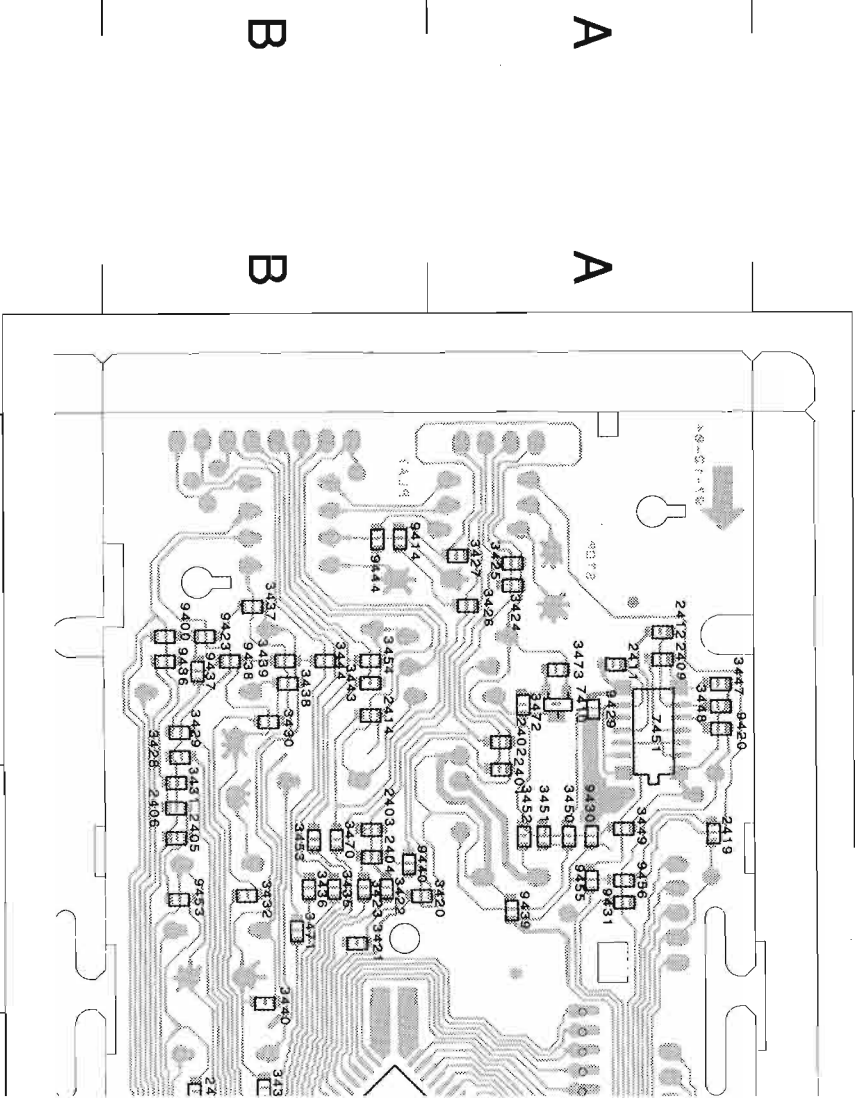
- 1450 A 5
- 1451 B 5
- 1452 B 4
- 1453 B 1
- 1454 B 5
- 1455 A 5
- 1456 B 5
- 1457 A 1
- 1458 B 2
- 1459 B 2
- 1490 A 1
- 1491 B 1
- 1492 A 3
- 1493 A 2
- 1495 A 2
- 2400 A 4
- 2408 B 5
- 2410 A 2
- 2413 A 2
- 2415 B 4
- 2416 A 5
- 3456 A 4
- 3460 A 4
- 3461 A 4
- 3462 A 4
- 5401 A 5
- 5402 B 4
- 5403 A 4
- 7420 A 5
- 7421 A 5
- 7423 A 5
- 7450 A 2
- 9402 B 1
- 9404 A 4
- 9405 B 4
- 9406 A 4
- 9407 B 1
- 9408 B 1
- 9409 A 4
- 9410 B 4
- 9411 B 4
- 9412 B 5
- 9416 B 2
- 9417 B 3
- 9419 B 2
- 9421 B 1
- 9422 B 1
- 9424 B 2
- 9425 B 1
- 9426 A 1
- 9427 A 1
- 9428 A 1
- 9432 A 1
- 9433 A 1
- 9434 A 1
- 9457 A 3

- 1
- 2
- 3
- 4
- 5



- 2401 A 2
- 2402 A 1
- 2403 B 2
- 2404 B 2
- 2405 B 2
- 2406 B 2
- 2407 B 3
- 2409 A 1
- 2411 A 1
- 2412 A 1
- 2414 B 1
- 2417 B 5
- 2418 B 4
- 2419 A 2
- 3400 A 3
- 3419 A 4
- 3420 B 2
- 3421 B 2
- 3422 B 2
- 3423 B 2
- 3424 A 1
- 3425 A 1
- 3426 A 1
- 3427 A 1
- 3428 B 1
- 3429 B 1
- 3430 B 1
- 3431 B 2
- 3432 B 2
- 3433 B 3
- 3434 B 3
- 3435 B 2
- 3436 B 2
- 3437 B 1
- 3438 B 1
- 3439 B 1
- 3439 B 2
- 3440 B 2
- 3441 B 5
- 3442 B 5
- 3443 B 1
- 3444 B 1
- 3445 B 5
- 3446 B 5
- 3447 A 1
- 3447 A 1
- 3448 A 1
- 3449 A 2
- 3450 A 2
- 3451 A 2
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- 3455 A 1
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- 3458 A 1
- 3459 B 1
- 3463 B 1

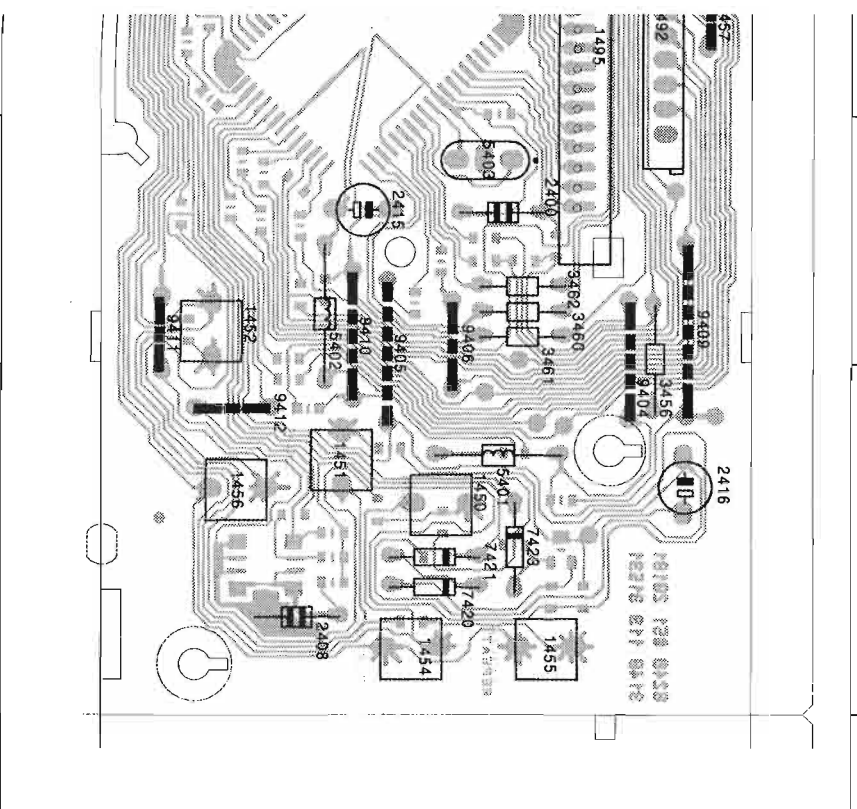
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- 2



FOR AZ1208 ONLY  
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 2413, 3447, 3448, 3449,  
 3450, 3451, 3452, 7450,  
 7451

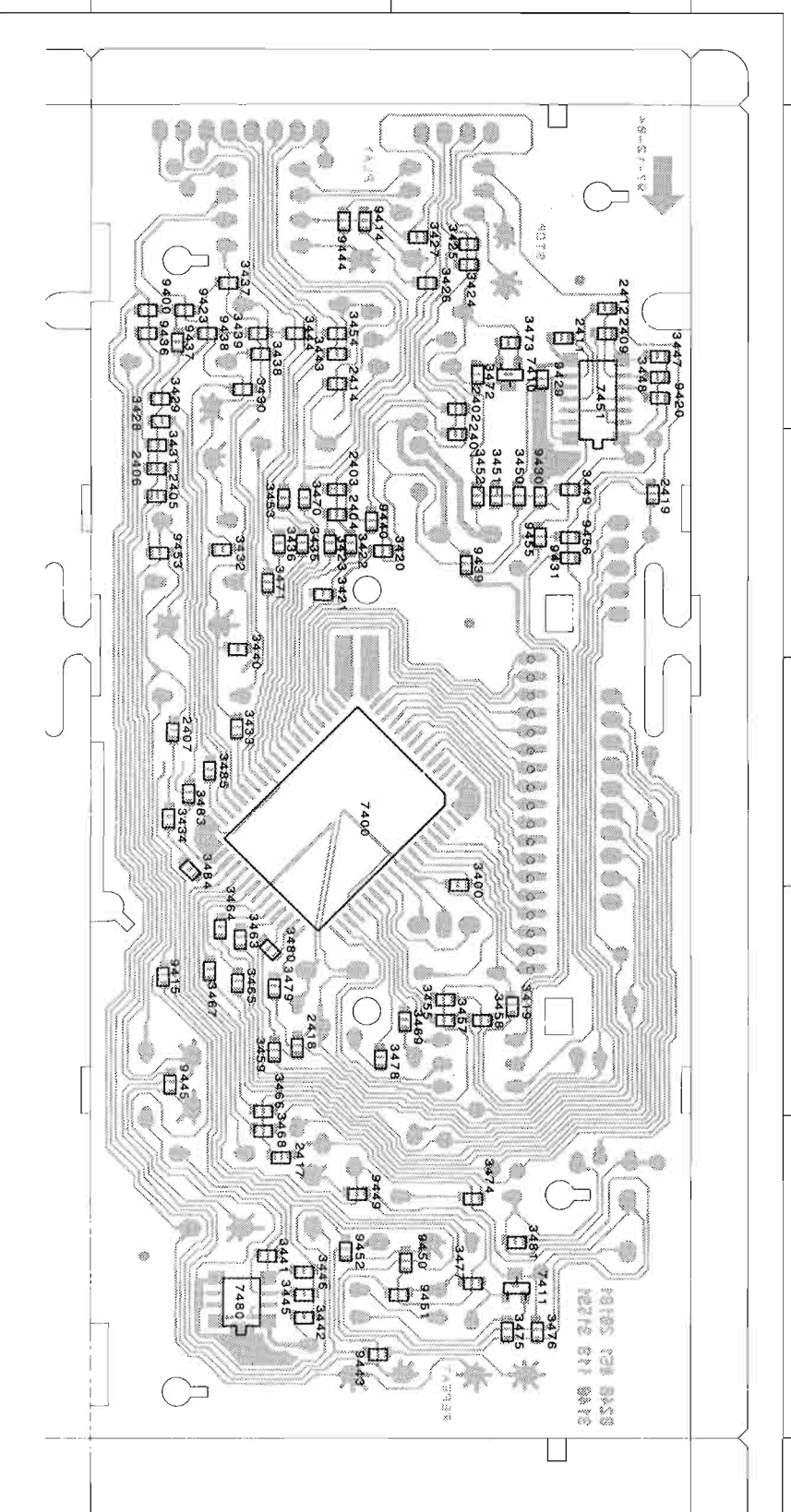
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 121 A 5 9404 A 4 9408 B 1 9412 B 5 9421 B 1 9426 A 1 9433 A 1  
 123 A 5 9405 B 4 9409 A 4 9416 B 2 9422 B 1 9427 A 1 9434 A 1  
 150 A 2 9406 A 4 9410 B 4 9417 B 3 9424 B 2 9428 A 1 9457 A 3

4 5



2401 A 2 2411 A 1 3420 B 2 3428 B 1 3436 B 2 3444 B 1 3452 A 2 3464 B 4 3472 A 1 3480 B 4 7451 A 1 9430 A 2 9444 B 1 9456 A 2  
 2402 A 1 2412 A 1 3421 B 2 3429 B 1 3437 B 1 3445 B 5 3453 B 2 3466 B 4 3473 A 1 3481 A 5 7480 B 5 9431 A 2 9445 B 4  
 2403 B 2 2414 B 1 3422 B 2 3430 B 1 3438 B 1 3446 B 5 3454 B 1 3466 B 4 3474 A 5 3483 B 3 9400 B 1 9436 B 1 9449 B 5  
 2404 B 2 2417 B 5 3423 B 2 3431 B 2 3439 B 1 3447 A 1 3455 A 4 3467 B 4 3475 A 5 3484 B 3 9414 B 1 9437 B 1 9450 A 5  
 2405 B 2 2418 B 4 3424 A 1 3432 B 2 3440 B 2 3448 A 1 3457 A 4 3468 B 5 3476 A 5 3485 B 3 9415 B 4 9438 B 1 9451 A 5  
 2406 B 2 2419 A 2 3425 A 1 3433 B 3 3441 B 5 3449 A 2 3458 A 4 3469 A 4 3477 A 5 3478 A 5 7400 B 3 9420 A 1 9439 A 2 9452 B 5  
 2407 B 3 3400 A 3 3426 A 1 3434 B 3 3442 B 5 3450 A 2 3459 B 4 3470 B 2 3478 B 4 7410 A 1 9423 B 1 9440 B 2 9453 B 2  
 2409 A 1 3419 A 4 3427 A 1 3435 B 2 3443 B 1 3451 A 2 3463 B 4 3471 B 2 3479 B 4 7411 A 5 9429 A 1 9443 B 5 9455 A 2

1 2 3 4 5



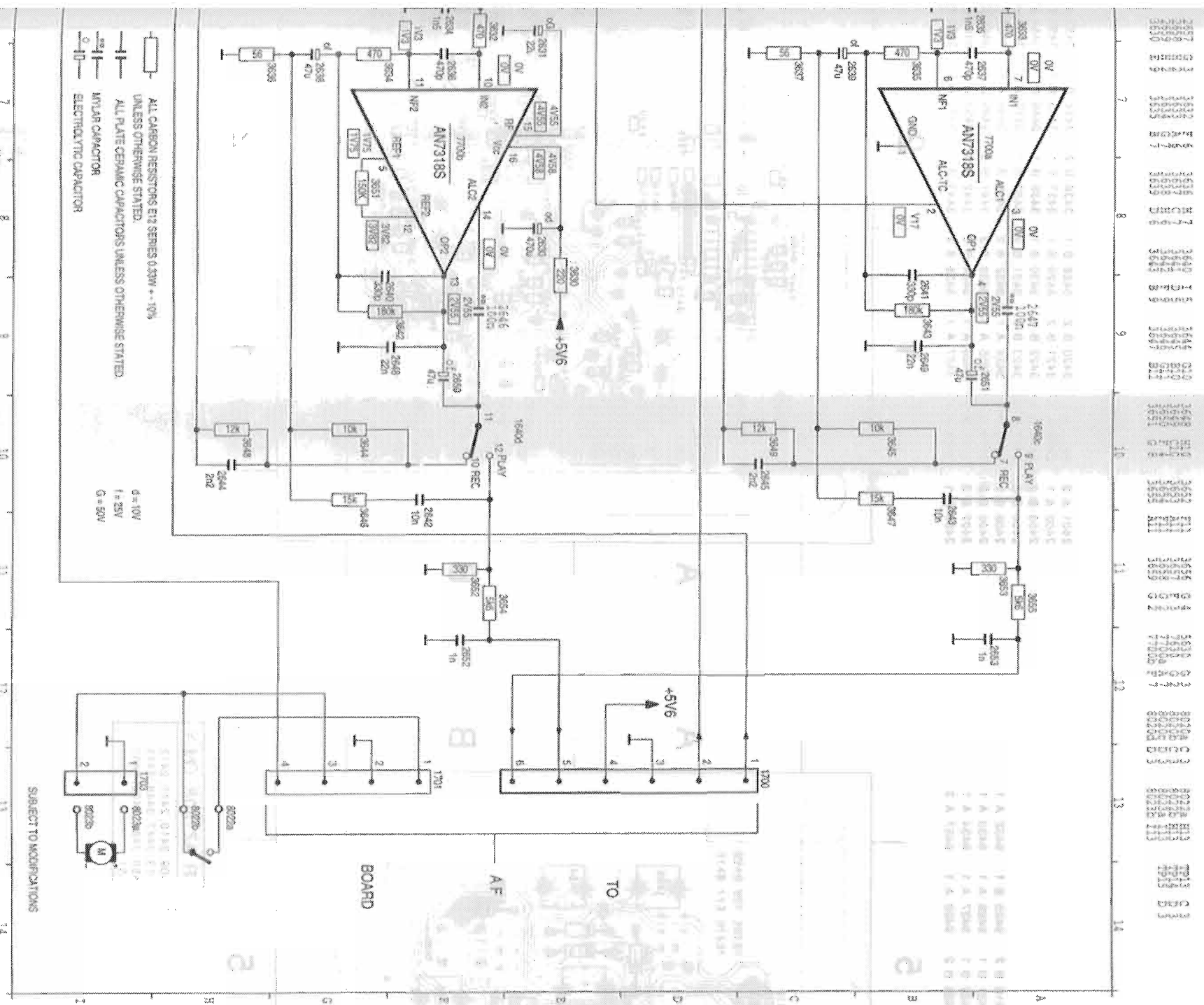
4 5 1 2 3 4 5

**FOR AZ1208 ONLY**  
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 7451



TAPE DECK BOARD - LAYOUT DIAGRAM

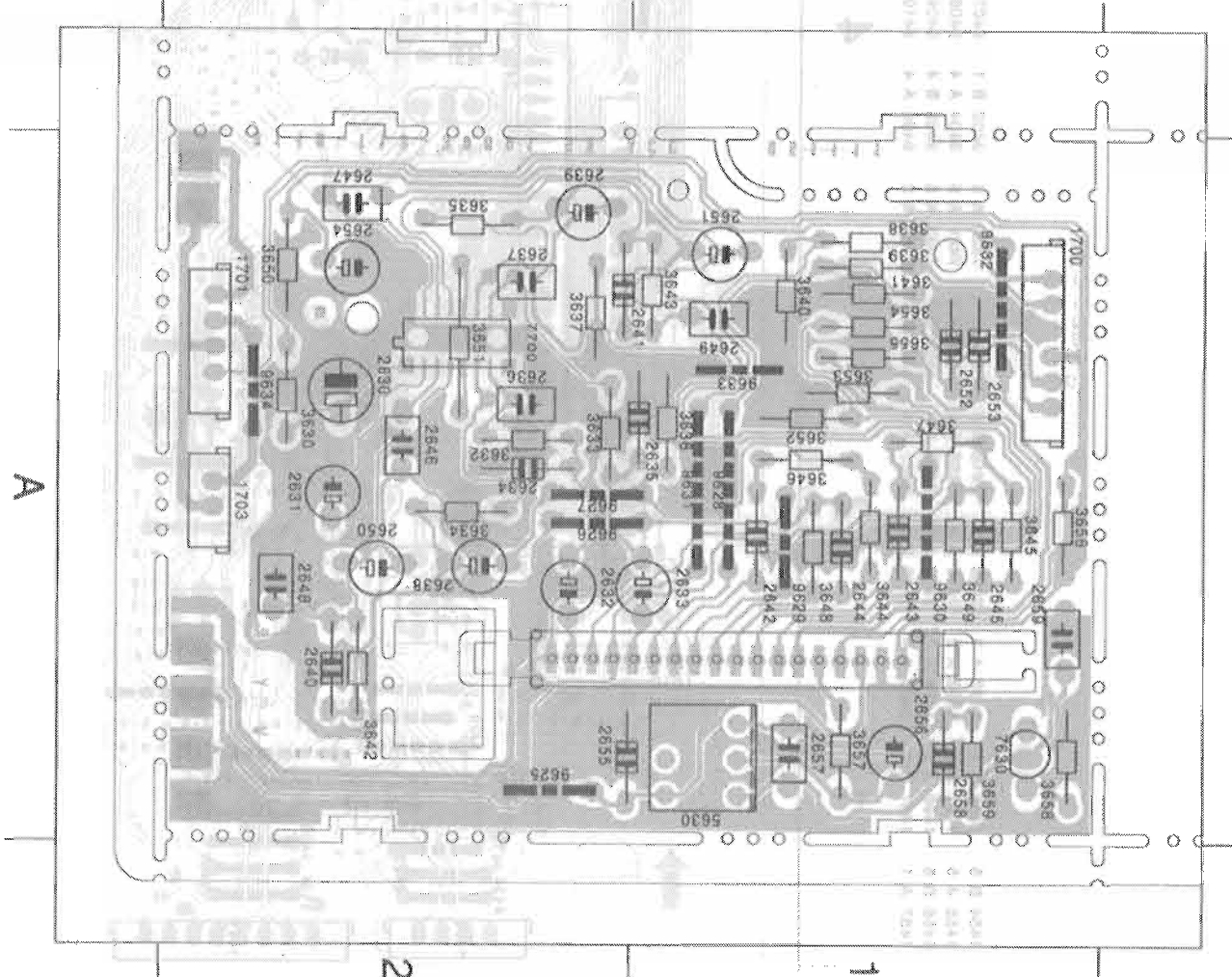
МАРШАЛД ТУУВАЛ - ГРАФ ТИӨРӨ



ALL CARBON RESISTORS E12 SERIES 0.25W ±10%  
UNLESS OTHERWISE STATED.  
ALL PLATE CERAMIC CAPACITORS UNLESS OTHERWISE STATED.  
MIL-PRC CAPACITOR  
ELECTROLYTIC CAPACITOR

d = 10V  
f = 25V  
G = 50V

SUBJECT TO MODIFICATIONS



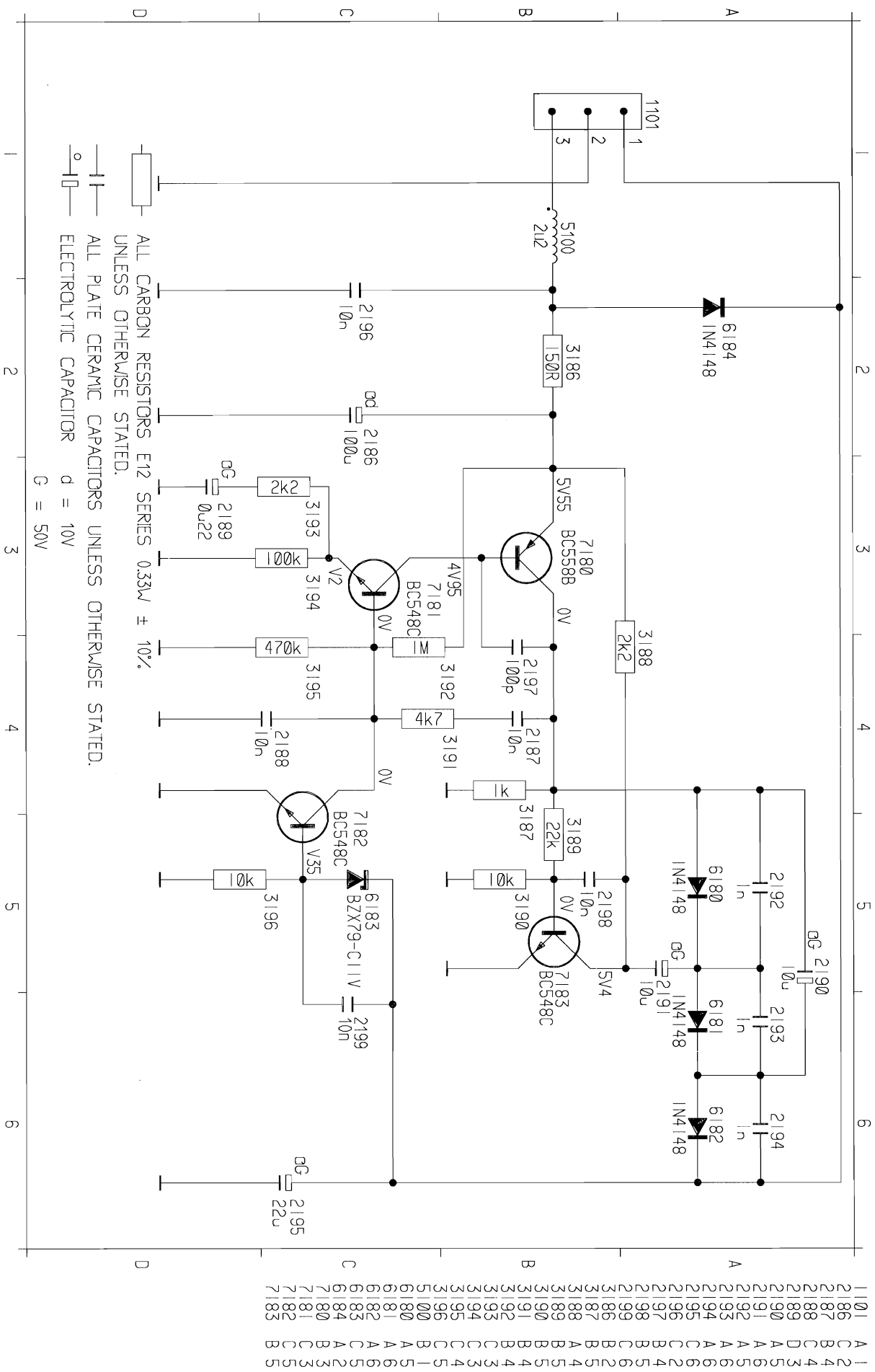
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- 1620 A 1 1630 A 1 1640 A 2 2636 A 2 2646 A 2 2656 A 1 3637 A 2 3647 A 1 3657 A 1 9629 A 1 9629 A 1 PADD5 A 2
- 1621 A 2 1631 A 1 1700 A 1 2637 A 2 2647 A 2 2657 A 1 3638 A 1 3648 A 1 3658 A 1 9630 A 1 9630 A 1 PADD6 A 2
- 1622 A 2 1632 A 1 1701 A 2 2638 A 2 2648 A 2 2658 A 1 3639 A 1 3649 A 1 3659 A 1 9631 A 1
- 1623 A 1 1633 A 1 1703 A 2 2639 A 2 2649 A 1 2659 A 1 3640 A 1 3650 A 2 3660 A 1 9632 A 1
- 1624 A 1 1634 A 1 2630 A 2 2640 A 2 2650 A 2 3630 A 2 3641 A 1 3651 A 2 7630 A 1 9633 A 1
- 1625 A 1 1635 A 1 2631 A 2 2641 A 2 2651 A 1 3632 A 2 3642 A 2 3652 A 1 7700 A 2 9635 A 2
- 1626 A 1 1636 A 1 2632 A 2 2642 A 1 2652 A 1 3633 A 2 3643 A 1 3653 A 1 9625 A 2 9625 A 2 PADD1 A 2
- 1627 A 1 1637 A 2 2633 A 1 2643 A 1 2653 A 1 3634 A 2 3644 A 1 3654 A 1 9626 A 2 9626 A 2 PADD2 A 2
- 1628 A 1 1638 A 2 2634 A 2 2644 A 1 2654 A 2 3635 A 2 3645 A 1 3655 A 1 9627 A 2 9627 A 2 PADD3 A 2





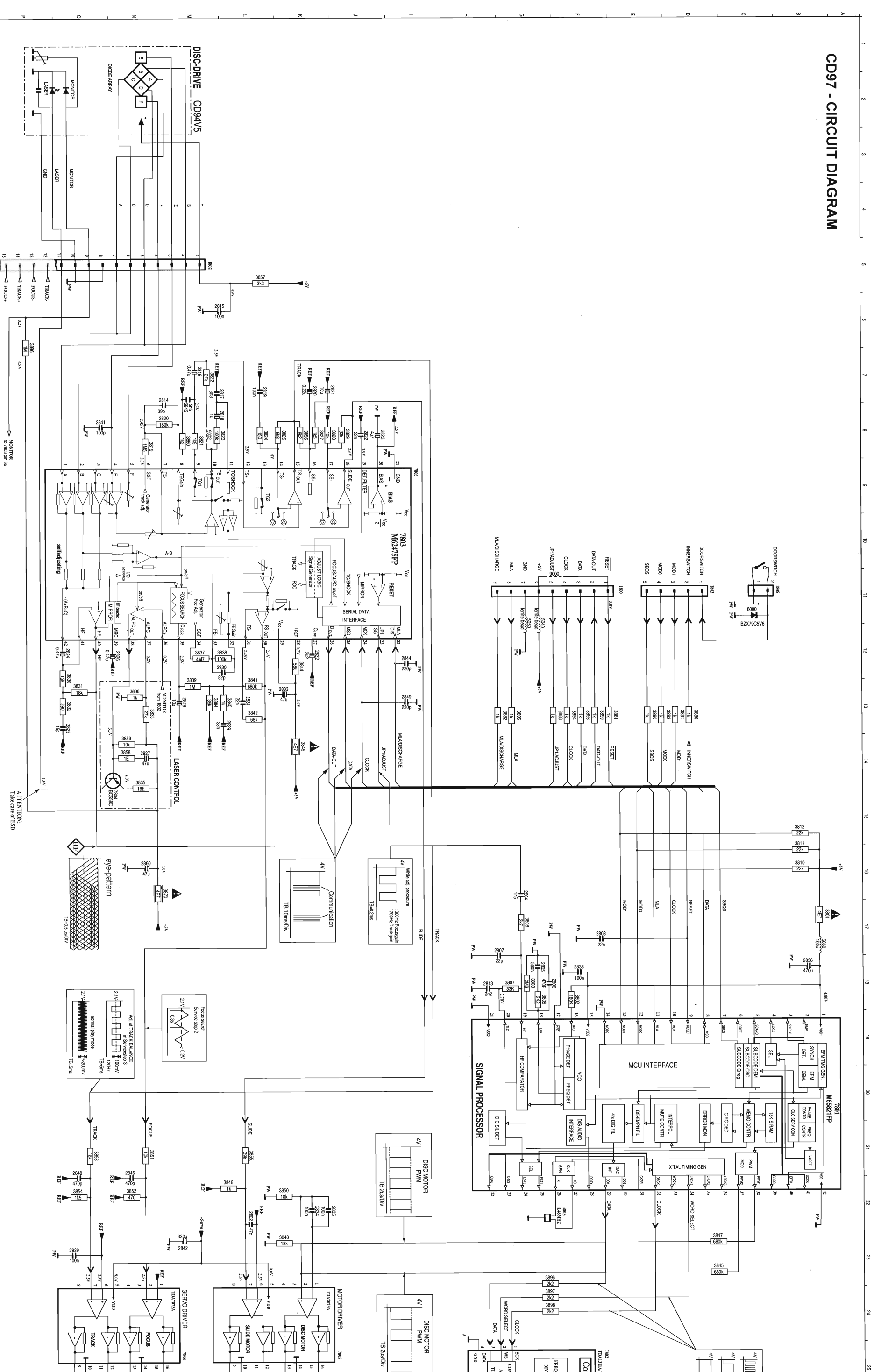
VOLTAGE MULTIPLIER BOARD (For AZ1208 only) - CIRCUIT DIAGRAM

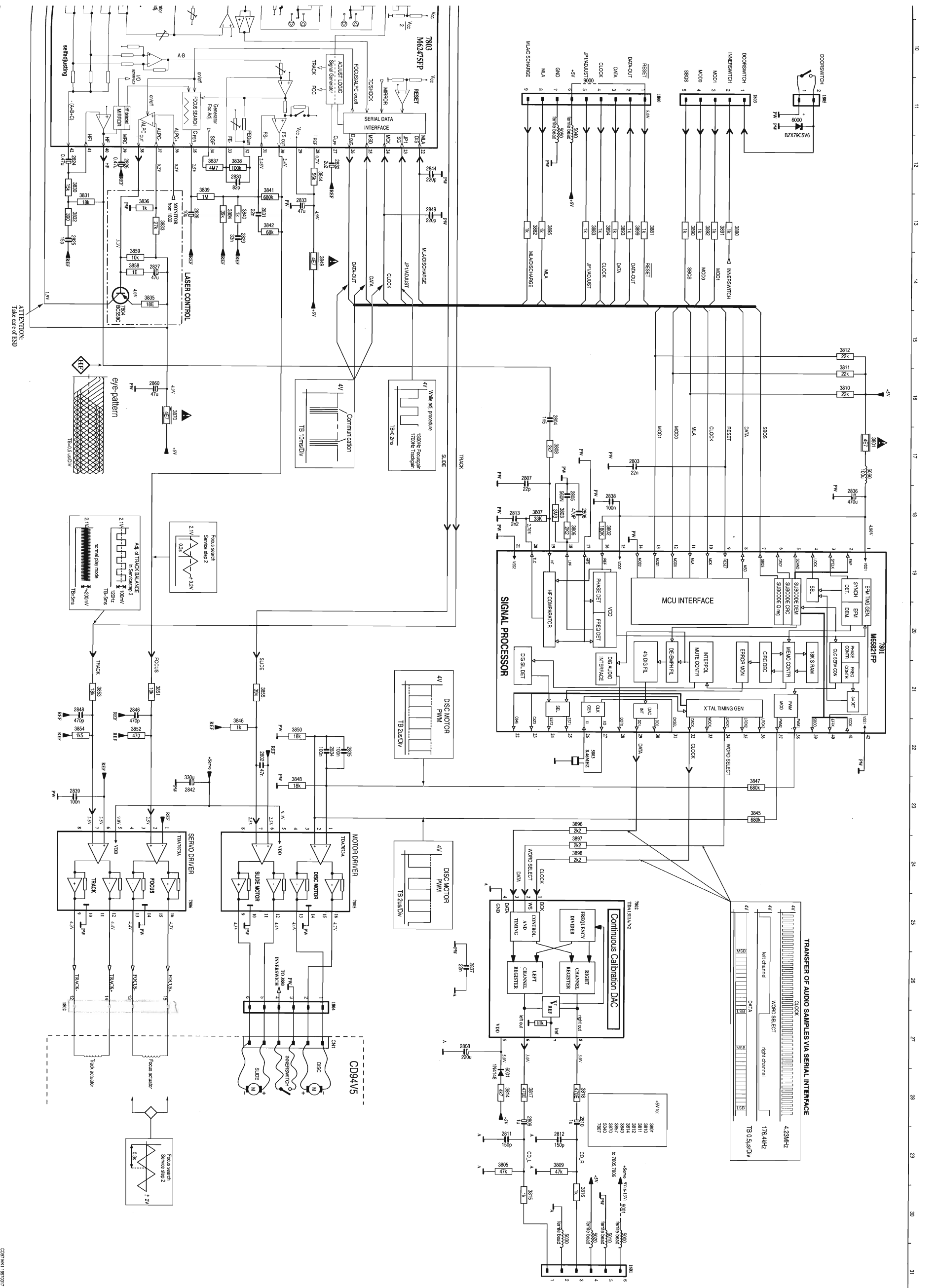
Adjust to	
d	max.
d	**a



A	
B	

# CD97 - CIRCUIT DIAGRAM

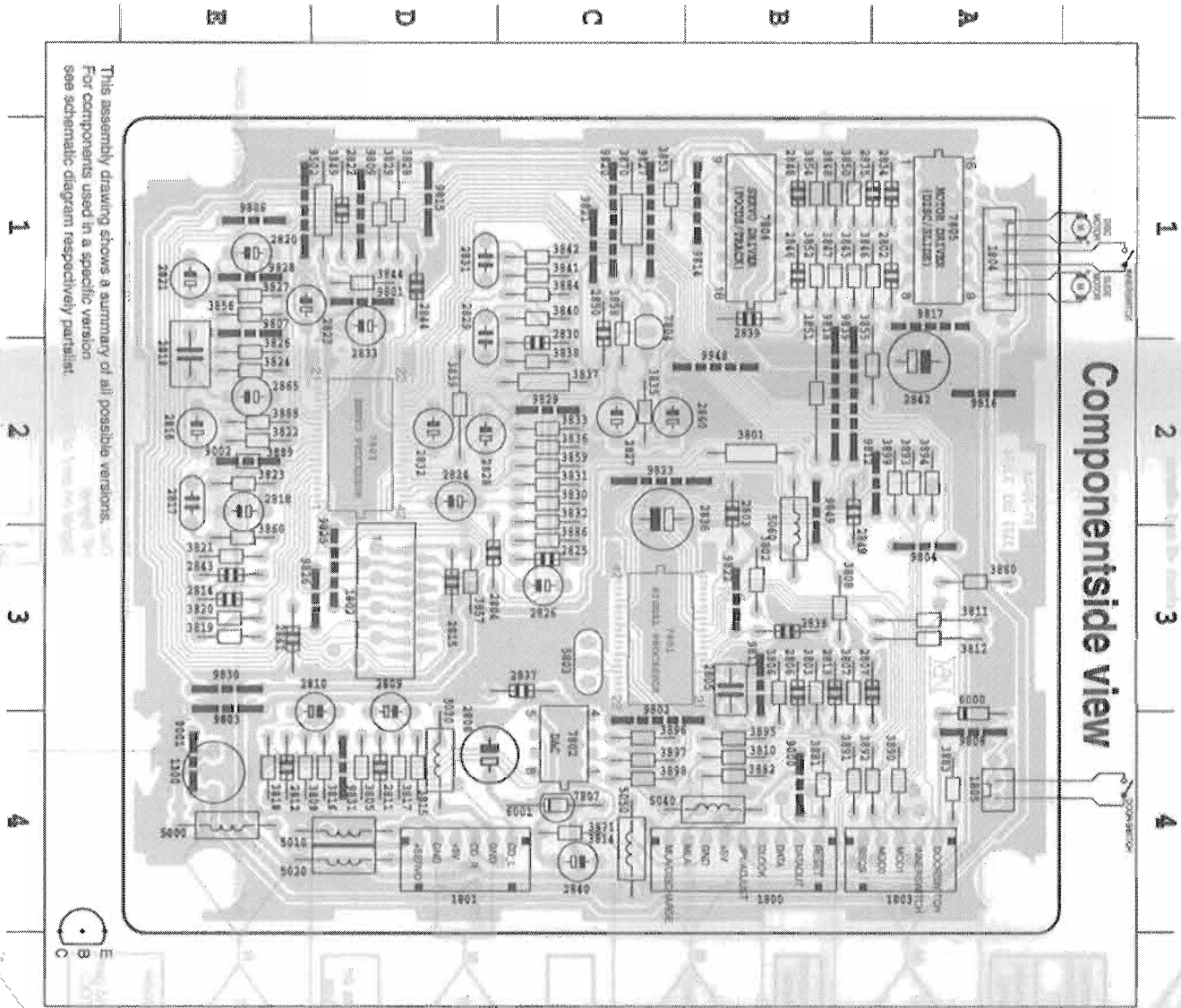




CDP MK1 1897317

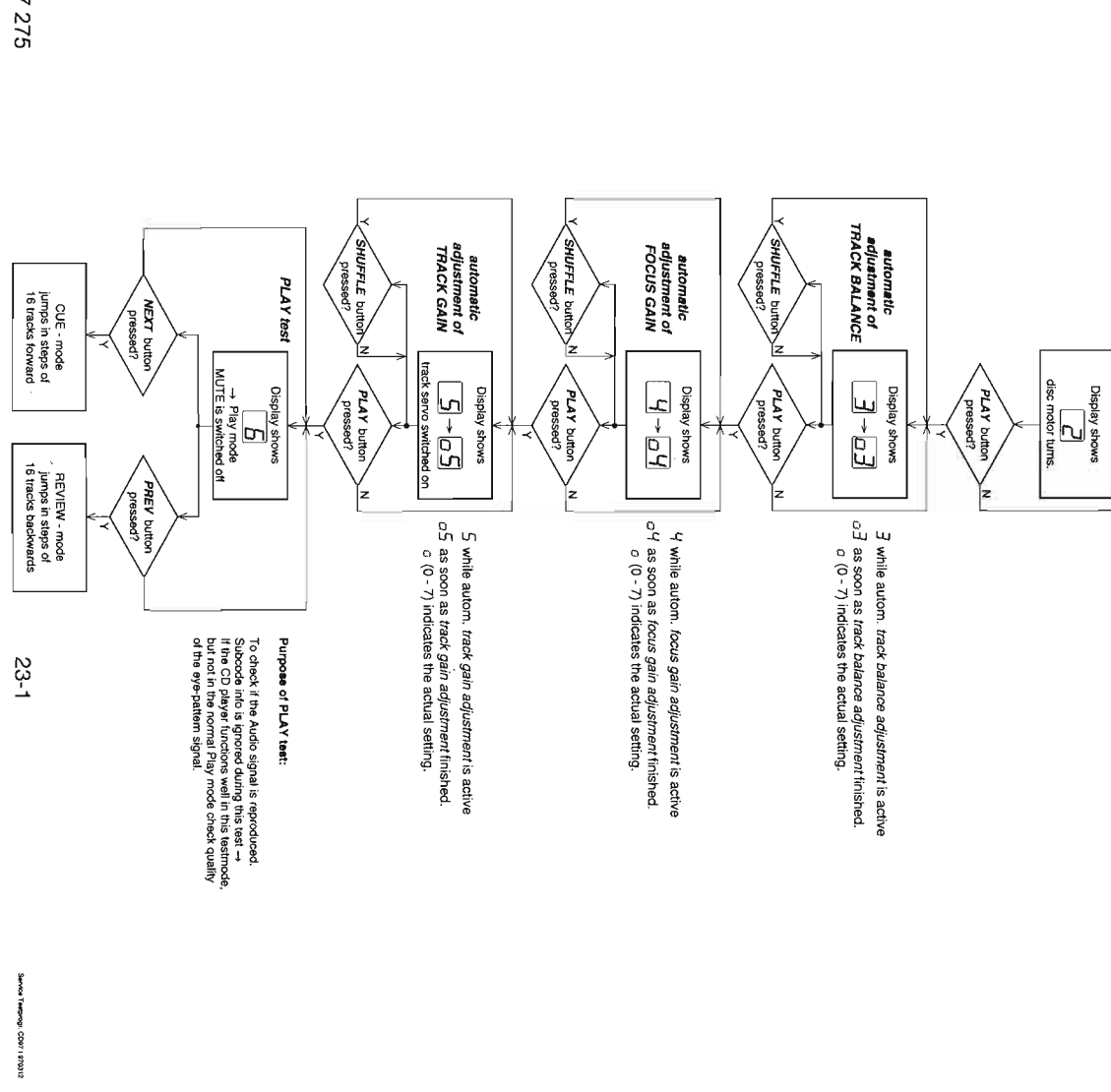
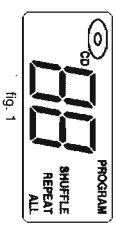
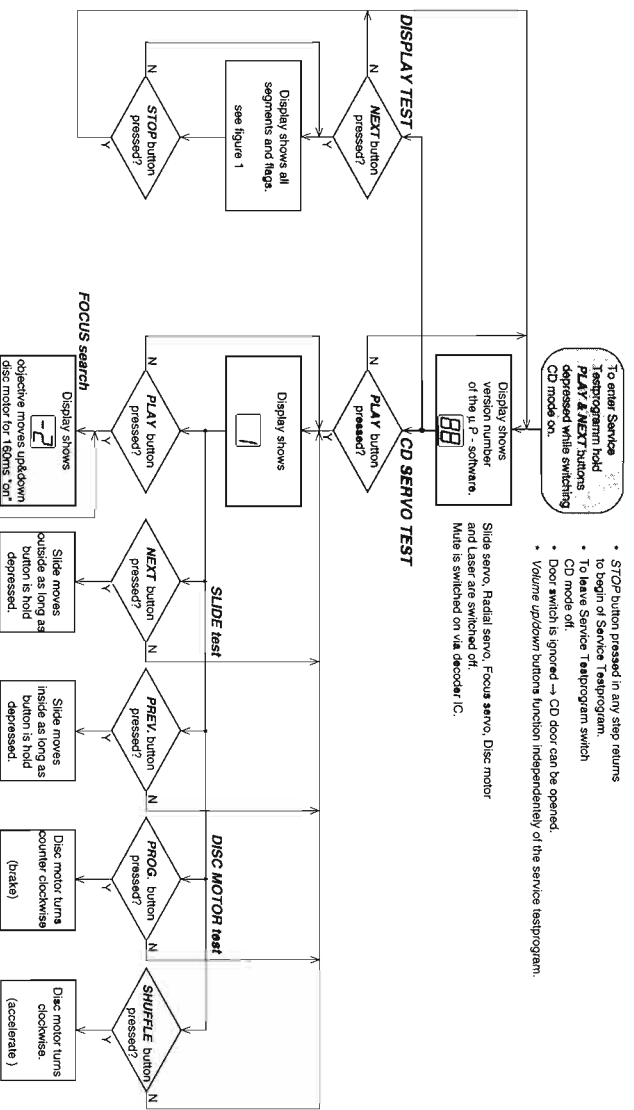
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B	1802	O.5
C	1804	D21
D	1805	D.8
E	2802	L22
F	2804	G16
G	2805	G18
H	2806	H27
I	2809	G28
J	2810	G28
K	2812	G29
L	2813	H19
M	2814	M.7
N	2817	L.7
O	2818	L.5
P	2820	K.7
Q	2821	J.7
R	2822	L.8
S	2823	L.8
T	2824	O12
U	2825	O12
V	2826	M13
W	2828	M13
X	2829	L13
Y	2831	L15
Z	2832	K12
AA	2833	K13
AB	2835	K22
AC	2836	B18
AD	2837	H16
AE	2839	O23
AF	2841	O.8
AG	2842	W23
AH	2844	L12
AI	2846	N21
AJ	2848	N21
AK	2850	O14
AL	2850	M16
AM	3805	M17
AN	3806	F18
AO	3807	G18
AP	3808	G18
AQ	3809	F18
AR	3810	F18
AS	3811	B16
AT	3812	B16
AU	3813	B16
AV	3814	B16
AW	3815	B16
AX	3816	B16
AY	3817	B16
AZ	3818	B16
BA	3819	B16
BB	3820	M.8
BC	3821	M.8
BD	3822	L.7
BE	3823	L.7
BF	3824	L.8
BG	3825	K.8
BH	3826	K.8
BI	3827	K.8
BJ	3828	O13
BK	3829	O13
BL	3830	O13
BM	3831	M13
BN	3832	M13
BO	3833	M13
BP	3834	M13
BQ	3835	M13
BR	3836	M13
BS	3837	M13
BT	3838	M13
BU	3839	M13
BV	3840	M13
BW	3841	L13
BX	3842	L13
BY	3843	K12
BZ	3844	K12
CA	3845	D23
CB	3846	D23
CC	3847	D23
CD	3848	D23
CE	3849	D23
CF	3850	M22
CG	3851	M21
CH	3852	N22
CI	3853	N22
CJ	3854	O22
CK	3855	L21
CL	3856	K.9
CM	3857	K.9
CN	3858	N14
CO	3859	N14
CP	3860	N14
CQ	3861	N14
CR	3862	N14
CS	3863	N14
CT	3864	N13
CU	3865	N13
CV	3866	N13
CW	3867	N13
CX	3868	N13
CY	3869	N13
CZ	3870	N13
DA	3871	M28
DB	3872	N13
DC	3873	N13
DD	3874	N13
DE	3875	N13
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DF	3993	N13
DF	3994	N13
DF	3995	N13
DF	3996	N13
DF	3997	N13
DF	3998	N13
DF	3999	N13
DF	4000	N13





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A	1317 E 2	1332 C 2	1413 B 3
A	1318 E 2	1333 C 2	1414 B 3
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A	1324 D 2	1340 C 1	1420 C 4
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A	1430 B 1	1446 B 1	1526 B 1
A	1431 B 1	1447 B 1	1527 B 1
A	1432 B 1	1448 B 1	1528 B 1
A	1433 B 1	1449 B 1	1529 B 1
A	1434 B 1	1450 B 1	1530 B 1
A	1435 B 1	1451 B 1	1531 B 1
A	1436 B 1	1452 B 1	1532 B 1
A	1437 B 1	1453 B 1	1533 B 1
A	1438 B 1	1454 B 1	1534 B 1
A	1439 B 1	1455 B 1	1535 B 1
A	1440 B 1	1456 B 1	1536 B 1
A	1441 B 1	1457 B 1	1537 B 1
A	1442 B 1	1458 B 1	1538 B 1
A	1443 B 1	1459 B 1	1539 B 1
A	1444 B 1	1460 B 1	1540 B 1
A	1445 B 1	1461 B 1	1541 B 1
A	1446 B 1	1462 B 1	1542 B 1
A	1447 B 1	1463 B 1	1543 B 1
A	1448 B 1	1464 B 1	1544 B 1
A	1449 B 1	1465 B 1	1545 B 1
A	1450 B 1	1466 B 1	1546 B 1
A	1451 B 1	1467 B 1	1547 B 1
A	1452 B 1	1468 B 1	1548 B 1
A	1453 B 1	1469 B 1	1549 B 1
A	1454 B 1	1470 B 1	1550 B 1
A	1455 B 1	1471 B 1	1551 B 1
A	1456 B 1	1472 B 1	1552 B 1
A	1457 B 1	1473 B 1	1553 B 1
A	1458 B 1	1474 B 1	1554 B 1
A	1459 B 1	1475 B 1	1555 B 1
A	1460 B 1	1476 B 1	1556 B 1
A	1461 B 1	1477 B 1	1557 B 1
A	1462 B 1	1478 B 1	1558 B 1
A	1463 B 1	1479 B 1	1559 B 1
A	1464 B 1	1480 B 1	1560 B 1
A	1465 B 1	1481 B 1	1561 B 1
A	1466 B 1	1482 B 1	1562 B 1
A	1467 B 1	1483 B 1	1563 B 1
A	1468 B 1	1484 B 1	1564 B 1
A	1469 B 1	1485 B 1	1565 B 1
A	1470 B 1	1486 B 1	1566 B 1
A	1471 B 1	1487 B 1	1567 B 1
A	1472 B 1	1488 B 1	1568 B 1
A	1473 B 1	1489 B 1	1569 B 1
A	1474 B 1	1490 B 1	1570 B 1
A	1475 B 1	1491 B 1	1571 B 1
A	1476 B 1	1492 B 1	1572 B 1
A	1477 B 1	1493 B 1	1573 B 1
A	1478 B 1	1494 B 1	1574 B 1
A	1479 B 1	1495 B 1	1575 B 1
A	1480 B 1	1496 B 1	1576 B 1
A	1481 B 1	1497 B 1	1577 B 1
A	1482 B 1	1498 B 1	1578 B 1
A	1483 B 1	1499 B 1	1579 B 1
A	1484 B 1	1500 B 1	1580 B 1
A	1485 B 1	1501 B 1	1581 B 1
A	1486 B 1	1502 B 1	1582 B 1
A	1487 B 1	1503 B 1	1583 B 1
A	1488 B 1	1504 B 1	1584 B 1
A	1489 B 1	1505 B 1	1585 B 1
A	1490 B 1	1506 B 1	1586 B 1
A	1491 B 1	1507 B 1	1587 B 1
A	1492 B 1	1508 B 1	1588 B 1
A	1493 B 1	1509 B 1	1589 B 1
A	1494 B 1	1510 B 1	1590 B 1
A	1495 B 1	1511 B 1	1591 B 1
A	1496 B 1	1512 B 1	1592 B 1
A	1497 B 1	1513 B 1	1593 B 1
A	1498 B 1	1514 B 1	1594 B 1
A	1499 B 1	1515 B 1	1595 B 1
A	1500 B 1	1516 B 1	1596 B 1
A	1501 B 1	1517 B 1	1597 B 1
A	1502 B 1	1518 B 1	1598 B 1
A	1503 B 1	1519 B 1	1599 B 1
A	1504 B 1	1520 B 1	1600 B 1
A	1505 B 1	1521 B 1	1601 B 1
A	1506 B 1	1522 B 1	1602 B 1
A	1507 B 1	1523 B 1	1603 B 1
A	1508 B 1	1524 B 1	1604 B 1
A	1509 B 1	1525 B 1	1605 B 1
A	1510 B 1	1526 B 1	1606 B 1
A	1511 B 1	1527 B 1	1607 B 1
A	1512 B 1	1528 B 1	1608 B 1
A	1513 B 1	1529 B 1	1609 B 1
A	1514 B 1	1530 B 1	1610 B 1
A	1515 B 1	1531 B 1	1611 B 1
A	1516 B 1	1532 B 1	1612 B 1
A	1517 B 1	1533 B 1	1613 B 1
A	1518 B 1	1534 B 1	1614 B 1
A	1519 B 1	1535 B 1	1615 B 1
A	1520 B 1	1536 B 1	1616 B 1
A	1521 B 1	1537 B 1	1617 B 1
A	1522 B 1	1538 B 1	1618 B 1
A	1523 B 1	1539 B 1	1619 B 1
A	1524 B 1	1540 B 1	1620 B 1
A	1525 B 1	1541 B 1	1621 B 1
A	1526 B 1	1542 B 1	1622 B 1
A	1527 B 1	1543 B 1	1623 B 1
A	1528 B		

# CD - SERVICE TESTPROGRAM



# CD STARTUP - PROCEDURE

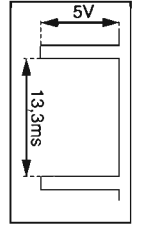
Remark: To check focus servo, slide servo, track servo and turntable use service test program

- Battery empty?  
- check +5 and +Servo

check: - door switch

check: - Laser light on ? - Check pin 38 of 7803 and LASER CONTROL circuit  
- Focus Servo

check: - Motor control pin 37/38 of Decoder 7801 and Disc Motor driver 7805  
- HF Signal  
- Signal on pin7 of Decoder 7801



**Purpose of PLAY test:**  
To check if the Audio signal is reproduced. Subcode info is ignored during this test → If the CD player functions well in this testmode, but not in the normal Play mode check quality of the eye-pattern signal.

## Abbreviations and Pin-descriptions of CD ICs

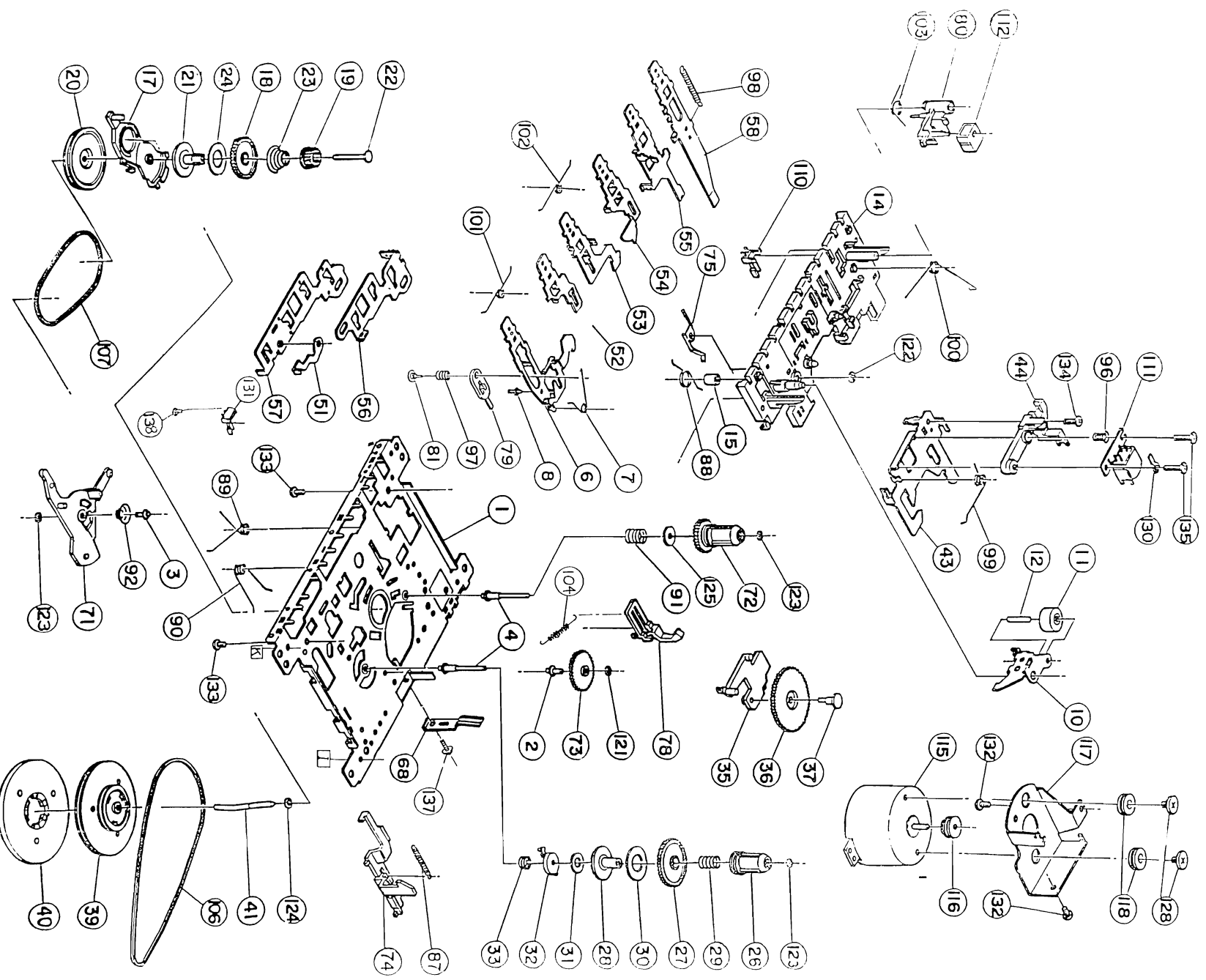
### SERVO PROCESSOR M62475FP

Pin	Name	Direction	Description
1-3	A, B, C	Diode array → Servo processor	Current input ( central photo diode signal input )
4-5	E, F	Diode array → Servo processor	Current input ( satellite photo diode signal input )
6	SGT	Servo processor → Track servo	Signal generator output to track servo, sends 1700Hz for adjustment, procedure
7	TE -	-	Inverting input of tracker error amplifier
8	TEGain	-	Gain control pin of track error amplifier
9	TG1	-	Track Gain 1 - switch: controls the gain of the track servo amplifier
10	TE out.	-	Track Error amplifier output
11	TC/Shock	-	Track Cross/Shock detector input
12	TS +	-	Non inverting input of track servo amplifier
13	TG2	-	Track Gain 2 - switch: controls the gain of the track servo amplifier
14	TS -	-	Inverting input of track servo amplifier
15	TS out	Servo processor → Servo driver	Output of track servo amplifier
16	SS +	-	Non inverting input of slide servo amplifier
17	SS -	-	Inverting input of slide servo amplifier
18	Slide out	Servo processor → Motor driver	Output of slide servo amplifier
19	DETFIL	-	Pin for connection of DETECTION FILTER capacitor of ADJUST LOGIC
20	BIAS	Servo processor → external electronic	Reference Voltage output Vcc/2 of internal BIAS-generator
21	GND	-	Ground connection pin ( negative supply )
22	MLA/DIS	µP → Servo processor	Serial interface Microprocessor Latch control / DIScharge control for adjustment
23	JP1/SG	µP → Servo processor	Serial interface Jump control line / Signal Generator input line for adjustment
24	MCK	µP → Servo processor	Serial interface Clock input line
25	MSD	µP → Servo processor	Serial interface Data input line
26	Dout	Servo processor → µP	Serial interface Data output line
27	CLPF	-	Pin for connection of Low Pass Filter capacitor for ADJUST LOGIC
28	REF	-	Reference current input
29	VCC	-	Positive supply connection pin ( 4V - 5.5V )
30	FSout	Servo processor → Servo driver	Output of focus servo amplifier
31	FS -	-	Inverting input of focus servo amplifier
32	FEGain	-	Gain control pin of focus error amplifier
33	FE -	-	Inverting input of focus error amplifier
34	SGF	Servo processor → Focus servo	Signal generator output to focus servo, sends 1300Hz for adjust. procedure
35	CFSR	-	Charge capacitor for Focus Search triangle-generator
36	APC +	-	Non inverting input of Automatic laser Power Control amplifier
37	APC -	-	Inverting input of Automatic laser Power Control amplifier
38	APC out	Servo processor → Laser driver	Output of Automatic laser Power Control amplifier
39	MFC	-	Connection pin for capacitor of Mirror detector
40	HF	Servo processor → Decoder	Output of HF amplifier
41	HF1	-	Inverting input of HF amplifier
42	ABC	-	Sum output of amplified A, B and C input ( central photo diode signal input ) to external ac-coupling capacitor

### SIGNAL PROCESSOR M65821FP

Pin	Name	Direction	Description
1	VDD1	-	+supply for signal processor
2	EMP	not connected	Emphasis flag output
3	SYCLK	not connected	Frame synchronize output
4	LOCK	not connected	Low disc rotation detect output
5	SCAND	not connected	Subcode sync signal detection
6	CRCF	not connected	Subcode Q CRC check flag output
7	SBOS	Signal processor → µP	Interrupt signal to read out subcode Q data
8	MSD	µP ↔ Signal processor	Data line
9	RESET	Reset circuit → Signal processor	System reset
10	MCK	µP → Signal processor	Clock input
11	MLA	µP → Signal processor	Latch clock input
12-14	MODx	µP → Signal processor	Mode setting inputs (0,1,2)
15	VDD2	-	+supply for data slicer and VCO
16	REF	-	Current reference
17	HFD	-	HF signal detect
18	LPF	-	HF signal filter
19	HF	Servo processor → Signal processor	PLL loop filter
20	TLC	-	Output from slice level control
21	VSS2	-	Ground
22	C846	not connected	8,4672MHz clock output
23	C423	Signal processor → µP	4,2336MHz clock output
24	EST2	not connected	Error monitor output2
25	EST1	not connected	Error monitor output1
26	XI	X-1tal → Signal processor	Crystal oscillator input
27	XO	Signal processor → X-1tal	Crystal oscillator output
28	DOTX	not connected	Output of digital interface
29	DO1	Signal processor → DAC	Serial data output to DAC
30	DO2	not connected	Serial data output to Dual DAC
31	CKSEL	not connected	Crystal selector input, H=8MHz, L=16MHz
32	DSCK	Signal processor → DAC	Data shift clock
33	WDCK	Signal processor → DAC	Word clock
34	LRCk1	Signal processor → DAC	Left/Right clock
35-36	not used	-	Left/Right clock
37	PWM1	Signal processor → Motor driver	Disc motor driving ( Pulse Width Modulation ) output1
38	PWM2	Signal processor → Motor driver	Disc motor driving ( Pulse Width Modulation ) output2
39-41	not used	-	-
42	VSS1	GND	Digital system ground

**EXPLODED VIEW DIAGRAM - TAPE DECK**



**EXPLODED VIEW DIAGRAM - CABINET**

401	4822 459 04988	Front Panel	459	4822 402 10724	Bracket Handle
402	4822 381 10515	Front Panel Lens (AZ1203)	461	4822 498 10644	Handle
402	4822 381 11981	Front Panel Lens (AZ1208)	462	4822 492 11642	Spring CD
403	4822 450 10524	Window LCD	463	4822 426 10473	Cabinet Rear
404	4822 450 10523	Cassette Door Lens (Not for AZ1203/17)	464	4822 265 20318	Socket Main (Not for -/17)
404	4822 450 10522	Cassette Door Lens (For AZ1203/17)	464	4822 265 20706	Socket Main (For -/17)
404	4822 450 10519	Cassette Door Lens (Not for AZ1208/17)	466	4822 492 51733	Spring Compression
404	4822 450 10518	Cassette Door Lens (For AZ1208/17)	467	4822 492 51961	Spring Compression
406	4822 443 10964	Cassette Door	468	4822 290 80313	Contact Plate
407	4822 492 42709	Spring Door	469	4822 443 10655	Battery Door
408	4822 459 04987	Front Cabinet Assy	471	4822 303 14038	Telescopic Aerial
411	4822 410 11848	Button Set Play	472	4822 219 10353	RC0786/04 (AZ1208 only)
413	4822 402 61508	LCD Bracket (DIG)		4822 321 10249	Mains Cord (For -/00/04)
414	4822 410 11239	Cassette Knob		4822 321 10886	Mains Cord (For -/05)
416	4822 492 11061	Spring Recording		4822 321 10882	Mains Cord (For -/17)
417	4822 402 10126	Lever Recording		4822 736 16134	Instr Manual (For -/00/04/05)
418	4822 410 11847	Button Set Shuffle		4822 736 16133	Instr Manual (For -/17)
419	4822 691 10612	Tape Deck Mechanism			
422	4822 402 10784	Sound Box Bracket			
428	4822 529 10387	Damper Rubber (40 DEG)			
429	4822 410 11124	Knob DBB			
432	4822 410 11123	Knob Mode			
434	4822 402 10723	Lever Eject			
436	4822 492 11058	Spring Eject			
437	4822 418 18550	Tray CD			
438	4822 410 11132	Knob Volume (AZ1203)			
438	4822 410 11383	Knob Volume (AZ1208)			
439	4822 410 11128	Knob Open			
441	4822 535 60096	Disc			
443	4822 532 12798	Pressure Ring Assy			
444	4822 443 10654	CD Door			
447	4822 464 10351	Frame Tuning			
453	4822 529 10386	Damper Rubber (30 DEG)			
454	4822 691 10654	CD Drive			
456	4822 529 10322	Damper Assy			

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

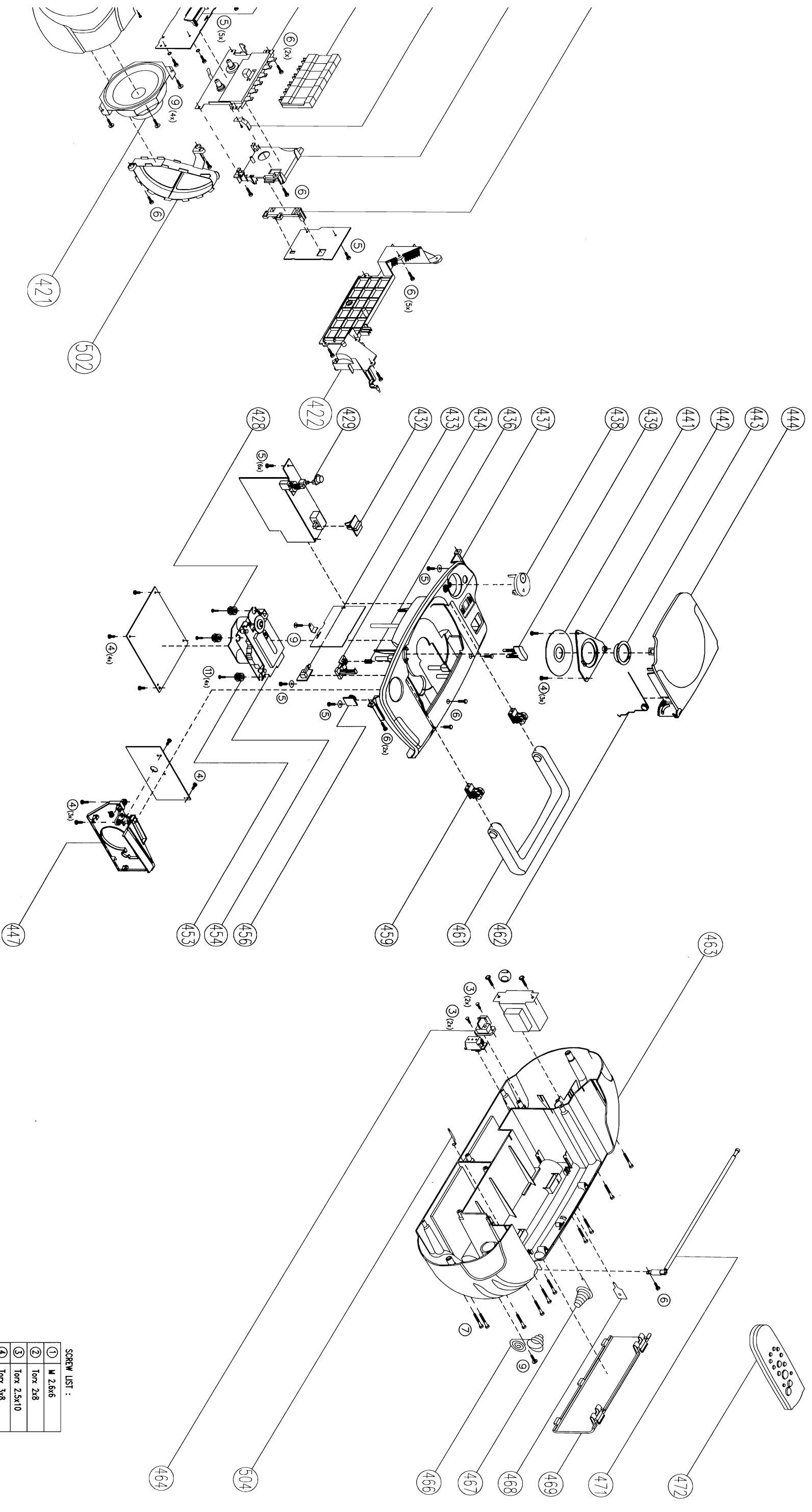
**EXPLODED VIEW DIAGRAM - TAPE DECK**

10	4822 528 70849	Pinch Roller Arm (B)	110	4822 278 90721	Leaf Switch
11	4822 528 70695	Pinch Roller Assy	111	4822 249 30218	MS18R-AKONI
74	4822 403 70968	Eject Hook (A)	112	4822 249 40306	E. Head
106	4822 358 31325	Main Belt 45.2 x 1.2	115	4822 361 21656	Motor EG-530AD-9B
107	4822 358 31124	Sub Belt 44.7 x 1.2	116	4822 528 81497	Motor Pulley

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







## AUDIO BOARD

2186		4822 124 11959	100µF	20%	10V
2187		4822 121 51387	10nF	20%	16V
2188		4822 121 51387	10nF	20%	16V
2189		4822 126 13581	0.22µF	20%	50V
2190		4822 124 40248	10µF	20%	63V
2191		4822 124 40248	10µF	20%	63V
2192		4822 122 33197	1nF	10%	50V
2193		4822 122 33197	1nF	10%	50V
2194		4822 122 33197	1nF	10%	50V
2195		4822 124 81151	22µF		50V
2196		4822 121 51387	1µF	20%	63V
2197		4822 122 33195	100pF	10%	50V
2198		4822 121 51387	10nF	20%	16V
2199		4822 121 51387	10nF	20%	16V
2250		4822 124 80195	470µF	20%	10V
2251	*	4822 124 80195	470µF	20%	10V
2252		5322 121 42661	330nF	5%	63V
2253	*	5322 121 42661	330nF	5%	63V
2254	*	4822 124 11958	47µF	20%	25V
2254	#	4822 124 40433	47µF	20%	25V
2255	*	4822 124 11958	47µF	20%	25V
2255	#	4822 124 40433	47µF	20%	25V
2256	*	4822 124 11959	100µF	20%	10V
2256	#	4822 124 42446	100µF	20%	10V
2257	*	4822 124 11959	100µF	20%	10V
2257	#	4822 124 42446	100µF	20%	10V
2258		5322 122 32052	600pF	10%	100V
2259		5322 122 32052	600pF	10%	100V
2260		4822 124 40246	4.7µF	20%	63V
2261		4822 124 40246	4.7µF	20%	63V
2262		4822 124 80144	220µF	20%	25V
2263		4822 124 11909	470µF	20%	25V
2264		4822 126 13581	0.22µF	20%	50V
2265		4822 126 13581	0.22µF	20%	50V
2266	*	4822 121 10684	68nF	10%	50V
2266	#	5322 121 42386	100nF	5%	63V
2267	*	4822 121 10684	68nF	10%	50V
2267	#	5322 121 42386	100nF	5%	63V
2300		4822 122 33197	1nF	10%	50V
2301		4822 122 33197	1nF	10%	50V

2302		4822 122 33197	1nF	10%	50V
2303		4822 122 33197	1nF	10%	50V
2304		5322 121 42386	100nF	5%	63V
2305		4822 124 12012	4700µF	20%	25V
2306		4822 126 11585	22nF+80-20% Y5V		25V
2307	*	4822 124 11972	220µF	20%	10V
2307	#	4822 124 12068	220µF	20%	10V
2312	*	4822 124 11959	100µF	20%	10V
2312	#	4822 124 42446	100µF	20%	10V
2400		4822 126 11714	4.7nF		20%
2401		4822 126 11714	4.7nF		20%
2402		4822 126 11714	4.7nF		20%
2403		4822 124 81151	22µF		50V
2404		4822 124 81151	22µF		50V
2405		4822 124 81151	22µF		50V
2518		4822 126 12878	1.5nF	10%	16V
2519		4822 126 12878	1.5nF	10%	16V
2564	*	4822 124 11959	100µF	20%	10V
2564	#	4822 124 42446	100µF	20%	10V
2565	#	4822 124 22726	4.7µF		35V
2565	*	4822 124 40246	100nF	5%	63V
2566	#	4822 124 22726	4.7µF		35V
2566	*	4822 124 40246	100nF	5%	63V
2567		4822 122 33195	100pF	10%	50V
2568		4822 122 33195	100pF	10%	50V
2569		4822 122 33197	1nF	10%	50V
2570		4822 122 33197	1nF	10%	50V
2571	*	4822 124 40242	1µF	20%	63V
2571	#	4822 124 40246	4.7µF	20%	63V
2572	*	4822 124 40242	1µF	20%	63V
2572	#	4822 124 40246	4.7µF	20%	63V
2579		4822 122 33197	1nF	10%	50V
2580		4822 122 33197	1nF	10%	50V
2581		4822 122 33197	1nF	10%	50V
2582		4822 122 33197	1nF	10%	50V
2583		4822 124 42446	100µF	20%	10V
2584		4822 124 42446	100µF	20%	10V
2585		4822 124 12068	220µF	20%	10V
2586		4822 124 40433	47µF	20%	25V
2587		4822 124 40248	10µF	20%	63V

## AUDIO BOARD

2593		4822 124 81151	22µF		50V
2594		4822 122 33195	100pF	10%	50V
2595		4822 122 33197	1nF	10%	50V
2596		4822 121 51387	10nF	20%	16V
2596		4822 124 11959	100µF	20%	10V
2588		4822 124 40433	47µF	20%	25V
2589	#	4822 126 12785	47nF		Y5V TUB 50V
2589	*	4822 126 12882	100nF+80-20%		50V
2590	#	4822 126 12785	47nF		Y5V TUB 50V
2590	*	4822 126 12882	100nF+80-20%		50V
2591	*	4822 126 12787	330pF	10%	Y5V 50V
2591	#	4822 122 33197	1nF	10%	50V
2592	*	4822 126 12787	330pF	10%	Y5V 50V
2592	#	4822 122 33197	1nF	10%	50V
2593	#	4822 124 40242	1µF	20%	63V
3184		4822 116 52176	10R	5%	0.5W
3185		4822 116 52231	820R	5%	0.5W
3186		4822 116 83868	150R	5%	0.5W
3187		4822 050 21002	10K	1%	0.6W
3188		4822 116 52256	2K2	5%	0.5W
3189		4822 116 52257	22K	5%	0.5W
3190		4822 116 83864	10K	5%	0.5W
3191		4822 116 52283	4K7	5%	0.5W
3192		4822 116 52235	1M	5%	0.5W
3193		4822 116 52256	2K2	5%	0.5W
3194		4822 116 52234	100K	5%	0.5W
3195		4822 116 52285	470K	5%	0.5W
3196		4822 116 83864	10K	5%	0.5W
3249		4822 052 10478	4K7	5%	0.33W
3249		4822 052 10478	4K7	5%	0.33W
3250		4822 052 10478	4K7	5%	0.33W
3250		4822 052 10478	4K7	5%	0.33W
3251		4822 116 83883	470R	5%	0.5W
3252		4822 116 52243	1K5	5%	0.5W
3253		4822 116 52226	560R	5%	0.5W

3254		4822 116 83883	470R	5%	0.5W
3255		4822 116 83883	470R	5%	0.5W
3258		4822 116 52238	12K	5%	0.5W
3259		4822 116 52256	2K2	5%	0.5W
3260		4822 116 52238	12K	5%	0.5W
3302	#	4822 116 52206	120R	5%	0.5W
3302	*	4822 116 83872	220R	5%	0.5W
3303	#	4822 116 52206	120R	5%	0.5W
3303	*	4822 116 83872	220R	5%	0.5W
3304		4822 116 83883	470R	5%	0.5W
3305		4822 116 83883	470R	5%	0.5W
3306		4822 116 52289	5K6	5%	0.5W
3307		4822 116 52303	8K2	5%	0.5W
3308		4822 116 83868	150R	5%	0.5W
3309		4822 116 83868	150R	5%	0.5W
3310		4822 116 52191	33R	5%	0.5W
3311		4822 050 21002	1K	1%	0.6W
3400		4822 116 83864	10K	5%	0.5W
3401		4822 116 52244	15K	5%	0.5W
3402		4822 116 52244	15K	5%	0.5W
3403		4822 116 52244	15K	5%	0.5W
3404	#	4822 116 52283	4K7	5%	0.5W
3404	*	4822 116 83864	10K	5%	0.5W
3405	#	4822 116 52283	4K7	5%	0.5W
3405	*	4822 116 83864	10K	5%	0.5W
3406	#	4822 116 83864	10K	5%	0.5W
3406	*	4822 116 52234	100K	5%	0.5W
3407	#	4822 116 83864	10K	5%	0.5W
3407	*	4822 116 52234	100K	5%	0.5W
3516	#	4822 116 52256	2K2	5%	0.5W
3516	*	4822 116 52269	3K3	5%	0.5W
3517	#	4822 116 52256	2K2	5%	0.5W
3517	*	4822 116 52269	3K3	5%	0.5W
3518	#	4822 116 52234	100K	5%	0.5W
3518	*	4822 116 52235	1M	5%	0.5W
3519	#	4822 116 52234	100K	5%	0.5W
3519	*	4822 116 52235	1M	5%	0.5W
3520		4822 116 52257	22K	5%	0.5W
3521		4822 116 52257	22K	5%	0.5W
3522		4822 116 52238	12K	5%	0.5W

3523		4822 116 5223			
3525		4822 102 1044			
3529		4822 116 8386			
3530		4822 116 8386			
3531		4822 116 5230			
3531		4822 116 5223			
3532		4822 116 5230			
3532		4822 116 5223			
3576		4822 116 8386			
3577		4822 116 8386			
3578	*	4822 050 2100			
3578	#	4822 116 5223			
3579	*	4822 050 2100			
3579	#	4822 116 5223			
3580		4822 116 5217			
3582	#	4822 116 5223			
3582	*	4822 116 5230			
3583	#	4822 116 5223			
3583	*	4822 116 5230			
3584	*	4822 050 2100			
3584	#	4822 116 5223			
3585	*	4822 050 2100			
3585	#	4822 116 5223			
3586		4822 116 5223			
3587		4822 116 5223			
3590		4822 116 5217			
3591		4822 116 5217			
3595	*	4822 116 5223			
3595	#	4822 116 5223			
3596	*	4822 116 5223			
3596	#	4822 116 5223			
3597	*	4822 050 2100			
3597	#	4822 116 5223			
3598	*	4822 050 2100			
3598	#	4822 116 5223			
3610		4822 116 8386			
3611	*	4822 116 8386			
3612	*	4822 116 5217			
3612	#	4822 116 8386			
3613	*	4822 116 5217			

## AUDIO BOARD

AUDIO BOARD

2593	4822 124 81151	22µF	50V
2594	4822 122 33195	100pF	10% 50V
2595	4822 122 33197	1nF	10% 50V
2596	4822 121 51387	10nF	20% 16V
2596	4822 124 11959	100µF	20% 10V
2588	4822 124 40433	47µF	20% 25V
2589	# 4822 126 12785	47nF	Y5V/TUB 50V
2589	* 4822 126 12882	100nF	+80-20% 50V
2590	# 4822 126 12785	47nF	Y5V/TUB 50V
2590	* 4822 126 12882	100nF	+80-20% 50V
2591	* 4822 126 12787	330pF	10% Y5V 50V
2591	# 4822 122 33197	1nF	10% 50V
2592	* 4822 126 12787	330pF	10% Y5V 50V
2592	# 4822 122 33197	1nF	10% 50V
2593	# 4822 124 40242	1µF	20% 63V
3184	4822 116 52176	10R	5% 0.5W
3185	4822 116 52231	820R	5% 0.5W
3186	4822 116 83868	150R	5% 0.5W
3187	4822 050 21002	10K	1% 0.6W
3188	4822 116 52256	2K2	5% 0.5W
3189	4822 116 52257	22K	5% 0.5W
3190	4822 116 83864	10K	5% 0.5W
3191	4822 116 52283	4K7	5% 0.5W
3192	4822 116 52235	1M	5% 0.5W
3193	4822 116 52256	2K2	5% 0.5W
3194	4822 116 52234	100K	5% 0.5W
3195	4822 116 52285	470K	5% 0.5W
3196	4822 116 83864	10K	5% 0.5W
3249	4822 052 10478	4K7	5% 0.33W
3249	4822 052 10478	4K7	5% 0.33W
3250	4822 052 10478	4K7	5% 0.33W
3250	4822 052 10478	4K7	5% 0.33W
3251	4822 116 83883	470R	5% 0.5W
3252	4822 116 52243	1K5	5% 0.5W
3253	4822 116 52226	560R	5% 0.5W

3254	4822 116 83883	470R	5% 0.5W
3255	4822 116 83883	470R	5% 0.5W
3258	4822 116 52238	12K	5% 0.5W
3259	4822 116 52256	2K2	5% 0.5W
3260	4822 116 52238	12K	5% 0.5W
3302	# 4822 116 52206	120R	5% 0.5W
3302	* 4822 116 83872	220R	5% 0.5W
3303	# 4822 116 52206	120R	5% 0.5W
3303	* 4822 116 83872	220R	5% 0.5W
3304	4822 116 83883	470R	5% 0.5W
3305	4822 116 83883	470R	5% 0.5W
3306	4822 116 52289	5K6	5% 0.5W
3307	4822 116 52303	8K2	5% 0.5W
3308	4822 116 83868	150R	5% 0.5W
3309	4822 116 83868	150R	5% 0.5W
3310	4822 116 52191	33R	5% 0.5W
3311	4822 050 21002	1K	1% 0.6W
3400	4822 116 83864	10K	5% 0.5W
3401	4822 116 52244	15K	5% 0.5W
3402	4822 116 52244	15K	5% 0.5W
3403	4822 116 52244	15K	5% 0.5W
3404	# 4822 116 52283	4K7	5% 0.5W
3404	* 4822 116 83864	10K	5% 0.5W
3405	# 4822 116 52283	4K7	5% 0.5W
3405	* 4822 116 83864	10K	5% 0.5W
3406	# 4822 116 83864	10K	5% 0.5W
3406	* 4822 116 52234	100K	5% 0.5W
3407	# 4822 116 83864	10K	5% 0.5W
3407	* 4822 116 52234	100K	5% 0.5W
3516	# 4822 116 52256	2K2	5% 0.5W
3516	* 4822 116 52269	3K3	5% 0.5W
3517	# 4822 116 52256	2K2	5% 0.5W
3517	* 4822 116 52269	3K3	5% 0.5W
3518	# 4822 116 52234	100K	5% 0.5W
3518	* 4822 116 52235	1M	5% 0.5W
3519	# 4822 116 52234	100K	5% 0.5W
3519	* 4822 116 52235	1M	5% 0.5W
3520	4822 116 52257	22K	5% 0.5W
3521	4822 116 52257	22K	5% 0.5W
3522	4822 116 52238	12K	5% 0.5W

3523	4822 116 52238	12K	5% 0.5W
3525	4822 102 10447	50K	BX2
3529	4822 116 83864	10K	5% 0.5W
3530	4822 116 83864	10K	5% 0.5W
3531	4822 116 52303	8K2	5% 0.5W
3531	4822 116 52283	4K7	5% 0.5W
3532	4822 116 52303	8K2	5% 0.5W
3532	4822 116 52283	4K7	5% 0.5W
3576	4822 116 83883	470R	5% 0.5W
3577	4822 116 83883	470R	5% 0.5W
3578	* 4822 050 21002	1K	1% 0.6W
3578	# 4822 116 52263	2K7	5% 0.5W
3579	* 4822 050 21002	1K	1% 0.6W
3579	# 4822 116 52263	2K7	5% 0.5W
3580	4822 116 52175	100R	5% 0.5W
3582	# 4822 116 52298	680K	5% 0.5W
3582	* 4822 116 52305	820K	5% 0.5W
3583	# 4822 116 52298	680K	5% 0.5W
3583	* 4822 116 52305	820K	5% 0.5W
3584	* 4822 050 21002	1K	1% 0.6W
3584	# 4822 116 52283	4K7	5% 0.5W
3585	* 4822 050 21002	1K	1% 0.6W
3585	# 4822 116 52283	4K7	5% 0.5W
3586	4822 116 52228	680R	5% 0.5W
3587	4822 116 52228	680R	5% 0.5W
3590	4822 116 52175	100R	5% 0.5W
3591	4822 116 52175	100R	5% 0.5W
3595	* 4822 116 52238	12K	5% 0.5W
3595	# 4822 116 52264	27K	5% 0.5W
3596	* 4822 116 52238	12K	5% 0.5W
3596	# 4822 116 52264	27K	5% 0.5W
3597	* 4822 050 21002	1K	1% 0.6W
3597	# 4822 116 52256	2K2	5% 0.5W
3598	* 4822 050 21002	1K	1% 0.6W
3598	# 4822 116 52256	2K2	5% 0.5W
3610	4822 116 83864	10K	5% 0.5W
3611	4822 116 83864	10K	5% 0.5W
3612	* 4822 116 52175	100R	5% 0.5W
3612	# 4822 116 83883	470R	5% 0.5W
3613	* 4822 116 52175	100R	5% 0.5W

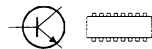
3613	# 4822 116 83883	470R	5% 0.5W
3660	4822 116 52244	15K	5% 0.5W
3661	4822 116 52244	15K	5% 0.5W
3662	4822 116 52269	3K3	5% 0.5W
3663	4822 116 52269	3K3	5% 0.5W
3664	4822 116 83883	470R	5% 0.5W
3665	4822 116 83883	470R	5% 0.5W
3666	4822 116 52175	100R	5% 0.5W
3667	4822 116 52175	100R	5% 0.5W
3668	4822 116 83883	470R	5% 0.5W
3669	4822 116 83883	470R	5% 0.5W
3670	4822 116 83883	470R	5% 0.5W
3671	4822 116 83883	470R	5% 0.5W
3672	4822 116 52256	2K2	5% 0.5W
3673	4822 116 52256	2K2	5% 0.5W
3674	4822 116 52226	560R	5% 0.5W
3675	4822 116 52226	560R	5% 0.5W
3676	4822 116 83884	47K	5% 0.5W
3677	4822 116 52249	1K8	5% 0.5W
3678	4822 116 52245	150K	5% 0.5W
3679	4822 116 52234	100K	5% 0.5W
3680	# 4822 116 52276	3K9	5% 0.5W
3680	* 4822 116 83882	39K	5% 0.5W
3681	# 4822 116 52276	3K9	5% 0.5W
3681	* 4822 116 83882	39K	5% 0.5W
3684	4822 116 52271	33K	5% 0.5W
3685	4822 116 52271	33K	5% 0.5W
3686	4822 116 52228	680R	5% 0.5W
5100	4822 157 51195	Coil	LAL02TB2R2J
6180	4822 130 30621	Diode	1N4148
6181	4822 130 30621	Diode	1N4148
6182	4822 130 30621	Diode	1N4148
6183	4822 130 34488	Diode	BZX79-B11
6184	4822 130 30621	Diode	1N4148

AUDIO BOARD

## AUDIO BOARD



6300	4822 130 31878	Diode	1N4003G
6301	4822 130 31878	Diode	1N4003G
6302	4822 130 31878	Diode	1N4003G
6303	4822 130 31878	Diode	1N4003G
6304	5322 130 31504	Diode	BZX79-B3V3
6305	4822 130 30621	Diode	1N4148
6306	4822 130 30621	Diode	1N4148
6402	4822 130 30621	Diode	1N4148
6402	4822 130 30621	Diode	1N4148
6403	4822 130 30621	Diode	1N4148
6404	4822 130 30621	Diode	1N4148



7180	4822 130 44568	Trans	BC557B
7181	4822 130 44503	Trans	BC547C
7182	4822 130 44503	Trans	BC547C
7183	4822 130 44503	Trans	BC547C
7250	4822 130 42231	Trans	BC557C
7251	4822 130 41327	Trans	BC327-40
7252	4822 130 44503	Trans	BC547C
7253	4822 130 42231	Trans	BC547C
7254	4822 130 41327	Trans	BC327-40
7300	4822 209 31544	IC	TA8227P
7400	5322 130 44779	Trans	BC338-40
7401	5322 130 44779	Trans	BC338-40
7513	4822 130 44503	Trans	BC547C
7514	4822 130 44503	Trans	BC547C
7515	4822 130 44568	Trans	BC557B
7516	4822 130 44568	Trans	BC557B
7517	4822 130 44568	Trans	BC557B
7518	4822 130 44568	Trans	BC557B
7519	4822 130 44503	Trans	BC557C
7520	4822 130 44503	Trans	BC557C

## - MISCELLANEOUS -

1008	4822 146 10825	Transf	(For -/00/04/05)
1008	4822 146 10822	Transf	(For -/17)
1257	4822 267 31468	Headphone	Socket
1302	4822 070 32002	Fuse 2A	(For -/00/04/05)
1302	5322 253 30116	Fuse 2A	(For -/17)
1400	4822 277 30689	Slide	Switch
1503	4822 276 12648	Push	Switch
1506	4822 276 13114	Tact	Switch
1507	4822 276 13114	Tact	Switch
1920	4822 276 13625	Push	Switch
5001	4822 240 10248	Loudspeaker	6W
5002	4822 240 10248	Loudspeaker	6W

\* For AZ1203 only  
# For AZ1208 only

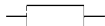
Note : Only those parts mentioned in the list are normal service parts.



## VOLTAGE MULTIPLIER BOARD



2186	4822 124 42446	100μF	20%	10V
2187	4822 121 51387	10nF	20%	16V
2188	4822 121 51387	10nF	20%	16V
2189	4822 126 13581	0.22μF	20%	50V
2190	4822 124 40248	10μF	20%	63V
2191	4822 124 40248	10μF	20%	63V
2192	4822 122 33197	1nF	10%	50V
2193	4822 122 33197	1nF	10%	50V
2194	4822 122 33197	1nF	10%	50V
2195	4822 124 81151	22μF	50V	
2196	4822 121 51387	10nF	20%	16V
2197	4822 122 33195	100pF	10%	50V
2198	4822 121 51387	10nF	20%	16V
2199	4822 121 51387	10nF	20%	16V



3186	4822 116 83868	150R	5%	0.5W
3187	4822 050 21002	1K	1%	0.6W
3188	4822 116 52256	2K2	5%	0.5W
3189	4822 116 52257	22K	5%	0.5W
3190	4822 116 83864	10K	5%	0.5W
3191	4822 116 52283	4K7	5%	0.5W
3192	4822 116 52235	1M	5%	0.5W
3193	4822 116 52256	2K2	5%	0.5W
3194	4822 116 52234	100K	5%	0.5W
3195	4822 116 52285	470K	5%	0.5W
3196	4822 116 83864	10K	5%	0.5W



5100	4822 157 11477	Coil	LAL02TB2R2J
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6180	4822 130 30621	Diode	1N4148
6181	4822 130 30621	Diode	1N4148
6182	4822 130 30621	Diode	1N4148
6183	4822 130 34488	Diode	BZX79-B11
6184	4822 130 30621	Diode	1N4148




7180	4822 130 44568	Trans	BC547B
7181	4822 130 44503	Trans	BC547C
7182	4822 130 44503	Trans	BC547C
7183	4822 130 44503	Trans	BC547C

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

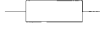
CD 97



2802	4822 126 12785	47nF +80-20% 50V
2803	4822 126 11585	47nF +80-20% 50V
2804	4822 126 12878	1,5nF 10% 16V
2805	4822 121 51412	560nF 10% 50V
2806	4822 122 33519	470pF 10% 50V
2807	4822 122 33191	18pF 5% 50V
2808	4822 124 22263	220µF 20% 25V
2809	4822 124 40242	1µF 20% 50V
2810	4822 124 40242	1µF 20% 50V
2811	4822 122 33849	150pF 10% 50V
2812	4822 122 33849	150pF 10% 50V
2813	4822 126 12339	2,2nF 10% 16V
2814	4822 126 13677	39pF 5% 50V
2815	4822 126 12882	100nF 8.2% 50V
2816	4822 124 41407	0,47µF 20% 50V
2817	4822 121 42687	3,3nF 10% 50V
2818	4822 124 40242	1µF 20% 50V
2819	5322 121 42386	100nF 10% 50V
2820	4822 124 40746	0,22µF 20% 50V
2821	4822 124 41579	10µF 20% 50V
2822	4822 122 10167	22nF 30% 50V
2823	4822 124 40246	4,7µF 20% 50V
2824	4822 124 41407	0,47µF 20% 50V
2825	4822 122 10462	15pF 5% NP0
2826	4822 124 41407	0,47µF 20% 50V
2827	4822 124 40433	47µF 20% 25V
2828	4822 124 41579	10µF 20% 50V
2829	5322 121 42489	33nF 10% 50V
2830	4822 122 10319	82pF 10% 50V
2831	4822 121 41856	22nF 10% 50V
2832	4822 124 41576	2,2µF 20% 50V
2833	4822 124 40433	47µF 20% 25V
2834	4822 126 12882	100nF +80-20% 50V
2835	4822 126 12882	100nF +80-20% 50V
2836	4822 124 80791	470µF 20% 16V
2837	4822 126 11585	22nF +80-20% 25V
2838	4822 126 12882	100nF +80-20% 50V
2839	4822 126 12882	100nF +80-20% 50V
2841	4822 122 33195	100pF 10% 50V
2842	4822 124 40849	330µF 20% 16V




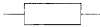



2843	4822 126 13098	5,6nF 20% 16V
2844	4822 122 10466	220pF 10% 50V
2846	4822 122 33519	470pF 10% 50V
2848	4822 122 33519	470pF 10% 50V
2849	4822 122 10466	220pF 10% 50V
2860	4822 124 40433	47µF 20% 25V

3801	4822 052 10478	4R7 5% 0,33W
3802	4822 116 52252	180K 5% 0,16W
3803	4822 111 50499	3M3 5%
3805	4822 116 83884	47K 5% 0,16W
3806	4822 116 52256	2K2 5% 0,16W
3807	4822 116 52271	33K 5% 0,16W
3808	4822 116 52263	2K7 5% 0,16W
3809	4822 116 83884	47K 5% 0,16W
3810	4822 116 52257	22K 5% 0,16W
3811	4822 116 52257	22K 5% 0,16W
3812	4822 116 52257	22K 5% 0,16W
3815	4822 050 11002	1K 5% 0,16W
3816	4822 050 11002	1K 5% 0,16W
3817	4822 116 83883	470R 5% 0,16W
3818	4822 116 83883	470R 5% 0,16W
3819	4822 117 11825	1M5 5%
3820	4822 116 52252	180K 5% 0,16W
3821	4822 116 52243	1K5 5% 0,16W
3822	4822 116 52264	27K 5% 0,16W
3823	4822 116 52234	100K 5% 0,16W
3824	4822 116 83868	150R 5% 0,16W
3826	4822 116 83961	6K8 5% 0,16W
3827	4822 116 52243	1K5 5% 0,16W
3828	4822 116 83864	10K 5% 0,16W
3829	4822 116 52271	33K 5% 0,16W
3830	4822 116 52244	15K 5% 0,16W
3831	4822 116 52251	18K 5% 0,16W
3832	4822 116 52222	390R 5% 0,16W
3833	4822 116 52264	27K 5% 0,16W
3835	4822 116 52184	18R 5% 0,16W

**CD 97**

			
3836	4822 050 11002	1K 5% 0,16W	
3837	4822 111 30893	4M7 5%	
3838	4822 11652234	100K 5% 0,16W	
3839	4822 116 52235	1M 5% 0,16W	
3840	4822 050 11002	1K 5% 0,16W	
3841	4822 116 52298	680K 5% 0,16W	
3842	4822 116 52297	68K 5% 0,16W	
3844	4822 116 52291	56K 5% 0,16W	
3845	4822 116 52298	680K 5% 0,16W	
3846	4822 050 11002	1K 5% 0,16W	
3847	4822 116 52298	680K 5% 0,16W	
3848	4822 116 52251	18K 5% 0,16W	
3849	4822 052 10478	4R7 5%	
3850	4822 116 52251	18K 5% 0,16W	
3851	4822 116 52244	15K 5% 0,16W	
3852	4822 116 83883	470R 5% 0,16W	
3853	4822 116 52251	18K 5% 0,16W	
3854	4822 116 52243	1K5 5% 0,16W	
3855	4822 116 83882	29K 5% 0,16W	
3856	4822 116 52303	8K2 5% 0,16W	
3857	4822 116 52269	3K3 5% 0,16W	
3858	4822 116 80176	1R 5% 0,16W	
3859	4822 116 83864	10K 5% 0,16W	
3860	4822 116 52207	1K2 5% 0,16W	
3870	4822 052 10478	4R7 5%	
3871	4822 116 52283	4K7 5% 0,5W	
3880	4822 050 11002	1K 5% 0,16W	
3881	4822 050 11002	1K 5% 0,16W	
3882	4822 050 11002	1K 5% 0,16W	
3883	4822 050 11002	1K 5% 0,16W	
3884	4822 116 83882	39K 5% 0,16W	
3886	4822 116 52235	1M 5% 0,16W	
3890	4822 050 11002	1K 5% 0,16W	
3891	4822 050 11002	1K 5% 0,16W	
3892	4822 050 11002	1K 5% 0,16W	
3893	4822 050 11002	1K 5% 0,16W	
3894	4822 050 11002	1K 5% 0,16W	
3895	4822 050 11002	1K 5% 0,16W	
3896	4822 116 52256	2K2 5% 0,16W	
3897	4822 116 52256	2K2 5% 0,16W	

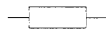
			
3898	4822 116 52256	2K2 5% 0,16W	
3899	4822 050 11002	1K 5% 0,16W	
			
5000	4822 526 10494	Ind Fxd 100MHz	
5010	4822 526 10494	Ind Fxd 100MHz	
5020	4822 526 10494	Ind Fxd 100MHz	
5030	4822 526 10494	Ind Fxd 100MHz	
5040	4822 526 10494	Ind Fxd 100MHz	
5050	4822 526 10494	Ind Fxd 100MHz	
5060	4822 157 50964	Coil 100µH 15%	
5803	4822 242 73557	Filter 8MHz467	
			
6001	4822 130 30621	Diode 1N4148	
			
7801	4822 209 13703	IC M65821FP	
7802	4822 209 32421	IC TDA1311A	
7803	4822 209 90496	IC M62475FP	
7804	5322 130 60068	Trans BC558C	
7805	4822 209 32852	IC TDA7073A	
7806	4822 209 32852	IC TDA7073A	
<b>- MISCELLANEOUS -</b>			
1802	4822 265 10925	Connector	
8000	4822 265 10926	Connector	

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

# FRONT BOARD



2400	4822 126 12882	100nF	+80-20%	50V
2401	5322 122 32531	100pF	10%	50V
2402	5322 122 32531	100pF	10%	50V
2403	5322 122 32531	100pF	10%	50V
2404	5322 122 32531	100pF	10%	50V
2405	5322 122 32268	470pF	10%	50V
2406	5322 122 32531	100pF	10%	50V
2407	5322 122 32531	100pF	10%	50V
2408	4822 126 12882	100nF	+80-20%	50V
2409	5322 122 32268	470pF	10%	50V
2410	4822 126 12882	100nF	+80-20%	50V
2411	5322 122 32268	470pF	10%	50V
2412	5322 122 32268	470pF	10%	50V
2413	4822 124 22726	4.7μF		35V
2414	5322 122 32654	22nF	10%	63V
2415	4822 124 42446	100μF	20%	10V
2416	4822 124 22651	1μF	20%	50V
2417	5322 122 32654	22nF	10%	63V
2419	5322 122 32268	470pF	10%	50V



3400	4822 051 20332	3K3	5%	0.1W
3419	4822 117 11846	10K	5%	1/16W
3420	4822 051 20102	1K	5%	0.1W
3421	4822 051 20102	1K	5%	0.1W
3422	4822 051 20102	1K	5%	0.1W
3423	4822 051 20102	1K	5%	0.1W
3424	4822 117 11846	10K	5%	1/16W
3425	4822 117 11846	10K	5%	1/16W
3426	4822 117 11846	10K	5%	1/16W
3427	4822 117 11846	10K	5%	1/16W
3428	4822 051 20102	1K	5%	0.1W
3429	4822 051 20472	4K7	5%	0.1W
3430	4822 051 20472	4K7	5%	0.1W
3431	4822 117 11449	2K2	1%	0.1W
3432	4822 051 20472	4K7	5%	0.1W
3433	4822 051 20472	4K7	5%	0.1W
3434	4822 051 20102	1K	5%	0.1W
3435	4822 051 20472	4K7	5%	0.1W
3436	4822 051 20472	4K7	5%	0.1W
3437	4822 051 20223	22K	5%	0.1W



3438	4822 051 20223	22K	5%	0.1W
3439	4822 051 20223	22K	5%	0.1W
3440	4822 051 20223	22K	5%	0.1W
3441	4822 117 11449	2K2	1%	0.1W
3442	4822 051 20101	100R	5%	0.1W
3443	4822 051 20223	22K	5%	0.1W
3444	4822 051 20223	22K	5%	0.1W
3445	4822 051 20223	22K	5%	0.1W
3446	4822 051 20223	22K	5%	0.1W
3447	4822 051 20104	100K	5%	0.1W
3448	4822 051 20104	100K	5%	0.1W
3449	4822 117 11503	220R	1%	0.1W
3450	4822 051 20223	22K	5%	0.1W
3451	4822 117 11846	10K	5%	1/16W
3452	4822 117 11503	220R	1%	0.1W
3453	4822 051 20472	4K7	5%	0.1W
3454	4822 051 20223	22K	5%	0.1W
3455	4822 051 20472	4K7	5%	0.1W
3456	4822 116 52257	22K	5%	0.5W
3457	4822 051 20472	4K7	5%	0.1W
3458	4822 051 20223	22K	5%	0.1W
3459	4822 051 20102	1K	5%	0.1W
3460	4822 116 52283	4K7	5%	0.5W
3461	4822 050 21002	1K	1%	0.6W
3462	4822 050 21002	1K	1%	0.6W
3463	4822 051 20471	470R	5%	0.1W
3464	4822 051 20471	470R	5%	0.1W
3465	4822 051 20471	470R	5%	0.1W
3466	4822 051 20471	470R	5%	0.1W
3467	4822 051 20471	470R	5%	0.1W
3468	4822 051 20471	470R	5%	0.1W
3469	4822 051 20102	1K	5%	0.1W
3470	4822 117 11449	2K2	1%	0.1W
3471	4822 051 20102	1K	5%	0.1W
3472	4822 051 20561	560R	5%	0.1W
3473	4822 051 20182	1K8	5%	0.1W
3474	4822 051 20101	100R	5%	0.1W
3475	4822 051 20153	15K	5%	0.1W
3476	4822 051 20104	100K	5%	0.1W
3477	4822 051 20471	470R	5%	0.1W

## FRONT BOARD



3478	4822 051 20472	4K7	5%	0.1W
3479	4822 051 20102	1K	5%	0.1W
3480	4822 051 20472	4K7	5%	0.1W
3481	4822 051 20223	22K	5%	0.1W
3483	4822 117 11449	2K2	1%	0.1W

3484	4822 051 20102	1K	5%	0.1W
3485	4822 051 20472	4K7	5%	0.1W
9400	4822 051 20008	Jumper		
9414	4822 051 20008	Jumper		
9415	4822 051 20008	Jumper		

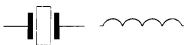
9420	4822 051 20008	Jumper		
9423	4822 051 20008	Jumper		
9429	4822 051 20008	Jumper		
9430	4822 051 20008	Jumper		
9431	4822 051 20008	Jumper		

9436	4822 051 20008	Jumper		
9437	4822 051 20008	Jumper		
9438	4822 051 20008	Jumper		
9439	4822 051 20008	Jumper		
9440	4822 051 20008	Jumper		

9441	4822 051 20008	Jumper		
9443	4822 051 20008	Jumper		
9444	4822 051 20008	Jumper		
9445	4822 051 20008	Jumper		
9449	4822 051 20008	Jumper		

9450	4822 051 20008	Jumper		
9451	4822 051 20008	Jumper		
9452	4822 051 20008	Jumper		
9453	4822 051 20008	Jumper		
9454	4822 051 20008	Jumper		

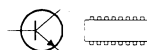
9455	4822 051 20008	Jumper		
9456	4822 051 20008	Jumper		



5401	4822 157 52333	Inductor	100µH	
5402	4822 157 11477	Inductor	LAL02TB2R2J	
5403	4822 242 73769	Filter	CST4,19MGW	



7420	4822 130 30621	Diode	1N4148	
7421	4822 130 30621	Diode	1N4148	
7423	4822 130 31554	Diode	BZX79-B4V3	



7400	4822 209 15839	IC	TMP47C823F	
7410	4822 130 60511	Trans	BC847B	
7411	4822 130 60511	Trans	BC847B	
7451	5322 209 11147	IC	HEF4093BT	
7480	4822 209 13156	IC	ST24C01M6	

### - MISCELLANEOUS -

1450	4822 276 13114	Tact Switch		
1451	4822 276 13114	Tact Switch		
1452	4822 276 13114	Tact Switch		
1453	4822 276 13114	Tact Switch		
1454	4822 276 13114	Tact Switch		

1455	4822 276 13114	Tact Switch		
1456	4822 276 13114	Tact Switch		
1457	4822 276 13114	Tact Switch		
1458	4822 276 13114	Tact Switch		
1459	4822 276 13114	Tact Switch		

1495	4822 135 00214	LCD DISPLAY		
7450	4822 218 11745	Sensor	TSOP1736	

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



## FRONT BOARD



2400	4822 126 12882	100nF	+80-20%	50V
2401	5322 122 32531	100pF	10%	50V
2402	5322 122 32531	100pF	10%	50V
2403	5322 122 32531	100pF	10%	50V
2404	5322 122 32531	100pF	10%	50V
2405	5322 122 32268	470pF	10%	50V
2406	5322 122 32531	100pF	10%	50V
2407	5322 122 32531	100pF	10%	50V
2408	4822 126 12882	100nF	+80-20%	50V
2409	5322 122 32268	470pF	10%	50V
2410	4822 126 12882	100nF	+80-20%	50V
2411	5322 122 32268	470pF	10%	50V
2412	5322 122 32268	470pF	10%	50V
2413	4822 124 22726	4.7μF		35V
2414	5322 122 32654	22nF	10%	63V
2415	4822 124 42446	100μF	20%	10V
2416	4822 124 22651	1μF	20%	50V
2417	5322 122 32654	22nF	10%	63V
2419	5322 122 32268	470pF	10%	50V



3400	4822 051 20332	3K3	5%	0.1W
3419	4822 117 11846	10K	5%	1/16W
3420	4822 051 20102	1K	5%	0.1W
3421	4822 051 20102	1K	5%	0.1W
3422	4822 051 20102	1K	5%	0.1W
3423	4822 051 20102	1K	5%	0.1W
3424	4822 117 11846	10K	5%	1/16W
3425	4822 117 11846	10K	5%	1/16W
3426	4822 117 11846	10K	5%	1/16W
3427	4822 117 11846	10K	5%	1/16W
3428	4822 051 20102	1K	5%	0.1W
3429	4822 051 20472	4K7	5%	0.1W
3430	4822 051 20472	4K7	5%	0.1W
3431	4822 117 11449	2K2	1%	0.1W
3432	4822 051 20472	4K7	5%	0.1W
3433	4822 051 20472	4K7	5%	0.1W
3434	4822 051 20102	1K	5%	0.1W
3435	4822 051 20472	4K7	5%	0.1W
3436	4822 051 20472	4K7	5%	0.1W
3437	4822 051 20223	22K	5%	0.1W



3438	4822 051 20223	22K	5%	0.1W
3439	4822 051 20223	22K	5%	0.1W
3440	4822 051 20223	22K	5%	0.1W
3441	4822 117 11449	2K2	1%	0.1W
3442	4822 051 20101	100R	5%	0.1W
3443	4822 051 20223	22K	5%	0.1W
3444	4822 051 20223	22K	5%	0.1W
3445	4822 051 20223	22K	5%	0.1W
3446	4822 051 20223	22K	5%	0.1W
3447	4822 051 20104	100K	5%	0.1W
3448	4822 051 20104	100K	5%	0.1W
3449	4822 117 11503	220R	1%	0.1W
3450	4822 051 20223	22K	5%	0.1W
3451	4822 117 11846	10K	5%	1/16W
3452	4822 117 11503	220R	1%	0.1W
3453	4822 051 20472	4K7	5%	0.1W
3454	4822 051 20223	22K	5%	0.1W
3455	4822 051 20472	4K7	5%	0.1W
3456	4822 116 52257	22K	5%	0.5W
3457	4822 051 20472	4K7	5%	0.1W
3458	4822 051 20223	22K	5%	0.1W
3459	4822 051 20102	1K	5%	0.1W
3460	4822 116 52283	4K7	5%	0.5W
3461	4822 050 21002	1K	1%	0.6W
3462	4822 050 21002	1K	1%	0.6W
3463	4822 051 20471	470R	5%	0.1W
3464	4822 051 20471	470R	5%	0.1W
3465	4822 051 20471	470R	5%	0.1W
3466	4822 051 20471	470R	5%	0.1W
3467	4822 051 20471	470R	5%	0.1W
3468	4822 051 20471	470R	5%	0.1W
3469	4822 051 20102	1K	5%	0.1W
3470	4822 117 11449	2K2	1%	0.1W
3471	4822 051 20102	1K	5%	0.1W
3472	4822 051 20561	560R	5%	0.1W
3473	4822 051 20182	1K8	5%	0.1W
3474	4822 051 20101	100R	5%	0.1W
3475	4822 051 20153	15K	5%	0.1W
3476	4822 051 20104	100K	5%	0.1W
3477	4822 051 20471	470R	5%	0.1W

## ECO5 TUNER BOARD



2101	5322 122 32531	100pF 5% NPO 50V
2102	4822 122 33177	10nF 20% X7R 50V
2103	5322 122 34123	1nF 10% X7R 50V
2104	4822 122 33195	100pF 10% 50V
2106	4822 125 50355	Var Cap 4-20pF
2106	4822 125 60101	Var Cap 3-11pF
2107	4822 121 51319	1µF 10% 63V
2108	5322 122 32531	100pF 5% NPO 50V
2109	5322 122 32448	10pF 5% 50V
2120	5322 122 31946	27pF 5% NPO 63V
2120	5322 122 32658	22pF 5% 50V
2122	4822 122 33891	3,3nF 10% X7R 63V
2123	4822 121 51254	390pF 1% 400V
2125	4822 121 51381	560pF 5% 400V
2126	5322 122 31863	330pF 5% NPO 50V
2127	4822 122 32927	220nF +80-20% 50V
2127	4822 126 13473	220nF +80-20% 50V
2128	4822 124 41579	10µF 20% 50V
2129	4822 124 41584	100µF 20% 10V
2130	4822 126 11585	22nF +80-20% 25V
2131	4822 122 33325	470nF 16V
2131	4822 126 13482	470nF 80/20% 16V
2132	4822 122 33325	470nF 16V
2132	4822 126 13482	470nF 80/20% 16V
2133	4822 124 40242	1µF 20% 63V
2134	4822 122 33128	15nF 10% X7R 63V
2134	5322 122 32654	22nF 10% X7R 63V
2135	4822 124 40746	0,22µF 20% 63V
2136	4822 122 33128	15nF 10% X7R 63V
2136	5322 122 32654	22nF 10% X7R 63V
2137	4822 124 40746	0,22µF 20% 63V
2138	4822 124 41576	2,2µF 20% 50V
2139	5322 122 32447	1pF 5% 50V
2140	4822 121 51252	470nF 5% 63V
2141	4822 122 31947	100nF 20%Y5V 63V
2141	4822 126 10002	100nF 20% Y5V 25V
2142	4822 122 31947	100nF 20%Y5V 63V
2142	4822 126 10002	100nF 20% Y5V 25V
2143	4822 122 32927	220nF +80-20% 50V
2143	4822 126 13473	220nF +80-20% 50V

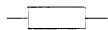


2144	4822 124 40242	1µF 20% 63V
2145	4822 122 33575	220pF 5% NPO 50V
2146	4822 122 33575	220pF 5% NPO 50V
2147	4822 122 33575	220pF 5% NPO 50V
2148	4822 126 11585	22nF +80-20% 25V
2149	5322 122 32654	22nF 10% X7R 63V
2150	4822 122 31947	100nF 20% Y5V 63V
2152	4822 122 33342	33nF 10% X7R 63V
2153	4822 122 32504	15pF 2% NPO 63V
2155	4822 125 60101	Var Cap 3-11pF
2158	5322 122 32448	10pF 5% 50V
2159	5322 122 32659	33pF 5% 50V
2160	5322 122 32654	22nF 10% X7R 63V
2161	4822 122 31947	100nF 20% Y5V 63V
2161	4822 126 10002	100nF 20% Y5V 25V
2163	4822 122 31947	100nF 20% Y5V 63V
2163	4822 126 10002	100nF 20% Y5V 25V
2164	4822 126 13482	470nF 80/20% 16V
2165	4822 122 31947	100nF 20%Y5V 63V
2165	4822 126 10002	100nF 20% Y5V 25V
2166	5322 122 34123	1nF 10% X7R 50V
2167	4822 122 32139	12pF 2% NPO 63V

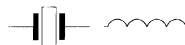


3101	4822 051 20333	33K 5% 0,1W
3102	4822 051 20104	100K 5% 0,1W
3103	4822 117 10965	18K 1% 0,1W
3104	4822 117 11448	180R 1% 0,1W
3105	4822 116 83872	220R 5% 0,5W
3108	4822 117 11449	2K2 1% 0,1W
3109	4822 051 20332	3K3 5% 0,1W
3110	4822 116 52195	47R 5% 0,5W
3123	4822 051 20472	4K7 5% 0,1W
3125	4822 117 10833	10K 1% 0,1W
3128	4822 117 11449	2K2 1% 0,1W
3132	4822 116 52195	47R 5% 0,5W
3134	4822 051 20224	220K 5% 0,1W
3137	4822 051 20223	22K 5% 0,1W
3140	4822 051 20008	Jumper

## ECO5 TUNER BOARD



3140	4822 117 10353	150R 1% 0,1W
3141	4822 051 20563	56K 5% 0,1W
3142	4822 100 11163	100K 30% 0,1W
3145	4822 117 11449	2K2 1% 0,1W
3146	4822 051 20229	22R 5% 0,1W
3152	4822 116 83883	470R 5% 0,5W
3153	4822 051 20471	470R 5% 0,1W
3154	4822 116 52206	120R 5% 0,5W
3155	4822 051 20229	22R 5% 0,1W
3156	4822 051 20104	100K 5% 0,1W
3158	4822 116 83883	470R 5% 0,5W
3159	4822 116 83883	470R 5% 0,5W
3160	4822 116 83883	470R 5% 0,5W
3161	4822 116 83883	470R 5% 0,5W
3167	4822 051 20121	120R 5% 0,1W
3169	4822 051 20154	150K 5% 0,1W
3170	4822 116 52234	100K 5% 0,5W
3173	4822 116 52219	330R 5% 0,5W
4101	4822 051 20008	Jumper
4102	4822 051 20008	Jumper
4102	4822 051 20334	330K 5% 0,1W
4103	4822 051 20008	Jumper
4104	4822 051 20008	Jumper
4105	4822 051 20008	Jumper
4106	4822 051 20008	Jumper
4108	4822 051 20008	Jumper
4111	4822 051 20008	Jumper
4120	4822 051 20008	Jumper
4150	4822 051 10008	0R 5% 0,25W
4151	4822 051 20008	Jumper
4152	4822 051 10008	0R 5% 0,25W
4153	4822 051 10008	0R 5% 0,25W
4154	4822 051 10008	0R 5% 0,25W
4155	4822 051 10008	0R 5% 0,25W
4156	4822 051 20008	Jumper
4157	4822 051 10008	0R 5% 0,25W
4158	4822 051 10008	0R 5% 0,25W
4159	4822 051 10008	0R 5% 0,25W
4163	4822 051 20008	Jumper



5102	4822 157 71634	MW Coil
5103	4822 157 71635	LW Coil
5109	4822 242 70665	Filter SFE10,7MS3-A
5110	4822 242 70665	Filter SFE10,7MS3-A
5111	4822 158 60511	Coil AM-1F
5112	4822 157 70302	Coil F7MCS-12216N
5114	4822 157 70302	Coil F7MCS-12216N
5120	4822 242 82065	Filter CDA10.7MG40KA
5120	4822 242 10251	CDA10,7MG61K-A-TF21
5121	4822 242 10261	Crystal 75KHz
5122	4822 157 60517	Coil 110,00 µH 8%
5123	4822 157 60517	Coil 110,00 µH 8%
5130	4822 156 30947	RF Coil
5131	4822 156 30947	RF Coil





6103	4822 130 30621	Diode 1N4148
6104	4822 130 30621	Diode 1N4148
6105	4822 130 83075	Diode HN1V02H-B
6107	4822 130 34488	Diode BZX79-B11
6120	4822 130 30621	Diode 1N4148
6130	4822 130 82833	Diode 1SV228
6131	4822 130 82833	Diode 1SV228






7101	4822 209 90924	IC TEA5757H/V1
7102	4822 130 60093	Trans 2SA838B
7104	5322 130 44779	Trans BC338-40
7105	5322 130 44779	Trans BC338-40
7109	5322 130 41983	Trans BC858B
7111	5322 130 42136	Trans BC848C
7122	5322 130 42136	Trans BC848C
7124	5322 130 42136	Trans BC848C

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

## TAPE DECK

		
2630	4822 126 13678	470μF 10V
2631	4822 124 41596	22μF 20% 50V
2632	4822 124 40242	1μF 20% 63V
2633	4822 124 40242	1μF 20% 63V
2634	4822 126 12878	1,5nF 10% 16V
2635	4822 126 12878	1,5nF 10% 16V
2636	5322 122 32311	470pF 10% 100V
2637	5322 122 32311	470pF 10% 100V
2638	4822 124 11958	47μF 20% 25V
2639	4822 124 11958	47μF 20% 25V
2640	4822 126 12787	330pF 10% Y5V 50V
2641	4822 126 12787	330pF 10% Y5V 50V
2642	4822 121 51304	10nF 10% 50V
2643	4822 121 51304	10nF 10% 50V
2644	4822 126 12339	2,2nF 10% Y5R
2645	4822 126 12339	2,2nF 10% Y5R
2646	5322 121 42386	100nF 5% 63V
2647	5322 121 42386	100nF 5% 63V
2648	4822 126 11167	22nF 20% 50V
2649	4822 126 11167	22nF 20% 50V
2650	4822 124 11958	47μF 20% 25V
2651	4822 124 11958	47μF 20% 25V
2652	4822 122 33197	1nF 10% 50V
2653	4822 122 33197	1nF 10% 50V
2654	4822 124 41596	22μF 20% 50V
2655	4822 122 33197	1nF 10% 50V
2656	4822 124 40242	1μF 20% 63V
2657	4822 121 51304	10nF 10% 50V
2658	4822 126 11714	4,7nF 20%
2659	4822 126 12147	22nF 10% Y5R 25V
		
3630	4822 116 83872	220R 5% 0,5W
3632	4822 116 83883	470R 5% 0,5W
3633	4822 116 83883	470R 5% 0,5W
3634	4822 116 83883	470R 5% 0,5W
3635	4822 116 83883	470R 5% 0,5W

		
3636	4822 116 52197	56R 5% 0,5W
3637	4822 116 52197	56R 5% 0,5W
3638	4822 116 52271	33K 5% 0,5W
3639	4822 116 52271	33K 5% 0,5W
3640	4822 116 83961	6K8 5%
3641	4822 116 83961	6K8 5%
3642	4822 116 52252	180K 5% 0,5W
3643	4822 116 52252	180K 5% 0,5W
3644	4822 116 83864	10K 5% 0,5W
3645	4822 116 83864	10K 5% 0,5W
3646	4822 116 52244	15K 5% 0,5W
3647	4822 116 52244	15K 5% 0,5W
3648	4822 116 52238	12K 5% 0,5W
3649	4822 116 52238	12K 5% 0,5W
3650	4822 111 30893	4M7 5% 0,2W
3651	4822 116 52245	150K 5% 0,5W
3652	4822 116 52219	330R 5% 0,5W
3653	4822 116 52219	330R 5% 0,5W
3654	4822 116 52289	5K6 5% 0,5W
3655	4822 116 52289	5K6 5% 0,5W
3656	4822 116 83864	10K 5% 0,5W
3657	4822 116 52206	120R 5% 0,5W
3658	4822 116 52176	10R 5% 0,5W
3659	4822 116 52291	56K 5% 0,5W
		
5630	4822 156 20946	Osc Coil 100 KHz
		
7630	4822 130 40959	Trans BC547B
7700	4822 209 32918	IC AN7318S
- MISCELLANEOUS -		
1640	4822 277 11504	Push Switch

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