JVC

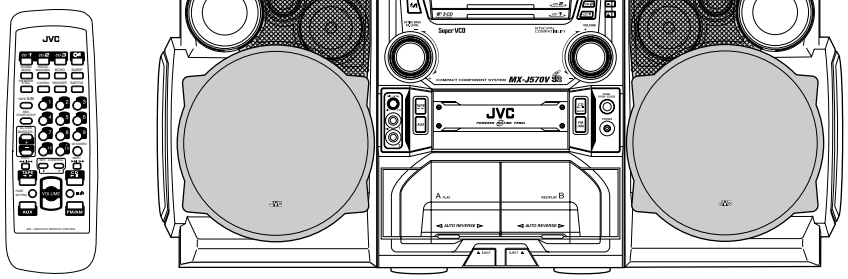
SERVICE MANUAL

COMPACT COMPONENT SYSTEM

MX-J570V
MX-J680V

Area Suffix

UT ---------- Taiwan



Each difference point

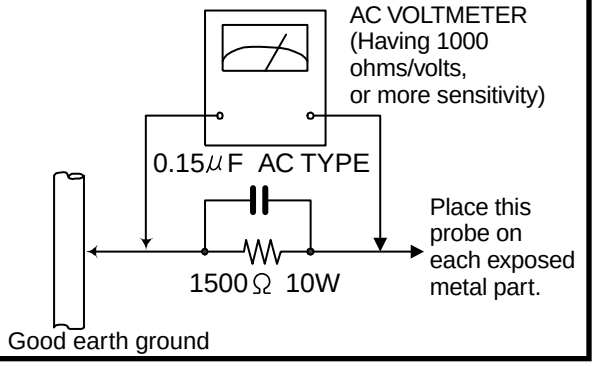
Model	CD/DECK/RECEIVER	SPEAKER	Color			
			Tray fitting	Panel	Net	Front
MX-J570V	CA-MXJ570V	SP-MXJ570V	Silver	Silver & Blue	Light blue	Silver
MX-J680V	CA-MXJ680V	SP-MXJ680V		Champagne-gold	Gray	Champagne-gold

Contents

No.20889
Dec. 2000

Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer`s warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet , particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.)
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to eachexposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. voltage measured Any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

⚠ ***CAUTION*** **Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

Important for laser products

1.CLASS 1 LASER PRODUCT

2.DANGER : Invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

3.CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.

4.CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are de feated. It is dangerous to defeat the safety switches.

5.CAUTION : If safety switches malfunction, the laser is able to function.

6.CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ ***CAUTION*** **Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

VARNING : Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle.Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning,når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL

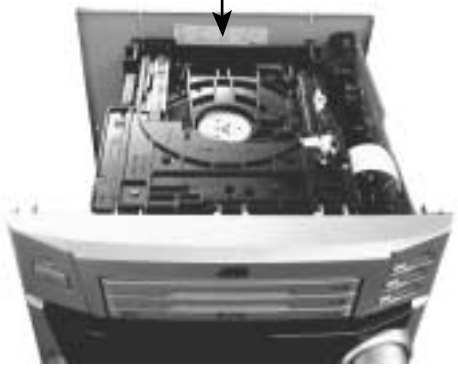
DANGER : Invisibie laser radiation when open and interlock or defeated.
AVOID DIRECT EXPOSURE TO BEAM (e)

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle.Älä katso säteeseen. (d)

VARNING : Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen. (s)

ADVARSEL :Usynlig laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (f)

CLASS 1
LASER PRODUCT



Preventing static electricity

1. Grounding to prevent damage by static electricity

Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

2. About the earth processing for the destruction prevention by static electricity

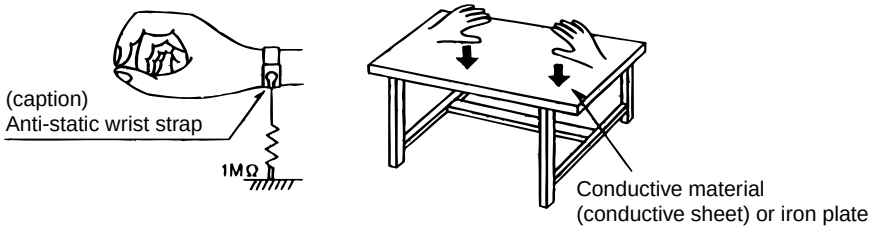
In the equipment which uses optical pick-up (laser diode), optical pick-up is destroyed by the static electricity of the work environment.
Be careful to use proper grounding in the area where repairs are being performed.

2-1 Ground the workbench

Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

2-2 Ground yourself

Use an anti-static wrist strap to release any static electricity built up in your body.



3. Handling the optical pickup

1. In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)

2. Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

4. Handling the traverse unit (optical pickup)

1. Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.

2. Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.

3. Handle the flexible cable carefully as it may break when subjected to strong force.

4. It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it

Attention when traverse unit is decomposed

***Please refer to "Disassembly method" in the text for pick-up and how to detach the CD traverse mechanism.**

1. Remove the disk stopper and T. bracket on the CD changer mechanism assembly.
2. Disconnect the harness from connector on the CD motor board.
3. CD traverse unit is put up as shown in Fig.1.
4. Solder is put up before the card wire is removed from connector CN601 on the CD servo control board as shown in Fig. 2.
   (When the wire is removed without putting up solder, the CD pick-up assembly might destroy.)
5. Please remove solder after connecting the card wire with CN601 when you install picking up in the substrate.

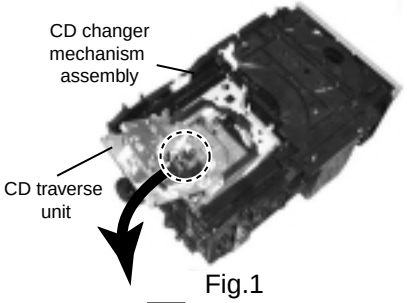


Fig.1

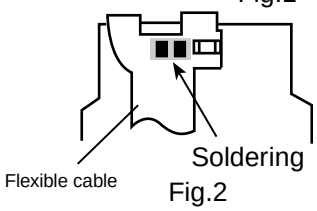


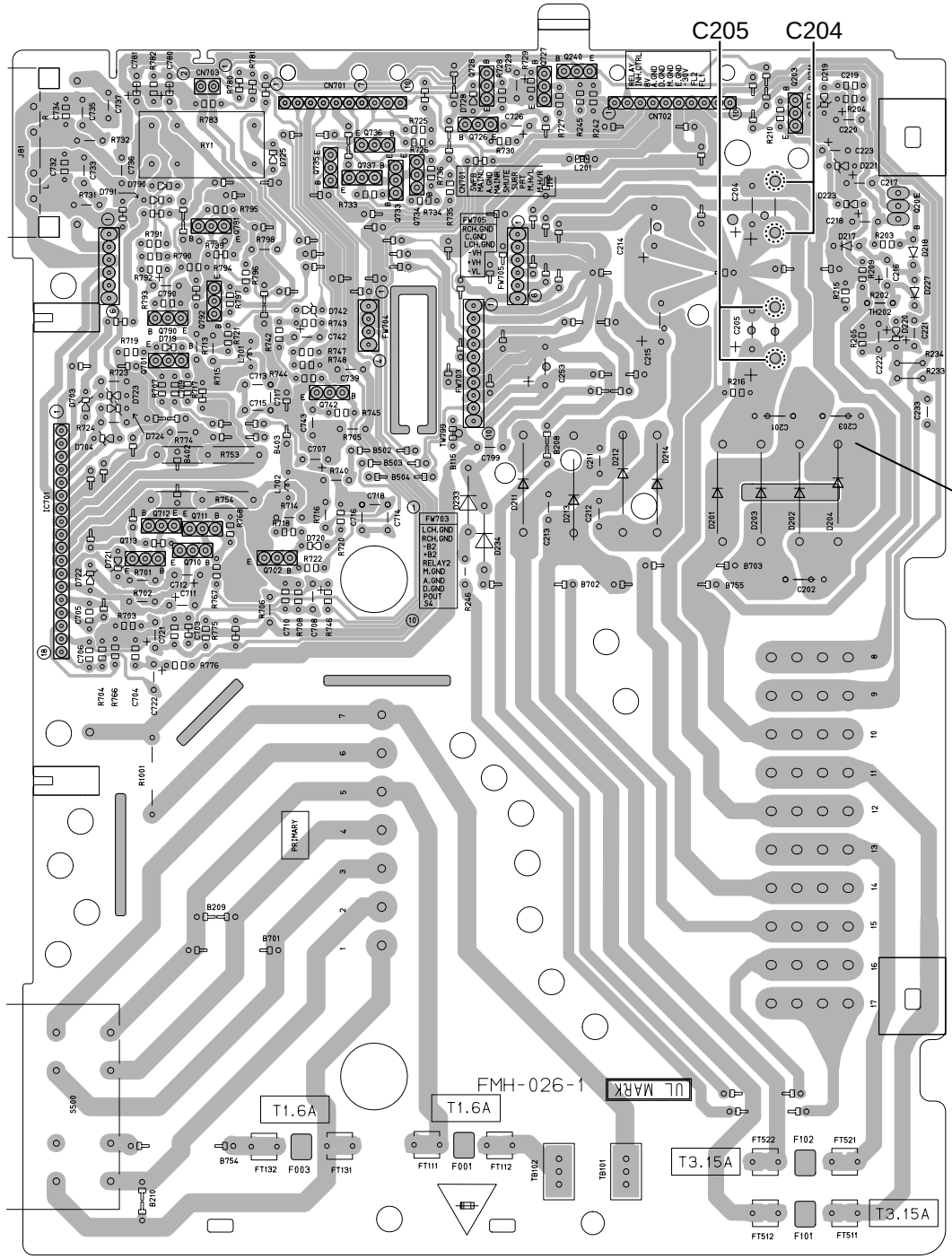
Fig.2

Precautions at disassembling and parts replacement

This model is charged with electricity on the power board even if the power cord is unplugged.
Therefore, always discharge electricity in accordance with the steps given below before starting disassembling of the unit and/or replacement of parts.

1. While referring to the disassembling steps, remove the metal cover and the CD changer mechanism.

2. Set electrical resistances of 1kohm 1/4W to the places between the + and - terminals of the respective condensers C204 and C205 on the power board, and discharge electricity for 4 ~ 5 seconds.



Disassembly method

<Main body>

■ Removing the metal cover

(See Fig.1 to 3)

1. Remove the six screws **A** attaching the metal cover on the back of the body.

2. Remove the two screws **B** attaching the metal cover on both sides of the body.

3. Remove the metal cover from the body by lifting the rear part of the cover.

ATTENTION: Do not break the front panel tab fitted to the metal cover.

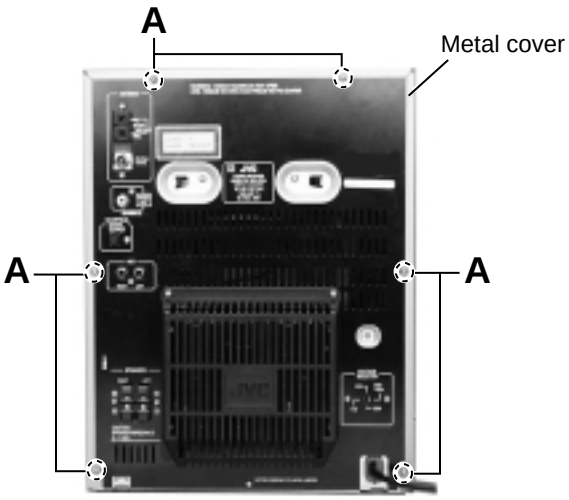


Fig.1

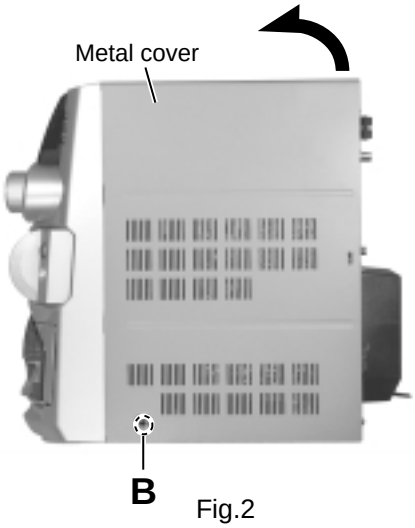


Fig.2

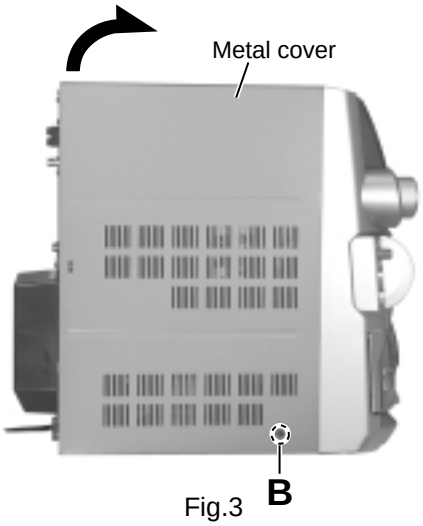


Fig.3

■Removing the CD changer mechanism assembly (See Fig.4 to 6)

- Prior to performing the following procedure, remove the metal cover.

1. For the card wire connecting the CD changer mechanism board and the main board, disconnect it from connector CN868 on the main board.

2. Remove the two screws **C** attaching the CD changer mechanism assembly on both sides of the body.

3. Remove the two screws **D** attaching the CD changer mechanism assembly to the rear panel. Remove the screw **E** attaching the AUX terminal on the back of the body.

4. Remove the screw **F** attaching the video out terminal on the back of the body. Then disconnect it from connector CN102 on the video CD board, and pull out the earth wire TW100 on the video CD board.

5. Pull the top of rear panel and the front panel assembly outward respectively, then remove the CD changer mechanism assembly and video out board by lifting the rear part of the CD changer mechanism assembly.

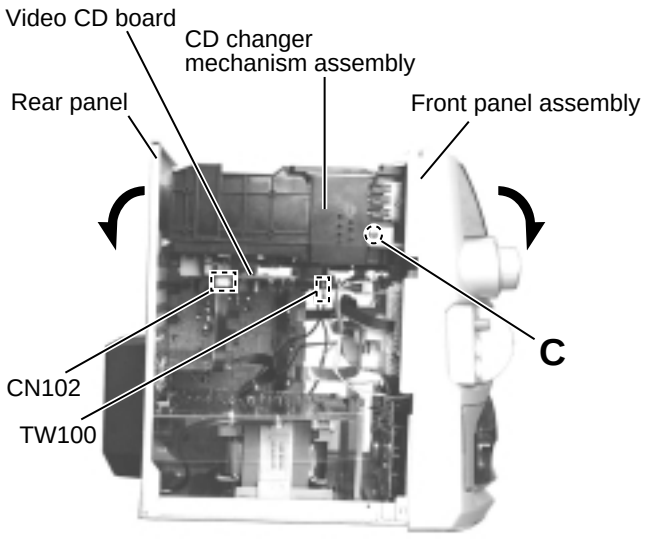


Fig.4

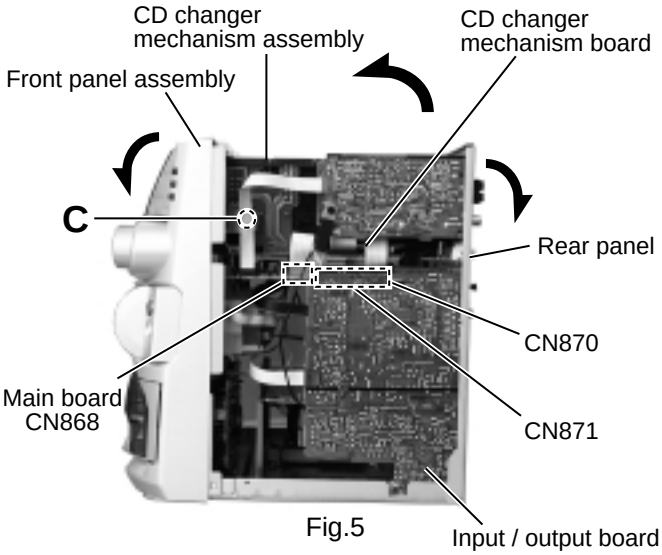


Fig.5

■Removing the video CD board (See Fig.7)

- Prior to performing the following procedure, remove the CD changer mechanism assembly.

1. Reverse the CD changer mechanism assembly.

2. Remove the two screws **H** attaching the bracket.

3. Remove the screw **I** attaching the video CD board.

4. Disconnect the card wire from connector CN100 and CN101 on the video CD board.

5. At first, remove the claw **a**. Then remove the claw **b** while raising the video CD board in the direction of the arrow mark as figure. After removing the claw **b**, you can removing the video CD board by pulling it backward.

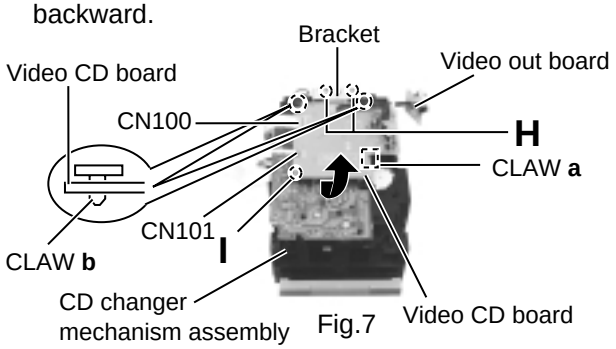


Fig.7

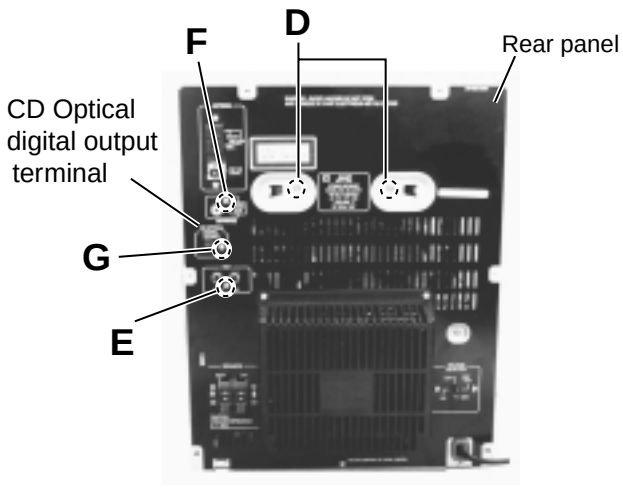


Fig.6

■ Removing the front panel assembly (See Fig.8 to 10)

- Prior to performing the following procedure, remove the metal cover and the CD changer mechanism assembly.

1. Disconnect the card wire from connector CN865 on the main board and pull out the earth wire on the main board.
2. Disconnect the card wire from connector CN315 on the input / output board.
3. Disconnect the harness from connector CN912 on the input / output board.
4. Disconnect the harness from connectors CN900 and CN901 on the relay board on the back of the front panel assembly respectively.
5. Disconnect connector CN870 and CN871 on the input/output board from the main board respectively.
6. Remove the four screws **J** attaching the front panel assembly on the bottom of the body.
7. Release the two joints **b** and **c** on the lower part of the sides using a screwdriver, and remove the front panel assembly toward the front.

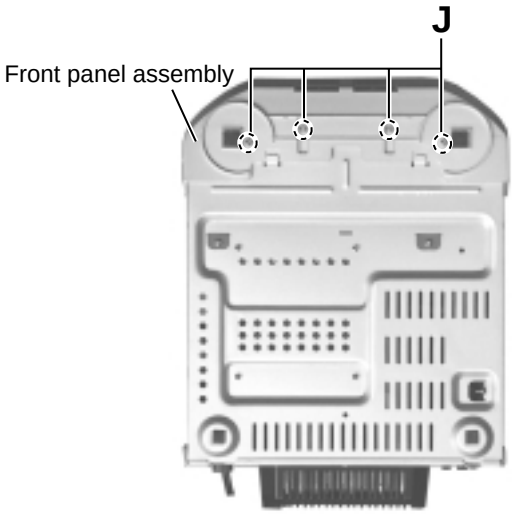


Fig.8

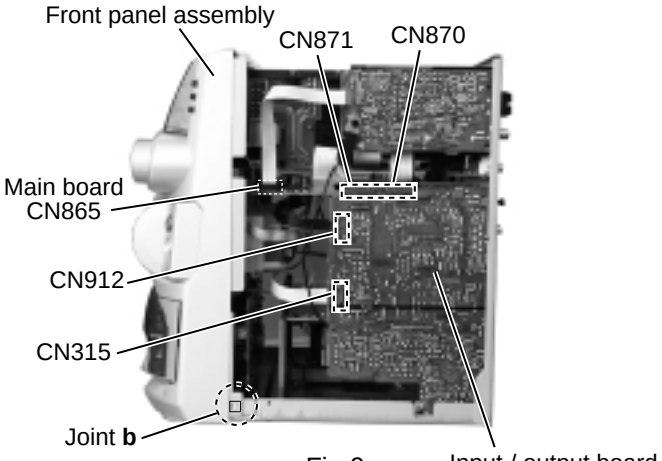


Fig.9

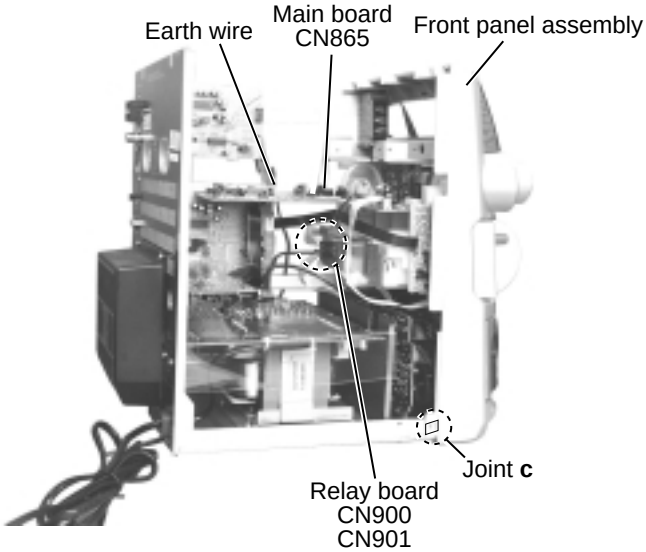


Fig.10

<Front panel assembly>

■ Removing the Microphone terminal board assembly (See Fig.11 and 12)

・Prior to performing the following procedure, remove the metal cover, CD changer mechanism assembly and the front panel assembly.

1. Pull out the MIC volume knob from the front side.
2. Remove the screw **K** attaching earth wire. then release the earth wire from the clamp on the upper part of the cassette mechanism assembly.
3. Remove the two screws **L** attaching the microphone terminal board assembly.
4. Remove the microphone terminal board assembly toward you.

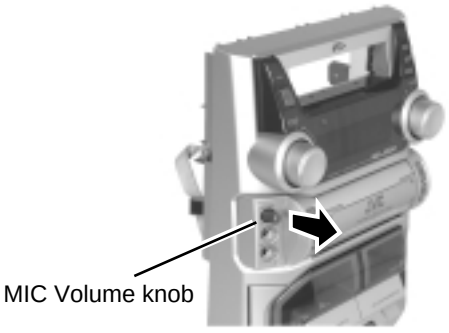


Fig.11

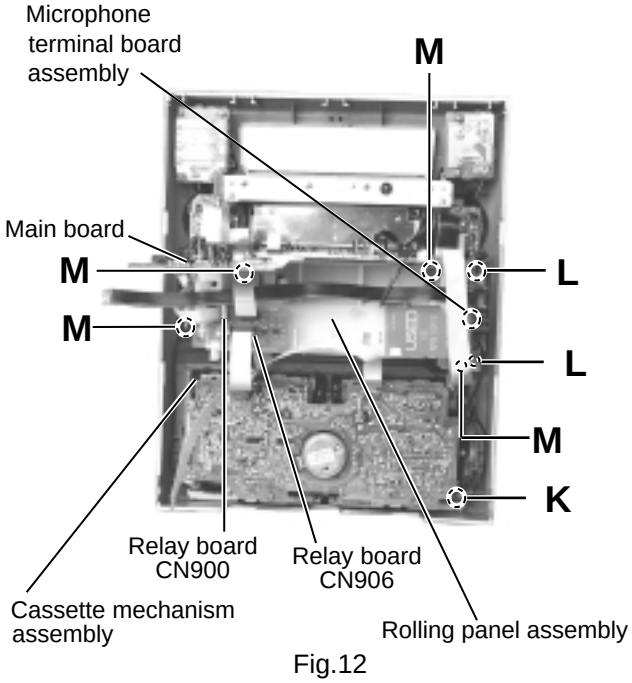


Fig.12

■ Removing the rolling panel assembly (See Fig.12 and 13)

・Prior to performing the following procedure, remove the microphone terminal boare .

1. Disconnect the harness from connector CN900 and CN906 on the relay board on the back of the rolling panel assembly.
2. Disconnect the harness from connector CN862, CN863, CN850, CN851 and CN815 on the main board respectively. Disconnect the card wire from connector CN880 on the main board.
3. Disconnect the card wire from connector CN869 and the harness from CN883 and CN884 on the main board respectively.
4. Remove the four screws **M** attaching the rolling panel assembly.
5. Remove the rolling panel assembly toward you.

ATTENTION: For the harness which should be connected to connector CN869, CN883 and CN884 on the main board, get them through the slots under the rolling panel when reattaching the rolling panel assembly to the front panel (Refer to Fig.13)

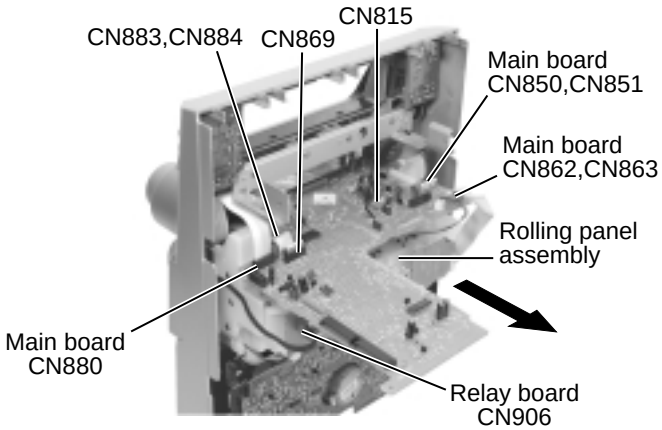


Fig.13

■Removing the main board (See Fig.14 and 15)

- Prior to performing the following procedure, remove the front panel assembly, the microphone terminal board and the rolling panel assembly.

1. Disconnect the harness from connector CN867 on the main board.
2. Disconnect the card wire from connector CN879 on the main board (Before pulling out the card wire, stand the part **d** of CN879 as shown in Fig.15).
3. Remove the two screws **N** attaching the main board.

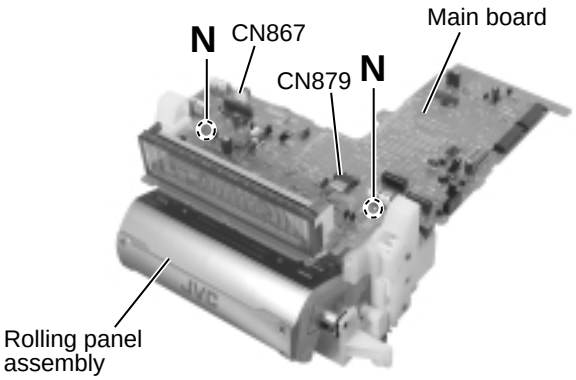


Fig.14

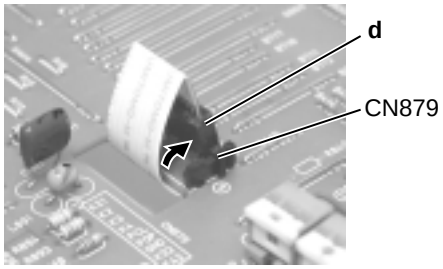


Fig.15

■Removing the cassette mechanism assembly (See Fig.16)

- Prior to performing the following procedure, remove the front panel assembly.

1. Disconnect the card wire from connector CN306 on the cassette mechanism board.
2. Remove the eight screws **O** and **P** attaching the cassette mechanism assembly.
3. Pull out the cassette mechanism assembly toward you.

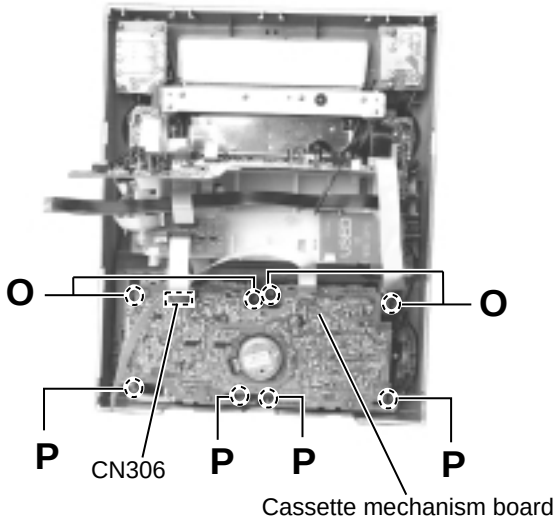


Fig.16

■ Removing the boards in the front panel assembly (See Fig.17 and 18)

- Prior to performing the following procedure, remove the front panel assembly, the microphone terminal board assembly and the rolling panel assembly.

— Function board1 (See Fig.17) —

1. Remove the two screws **Q** attaching the function board 1.

— Function board2 (See Fig.17) —

1. Remove the two screws **R** attaching the function board 2.

— Bass-level regulator board (See Fig.18) —

1. Pull out the bass-level knob on the front side of the front panel assembly and remove the nut attaching the bass-level regulator board.

2. Release the two joints **e**. Unsolder FW951 on the bass-level regulator board and disconnect the harness connected to the power switch board.

— Main volume & headphone board (See Fig.18) —

1. Pull out the volume knob on the front side of the front panel assembly and remove the nut attaching the main volume & headphone board.

2. Remove the two screws **S** attaching the main volume & headphone board on the back of the front panel assembly and release the two joints **f**.

3. Remove the screw **P** attaching the earth wire extending from the main volume & headphone board.

4. Unsolder FW850 on the main volume & headphone board and disconnect the harness connected to the eject switch board.

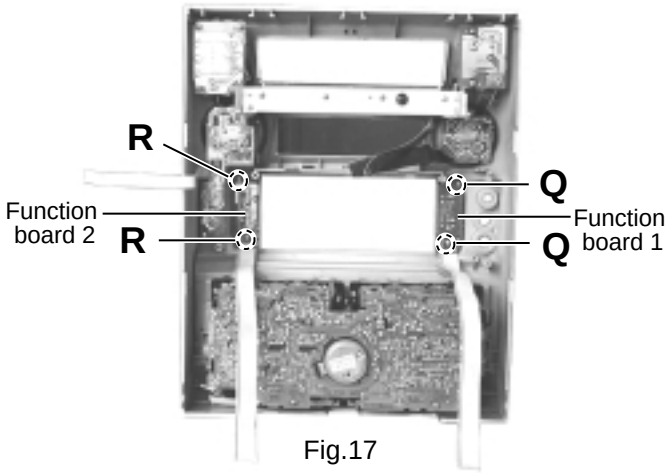


Fig.17

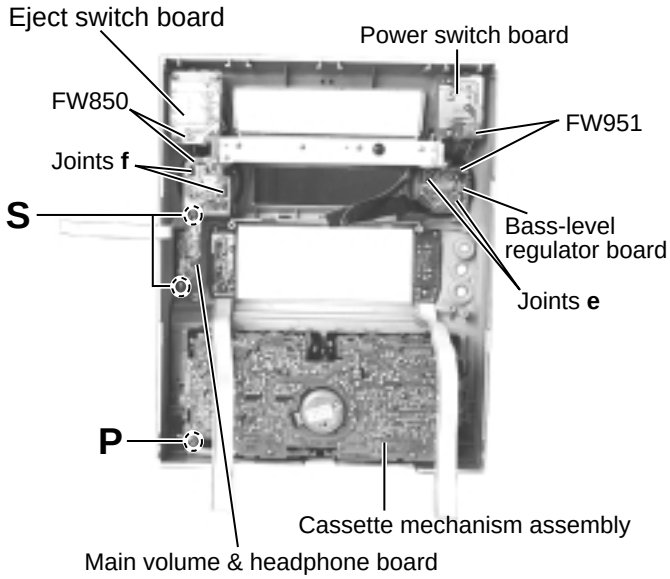


Fig.18

— Power switch board (See Fig.19) —

1. Remove the two screws **T** attaching the power switch board. Unsolder FW951 on the power switch board and disconnect the harness extending to the bass-level regulator board.

— Eject switch board (See Fig.19) —

1. Remove the four screws **U** attaching the eject switch board. Unsolder FW850 on the eject switch board and disconnect the harness extending to the main volume & headphone board.

— Remote control port board (See Fig.19) —

1. Remove the screw **V** attaching the remote control port board.

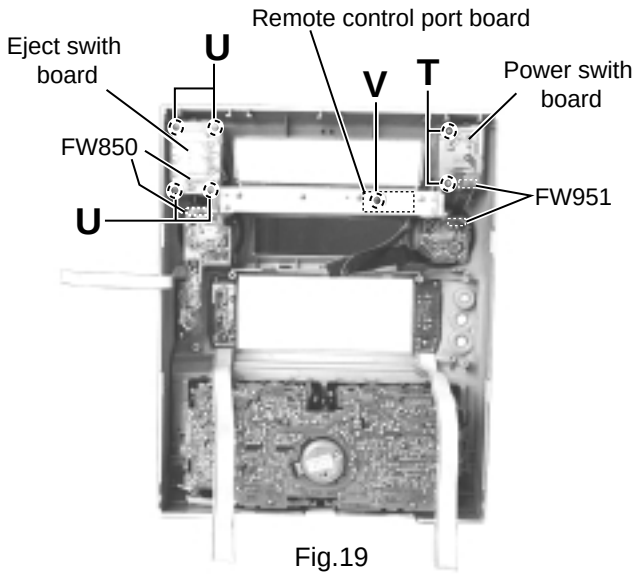


Fig.19

■Removing the relay board and fixing board (See Fig.20)

- Prior to performing the following procedure, remove the metal cover,CD changer mechanism assembly and the front panel assembly.
- There is no need to remove the front panel assembly.

1. Disconnect the harness from connector CN900, CN901, CN905 and CN906 on the relay board on the back of the rolling panel assembly.
2. Remove the screw **W** attaching the relay board. Remove the relay board from the groove **g**.
3. Remove the screw **X** attaching the fixing board and remove the fixing board from the groove **h**.

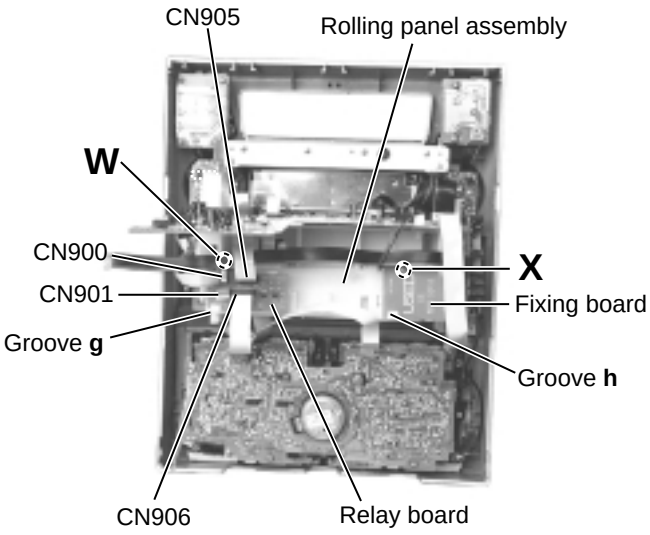


Fig.20

<Rear panel assembly>

■Removing the tuner board (See Fig.21 and 22)

- Prior to performing the following procedure, remove the metal cover and CD changer mechanism assembly.

1. Remove the two plastic rivets attaching the joint board, and remove the joint board.
2. Disconnect the card wire from connector CN1 on the tuner board.
3. Remove the two screws **Y** attaching the tuner board on the back of the body.

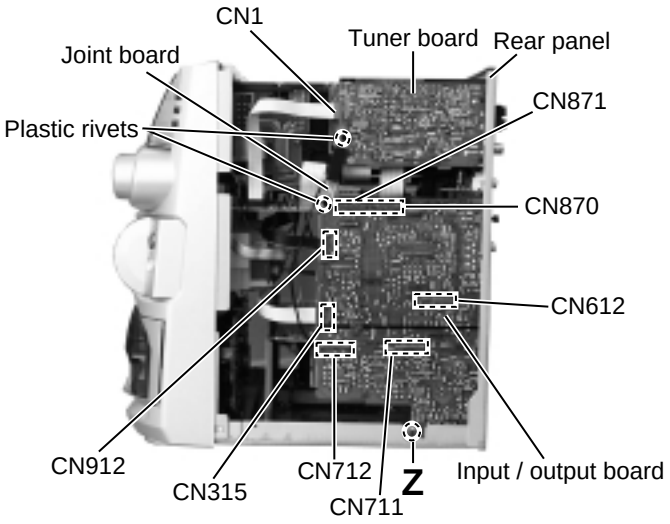


Fig.21

■Removing the input / output board (See Fig.21 and 22)

- Prior to performing the following procedure, remove the metal cover and CD changer mechanism assembly.

1. Remove the two plastic rivets attaching the joint board, and remove the joint board.
2. Disconnect the card wire from connector CN315 on the input / output board.
3. Disconnect the harness from connector CN912 on the input / output board.
4. Remove the screw **Z** attaching the input / output board on the lower side of the body.
5. Disconnect connector CN612, CN870, CN871, CN711 and CN712 on the input / output board and pulling out them outward. Remove the input / output board from the body.

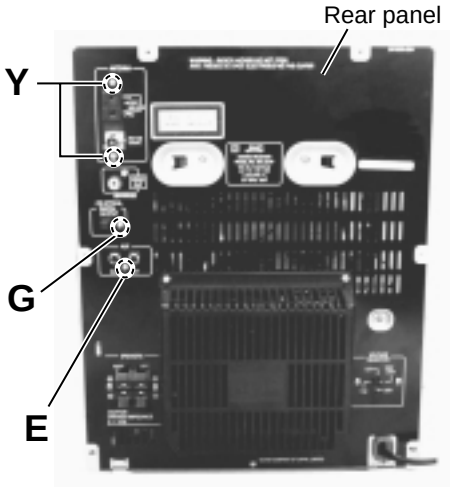


Fig.22

■ Removing the rear cover / rear panel (See Fig.23 to 26)

- Prior to performing the following procedure, remove the metal cover and the CD changer mechanism assembly.
- There is no need to remove the front panel assembly.

1. Remove the two screws **A** attaching the rear cover on the back of the body.
2. Remove the screw **E** attaching the AUX terminal board and the rear panel on the back of the body.
3. Remove the screw **G** attaching the digital output terminal.
4. Remove the seven screws **B** attaching the heat sink and the pre-amplifier board to the rear panel on the back of the body.
5. Remove the two screws **C** attaching the voltage selector on the back at the body.
6. Remove the three screws **D** attaching the antenna terminal and the rear panel to the chassis base on the back of the body.
7. Release the two joints **i** and **j** on the rear panel bottom using a screwdriver, and detach the rear panel backward.

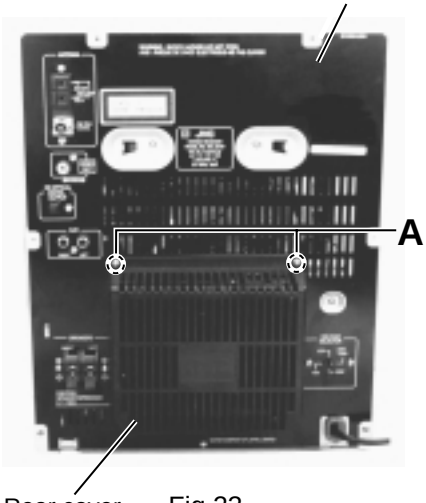


Fig.23

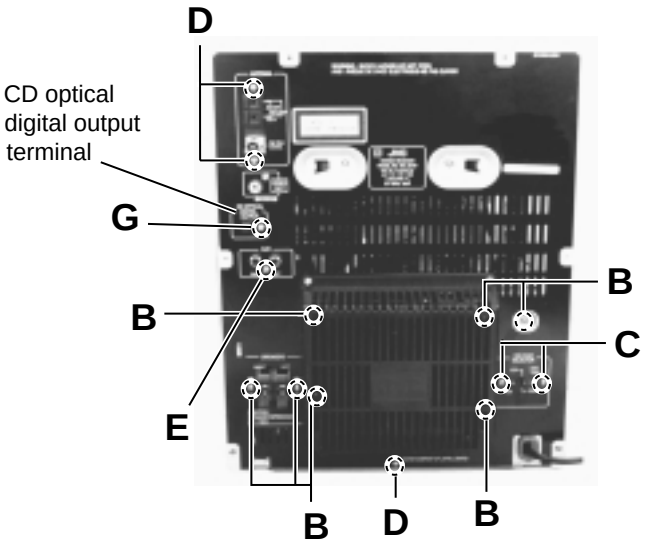


Fig.24

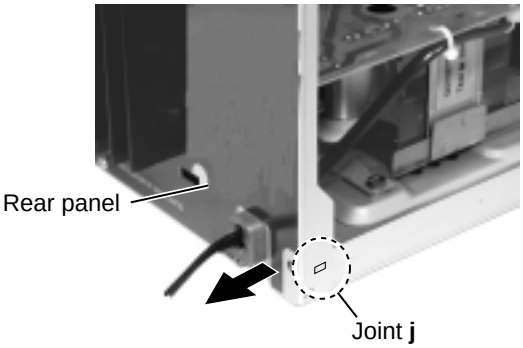


Fig.26

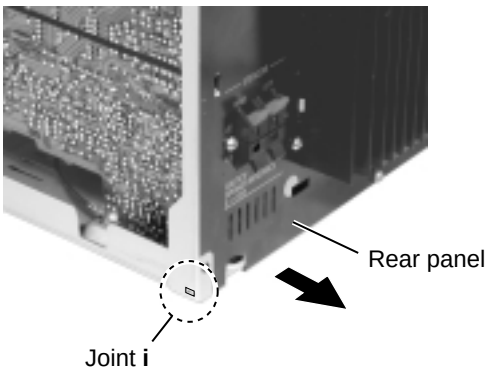


Fig.25

■Removing the pre-amplifier board / heat sink (See Fig.27 to 29)

- Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly and the rear cover / rear panel.
- There is no need to remove the front panel assembly.

1. Remove the input / output board (Refer to Fig.21 and 22).
2. Disconnect the harness from connector CN713 on the pre-amplifier board.
3. Remove the two screws **E** attaching the heat sink to the power & main amplifier board on the back of the body.
4. Remove the two screws **F** attaching the pre-amplifier board to the heat sink and detach them with the heat sink bracket.

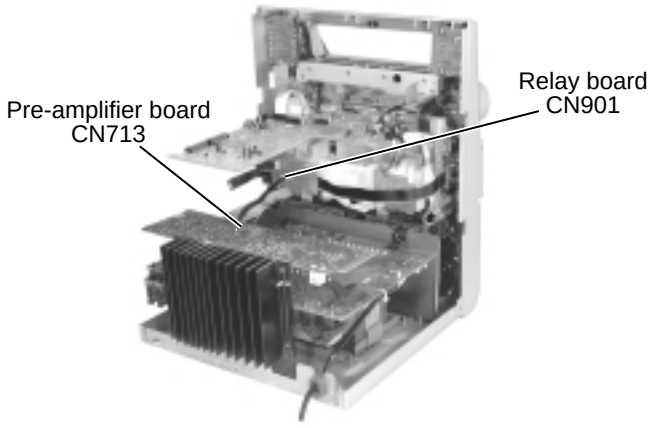


Fig.27

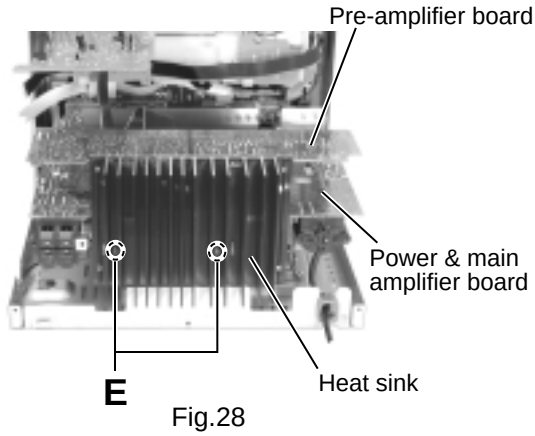


Fig.28

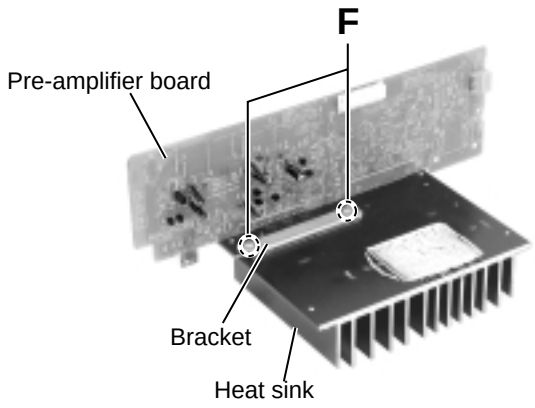


Fig.29

■Removing the power & main amplifier board (See Fig.30 and 31)

- Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly, the front panel assembly, the rear cover / rear panel, the tuner board, the input / output board and pre-amplifier board.

1. Remove the four screws **G** attaching the transf. on the power & main amplifier board through the upper side slots.

2. Remove the two plastic rivets fixing the power & main amplifier board.

3. Remove the cord stopper by pushing it upward.

4. Cut off the bands **k** and **l** fixing the power cord and unsolder the soldered part on the power & main amplifier board.

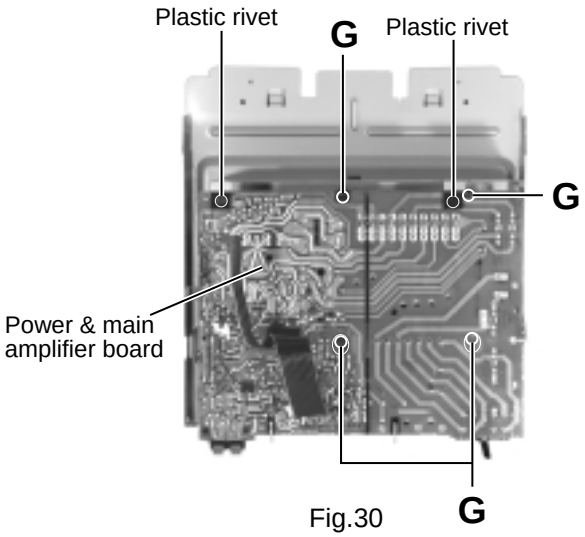


Fig.30

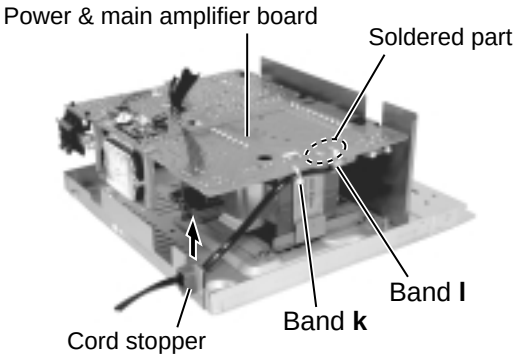


Fig.31

<Rolling panel assembly>

■Removing the multi-control assembly (See Fig.32 to 34)

- Prior to performing the following procedure, remove the metal cover, CD changer mechanism assembly, the front panel assembly, the microphone terminal board assembly, the rolling panel assembly and the main board.

1. Remove the two screws **H** attaching the multi-control assembly on both sides.
2. Remove the multi-control assembly outward while pushing, pull the right and left hooks fixing multi-control assembly outward respectively.

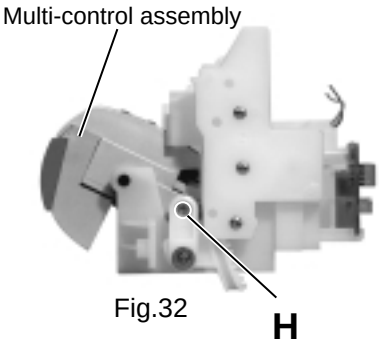


Fig.32

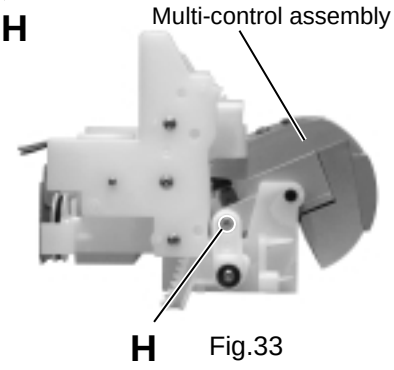


Fig.33

■Removing the multi-control board (See Fig.35 to 37)

- Prior to performing the following procedure, remove the multi-control assembly.

1. Remove the four screws **I** attaching the cover and the bracket.
2. Pull out the right and left panel holders outward respectivery by releasing the tabs **m** outward.
3. Remove the cover and the bracket.
4. Remove the four screws **J** attaching the multi-control board.

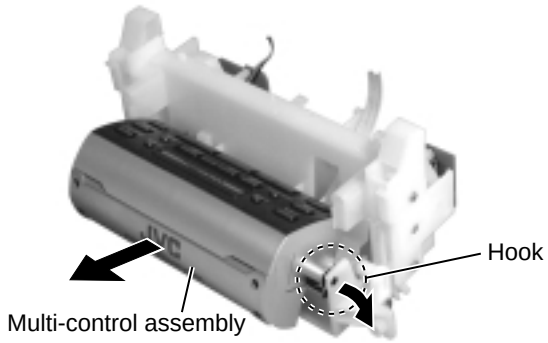


Fig.34

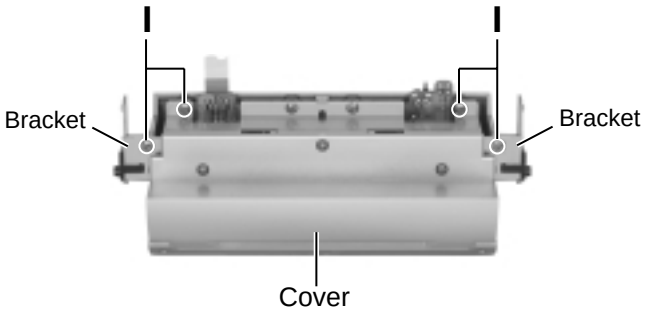


Fig.35

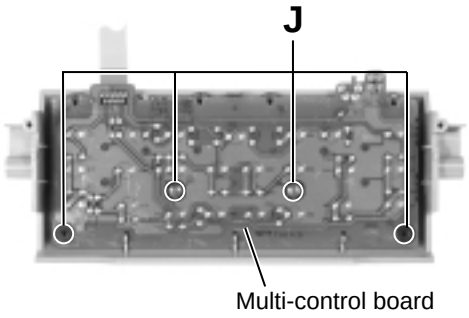


Fig.37

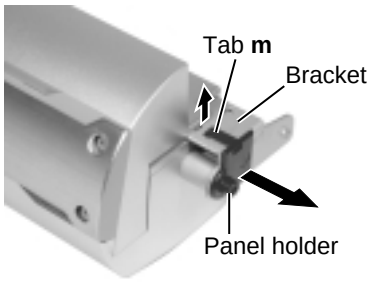


Fig.36

■ Removing the drive motor assembly (See Fig.38 to 40)

- Prior to performing the following procedure, remove the metal cover, CD changer mechanism assembly, the front panel assembly, the microphone terminal board assembly, the rolling panel assembly and the main board.

1. Remove the relay board / fixing board (Refer to Fig.20).
2. Remove the two screws **K** attaching the motor bracket and remove the motor lead staple **n**.
3. Remove the two screws **L** attaching the shaft bracket.
4. Remove the motor belt.
5. Remove the three screws **M** attaching the side bracket.
6. Remove the shaft assembly from the rolling panel assembly by lift up the shaft assembly upward.
7. Remove the drive motor upward.

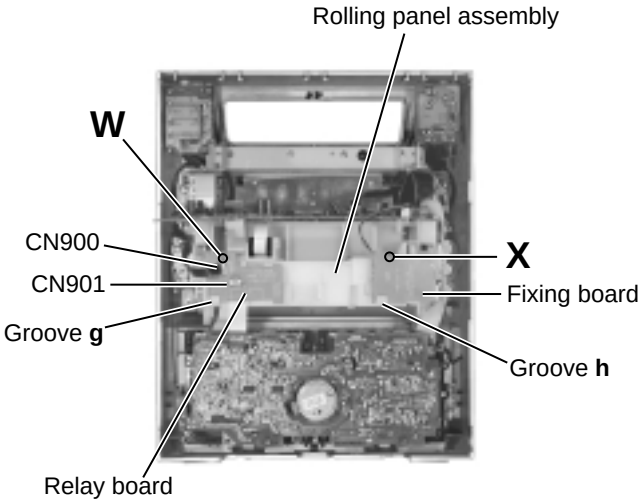


Fig.20

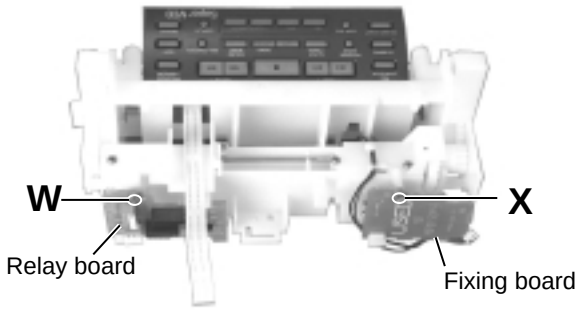


Fig.38

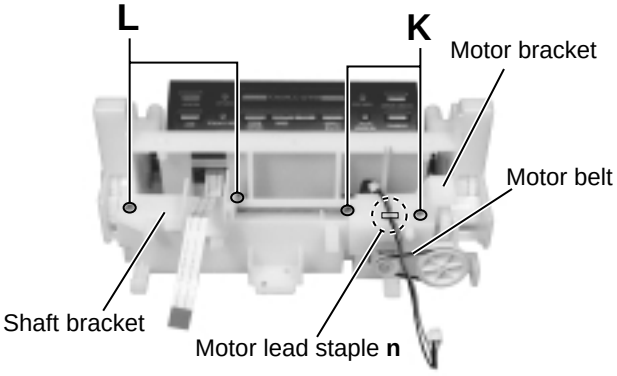


Fig.39

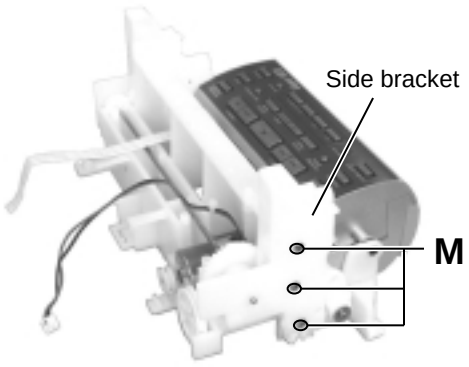


Fig.40

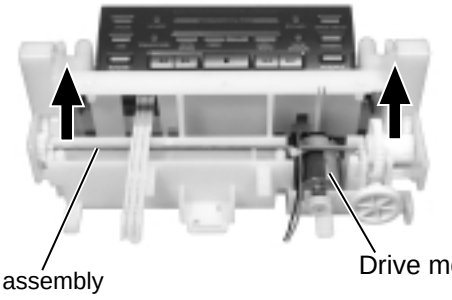


Fig.39

■ Removing the super VCD control board (See Fig.41)

- Prior to performing the following procedure, remove the metal cover and the CD changer mechanism assembly.

1. Disconnect the card wire from connector CN101 and CN102 on the super VCD control board.

2. Remove the two plastic rivets attaching the super VCD control board.

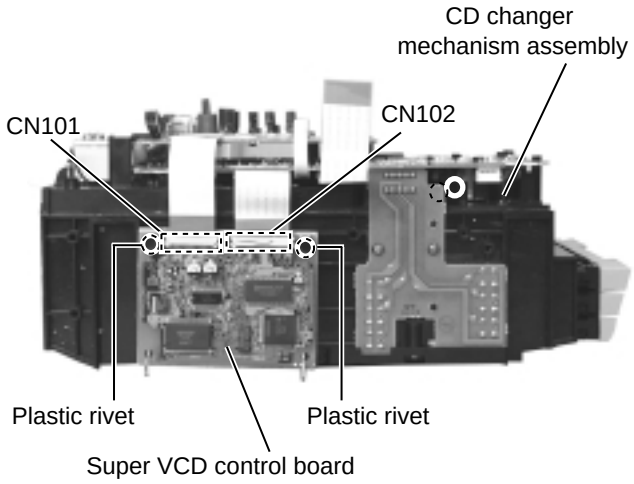


Fig.42

≪CD Changer Mechanism Type:VC3 Section≫

■ Removing the CD Servo control board (See Fig.1)

1.Remove the metal cover.
2.Remove the CD changer mechanism assembly.
3.From bottom side the CD changer mechanism assembly, remove the two screws **A** retaining the CD servo control board.
4.Absorb the four soldered positions "a" of the right and left motors with a soldering absorber.
5.Pull out the earth wire on the CD changer mechanism assembly.
6.The two screws **B** is removed and C.B.holder is detached.
7.Disconnect the connector CN854 on the CD servo control board.
8.Disconnect the card wire CN601 and the connector CN801 on the CD servo control board.

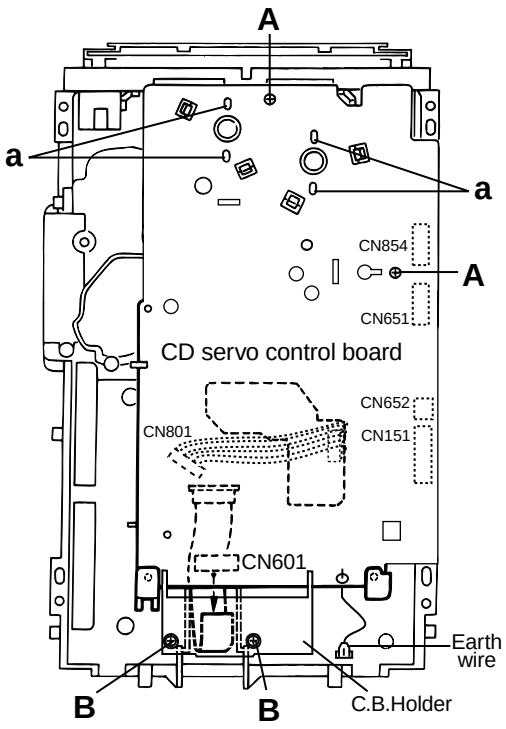


Fig.1

■ Removing the CD tray assembly (See Fig.2~4)

1. Remove the front panel assembly.
2. Remove the CD changer mechanism assembly.
3. Remove the CD Servo control board.
4. Remove the screw **C** retaining the lod stopper (Only ver.J/C).
5. From the T.bracket section "b" and clamper base section "c" , remove both of the edges fixing the rod(See Fig.2 and 3).
6. Remove the screw **D** retaining the disc stopper (See Fig.3).
7. Remove the three screws **E** retaining the T.bracket (See Fig.3).
8. Remove the screw **F** retaining the clamper assembly (See Fig.3).
9. From the left side face of the chassis assembly, remove the one screw **G** retaining both of the return spring and lock lever(See Fig. 4).
10. By removing the pawl at the section "d" fixing the return spring, dismount the return spring(See Fig.4).
11. Remove the three lock levers(See Fig.4).

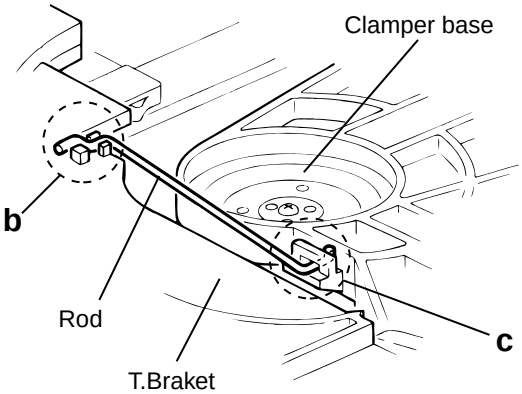


Fig.2

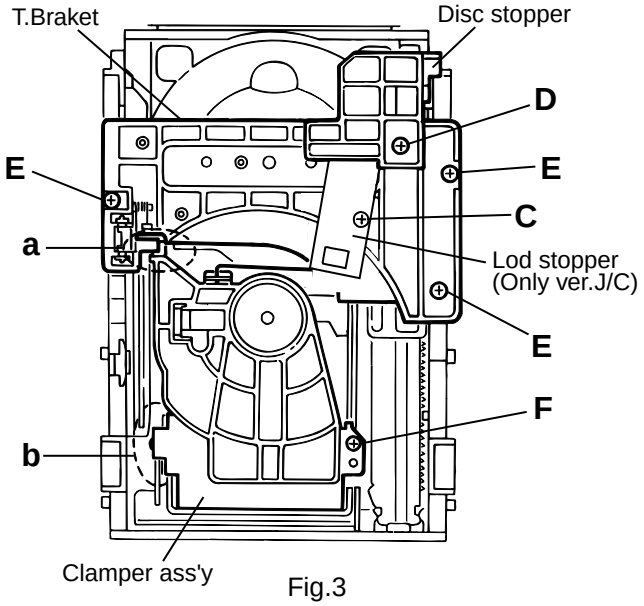


Fig.3

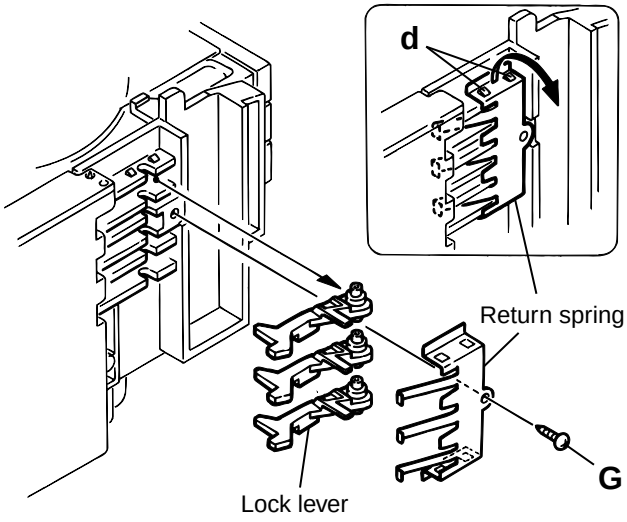


Fig.4

11. Check whether the lifter unit stopper has been caught into the hole at the section "e" of CD tray assembly as shown in Fig.5.
12. Make sure that the driver unit elevator is positioned as shown in Fig.6 from to the second or fifth hole on the left side face of the CD changer mechanism assembly.

[Caution] In case the driver unit elevator is not at above position, set the elevator to the position as shown in Fig.7 by manually turning the pulley gear as shown in Fig.8.

13. Manually turn the motor pulley in the clockwise direction until the lifter unit stopper is lowered from the section "e" of CD tray assembly(See Fig.8).
14. Pull out all of the three stages of CD tray assembly in the arrow direction "f" until these stages stop (See Fig.6).
15. At the position where the CD tray assembly has stopped, pull out the CD tray assembly while pressing the two pawls "g and g' " on the back side of CD tray assembly(See Fig.9). In this case, it is easy to pull out the assembly when it is pulled out first from the stage CD tray assembly.

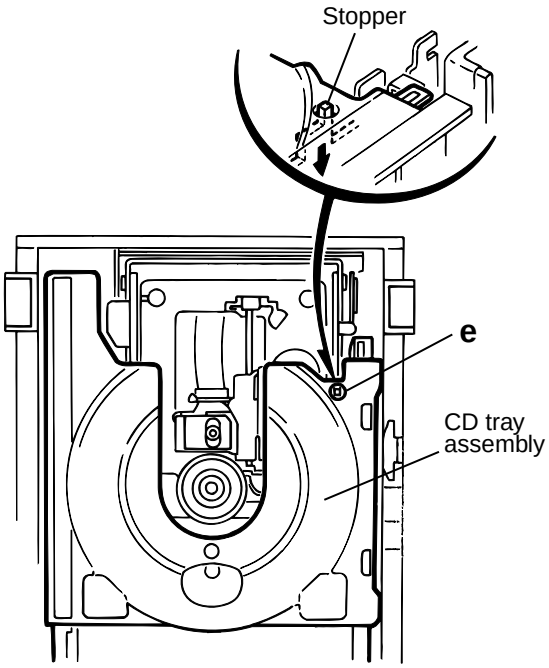


Fig.5

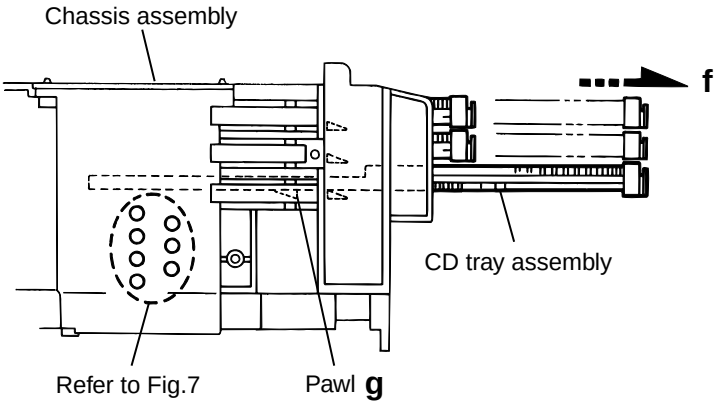


Fig.6

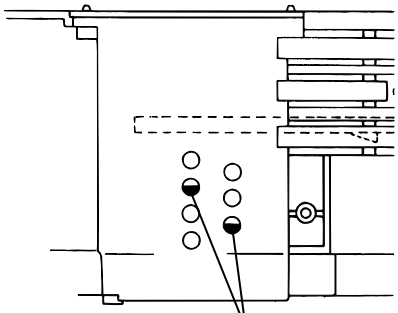


Fig.7

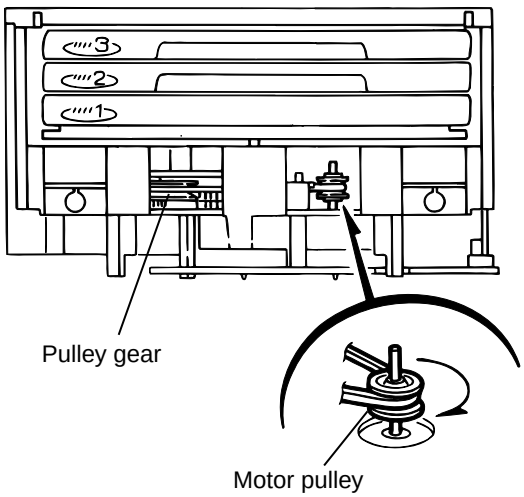


Fig.8

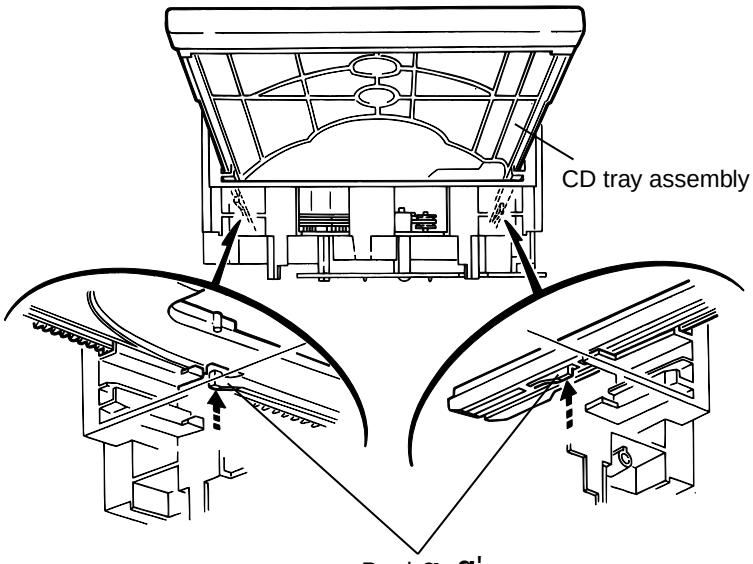


Fig.9

■ Removing the CD loading mechanism assembly(See Fig.10)

1. While turning the cams R1 and R2 assembly in the arrow direction "h" ,align the shaft "i" of the CD loading mechanism assembly to the position shown in Fig.10.
2. Remove the four screws **H** retaining the CD loading mechanism assembly.

■ Removing the CD traverse mechanism (See Fig.11 and 12)

1. For dismounting only the CD traverse mechanism without removing the CD loading mechanism assembly, align the shaft "j" of the CD loading mechanism assembly to the position shown Fig.11 while turning the cam R1 and R2 assembly in the arrow direction "k" .
2. By raising the CD loading mechanism assembly in the arrow direction "l", remove the assembly from the lifter unit

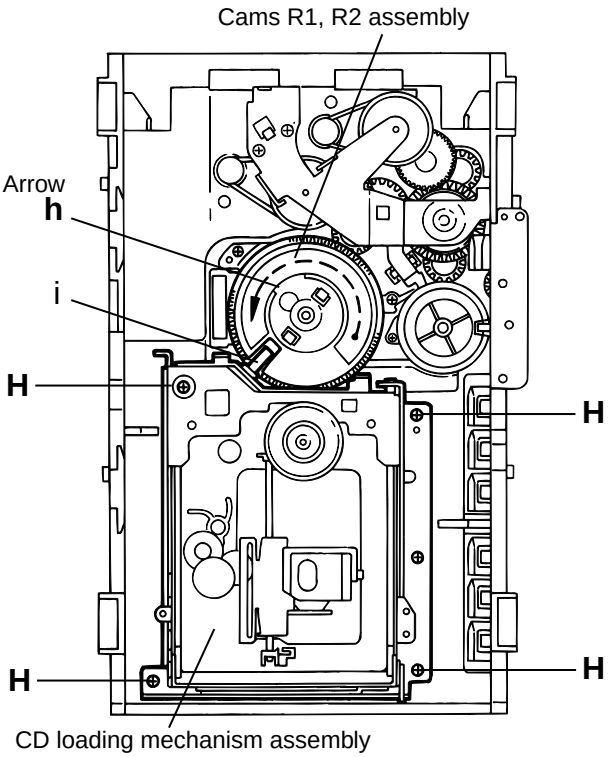


Fig.10

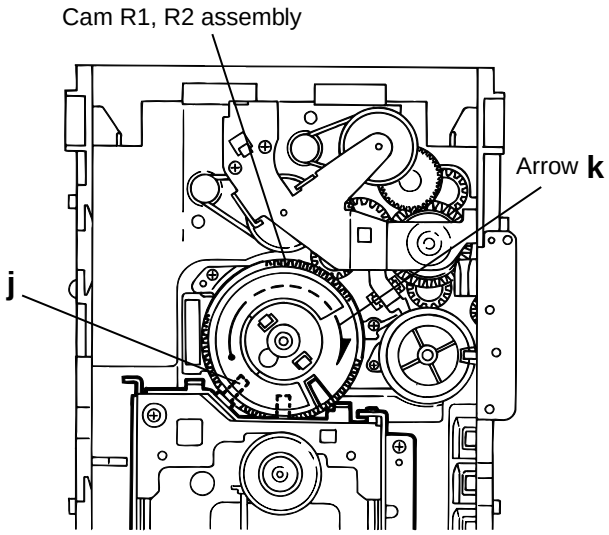


Fig.11

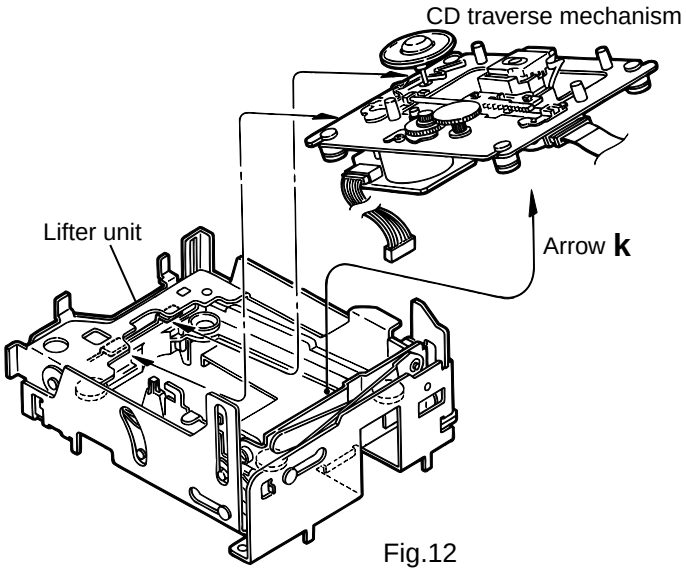


Fig.12

■ Removing the CD pick unit (See Fig.13)

1. Move the cam gear in the arrow direction "m" . Then, the CD pickup unit will be moved in the arrow direction "n" .
2. According to the above step, shift the CD pickup unit to the center position.
3. While pressing the stopper retaining the shaft in the arrow direction "o" , pull out the shaft in the arrow direction "p".
4. After dismounting the shaft from the CD pickup unit, remove the CD pickup unit

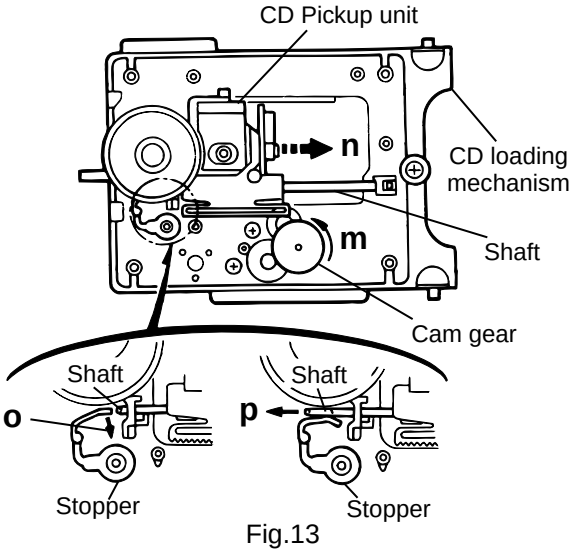


Fig.13

■ Removing the cam unit (See Fig.14 ~17)

1. Remove the CD loading mechanism assembly.
2. While turning the cam gear "q", align the pawl "r" position of the drive unit to the notch position(Fig.15) on the cam gear "q".
3. Pull out the drive unit and cylinder gear(See Fig.16).
4. While turning the cam gear "q", align the pawl "s" position of the select lever to the notch position(Fig.17) on the cam gear "q".
5. Remove the four screws **J** retaining the cam unit(cam gear "q" and cams R1/R2 assembly)(See Fig.17).

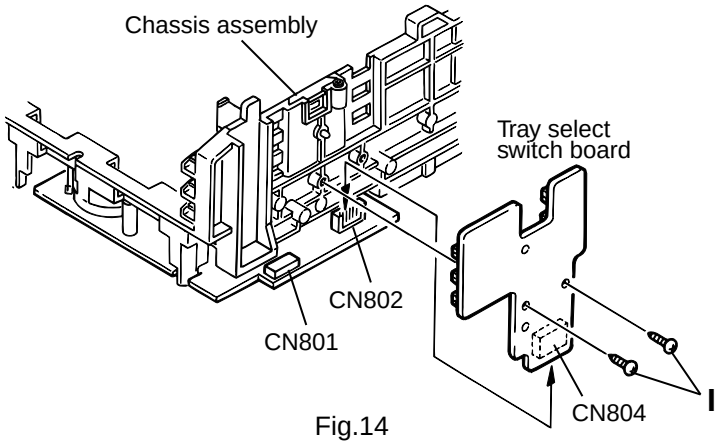


Fig.14

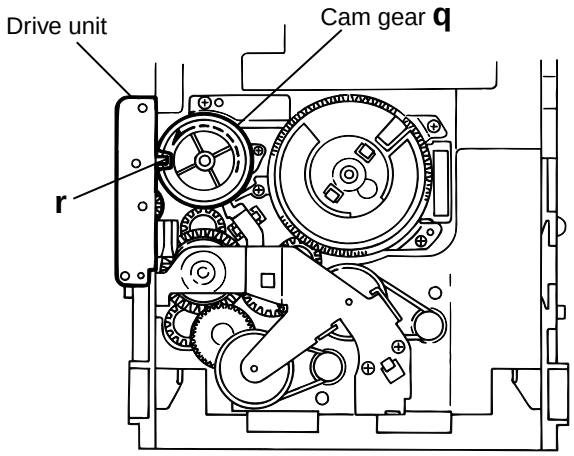


Fig.15

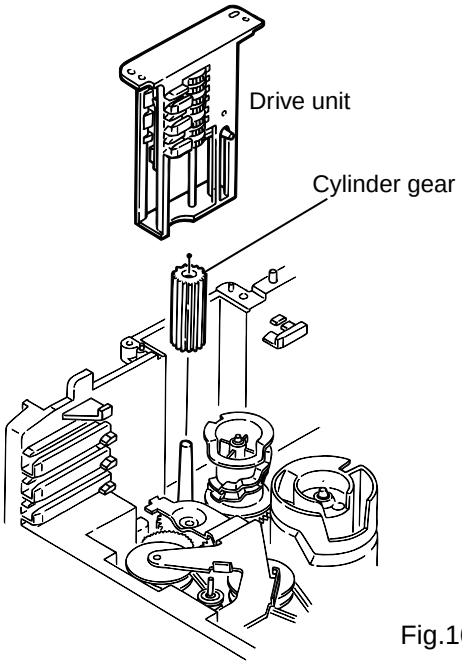


Fig.16

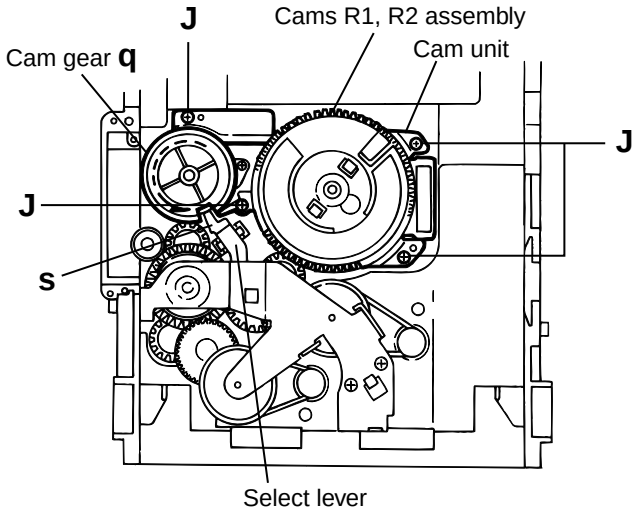


Fig.17

■ Removing the actuator motor and belt (See Fig.18~21)

1. Remove the two screws **K** retaining the gear bracket (See Fig.18).
2. While pressing the pawl "t" fixing the gear bracket in the arrow direction, remove the gear bracket (See Fig.18).
3. From the notch "u section" on the chassis assembly fixing the edge of gear bracket, remove and take out the gear bracket(See Fig. 19).
4. Remove the belts respectively from the right and left actuator motor pulleys and pulley gears(See Fig. 18).
5. After turning over the chassis assembly, remove the actuator motor while spreading the four pawls "v" fixing the right and left actuator motors in the arrow direction(See Fig. 20).

[Note] When the chassis assembly is turned over under the conditions wherein the gear bracket and belt have been removed, then the pulley gear as well as the gear, etc. constituting the gear unit can possibly be separated to pieces. In such a case, assemble these parts by referring to the assembly and configuration diagram in Fig. 21.

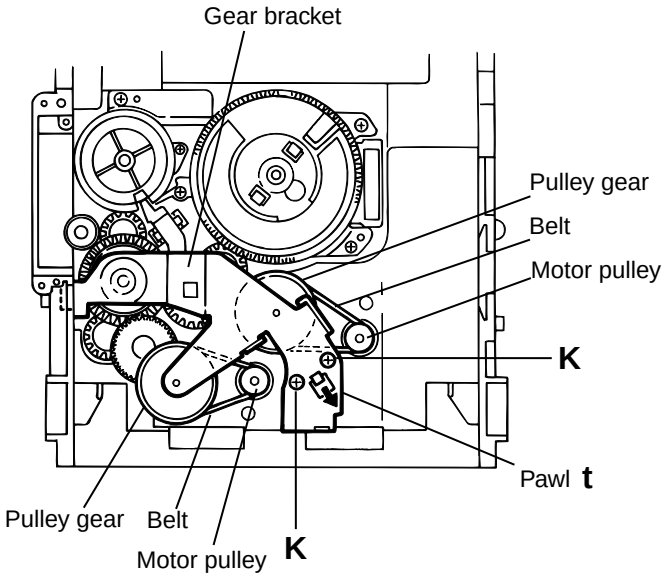


Fig.18

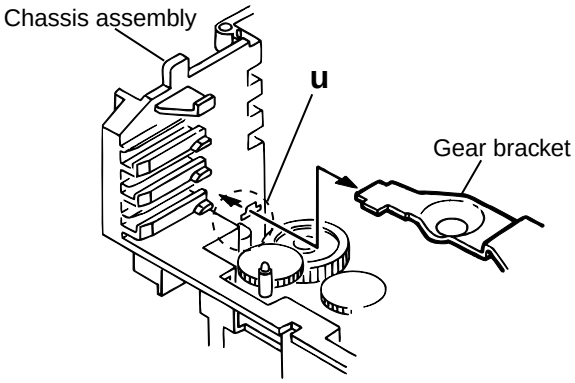


Fig.19

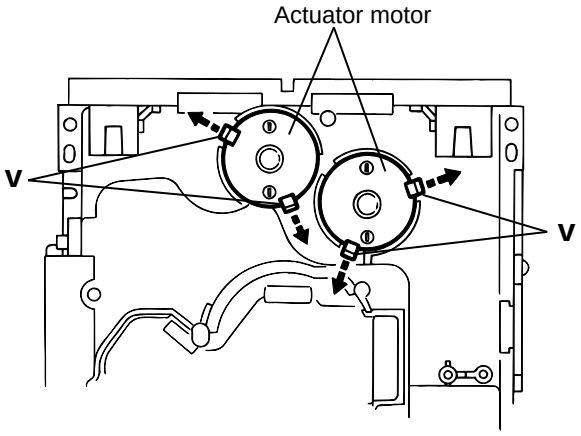


Fig.20

Assembly and Configuration Diagram

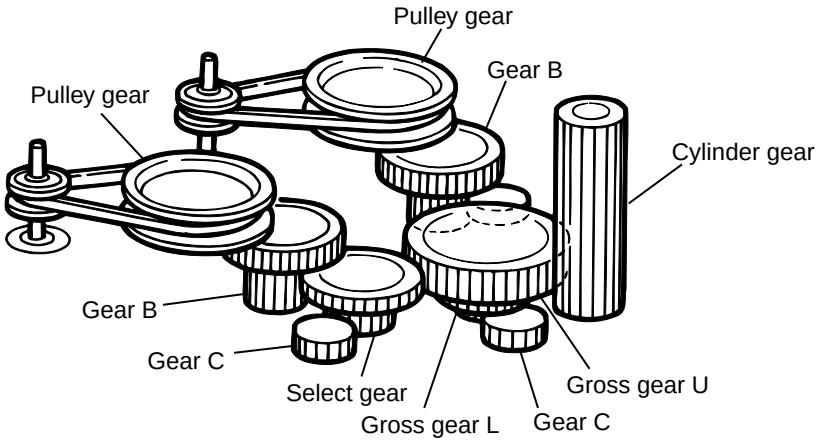


Fig.21

■ Removing the cams R1/R2 assembly and cam gear q(See Fig.22)

1. Remove the slit washer fixing the cams R1 and R2 assembly.
2. By removing the two pawls "w" fixing the cam R1, separate R2 from R1.
3. Remove the slit washer fixing the cam gear "q".
4. Pull out the cam gear "q" from the C.G. base assembly.

■ Removing the C.G. base assembly (See Fig.22 and 23)

Remove the three screws **L** retaining the C.G. base assembly.

[Caution] To reassemble the cylinder gear, etc.with the cam unit (cam gear and cans R1/R2 assembly), gear unit and drive unit, align the position of the pawl "x" on the drive unit to that of the notch on the cam gear "q". Then, make sure that the gear unit is engaged by turning the cam gear "q" (See Fig. 23).

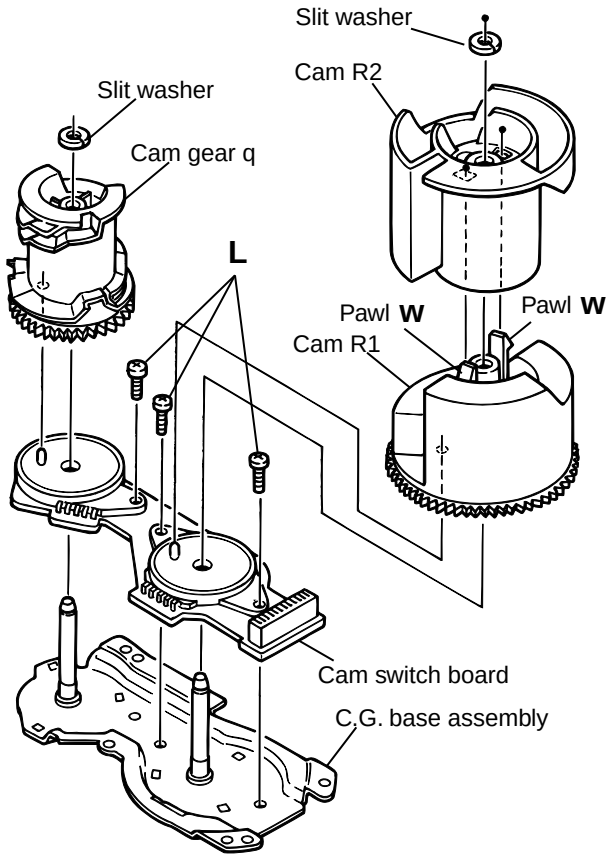


Fig.22

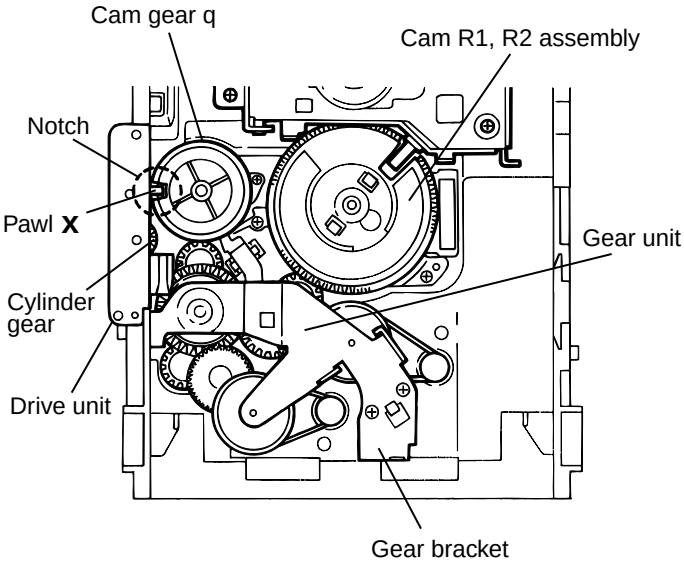


Fig.23

< Cassette mechanism section >

■ Removing the playback,recording and eraser heads (See Fig.1~3)

1. While shifting the trigger arms seen on the right side of the head mount in the arrow direction,turn the flywheel R in counterclockwise direction until the head mount has gone out with a click (See Fig. 1).
2. When the flywheel R is rotated in counterclockwise direction, the playback head will be turned in counterclockwise direction from the position in Fig.2 to that in Fig.3.
3. At this position, disconnect the flexible P.C.board (outgoing from the playback head) from the connector CN301 on the head amp. and mechanism control P.C. board.
4. After dismounting the FPC holder,remove the flexible P.C.board.
5. Remove the flexible P.C.board from the chassis base.
6. Remove the spring "a" from behind the playback head.
7. Loosen the reversing azimuth screw retaining the playback head.
8. Take out the playback head from the front of the head mount.
9. The recording and eraser heads should also be removed similarly according to Steps 1~8 above.

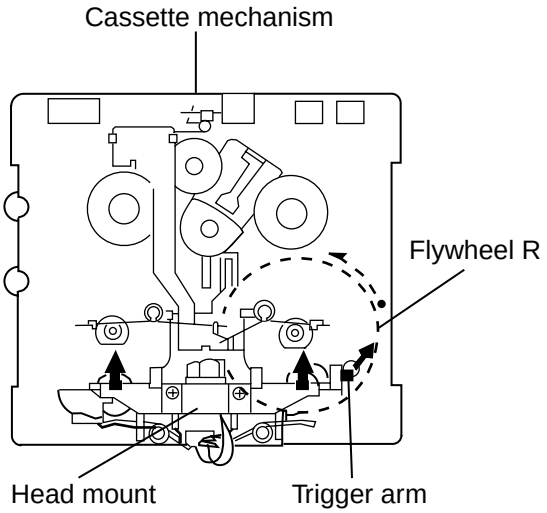


Fig.1 (Mechanism A side)

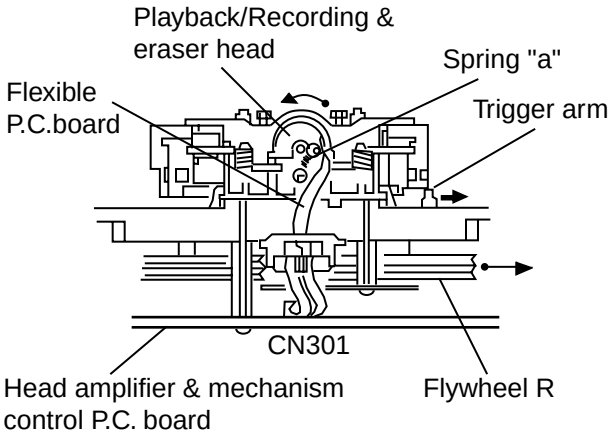


Fig.2 (Mechanism A side)

● Reassembling the playback, recording and eraser heads (See Fig.2,3)

1. Reassemble the playback head from the front of the head mount to the position as shown in Fig.3.
2. Fix the reversing azimuth screw.
3. Set the spring a from behind the playback head.
4. Attach the flexible P.C.board to the chassis base, and fix it with the FPC holder as shown in Fig.3.
5. The recording and eraser heads should also be reassembled similarly according to Steps 1~4 above.

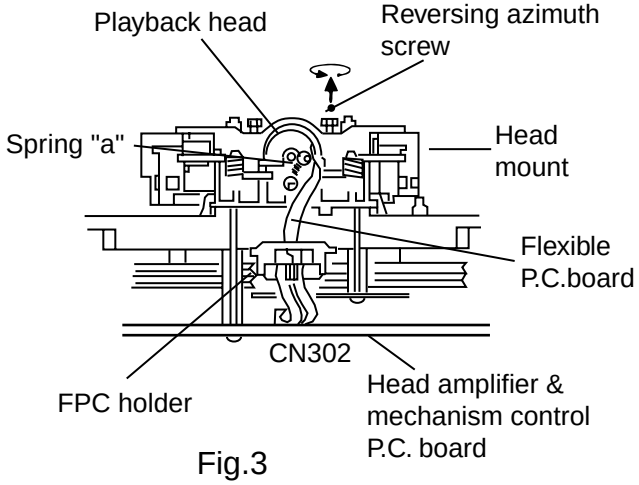


Fig.3 (Mechanism B side)

■ Removing the head amp.and mechanism control P.C.board (See Fig. 4)

1.Remove the cassette mechanism assembly.
2.After turning over the cassette mechanism assembly,remove the five screws "A" retaining the head amp. and mechanism control P.C. board
3.Disconnect the connectors CN303 and CN304 on the P.C.Board and the connectors CN1 on both the right and left side reel pulse P.C.Boards.
4.When necessary, remove the 4pin parallel wire soldered to the main motor

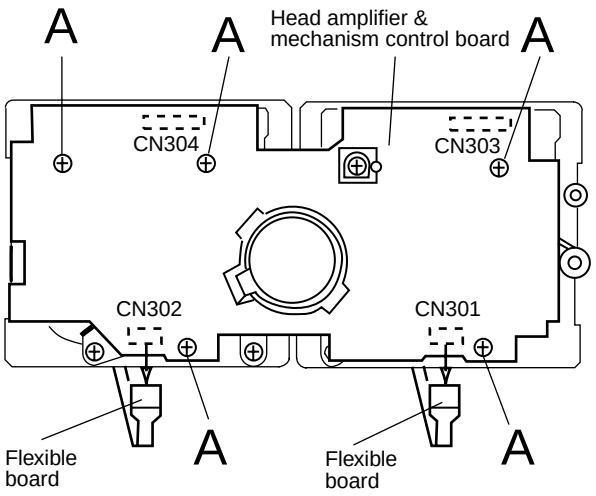


Fig.4

■ Removing the capstan motor assembly

1.Remove the six screws "B" retaining capstan motor assembly (See Fig. 5).
2.While raising the capstan motor, remove the capstan belts A and B respectively from the motor pulley (See Fig. 6).

Caution 1: Be sure to handle the capstan belts so carefully that these belts will not be stained by grease and other foreign matter. Moreover, these belts should be hand while referring to the capstan belt hanging method.

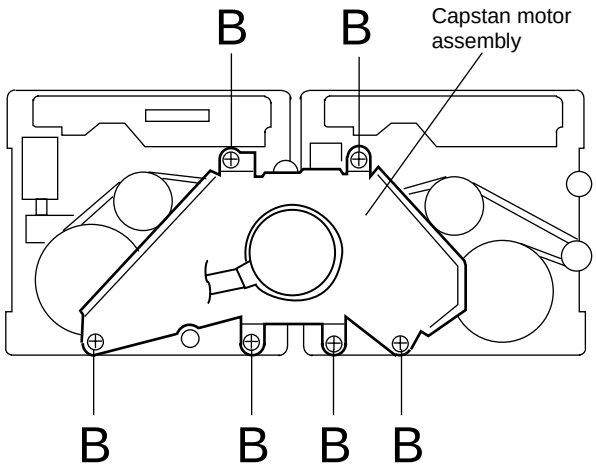


Fig.5

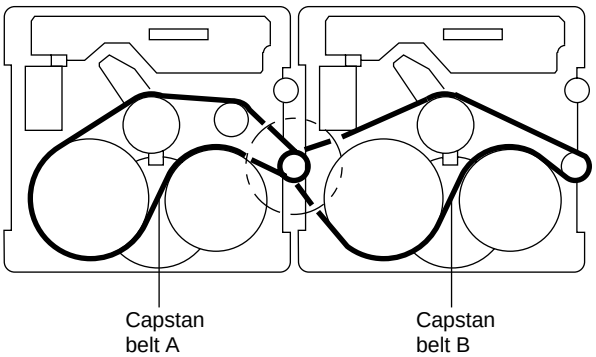


Fig.7

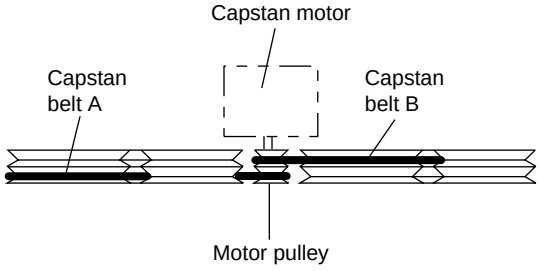


Fig.6

■ Removing the capstan motor (See Fig. 8)

From the joint bracket, remove the two screws "C" retaining the capstan motor.

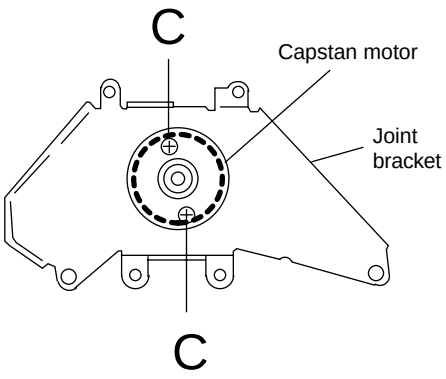


Fig.8

■ Removing the flywheel (See Fig. 9,10)

1.Remove the head amp. and mechanism control P.C.Board.
2.Remove the capstan motor assembly.
3.After turning over the cassette mechanism, remove the slit washers "a" and "b" fixing the capstan shafts R and L, and pull out the flywheels R and L respectively from behind the cassette mechanism.

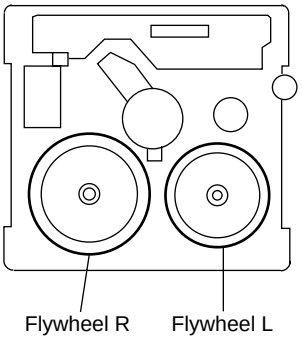


Fig.10

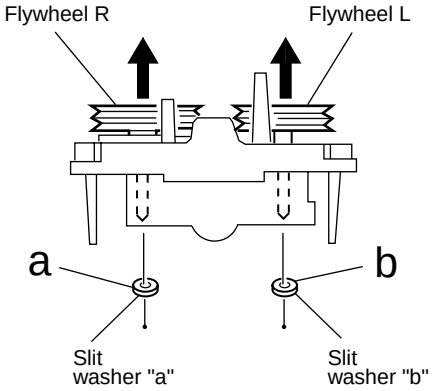


Fig.9

■ Removing the reel pulse P.C.board and solenoid (See Fig. 11)

1.Remove the five pawls (c,d,e,f,g) retaining the reel pulse P.C.Board.
2.From the surface of the reel pulse P.C.Board parts, remove the two pawls "h" and "i" retaining the solenoid.

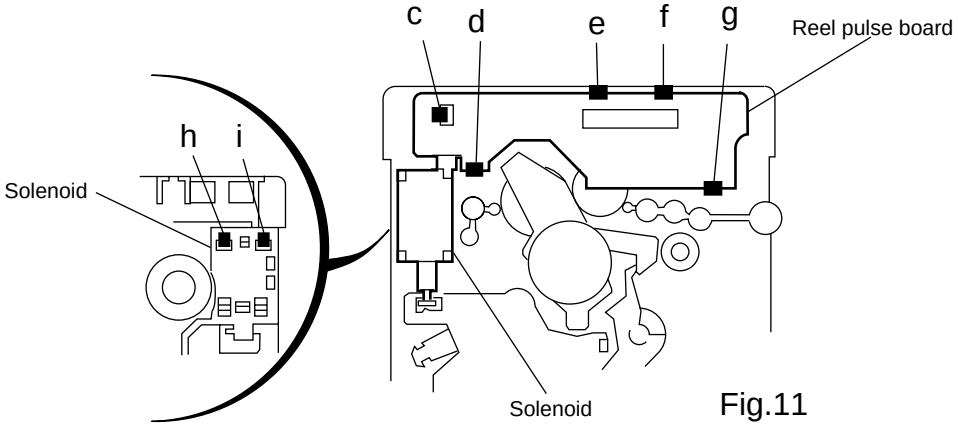


Fig.11

Adjustment method

Measurement instruments required for a djustment

1. Low frequency oscillator,
   This oscillator should have a capacity to output 0dBs to 600ohm at an oscillation frequency of 50Hz-20kHz.
2. Attenuator impedance : 600ohm
3. Electronic voltmeter
4. Frequency counter
5. Wow flutter meter
6. Test tape
   VTT712 : For Tape speed and wow flutter (3kHz)
   VTT724 : For Reference level (1kHz)
   TMT7036 : For Head angle(10kHz),Play back frequency characteristics(1kHz),and dubbing frequency characteristics(63,1,10kHz)
   Because of frequency-mixed tape with 63,1k,10k and 14kHz(250nWb/m -24dB).
   Use this tape together with a filter.
7. Blank tape
   TAPE Ⅰ: AC-225, TAPE Ⅱ: AC-514
8. Torque gauge : For play and back tension
   Forward ; TW2111A, Reverse ; TW2121A
   Fast Forward and Rewind ; TW2231A
9. Test disc
   : CTS-1000(12cm),GRG-1211(8cm)
10. Jitter meter

Measurement conditions

Power supply voltage
AC110/127/220/230-240V(50Hz)

Measurement
output terminal : Speaker out
:TP101(Mesuring for TUNER/DECK/CD)
:Dummy load 6ohm

Radio input signal
AM modulation frequency : 400Hz
Modulation factor : 30%
FM modulation frequency : 400Hz
Frequency displacement : 22.5kHz

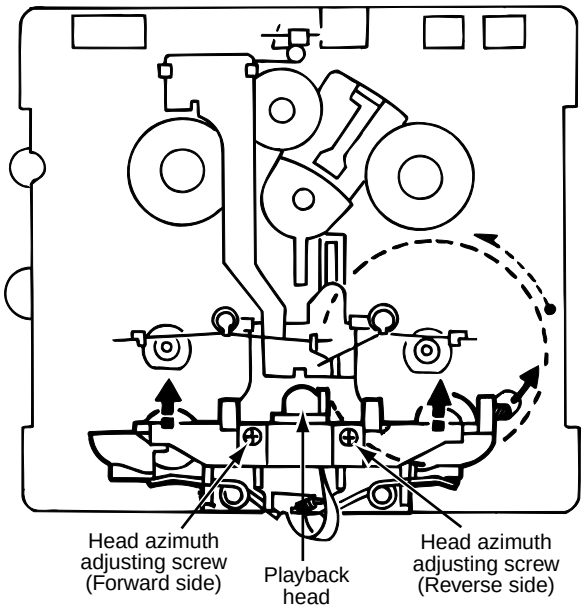
Frequency Range
AM 531kHz~1710kHz
FM 87.5MHz~108MHz

Standard measurement positions of volume and switch
Power : Standby (Light STANDBY Indicator)
S,A,BASS : OFF
Sound mode : OFF
Main VOL. : 0 Minimum
Travers mecha set position : Disc 1
Mic MIX VOL : MAX
ECHO : OFF

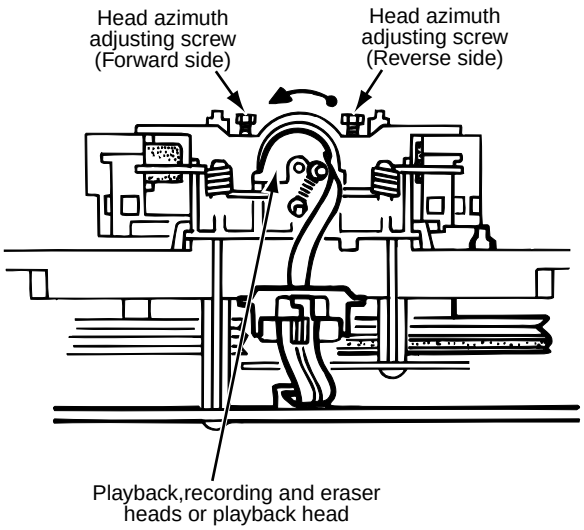
Precautions for measurement
1. Apply 30pF and 33kohm to the IF sweeper output side and 0.082 μF and 100kohm in series to the sweeper input side.
2. The IF sweeper output level should be made as low as possible within the adjustable range.
3. Since the IF sweeper is a fixed device, there is no need to adjust this sweeper.
4. Since a ceramic oscillator is used, there is no need to perform any MPX adjustment.
5. Since a fixed coil is used, there is no need to adjust the FM tracking.
6. The input and output earth systems are separated. In case of simultaneously measuring the voltage in both of the input and output systems with an electronic voltmeter for two channels, therefore, the earth should be connected particularly.
7. In the case of BTL connection amplifier, the minus terminal of speaker is not for earthing. Therefore, be sure not to connect any other earth terminal to this terminal. This system is of an OTL system.

■ Arrangement of adjusting positions

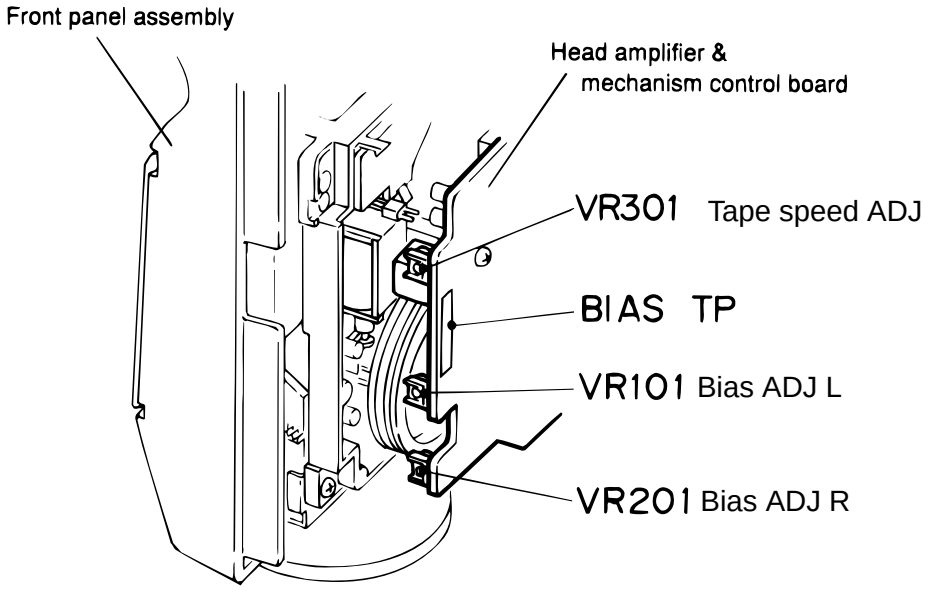
Cassette mechanism section (Mechanism A section)



Cassette mechanism section (Back side)



Cassette mechanism unit section



■ Tape recorder section

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Confirmation of head angle	Test tape :TMT7036(10kHz) Measurement output terminal :Speaker terminal Speaker R (Load resistor:3Ω) :Headphone terminal	1.Playback the test tape TMT7036(10kHz). 2.With the playback mechanism or recording & playback mechanism, adjust the head azimuth screw so that the forward and reverse output levels become maximum.After adjustment,lock the head azimuth at least by half a turn. 3.In either case,this adjustment should be performed in both the forward and reverse directions with the head azimuth screw.	Maximum output	Adjust the head azimuth screw only when the head has been changed.
Confirmation of tape speed	Test tape :VTT712(3kHz) or TMT7036(3kHz) Measurement output terminal :Headphone terminal	<Constant speed> Adjust VR301 so that the frequency counter reading becomes 3,000Hz±60Hz when playing back the test tape VTT712(3kHz)with the playback mechanism or playback and recording mechanism after ending forward winding of the tape.	Tape speed of decks (A and B) :3,000Hz ±60Hz	VR301

■ Reference values for confirmation items

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Double tape speed	Test tape :TMT7036(10kHz) Measurement output terminal :Speaker terminal Speaker R (Load resistance:3Ω) measurement output terminal :Headphone terminal	After setting to the double speed motor, confirm that the frequency counter reading becomes 4,800+400/-300Hz when the test tape VTT712 (3kHz) has been play back with the playback mechanism.	4,800+400/ -300Hz	Playback mechanism side
Difference between the forward and reverse speed. P.mecha and R/P mecha speed		When the test tape VTT712(3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding, the frequency counter reading of the difference between both of the mechanisms should be 6.0Hz or less.	60Hz or less	Both the playback and recording & playback mechanism
Wow & flutter	Test tape :TMT7036(10kHz) Measurement output terminal :Headphone terminal	When the test tape VTT712(3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding the frequency counter reading of wow& flutter should be 0.25% or less(WRMS).	with in 0.25% JIS(WTD)	Both the playback and recording & playback mechanism

■ Electrical performance

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Adjustment of recording bias current (Reference value)	*Mode : Forward or reverse mode *Recording mode *Test tape :AC-514 and AC-225 Measurement output terminal :Both recording and headphone terminals	1.With the recording and playback mechanism, load the test tapes(AC-514 to TYPⅡ and AC-225 to TYPⅠ),and set the mechanism to the recording and pausing conditions in advance. 2.After connecting 100Ω in series to the recorder head,measure the bias current with a valve voltmeter at both of the terminals. 3.After resetting the [PAUSE] mode,start recording. At this time,adjust VR101 for LcH and VR201 for RcH so that the recording bias current values become 4.0μA (TYPⅠ) and 4.20μA(TYPⅡ).	AC-225 :4.20μA AC-514 :4.0μA	LcH :VR101 RcH :VR201
Adjustment of recording and playback frequency characteristics	Reference frequency :1kHz and 10kHz (REF:-20dB) Test tape :TYPⅡ AC-514 Measurement input terminal :OSC IN	1.With the recording and playback mechanism,load the test tape(AC-514 to TYPⅡ),and set the mechanism to the recording and pausing condition in advance. 2.While repetitively inputting the reference frequency signal of 1kHz and 10kHz from OSC IN, record and playback the test tape. 3.While recording and playing back the test tape in TYPⅡ,adjust VR101 for LcH and VR201 for RcH so that the output deviation between 1kHz and 10kHz becomes -1dB±2dB.	Output deviation between 1kHz and 10kH :-1dB±2dB	LcH :VR101 RcH :VR201

■ Reference values for electrical function confirmation items

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Recording bias frequency	*Recording and playback side forward or reverse *Test tape :TYPⅡ AC-514 *Measurement terminal BIAS TP on P.C.board	1.While changing over to and from BIAS 1 and 2, confirm that the frequency is changed. 2.With the recording and playback mechanism. load the test tape (AC-514 to TYPⅡ),and set the mechanism to the recording and pausing conditions in advance. 3.Confirm that the BIAS TP frequency on the P.C.board is 100kHz±6kHz.	100kHz +9kHz -7kHz	
Eraser current (Reference value)	*Recording and playback side forward or reverse *Recording mode *Test tape :AC-514 and AC-225 Measurement terminal Both of the eraser head	1.With the recording and playback mechanism, load the test tapes(AC-514 to TYPⅡ and AC-225 to TYPⅠ),and set the mechanism to the recording and pausing condition in advance. 2.After setting to the recording conditions,connect 1MΩ in series to the eraser head on the recording and playback mechanism side,and measure the eraser current from both of the eraser terminal.	TYPⅡ :120mA TYPⅠ :75mA	

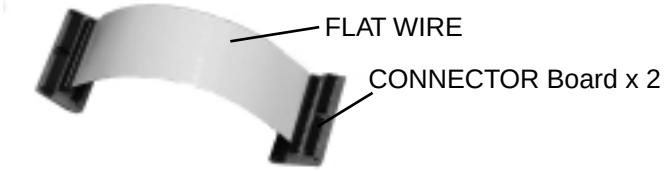
Diagnosis which uses extension wire method

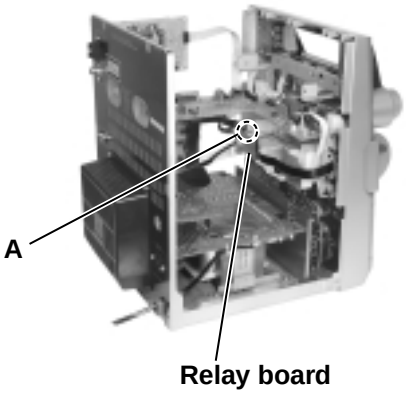
System control P.C.board

1.Remove the metal cover and CD changer mechanism.
2.Remove the front panel assembly.
3.One screw **A** is removed, and relay board is removed.
4.As shown in fig.1, place the front panel assembly after opening it outward using the right side of the front panel as an axis.
5.The extension wire is connected with CN870 & CN871 on the INPUT/OUTPUT board and CN860 & CN861 on the main board.

Extension wire parts No.

QUQ412-4020CJ	FLAT WIRE
JIG-MXJ500	CONNECTOR Board x 2





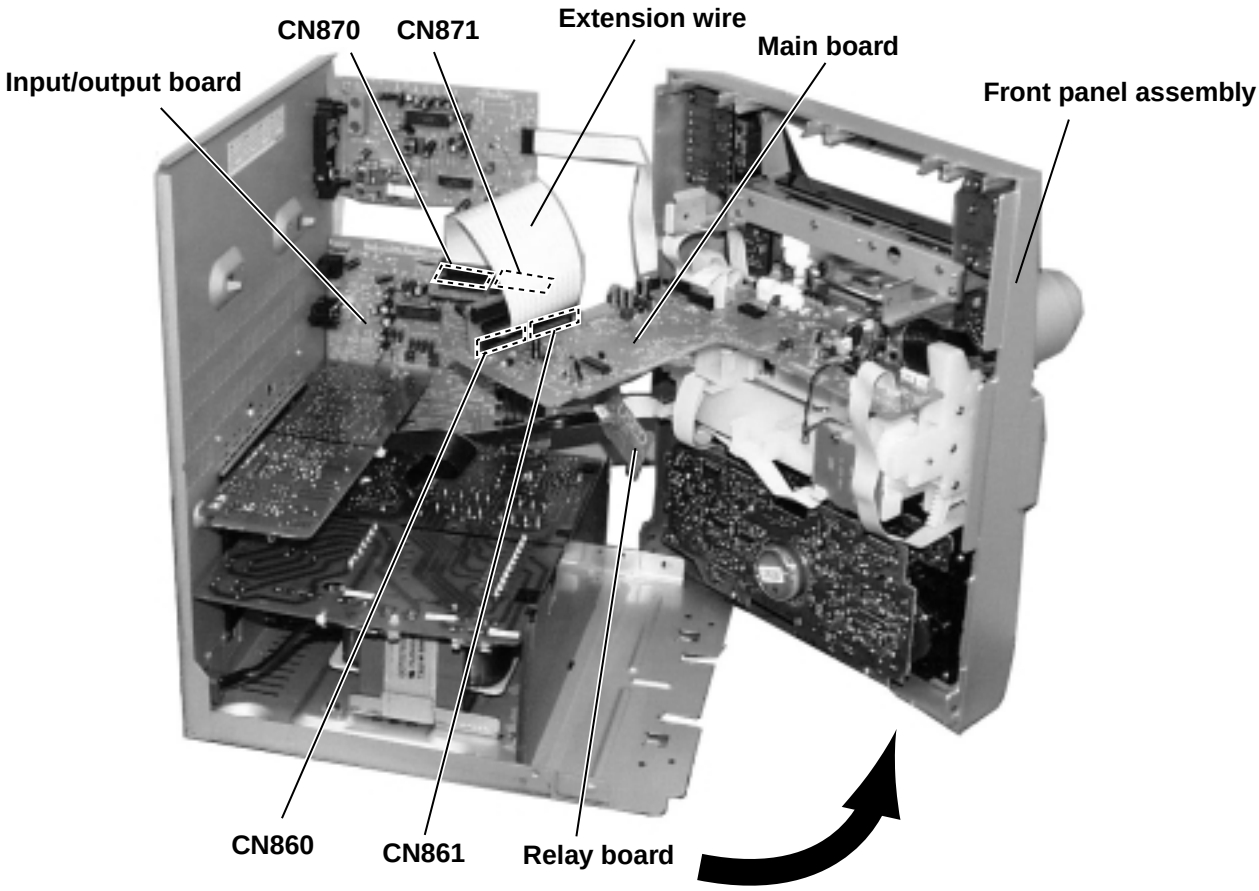
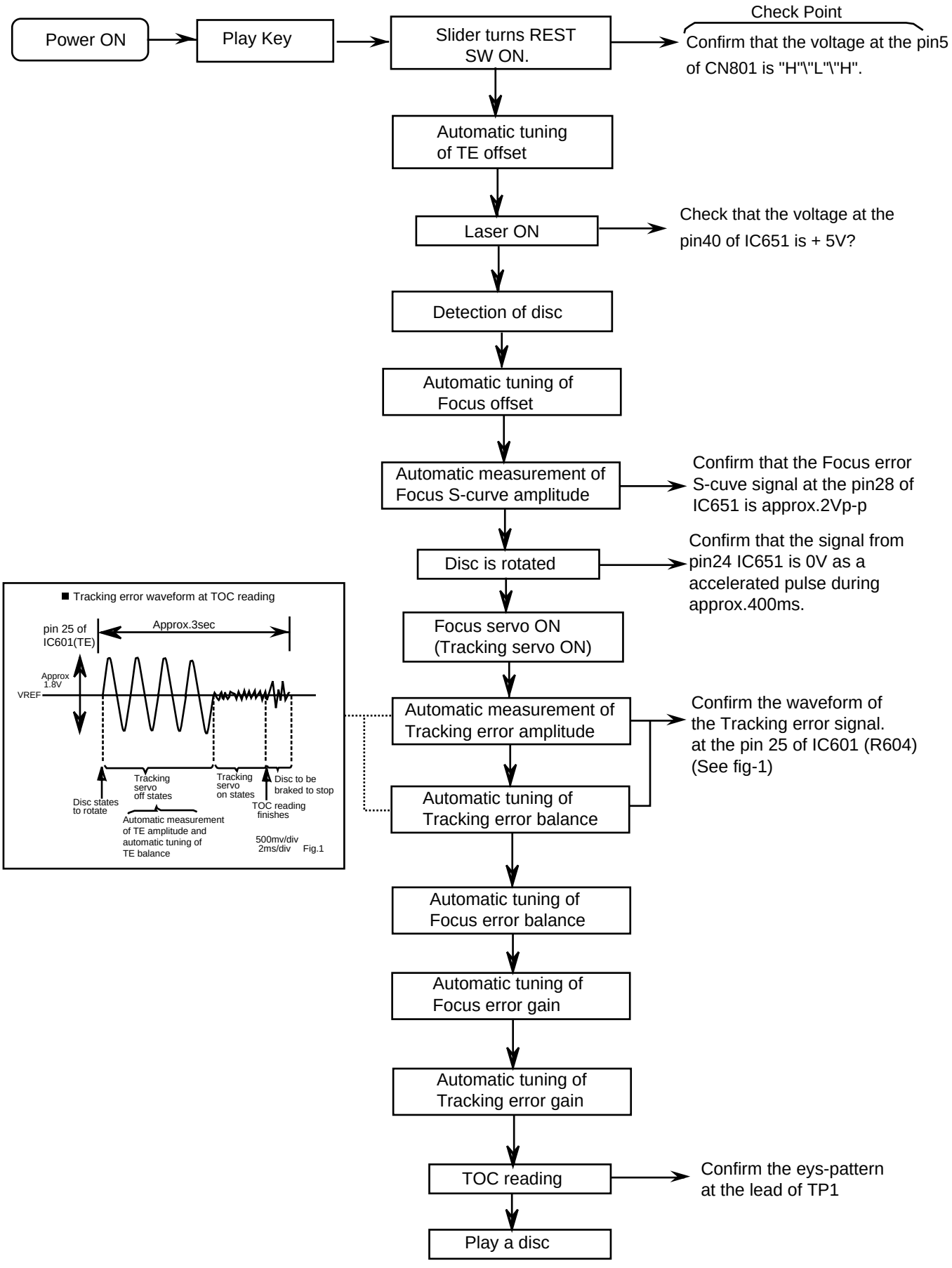


Fig.1

Flow of functional operation until TOC read

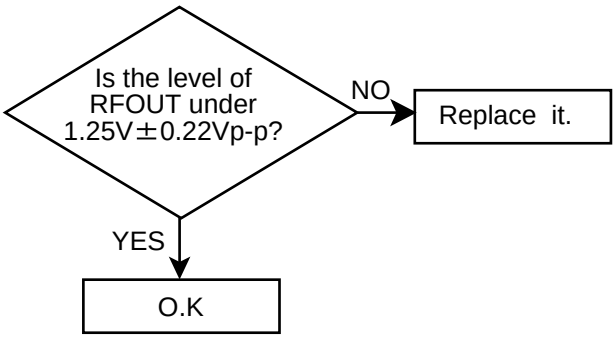


Maintenance of laser pickup

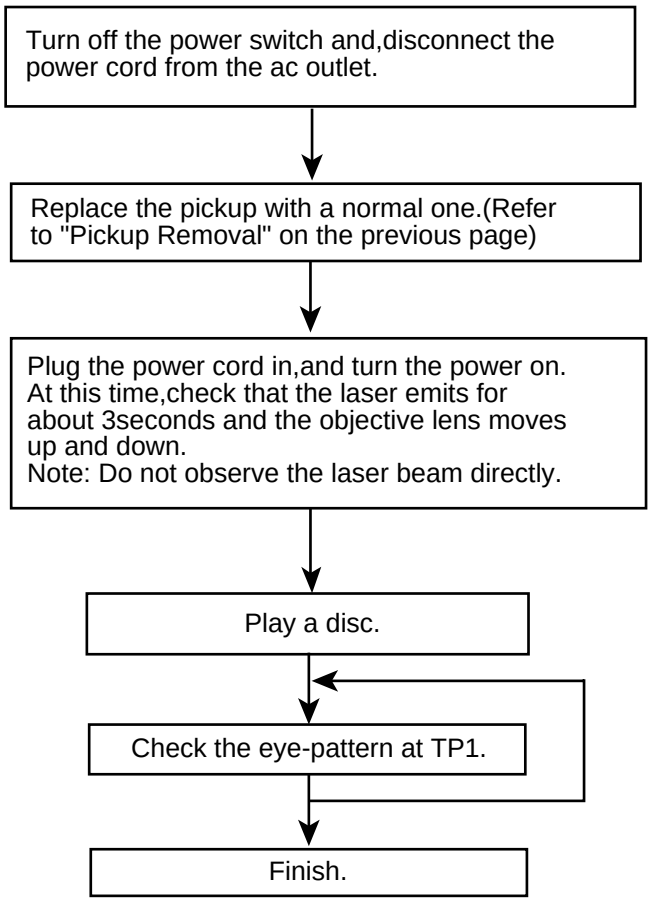
(1) Cleaning the pick up lens
Before you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

(2) Life of the laser diode
When the life of the laser diode has expired, the following symptoms will appear.

1. The level of RF output (EFM output:amplitude of eye pattern) will below.



Replacement of laser pickup

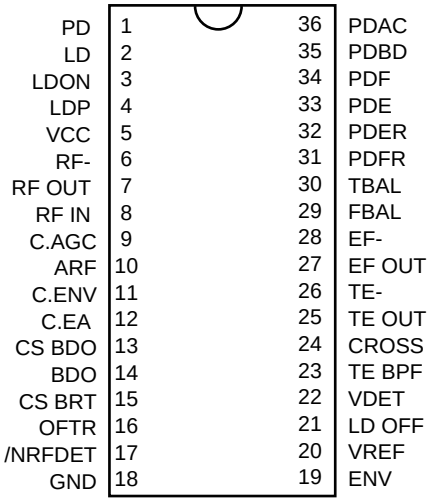


(3) Semi-fixed resistor on the APC PC board The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power.Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value,the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally,the laser pickup may be damaged due to excessive current.

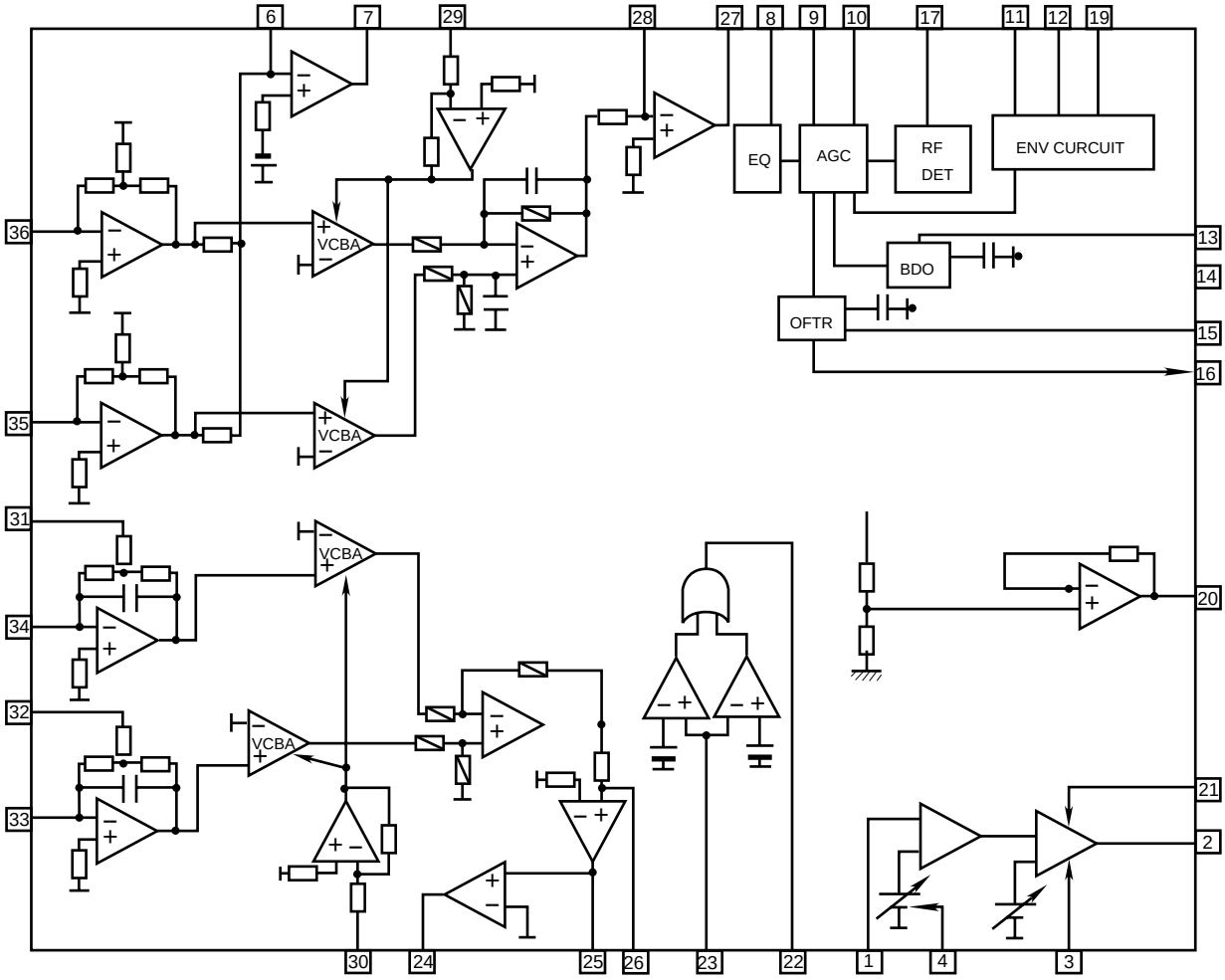
Description of major ICs

■ AN8806SB-W (IC601) : RF&Servo AMP

1.Pin layout



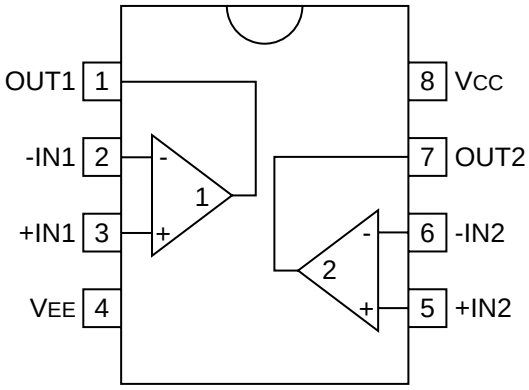
2.Block diagram



3. Pin function

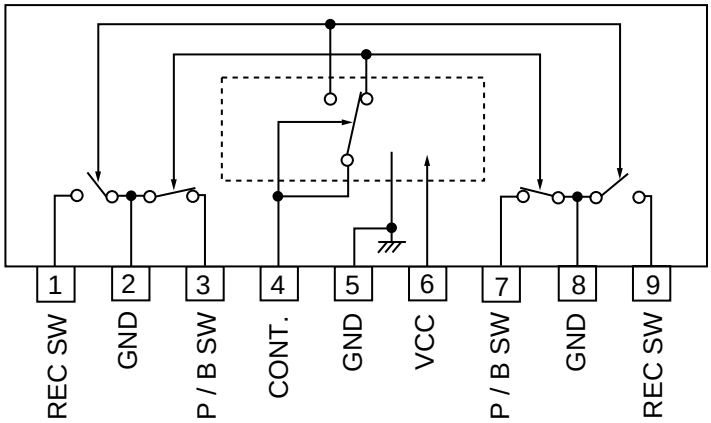
Pin No.	Symbol	I/O	Description
1	PD	I	APC amp input terminal
2	LD	O	APC amp output terminal
3	LD ON	I	APC ON/OFF control terminal
4	LDP	--	Connect to ground
5	VCC	--	Power supply
6	RF-	I	Inverse input pin for RF amp
7	RF OUT	O	RFamp output
8	RF IN	I	RF input
9	C.AGC	I/O	Connecting pin of AGC loop filter
10	ARF	O	RF output
11	C.ENV	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
12	C.EA	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
13	CS BDO	I/O	A capacitor is connected to detect the lower envelope of RF signal
14	BDO	O	BDO output pin
15	CS BRT	I/O	A capacitor is connected to detect the lower envelope of RF signal
16	OFTR	O	Of-track status signal output
17	/NRFDET	O	RF detection signal output
18	GND	--	Ground
19	ENV	O	Envelope output
20	VREF	O	Reference voltage output
21	LD OFF	--	Connect to ground
22	VDET	O	Vibration detection signal output
23	TE BPF	I	Input pin of tracking error through BPF
24	CROSS	O	Tracking error cross output
25	TE OUT	O	Tracking error signal output
26	TE-	I	Inverse input pin for tracking error amp
27	FE OUT	O	Output pin of focus error
28	FE-	I	Inverse input pin for focus error amp
29	FBAL	I	Focus balance control
30	TBAL	I	Tracking balance control
31	PDFR	I/O	F I-V amp gain control
32	PDER	I/O	E I-V amp gain control
33	PDF	I	I-V amp input
34	PDE	I	I-V amp input
35	PD BD	I	I-V amp input
36	PD AC	I	I-V amp input

■ BA15218 (IC526) : OP AMP.

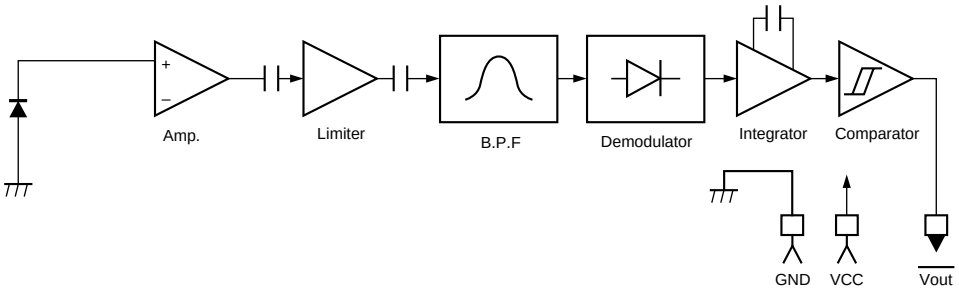


■ BA3126N (IC301) : SWITCH

1. Terminal layout and Block diagram

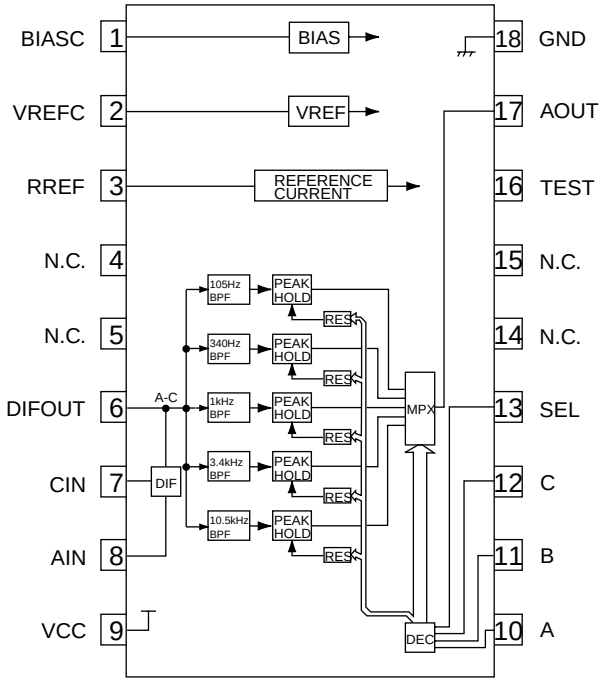


■ GP1U281X (IC915) : Receiver for remote controller



■ BA3835S (IC812) : SPI B.P.F.

1.Block Diagrams

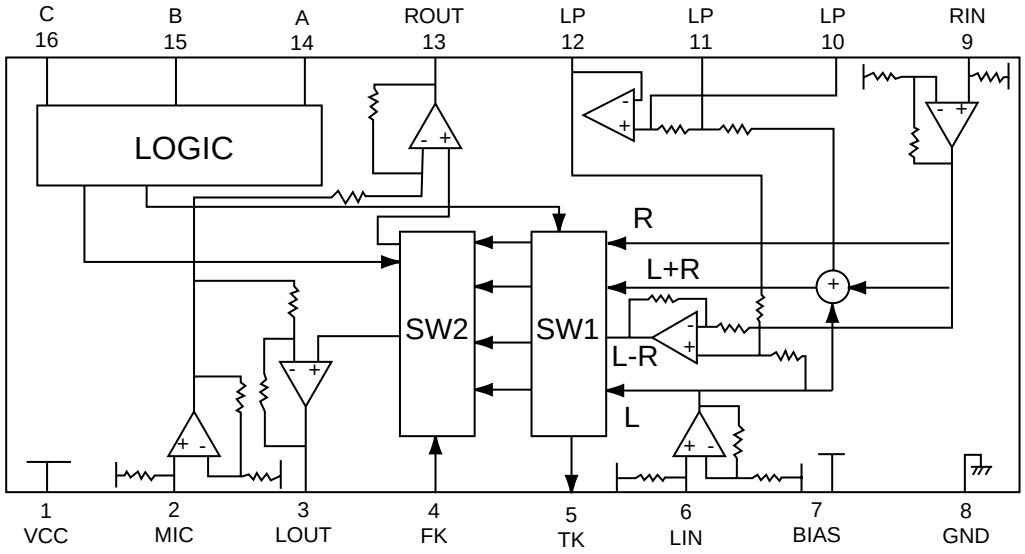


2.Pin Function

No.	Symbol	I/O	Function
1	BIASC	-	Decoupling condenser connection terminal.
2	VREFC	-	Decoupling condenser connection terminal.
3	RPEF	-	Reference resistance connection terminal.
4	NC	-	Non connect.
5	NC	-	Non connect.
6	NC	-	Non connect.
7	CIN	-	Connected to GND of audio system through a condenser.
8	AIN	I	Inputs the audio signal through a condenser.
9	VCC	-	Power supply terminal.
10	SPI-A	O	Output selection control terminal.
11	SPI-B	O	Output selection control terminal.
12	SPI-C	O	Output selection control terminal.
13	SPICSB	O	Output selection control terminal.
14	NC	-	Non connect.
15	NC	-	Non connect.
16	TEST	-	Connected to GND upon normal use.
17	AOUT	O	Multi-plexor output terminal.
18	GND	-	Connect to GND.

■ BA3837(IC466):MIC Mixer

1.Block diagram

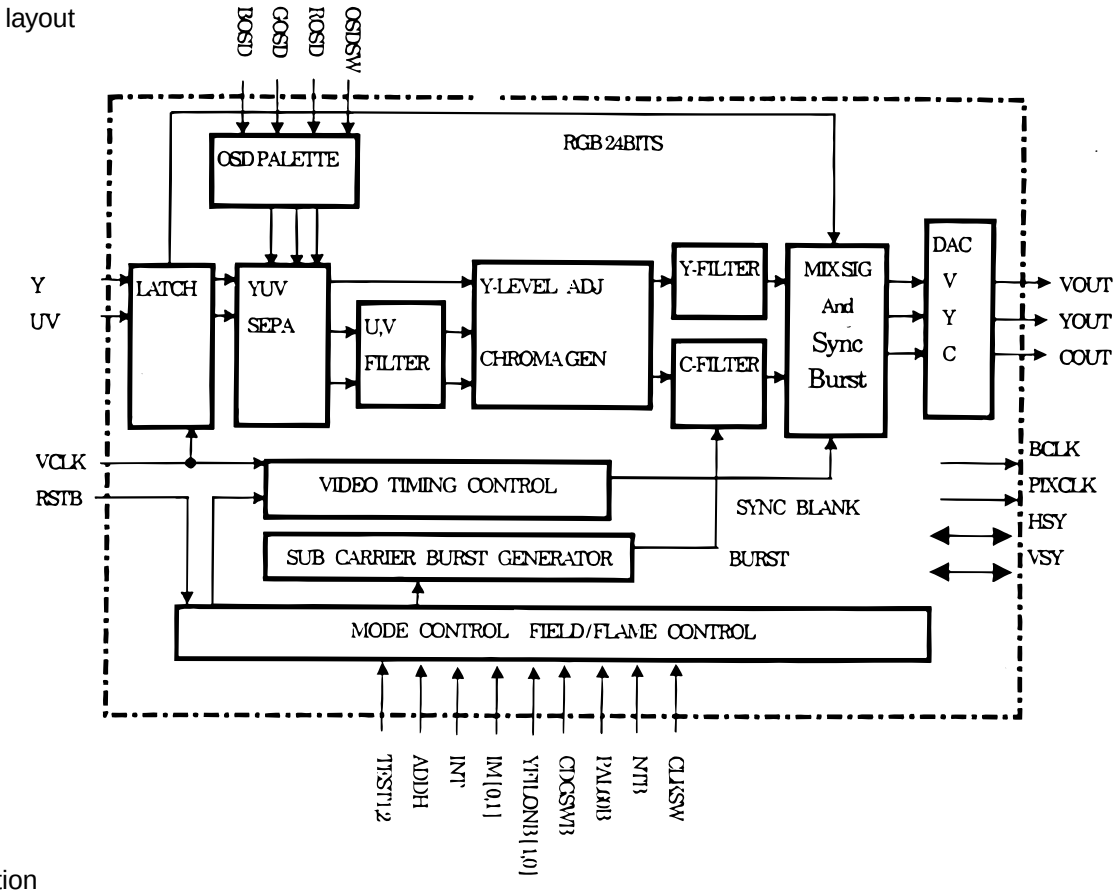


2.Pin function

Pin No.	Symbol	I/O	Description
1	VCC	-	Power supply
2	MIC IN	I	Microphone mixing input
3	LOUT	O	Channel L output
4	FK	-	Non connect
5	TK	-	Non connect
6	LIN	I	Channel L input
7	BIAS	I	Signal bias
8	GND	-	Connect to GND
9	RIN	I	Channel R input
10	LPF1	O	Connects to LPF time constant element
11	LPF2	O	Connects to LPF time constant element
12	LPF3	O	LPF outpout
13	ROUT	O	Channel R output
14	CONTA	I	Mode select input A
15	CONTB	I	Mode select input B
16	CONTC	I	Mode select input C

■ BU1427K (IC152) : Digital RGB-TV encoder

1. Terminal layout



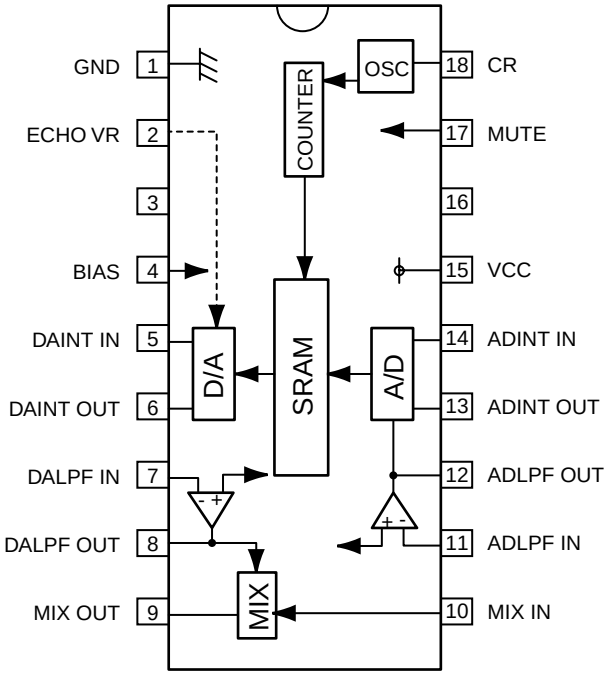
2. Pin function

No.	NAME	FUNCTION	No.	NAME	FUNCTION
1	BOSD	OSD BLUE DATA INPUT	33	SLABEB	SELECT MASTER/SLAVE
2	Y0/YUV0	YUV DATA	34	ADDH	+0.5/-0.5 LINE at NON-INTER
3	Y1/YUV1	YUV DATA	35	VREF-C	DAC BIAS
4	Y2/YUV2	YUV DATA	36	CGND	CHROMA OUTPUT GROUND
5	Y3/YUV3	YUV DATA	37	COUT	CHROMA OUTPUT
6	Y4/YUV4	YUV DATA	38	VGND	Composite Output Ground
7	Y5/YUV5	YUV DATA	39	VOUT	COMPOSITE OUTPUT
8	Y6/YUV6	YUV DATA	40	AVSS	Analog Ground (DAC, VREF)
9	GND	DIGITAL GROUND	41	P-VDD	POWER(DAC) VDD
10	Y7/YUV7	YUV DATA	42	IR	REFERENCE RESISTOR
11	UV0	UV DATA	43	AVDD	ANALOG (VREF) VDD
12	UV1	UV DATA	44	YGND	Luminance Output Ground
13	UV2	UV DATA	45	YOUT	Luminance Output
14	UV3	UV DATA	46	VDD	DIGITAL VDD
15	OSDSW	OSD ENABLE/DISABLE	47	YFILON2B	Y-FILSEL THROU/FILON2
16	CDGSWB	SELECT Video CD/CD-G	48	YCOFF	DAC(YOUT,COUT) OFF
17	UV4	UV DATA	49	YFILON1B	Y-FILSEL THROU/ FILON1
18	UV5	UV DATA	50	PAL60B	NORMAL/PAL60 at PALMODE
19	UV6	UV DATA	51	VCLK	Video Clock Input
20	UV7	UV DATA	52	RSTB	NORMAL/RESET
21	GND	DIGITAL GROND	53	CLKSW	SEL*1CLK/*2CLK
22	NTB	SELECT NISC/PAL MODE	54	RD0	Pull Down to GND
23	IM0	SELECT YUV/YUV	55	RD1	Pull Down to GND
24	IM1	SELECT DAC/NORMAL	56	RD2	Pull Down to GND
25	TEST1	Normally pull down to GND	57	ROSD	OSD RED DATA INPUT
26	TEST2	SELECT U/V TIMING	58	RD3	Pull Down to GND
27	VSY	V-SYNC INPUT or OUTPUT	59	BCLK/RD4	BASE CLOCK OUT
28	HSY	H-SYNC INPUT or OUTPUT	60	RD5	Pull Down to GND
29	PIXCLK	1/2 freq. of BCLK	61	IO VDD	VDD for I/O
30	VDD	DIGITAL VDD	62	RD6	Pull Down to GND
31	IO VDD	VDD for I/O	63	RD7	Pull Down to GND
32	INT	Interlace /Non-Interlace	64	GOSD	OSDGREEN DATA INPUT

* The pin built-in pull-down resister. (30kohm)

■ BU9253AS(IC902) : LPF&ECHO MIX.

1.Pin layout & block diagram

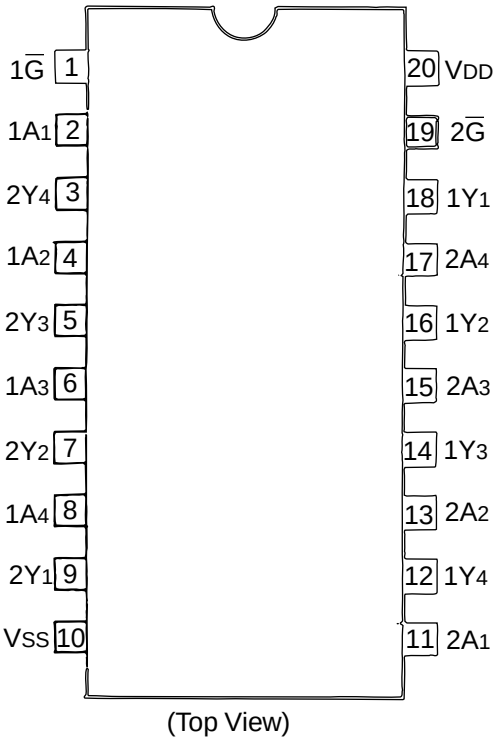


2.Pin function

Pin No.	Symbol	I/O	Descriptions
1	GND	-	Connect GND
2	ECHO VR	I	Echo level control
3		-	Non connect
4	BIAS	-	Analog part DC bias
5	DAINT IN	I	DA side integrator input
6	DAINT OUT	O	DA side integrator output
7	DALPF IN	I	DA side LPF input
8	DALPF OUT	O	DAside LPF output
9	MIX OUT	O	Mix AMP output for original tone& echo tone
10	MIX IN	I	Mix AMP input pin for original tone
11	ADLPF IN	I	AD side LPF input
12	ADLPF OUT	O	AD side LPF output
13	ADINT OUT	O	AD side integrator output
14	ADINT IN	I	AD side integrator input
15	VCC	-	Power supply
16	NC2	-	Non connect
17	MUTE	I	Mute control signal input
18	CR	-	CR pin for oscillator

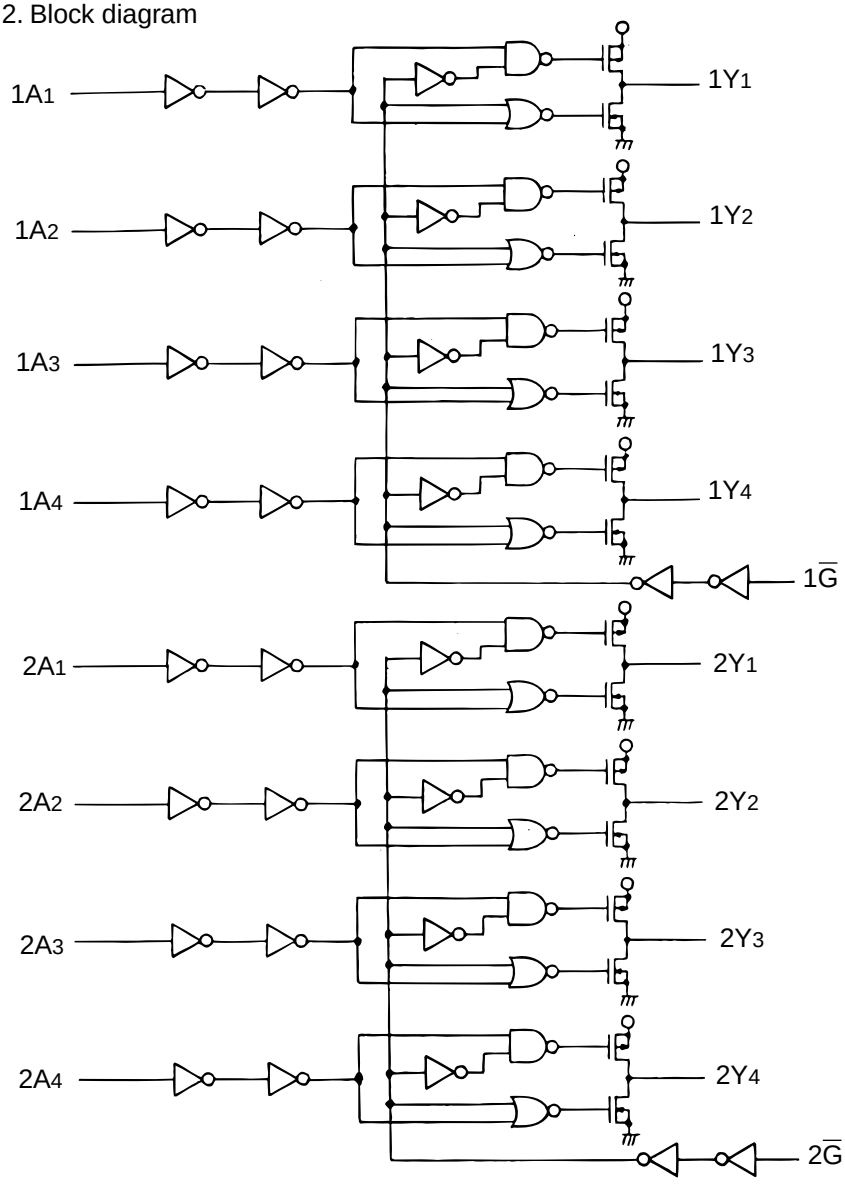
■ HD74HCT244FP-XE (IC181) : Buffer

1. Terminal layout



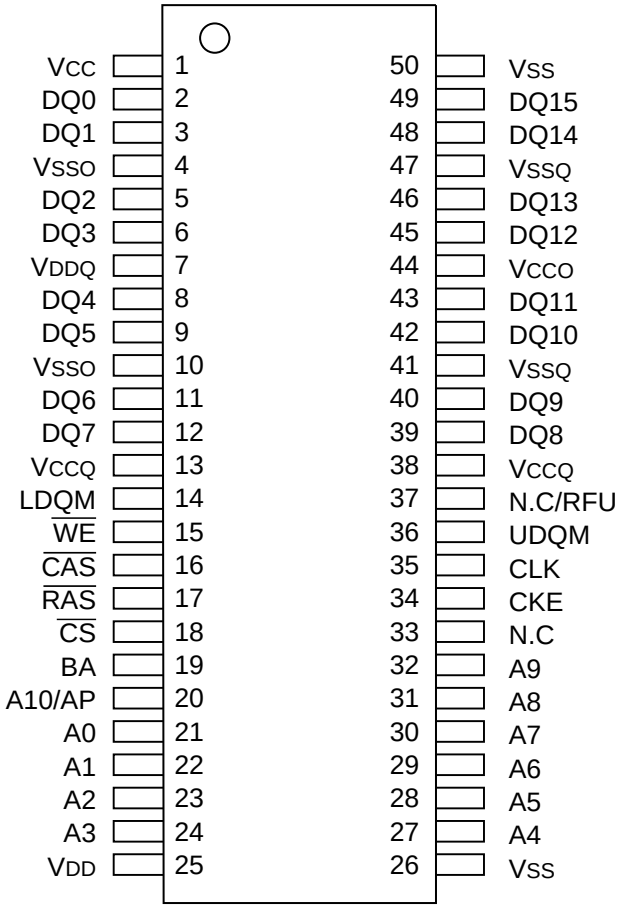
(Top View)

2. Block diagram



KM416S1020CTG10 (IC104) : 16Mb SDRAM

1. Terminal layout

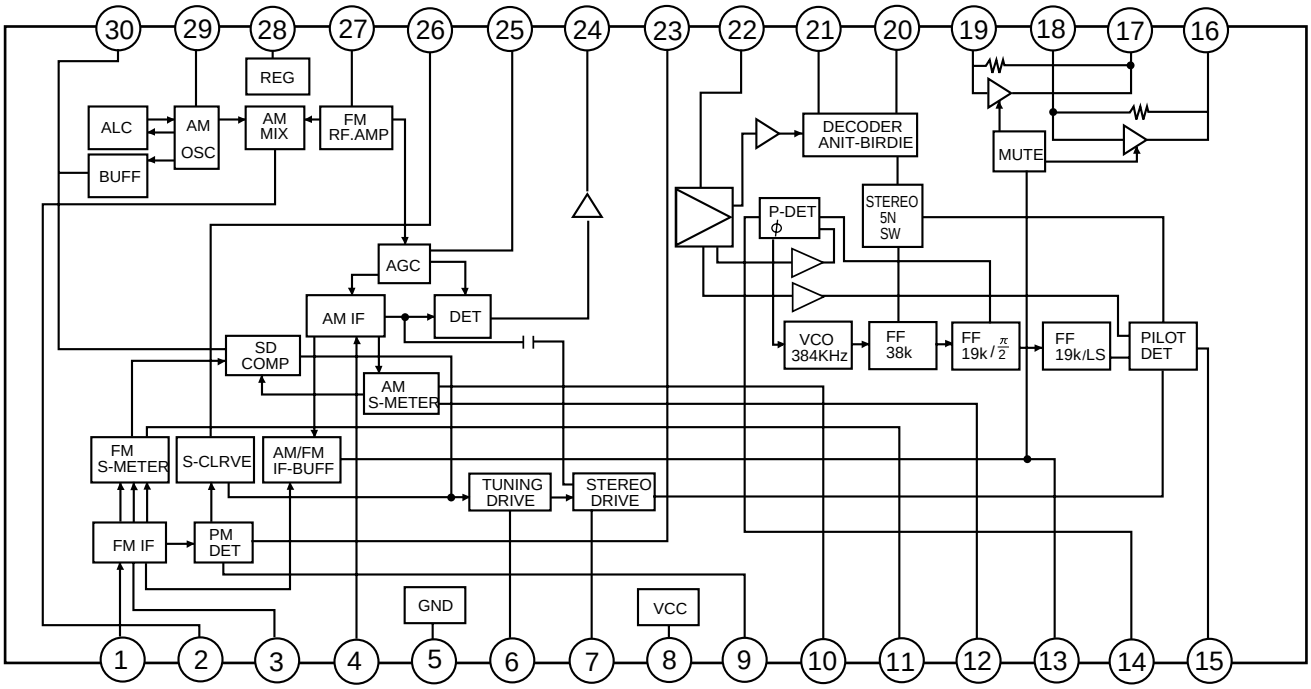


2. Pin function

Pin name	Function
CLK	System clock
$\overline{CS}$	Chip select
CKE	Clock enable
A_0 ~ A_{10}/AP	Address
BA	Bank select address
$\overline{RAS}$	Row address strobe
$\overline{CAS}$	Column address Strobe
$\overline{WE}$	Write enable
L(U)DQM	Data input/Output mask
$DQ_{0 \sim 15}$	Data input/Output
V_{DD}/V_{SS}	Power supply/Ground
V_{DDQ}/V_{SSQ}	Data output power/Ground
N.C/RFU	No connection/Reserved for future use

■ LA1838(IC1): FM AM IF AMP&detector, FM MPX decoder

1. Block Diagram

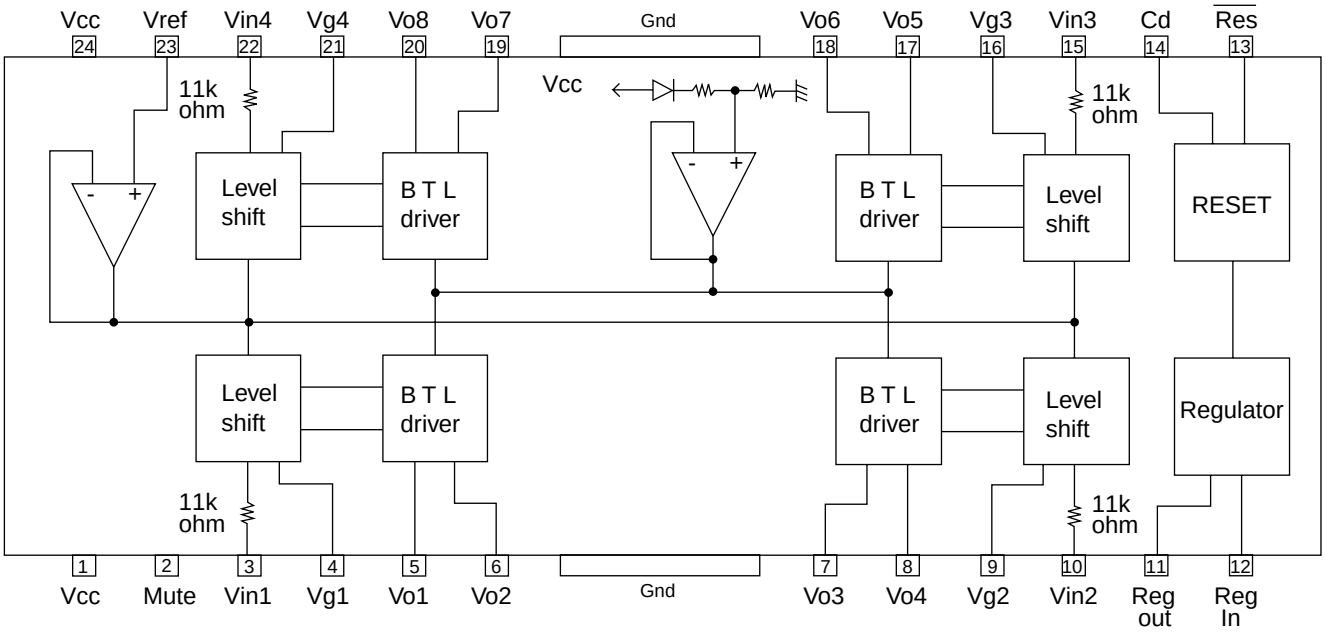


2. Pin Function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	FM IN	I	This is an input terminal of FM IF signal.	16	L OUT	O	Left channel signal output.
2	AM MIX	O	This is an out put terminal for AM mixer.	17	R OUT	O	Right channel signal output.
3	FM IF	I	Bypass of FM IF	18	L IN	I	Input terminal of the left channel post AMP.
4	AM IF	I	Input of AM IF Signal.	19	R IN	I	Input terminal of the right channel post AMP.
5	GND	–	This is the device ground terminal.	20	RO	O	Mpx Right channel signal output.
6	TUNED	O	When the set is tuning, this terminal becomes "L".	21	LO	O	Mpx Left channel signal output.
7	STEREO	O	Stereo indicator output. Stereo "L", Mono: "H"	22	IF IN	I	Mpx input terminal
8	VCC	–	This is the power supply terminal.	23	FM OUT	O	FM detection output.
9	FM DET	–	FM detect transformer.	24	AM DET	O	AM detection output.
10	AM SD	–	This is a terminal of AM ceramic filter.	25	AM AGC	I	This is an AGC voltage input terminal for AM
11	FM VSM	O	Adjust FM SD sensitivity.	26	AFC	–	This is an output terminal of voltage for FM-AFC.
12	AM VSM	O	Adjust AM SD sensitivity.	27	AM RF	I	AM RF signal input.
13	MUTE	I/O	When the signal of IF REQ of IC121(LC72131) appear, the signal of FM/AM IF output. //Muting control input.	28	REG	O	Register value between pin 26 and pin28 desides the frequency width of the input signal.
14	FM/AM	I	Change over the FM/AM input. "H" :FM, "L" : AM	29	AM OSC	–	This is a terminal of AM Local oscillation circuit.
15	MONO/ST	O	Stereo : "H", Mono: "L"	30	OSC BUFFER	O	AM Local oscillation Signal output.

■ LA6541-X(IC801) : Servo Driver

1. Pin Layout & Block Diagram

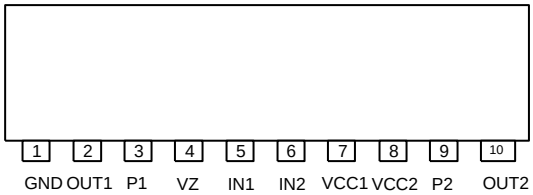


2. Pin functions

Pin No.	Symbol	Function
1	Vcc	Power supply (Shorted to pin 24)
2	Mute	All BTL amplifier outputs ON/OFF
3	Vin1	BTL AMP 1 input pin
4	Vg1	BTL AMP 1 input pin (For gain adjustment)
5	Vo1	BTL AMP 1 input pin (Non inverting side)
6	Vo2	BTL AMP 1 input pin (Inverting side)
7	Vo3	BTL AMP 2 input pin (Inverting side)
8	Vo4	BTL AMP 2 input pin (Non inverting side)
9	Vg2	BTL AMP 2 input pin (For gain adjustment)
10	Vin2	BTL AMP 2 input pin
11	Reg Out	External transistor collector (PNP) connection. 5V power supply output
12	Reg In	External transistor (PNP) base connection
13	Res	Reset output
14	Cd	Reset output delay time setting (Capacitor connected externally)
15	Vin3	BTL AMP 3 input pin
16	Vg3	BTL AMP 3 input pin (For gain adjustment)
17	Vo5	BTL AMP 3 output pin (Non inverting side)
18	Vo6	BTL AMP 3 output pin (Inverting side)
19	Vo7	BTL AMP 4 output pin (Inverting side)
20	Vo8	BTL AMP 4 output pin (Non inverting side)
21	Vg4	BTL AMP 4 output pin (For gain adjustment)
22	Vin4	BTL AMP 4 output pin
23	Vref	Level shift circuit's reference voltage application
24	Vcc	Power supply (Shorted to pin 1)

■ LB1641 (IC853) : DC Motor Driver

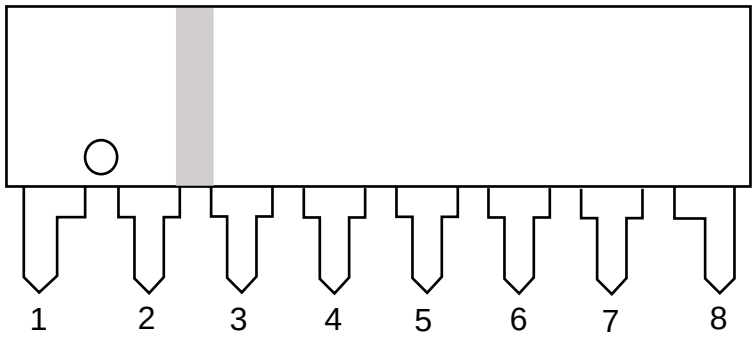
1. Pin Layout



2. Pin Functions

Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	CLOCKWISE
0	1	0	1	COUNTER-CLOCKWISE
1	1	0	0	Brake

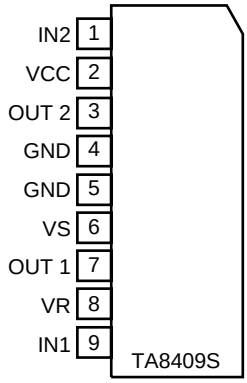
■ NJM4580L (IC901) : Mic Amplifier



1. A OUTPUT
2. A-INPUT
3. A+INPUT
4. V -
5. B+INPUT
6. B-INPUT
7. B OUTPUT
8. V+

■ TA8409S(IC851,IC852):Motor driver

1.Pin layout

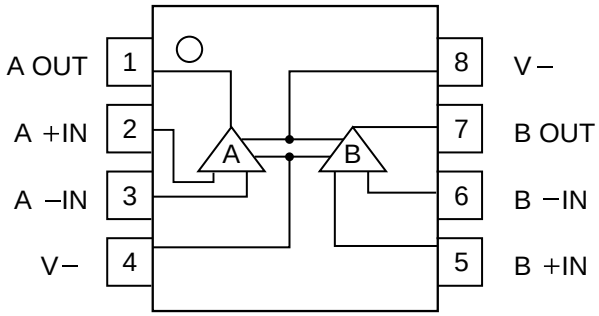


2.Pin function

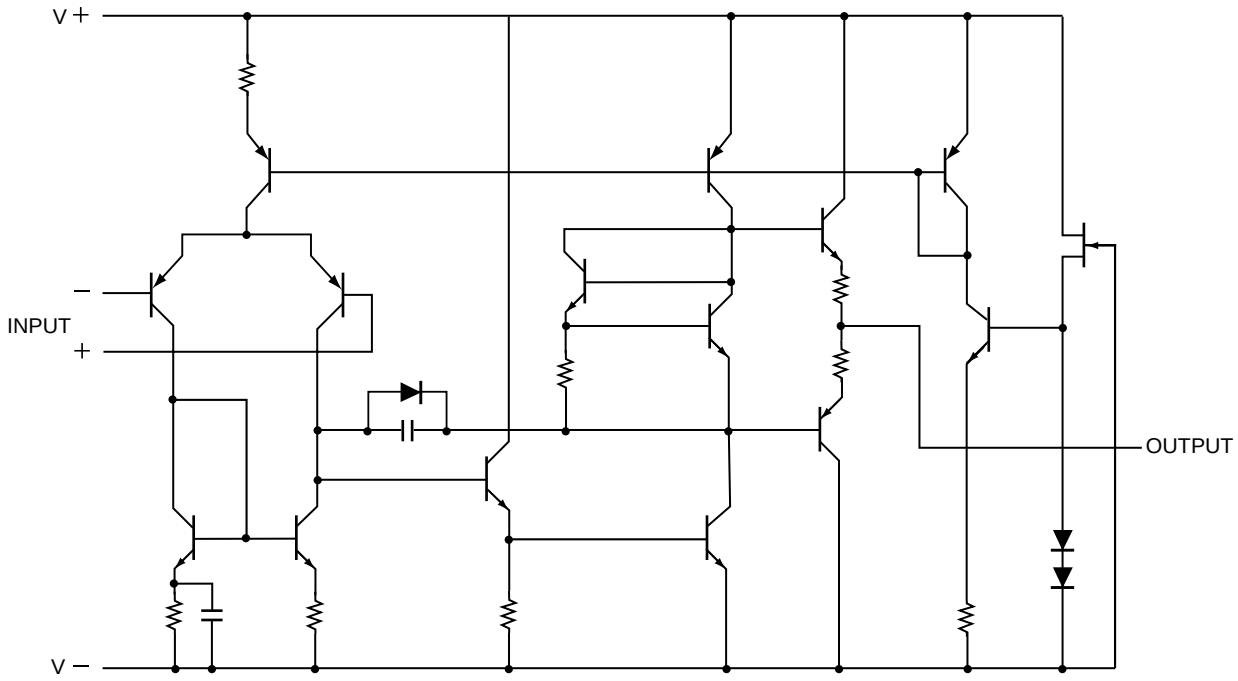
INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	MOTOR
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

■ NJM4580E-W(IC652) : OP amp

1. Terminal layout

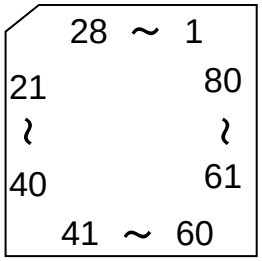


2. Block diagram

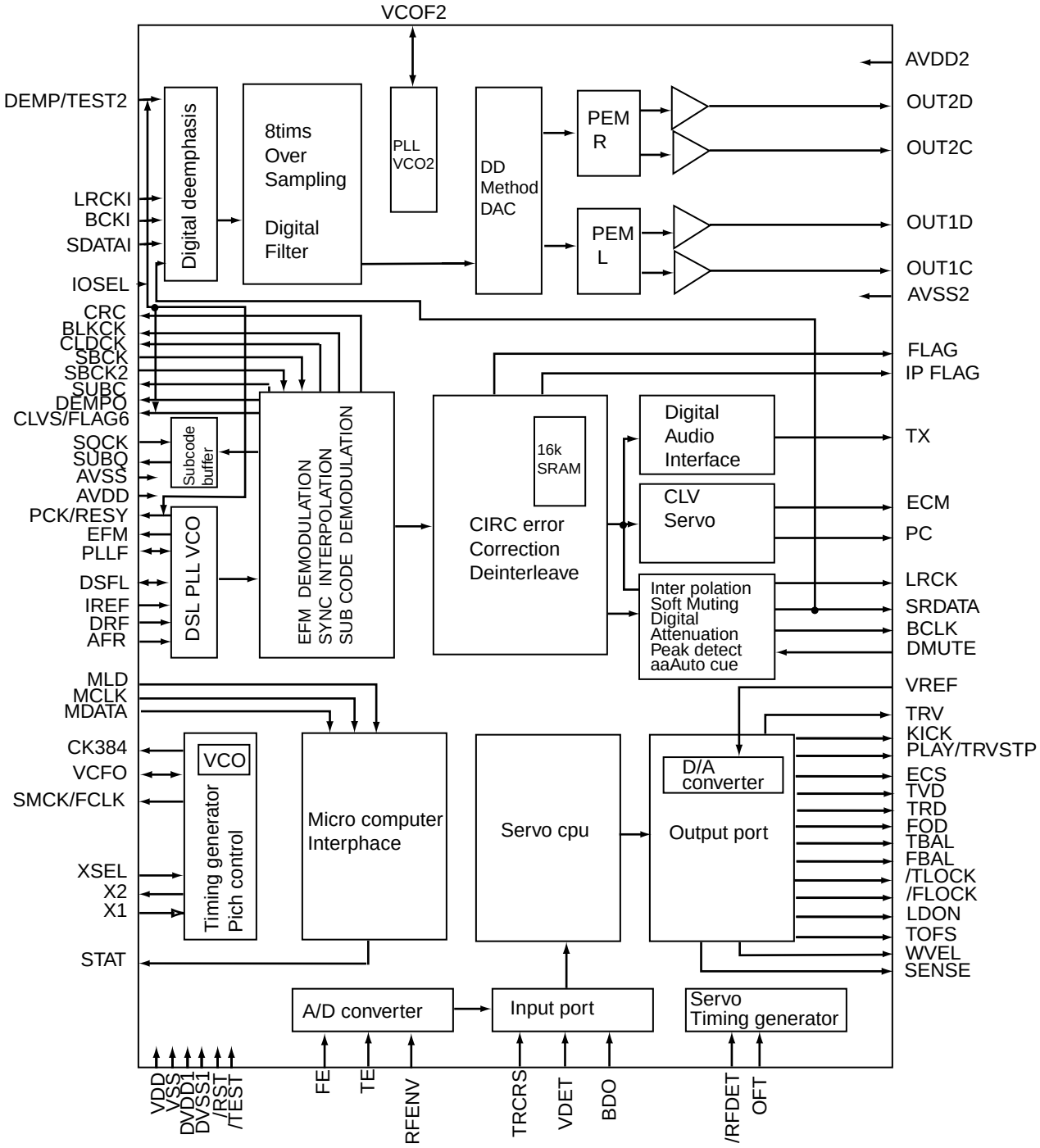


■ MN35511(IC651) : Digital servo & processor

1.Pin layout



2.Block diagram

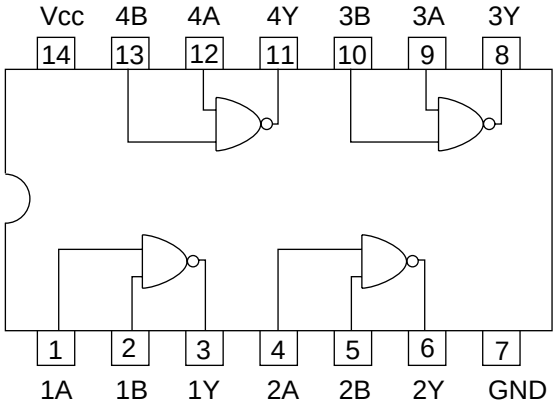


3. Pin function

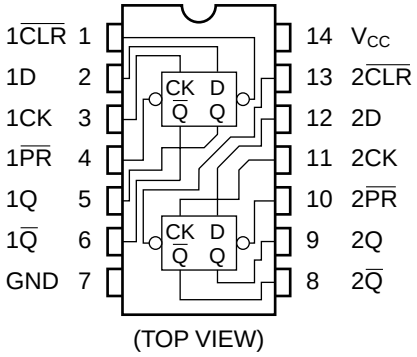
Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	BCLK	O	Bit clock output for SRDATA	41	TES	–	Non connect
2	LRCK	O	Identification signal output of Lch and Rch	42	PLAY	–	Non connect
3	SRDATA	O	Serial data output	43	WVEL	–	Non connect
4	DVDD1	–	Power supply (Digital)	44	ARF	I	RF signal input
5	DVSS1	–	Connected to GND	45	IREF	I	Reference current input pin
6	TX	O	Digital audio interface output	46	DRF	I	Bias pin for DSL
7	MCLK	I	μcom command clock signal input (Data is latched at signal's rising point)	47	DSLF	I/O	Loop filter pin for DSL
8	MDATA	I	μcom command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	μcom command load signal input	49	VCOF	–	Not used
10	SENSE	-	Non connect	50	AVDD2	–	Power supply(Analog)
11	FLOCK	-	Non connect	51	AVSS2	–	Connected to GND(Analog)
12	TLOCK	-	Non connect	52	EFM	–	Non connect
13	BLKCK	-	Non connect	53	PCK	–	Non connect
14	SQCK	I	Outside clock for sub-code Q resister input	54	PDO	–	Non connect
15	SUBQ	O	Sub-code Q -code output	55	SUBC	–	Non connect
16	DMUTE	–	Connected to GND	56	XSEL	I	Clock input for subcode/serial output
17	STATUS	O	Status signal (CRC,CUE,CLVS,TTSTOP,ECLV,SQOK)	57	VSS	–	Connected to GND(for X'tal oscillation circuit)
18	RST	I	Reset signal input (L:Reset)	58	XI	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	–	Non connect	59	X2	O	Output of X'tal oscillation circuit
20	PMCK	–	Non connect	60	VDD	–	Power supply(for X'tal cscillation circuit)
21	TRV	O	Traverse enforced output	61	VCOF2	O	PLL loop filter terminal for jitter absorption
22	TVD	O	Traverse drive output	62	AVSS1	O	Ground terminal for audio DAC
23	PC	–	Non connect	63	OUT1C	O	PEM output terminal 1C
24	ECM	O	Spindle motor drive signal (Enforced mode output) 3-State	64	OUT1D	O	PEM output terminal 1D
25	ECS	O	Spindle motor drive signal (Servo error signal output)	65	OUT2D	O	PEM output terminal 2D
26	KICK	O	Kick pulse output	66	OUT2C	O	PEM output terminal 2C
27	TRD	O	Tracking drive output	67	AVDD1	O	Power supply for audio DAC
28	FOD	O	Focus drive output	68	DEMPO	-	Non connect
29	VREF	I	Reference voltage input pin for D/A output block (TVD,FOD,FBA,TBAL)	69	CK384	O	384fs clock output
30	FBAL	O	Focus Balance adjust signal output	70	IOSEL	I	Mode switch terminal
31	TBAL	O	Tracking Balance adjust signal output	71	TEST	I	Test mode setting terminal
32	FE	I	Focus error signal input(Analog input)	72	SBCK2	I	Sub code/data reading clock input
33	TE	I	Tracking error signal input(Analog input)	73	SUBC	O	Sub code/serial output
34	RF ENV	I	RF envelope signal input(Analog input)	74	SBCK	I	Clock input for sub code/serial output
35	VDET	I	Vibration detect signal input(H:detect)	75	CLDCK	O	Sub code /frame clock signal output terminal
36	OFT	I	Off track signal input(H:off track)	76	IPFLAG	I	Interpolation flag signal output H:Interpolation
37	TRCRS	I	Track cross signal input	77	DEMPI	I	IOSEL:L The outside DEMPO input terminal
38	RFDET	I	RF detect signal input(L:detect)	78	SDATI	I	SRDATA input terminal
39	BDO	I	BDO input pin(L:detect)	79	LRCKI	I	When IOSEL is "L", LRCK input H:Lch data
40	LDON	O	Laser ON signal output(H:on)				L:Rch data
				80	BCKI	I	When IOSEL is "L", BCK input

■ TC74VHC00FT-X(IC106) : Wright timing control

1.Terminal layout / Block diagram

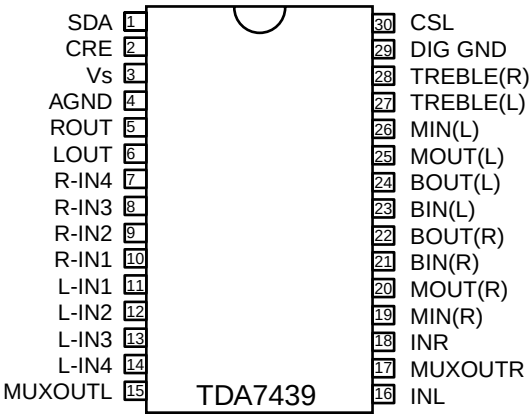


■ TC74VHC74FT-X (IC107) : Flip-Flop

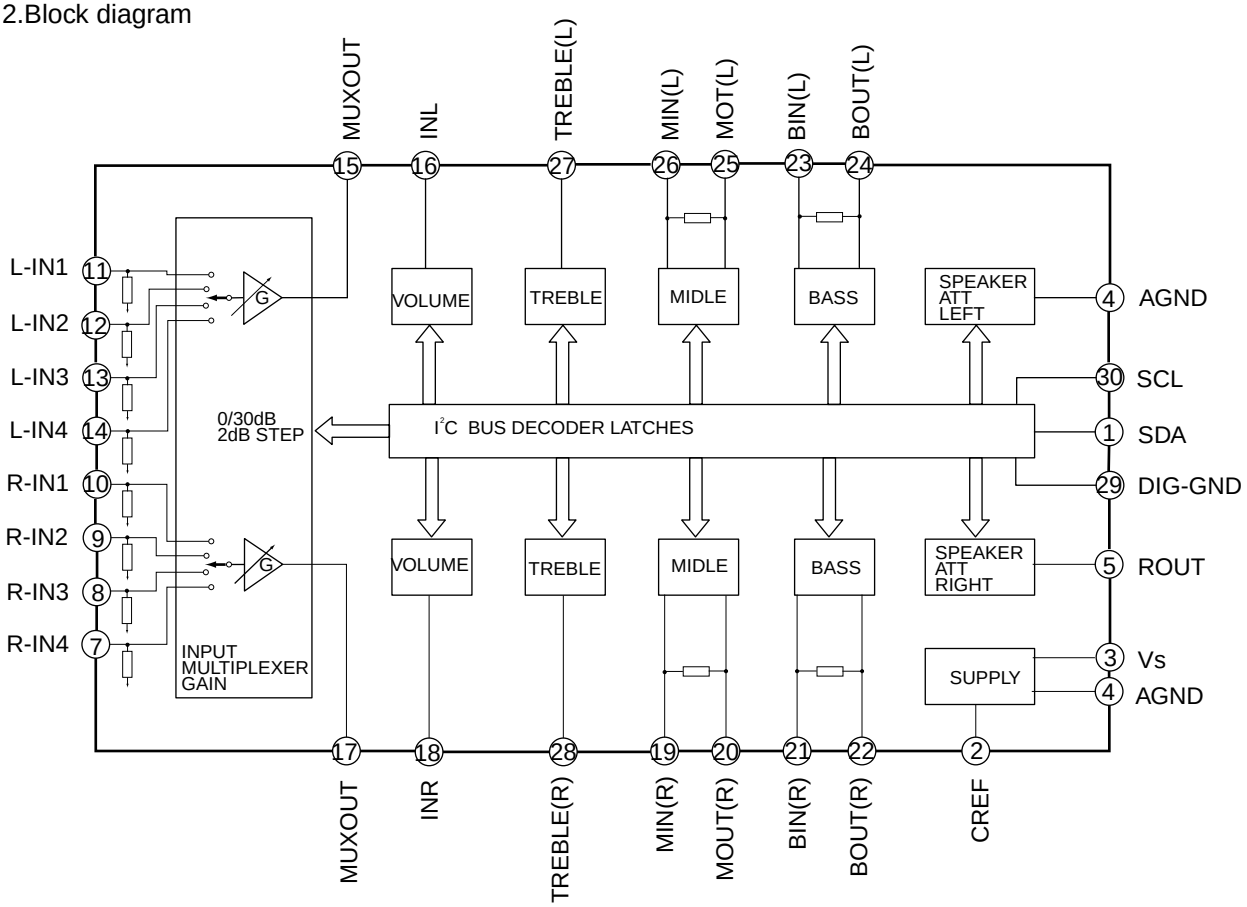


■ TDA7439 (IC436) : Conrtol volume

1.Pin layout

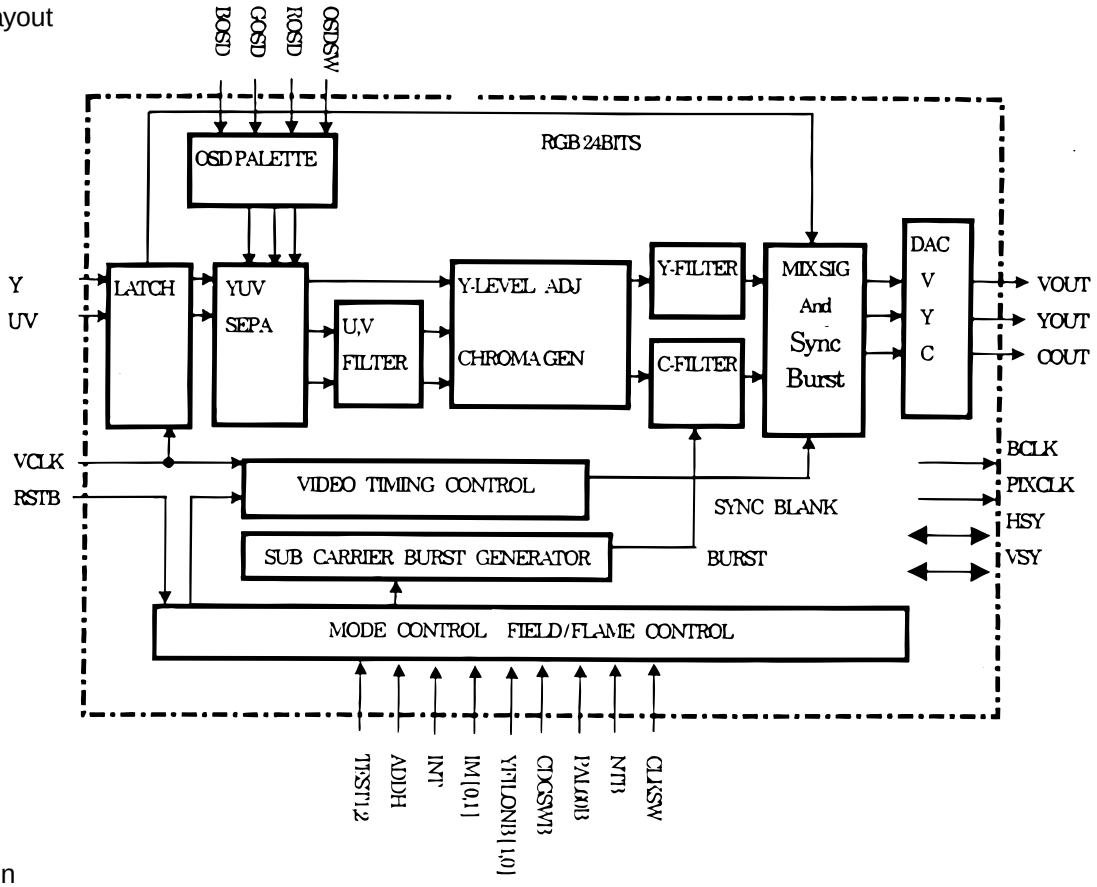


2.Block diagram



■ BU1427K (IC701) : Digital RGB-TV Encoder

1. Terminal layout



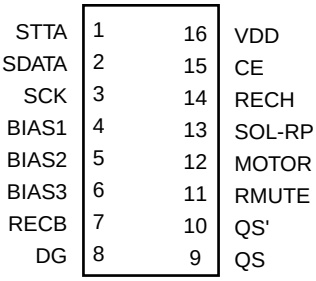
2. Pin function

No.	NAME	FUNCTION	No.	NAME	FUNCTION
1	BOSD	OSD BLUE DATA INPUT	33	SLABEB	SELECT MASTER/SLAVE
2	Y0/YUV0	YUV DATA	34	ADDH	+0.5/-0.5 LINE at NON-INTER
3	Y1/YUV1	YUV DATA	35	VREF-C	DAC BIAS
4	Y2/YUV2	YUV DATA	36	CGND	CHROMA OUTPUT GROUND
5	Y3/YUV3	YUV DATA	37	COUT	CHROMA OUTPUT
6	Y4/YUV4	YUV DATA	38	VGND	Composite Output Ground
7	Y5/YUV5	YUV DATA	39	VOUT	COMPOSITE OUTPUT
8	Y6/YUV6	YUV DATA	40	AVSS	Analog Ground (DAC, VREF)
9	GND	DIGITAL GROUND	41	P-VDD	POWER(DAC) VDD
10	Y7/YUV7	YUV DATA	42	IR	REFERENCE RESISTOR
11	UV0	UV DATA	43	AVDD	ANALOG (VREF) VDD
12	UV1	UV DATA	44	YGND	Luminance Output Ground
13	UV2	UV DATA	45	YOUT	Luminance Output
14	UV3	UV DATA	46	VDD	DIGITAL VDD
15	OSDSW	OSD ENABLE/DISABLE	47	YFILON2B	Y-FILSEL THROU/FILON2
16	CDGSWB	SELECT Video CD/CD-G	48	YCOFF	DAC(YOUT,COUT) OFF
17	UV4	UV DATA	49	YFILON1B	Y-FILSEL THROU/ FILON1
18	UV5	UV DATA	50	PAL60B	NORMAL/PAL60 at PALMODE
19	UV6	UV DATA	51	VCLK	Video Clock Input
20	UV7	UV DATA	52	RSTB	NORMAL/RESET
21	GND	DIGITAL GROND	53	CLKSW	SEL*1CLK/*2CLK
22	NTB	SELECT NISC/PAL MODE	54	RD0	Pull Down to GND
23	IM0	SELECT YUV/YUV	55	RD1	Pull Down to GND
24	IM1	SELECT DAC/NORMAL	56	RD2	Pull Down to GND
25	TEST1	Normally pull down to GND	57	ROSD	OSD RED DATA INPUT
26	TEST2	SELECT U/V TIMING	58	RD3	Pull Down to GND
27	VSY	V-SYNC INPUT or OUTPUT	59	BCLK/RD4	BASE CLOCK OUT
28	HSY	H-SYNC INPUT or OUTPUT	60	RD5	Pull Down to GND
29	PIXCLK	1/2 freq. of BCLK	61	IO VDD	VDD for I/O
30	VDD	DIGITAL VDD	62	RD6	Pull Down to GND
31	IO VDD	VDD for I/O	63	RD7	Pull Down to GND
32	INT	Interlace /Non-Interlace	64	GOSD	OSDGREEN DATA INPUT

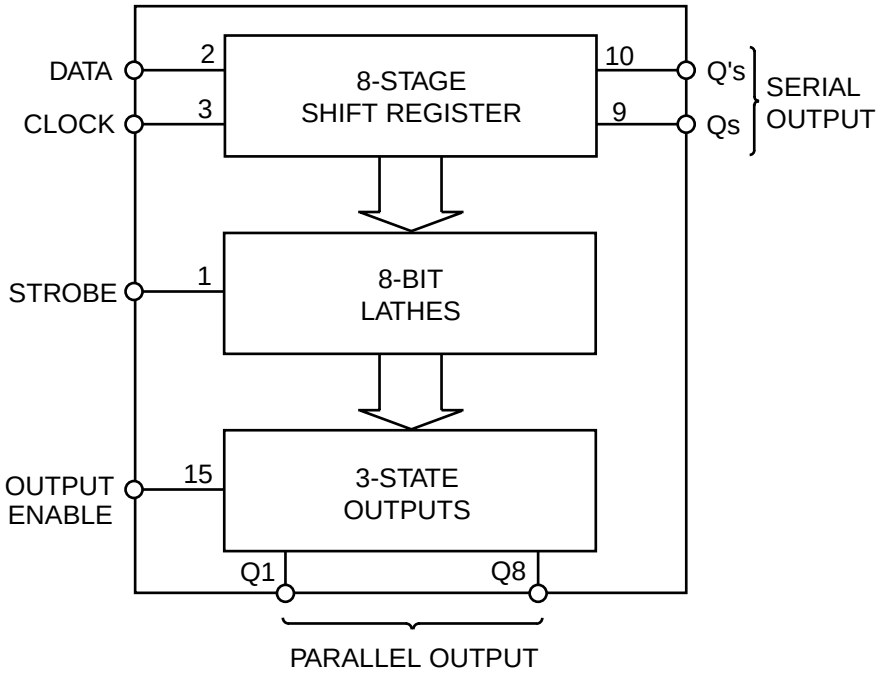
* The pin built-in pull-down resister. (30kohm)

■ BU4094BCF (IC303,IC304) : Serial to parallel port extension

1.Pin layout

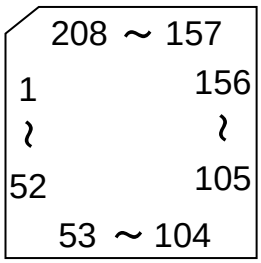


2.Block diagram

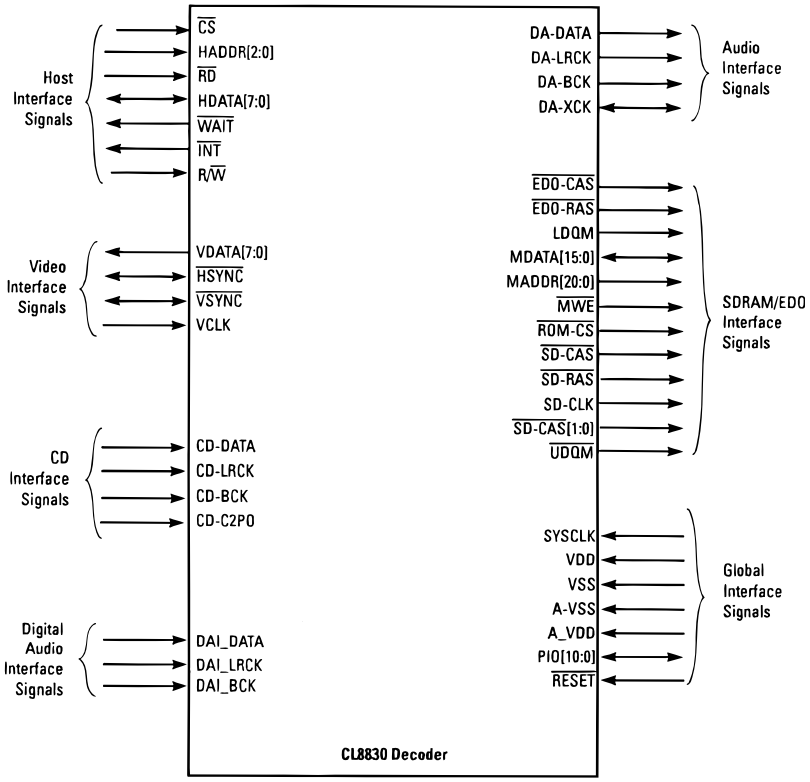


■ CL8830-PA1 (IC101) : MPEG Decoder & DSP

1. Pin layout



2. Block diagram



3.Pin function(1/2)

Pin No	Name	Symbol and I/O	Description
System Services			
13	$\overline{\text{RESET}}$	I	Hardware reset. An external device asserts $\overline{\text{RESET}}$ (active LOW) to execute a decoder hardware reset. To ensure proper initialization after power is stable, assert RESET for at least 20µs.
178	SYSCLK	I	System clock. Decoder requires an external 27 MHz TTL oscillator. Drive with the same 27-MHz as VCK.
190,174,156,153,147,141,138, 133,129,52,1	PIO[10:0]	I/O	Programmable I/O pins.
Power and Ground			
176	A- VDD	Analog Power	3.3-V analog supply voltage.
179	A- VSS	Analog Ground	Analog ground for PLL.
5,12,17,27,36,40,47,55,61,65, 69,75,81,87,91,95,101,107,113, 117,123,134,144,149,160,168, 175,181,193,197	VDD	Power	3.3-V supply voltage for core logic and I/O signals.
7,14,19,29,38,42,49,57,63,67, 71,77,83,89,93,97,103,109,115, 119,125,136,146,151,162,170, 183,195,199	VSS	Ground	Ground for core logic and I/O signals.
8-bit Host Interface			
206	$\overline{\text{CS}}$	I	Host chip select. Host asserts CS to select the decoder for a read or write operation. The falling edge of this signal triggers the read or write operation.
204-202	HADDR[2:0]	I	Host address bus. 3-bit address bus selects one of eight host interface registers.
11-8,6,4-2	HDAT[7:0]	I/O	8-bit bi-directional host data bus. Host writes data to the decoder Code FIFO via HDATA[7:0]. MSB of the 32-bit word is written first. The host also reads and writes the decoder internal registers and local SDRAM/ROM via HDAT[7:0].
16	$\overline{\text{INT}}$	O,OD,PU	Host interrupt. Open drain signal, must be pulled-up to 3.3 volts. Driven high for 10 ns before tristate.
208	$\overline{\text{RD}}$	I	Read strobe in I mode. Must be held HIGH in M Mode.
207	R/$\overline{\text{W}}$	I	Read/write strobe in M mode. Write strobe in I mode. Host asserts R/$\overline{\text{W}}$ LOW to select write and LOW to select Read.
15	$\overline{\text{WAIT}}$	O,OD,PU	Active LOW to indicate host initiated transfer is not complete. $\overline{\text{WAIT}}$ is asserted after the falling edge of $\overline{\text{CS}}$ and reasserted when decoder is ready to complete transfer cycle. Open drain signal, must be pulled-up to 3.3 volts. Driven high for 10 ns before tristate.
CD interface			
185	CD-C2PO	I	Asserted HIGH indicates a corrupted byte. Decoder keeps the previouse valid picture on-screen until the next valid picture is decoded.
184	CD-BCK	I	CD bit clock. Decoder accept multiple BCK rates.
182	CD-LRCK	I	Programmable polarity 16-bit word synchronization to the decoder (right channel HIGH).
180	CD-DATA	I	Serial CD data.

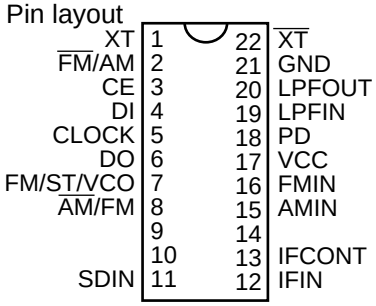
3.Pin function(2/2)

Pin No	Name	Symbol and I/O	Description
Video Output			
157	$\overline{\text{HSYNC}}$	I/O	Horizontal sync. The decoder begins outputting pixel data for a new horizontal line after the falling (active) edge of $\overline{\text{HSYNC}}$.
177	VCLK	I	Video clock. Clocks out data on input. VDATA[7:0]. Clock is typically 27 MHz.
155,154,152,150,148,145,143, 142	VDATA[7:0]	O	Video data bus. Byte serial CbYCrY data synchronous with VCLK. At power-up, the decoder does not drive VDATA. During boot-up, the decoder uses configuration parameters to drive or 3-state VDATA.
158	$\overline{\text{VSYNC}}$	I/O	Vertical sync. Bi-directional, the decoder outputs the top border of a new field on the first $\overline{\text{HSYNC}}$ after the falling edge of $\overline{\text{VSYNC}}$. $\overline{\text{VSYNC}}$ can accept vertical synchronization or top/bottom field notification from an external source. ($\overline{\text{VSYNC}}$ HIGH = bottom field. $\overline{\text{VSYNC}}$ LOW = Top field)
SDRAM/EDO/ROM interface			
92	$\overline{\text{EDO-CAS}}$	O	Active LOW EDO DRAM column address strobe.
94	$\overline{\text{EDO-RAS}}$	O	Active LOW EDO DRAM Row address strobe.
79	LDQM	O	SDRAM LDQM.
127,126,124,122-120,118,116, 114,112-110,108,106-104,102, 100-98,96	MADDR[20:0]	O	Memory address.
78,76,74-72,70,68,66,64,62,60-58,56,54,53	MDATA[15:0]	I/O	Memory data.
82	$\overline{\text{MWE}}$	O	SDRAM/EDO write enable. Decoder asserts active LOW to request a write operation to the SDRAM array.
128	$\overline{\text{ROM-CS}}$	O,OD,PU	ROM chip select. Open drain signal, must be pulled-up to 3.3 volts.
85	$\overline{\text{SD-CAS}}$	O	Active LOW SDRAM column address.
84	SD-CLK	O	SDRAM system clock.
88,90	$\overline{\text{SD-CS}}$[1:0]	O	Active LOW SDRAM bank select.
86	$\overline{\text{SD-RAS}}$	O	Active LOW SDRAM row address.
80	UDQM	O	SDRAM UDQM.
Audio interface			
167	DA-BCK	O	PCM bit clock. Divided by 8 from DA-XCK, DA-BCK can be either 48 or 32 times the sampling clock.
161	DA-DATA	O	Serial audio samples relative to DA-BCK clock.
166	DA-LRCK	O	PCM left-right clock. Identifies the channel for each audio sample. The polarity is programmable.
169	DA-XCK	I/O	Audio external frequency clock. Used to generate DA-BCK and DA-LRCK. DA-XCK can be either 384 or 256 times the sampling frequency.
173	DAI-BCK	I	PCM input bit clock.
171	DAI-DATA	I	PCM input data, two channels. Serial audio samples relative to DA-BCK clock, resulting in downmixed audio output.
172	DAI-LRCK	I	PCM input left-right clock.

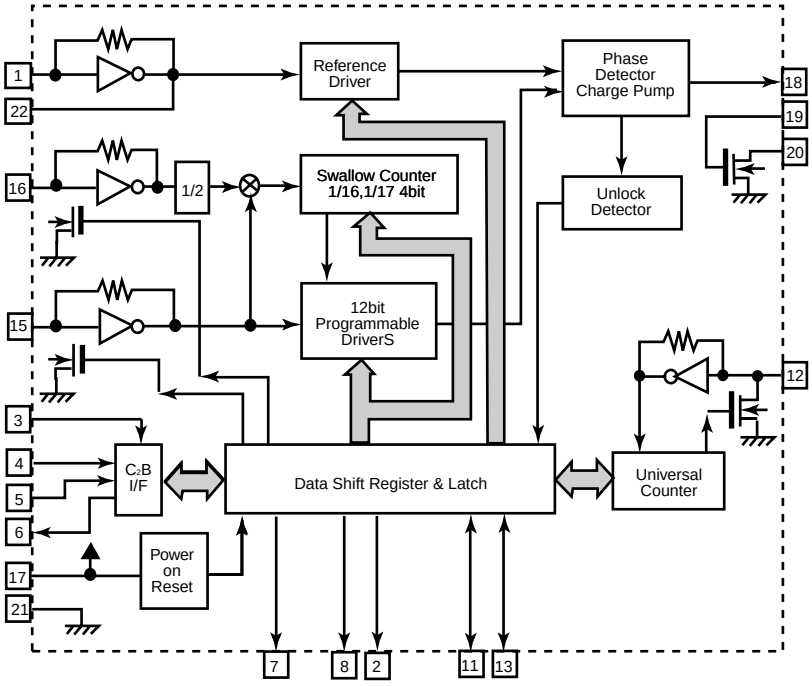
1.I-input, O-output, OD-open drain, PU-requires external 4.7-kΩpull-up resistor.

■ LC72136N (IC2) : PLL frequency synthesizer

1. Pin layout



2. Block diagram

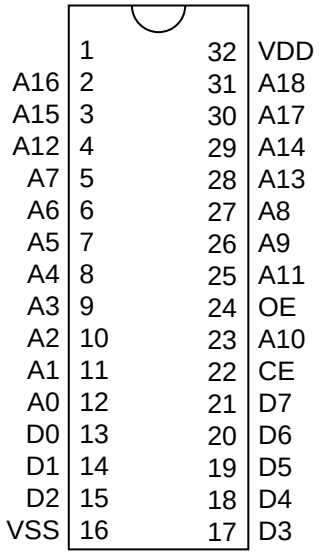


3. Pin function

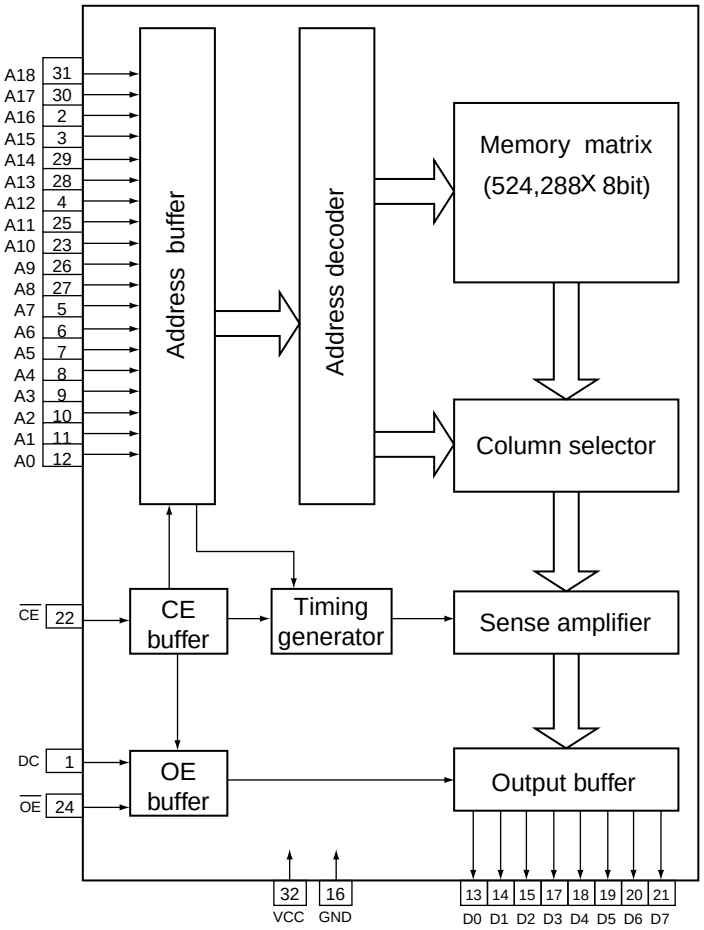
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XT	I	X'tal oscillator connect (75kHz)	12	IFIN	I	IF counter signal input
2	$\overline{FM}$/AM	O	LOW:FM mode	13	IFCONT	O	IF signal output
3	CE	I	When data output/input for 4pin(input) and 6pin(output): H	14		-	Not use
4	DI	I	Input for receive the serial data from controller	15	AMIN	I	AM Local OSC signal output
5	CLOCK	I	Sync signal input use	16	FMIN	I	FM Local OSC signal input
6	DO	O	Data output for Controller Output port	17	VCC	-	Power suplly(VDD=4.5-5.5V) When power ON:Reset circuit move
7	FM/ST/VCO	O	"Low": MW mode	18	PD	O	PLL charge pump output(H: Local OSC frequency Height than Reference frequency. L: Low Agreement: Height impedance)
8	$\overline{AM}$/FM	O	Open state after the power on reset	19	LPFIN	I	Input for active lowpassfilter of PLL
9	LW	I/O	Input/output port	20	LPFOUT	O	Output for active lowpassfilter of PLL
10	MW	I/O	Input/output port	21	GND	-	Connected to GND
11	SDIN	I/O	Data input/output	22	$\overline{XT}$	I	X'tal oscillator(75KHz)

■ LHMN4RN5-X (IC105) : 4MB micro code

1.Terminal layout



2.Block diagram

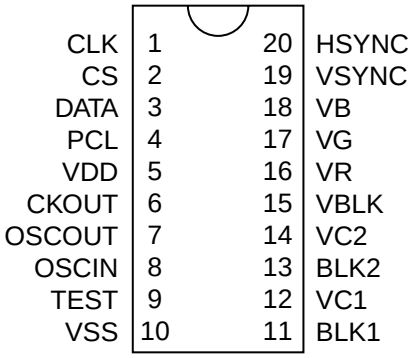


3.Pin function

Pin No.	Symbol	I/O	Description
1		-	Non connect
2,3	A16,A15	I	Address input
4	A12	I	Address input
5~12	A7~0	I	Address input
13~15	D0~2	O	Data output
16	VSS	-	Connect to GND
17~21	D3~7	O	Data output
22	CE	I	Chip enable input
23	A10	I	Address input
24	OE	I	Output enable input
25	A11	I	Address input
26,27	A9,8	I	Address input
28,29	A13,14	I	Address input
30,31	A17,18	I	Address input
32	VDD	-	Power supply

■UPD6461GS-635-X (IC151) : 16MB SDRAM

1.Pin layout



2.Pin function

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	CLK	Clock signal input	12	VC1	Non connect
2	CS	Chip select input	13	BLK2	Non connect
3	DATA	Serial data input	14	VC2	Non connect
4	PCL	Power ON clear	15	VBLK	Blanking signal output
5	VDD	Power supply	16	VR	Character signal output
6	CKOUT	Non connect	17	VG	Character signal output
7	OSCOUT	Non connect	18	VB	Character signal output
8	OSCIN	Oscillation terminal (output)	19	VSYNC	Vertical synchronizing signal input
9	TEST	Connect to GND			
10	VSS	Connect to GND	20	HSYNC	Horizontal synchronizing signal input
11	BLK1	Non connect			

■ MN101C35DEB (IC810) : System controller

Pin function (1/2)

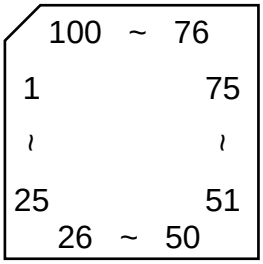
Pin No.	Symbol	I/O	Function
1	KCMND	O	SVC3 Serial data output
2	MSTAT	I	SVC3 status input input
3	KCLK	I	SVC3 Serial clock input
4	DATAOUT	O	SLC/TUNER data output
5	DATAIN	I	TUNER data input
6	CK	O	SLC/TUNER clock
7	BEAT	O	Beat cut signal output of TUNER
8	VDD	-	Power supply +5V
9,10	OSC2,1	I/O	Oscillation terminal (8MHz)
11	VSS	-	Connect to GND
12,13	XI,XO	I/O	Sub clock (32.768kHz)
14	MMOD	-	Connect to GND
15	VREF-	-	Connect to GND
16~19	KEY1~4	I	Key matrix input 1~4
20	SLCKEY1	I	Tape B playback/recording detect switch
21	SLCKEY2	I	Tape B playback detect switch
22	SLCKEY3	I	Tape A playback detect switch
23	SPID	I	SPID IN
24	VREF+	I	AD port voltage reference
25	MRDY	I	VC3 Ready
26	RESET	I	Reset signal input
27	P OPEN	I	Rolling panel open detection signal input
28	P CLOSE	I	Rolling panel close detection signal input
29	VOLLED	O	LED Control signal output (VOL)
30	MSI	I	MS detector signal input
31	ECHO2	-	Echo ON/OFF(Not used)
32	ECHO1	-	Echo ON/OFF(Not used)
33	REMIN	I	Remote control signal input
34	PHOTOA	I	Tape A mechanism running detection signal input
35	PHOTOB	I	Tape B mechanism running detection signal input
36	INH	I	Inhibit signal input
37	RDSCLK	I	Clock signal input from IC3 (B/E/EN model)
38	PRT	I	Protector input
39	EXTCE	-	EXT IC Chip enable
40~41	BASSVOL+/-	I	Bass volume rotary encoder input(+/-)
42	RDS-DATA	I	RDS data input from IC3(B/E/EN model)
43	SPIA	-	SPI Control A
44	SPIB	-	SPI Control B
45,46	VOL+/-	I	Volume rotary encoder input (+/-)
47	MPX	I	Stereo detect
48	FVOLDA	O	Front volume data output
49	VOLCLK	O	Clock sibnal output to IC436
50	BASSLED	O	LED Control signal output (BASS)

Pin function (2/2)

Pin No.	Symbol	I/O	Function
51~63	G13~G1	O	FL grid control signal output
64~87	P1~P24	O	FL segment control signal output
88	SLCCE	O	SLC Chip enable signal output to IC303,IC304
89	AUX LED	O	LED Control signal output (AUX)
90	DOORCL	O	Rolling panel motor control signal output
91	DOOR OPEN	O	Rolling panel motor control signal output
92	CDLED	O	LED Control signal output (CD)
93	TAPE LED	O	LED Control signal output (TAPE)
94	TU LED	O	LED Control signal output (TUNER)
95	SMUTE	O	System mute control signal output
96	BTU+	O	Tuner supply control
97	POUT	O	Power ON/OFF
98	TUCE	O	TUNER Chip enable signal output
99	VC3RESET	O	VC3 reset output
100	VPP	-	Power supply

■ MN102L490A (IC103) : VCD Host micom

1.Pin layout



2.Pin function

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	DVDWAIT	I	Wait signal input from IC106	55~57		-	Non connect
				58	ENCRST	O	Reset signal output to IC152
2	OE	I	Read Enable input	59	PAL60	O	Normal PAL60 at PAL mode
3		-	Non connect	60	N/PAL	O	Select NTSC/PAL mode
4	WE	O	Write enable signal output	61	VSS	-	Connect to ground
5	ROMCS	O	Chip select signal output (ROM)	62		-	Non connect
				63	VCDEMP	-	Non connect
6		-	Non connect	64	HREQ	O	Request signal output to IC251
7	RAMCS	-	Non connect				
8	DVDCS	O	Chip select signal output (AV decoder)	65	HRDY	O	Ready signal output to IC251
				66	VDD	-	Power supply
9	BREQ	-	Power supply	67	SRCLK	I	Data clock input
10	DVDRST	O	Reset signal output to IC101	68	M2HDAT	I	Mecha to host micom data port
11		-	Non connect				
12	WORD	-	Connect to ground	69	H2MDAT	O	Host to mecha micom data port
13~16	HA0~3	O	Host address bus terminal				
17	VDD	-	Power supply	70	SBT1	-	Power supply
18	SYSCLK	-	Non connect	71	SBI1	-	Connect to ground
19	VSS	-	Connect to ground	72	SBO1	-	Non connect
20	XI	-	Connect to ground	73		-	Pull up
21	XO	-	Non connect	74		-	Pull up
22	VDD	-	Power supply	75		-	Power supply
23	OSCI	I	Oscillation terminal(1MHz)	76	MREQ	I	Request signal input from IC251
24	OSCO	O	Oscillation terminal(1MHz)				
25	MODE	-	Connect to ground	77		-	Non connect
26~33	HA4~11	O	Host address bus terminal	78	DVDINT	I	Interrupt from AV decoder
34	VDD	-	Power supply	79,80		-	Non connect
35~41	HA12~18	O	Host address bus terminal	81	ADSEP	-	Power supply
42	HA19	-	Non connect	82	RESET	I	Reset signal input
43	VSS	-	Connect to ground	83	VDD	-	Power supply
44~47	HA20~23	-	Non connect	84~91		-	Non connect
48~53		-	Non connect	92	VSS	-	Connect to ground
54	VDD	-	Power supply	93~100	HD0~7	I/O	Host data bus terminal

-MEMO-

MX-J570V
MX-J680V

JVC

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