

JVC

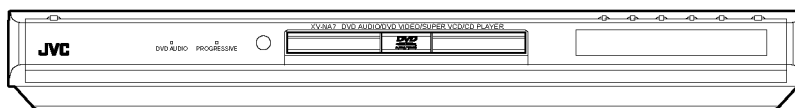
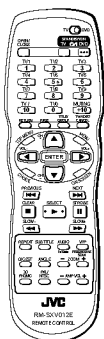
SERVICE MANUAL

DVD AUDIO/VIDEO PLAYER

XV-NA7SL

Area S uffix

A ----- Australia
 B ----- U.K.
 E --- Continental Europe
 EN --- Northern Europe
 US ----- Singapore
 UW --- Brazil, Mexico, Peru


AV COMPU LINK

For only ver.A,US,UW

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SECTION 1

Important Safety Precautions

1.1 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 manufacturers 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 (Δ) 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 reassembling.
- (5) Leakage shock hazard testing)

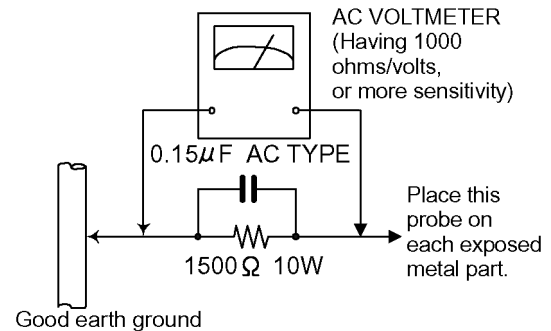
After reassembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

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 1,500 ohm 10W resistor paralleled by a 0.15 μ F 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 each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure 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.).



1.2 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.

1.3 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 pre-forming repair of this system.

1.4 Critical parts for safety

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor ($\blacksquare$), diode ($\blacktriangle$) and ICP ($\bullet$) or identified by the " Δ " mark nearby are critical for safety.

When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (Except the JC version)

1.5 Preventing 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.

1.5.1 Grounding to prevent damage by static electricity

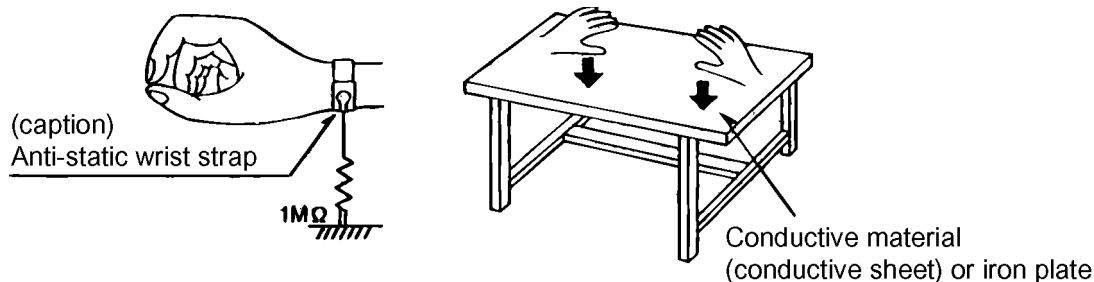
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as DVD players. Be careful to use proper grounding in the area where repairs are being performed.

(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) Ground yourself

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



(3) Handling the optical pickup

- 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.)
- 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.

1.6 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.

1.7 Important for laser products

- (1) **CLASS 1 LASER PRODUCT**
- (2) **DANGER** : Invisible laser radiation when open and interlock 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 defeated. 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 öppnas och spärren är urkopplad. Betrakta ej strålen.

VARO

Avattaessa ja suojalulitus 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 åbning, når sikkerhedsbryteren er avslott. unngå utsettelse for stråling.

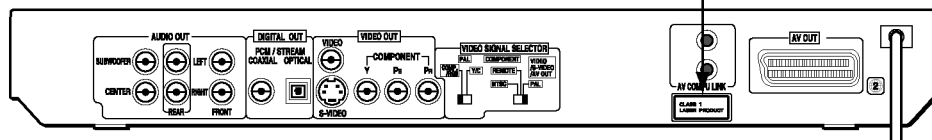
REPRODUCTION AND POSITION OF LABEL and PRINT

WARNING LABEL and PRINT

CAUTION: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)	VARNING: Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen. (s)	ADVARSEL: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (d)	VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)
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CLASS 1
LASER PRODUCT



1.8 Precautions for Service

1.8.1 Handling of Traverse Unit and Laser Pickup

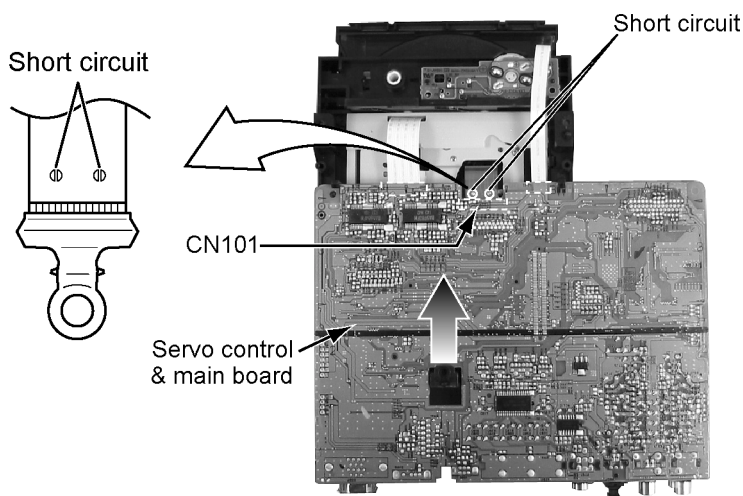
- (1) Do not touch any peripheral element of the pickup or the actuator.
- (2) The traverse unit and the pickup are precision devices and therefore must not be subjected to strong shock.
- (3) Do not use a tester to examine the laser diode. (The diode can easily be destroyed by the internal power supply of the tester.)
- (4) To replace the traverse unit, pull out the metal short pin for protection from charging.
- (5) When replacing the pickup, after mounting a new pickup, remove the solder on the short land which is provided at the center of the flexible wire to open the circuit.
- (6) Half-fixed resistors for laser power adjustment are adjusted in pairs at shipment to match the characteristics of the optical block. Do not change the setting of these half-fixed resistors for laser power adjustment.

1.8.2 Destruction of Traverse Unit and Laser Pickup by Static Electricity

Laser diodes are easily destroyed by static electricity charged on clothing or the human body. Before repairing peripheral elements of the traverse unit or pickup, be sure to take the following electrostatic protection:

- (1) Wear an antistatic wrist wrap.
- (2) With a conductive sheet or a steel plate on the workbench on which the traverse unit or the pick up is to be repaired, ground the sheet or the plate.
- (3) After removing the flexible wire from the connector (CN101), short-circuit the flexible wire by the metal clip.
- (4) Short-circuit the laser diode by soldering the land which is provided at the center of the flexible wire for the pickup. After completing the repair, remove the solder to open the circuit.

Please refer to "Fig.8" of "Disassembly method" for details.



SECTION 2

Disassembly method

There is a part different from the photograph according to the model and the destination though explains this disassembly method by using version for europe.

2.1 Main body section

2.1.1 How to remove a top cover

(See Figure 1)

- (1) Screw A attaches a top cover to the main part. Remove the two screws A from the both sides of the main part.
- (2) Screw B attaches the top cover to the main part. Remove the three screws B from the rear side of the main part.
- (3) Raise the both sides and lower part of the rear of the top cover, with opening them slightly in an outward direction. And the top cover will be removed.

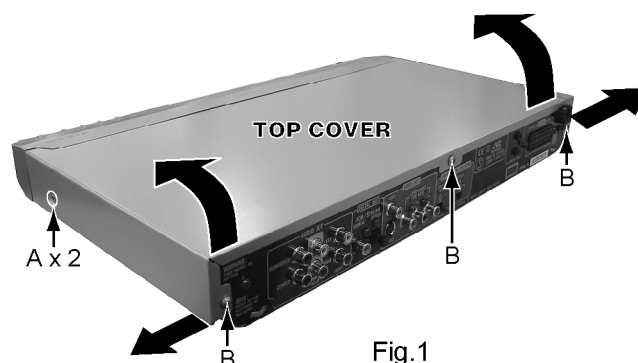


Fig.1

2.1.2 How to remove a front panel assembly

(See Figure 2, 3, and 4.)

- Please remove a top cover before removing a front panel assembly.
 - Front panel assembly can be removed without removing mechanism assembly.
- (1) Insert a kind of screwdriver in a hole located in the left side of mechanism assembly, and push a lever until it cannot be inserted any further.
 - (2) And then, a tray will come out. Remove the tray in an upper direction, with slightly opening the lower part of fitting in an outward direction.
 - (3) Screw C attaches LCD display & operation switch board to the main part. Remove the screw C.
 - (4) Extract a card wire from connector CN1 on LCD display & operation switch board.
 - (5) Remove 1 screw that attach the front panel assembly to the main part.
 - (6) Remove two hook "a"s and two "b"s. Remove front panel assembly in a front direction.

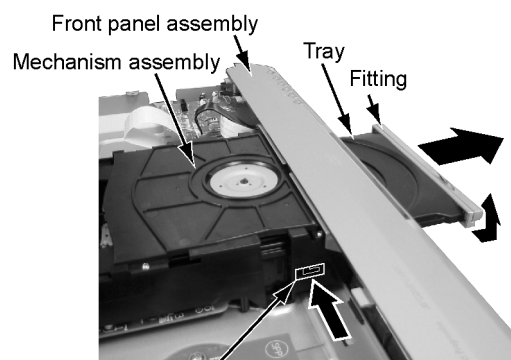


Fig.2

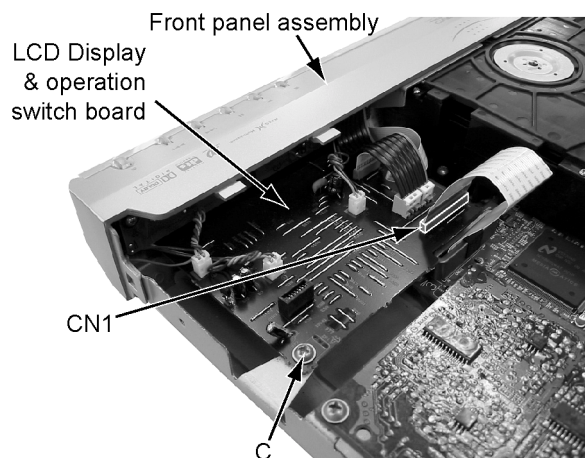


Fig.3

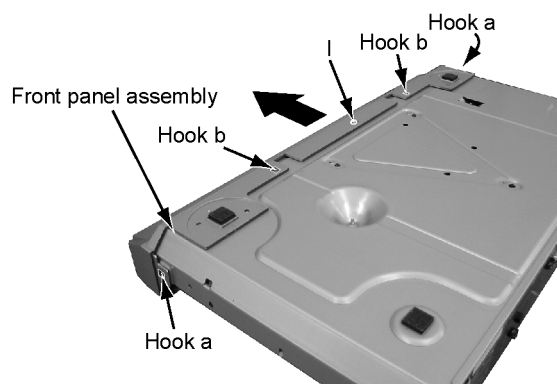


Fig.4

2.1.3 How to remove a rear panel

(See Figure 5 and 6)

- Please remove a top cover before removing a rear panel.
 - (1) Screw D attaches a rear panel to the main part. Remove the thirteen screws D.
 - (2) Extract a power cord from socket P901 on a power supply board.
 - (3) Remove two tie bands.

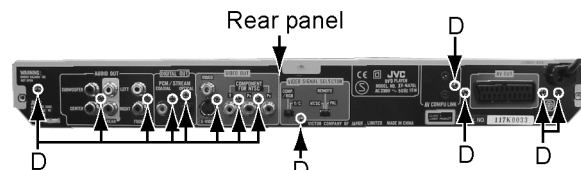


Fig.5

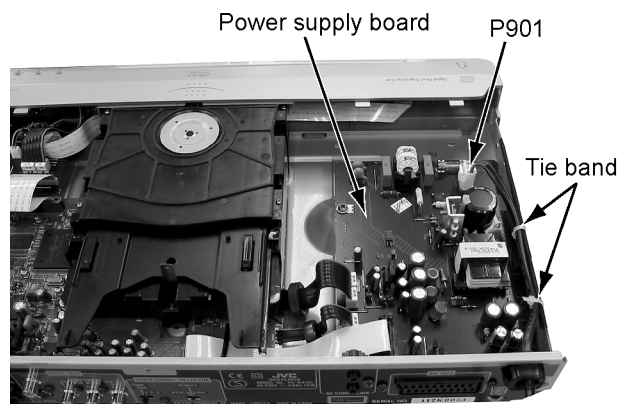


Fig.6

2.1.4 How to remove a mechanism assembly & servo control board

(See Figure 7 and 8)

- Please remove a top cover, a front panel assembly, and a rear panel before removing a mechanism assembly & servo control board.
 - (1) Extract flat wire from connector JT911, JT912, and JT913 on a power supply board.
 - (2) Extract card wire from connector CN902 and CN704 on a power supply board and servo control & main board.
 - (3) Screw E attaches servo control & main board to the main part. Remove one screw E.
 - (4) Screw F attaches a mechanism assembly. Remove three screws F.
 - (5) Remove two hook "c"s. And then, remove servo control & main board with sliding it in a front direction.
 - (6) Two card wires are connected to servo control & main board. Extract this card wire from CN201 and CN202 respectively.
 - (7) A wire is connected to servo control & main board from a pickup. Extract it from CN101.

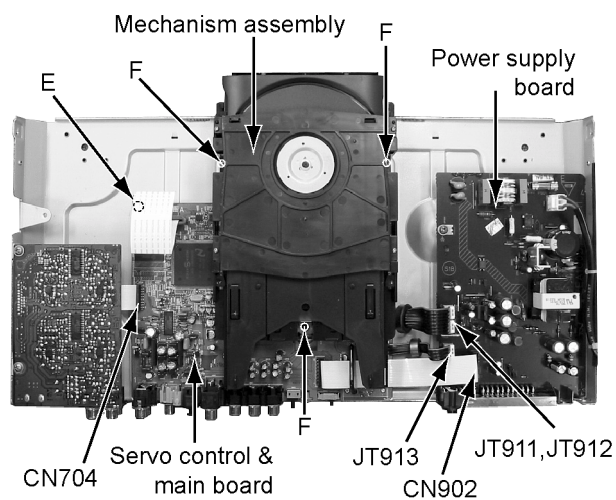


Fig.7

ATTENTION:

At this time, please extract the wire after short-circuiting of two places on the wire in part d with solder. Please remove the solder two places of part d after connecting the wire with CN101 when reassembling.

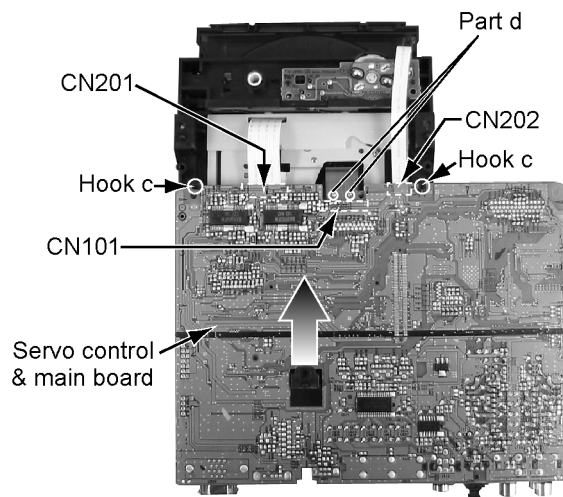
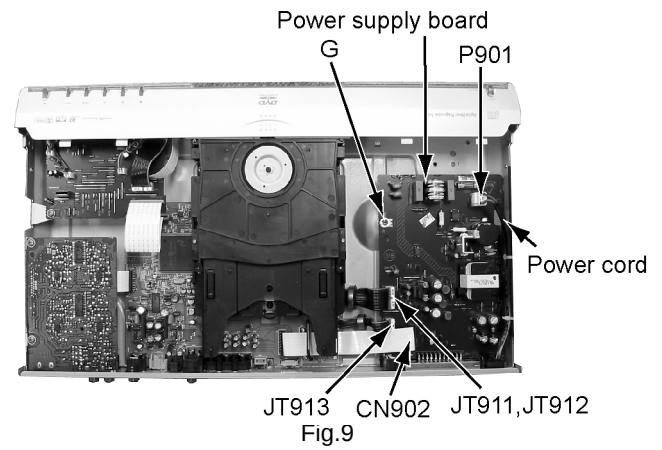


Fig.8

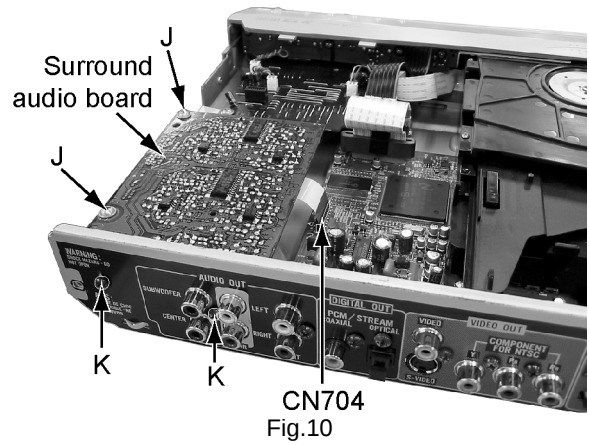
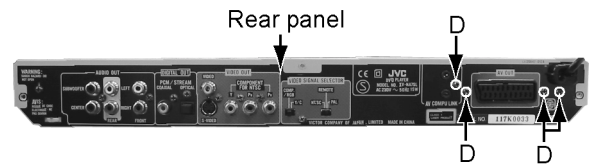
2.1.5 How to remove a power supply board (See Figure 9 and 5)

- Please remove a top cover before removing a power supply board.
 - (1) Extract flat wire from connector JT911, JT912, and JT913 on a power supply board.
 - (2) Extract card wire from connector CN902 on a power supply board.
 - (3) Extract power supply cord from socket P901 on a power supply board.
 - (4) Remove one screw G that attaches a power supply board and four screws D that attaches a power supply board from the rear side.



2.1.6 How to remove a surround audio board (See Figure 10)

- Please remove a top cover before removing a surround audio board.
 - (1) Extract card wire from connector CN704 on a servo control & main board.
 - (2) Remove two screws J that attaches a surround audio board and two screws K that attaches a surround audio board from the rear side.



2.1.7 How to remove LCD display & operation switch board

(See Figure 11, 12, and 13)

- Please remove a top cover and a front panel assembly before removing LCD display & operation switch board.
 - (1) Extract card wire and flat wire from connector CN2, CN3, and CN8 on LCD display board.
 - (2) Remove four screws H that attach an operation switch board, and then operation switch board.
 - (3) Remove support button, LCD display board, and push button in this order.
- **When the main part is assembled, parts must be assembled in the following order:**
 Push button → LCD display board → Side LED board → Support button → Operation switch board.
- **After the operation switch board is attached to its place, let a card wire through a slit on the operation switch board, and then insert it in CN2. (See Figure 11.)**

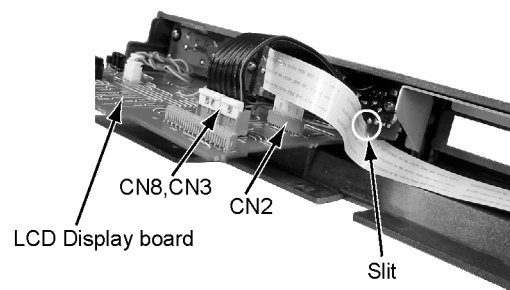


Fig.11

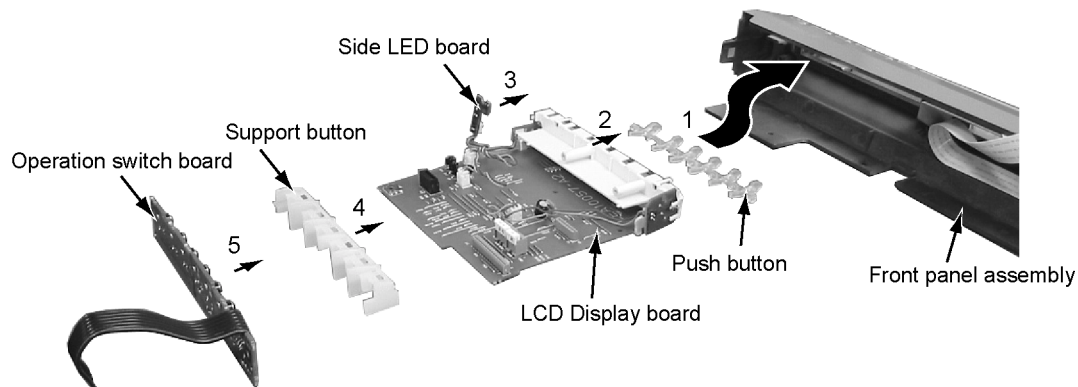
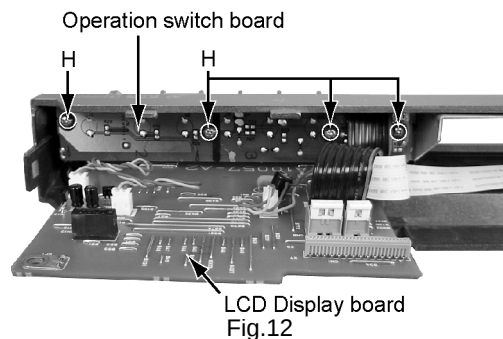


Fig.13

SECTION 3 Mechanism

3.1 Loading assembly section

3.1.1 Removing the clamber assembly (See Fig.1)

- (1) Remove the four screws **A** attaching the clamber assembly.
- (2) Move the clamber in the direction of the arrow to release the two joints **a** on both sides.

ATTENTION:

When reattaching, fit the clamber to the two joints **a**.

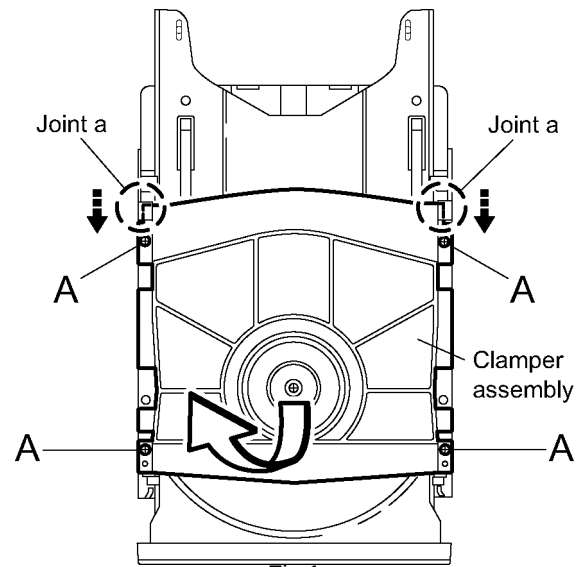


Fig.1

3.1.2 Removing the tray (See Fig2. and 3)

Note:

- Prior to performing the following procedure, remove the clamber assembly.
- (1) Push **b** of the slide cam into the slot on the left side of the loading base until it stops.
 - (2) Draw out the tray toward the front.

ATTENTION:

Before reattaching the tray, slide the part **c** of the slide cam to the right as shown in Fig.3.

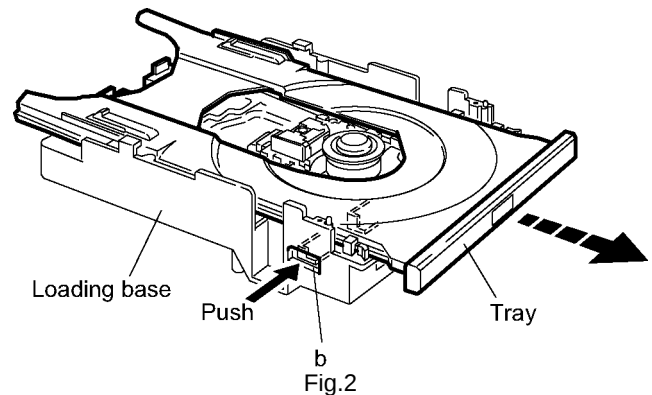


Fig.2

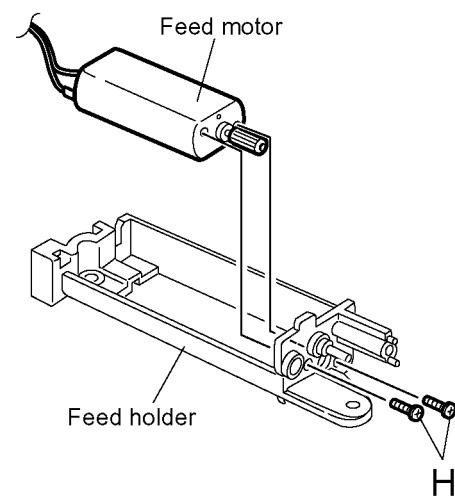


Fig.3

3.1.3 Removing the traverse mechanism assembly (See Fig.4 and 5)

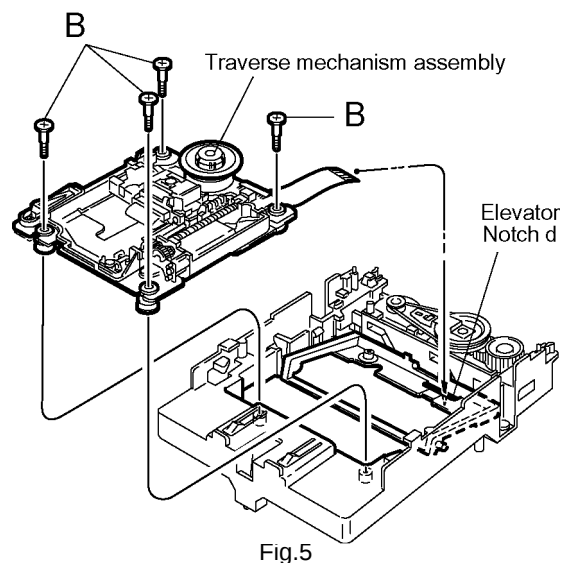
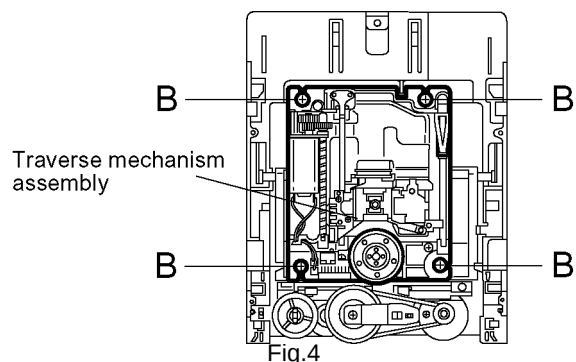
Note:

- Prior to performing the following procedure, remove the clamper assembly and the tray.

- (1) Remove the four screws **B** attaching the traverse mechanism assembly.

ATTENTION:

Before reattaching the traverse mechanism assembly, pass the card wire extending from the spindle motor board through the notch d of the elevator.



3.1.4 Removing the elevator (See Fig.6)

Note:

- Prior to performing the following procedure, remove the clamper assembly, the tray and the traverse mechanism assembly.

- (1) Extend each bar **e** inside of the loading base outward and detach the elevator shaft.

ATTENTION:

When reattaching, first fit the two shafts on the front of the elevator to the slots **f** of the slide cam.

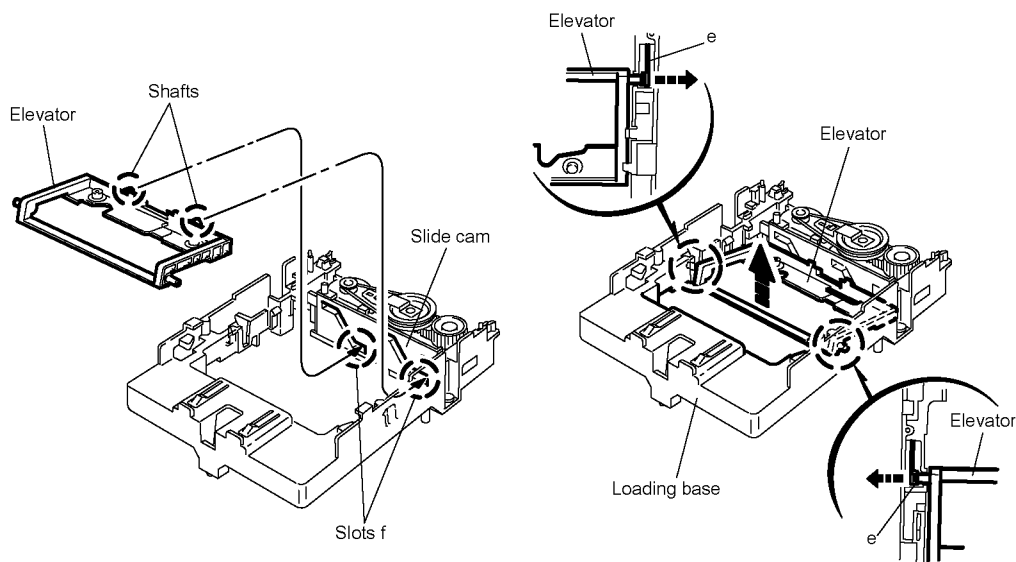


Fig.6

3.1.5 Removing the motor assembly (See Fig.7 and 8)

Note:

- Prior to performing the following procedure, remove the clasper assembly, the tray, the traverse mechanism assembly and the elevator.

- (1) Remove the belt from the pulley.
- (2) Remove the screw **C** attaching the motor assembly.
- (3) Turn over the body and remove the screw **D** attaching the motor assembly.
- (4) Release the two tabs **g** retaining the motor board.

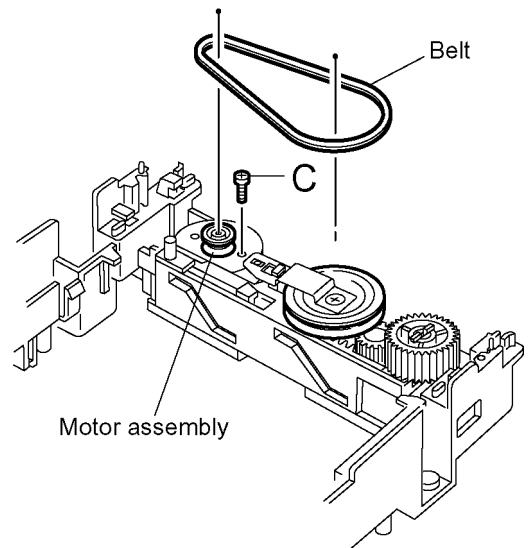


Fig.7

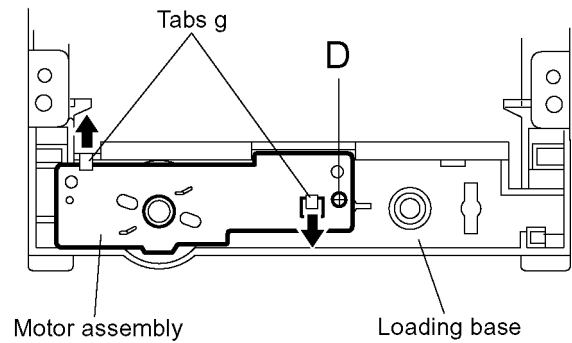


Fig.8

3.1.6 Removing the Idle gear/pulley gear/middle gear/slitecam (See Fig.9 to 11)

Note:

- Prior to performing the followong procedure,remove the clamber assembly,the tray,the traverse mechanism assembly,the elevator and the motor assembly.

- (1) Press the two tabs **h** inward and pull out idle gear.
- (2) Remove the screw **E** attaching the pulley gear bracket.
Slide the pulley gear bracket in the direction of the arrow and pull out the pulley gear.
- (3) Slide the side cam in the direction of the arrow to release the two joints **i** and remove upward.
- (4) Remove the middle gear.

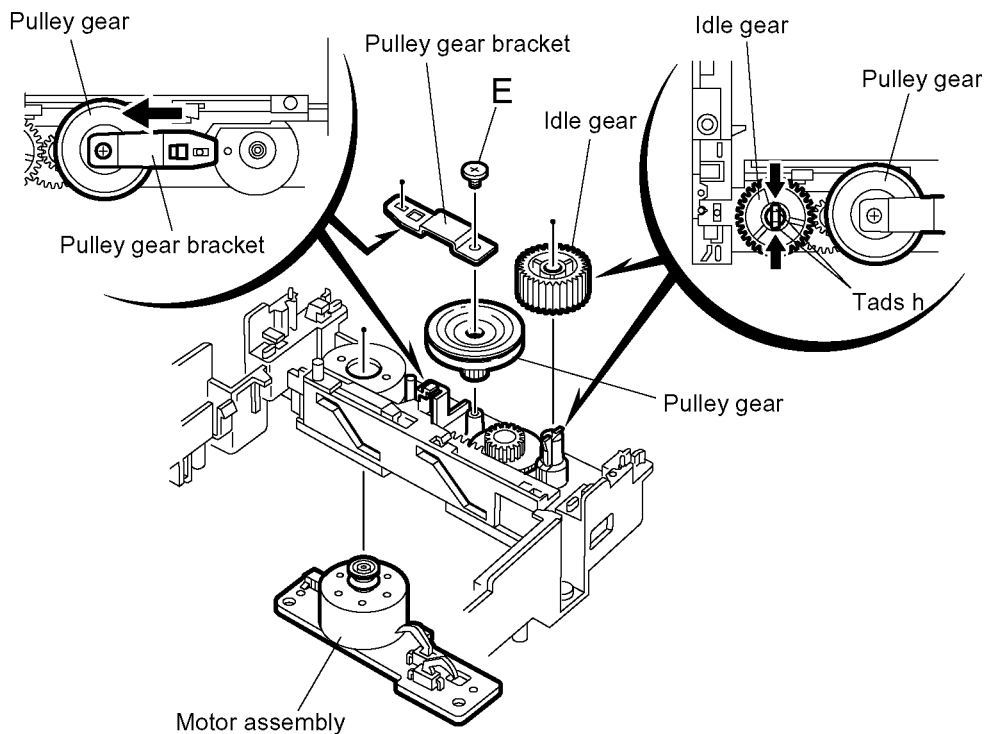


Fig.9

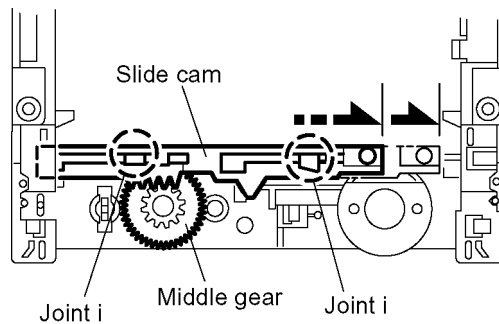


Fig.10

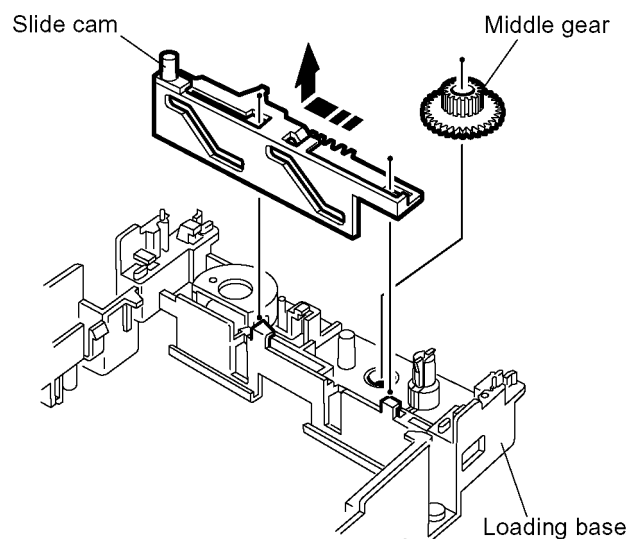
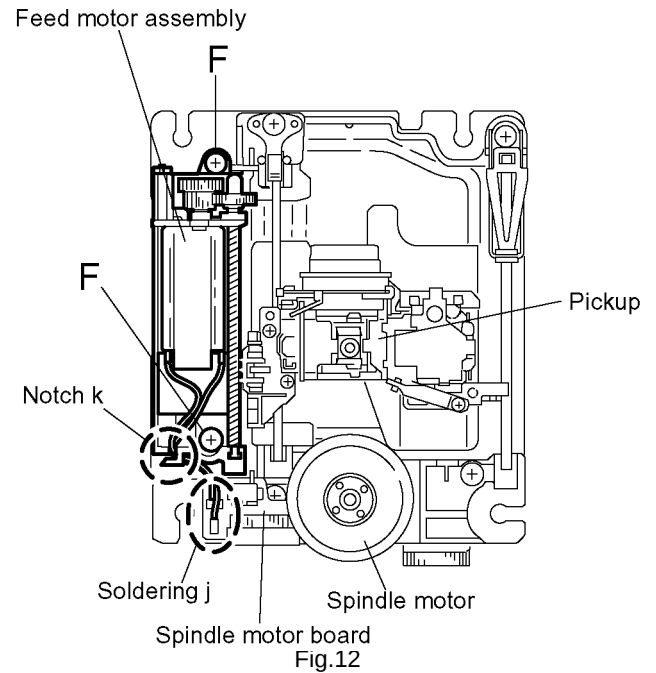


Fig.11

3.2 Traverse mechanism assembly section

3.2.1 Removing the feed motor assembly (See Fig.12)

- (1) Unsolder the two soldering **j** on the spindle motor board.
- (2) Remove the four screws **F** attaching the feed motor assembly.



3.2.2 Removing the feed motor (See Fig.12 to 14)

Note:

- Prior to performing the following procedure, remove the feed motor assembly.

- (1) Remove the screw **G** attaching the thrust spring.

ATTENTION:

When reattaching the thrust spring, make sure that the thrust spring presses the feed gear (M) and the feed gear (E) reasonably.

- (2) Remove the feed gear (M).
- (3) Pull out the feed gear (E) and the lead screw.
- (4) Remove the two screws **H** attaching the feed motor.

ATTENTION:

When reattaching, pass the two cables extending from the feed motor through the notch k of the feed holder as shown in Fig13.

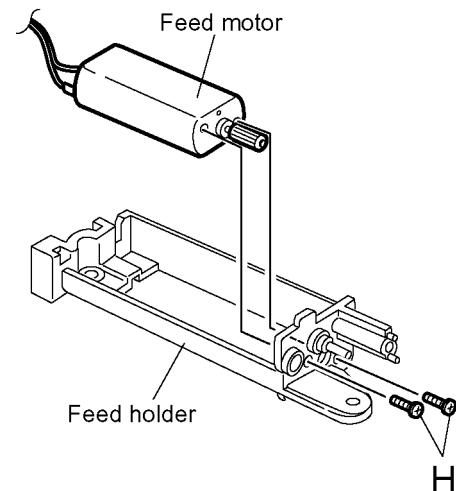
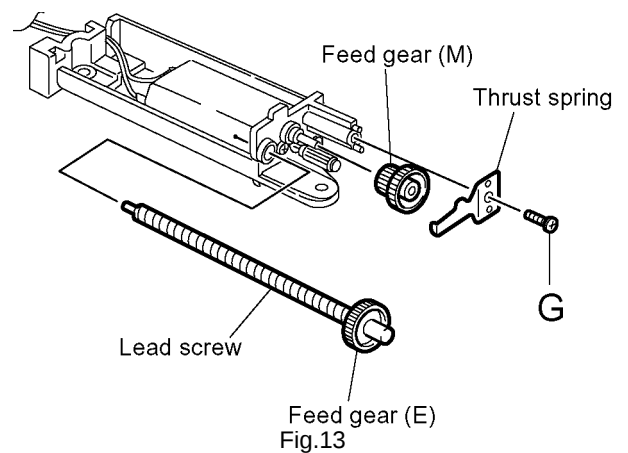


Fig.14

3.2.3 Removing the pickup (See Fig.16 and 18)

- (1) Remove the screw **I** attaching the **T** spring (**S**) and the shaft holder. Remove also the plate.

ATTENTION:

When reattaching, make sure that the T spring (S**) presses the shaft.**

- (2) Pull out the part **I** of the shaft upward. Move the part **m** in the direction of the arrow and detach from the spindle base.
- (3) Disengage the joint **n** of the pickup and the shaft in the direction of the arrow.
- (4) Pull out the shaft from the pickup.
- (5) Remove the two screws **J** attaching the actuator.
- (6) Disengage the joint of the actuator and the lead spring. Pull out the lead spring.

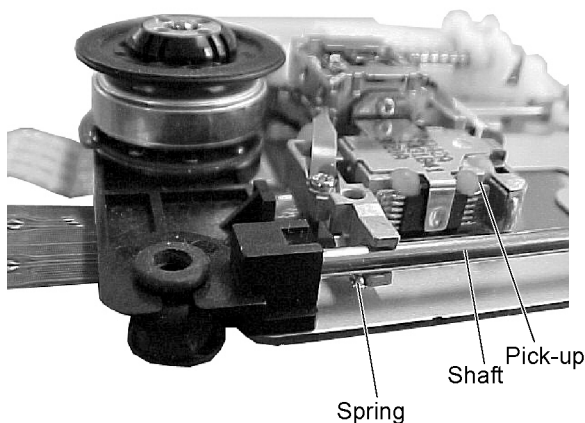


Fig.15

The spring must be under the shaft when you install pick-up.

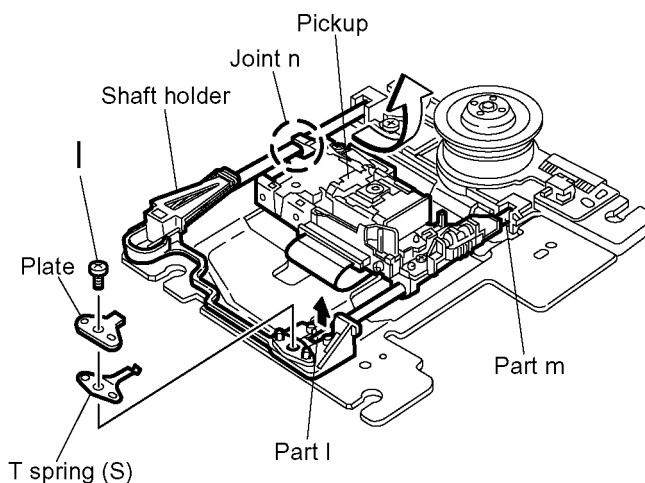


Fig.16

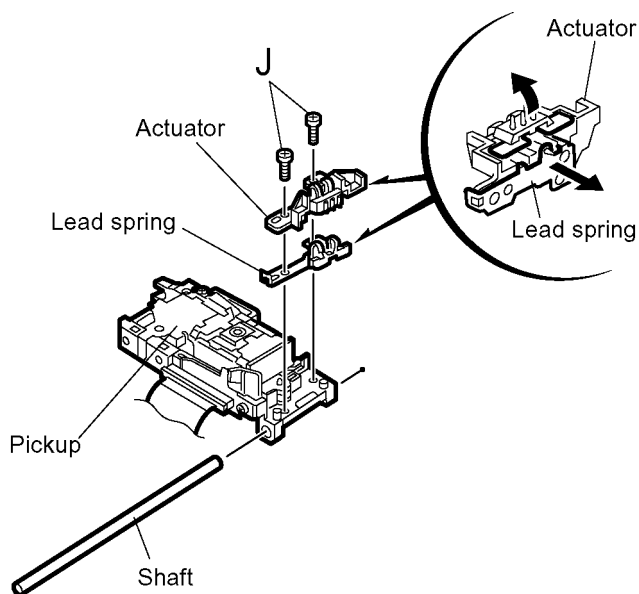


Fig.17

3.2.4 Removing the shaft holder / shaft (See Fig.18)

- (1) Remove the screw **K** attaching the shaft holder.
- (2) Remove the shaft.

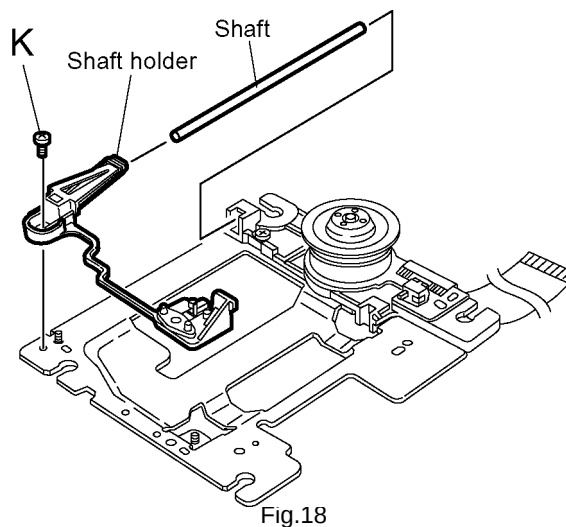


Fig.18

3.2.5 Removing the spindle motor assembly (See Fig.19 to 21)

- (1) Remove the three screws **L** attaching the spindle motor on the bottom of the mechanism base.

ATTENTION:

When reattaching, pass the card wire extending from the spindle motor board through the notch of the spindle base.

- (2) Remove the three screws **M** attaching the spindle base.

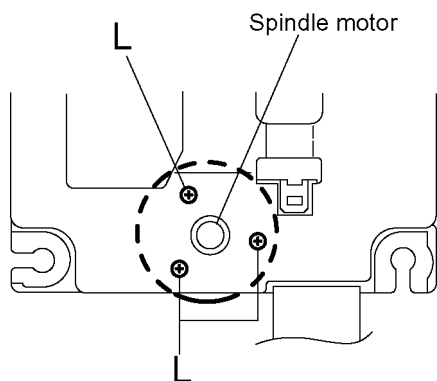


Fig.19

Spindle motor assembly

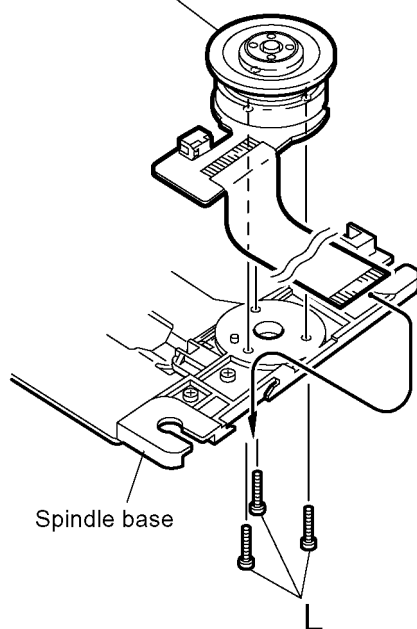


Fig.20

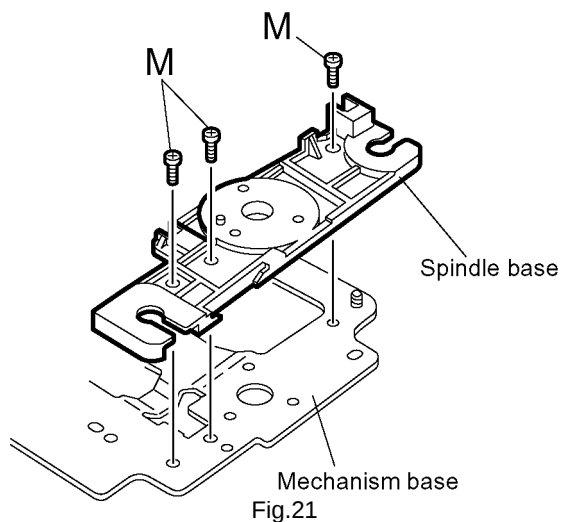


Fig.21

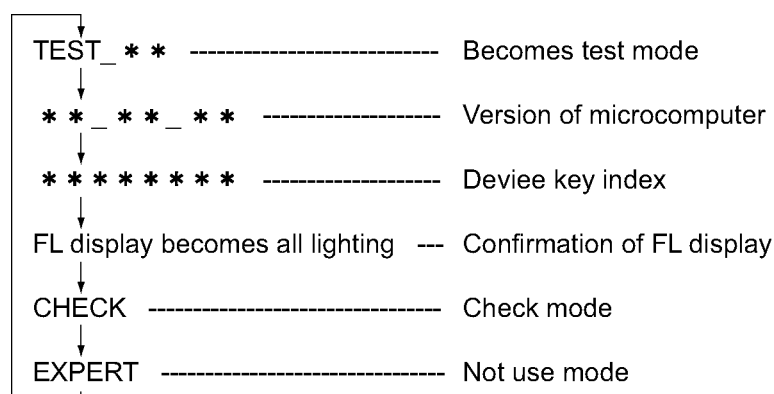
SECTION 4

Adjustment method

4.1 Test mode setting method

- (1) Take out the disc and close the tray.
- (2) Unplug the power plug.
- (3) Insert power plug into outlet while pressing both "PLAY" key and "STOP" key of the main body.
- (4) The player displays "TEST_**" on the LCD display. "**" means the player version.
- (5) When the power supply is turned off, test mode is released.

The mode changes as follows whenever the "CHOICE" key of remote controller is pushed in test mode.



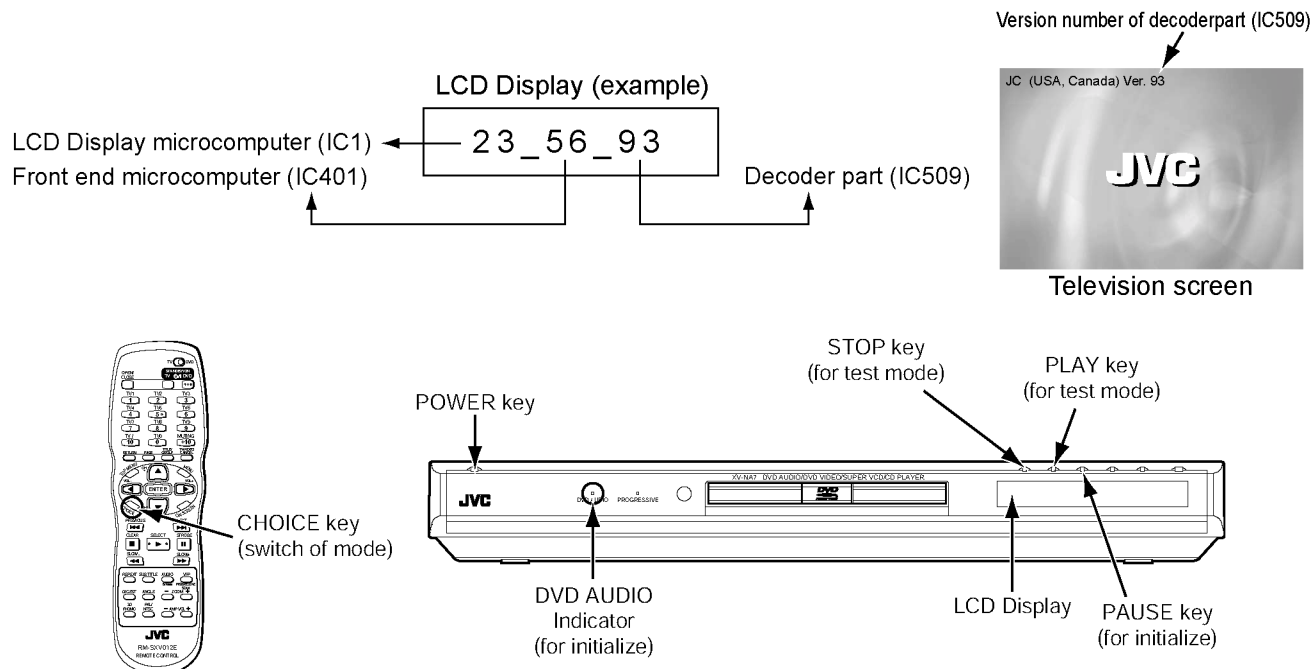
4.2 Initialization method

Please initialize according to the following procedures when microprocessor or pick-up is exchanged and when the up-grade is done.

- (1) Makes to test mode.
- (2) "PAUSE" key of the main body is pushed.
- (3) When the DVD AUDIO indicator lights blue, it is initialization completion.

4.3 Method of displaying version of microcomputer

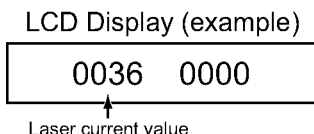
- (1) Makes to test mode and initializes
- (2) When "CHOICE" key of remote controller is pushed once, the figure is displayed on the LCD display as follows.
 - * Version number of decoder is displayed on the television screen.
 - * Last two digits are displayed on the FL display for the treble version number.



4.4 Display of current value of laser

- (1) Makes to test mode and initializes.
- (2) When "CHOICE" key of remote controller is pushed four times, It is displayed on the LCD display, "CHECK".
- (3) Afterwards, the laser current value can be switched by pushing the key to remote controller without turning on the disc.

Remote controller "4" key --- Laser of CD
Remote controller "5" key --- Laser of DVD



As for the current value of the laser, the figure displayed on the LCD display becomes a current value as it is by "mA" unit. becomes 36 mA if displayed as 36.

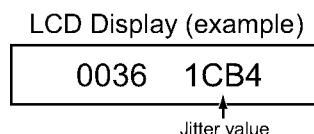
- (4) The laser output stops if the "STOP" key to remote controller is pushed.

It can be judged it is simply good if the displayed current value of the laser is smaller than that of the undermentioned value. Moreover, there must be a deteriorated possibility and the pick-up must exchange the pick-up more than the undermentioned value.

Laser current value of CD ----- 49 mA or less
Laser current value of DVD ---- 64 mA or less

4.5 Display of jitter value

- (1) Makes to test mode and initializes.
- (2) When "CHOICE" key of remote controller is pushed four times, It is displayed on the LCD display, "CHECK".
- (3) The test disk (VT-501) is inserted, and the "PLAY" key to the main body is pushed.
- (4) After a few seconds, the jitter value is displayed on the LCD display as follows.

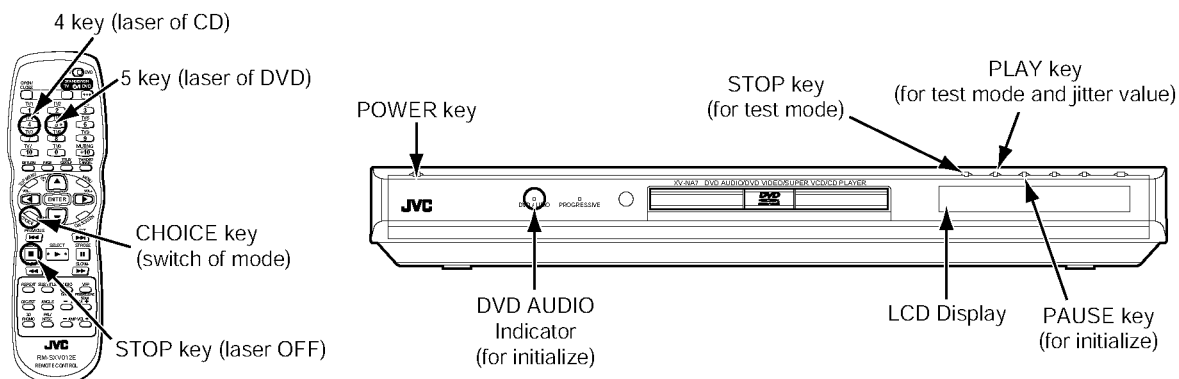


Values to judge whether the jitter is allowable or not is displayed, instead of actual jitter values. The displayed values are expressed in hexadecimal numbers.

In the following cases, please "Flap adjustment of the pick-up guide shaft" referring to the following page.
 Before using the TEST disc VT-501, careful check it if there is neither damage nor dirt on the read surface.

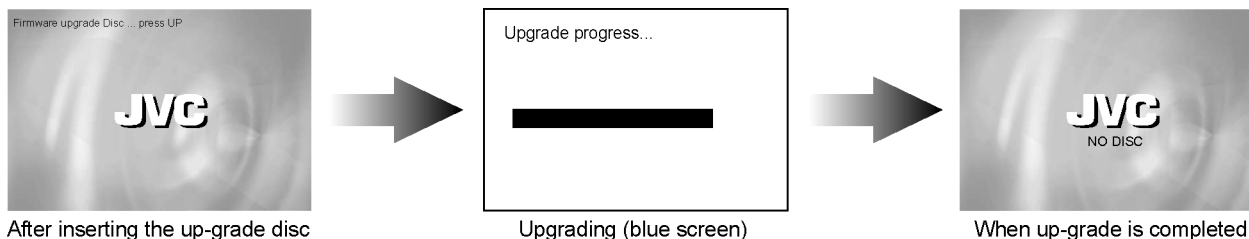
< In the following cases, please adjustment >

- When you exchange the pick-up
- When you exchange the spindle motor
- When the reading accuracy of the signal is bad (There is a block noise in the screen etc..)



4.6 Upgrading of firmware

- (1) The power supply is turned on pushing the "POWER" key.
- (2) The up-grade disc is inserted.
- (3) When LCD display of the main body changes from "READING" into "UPGRADE", cursor "UP" key (▲) of remote controller is pushed.
- (4) The up-grade starts if the entire screen becomes blue and it is displayed, "Upgrade progress".
- (5) The tray opens automatically, the up-grade disc is removed.
- (6) The up-grade ends if the tray closes automatically, and the screen returns to the normal screen.
- (7) Please confirm the version of the microcomputer after makes to test mode and initializes.



The disc for the up-grade is usually one piece. The disc becomes two pieces according to the version. In that case, please note the undermentioned content.

*The up-grade is done by using the STEP1 disc according to "(1)" and "(4)" of the above-mentioned procedure.

*The tray opens automatically after a few seconds and exchange for the disc of STEP2, please.

*The tray closes automatically. There is only about five second time that the tray opens this time, and replace the disc quickly between those, please.

ATTENTION:

- **When the tray shuts with the STEP1 disc left for the tray**

The up-grade starts again and exchange for the STEP2 disc, please when the tray opens automatically.

- **When the tray closes with there no disc in the tray**

Because the tray opens automatically, the disc of STEP2 is put on the tray.

The power supply is turned off once pushing the "POWER" key.

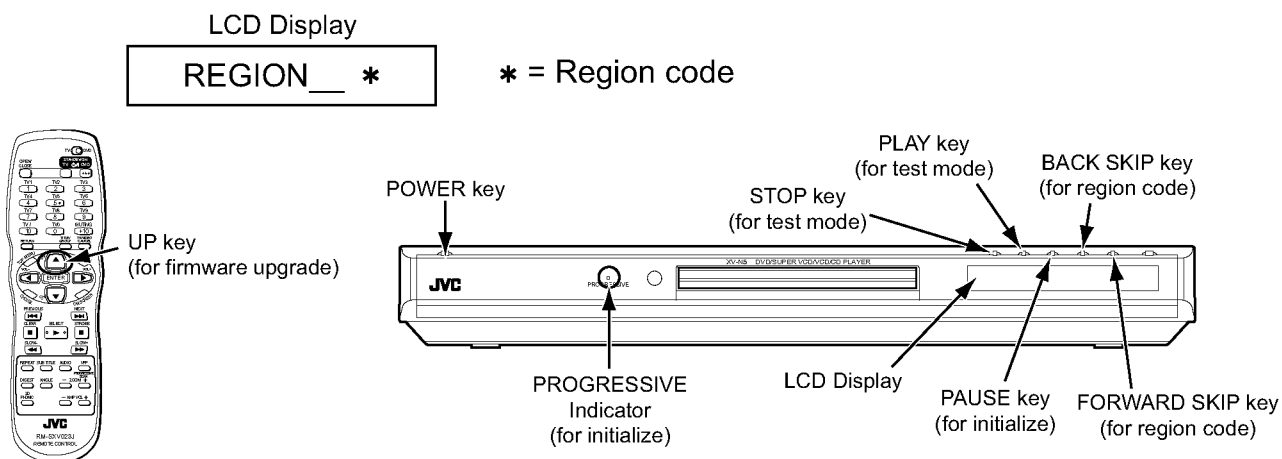
The up-grade starts when the "POWER" key is pushed afterwards.

* After the up-grade ends, the STEP2 disc is removed because the tray opens automatically.

* Afterwards, it is the same as (6),(7) of the above-mentioned procedures.

4.7 Display of region code

- (1) Makes to the stand-by state.
- (2) The "POWER" key is pushed while pushing the "BACK SKIP" key and the "FORWARD SKIP" key to the main body.
- (3) Region code is displayed on the LCD display as follows.



4.8 Flap adjustment of the pick-up guide shaft

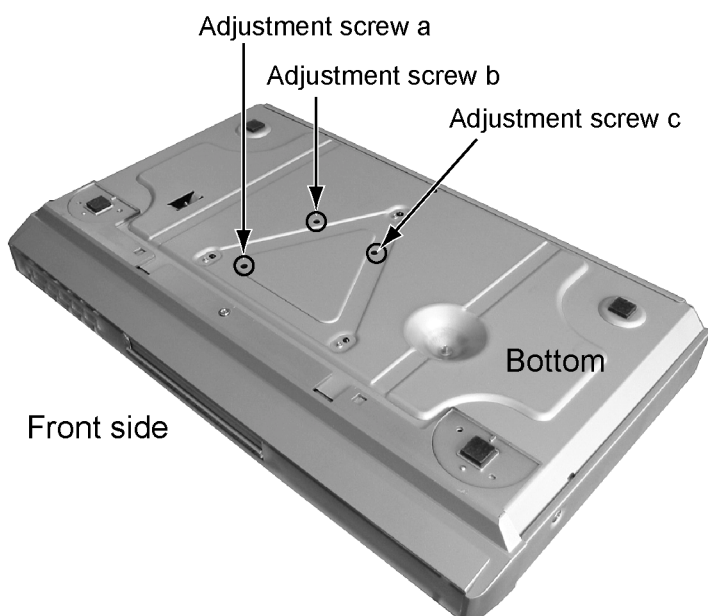
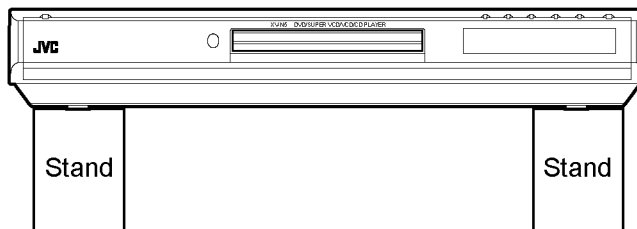
4.8.1 Tool list for adjustment

Hex wrench for adjustment : Off-the-shelf (1.3mm)
 Test disc : VT-501 or VT-502
 Stand of about 150mm in height : 2 pcs

- (1) Puts into the state to display the jitter value on the LCD display referring to "3.5 Display of the jitter value".
- (2) A hex-head wrench is inserted in the hole three places for the adjustment in the main body bottom, and the adjustment screw is turned, and matches so that the jitter value displayed on the LCD display may become **maximum** value.

ATTENTION:

As this value is bigger, the jitter is more allowable in this model.



POINT:

- (1) Turns in the forward or the opposite direction, and makes to the position where the jitter value is good the half rotation of adjustment screw a and b(180 degrees) respectively.
- (2) Afterwards, adjustment screw b and c are turned in the same way, and makes to the best position.

4.9 Attention when pick-up is exchanged

- (1) Flexible wire, pick-up spring, switch actuator, and lead spring are removed from an old pick-up (broken the one).

Guide:

Flexible wire, pick-up spring and switch actuator, lead spring are removed without each decomposing while assembled.

- (2) The above-mentioned parts are installed in a new pick-up (non-defective article).
- (3) A flexible wire is inserted in the connector which has taken side with the pick-up, and solder is put up to short land part "a" two places on a flexible wire.
- (4) The electrostatic breakdown protection circuit attached to the pick-up is cut.

ATTENTION:

Please cut the electrostatic breakdown protection circuit attached to the pick-up after solder is put up to two places on a flexible wire short land part "a" of the insertion of a flexible wire this time in the connector without fail.

The procedure might be mistaken and if solder has not surely adhered to two places on a flexible wire short land part "a", the laser diode in the pick-up be destroyed again.

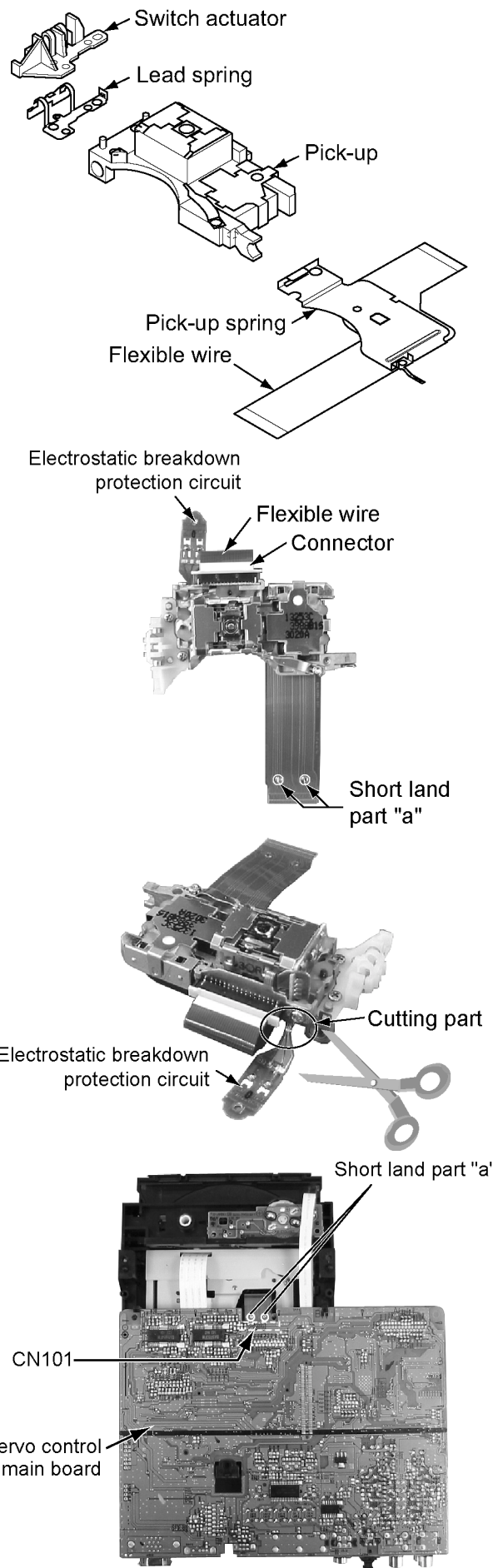
- (5) The pick-up is installed in the traverse mechanism.
- (6) A flexible wire is connected with connector CN101 on the servo control board by installing the traverse mechanism in the loading mechanism.
- (7) Solder in two places on a flexible wire in part "a" is removed.

ATTENTION :

Please remove solder in two places in part "a" after connecting a flexible wire with connector CN101 on the servo control board without fail this time.

When the procedure is mistaken, the laser diode in the pick-up might be destroyed.

Please remove solder in two places in part "a" surely.



4.10 Confirm method of operation

Please confirm the operation of the undermentioned item after doing the repair and the upgrade of the firmware.

The EEPROM is initialized.	Refer to the initialization method.
Opening picture check (Power ON)	It should be display "JVC"
Muting working	The noise must not be had to the performance beginning when you push "PLAY" button or at ON/STANDBY.
FL Display	The mark and the logo, etc. displayed by each operation must be displayed correctly. FL Display should light correctly without any unevenness.
All Function button	All function buttons should worked correctly with moderate click feeling.
Open and close movement of tray	When press OPEN/CLOSE button the tray should move smoothly without any noise.
Remote controller unit working	Check the correctly operation in use of remote controller unit.
Reading of TOC	Be not long in the malfunction.
Search	Both forward-searches and backward-searches should be able to be done. Do not stop be searching or after the search.
Skip	Both forward-skip and backward-skip should be able to be done. Do not stop be after the skip.
Playback	Do not find abnormality etc. of tone quality and the picture quality.
Most outside TITLE playback check	Play VT-501 TITLE 59 CHAPTER 1 , check normal playback.

4.11 Troubleshooting

4.11.1 Servo volume

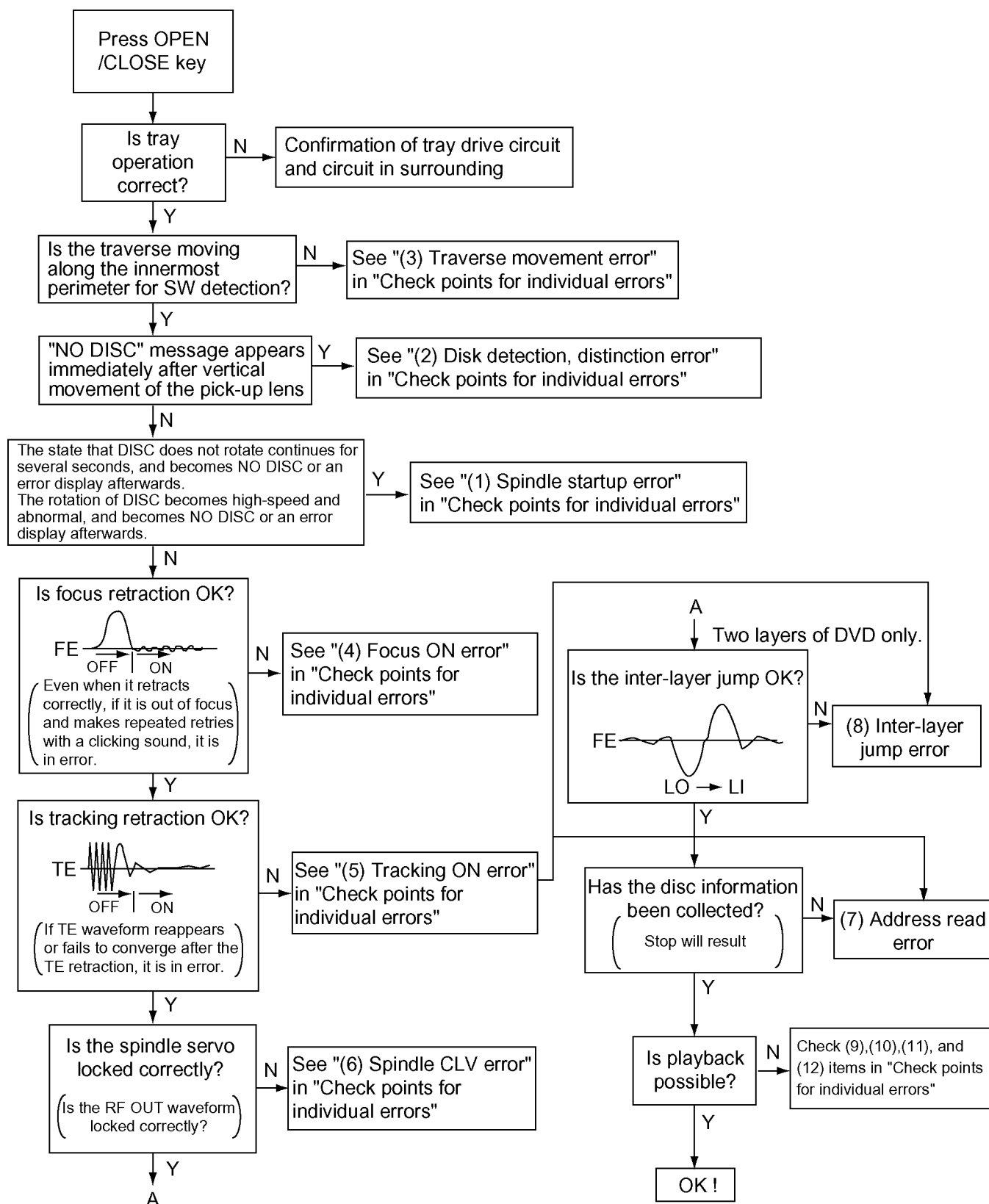


Fig.1

4.12 Check points for each error

4.12.1 Spindle start error

- (1) Defective spindle motor
 - Are there several ohms resistance between each pin of CN201 "5-6","6-7","5-7"?
(The power supply is turned off and measured.)
 - Is the sign wave of about 100mVp-p in the voltage had from each terminal?
[CN201"9"(H1-),"10"(H1+),"11"(H2-),"12"(H2+),"13"(H3-),"14"(H3+)]
- (2) Defective spindle motor driver (IC251)
 - Has motor drive voltage of a sine wave or a rectangular wave gone out to each terminal(SM1~3) of CN201"5,6,7" and IC251"2,4,7"?
 - Is FG pulse output from the terminal of IC251"24"(FG) according to the rotation of the motor?
 - Is it "L(about 0.9V)" while terminal of IC251"15"(VH) is rotating the motor?
- (3) Has the control signal come from servo IC or the microcomputer?
 - Is it "L" while the terminal of IC251"18"(SBRK) is operating?
Is it "H" while the terminal of IC251"23"(SPMUTE) is operating?
 - Is the control signal input to the terminal of IC251"22"(EC)?
(changes from VHALF voltage while the motor is working.)
 - Is the VHALF voltage input to the terminal of IC251"21"(ECR)?
- (4) Is the FG signal input to the servo IC?
 - Is FG pulse input to the terminal of IC301"69"(FG) according to the rotation of the motor?

4.12.2 Disc Detection, Distinction error (no disc, no RFENV)

- Laser is defective.
- Front End Processor is defective (IC101).
- APC circuit is defective. --- Q101,Q102.
- Pattern is defective. --- Lines for CN101 - All patterns which relate to pick-up and patterns between IC101
- IC101 --- For signal from IC101 to IC301, is signal output from IC101 "20" (ASOUT) and IC101 "41"(RFENV) and IC101 "22" (FEOUT)?

4.12.3 Traverse movement NG

- (1) Defective traverse driver
 - Has the voltage come between terminal of CN101 "1" and "2" ?
- (2) Defective BTL driver (IC201)
 - Has the motor drive voltage gone out to IC201"17" or "18"?
- (3) Has the control signal come from servo IC or the microcomputer?
 - Is it "H" while the terminal of IC201"9"(STBY1) ?
 - TRSDRV Is the signal input? (IC301 "67")
- (4) TRVSW is the signal input from microcomputer? (IC401 "50")

4.12.4 Focus ON NG

- Is FE output ? --- Pattern, IC101
- Is FODRV signal sent ? (R209) --- Pattern, IC301 "115"
- Is driving voltage sent ?
- IC201 "13", "14" --- If NG, pattern, driver, mechanical unit .
- Mechanical unit is defective.

4.12.5 Tracking ON NG

- When the tracking loop cannot be drawn in, TE shape of waves does not settle.
- Mechanical unit is defective.
Because the self adjustment cannot be normally adjusted, the thing which cannot be normally drawn in is thought.
- Periphery of driver (IC201)
Constant or IC it self is defective.
- Servo IC (IC301)
When improperly adjusted due to defective IC.

4.12.6 Spindle CLV NG

- IC101 -- "35"(RF OUT), "30"(ARF-), "31"(ARF+).
- Does not the input or the output of driver's spindle signal do the grip?
- Has the tracking been turned on?
- Spindle motor and driver is defective.
- Additionally, "IC101 and IC301" and "Mechanism is defective(jitter)", etc. are thought.

4.12.7 Address read NG

- Besides, the undermentioned cause is thought though specific of the cause is difficult because various factors are thought.
Mechanism is defective. (jitter)
IC301, IC401.
The disc is dirty or the wound has adhered.

4.12.8 Between layers jump NG (double-layer disc only)

Mechanism defective
Defect of driver's IC(IC201)
Defect of servo control IC(IC301)

4.12.9 Neither picture nor sound is output

(1) It is not possible search

- Has the tracking been turned on?
- To "(5) Tracking ON NG" in "Check points for each error" when the tracking is not normal.
- Is the feed operation normal?
To "(3) traverse movement NG" in "Check points for each error" when it is not normal.
Are not there caught of the feeding mechanism etc?

4.12.10 Picture is distorted or abnormal sound occurs at intervals of several seconds.

Is the feed operation normal?
Are not there caught of the feeding mechanism etc?

4.12.11 Others

- The image is sometimes blocked, and the image stops.
- The image is blocked when going to outer though it is normal in surroundings in the disk and the stopping symptom increases.

There is a possibility with bad jitter value for such a symptom.

4.12.12 CD During normal playback operation

(1) Is TOC reading normal?

- Displays total time for CD-DA.
- Shifts to double-speed mode for V-CD

(2) Is playback afterwards possible?

(3) When can not do a normal playback

- --:-- is displayed during FL search.
According to [It is not possible to search] for DVD(9), check the feed and tracking systems.
- No sound is output although the time is displayed.(CA-DA)
DAC, etc, other than servo.
- The passage of time is not stable, or picture is abnormal.(V-CD)
- The wound of the disc and dirt are confirmed.

SECTION 5

Description of major ICs

5.1 74LCX373MTC-X(IC512,IC513)

- Pin layout

$\overline{OE}$	1	20	VCC
Q0	2	19	Q7
D0	3	18	D7
D1	4	17	D6
Q1	5	16	Q6
Q2	6	15	Q5
D2	7	14	D5
D3	8	13	D4
Q3	9	12	Q4
GND	10	11	LE

- Pin function

Symbol	Description
D0~D7	Data inputs
LE	Latch enable input
$\overline{OE}$	Output enable input
Q0~Q7	3-State latch outputs

- Truth table

INPUTS			OUTPUTS
LE	$\overline{OE}$	Dn	Qn
X	H	X	Z
H	L	L	L
H	L	H	H
L	L	X	Q0

H = HIGH Voltage level

L = LOW Voltage level

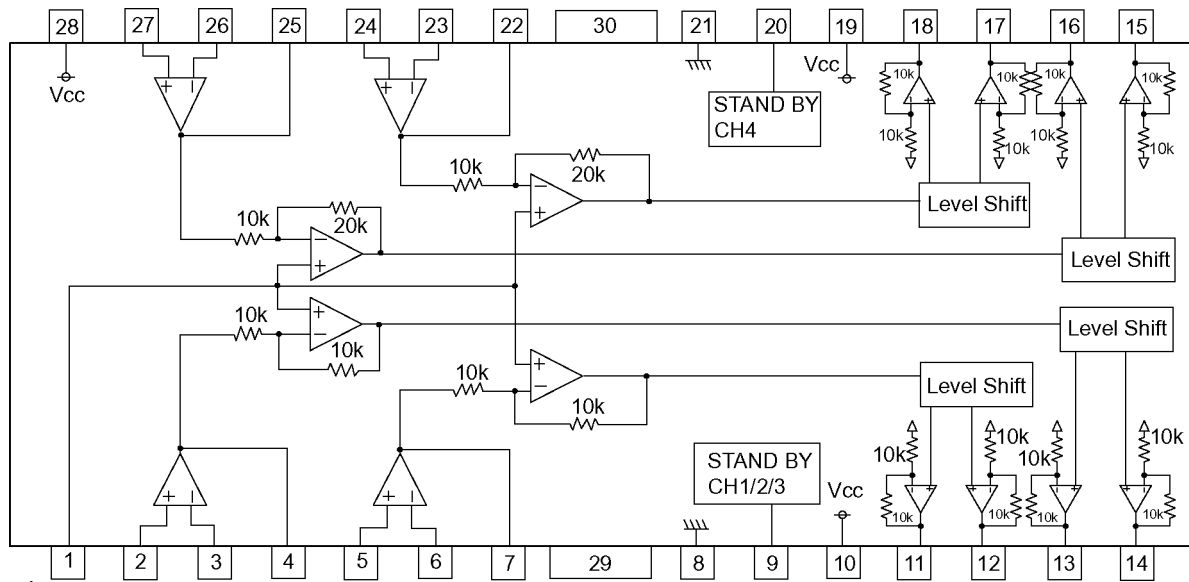
Z = High impedance

X = Immaterial

Q0 = Previous Q0 before HIGH to LOW transition of latch enable

5.2 BA5983FM-X (IC201) : 4CH Driver

• Block diagram



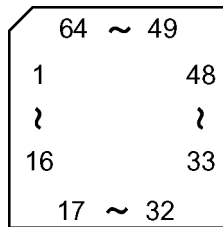
• Pin function

Pin No.	Symbol	I/O	Description
1	BIAS IN	I	Input for Bias-amplifier
2	OPIN1(+)	I	Non inverting input for CH1 OP-AMP
3	OPIN1(-)	I	Inverting input for CH1 OP-AMP
4	OPOUT1	O	Output for CH1 OP-AMP
5	OPIN2(+)	I	Non inverting input for CH2 OP-AMP
6	OPIN2(-)	I	Inverting input for CH2 OP-AMP
7	OPOUT2	O	Output for CH2 OP-AMP
8	GND	-	Substrate ground
9	STBY1	I	Input for CH1/2/3 stand by control
10	PowVcc1	-	Vcc for CH1/2 power block
11	VO2(-)	O	Inverted output of CH2
12	VO2(+)	O	Non inverted output of CH2
13	VO1(-)	O	Inverted output of CH1
14	VO1(+)	O	Non inverted output of CH1
15	VO4(+)	O	Non inverted output of CH4

Pin No.	Symbol	I/O	Description
16	VO4(-)	O	Inverted output of CH4
17	VO3(+)	O	Non inverted output of CH3
18	VO3(-)	O	Inverted output of CH3
19	PowVcc2	-	Vcc for CH3/4 power block
20	STBY2	I	Input for Ch4 stand by control
21	GND	-	Substrate ground
22	OPOUT3	O	Output for CH3 OP-AMP
23	OPIN3(-)	I	Inverting input for CH3 OP-AMP
24	OPIN3(+)	I	Non inverting input for CH3 OP-AMP
25	OPOUT4	O	Output for CH4 OP-AMP
26	OPIN4(-)	I	Inverting input for CH4 OP-AMP
27	OPIN4(+)	I	Non inverting input for CH4 OP-AMP
28	PreVcc	-	Vcc for pre block
29		-	Connect to ground
30		-	Connect to ground

5.3 AN8703FH-V (IC101) : Frontend processor

- Pin layout



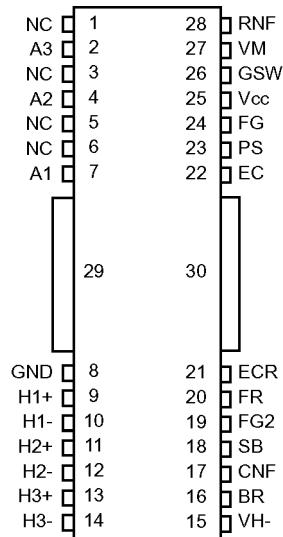
- Pin function

Pin No.	Symbol	I/O	Description
1	LPC1	I	Laser input terminal (DVD)
2	LPC01	O	Laser drive signal output terminal (DVD)
3	LPC2	I	Laser input terminal (CD)
4	LPC02	O	Laser drive signal output terminal (CD)
5	VFOSHORT	I	VFOSHORT control terminal
6	TBAL	I	Tracking balance control terminal
7	FBAL	I	Focus balance control terminal
8	POFLT	O	Track detection threshold level terminal
9	DTRD	I	Data slice part data read signal input terminal(For RAM)
10	IDGT	I	Data slice part address part gate signal input terminal(For RAM)
11	STANDBY	I	Standby mode control terminal
12	SEN	I	SEN(Serial data input terminal)
13	SCK	I	SCK(Serial data input terminal)
14	STDI	I	STDI(Serial data input terminal)
15	RSCL	I	Standard electric current terminal
16	JLINE	I	Electric current setting terminal of JLine
17	TEN	I	Reversing input terminal of tracking error output AMP.
18	TEOUT	O	Tracking error signal output terminal
19	AGCBAL	I	Offset adjusting terminal 1
20	ASOUT	O	Full adder signal output terminal
21	FEN	I	Focus error output amplifier reversing input terminal
22	FEOUT	O	Focus error signal output terminal
23	AGCOFST	I	Offset adjusting terminal 2
24	MON	-	Non connect
25	AGCLVL	O	Output amplitude adjustment for DRC
26	GND2	-	Connect to GND
27	VREF2	O	VREF2 voltage output terminal
28	VCC2	-	Power supply terminal 5V
29	VHALF	O	VHALF voltage output terminal
30	DFLTON	O	Reversing output terminal of filter AMP.
31	DFLTOP	O	Filter AMP. output terminal
32	DCFLT	I	Capacity connection terminal for filter output

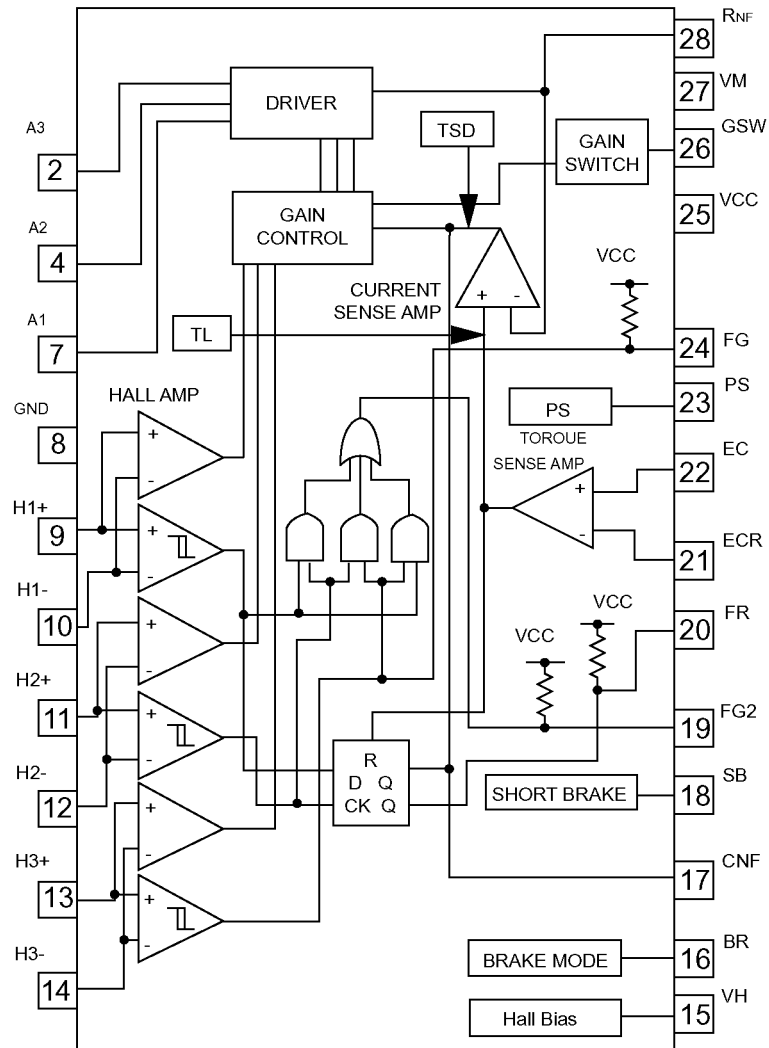
Pin No.	Symbol	I/O	Description
33	GND3	-	Connect to GND
34	RFDIFO	-	Non connect
35	RFOUT	-	Connect to TP103
36	VCC3	-	Power supply terminal 3.3V
37	RFC	O	Filter for RF delay correction AMP.
38	DCRF	O	All addition amplifier capacitor terminal
39	OFTR	O	OFTR output terminal
40	BDO	O	BDO output terminal
41	RFENV	O	RF envelope output terminal
42	BOTTOM	O	Bottom envelope detection filter terminal
43	PEAK	O	Peak envelope detection filter terminal
44	AGCG	O	AGC amplifier gain control terminal
45	AGCO	O	AGC amplifier level control terminal
46	TESTSG	I	TEST signal input terminal
47	RFINP	I	RF signal positive input terminal
48	RFINN	I	RF signal negative input terminal
49	VIN5	I	Internal four-partition (CD) RF input 1
50	VIN6	I	Internal four-partition (CD) RF input 2
51	VIN7	-	Internal four-partition (CD) RF input 3
52	VIN8	-	Internal four-partition (CD) RF input 4
53	VIN9	I	External two-partition (DVD) RF input 2
54	VIN10	I	External two-partition (DVD) RF input 1
55	VCC1	-	Power supply terminal 5V
56	VREF1	O	VREF1 voltage output terminal
57	VIN1	I	Internal four-partition (DVD) RF input 1
58	VIN2	I	Internal four-partition (DVD) RF input 2
59	VIN3	I	Internal four-partition (DVD) RF input 3
60	VIN4	I	Internal four-partition (DVD) RF input 4
61	GND1	-	Connect to GND
62	VIN11	I	3 beam sub input terminal 2 (CD)
63	VIN12	I	3 beam sub input terminal 1 (CD)
64	HDTYPE	O	HD Type selection

5.4 BA6664FM-X (IC251) : 3Phase Motor Driver

- Pin layout



- Block diagram

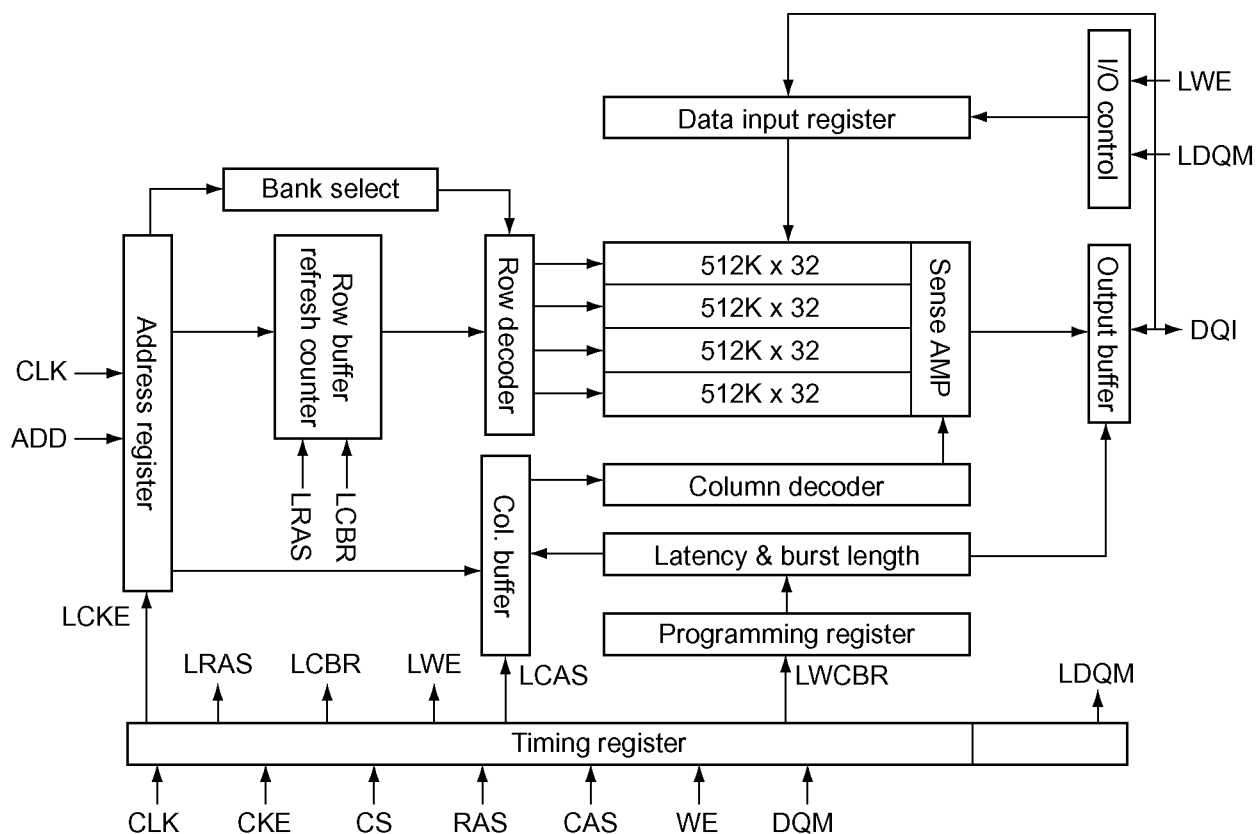


- Pin function (BA6664FM-X)

Pin No.	Symbol	I/O	Description
1	NC	-	Non connect
2	A3	O	Output 3 for spindle motor
3	NC	-	Non connect
4	A2	O	Output 2 for spindle motor
5	NC	-	Non connect
6	NC	-	Non connect
7	A1	O	Output 1 for spindle motor
8	GND	-	Connect to ground
9	H1+	I	Positive input for hall input AMP 1
10	H1-	I	Negative input for hall input AMP 1
11	H2+	I	Positive input for hall input AMP 2
12	H2-	I	Negative input for hall input AMP 2
13	H3+	I	Positive input for hall input AMP 3
14	H3-	I	Negative input for hall input AMP 3
15	VH	I	Hall bias terminal
16	BR	-	Non connect
17	CNF	-	Capacitor connection pin for phase compensation
18	SB	I	Short brake terminal
19	FG2	-	Non connect
20	FR	-	Non connect
21	ECR	I	Torque control standard voltage input terminal
22	EC	I	Torque control voltage input terminal
23	PS	O	Start/stop switch (power save terminal)
24	FG	O	FG signal output terminal
25	VCC	-	Power supply for signal division
26	GSW	O	Gain switch
27	VM	-	Power supply for driver division
28	RNF	O	Resistance connection pin for output current sense
29		-	Connect to ground
30		-	Connect to ground

5.5 K4S643232E-TC60(IC505):DRAM

- Block diagram



- Pin function

Symbol	Description
CLK	System clock signal input
CS	Chip select input
CKE	Clock enable
A0~A10	Address
BA0,1	Bank select address
RAS	Row address strobe
CAS	Column address strobe
WE	Write enable
DQM0~3	Data input/output mask
DQ0~31	Data input/output
VDD	Power supply terminal
VSS	Connect to ground
VDDQ	Power supply terminal
VSSQ	Connect to ground
NC	Non connect

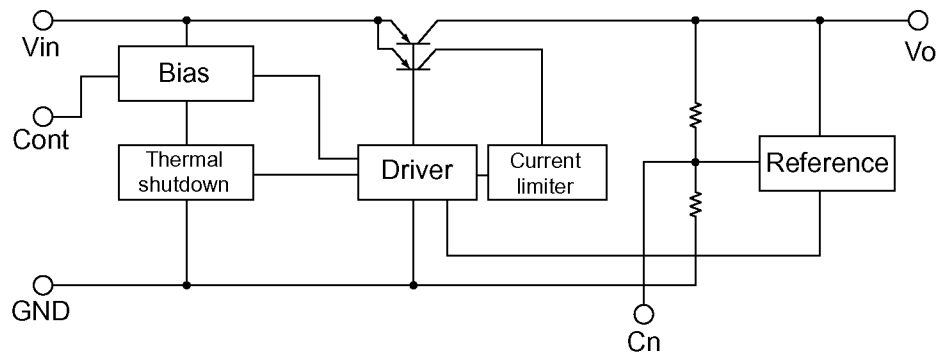
5.6 MN101C57DLR(IC1):System controller

• Pin function

Pin No.	Symbol	I/O	Description
1	VLC1	-	LCD Power supply terminal 1 (B5V)
2	VLC2	-	LCD Power supply terminal 2 (B5V divide voltage)
3	VLC3	-	LCD Power supply terminal 3 (B5V divide voltage)
4,5	NC	-	Non connect
6	P.ON	O	Indicator control signal output for STANDBY
7	PRORED	O	Indicator control signal output for PROGRESSIVE (red)
8	PROGRN	O	Indicator control signal output for PROGRESSIVE (green)
9	DVDAUDIO	O	Indicator control signal output for DVD AUDIO
10	N5/NA7	O	Indicator control signal output for PLAY
11	VSS	-	Connect to ground
12,13	OSC1,2	I/O	System clock signal oscillation terminal
14	MMOD	I	Memory enhancing switching
15	XI	-	Connect to ground
16	XO	-	Non connect
17	VDD	-	Power supply terminal (B5V)
18	NRST	I	Reset input
19	VDD	-	Power supply terminal (B5V)
20	TXD	O	Serial transmission data output
21	RXD	I	Serial receive data input
22	SCK	I	Serial communication clock input
23	INT	O	Serial transmission interrupt output
24	CLP	O	RGB/CMP switching signal output
25	AVCO	O	AV Compulink output terminal
26	AVCI	I	AV Compulink input terminal
27	BL	O	LCD Back lamp drive signal output
28	TCLOSE	O	Tray open signal output
29	TOPEN	O	Tray close signal output
30	LMMUTE	O	4 ch driver MUTE signal output L:MUTE
31	DISCSET	I	Disc catch status input H:SET
32	DISCSTP	I	Disc stop status input H:STOP
33	SWOPEN	I	Tray open status input H:OPEN L:CLOSE
34	SWUPDN	I	Tray close status input L:OPEN H:CLOSE
35	REMO	I	Remote control signal input
36	RGB	I	RGB/ S video switch signal input
37	CS	I	Serial receive chip select input
38	POWERSW	I	Power button input
39	VDD	-	Power supply terminal (B5V)
40	VREF+	-	Power supply terminal (B5V)
41	KEYI0	I	Key control signal input 0
42	KEYI1	I	Key control signal input 1
43	NTB	I	NTSC/PAL switch signal input
44	PROINT	I	INT/PROG switch signal input
45	MUTE	O	Audio muting output
46	INT/PROG	O	INT/PROG switch signal output
47	EMODEL	O	Indicator control signal output for PAUSE
48	CPURST	O	LSI Reset output
49	VREF-	-	Connect to ground
50~96	SEG46~0	O	LCD Segment control signal output 46~0
97~100	COM0~3	O	LCD Common signal output 0~3

5.7 MM1565AF-X (IC951) : 500mA Regulator

- Block diagram



- Pin function

Pin No.	Symbol	Function
1	Vout	Output terminal
2	NC	Non connect
3	GND	Connect to ground
4	Cn	Noise decrease terminal
5	Cout	Control terminal
6	Sub	Substrate (Connect to ground)
7	Vin	Input terminal

5.8 MN102L62GLF3 (IC401) : Unit CPU

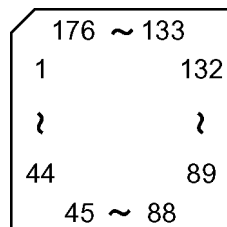
• Pin function

Pin No.	Symbol	I/O	Function
1	WAIT	I	Micon wait signal input
2	RE	O	Read enable
3	SPMUTE	O	Spindle muting output to IC251
4	WEN	O	Write enable
5	LMMUTE	-	Non connect
6	CS1	O	Chip select for ODC
7	CS2	-	Non connect
8	HDTYPE	O	HD Type selection
9	DRVMUTE	O	Driver mute
10	SBRK	O	Short brake terminal
11	LSIRST	O	LSI reset
12	WORD	I	Bus selection input
13	A0	O	Address bus 0 for CPU
14	A1	O	Address bus 1 for CPU
15	A2	O	Address bus 2 for CPU
16	A3	O	Address bus 3 for CPU
17	VDD	-	Power supply
18	SYSCLK	-	Non connect
19	VSS	-	Ground
20	XI	-	Not use (Connect to vss)
21	XO	-	Non connect
22	VDD	-	Power supply
23	OSCI	I	Clock signal input(13.5MHz)
24	OSCO	O	Clock signal output(13.5MHz)
25	MODE	I	CPU Mode selection input
26	A4	O	Address bus 4 for CPU
27	A5	O	Address bus 5 for CPU
28	A6	O	Address bus 6 for CPU
29	A7	O	Address bus 7 for CPU
30	A8	O	Address bus 8 for CPU
31	A9	O	Address bus 9 for CPU
32	A10	O	Address bus 10 for CPU
33	A11	O	Address bus 11 for CPU
34	VDD	-	Power supply
35	A12	O	Address bus 12 for CPU
36	A13	O	Address bus 13 for CPU
37	A14	O	Address bus 14 for CPU
38	A15	O	Address bus 15 for CPU
39	A16	O	Address bus 16 for CPU
40	A17	O	Address bus 17 for CPU
41	A18	-	Non connect
42	A19	-	Non connect
43	VSS	-	Ground
44	A20	-	Non connect
45	DISCSTP	O	Mechanism state signal output
46	HUGUP	O	Connect to pick-up
47	TCLOSE	-	Non connect
48	WOBBLEF1L		
49	HFMON	O	HFM Control output to Q103
50	TRVSW	I	Detection switch of traverse in-side

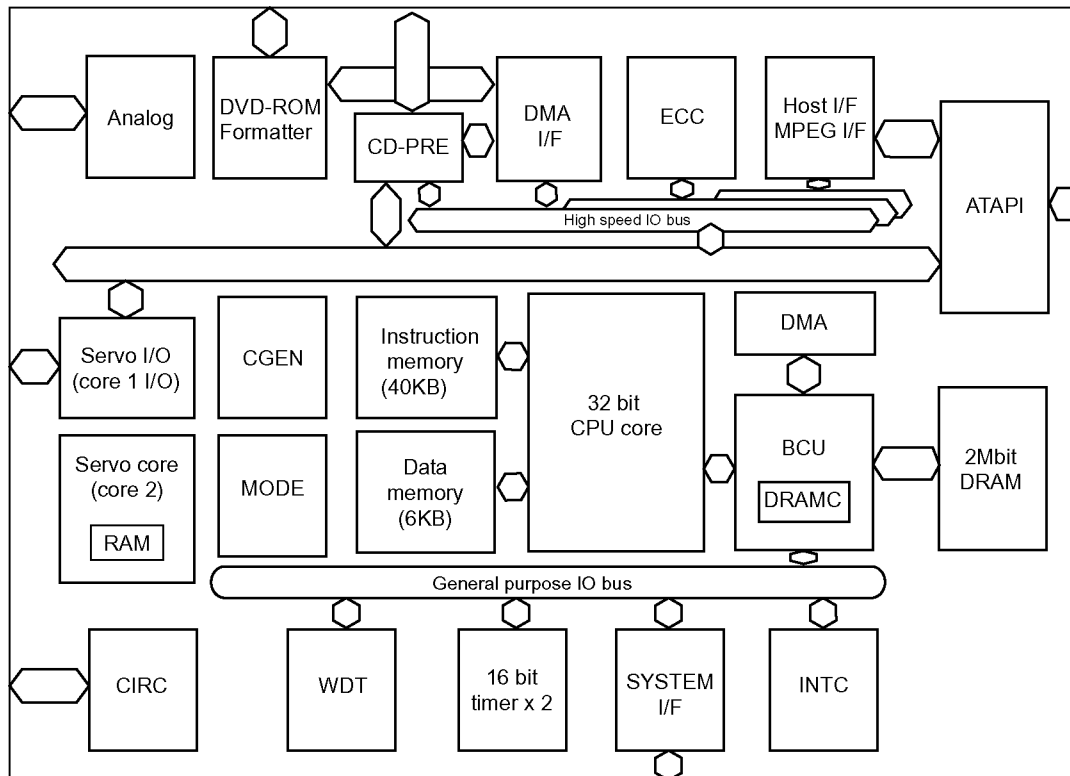
Pin No.	Symbol	I/O	Function
51	SWUPDN	-	Non connect
52	MECHA_H/V	-	Connect to ground
53	DISCSET	I	Mechanism state signal input
54	VDD	-	Power supply
55	FEPEN	O	Serial enable signal for FEP
56	SLEEP	O	Standby signal for FEP
57	BUSY	-	Non connect
58	REQ	O	Communication request
59	-	-	Connect to TP405
60	-	-	Non connect
61	VSS	-	Ground
62	EPCS	O	EEPROM chip select
63	EPSK	O	EEPROM clock
64	EPDI	I	EEPROM data input
65	EPDO	O	EEPROM data output
66	VDD	-	Power supply
67	SCLKO	O	Communication clock
68	S2UDT	I	Communication input data
69	U2SDT	O	Communication output data
70	CPSCK	O	Clock for ADSC serial
71	P74/SBI1	I	Not use (Pull down)
72	SDOUT	O	ADSC serial data output
73	-	I	Not use (Pull up)
74	-	I	Not use (Pull up)
75	NMI	I	NMI Terminal
76	ADSCIRQ	I	Interrupt input of ADSC
77	ODCIRQ	I	Interrupt input of ODC
78	DECIRQ	I	Interrupt input of ZIVA
79	CSSIRQ	I	Not use (Pull down)
80	ODCIRQ2	I	Interruption of system control
81	ADSEP	I	Address data selection input
82	RST	I	Reset input
83	VDD	-	Power supply
84	TEST1	I	Test signal 1 input
85	TEST2	I	Test signal 2 input
86	TEST3	I	Test signal 3 input
87	TEST4	I	Test signal 4 input
88	TEST5	I	Test signal 5 input
89	TEST6	I	Test signal 6 input
90	TEST7	I	Test signal 7 input
91	TEST8	I	Test signal 8 input
92	VSS	-	Ground
93	D0	I/O	Data bus 0 of CPU
94	D1	I/O	Data bus 1 of CPU
95	D2	I/O	Data bus 2 of CPU
96	D3	I/O	Data bus 3 of CPU
97	D4	I/O	Data bus 4 of CPU
98	D5	I/O	Data bus 5 of CPU
99	D6	I/O	Data bus 6 of CPU
100	D7	I/O	Data bus 7 of CPU

5.9 MN103S26EGA (IC301) : Super optical disc controller

- Terminal layout



- Block diagram



• Pin function

Pin No.	Symbol	I/O	Description
1,2	NINT0,1	O	Interruption of system control 0,1
3	VDD3	-	Power supply terminal for I/O(3.3V)
4	VSS	-	Connect to ground
5	NINT2	O	Interruption of system control 2
6	WAITDOC	O	Wait control of system control
7	NMPST	O	Reset of system control (Non connect)
8	DASPST	I	Setting of initial value of DASP signal
9~17	CPUADR17~9	I	System control address
18	VDD18	-	Power supply terminal for I/O (1.8V)
19	VSS	-	Connect to ground
20	DRAMVDD18	-	Power supply terminal for DRAM (1.8V)
21	DRAMVSS	-	Connect to ground for DRAM
22~30	CPUADR8~0	I	System control address
31	VDD3	-	Power supply terminal for I/O (3.3V)
32	VSS	-	Connect to ground
33	DRAMVDD3	-	Power supply terminal for DRAM (3.3V)
34	NCS	I	System control chip select
35	NWR	I	Writing system control
36	NRD	I	Read signal input from system controller
37~44	CPUDT7~0	I/O	System control data
45	CLKOUT1	-	Non connect
46	MMOD	I	Test mode switch signal
47	NRST	I	System reset
48	MSTPOL	I	Master terminal polarity switch input
49	SCLOCK	-	Non connect
50	SDATA	-	Non connect
51	OFTR	I	Off track signal input
52	BDO	I	Drop out signal input
53~56	PWM1~4	-	Non connect
57	VDD3	-	Power supply terminal for I/O (3.3V)
58	DRAMVDD18	-	Power supply terminal for DRAM (1.8V)
59	DRAMVSS	-	Connect to ground for DRAM
60	VSS	-	Connect to ground
61~64	PWM5~8	-	Non connect
65	TBAL	O	Tracking balance adjustment output
66	FBAL	O	Focus balance adjustment output
67	TRSDRV	O	Traverse drive output
68	SPDRV	O	Spindle drive output
69	FG	I	Motor FG input
70	TILTP	-	Non connect
71	TILT	-	Non connect
72	TILT_N	-	Non connect
73	TX	O	Digital output signal
74	DTRD	-	Non connect
75	IDGT	-	Non connect
76	VDD18	-	Power supply terminal for I/O (1.8V)
77	VSS	-	Connect to ground

Pin No.	Symbol	I/O	Description
78	VDD3	-	Power supply terminal for I/O (3.3V)
79	OSCI1	I	Oscillation input 16.9MHz
80	OSCO1	O	Oscillation output 16.9MHz
81	VSS	-	Connect to ground
82	TSTSG	O	Calibration signal
83	VFOSHORT	O	VFO short output
84	JLINE	O	J-line setting output
85	AVSSD	-	Connect to ground for analog circuit
86	ROUT	-	Non connect
87	LOUT	-	Non connect
88	AVDD	-	Power supply terminal for analog circuit (3.3V)
89	VCOF	I	JFVCO control voltage
90	TRCRS	I	Input signal for track cross formation
91	CMPIN	-	Non connect
92	LPFOUT	-	Non connect
93	LPFIN	I	Pull-up to VHALF
94	AVSS	-	Connect to ground for analog circuit
95	HPFOUT	-	Non connect
96	FPFIN	I	HPF input
97	CSLFLT	I	Pull-up to VHALF
98	RFDIF	-	Non connect
99	AVDDC	-	Power supply terminal for analog circuit (3.3V)
100	PLFLT2	I	Connect to capacitor 2 for PLL
101	PLFLT1	I	Connect to capacitor 1 for PLL
102	AVSS	-	Connect to ground for analog circuit
103	RVI	I	Connect to resistor for VREF reference current source
104	VREFH	I	Reference voltage input (2.2V)
105	PLPG	-	Non connect
106	VHALF	I	Reference voltage input (1.65V)
107,108	DSL2,1	I	Connect to capacitor 2,1 for DSL
109	AVDD	-	Power supply terminal for analog circuit (3.3V)
110	NARF	I	Equivalence RF-
111	ARF	I	Equivalence RF+
112	JITOUT	O	Output for jitter signal monitor
113	AVSS	-	Connect to ground for analog circuit
114	DAC0	O	Tracking drive output
115	DAC1	O	Focus drive output
116	AVDD	-	Power supply terminal for analog circuit (3.3V)
117	AD0	I	Focus error input
118	AD1	I	Phase difference/3 beams tracking error
119	AD2	I	AS : Full adder signal
120	AD3	I	RF envelope input
121	AD4	I	DVD laser current control terminal
122	AD5	I	
123	AD6	I	CD laser current control terminal
124	TECAPA	-	Non connect
125	VDD3	-	Power supply terminal for I/O (3.3V)
126	VSS	-	Connect to ground

Pin No.	Symbol	I/O	Description
127	MONI0	-	Connect to TP306
128	MONI1	-	Connect to TP307
129	MONI2	-	Connect to TP308
130	MONI3	-	Connect to TP309
131	NEJECT	I/O	Eject detection
132	NTRYCTL	I/O	Tray close detection
133	NDASP	I/O	ATAPI drive active / slave connect I/O
134	NCS3FX	I	ATAPI host chip select
135	NCS1FX	I	ATAPI host chip select
136,137	DA2,0	I/O	ATAPI host address 2,0
138	NPDIAG	I/O	ATAPI slave master diagnosis input
139	DA1	I/O	ATAPI host address 1
140	NIOCS16	-	Non connect
141	INTRQ	O	ATAPI host interruption output
142	NDMACK	I	ATAPI host DMA characteristic
143	VDD3	-	Power supply terminal I/O (3.3V)
144	VSS	-	Connect to ground
145	IORDY	-	Non connect
146	NIORD	I/O	ATAPI host read
147	NIOWR	-	Non connect
148	DMARQ	-	Non connect
149	HDD15	I/O	ATAPI host data 15
150	HDD0	I/O	ATAPI host data 0
151	HDD14	I/O	ATAPI host data 14
152	VDD18	-	Power supply terminal for I/O (1.8V)
153	PO	I	Connect to ground
154	UATASEL	I	Connect to ground
155	VSS	-	Connect to ground
156	VDD3	-	Power supply terminal for I/O (3.3V)
157	HDD1	I/O	ATAPI host data 1
158	HDD13	I/O	ATAPI host data 13
159	HDD2	I/O	ATAPI host data 2
160	HDD12	I/O	ATAPI host data 12
161	HDD3	I/O	ATAPI host data 3
162	VDD3	-	Power supply terminal for I/O (3.3V)
163	VSS	-	Connect to ground
164	HDD11	I/O	ATAPI host data 11
165	HDD4	I/O	ATAPI host data 4
166	HDD10	I/O	ATAPI host data 10
167	HDD5	I/O	ATAPI host data 5
168	HDD9	I/O	ATAPI host data 9
169	VDD3	-	Power supply terminal for I/O (3.3V)
170	VSS	-	Connect to ground
171~173	HDD6~8	I/O	ATAPI host data 6~8
174	VDDH	-	Reference power supply for ATAPI (5.0V)
175	NRESET	I	ATAPI host reset input
176	MASTER	I	ATAPI master / slave select

5.10 MN35505-X (IC703,IC411,IC412) : DAC

• Terminal layout

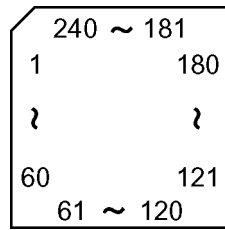
M5	1	28	M6
DIN	2	27	M4
LRCK	3	26	M8
BCK	4	25	M7
M3	5	24	DVDD1
DVDD2	6	23	VCOF
CKO	7	22	XIN
DVSS2	8	21	XOUT
M2	9	20	DVSS1
M1	10	19	M9
OUT1C	11	18	OUT2C
AVDD1	12	17	AVDD2
OUT1D	13	16	OUT2D
AVSS1	14	15	AVSS2

• Pin function

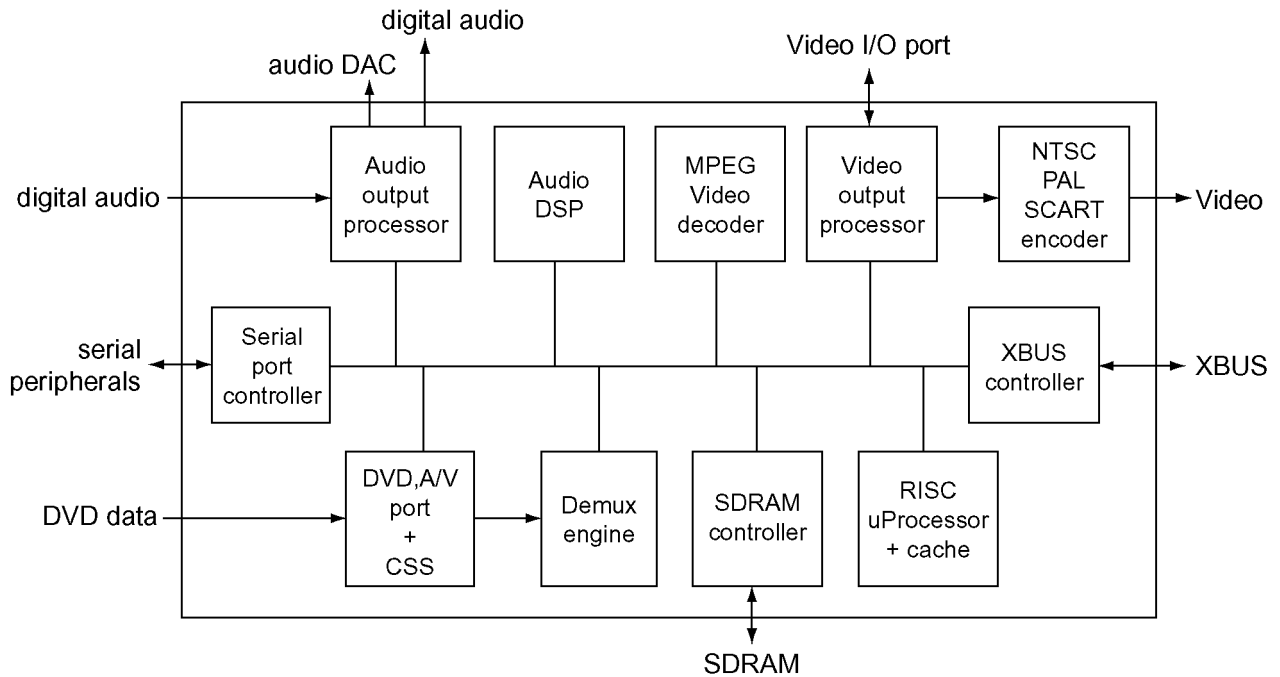
Pin No.	Symbol	I/O	Description
1	M5	I	Control signal for DAC
2	DIN	I	Digital data input
3	LRCK	I	L and R clock for DAC
4	BCK	I	Bit clock for DAC
5	M3	I	Control signal for DAC
6	DVDD2	-	Power supply terminal
7	CKO	-	Non connect
8	DVSS2	-	Connect to ground
9	M2	I	Control signal for DAC
10	M1	I	Control signal for DAC
11	OUT1C	O	Analog output 1
12	AVDD1	-	Power supply terminal
13	OUT1D	O	Analog output 1
14	AVSS1	-	Connect to ground
15	AVSS2	-	Connect to ground
16	OUT2D	O	Analog output 2
17	AVDD2	-	Power supply terminal
18	OUT2C	O	Analog output 2
19	M9	I	Control signal for DAC
20	DVSS1	-	Connect to ground
21	XOUT	-	Non connect
22	XIN	-	Non connect
23	VCOF	I	VCO Frequency
24	DVDD1	-	Power supply D+5V
25	M7	-	Connect to ground
26	M8	-	Connect to ground
27	M4	I	Control signal for DAC
28	M6	I	Clock for control signal

5.11NDV8611VWA(IC501):AV Decoder

- Pin layout



- Block diagram



- Pin function

Pin No.	Symbol	I/O	Description
1	VDDio	-	Power supply terminal 3.3V
2,3	MD10,11	I/O	SDRAM Data bus terminal
4	VDD	-	Power supply terminal 1.8V
5	MD12	I/O	SDRAM Data bus terminal
6	VSSio	-	Connect to ground
7~9	MD13~15	I/O	SDRAM Data bus terminal
10	VDDio	-	Power supply terminal 3.3V
11	DQM1	O	SDRAM Data byte enable
12,13	MA9,8	O	SDRAM Address bus terminal
14	VSSio	-	Connect to ground
15,16	MA7,6	O	SDRAM Address bus terminal
17	VSS	-	Connect to ground
18	MA5	O	SDRAM Address bus terminal
19	VDDio	-	Power supply terminal 3.3V
20,21	MA4,3	O	SDRAM Address bus terminal
22	MCLK	O	SDRAM Clock output
23	VSSio	-	Connect to ground
24	CKE	O	SDRAM Clock enable output
25,26	MA2,1	O	SDRAM Address bus terminal
27	VDDio	-	Power supply terminal 3.3V
28	MA0	O	SDRAM Address bus terminal
29	MA10	O	SDRAM Address bus terminal
30	MA11	-	Non connect

Pin No.	Symbol	I/O	Description
31	VSSio	-	Connect to ground
32,33	MA12,13	O	SDRAM Address bus, reserved for terminal compatibility with 64Mb SDRAM
34	VDD	-	Power supply terminal 1.8V
35	CS0	O	SDRAM Primary bank chip select
36	VDDio	-	Power supply terminal 3.3V
37	RAS	O	SDRAM Command bit
38	CAS	O	SDRAM Command bit
39	WE	O	SDRAM Command bit
40	VSSio	-	Connect to ground
41	DQM0	O	SDRAM Data byte enable
42	DQM2	O	SDRAM Data byte enable
43	MD16	I/O	SDRAM Data bus terminal
44	VDDio	-	Power supply terminal 3.3V
45,46	MD17,18	I/O	SDRAM Data bus terminal
47	VSS	-	Connect to ground
48	MD19	I/O	SDRAM Data bus terminal
49	VSSio	-	Connect to ground
50~52	MD20~22	I/O	SDRAM Data bus terminal
53	VDDio	-	Power supply terminal 3.3V
54~56	MD23~25	I/O	SDRAM Data bus terminal
57	VSSio	-	Connect to ground
58~61	MD26~29	I/O	SDRAM Data bus terminal
62	VDDio	-	Power supply terminal 3.3V
63,64	MD30,31	I/O	SDRAM Data bus terminal
65	DQM3	O	SDRAM Data byte enable
66	CS1	O	SDRAM Extension bank chip select
67	VSSD	-	Connect to ground
68	SPDIF	O	S/PDIF Digital audio output terminal
69	VSSio	-	Connect to ground
70	AIN	I	Digital audio input for digital micro; can be used as GPIO
71	AOUT3	O	Serial audio output data to audio DAC for left and right channels for down-mix
72	AOUT2	O	Serial audio output data to audio DAC for surround left and right channels
73	AOUT1	O	Serial audio output data to audio DAC for center and LFE channels
74	AOUT0	O	Serial audio output data to audio DAC for left and right channels
75	VDDio	-	Power supply terminal 3.3V
76	PCMCLK	O	Audio DAC PCM sampling clock frequency, common clock for DACs and ADC
77	VDD	-	Power supply terminal 1.8V
78	ACLK	O	Audio interface serial data clock, common clock for DACs and AD converter
79	LRCLK	O	Left / right channel clock, common clock for DACs and ADC
80	SRST	O	Active low RESET signal for peripheral reset
81	RSTP	I	RESET_Power : from system, used to reset frequency synthesizer and rest of chip
82	VSSio	-	Connect to ground
83	RXD1	I	UART1 Serial data input from external serial device, used for IR receiver
84	SSPIN1	I/O	SSP1 Data in or 16X clock for USART function in UART1
85	VSS	-	Connect to ground
86	SSPOUT1	I/O	SSP1 Data out or UART1 data-terminal-ready signal
87	SSPCLK1	I/O	SSP1 Clock or UART1 clear-to-send signal
88	SSPCLK0	I/O	SSP0 Clock or request-to-send function in UART1
89	VDD	-	Power supply terminal 1.8V
90	SSPIN0	I/O	SSP0 Data in or 16X clock for USART function in UART0
91	VDDio	-	Power supply terminal 3.3V

Pin No.	Symbol	I/O	Description
92	SSPOUT0	I/O	SSP0 Data out or UART0 data-terminal-ready signal
93	TXD0	I/O	UART0 Serial data output to an external serial device
94	RXD0	I	UART0 Serial data input from external serial device
95	CTS0	I/O	UART0 Clear-to-send signal
96	RTS0	I/O	UART0 Request-to-send signal
97	VSSio	-	Connect to ground
98	CXI	I	Crystal input terminal for on-chip oscillator or system input clock
99	CXO	O	Crystal output terminal for on-chip oscillator
100	OSCVSS	-	Connect to ground for oscillator
101	OSCVDD	-	Power supply terminal for oscillator 1.8V
102	MVCKVDD	-	Power supply terminal for main and video clock PLL 3.3V
103	SCEN	I	Scan chain test enable
104	MVCKVSS	-	Connect to ground for main and video clock PLL
105	ACLKVSS	-	Connect to ground for audio clock PLL
106	SCMD	I	Scan chain test mode
107	ACLKVDD	-	Power supply terminal for audio clock PLL 3.3V
108	VDDDAK	-	Power supply terminal for DAC digital 1.8V
109	VSSDAC	-	Connect to ground for DAC digital
110	Cr/R	O	Video signal output (Cr output : composite/component Red output)
111	IOM	O	Cascaded DAC differential output used to dump current into external resistor for power
112	C/Cb/B	O	Video signal output (Chrominance output for NTSC/PAL S-Video
113	VAA3	-	Cb output for component Blue output)
114	Y/G	O	Power supply terminal for DAC analog 3.3V
115	VSSA	-	Video signal output (Luminance for S-Video and component Green output)
116	VREF	-	Connect to ground for DAC analog
117	VAA	-	Non connect
118	CVBS/C	O	Video signal output (Composite video Chrominance output for S-Video)
119	RSET	O	Current setting resistor of output DACs
120	COMP	O	Compensation capacitor connection
121	VSS	-	Connect to ground
122	VCLK	-	Non connect
123	VSYNC	-	Non connect
124	HSYNC	-	Non connect
125	VDDio	-	Power supply terminal 3.3V
126~131	VI07~02	-	Non connect
132	VSSio	-	Connect to ground
133,134	VI01,00	-	Non connect
135	VDD	-	Power supply terminal 1.8V
136~139	AD31~28	I/O	Multiplexed address / data bus terminal
140	VDDio	-	Power supply terminal
141~144	AD27~24	I/O	Multiplexed address / data bus terminal
145	PWE3	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
146	AD23	I/O	Multiplexed address / data bus terminal
147	VSSio	-	Connect to ground
148~153	AD22~17	I/O	Multiplexed address / data bus terminal
154	VDDio	-	Power supply terminal 3.3V
155	AD16	I/O	Multiplexed address / data bus terminal
156	PWE2	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
157,158	AD15,14	I/O	Multiplexed address / data bus terminal
159	VDD	-	Power supply terminal 1.8V
160	SCLK	O	External bus clock used for programmable host peripherals

Pin No.	Symbol	I/O	Description
161	ACK	I/O	Programmable WAIT/ACK/RDY control
162	VSSio	-	Connect to ground
163~168	AD13~8	I/O	Multiplexed address / data bus terminal
169	VDDio	-	Power supply terminal 3.3V
170	PWE1	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
171	VSS	-	Connect to ground
172~176	AD7~3	I/O	Multiplexed address / data bus terminal
177	VSSio	-	Connect to ground
178~180	AD2~0	I/O	Multiplexed address / data bus terminal
181	VDDio	-	Power supply terminal 3.3V
182	PWE0	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
183	ALE	I/O	Address latch enable
184~187	LA0~3	I/O	Latched address 0~3
188	VSSio	-	Connect to ground
189	RD	I/O	Read terminal
190	LHLDA	O	Bus hold acknowledge in slave mode
191	LHLD	I	Bus hold request from external master in slave mode
192	VDD	-	Power supply terminal 1.8V
193	PCS0	O	Peripheral chip select 0, generally used for enabling the program store ROM/FLASH
194,195	XI01,02	I/O	Programmable general purpose external input/output
196	VDDio	-	Power supply terminal 3.3V
197~200	XI03~06	I/O	Programmable general purpose external input/output
201	VSS	-	Connect to ground
202,203	XI07,08	I/O	Programmable general purpose external input/output
204	VSSio	-	Connect to ground
205	XI09	I/O	Programmable general purpose external input/output
206~209	XID10~13	I/O	Programmable general purpose external input/output
210	VDDio	-	Power supply terminal 3.3V
211	XID14	I/O	Programmable general purpose external input/output
212	VDD	-	Power supply terminal 1.8V
213	DSYNC	I	DVD Parallel mode sector sync
214	DREQ	O	DVD Parallel mode data request
215	DCLK	I	Data sampling clock
216	DSTB	I	Parallel mode data valid, serial mode left/right clock
217	DVD0	I	DVD Drive parallel data port
218	VSSio	-	Connect to ground
219~223	DVD1~5	I	DVD Drive parallel data port
224	VDDio	-	Power supply terminal 3.3V
225,226	DVD6,7	I	DVD Drive parallel data port
227	MD0	I/O	SDRAM Data bus terminal
228	VSSio	-	Connect to ground
229	MD1	I/O	SDRAM Data bus terminal
230	VSS	-	Connect to ground
231,232	MD2,3	I/O	SDRAM Data bus terminal
233	VDDio	-	Power supply terminal 3.3V
234~236	MD4~6	I/O	SDRAM Data bus terminal
237	VSSio	-	Connect to ground
238~240	MD7~9	I/O	SDRAM Data bus terminal

5.12 S-93C66AFJ-X (IC451, IC510) : EEPROM

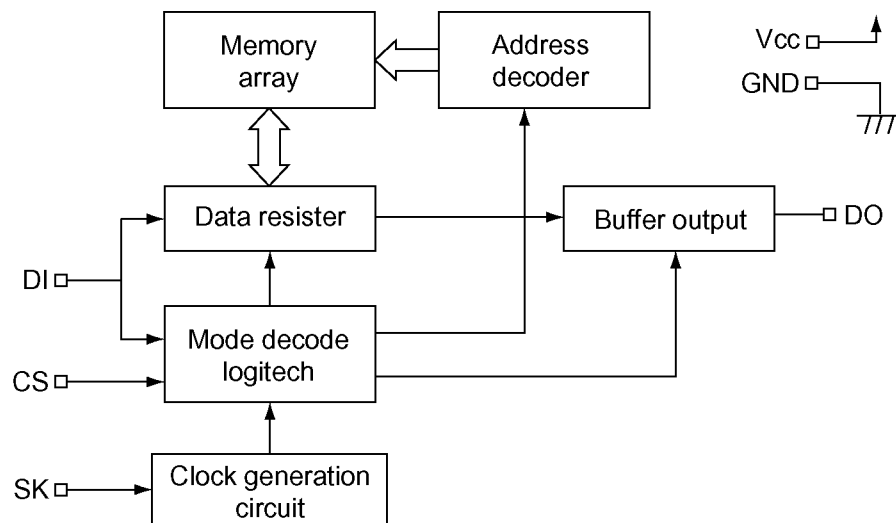
- Pin layout

PE	1	8	NC
VCC	2	7	GND
CS	3	6	DO
SK	4	5	DI

- Pin function

Pin No.	Symbol	I/O	Description
1	PE	-	Non connect
2	VCC	-	Power supply terminal
3	CS	I	Chip select input
4	SK	I	Serial clock input
5	DI	I	Serial data input
6	DO	O	Serial data output
7	GND	-	Connect to ground
8	NC	-	Non connect

- Block diagram

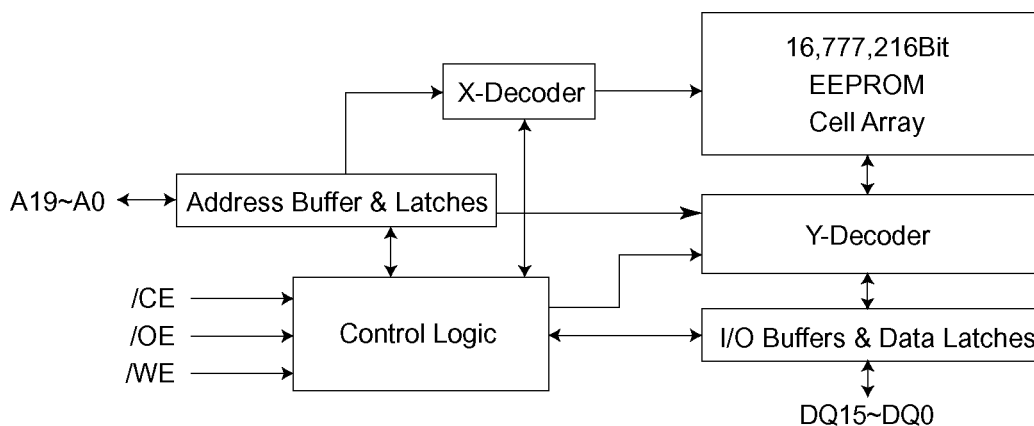


5.13 SST39VF160-7CEK (IC509) : 16M EEPROM

• Pin layout

A15	1	48	A16
A14	2	47	/BYTE
A13	3	46	Vss
A12	4	45	D15
A11	5	44	D7
A10	6	43	D14
A9	7	42	D6
A8	8	41	D13
A19	9	40	D5
NC	10	39	D12
/WE	11	38	D4
/RST	12	37	VCC
NC	13	36	D11
NC	14	35	D3
R/B	15	34	D10
A18	16	33	D2
A17	17	32	D9
A7	18	31	D1
A6	19	30	D8
A5	20	29	D0
A4	21	28	/OE
A3	22	27	Vss
A2	23	26	/CE
A1	24	25	A0

• Block diagram

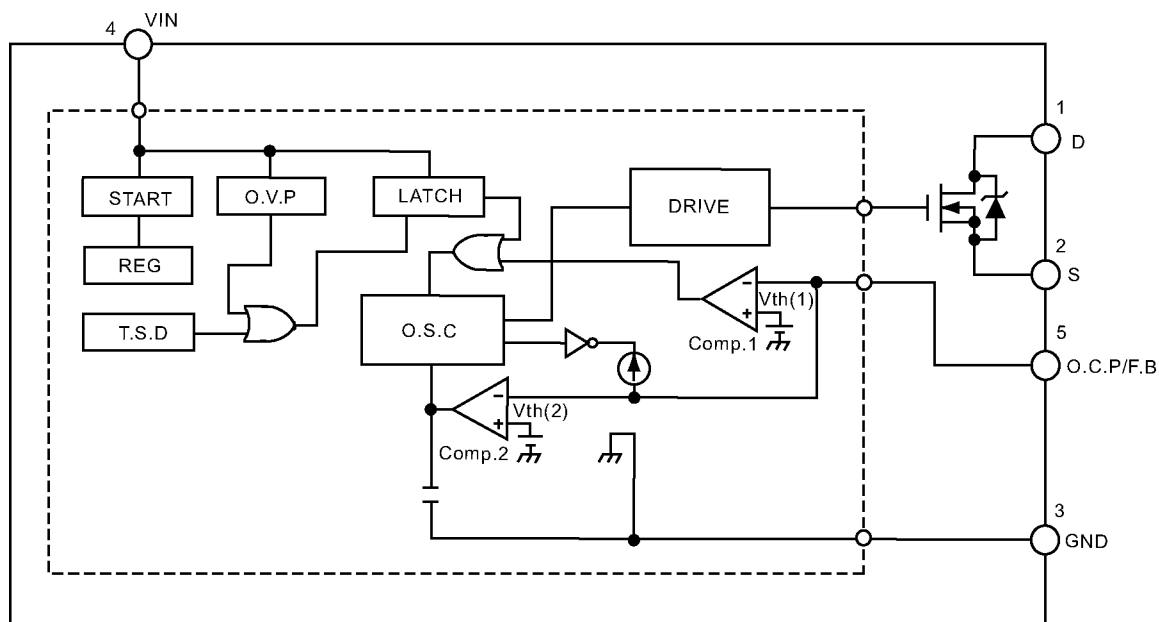


• Pin function

Symbol	Pin name	Function
A19~A0	Address Inputs	To provide memory addresses. During sector erase A19~A11 address lines will select the sector. During block erase A19~A15 address lines will select the block.
DQ15~DQ0	Data Input/Output	To output data during read cycles and receive input data during write cycles. Data is internally latched during a write cycle. The outputs are in tri-state when /OE or /CE is high.
/CE	Chip Enable	To activate the device when /CE is low.
/OE	Output Enable	To gate the data output buffers.
/WE	Write Enable	To control the write operations.
VCC	Power Supply	To provide 3-volt supply (2.7V-3.6V).
Vss	Ground	
NC	No Connection	

5.14 STR-G6551-F8 (IC901) : Switch regulator

- Block diagram

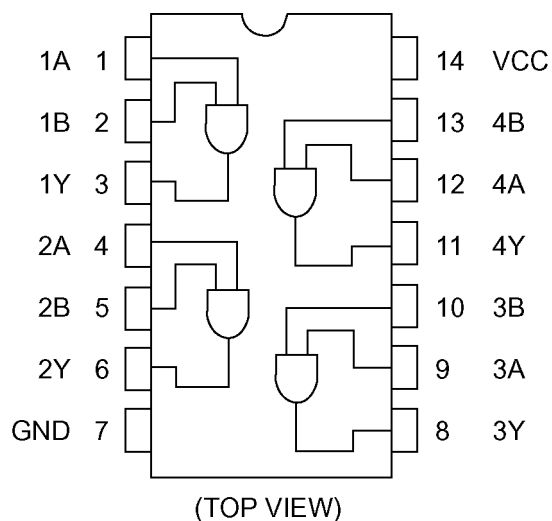


- Pin function

Pin No.	Symbol	Description	Function
1	D	Drain terminal	MOS FET drain
2	S	Source terminal	MOS FET source
3	GND	Ground terminal	Ground
4	Vin	Power supply terminal	Input of power supply for control circuit
5	O.C.P/F.B	Over current / Feedback terminal	Input of over current detection signal and constant voltage control signal

5.15 TC74HC08AF-X(IC704) : 2-input and gate

- Pin layout



- Truth table

A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

SECTION 6

Glossary of term and abbreviations(for AV Decoder section)

3D	3-dimension
A/V	1)audio/video 2)audio/visual
ac	alternating current
ACLK	audio serial-data (bit) clock
AD	multiplexed address / data bus
ADC	analog-to-digital converter
AIN	digital audio input
ALE	address latch enable
ANSI/SMPTE	American National Standards Institute / Society of Motion Pictures and Television Engineers
AOP	Audio Output Processor
AXCLK	test-mode audio-PLL clock output
baud	unit of signaling speed equal to one code element per second
Cb	blue color difference component (in accordance with the CCIR 601 specifications)
CCIR	Consultative Committee on International Radio
CD	compact disc
CD-DA	compact disc-digital audio
CMOS	Complementary Metal Oxide Semiconductor
CPU	Central Processing Unit
Cr	red color difference component (in accordance with the CCIR 601 specifications)
CSS	Content Scrambling System
CTS	Clear To Send
CVBS	Composite Video Blank and Sync
DAC	Digital-to-Analog Converter
dc	direct current
DEMUX	DEMUX Engine
DSP	Digital Signal Processing
DTS	Digital Theater System
DVD	Digital Versatile Disc
EAV	End Active Video
EAV/SAV	End Active Video / Start Active Video
EEI	Enable Error Interrupt
EEPROM	Electrically Erasable Programmable Read-Only Memory
FS	FIFO Status
GPIO	General Purpose Input/Output
HD-CD	High Definition Compatible Digital
HDTV	High-Definition television
HSYNC	Horizontal sync
I/O	Input/Output
IEC	International Electrotechnical Commission
IOM	Current (I) Output Minus (complementary shared current path to Video DAC current paths)
IR	infrared
ITU	International Telecommunications Union
LA	Latched Address Bus
LCLK	oscillator clock (derived from internal crystal oscillator)
Lfe	Low-frequency effect
LRCLK	Left/Right clock
LSB	Least Significant Bit
Mb	Megabit
MB	Megabyte
MCLK	primary or master clock
MHz	Megahertz
MIPS	Million Instructions Per Second
MmCPU	Mediamatics CPU (synonym for internal RISC CPU)
MP3	Moving Picture Experts Group Layer-3 Audio (audio file format / extension)
MPEG1 audio	A digital audio format mainly used in video CDs. It is based on the moving picture expert group(MPEG1) format, a data compression technology.
MPEG2 audio	A digital audio format mainly used in Europe and Australia. It provides high quality, multi-channel audio of up to eight channels in the same was as Dolby Digital and DTS. It is based on the MPEG2 format, a data compression technology more improved than MPEG1
NOP	No Operation
NTSC	1)National Television System Committee 2)Worldwide video standard in North America and Japan
NTSC-M	Version of NTSC used in certain parts of the world (Brazil)
OSD	On-screen display
PAL	Phase alteration by line
PCM	Pulse Code Modulation
PCMCLK	PCM audio-data over-sampling clock
PCS	1)Picture Control and Size 2)Peripheral Chip Select
PLL	Phase Lock Loop
PQFP	Plastic Quad Flat Pack (Package)
PWM	Pulse Width Modulator
r/w	Read/Write access
RAM	Random Access Memory
RGB	Red-Green-Blue (color model)
RISC	Reduced Instruction Set Computer
ROM	Read-Only Memory
RXD	Receive signal

RW	Readable / Write able
SAV	Start Active Video
SCART	Syndicat des Constructeurs d'Appareils Radiorecepteurs et Televiseurs (connector used in Europe to connect many kinds of audiovisual equipment)
SCLK	Secondary or slave clock
SDRAM	Synchronous Dynamic Random Access Memory
S/PDIF	Sony / Philips Digital Interface
S/PDIFCLK	clock associated with the S/PDIF output
SRAM	Static Random Access Memory
SSP	Synchronous Serial Port
TXD	transmit signal
UART	Universal Asynchronous Receiver-transmitter
USART	Universal Synchronous / Asynchronous Receiver / Transmitter
VGA	Video Graphics Array
VIO	Video Input / Output
VREF	Voltage REference
Vref	Vertical reference
VSSA	quiet analog ground
VSYNC	Vertical sync
XBUS	External peripheral bus
XIO	External Input / Output
Y	Luminance component (in accordance with the CCIR 601 specifications)
YCbCr	Luminance component, blue color difference component, red color difference component(in accordance with the CCIR 601 specifications)



VICTOR COMPANY OF JAPAN, LIMITED
PERSONAL & MOBILE NETWORK BUSINESS UNIT.
1644, Shimotsuruma, Yamato, Kanagawa 242-8514, Japan



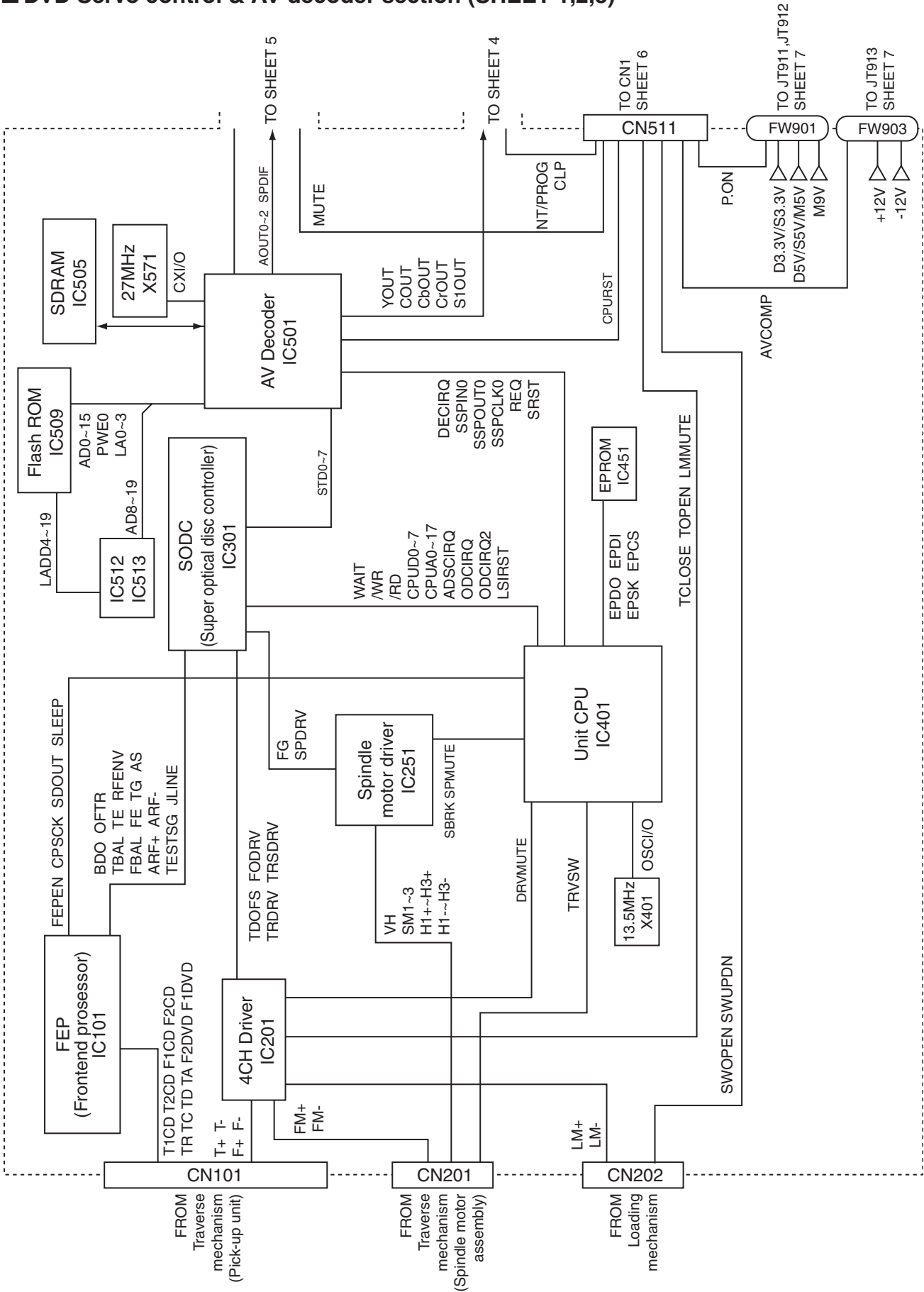
Safety precaution

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (■), diode (⬤) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.

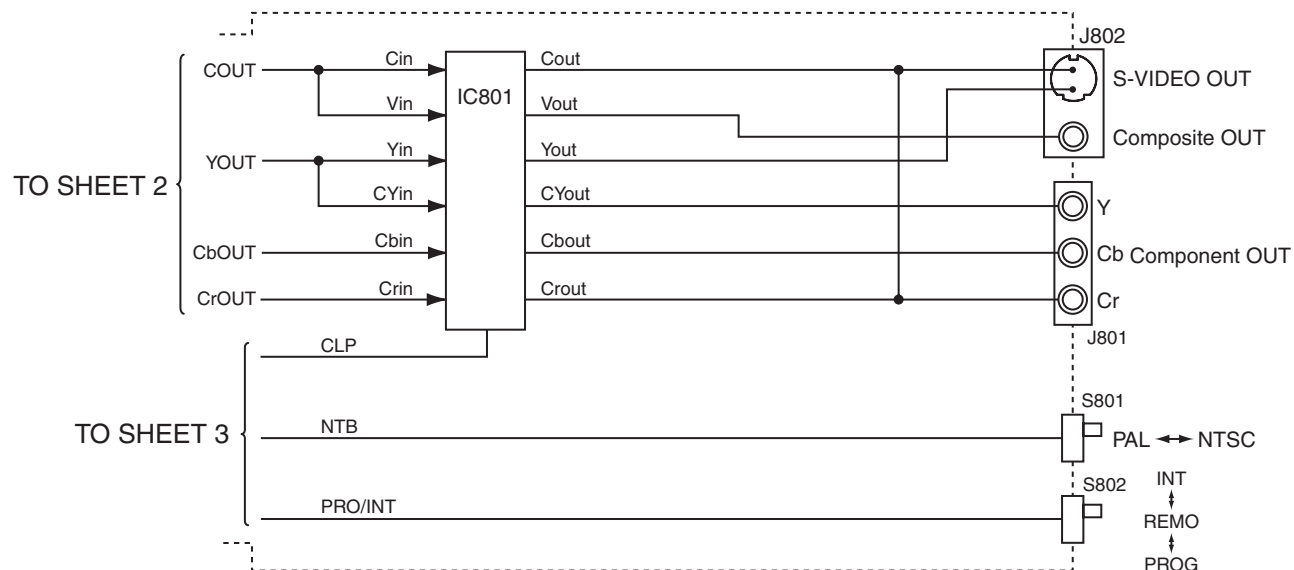
When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (Except the JC version)

Block diagrams

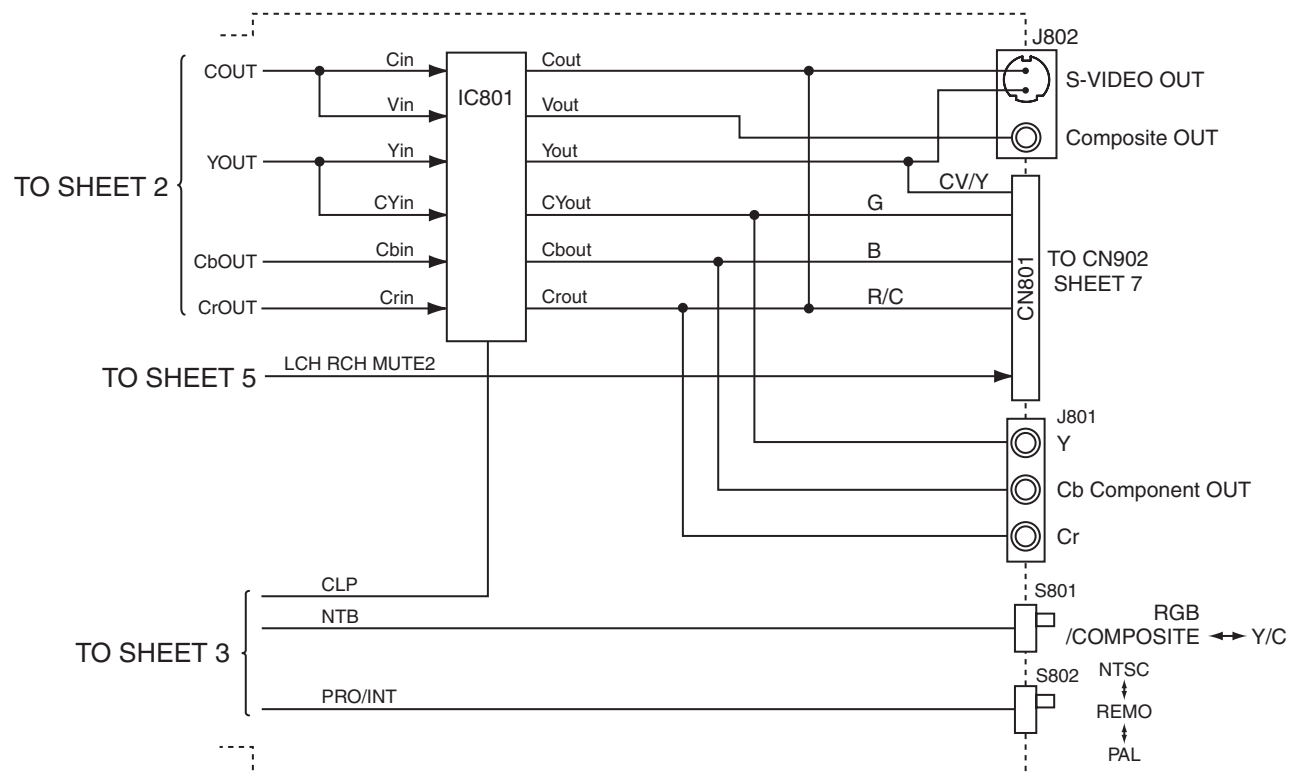
DVD Servo control & AV decoder section (SHEET 1,2,3)



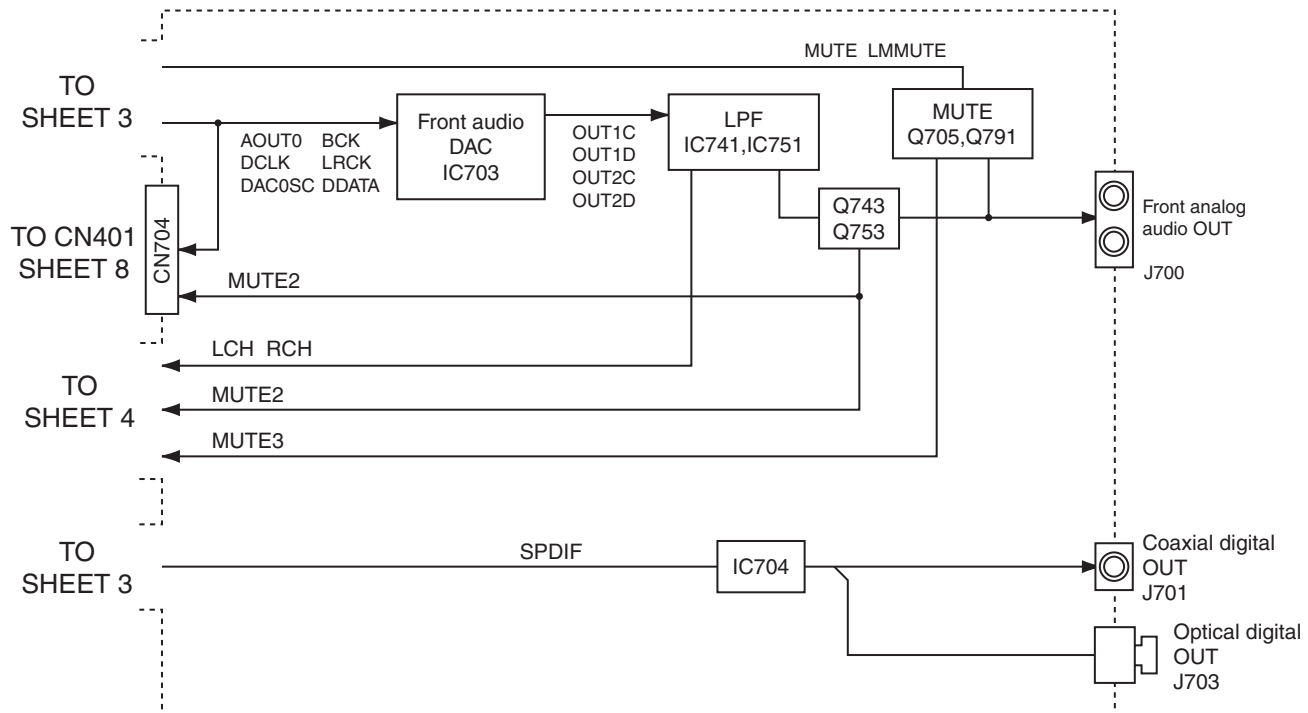
■ Video signal output section (SHEET 4) For Asia



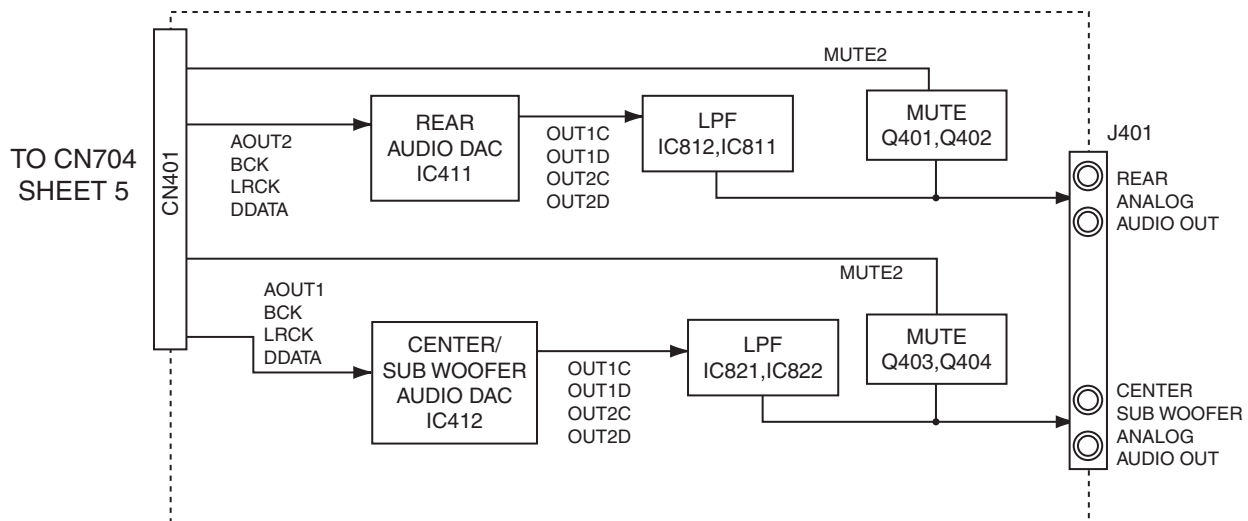
■ Video signal output section (SHEET 4) For Europe



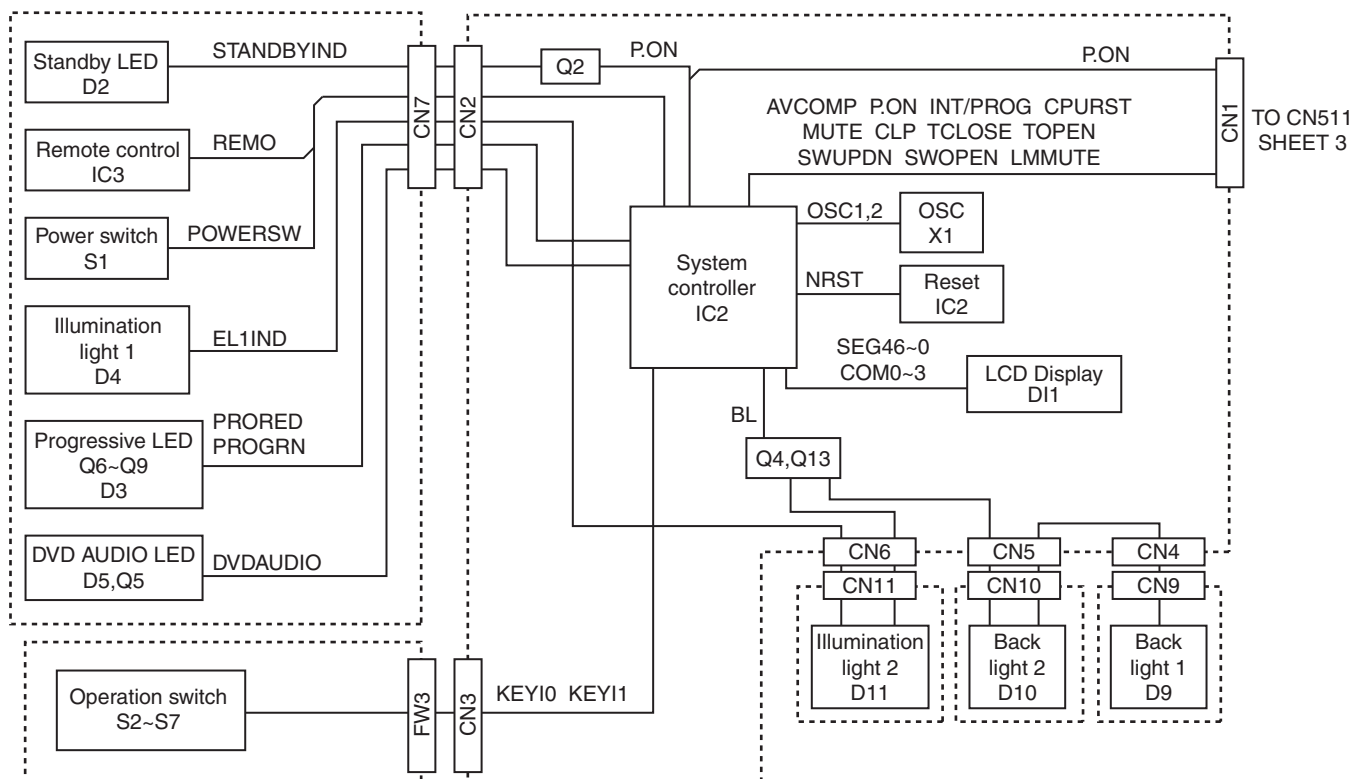
■ DAC & Audio signal output section (SHEET 5)



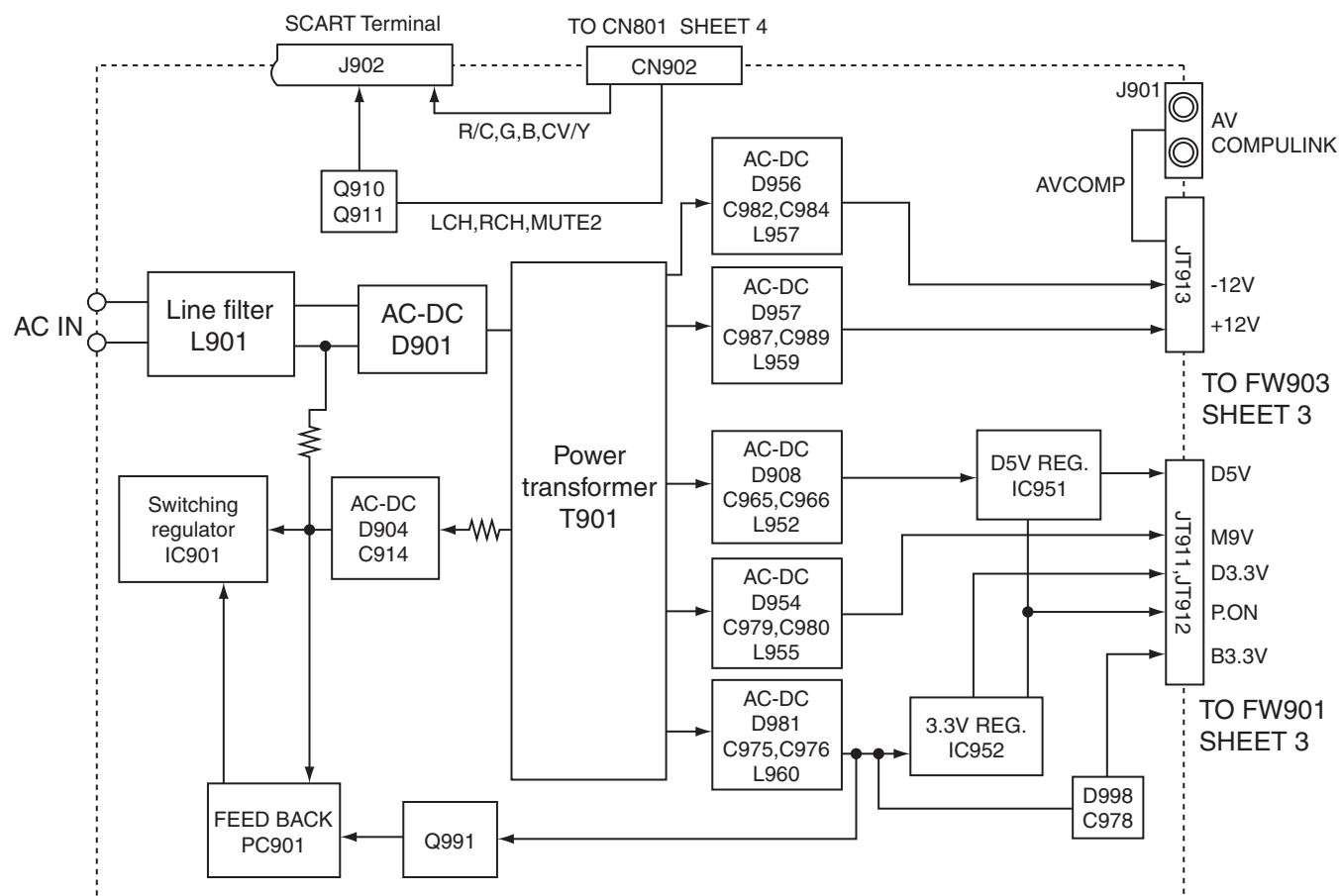
■ Surround audio section (SHEET 8)



System control & LCD display section (SHEET 6)



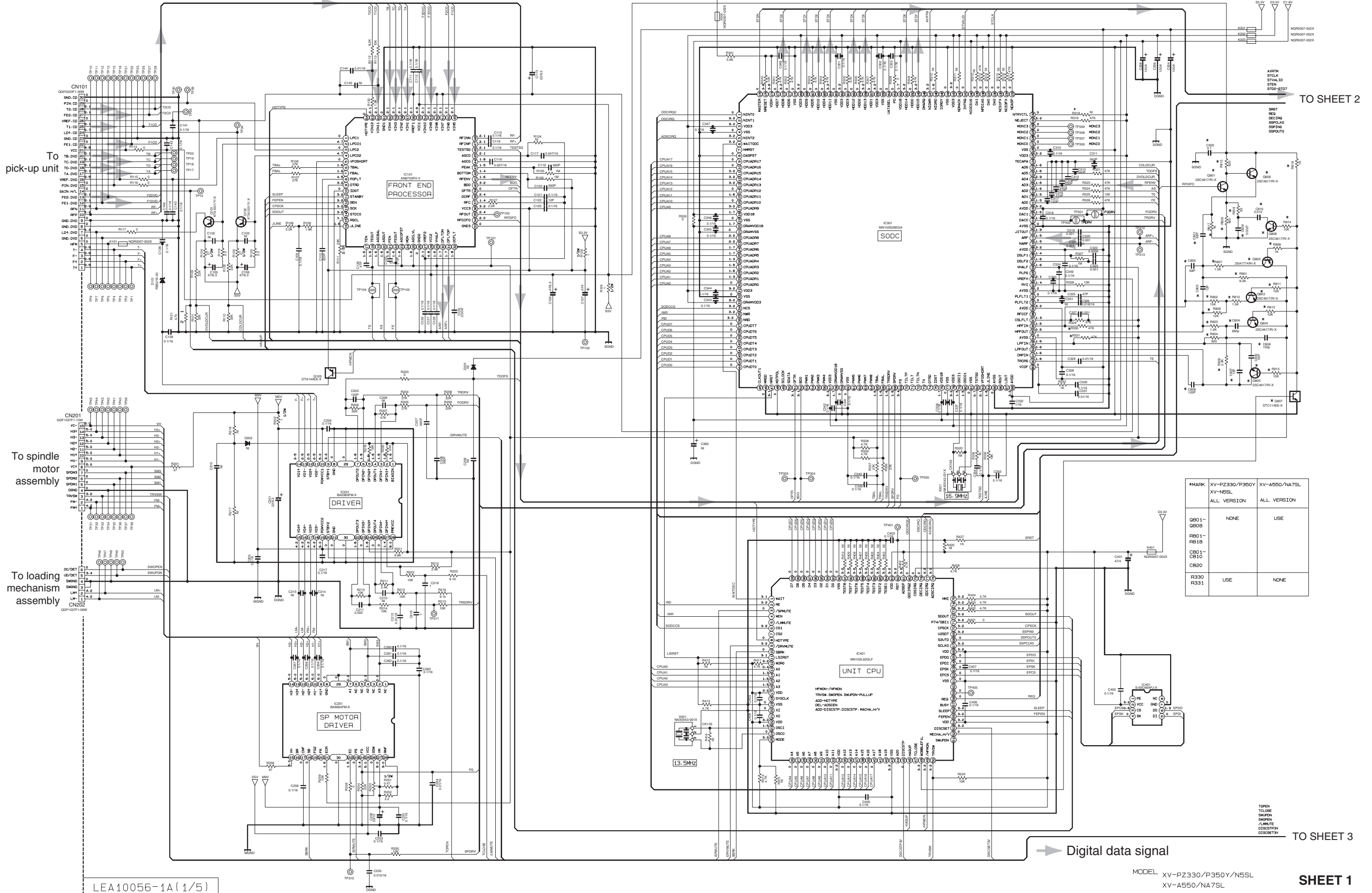
Power supply section (SHEET 7)



< MEMO >

Standard schematic diagrams

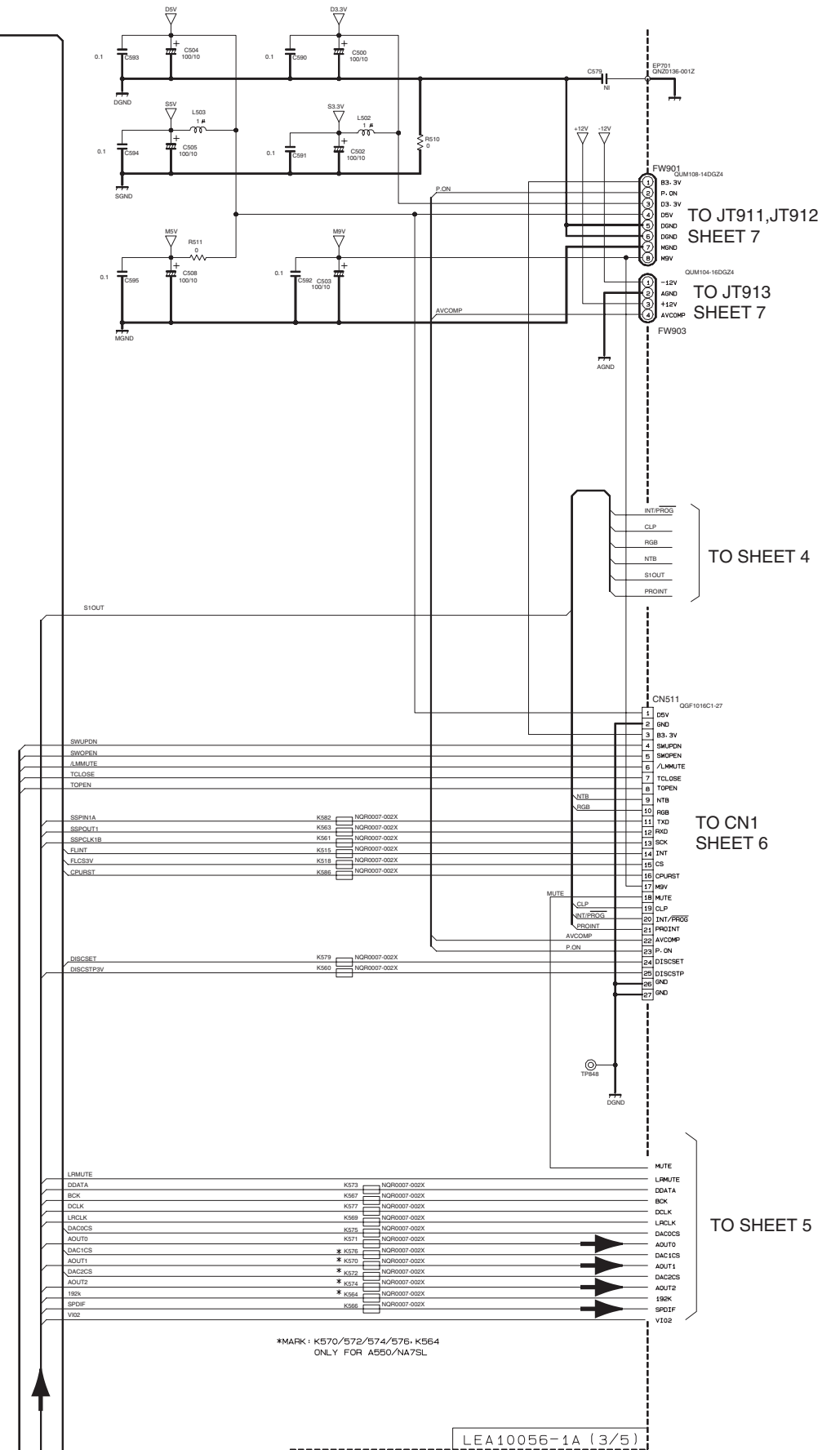
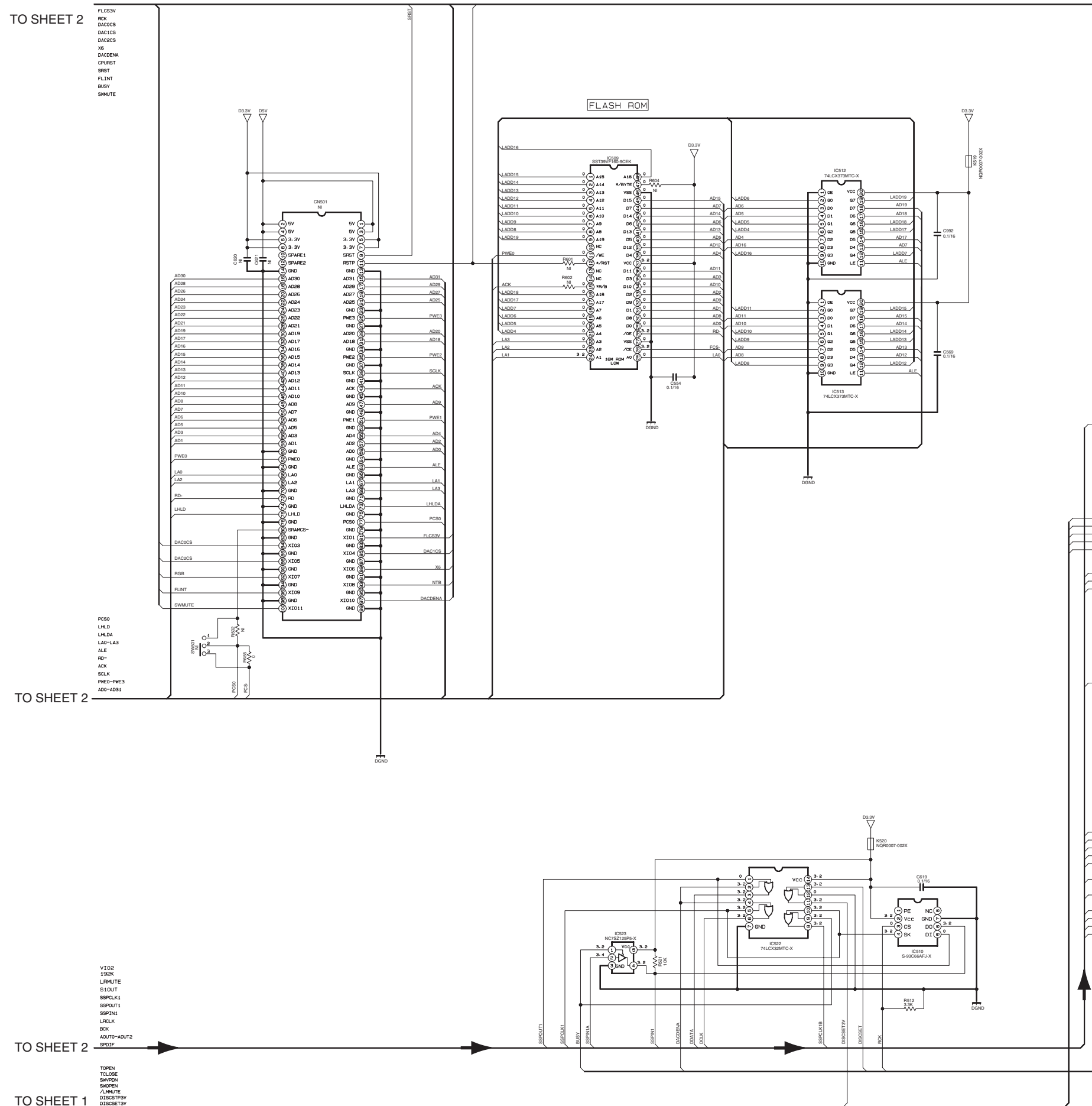
Servo control section





■ Flash ROM section

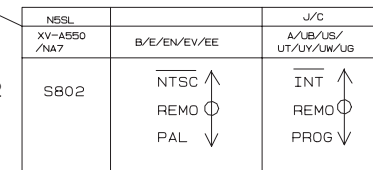
TO SHEET 2



➔ Audio signal

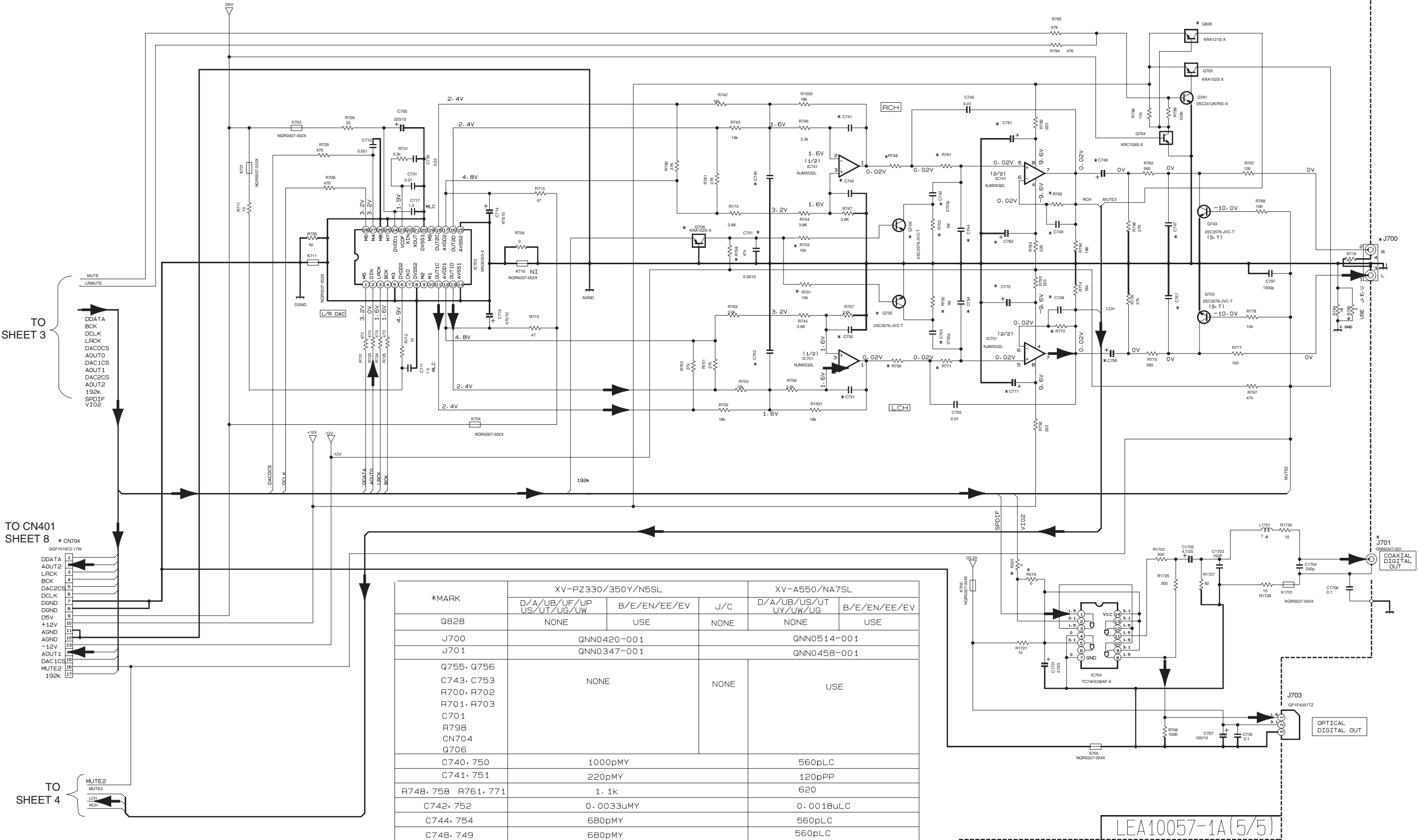
MODEL
XV-PZ330/P350Y/N5SL
XV-A550/NA7SL

SHEET 3



 Video signal
 Audio signal

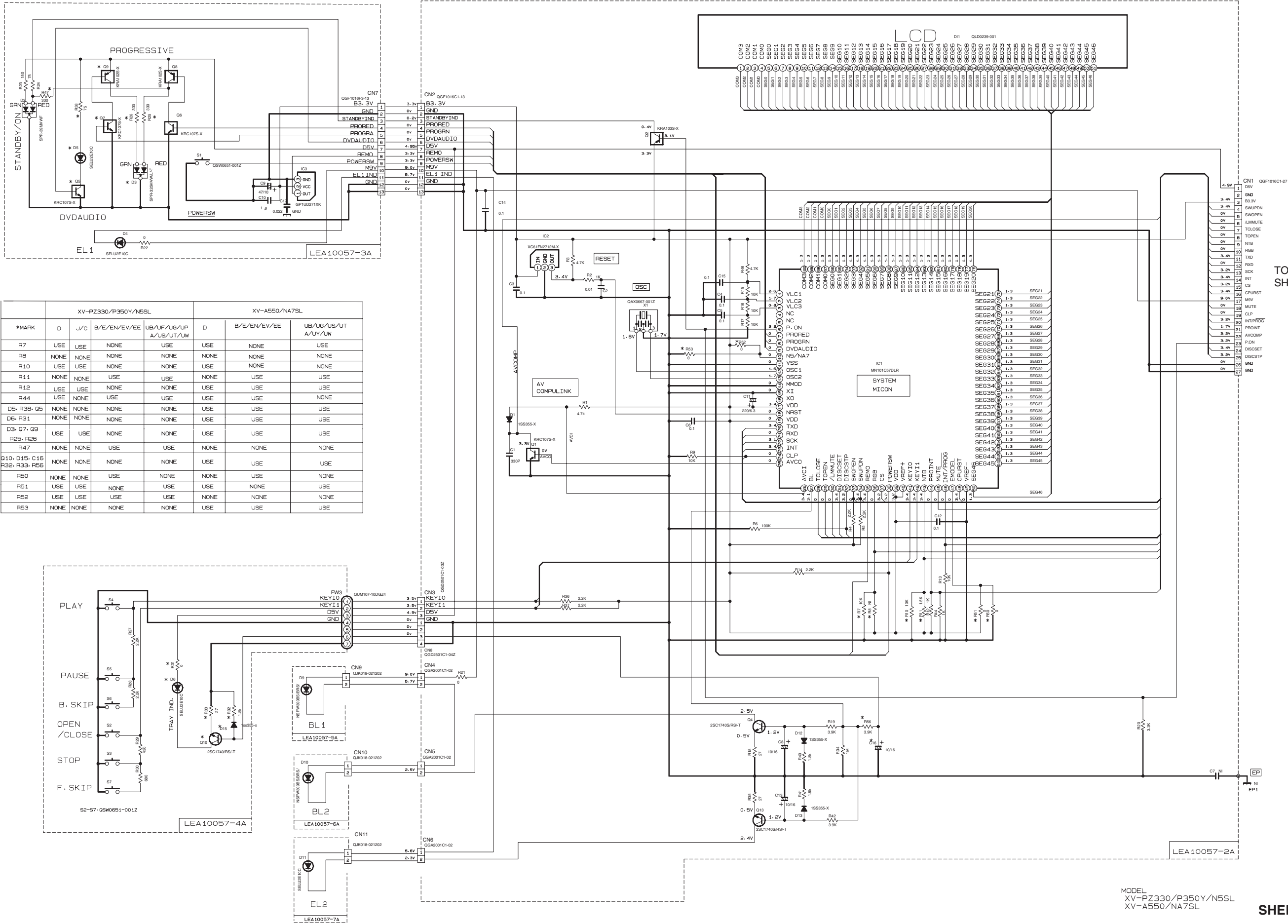
■ DAC & audio signal output section



➔ Audio signal

MODEL
XV-PZ330/P350Y/N5SL
XV-A550/NA7SL

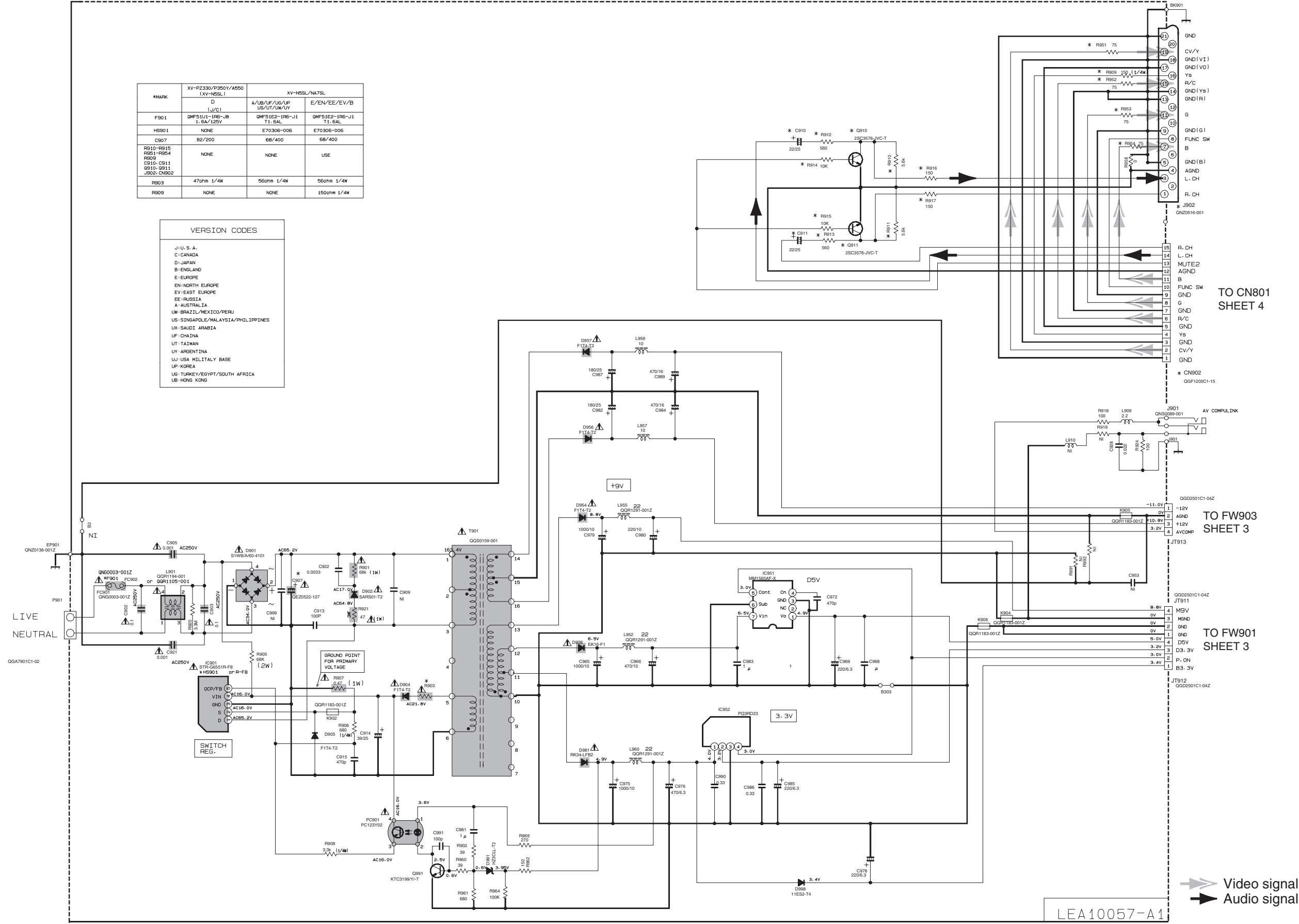
■ System control & LCD display section



TO CN511
SHEET 3

MODEL
XV-PZ330/P350Y/N5SL
XV-A550/NA7SL

Power supply section

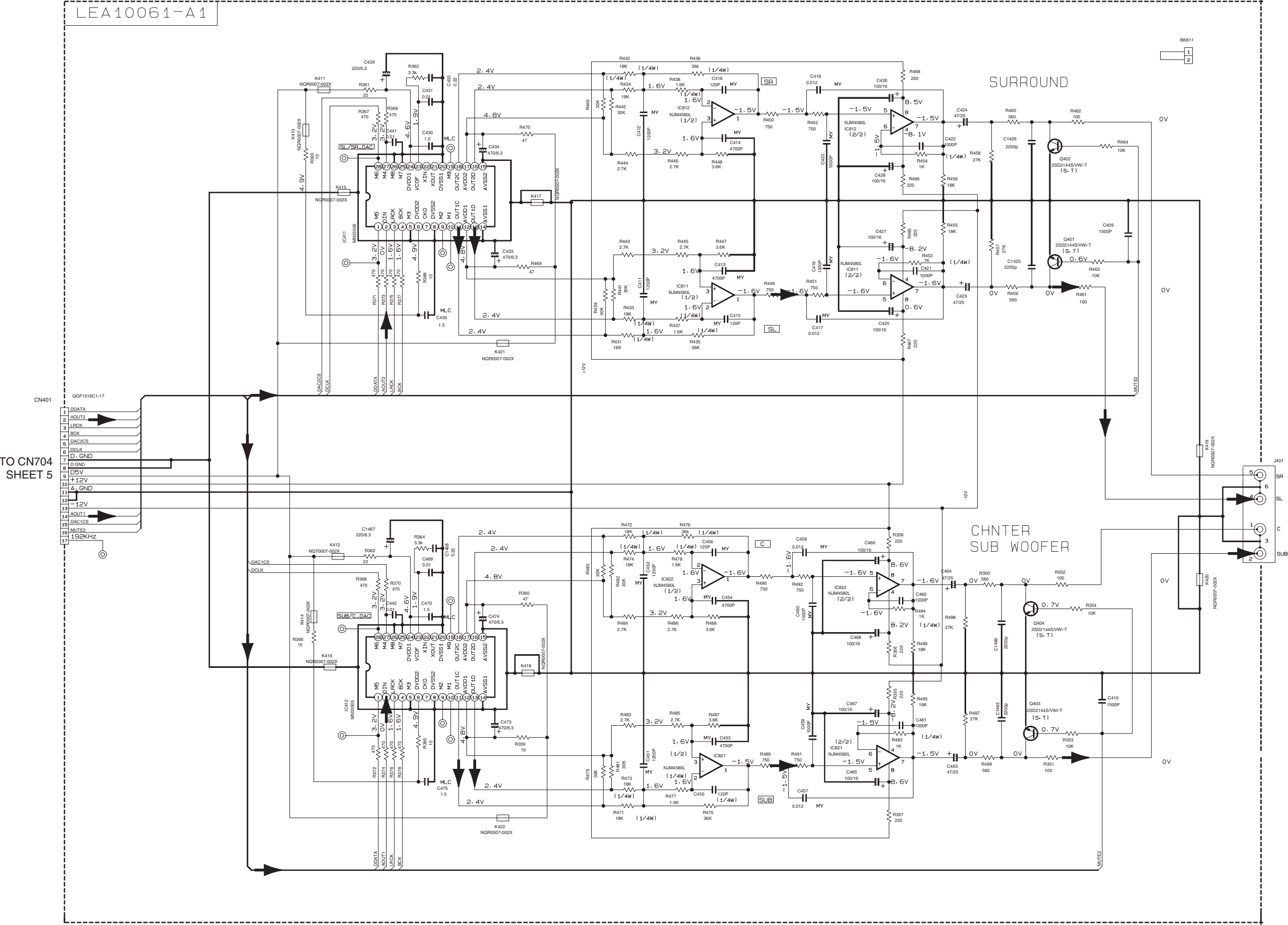


Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

MODEL
XV-P2330/P350Y/N5SL
XV-A550/NA7SL

SHEET 7

■ Surround audio section

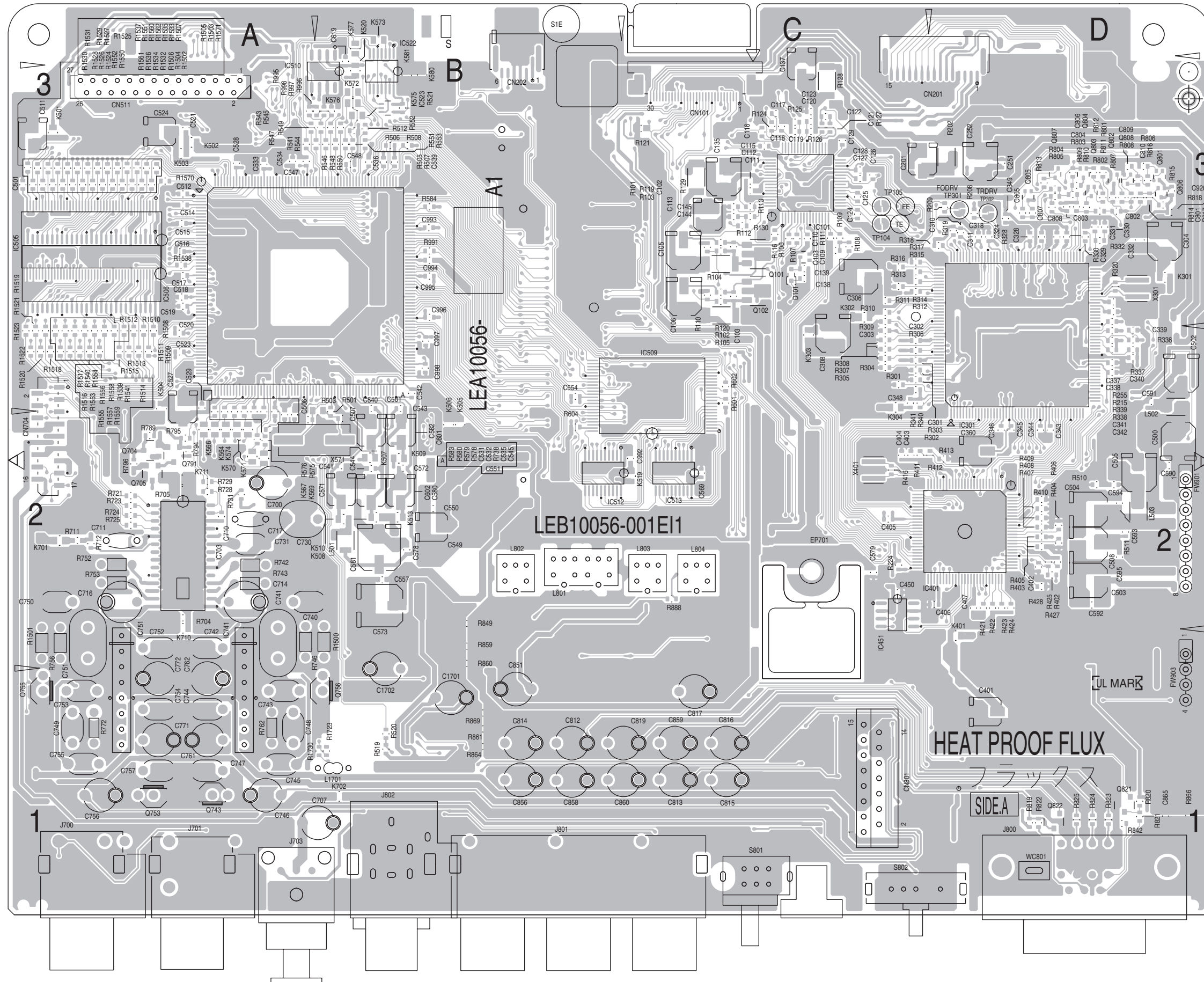


➡ Audio signal

MODEL
XV-A550/NA7SL

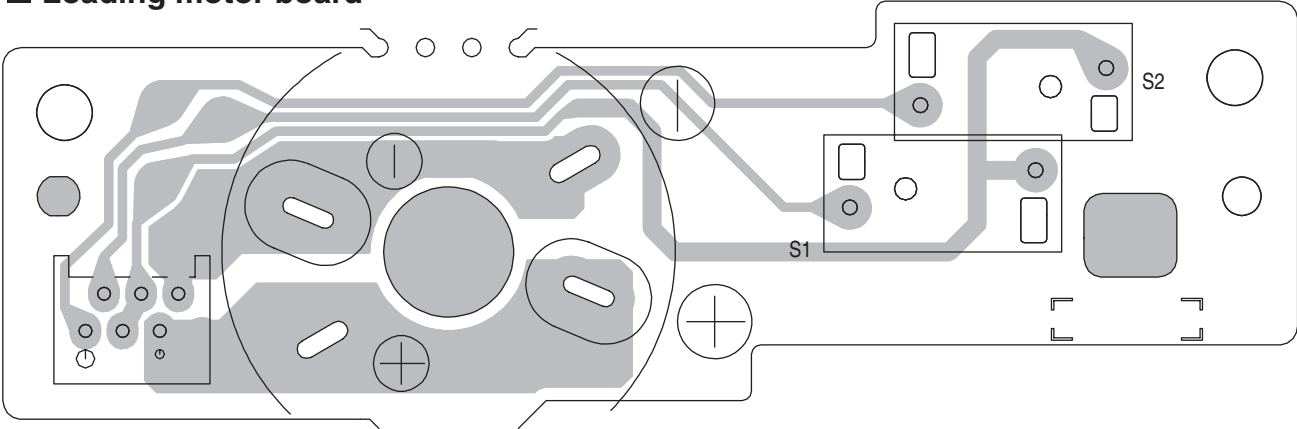
SHEET 8

■ Servo control & output terminal board (Forward side)

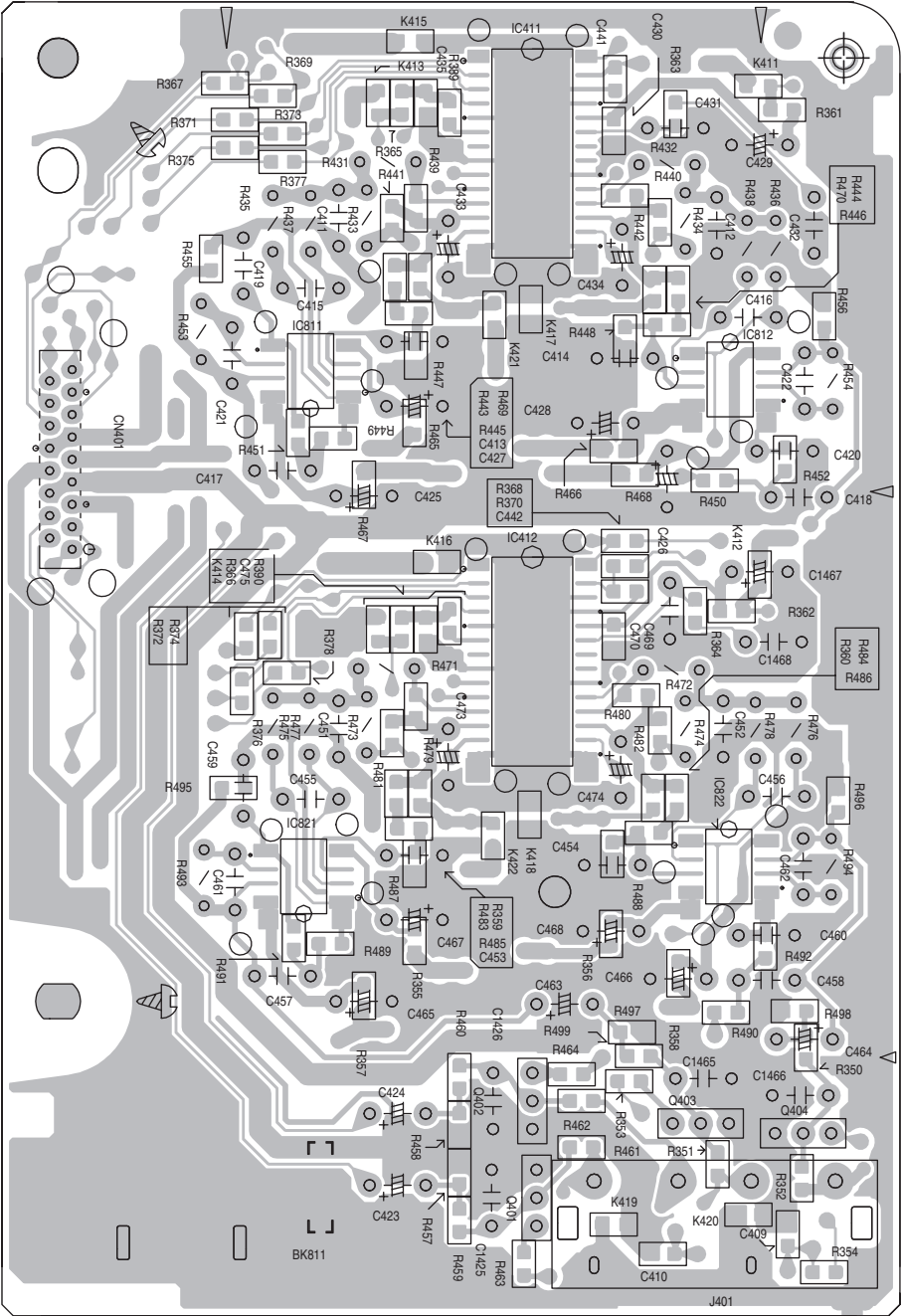




■ Loading motor board



■ Surround audio board



PARTS LIST

[XV-NA7SL]

* All printed circuit boards and its assemblies are not available as service parts.

Area Suffix

A -----	Australia
B -----	U.K.
E -----	Continental Europe
EN ----	Northern Europe
US ----	Singapore
UW ---	Brazil, Mexico, Peru

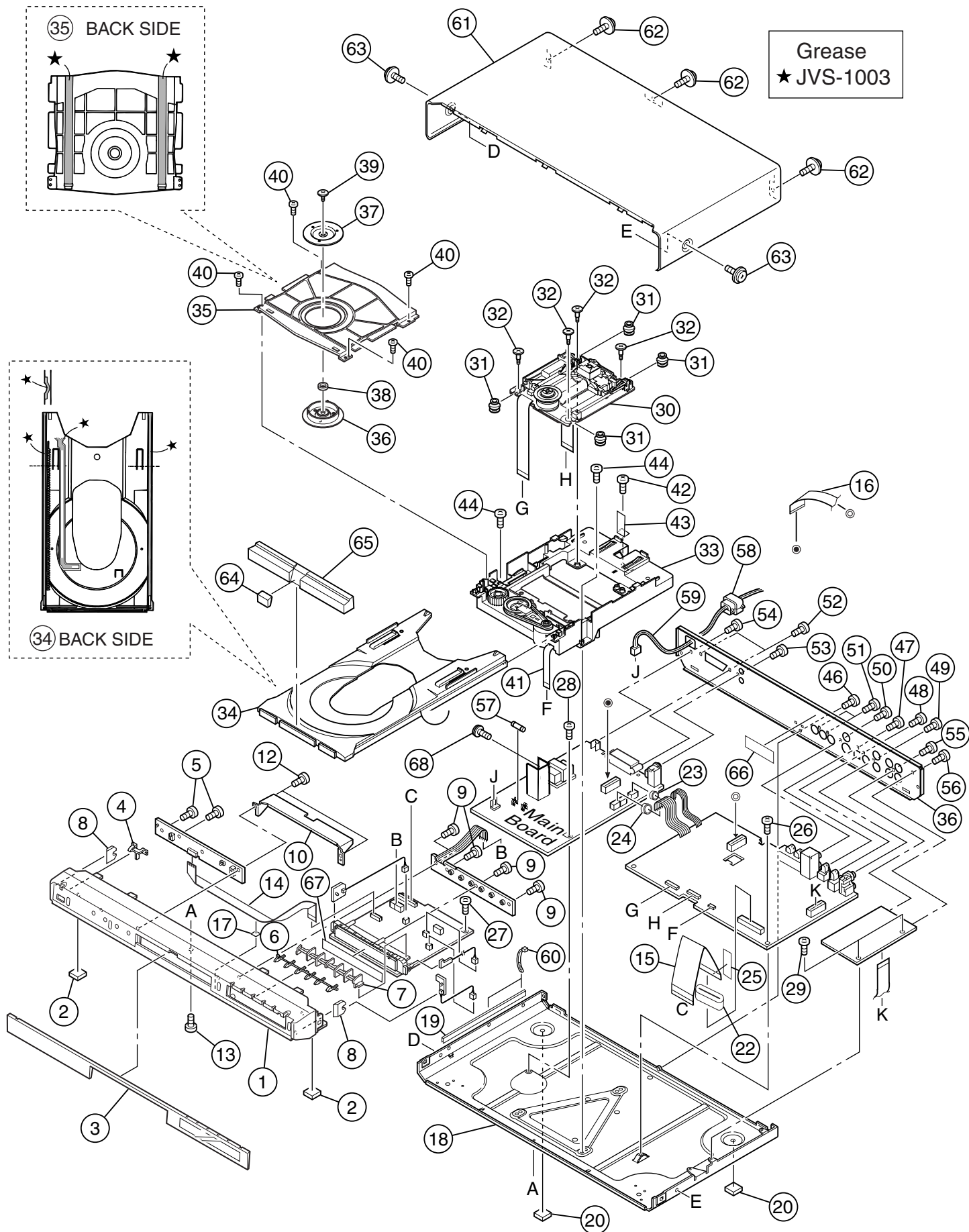
- Contents -

Exploded view of general assembly and parts list	3-2
DVD Traverse mechanism assembly and parts list	3-5
DVD Loading mechanism assembly and parts list	3-7
Electrical parts list	3-9
Packing materials and accessories parts list	3-20

Exploded view of general assembly and parts list

Block No.

M	1	M	M
---	---	---	---



■ Parts list (General assembly) 1/2

Block No. M1MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LE10272-006A	FRONT PANEL	1		A,US,UW
		LE10272-005A	FRONT PANEL	1		B,E,EN
	2	E75896-001	FELT SPACER	2		
	3	LE20638-014A	WINDOW SCREEN	1		
	4	LE20639-004A	PUSH BUTTON	1		
	5	QYSBSF2608Z	T.SCREW	2		
	6	LE20640-002A	PUSH BUTTON	1		
	7	LE20641-001A	PUSH BUTTON	1		
	8	LE31030-002A	LED LENS	2		
	9	QYSBSF2608Z	T.SCREW	4		
	10	LE20646-001A	BKT	1		
	11	LE20662-001A	INDICATOR	1		
	12	QYSBSF2608Z	T.SCREW	2		
	13	QYSDSG3008N	T.SCREW	1		
	14	QUQ110-1336AJ	FFC WIRE	1		
	15	QUQ110-2711AJ	FFC WIRE	1		
	16	QUQ412-1514CJ	FFC WIRE	1		B,E,EN
	17	E3400-431	SPACER	1		
	18	LE10273-002A	CHASSIS BASE	1		
	19	LE30001-033A	SPACER	1		
	20	E75896-001	FELT SPACER	2		
	21	QUQ810-1713AJ	FFC WIRE	1		
	22	QQR1349-001	FERRITE CORE	1		
	23	QQR1350-001	FERRITE CORE	1		
	24	QQR1351-001	FERRITE CORE	1		
	25	LV30225-090A	SPACER	1		
	26	QYSBSGG3008E	T.SCREW	1		
	27	QYSBSGG3008E	T.SCREW	1		
	28	QYSBSGG3008E	T.SCREW	1		
	29	QYSBSGG3008E	T.SCREW	2		
	30	-----	DVD TRAVERSE ME	1		
	31	LV41659-201A	INSULATOR	4		
	32	LV41424-001A	SPECIAL SCREW	4		
	33	-----	1DISC LAODING B	1		
	34	LV10582-001A	TRAY LONG TYPE	1		
	35	LV20913-002A	CLAMPER BASE	1		
	36	LV32417-001A	CLAMPER	1		
	37	LV42089-002A	YOKE	1		
	38	LV42930-003A	MAGNET	1		
	39	LV41741-001A	SPECIAL SCREW	1		
	40	QYSBSF2008Z	SCREW	4		
	41	QUQ110-0610AJ	FFC WIRE	1		
	42	QYSBST3010E	T.SCREW	1		
	43	LE40874-002A	THRUST SPRING	1		
	44	QYSBST3008E	T.SCREW	2		
	45	LE20647-025A	REAR PANEL	1		A
		LE20647-022A	REAR PANEL	1		B,E,EN
		LE20647-023A	REAR PANEL	1		US

■ Parts list (General assembly) 2/2

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	45	LE20647-024A	REAR PANEL	1		UW
	46	QYSBSGY3008M	SPECIAL SCREW	1		
	47	QYSBSGY3008M	SPECIAL SCREW	1		
	48	QYSBSGY3008M	SPECIAL SCREW	1		
	49	QYSBSGY3008M	SPECIAL SCREW	1		
	50	QYSBSGY3008M	SPECIAL SCREW	1		
	51	QYSBSGY3008M	SPECIAL SCREW	2		
	52	QYSBSGY3008M	SPECIAL SCREW	2		B,E,EN
	53	QYSBSGY3008M	SPECIAL SCREW	1		
	54	QYSBSGY3008M	SPECIAL SCREW	1		
	55	QYSBSGY3008M	SPECIAL SCREW	1		
	56	QYSBSGY3008M	SPECIAL SCREW	1		
⚠	57	QMF51E2-1R6-J1	FUSE	1		
⚠	58	QHS3771-108	CORD STOPPER	1		
⚠	59	QMPG070-244-JC	POWER CORD	1		A
⚠		QMPN160-200-JD	POWER CORD	1		B
⚠		QMPK190-200-JC	POWER CORD	1		E,EN,US,UW
	60	QZW0004-001	WIRE CLAMP	2		
	61	LE20645-001A	METAL COVER	1		
	62	QYSBSGG3008E	T.SCREW	3		
	63	QYSDSG3008N	T.SCREW	2		
	64	LE31040-001A	ORNAMENT	1		
	65	LE20663-001A	FITTING BASE	1		
	66	LV41843-001A	LASER CAUTION	1		
	67	LE31028-001A	LCD LENS	1		
	68	QYSBSE3008Z	SCREW	1		

DVD Traverse mechanism assembly and parts list

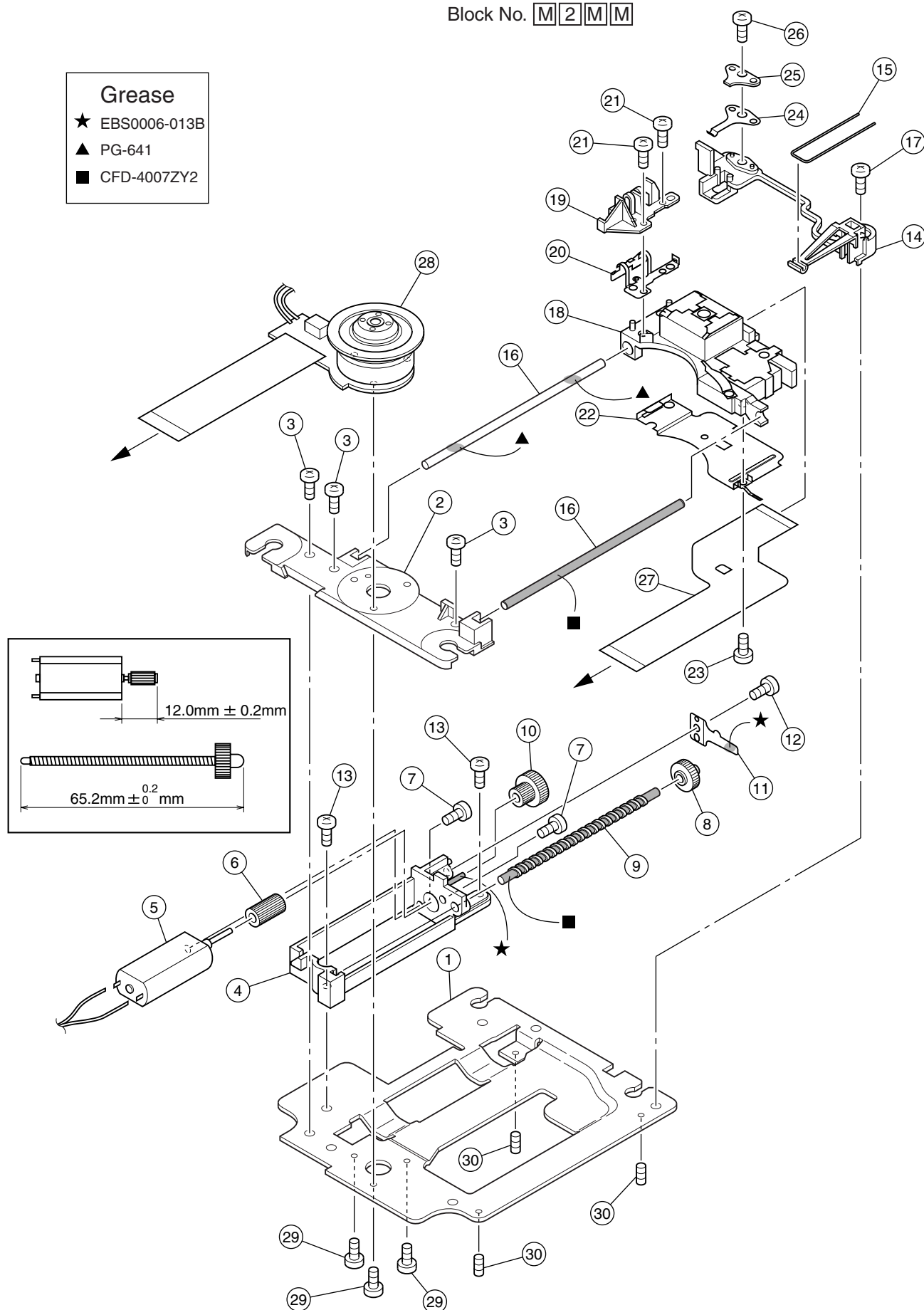
Block No. **M 2 M M**

Grease

★ EBS0006-013B

▲ PG-641

■ CFD-4007ZY2



■ Parts list (DVD Traverse mechanism assembly)

Block No. M2MM

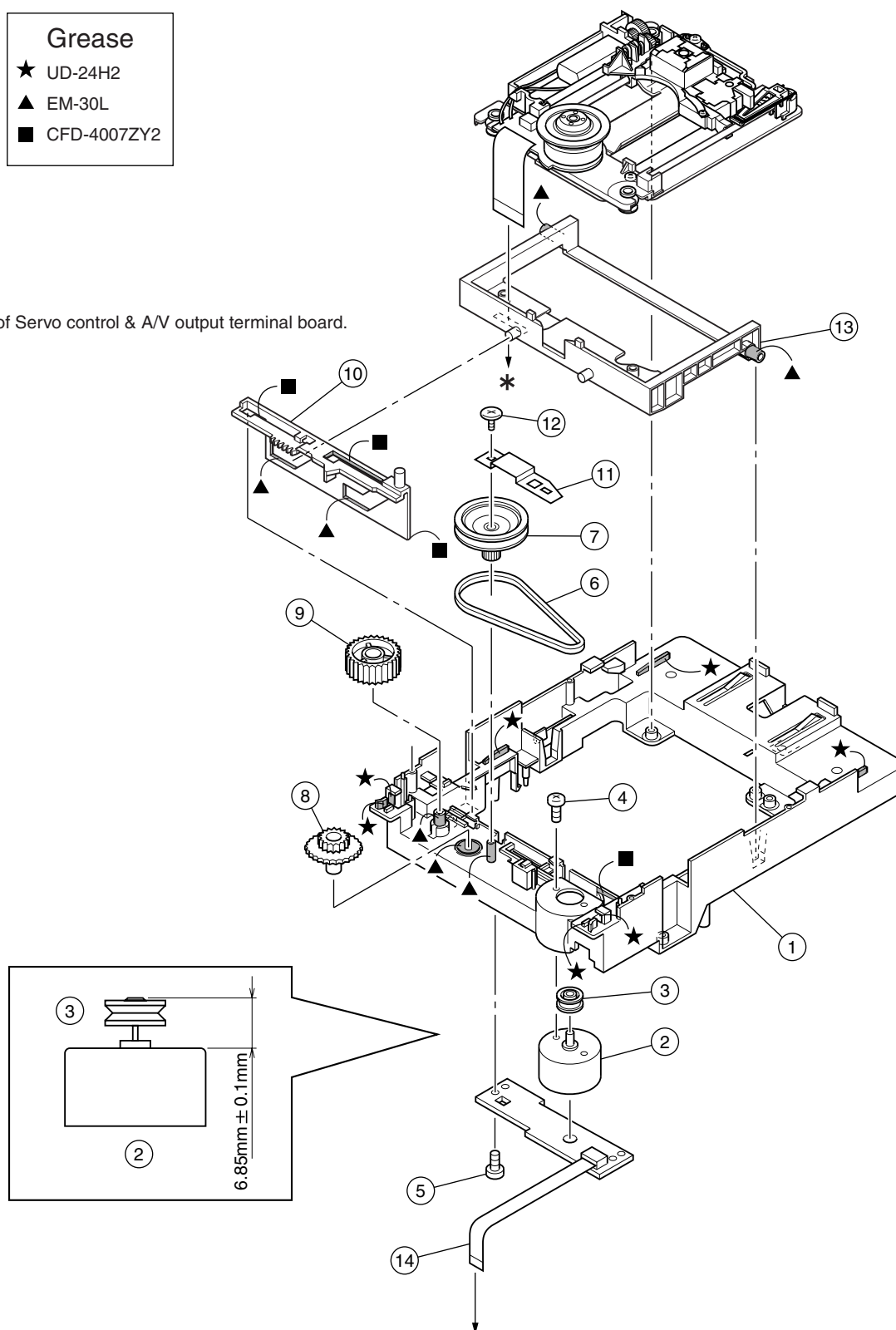
△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LE20520-002A	MECHA BASE	1		
	2	LE20516-001A	SPINDLE BASE	1		
	3	QYSDST2605M	TAPPING SCREW	3		
	4	LE30909-001A	HOLDER	1		
	5	QAR0165-001	FEED MOTOR	1		
	6	LV41510-001A	FEED GEAR	1		
	7	QYSPSPU2040M	SCREW	2		
	8	LV41512-001A	FEED GEAR	1		
	9	LV41517-003A	LEAD SCREW	1		
	10	LV41511-002A	FEED GEAR	1		
	11	LE40742-001A	TORSION SPRING	1		
	12	QYSDSF2005Z	SCREW	1		
	13	QYSDST2605M	TAPPING SCREW	2		
	14	LE20517-001A	HOLDER	1		
	15	LE40744-001A	SPRING	1		
	16	LV41121-002A	SLIDE SHAFT	2		
	17	QYSDST2605M	TAPPING SCREW	1		
	18	QAL0342-001	OPTICAL PICK-UP	1		
	19	LE20519-001A	ACTUATOR	1		
	20	LE30886-001A	SPRING	1		
	21	QYSPSFU1740Z	SCREW	2		
	22	LE30888-003A	SPRING	1		
	23	QYSPSGU1430Z	SCREW	1		
	24	LE40743-001A	SPRING	1		
	25	LE40774-001A	PLATE	1		
	26	QYSDST2606Z	SCREW	1		
	27	QAL0284-001	F.P.C.WIRE ASSY	1		
	28	QAR0162-001	SPINDLE MOTOR	1		
	29	QYSPSPU1760Z	SCREW	3		
	30	QYYASPF2608N	SCREW	3		

DVD Loading mechanism assembly and parts list

Block No. M3MM

Grease	
★	UD-24H2
▲	EM-30L
■	CFD-4007ZY2

* To G of Servo control & A/V output terminal board.



To F of Servo control & A/V output terminal board.

■ Parts list (DVD Loading mechanism assembly)

Block No. M3MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LV10454-007A	LOADING BASE	1		
	2	QAR0164-001	MOTOR	1		
	3	LV42087-001A	MOTOR PULLEY	1		
	4	QYSPSPU1730Z	SCREW	1		
	5	VKZ4777-003	MINI SCREW	1		
	6	LV42209-001A	BELT	1		
	7	LV42084-002A	PULLEY GEAR	1		
	8	LV42085-002A	MIDDLE GEAR	1		
	9	LV42086-001A	IDLE GEAR	1		
	10	LV32514-002A	SLIDE CAM	1		
	11	LV42348-001A	GEAR BRACKET	1		
	12	VKZ4777-003	MINI SCREW	1		
	13	LV20912-002A	ELEVATOR	1		
	14	QUQ110-0610AJ	FFC WIRE	1		

■ Electrical parts list (Loading motor board)

Block No. 04

△	Item	Parts number	Parts name	Remarks	Area
	CN 1	QGF1016F3-06	CONNECTOR		
	S 1	QSW0910-002	SWITCH		
	S 2	QSW0910-002	SWITCH		

■ Electrical parts list (Servo control board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C 105	NEA70JM-476X	E.CAPACITOR				C 315	NCB31HK-471X	C CAPACITOR		
	C 106	NEA70JM-476X	E.CAPACITOR				C 316	NCB31HK-271X	C CAPACITOR		
	C 109	NCB31CK-104X	C CAPACITOR				C 317	NCS31HJ-121X	C CAPACITOR		
	C 110	NCS31HJ-221X	C.CAPA. C.M				C 318	NCB31CK-104X	C CAPACITOR		
	C 111	NCB31CK-104X	C CAPACITOR				C 319	NCB31HK-102X	C CAPACITOR		
	C 112	NCB31CK-104X	C CAPACITOR				C 320	NCB31HK-102X	C CAPACITOR		
	C 113	NEA70JM-226X	E CAPACITOR				C 321	NCB31HK-102X	C CAPACITOR		
	C 115	NCB31CK-104X	C CAPACITOR				C 322	NCB31HK-562X	C CAPACITOR		
	C 116	NCB31CK-104X	C CAPACITOR				C 323	NCB31HK-102X	C CAPACITOR		
	C 117	NCB31CK-473X	C CAPACITOR				C 324	NCB31CK-104X	C CAPACITOR		
	C 118	NCB31CK-273X	C CAPACITOR				C 325	NCS31HJ-470X	C.CAPA. C.M		
	C 119	NCB31HK-561X	C CAPACITOR				C 326	NCB31CK-183X	C CAPACITOR		
	C 120	NCB31HK-561X	C CAPACITOR				C 327	NCB31CK-102X	C.CAPA. C.M		
	C 121	NCB31CK-104X	C CAPACITOR				C 328	NCB31CK-104X	C CAPACITOR		
	C 122	NCS31HJ-120X	C.CAPA. C.M				C 329	NCB31CK-103X	C CAPACITOR		
	C 123	NCB31CK-104X	C CAPACITOR				C 330	NCB31CK-104X	C CAPACITOR		
	C 124	NCS31HJ-470X	C.CAPA. C.M				C 331	NCB31CK-103X	C CAPACITOR		
	C 125	NCB31HK-271X	C CAPACITOR				C 332	NCB21CK-105X	C CAPACITOR		
	C 126	NCB31CK-104X	C CAPACITOR				C 333	NCB31CK-104X	C CAPACITOR		
	C 127	NCB31CK-104X	C CAPACITOR				C 334	NCB31CK-104X	C CAPACITOR		
	C 128	NCB31CK-104X	C CAPACITOR				C 337	NCB31CK-104X	C CAPACITOR		
	C 129	NCB31HK-472X	C CAPACITOR				C 338	NCB31CK-104X	C CAPACITOR		
	C 135	NEA70JM-476X	E.CAPACITOR				C 339	NCB31CK-104X	C CAPACITOR		
	C 137	NEA70GM-476X	E.CAPA. C.M.				C 340	NCB31CK-104X	C CAPACITOR		
	C 138	NCB31CK-104X	C CAPACITOR				C 341	NCB31CK-104X	C CAPACITOR		
	C 139	NCB31CK-104X	C CAPACITOR				C 342	NCB31CK-104X	C CAPACITOR		
	C 141	NCB31CK-104X	C CAPACITOR				C 343	NCB31CK-104X	C CAPACITOR		
	C 142	NCB31CK-104X	C CAPACITOR				C 344	NCB31CK-104X	C CAPACITOR		
	C 143	NCB31CK-104X	C CAPACITOR				C 345	NCB31CK-104X	C CAPACITOR		
	C 144	NCB31CK-103X	C CAPACITOR				C 346	NCB31CK-104X	C CAPACITOR		
	C 146	NCB31CK-104X	C CAPACITOR				C 347	NCB31CK-104X	C CAPACITOR		
	C 201	NEA70JM-226X	E CAPACITOR				C 348	NCB31CK-104X	C CAPACITOR		
	C 203	NCB31CK-104X	C CAPACITOR				C 349	NCB31CK-104X	C CAPACITOR		
	C 204	NCB31CK-104X	C CAPACITOR				C 350	NCB31CK-104X	C CAPACITOR		
	C 205	NCS31HJ-121X	C CAPACITOR				C 401	NEA70GM-476X	E.CAPA. C.M.		
	C 207	NCB31HK-391X	C CAPACITOR				C 402	NCB31CK-104X	C CAPACITOR		
	C 208	NCB31HK-391X	C CAPACITOR				C 403	NCB31CK-104X	C CAPACITOR		
	C 211	NCB31HK-223X	C CAPACITOR				C 404	NCB31CK-104X	C CAPACITOR		
	C 212	NCB31CK-103X	C CAPACITOR				C 405	NCB31CK-104X	C CAPACITOR		
	C 216	NCB30JK-105X	C CAPACITOR				C 406	NCB31CK-104X	C CAPACITOR		
	C 217	NCB31CK-104X	C CAPACITOR				C 407	NCB31CK-104X	C CAPACITOR		
	C 218	NCB30JK-105X	C CAPACITOR				C 450	NCB31CK-104X	C CAPACITOR		
	C 251	NCB31CK-104X	C CAPACITOR				C 500	NEA70JM-476X	E.CAPACITOR		
	C 252	NEA71AM-336X	E CAPACITOR				C 501	NCB31CK-104X	C CAPACITOR		
	C 253	NCB31CK-104X	C CAPACITOR				C 502	NEA70JM-476X	E.CAPACITOR		
	C 255	NCB31CK-153X	C CAPACITOR				C 503	NEA71AM-336X	E CAPACITOR		
	C 256	NCB31CK-104X	C CAPACITOR				C 504	NEA70JM-476X	E.CAPACITOR		
	C 257	NCB31CK-104X	C CAPACITOR				C 505	NEA70JM-476X	E.CAPACITOR		
	C 258	NCB31CK-104X	C CAPACITOR				C 506	NDC31HJ-150X	C CAPACITOR		
	C 259	NCB31CK-104X	C CAPACITOR				C 507	NDC31HJ-180X	C.CAPACITOR		
	C 260	NCB31CK-104X	C CAPACITOR				C 508	NEA70JM-476X	E.CAPACITOR		
	C 261	NCB31CK-104X	C CAPACITOR				C 511	NEA70GM-476X	E.CAPA. C.M.		
	C 262	NCB31CK-104X	C CAPACITOR				C 512	NCB31CK-104X	C CAPACITOR		
	C 263	NCB31CK-104X	C CAPACITOR				C 514	NCB31CK-104X	C CAPACITOR		
	C 264	NCB31CK-103X	C CAPACITOR				C 515	NCB31CK-104X	C CAPACITOR		
	C 301	NCB31CK-104X	C CAPACITOR				C 516	NCB31CK-104X	C CAPACITOR		
	C 302	NCB31CK-104X	C CAPACITOR				C 517	NCB31CK-104X	C CAPACITOR		
	C 303	NCB31CK-104X	C CAPACITOR				C 518	NCB31CK-104X	C CAPACITOR		
	C 304	NEA70GM-107X	E CAPACITOR				C 519	NCB31CK-104X	C CAPACITOR		
	C 306	NEA70GM-107X	E CAPACITOR				C 520	NCB31CK-104X	C CAPACITOR		
	C 308	NEA70GM-107X	E CAPACITOR				C 521	NCB31CK-104X	C CAPACITOR		
	C 310	NCB31CK-104X	C CAPACITOR				C 523	NCB31CK-104X	C CAPACITOR		
	C 311	NCB31HK-561X	C CAPACITOR				C 524	NEA70GM-476X	E.CAPA. C.M.		
	C 312	NCB31HK-561X	C CAPACITOR				C 527	NEA70GM-476X	E.CAPA. C.M.		
	C 313	NCB31HK-561X	C CAPACITOR				C 528	NCB31CK-104X	C CAPACITOR		
	C 314	NCB31HK-331X	C CAPACITOR				C 529	NCB31CK-104X	C CAPACITOR		

■ Electrical parts list (Servo control board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C 531	NCB31CK-104X	C CAPACITOR				C 757	QFLC1HJ-182Z	M CAPACITOR	1800PF 5% 50V	
	C 532	NCB31CK-104X	C CAPACITOR				C 761	QTE1C28-107Z	E CAPACITOR		
	C 533	NCB31CK-104X	C CAPACITOR				C 762	QTE1C28-107Z	E CAPACITOR		
	C 534	NCB31CK-104X	C CAPACITOR				C 771	QTE1C28-107Z	E CAPACITOR		
	C 535	NCB31CK-104X	C CAPACITOR				C 772	QTE1C28-107Z	E CAPACITOR		
	C 536	NCB31CK-104X	C CAPACITOR				C 797	NCB31HK-152X	C CAPACITOR		
	C 539	NCB31CK-104X	C CAPACITOR				C 801	NCS31HJ-680X	C CAPACITOR	C	
	C 540	NCB31CK-104X	C CAPACITOR				C 802	NCS31HJ-680X	C CAPACITOR	C	
	C 541	NCB31CK-104X	C CAPACITOR				C 803	NCS31HJ-120X	C CAPACITOR	C	
	C 542	NCB31CK-104X	C CAPACITOR				C 804	NCS31HJ-681X	C CAPACITOR	C	
	C 543	NCB31CK-104X	C CAPACITOR				C 805	NCS31HJ-560X	C CAPACITOR	C	
	C 544	NCB31CK-104X	C CAPACITOR				C 806	NCS31HJ-151X	C CAPACITOR	C	
	C 545	NCB31CK-104X	C CAPACITOR				C 807	NCS31HJ-120X	C CAPACITOR	C	
	C 547	NCB31CK-104X	C CAPACITOR				C 808	NCS31HJ-121X	C CAPACITOR	C	
	C 548	NCB31CK-104X	C CAPACITOR				C 809	NCB31HK-272X	C CAPACITOR	C	
	C 549	NEA70GM-476X	E CAPACITOR				C 810	NCB31HK-123X	C CAPACITOR	C	
	C 550	NCB31CK-104X	C CAPACITOR				C 811	NCB31CK-104X	C CAPACITOR		
	C 551	NCB31CK-103X	C CAPACITOR				C 812	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C 554	NCB31CK-104X	C CAPACITOR				C 813	QETN0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C 557	NCB31CK-104X	C CAPACITOR				C 814	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C 569	NCB31CK-104X	C CAPACITOR				C 815	QETN0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C 571	NEA70GM-476X	E CAPACITOR				C 816	QETN1AM-226Z	E CAPACITOR	22MF 20% 10V	
	C 572	NCB31CK-104X	C CAPACITOR				C 817	QETN1AM-226Z	E CAPACITOR	22MF 20% 10V	
	C 573	NEA70GM-227X	E CAPACITOR				C 818	NCB21CK-105X	C CAPACITOR		
	C 578	NCB31CK-104X	C CAPACITOR				C 819	QETN1AM-226Z	E CAPACITOR	22MF 20% 10V	
	C 580	NEA70GM-476X	E CAPACITOR				C 831	NCB21CK-105X	C CAPACITOR		
	C 581	NEA70GM-227X	E CAPACITOR				C 832	NCB21CK-105X	C CAPACITOR		
	C 582	NEA70GM-476X	E CAPACITOR				C 833	NCB31HK-103X	C CAPACITOR		
	C 590	NCB31CK-104X	C CAPACITOR				C 834	NCB31CK-104X	C CAPACITOR		
	C 591	NCB31CK-104X	C CAPACITOR				C 835	NCB31CK-104X	C CAPACITOR		
	C 592	NCB31CK-104X	C CAPACITOR				C 836	NCB31CK-103X	C CAPACITOR		
	C 593	NCB31CK-104X	C CAPACITOR				C 851	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 594	NCB31CK-104X	C CAPACITOR				C 853	NCB31CK-104X	C CAPACITOR		
	C 595	NCB31CK-104X	C CAPACITOR				C 856	QETN0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C 601	NEA70GM-476X	E CAPACITOR				C 858	QETN0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C 602	NEA70GM-476X	E CAPACITOR				C 859	QETN1AM-226Z	E CAPACITOR	22MF 20% 10V	
	C 619	NCB31CK-104X	C CAPACITOR				C 860	QETN0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C 700	QEXT0JM-157Z	E CAPACITOR	150MF 20% 6.3V			C 865	NCB31CK-103X	C CAPACITOR		
	C 701	NCB31HK-152X	C CAPACITOR				C 992	NCB31CK-104X	C CAPACITOR		
	C 705	NCB31CK-104X	C CAPACITOR				C 993	NCB31CK-104X	C CAPACITOR		
	C 707	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V			C 994	NCB31CK-104X	C CAPACITOR		
	C 710	NCS31HJ-102X	C CAPACITOR				C 995	NCB31CK-104X	C CAPACITOR		
	C 711	QCZ0202-155Z	ML C CAPACITOR	1.5MF			C 996	NCB31CK-104X	C CAPACITOR		
	C 714	QTE1A28-477Z	E CAPACITOR				C 997	NCB31CK-104X	C CAPACITOR		
	C 716	QTE1A28-477Z	E CAPACITOR				C 998	NCB31CK-104X	C CAPACITOR		
	C 717	QCZ0202-155Z	ML C CAPACITOR	1.5MF			C1701	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 730	QFV21HJ-224Z	MF CAPACITOR	.22MF 5% 50V			C1702	QETN1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 731	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V			C1703	NCS31HJ-151X	C CAPACITOR		
	C 735	NCB31CK-104X	C CAPACITOR				C1704	NCS31HJ-331X	C CAPACITOR		
	C 740	QFLC1HJ-561Z	M CAPACITOR	560PF 5% 50V			C1706	NCB31CK-104X	C CAPACITOR		
	C 741	QFP31HJ-121Z	PP CAPACITOR	120PF 5% 50V			CN101	QGF0523F1-30W	FFC/FPC CONNE	PU	
	C 742	QFLC1HJ-182Z	M CAPACITOR	1800PF 5% 50V			CN201	QGF1037F1-15W	CONNECTOR	SP&STP	
	C 743	QFLC1HJ-272Z	M CAPACITOR	2700PF 5% 50V			CN202	QGF1037F1-06W	W TO B CONNE	LOADER	
	C 744	QFLC1HJ-561Z	M CAPACITOR	560PF 5% 50V			CN511	QGF1016C1-27	CONNECTOR		
	C 745	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V			CN704	QGF1016C2-17W	CONNECTOR	REAR/CNTR/SW	
	C 746	QTE1A48-476Z	E CAPACITOR				CN801	QGF1205C1-15	CONNECTOR	E	
	C 747	QFLC1HJ-182Z	M CAPACITOR	1800PF 5% 50V			D 101	RB521S-30	MG RESISTOR		B,E,EN
	C 748	QFLC1HJ-561Z	M CAPACITOR	560PF 5% 50V			FW901	QUM138-08DGZ4	PARA RIBON WIRE		
	C 749	QFLC1HJ-561Z	M CAPACITOR	560PF 5% 50V			FW903	QUM134-08DGZ4	PARA RIBON WIRE		
	C 750	QFLC1HJ-561Z	M CAPACITOR	560PF 5% 50V			IC101	AN8703FH-V	IC		
	C 751	QFP31HJ-121Z	PP CAPACITOR	120PF 5% 50V			IC201	BA5983FM-X	IC		
	C 752	QFLC1HJ-182Z	M CAPACITOR	1800PF 5% 50V			IC251	BA6664FM-X	LSI		
	C 753	QFLC1HJ-272Z	M CAPACITOR	2700PF 5% 50V			IC301	MN103S26EGA	IC		
	C 754	QFLC1HJ-561Z	M CAPACITOR	560PF 5% 50V			IC401	MN102L62GLF3	IC		
	C 755	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V			IC451	S-93C66AFJ-X	IC		
	C 756	QTE1A48-476Z	E CAPACITOR				IC501	NDV8611VWA	IC		

■ Electrical parts list (Servo control board) Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	IC505	K4S643232E-TC60	IC				K 801	NQR0007-002X	FERRITE BEADS		
	IC509	SST39VF160-9CEK	IC (FLASH)				K 802	NQR0007-002X	FERRITE BEADS		
	IC510	S-93C66AFJ-X	IC				K1701	NQR0227-004X	FERRITE BEADS		
	IC511	LM1117MP1.8-X	IC				L 501	NQL044K-100X	INDUCTOR		
	IC512	74LCX373MTC-X	IC(DIGITAL)				L 502	NQL044K-100X	INDUCTOR		
	IC513	74LCX373MTC-X	IC(DIGITAL)				L 503	NQL044K-100X	INDUCTOR		
	IC522	74LCX32MTC-X	IC(DIGITAL)				L 801	QQR1089-001	LPF		
	IC523	NC7SZ125P5-X	IC(DIGITAL)				L 802	QQR1088-001	LPF		
	IC703	MN35505-X	IC C M				L 803	QQR1088-001	LPF		
	IC704	TC74HC08AF-X	IC				L 804	QQR1088-001	LPF		
	IC741	NJM5532L	IC				L1701	QQL231K-1R0Y	INDUCTOR		
	IC751	NJM5532L	IC				Q 101	KTA1001/Y/-X	TRANSISTOR		
	IC801	MM1568CJ-X	IC				Q 102	KTA1001/Y/-X	TRANSISTOR		
	J 700	QNN0513-001	PIN JACK	FRONT L/R			Q 103	DTA144EE-X	DIGI TRANSISTOR		
	J 701	QNN0458-001	PIN JACK	COAXIAL			Q 704	KRC109S-X	TRANSISTOR		
	J 703	GP1FA351TZ	OPT TRANSMITTER	OPT DIGITAL OUT			Q 705	KRA102S-X	DIGITAL.TR		
	J 801	QNN0395-001	PIN JACK	COMPONENT ALL			Q 706	KRA102S-X	DIGITAL.TR		
	J 802	QNN0454-001	PIN JACK	S/COMP. ALL			Q 743	2SC3576-JVC-T	TRANSISTOR I/M	LR MUTE	
	K 101	NQR0007-002X	FERRITE BEADS				Q 753	2SC3576-JVC-T	TRANSISTOR I/M	LR MUTE	
	K 301	NQR0007-002X	FERRITE BEADS				Q 755	2SC3576-JVC-T	TRANSISTOR I/M	NA7 ONLY	
	K 302	NQR0007-002X	FERRITE BEADS				Q 756	2SC3576-JVC-T	TRANSISTOR I/M	NA7 ONLY	
	K 303	NQR0007-002X	FERRITE BEADS				Q 791	2SC2412K/RS/-X	CHIP TRANSISTOR		
	K 304	NQR0007-002X	FERRITE BEADS				Q 801	2SC4617/R/-X	TRANSISTOR	NA7 ONLY	
	K 401	NQR0007-002X	FERRITE BEADS				Q 802	2SA1774/R/-X	TRANSISTOR	C	
	K 501	NQR0007-002X	FERRITE BEADS				Q 803	2SC4617/R/-X	TRANSISTOR	C	
	K 502	NRSA02J-0R0X	MG RESISTOR				Q 804	2SC4617/R/-X	TRANSISTOR	C	
	K 503	NRSA02J-0R0X	MG RESISTOR				Q 805	2SC4617/R/-X	TRANSISTOR	C	
	K 504	NQR0007-002X	FERRITE BEADS				Q 806	2SC4617/R/-X	TRANSISTOR	C	
	K 507	NQR0007-002X	FERRITE BEADS				Q 807	DTC114EE-X	RANSISTOR	C	
	K 508	NQR0007-002X	FERRITE BEADS				Q 808	2SC4617/R/-X	TRANSISTOR	C	
	K 509	NQR0007-002X	FERRITE BEADS				Q 821	KRC102S-X	DIGITAL.TR	D	A,US,UW
	K 510	NQR0007-002X	FERRITE BEADS				Q 822	KRC102S-X	DIGITAL.TR	D	A,US,UW
	K 513	NQR0007-002X	FERRITE BEADS				Q 825	DTA114EK-X	TRANSISTOR	E	B,E,EN
	K 515	NQR0007-002X	FERRITE BEADS				Q 826	DTC114EKA-X	TRANSISTOR	E	B,E,EN
	K 518	NQR0007-002X	FERRITE BEADS				Q 828	KRA121S-X	DIGITAL.TR	E	B,E,EN
	K 519	NQR0007-002X	FERRITE BEADS				R 101	NRSA63J-333X	MG RESISTOR		
	K 520	NQR0007-002X	FERRITE BEADS				R 102	NRSA63J-223X	MG RESISTOR		
	K 556	NQR0007-002X	FERRITE BEADS				R 103	NRSA63J-223X	MG RESISTOR		
	K 557	NQR0007-002X	FERRITE BEADS				R 104	NRS125J-270X	MG RESISTOR		
	K 558	NQR0007-002X	FERRITE BEADS				R 105	NRS125J-270X	MG RESISTOR		
	K 559	NQR0007-002X	FERRITE BEADS				R 106	NRSA63J-273X	MG RESISTOR		
	K 560	NQR0007-002X	FERRITE BEADS				R 107	NRSA63J-273X	MG RESISTOR		
	K 561	NQR0007-002X	FERRITE BEADS				R 108	NRSA63J-222X	MG RESISTOR		
	K 563	NQR0007-002X	FERRITE BEADS				R 109	NRSA63J-182X	MG RESISTOR		
	K 564	NQR0007-002X	FERRITE BEADS				R 110	NRSA63J-333X	MG RESISTOR		
	K 566	NQR0007-002X	FERRITE BEADS				R 111	NRVA63D-243X	RES. C.M		
	K 567	NQR0007-002X	FERRITE BEADS				R 112	NRSA63J-822X	MG RESISTOR		
	K 569	NQR0007-002X	FERRITE BEADS				R 113	NRSA63J-103X	MG RESISTOR		
	K 570	NQR0007-002X	FERRITE BEADS				R 114	NRSA63J-0R0X	MG RESISTOR		
	K 571	NQR0007-002X	FERRITE BEADS				R 115	NRSA63J-0R0X	MG RESISTOR		
	K 572	NQR0007-002X	FERRITE BEADS				R 116	NRSA63J-0R0X	MG RESISTOR		
	K 573	NQR0007-002X	FERRITE BEADS				R 117	NRSA63J-0R0X	MG RESISTOR		
	K 574	NQR0007-002X	FERRITE BEADS				R 119	NRSA63J-2R2X	MG RESISTOR		
	K 575	NQR0007-002X	FERRITE BEADS				R 120	NRSA63J-2R2X	MG RESISTOR		
	K 576	NQR0007-002X	FERRITE BEADS				R 121	NRSA63J-472X	MG RESISTOR		
	K 577	NQR0007-002X	FERRITE BEADS				R 125	NRSA63J-105X	MG RESISTOR		
	K 579	NQR0007-002X	FERRITE BEADS				R 126	NRSA63J-105X	MG RESISTOR		
	K 582	NQR0007-002X	FERRITE BEADS				R 127	NRSA63J-222X	MG RESISTOR		
	K 586	NQR0007-002X	FERRITE BEADS				R 128	NRS125J-1R0X	MG RESISTOR		
	K 701	NQR0007-002X	FERRITE BEADS				R 129	NRS125J-1R0X	MG RESISTOR		
	K 702	NQR0007-002X	FERRITE BEADS				R 130	NRSA63J-182X	MG RESISTOR		
	K 703	NQR0007-002X	FERRITE BEADS				R 201	NRSA63J-470X	MG RESISTOR		
	K 704	NQR0007-002X	FERRITE BEADS				R 202	NRS125J-1R0X	MG RESISTOR		
	K 705	NQR0227-004X	FERRITE BEADS				R 203	NRSA63J-0R0X	MG RESISTOR		
	K 706	NQR0227-004X	FERRITE BEADS				R 204	NRSA63J-273X	MG RESISTOR		
	K 711	NQR0007-002X	FERRITE BEADS				R 205	NRSA63J-273X	MG RESISTOR		

■ Electrical parts list (Servo control board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area
	R 206	NRSA63J-303X	MG RESISTOR		
	R 207	NRSA63J-473X	MG RESISTOR		
	R 208	NRSA63J-223X	MG RESISTOR		
	R 209	NRSA63J-223X	MG RESISTOR		
	R 210	NRSA63J-242X	MG RESISTOR		
	R 211	NRSA63J-242X	MG RESISTOR		
	R 212	NRSA63J-103X	MG RESISTOR		
	R 213	NRSA63J-103X	MG RESISTOR		
	R 214	NRSA63J-103X	MG RESISTOR		
	R 215	NRSA63J-103X	MG RESISTOR		
	R 216	NRSA63J-912X	MG RESISTOR		
	R 219	NRSA63J-183X	MG RESISTOR		
	R 220	NRSA63J-243X	MG RESISTOR		
	R 221	NRSA63J-682X	MG RESISTOR		
	R 222	NRSA63J-103X	MG RESISTOR		
	R 223	NRSA63J-912X	MG RESISTOR		
	R 224	NRSA63J-103X	MG RESISTOR		
	R 251	NRS125J-R47X	MG RESISTOR		
	R 252	NRSA63J-2R2X	MG RESISTOR		
	R 253	NRSA63J-0R0X	MG RESISTOR		
	R 254	NRSA63J-203X	MG RESISTOR		
	R 255	NRSA63J-103X	MG RESISTOR		
	R 256	NRSA63J-470X	MG RESISTOR		
	R 258	NRSA63J-0R0X	MG RESISTOR		
	R 259	NRSA63J-103X	MG RESISTOR		
	R 301	NRSA63J-473X	MG RESISTOR		
	R 302	NRSA63J-473X	MG RESISTOR		
	R 303	NRSA63J-473X	MG RESISTOR		
	R 304	NRSA63J-473X	MG RESISTOR		
	R 305	NRSA63J-473X	MG RESISTOR		
	R 306	NRSA63J-473X	MG RESISTOR		
	R 307	NRSA63J-473X	MG RESISTOR		
	R 308	NRSA63J-0R0X	MG RESISTOR		
	R 309	NRSA63J-473X	MG RESISTOR		
	R 313	NRSA63J-473X	MG RESISTOR		
	R 317	NRSA63J-473X	MG RESISTOR		
	R 319	NRSA63J-473X	MG RESISTOR		
	R 320	NRSA63J-105X	MG RESISTOR	C	
	R 321	NRSA63J-473X	MG RESISTOR		
	R 323	NRSA63J-473X	MG RESISTOR		
	R 324	NRSA63J-473X	MG RESISTOR		
	R 325	NRSA63J-123X	MG RESISTOR		
	R 326	NRSA63J-473X	MG RESISTOR		
	R 327	NRSA63J-105X	MG RESISTOR		
	R 328	NRSA63J-183X	MG RESISTOR		
	R 329	NRSA63J-473X	MG RESISTOR		
	R 332	NRSA63J-102X	MG RESISTOR		
	R 333	NRSA63J-183X	MG RESISTOR		
	R 334	NRSA63J-102X	MG RESISTOR		
	R 336	NRSA63J-273X	MG RESISTOR		
	R 337	NRSA63J-273X	MG RESISTOR		
	R 338	NRSA63J-472X	MG RESISTOR		
	R 339	NRSA63J-472X	MG RESISTOR		
	R 340	NRSA63J-103X	MG RESISTOR		
	R 341	NRSA63J-562X	MG RESISTOR		
	R 350	NRSA63J-0R0X	MG RESISTOR		
	R 402	NRSA63J-472X	MG RESISTOR		
	R 403	NRSA63J-0R0X	MG RESISTOR	C	
	R 405	NRSA63J-0R0X	MG RESISTOR	C	
	R 411	NRSA63J-472X	MG RESISTOR		
	R 413	NRSA63J-472X	MG RESISTOR		
	R 414	NRSA63J-472X	MG RESISTOR		
	R 421	NRSA63J-0R0X	MG RESISTOR		
	R 422	NRSA63J-472X	MG RESISTOR		
	R 423	NRSA63J-472X	MG RESISTOR		
	R 424	NRSA63J-472X	MG RESISTOR		

△	Item	Parts number	Parts name	Remarks	Area
	R 427	NRSA63J-102X	MG RESISTOR		
	R 428	NRSA63J-472X	MG RESISTOR		
	R 501	NRSA63J-470X	MG RESISTOR		
	R 510	NRSA63J-0R0X	MG RESISTOR		
	R 511	NRSA63J-0R0X	MG RESISTOR		
	R 512	NRSA63J-332X	MG RESISTOR		
	R 519	NRSA63J-0R0X	MG RESISTOR		B,E,EN
	R 520	NRSA63J-0R0X	MG RESISTOR		A,US,UW
	R 521	NRSA63J-103X	MG RESISTOR		
	R 541	NRSA63J-0R0X	MG RESISTOR		
	R 543	NRSA63J-0R0X	MG RESISTOR		
	R 544	NRSA63J-471X	MG RESISTOR		
	R 545	NRSA63J-0R0X	MG RESISTOR		
	R 546	NRSA63J-0R0X	MG RESISTOR		
	R 547	NRSA63J-0R0X	MG RESISTOR		
	R 548	NRSA63J-471X	MG RESISTOR		
	R 549	NRSA63J-471X	MG RESISTOR		
	R 550	NRSA63J-471X	MG RESISTOR		
	R 551	NRSA63J-0R0X	MG RESISTOR		
	R 552	NRSA63J-0R0X	MG RESISTOR		
	R 553	NRSA63J-0R0X	MG RESISTOR		
	R 565	NRVA63D-622X	CMF RESISTOR		
	R 566	NRVA63D-132X	MG RESISTOR		
	R 567	NRVA63D-750X	RES. C.M		
	R 568	NRVA63D-750X	RES. C.M		
	R 569	NRVA63D-750X	RES. C.M		
	R 570	NRSA63J-100X	MG RESISTOR		
	R 572	NRVA63D-750X	RES. C.M		
	R 573	NRSA63J-162X	MG RESISTOR		
	R 574	NRSA63J-162X	MG RESISTOR		
	R 575	NRSA63J-151X	MG RESISTOR		
	R 576	NRSA63J-151X	MG RESISTOR		
	R 578	NRSA63J-151X	MG RESISTOR		
	R 579	NRSA63J-151X	MG RESISTOR		
	R 580	NRSA63J-151X	MG RESISTOR		
	R 583	NRSA63J-101X	MG RESISTOR		
	R 584	NRSA63J-332X	MG RESISTOR		
	R 589	NRSA63J-0R0X	MG RESISTOR		
	R 655	NRSA63J-0R0X	MG RESISTOR		
	R 700	NRSA63J-105X	MG RESISTOR		
	R 701	NRSA63J-103X	MG RESISTOR		
	R 702	NRSA63J-105X	MG RESISTOR		
	R 703	NRSA63J-103X	MG RESISTOR		
	R 704	NRSA63J-0R0X	MG RESISTOR		
	R 706	NRSA63J-104X	MG RESISTOR		
	R 711	NRSA63J-100X	MG RESISTOR		
	R 712	NRSA63J-100X	MG RESISTOR		
	R 713	NRSA63J-470X	MG RESISTOR		
	R 715	NRSA63J-470X	MG RESISTOR		
	R 721	NRSA63J-471X	MG RESISTOR		
	R 723	NRSA63J-471X	MG RESISTOR		
	R 724	NRSA63J-471X	MG RESISTOR		
	R 725	NRSA63J-471X	MG RESISTOR		
	R 726	NRSA63J-220X	MG RESISTOR		
	R 728	NRSA63J-471X	MG RESISTOR		
	R 729	NRSA63J-471X	MG RESISTOR		
	R 731	NRSA63J-332X	MG RESISTOR		
	R 738	NRSA63J-152X	MG RESISTOR		
	R 739	NRSA63J-0R0X	MG RESISTOR		
	R 740	NRSA63J-0R0X	MG RESISTOR		
	R 742	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R 743	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R 744	NRSA63J-362X	MG RESISTOR		
	R 746	QRA14CF-3301Y	MF RESISTOR	33 1/4W	
	R 747	NRSA63J-362X	MG RESISTOR		
	R 748	NRSA63J-621X	MG RESISTOR		

■ Electrical parts list (Servo control board) Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	R 750	NRSA63J-273X	MG RESISTOR				R 838	NRSA63J-750X	MG RESISTOR		
	R 751	NRSA63J-273X	MG RESISTOR				R 839	NRSA63J-750X	MG RESISTOR		
	R 752	QRA14CF-1802Y	MF RESISTOR	18 1/4W			R 843	NRSA63J-750X	MG RESISTOR		
	R 753	QRA14CF-1802Y	MF RESISTOR	18 1/4W			R 844	NRSA63J-222X	MG RESISTOR	E	B,E,EN
	R 754	NRSA63J-362X	MG RESISTOR				R 845	NRSA63J-0R0X	MG RESISTOR	E	B,E,EN
	R 756	QRA14CF-3301Y	MF RESISTOR	33 1/4W			R 846	NRSA63J-0R0X	MG RESISTOR	E	B,E,EN
	R 757	NRSA63J-362X	MG RESISTOR				R 847	NRSA63J-0R0X	MG RESISTOR		
	R 758	NRSA63J-621X	MG RESISTOR				R 850	NRSA63J-0R0X	MG RESISTOR	E	B,E,EN
	R 761	NRSA63J-621X	MG RESISTOR				R 851	NRSA63J-223X	MG RESISTOR		
	R 762	QRE141J-821Y	C RESISTOR	820 5% 1/4W			R 852	NRSA63J-223X	MG RESISTOR		
	R 763	NRSA63J-362X	MG RESISTOR				R 853	NRSA63J-0R0X	MG RESISTOR	E	B,E,EN
	R 764	NRSA63J-183X	MG RESISTOR				R 854	NRSA63J-0R0X	MG RESISTOR	E	B,E,EN
	R 765	NRSA63J-561X	MG RESISTOR				R 855	NRSA63J-104X	MG RESISTOR	E	B,E,EN
	R 766	NRSA63J-273X	MG RESISTOR				R 856	NRSA63J-102X	MG RESISTOR	E	B,E,EN
	R 767	NRSA63J-101X	MG RESISTOR				R 857	NRSA63J-102X	MG RESISTOR	E	B,E,EN
	R 768	NRSA63J-103X	MG RESISTOR				R 858	NRSA63J-0R0X	MG RESISTOR	E	B,E,EN
	R 771	NRSA63J-621X	MG RESISTOR				R 859	NRSA63J-0R0X	MG RESISTOR		
	R 772	QRE141J-821Y	C RESISTOR	820 5% 1/4W			R 861	NRSA63J-0R0X	MG RESISTOR		
	R 773	NRSA63J-362X	MG RESISTOR				R 862	NRSA63J-332X	MG RESISTOR	E	B,E,EN
	R 774	NRSA63J-183X	MG RESISTOR				R 863	NRSA63J-102X	MG RESISTOR	E/U	
	R 775	NRSA63J-561X	MG RESISTOR				R 866	NRSA63J-0R0X	MG RESISTOR		
	R 776	NRSA63J-273X	MG RESISTOR				R 872	NRSA63J-820X	MG RESISTOR		
	R 777	NRSA63J-101X	MG RESISTOR				R 874	NRSA63J-102X	MG RESISTOR		
	R 778	NRSA63J-103X	MG RESISTOR				R 875	NRSA63J-750X	MG RESISTOR		
	R 779	NRSA63J-0R0X	MG RESISTOR				R 877	NRSA63J-102X	MG RESISTOR		
	R 780	NRSA63J-273X	MG RESISTOR				R 878	NRSA63J-750X	MG RESISTOR		
	R 781	NRSA63J-273X	MG RESISTOR				R 880	NRSA63J-102X	MG RESISTOR		
	R 782	NRSA63J-221X	MG RESISTOR				R 881	NRSA63J-750X	MG RESISTOR		
	R 783	NRSA63J-221X	MG RESISTOR				R 882	NRSA63J-0R0X	MG RESISTOR	E	B,E,EN
	R 785	NRSA63J-0R0X	MG RESISTOR				R 883	NRSA63J-0R0X	MG RESISTOR	D/U	A,US,UW
	R 789	NRSA63J-104X	MG RESISTOR				R 884	NRSA63J-0R0X	MG RESISTOR		
	R 792	NRSA63J-221X	MG RESISTOR				R 887	NRSA63J-0R0X	MG RESISTOR	D/U	A,US,UW
	R 793	NRSA63J-221X	MG RESISTOR				R 888	NRSA63J-0R0X	MG RESISTOR	E	B,E,EN
	R 794	NRSA63J-473X	MG RESISTOR				R 890	NRSA63J-0R0X	MG RESISTOR	D/U	A,US,UW
	R 795	NRSA63J-473X	MG RESISTOR				R 991	NRSA63J-220X	MG RESISTOR		
	R 796	NRSA63J-103X	MG RESISTOR				R 996	NRSA63J-0R0X	MG RESISTOR		A,US,UW
	R 797	NRSA63J-473X	MG RESISTOR				R 997	NRSA63J-0R0X	MG RESISTOR		
	R 798	NRSA63J-473X	MG RESISTOR				R 998	NRSA63J-0R0X	MG RESISTOR		B,E,EN
	R 800	NRSA63J-750X	MG RESISTOR				R1500	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R 801	NRSA63J-822X	MG RESISTOR	C			R1501	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R 802	NRSA63J-153X	MG RESISTOR	C			R1502	NRSA63J-100X	MG RESISTOR		
	R 803	NRSA63J-122X	MG RESISTOR	C			R1503	NRSA63J-100X	MG RESISTOR		
	R 804	NRSA63J-821X	MG RESISTOR	C			R1504	NRSA63J-100X	MG RESISTOR		
	R 805	NRSA63J-242X	MG RESISTOR	C			R1505	NRSA63J-100X	MG RESISTOR		
	R 806	NRSA63J-821X	MG RESISTOR	C			R1506	NRSA63J-100X	MG RESISTOR		
	R 807	NRSA63J-152X	MG RESISTOR	C			R1507	NRSA63J-100X	MG RESISTOR		
	R 808	NRSA63J-102X	MG RESISTOR	C			R1508	NRSA63J-100X	MG RESISTOR		
	R 809	NRSA63J-123X	MG RESISTOR	C			R1509	NRSA63J-100X	MG RESISTOR		
	R 810	NRSA63J-152X	MG RESISTOR	C			R1510	NRSA63J-100X	MG RESISTOR		
	R 811	NRSA63J-103X	MG RESISTOR	C			R1511	NRSA63J-100X	MG RESISTOR		
	R 812	NRSA63J-103X	MG RESISTOR	C			R1512	NRSA63J-100X	MG RESISTOR		
	R 813	NRSA63J-103X	MG RESISTOR	C			R1513	NRSA63J-100X	MG RESISTOR		
	R 814	NRSA63J-103X	MG RESISTOR	C			R1514	NRSA63J-100X	MG RESISTOR		
	R 815	NRSA63J-821X	MG RESISTOR	C			R1515	NRSA63J-100X	MG RESISTOR		
	R 816	NRSA63J-820X	MG RESISTOR	C			R1516	NRSA63J-100X	MG RESISTOR		
	R 817	NRSA63J-102X	MG RESISTOR	C			R1517	NRSA63J-100X	MG RESISTOR		
	R 818	NRSA63J-102X	MG RESISTOR	C			R1518	NRSA63J-100X	MG RESISTOR		
	R 825	NRSA63J-750X	MG RESISTOR	D	A,US,UW		R1519	NRSA63J-100X	MG RESISTOR		
	R 827	NRSA63J-0R0X	MG RESISTOR				R1520	NRSA63J-100X	MG RESISTOR		
	R 828	NRSA63J-750X	MG RESISTOR				R1521	NRSA63J-100X	MG RESISTOR		
	R 829	NRSA63J-750X	MG RESISTOR				R1522	NRSA63J-100X	MG RESISTOR		
	R 831	NRSA63J-0R0X	MG RESISTOR		A,US,UW		R1523	NRSA63J-100X	MG RESISTOR		
	R 832	NRSA63J-0R0X	MG RESISTOR	E	B,E,EN		R1524	NRSA63J-100X	MG RESISTOR		
	R 833	NRSA63J-0R0X	MG RESISTOR	U	A,US,UW		R1525	NRSA63J-100X	MG RESISTOR		
	R 836	NRSA63J-0R0X	MG RESISTOR				R1526	NRSA63J-100X	MG RESISTOR		
	R 837	NRSA63J-0R0X	MG RESISTOR	U	A,US,UW		R1527	NRSA63J-100X	MG RESISTOR		

■ Electrical parts list (Servo control board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area
	R1528	NRSA63J-100X	MG RESISTOR		
	R1529	NRSA63J-100X	MG RESISTOR		
	R1530	NRSA63J-100X	MG RESISTOR		
	R1531	NRSA63J-100X	MG RESISTOR		
	R1532	NRSA63J-100X	MG RESISTOR		
	R1533	NRSA63J-100X	MG RESISTOR		
	R1534	NRSA63J-100X	MG RESISTOR		
	R1535	NRSA63J-100X	MG RESISTOR		
	R1536	NRSA63J-100X	MG RESISTOR		
	R1537	NRSA63J-100X	MG RESISTOR		
	R1538	NRSA63J-100X	MG RESISTOR		
	R1539	NRSA63J-100X	MG RESISTOR		
	R1540	NRSA63J-100X	MG RESISTOR		
	R1541	NRSA63J-100X	MG RESISTOR		
	R1550	NRSA63J-100X	MG RESISTOR		
	R1551	NRSA63J-100X	MG RESISTOR		
	R1552	NRSA63J-100X	MG RESISTOR		
	R1553	NRSA63J-100X	MG RESISTOR		
	R1554	NRSA63J-100X	MG RESISTOR		
	R1555	NRSA63J-100X	MG RESISTOR		
	R1556	NRSA63J-100X	MG RESISTOR		
	R1557	NRSA63J-100X	MG RESISTOR		
	R1558	NRSA63J-100X	MG RESISTOR		
	R1559	NRSA63J-100X	MG RESISTOR		
	R1560	NRSA63J-100X	MG RESISTOR		
	R1561	NRSA63J-100X	MG RESISTOR		
	R1562	NRSA63J-100X	MG RESISTOR		
	R1570	NRSA63J-100X	MG RESISTOR		
	R1571	NRSA63J-100X	MG RESISTOR		
	R1721	NRSA63J-100X	MG RESISTOR		
	R1722	NRSA63J-301X	MG RESISTOR		
	R1725	NRSA63J-301X	MG RESISTOR		
	R1727	NRSA63J-820X	MG RESISTOR		
	R1728	NRSA63J-100X	MG RESISTOR		
	R1730	NRSA63J-100X	MG RESISTOR		
	S 801	QSW0454-001	SWITCH	PAL/NT U	
	S 802	QSW0986-001	SLIDE SWITCH	PRG/INT/RM U	
	WC801	QZW0038-001	WIRE CLAMP		B,E,EN
	X 301	NAX0542-001X	C RESONATOR		
	X 401	NAX0543-001X	C RESONATOR		
	X 571	NAX0513-001X	CRYSTAL		

■ Electrical parts list (Main board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	BK901	E409182-001SM	GRAND TERMINAL				D 6	SELU2E10C	LED	TRAY	
	C 1	NCS31HJ-331X	C RESISTOR				D 9	NSPW300BS/BRS/	LED	BACK LIGHT	
	C 2	NCB31CK-103X	C CAPACITOR				D 10	NSPW300BS/BRS/	LED	BACK LIGHT	
	C 3	NCB31CK-104X	C CAPACITOR				D 11	SELU2E10C	LED	EDGE LIGHT	
	C 4	NCB31CK-104X	C CAPACITOR				D 12	1SS355-X	DIODE		
	C 5	NCB31CK-104X	C CAPACITOR				D 13	1SS355-X	DIODE		
	C 6	NCB31CK-104X	C CAPACITOR				D 15	1SS355-X	DIODE		
	C 8	QEK1CM-106Z	E CAPACITOR	10MF 20% 16V			△ D 901	S1WB/A/60-4101	BRIDGE DIODE		
	C 9	QEK1AM-476Z	E CAPACITOR	47MF 20% 10V			△ D 902	SARS01-T2	FR DIODE		
	C 10	NCB21CK-105X	C CAPACITOR				△ D 904	F1T4-T2	FR DIODE		
	C 11	QEK0JM-227Z	E CAPACITOR	220MF 20% 6.3V			D 905	F1T4-T2	FR DIODE		
	C 12	NCB31CK-104X	C CAPACITOR				△ D 908	EK16-F1	FR DIODE(FOMING		
	C 13	QEK1CM-106Z	E CAPACITOR	10MF 20% 16V			△ D 954	F1T4-T2	FR DIODE		
	C 14	NCB31CK-104X	C CAPACITOR				△ D 956	F1T4-T2	FR DIODE		
	C 15	NCB31CK-104X	C CAPACITOR				△ D 957	F1T4-T2	FR DIODE		
	C 16	QEK1CM-106Z	E CAPACITOR	10MF 20% 16V			△ D 981	RK34-LFB2	SB DIODE		
	C 17	NCB31CK-223X	C CAPACITOR				D 991	HZS3CLL-T2	Z DIODE		
△	C 902	QFZ9075-104	M CAPACITOR	.10MF			D 998	11ES2-T4	DIODE I.M		
△	C 903	QFZ9075-104	M CAPACITOR	.10MF			DI 1	QLD0239-001	LCD MODULE		
△	C 905	QCZ9079-102	C CAPACITOR	1000PF			EP901	QNZ0136-001Z	EARTH PLATE	PRIMARY	
△	C 907	QE0590-686	E CAPACITOR	U/A			FC901	QNG0003-001Z	FUSE CLIP		
	C 910	QETN1EM-226Z	E CAPACITOR	E	B,E,EN		FC902	QNG0003-001Z	FUSE CLIP		
	C 911	QETN1EM-226Z	E CAPACITOR	E	B,E,EN		FW 3	QUM137-10DGZ4	PARA RIBON WIRE		
	C 913	QCZ0136-101Z	C CAPACITOR	100PF			HL 1	LE20644-001A	LCD HOLDER		
	C 914	QE0532-396Z	E CAPACITOR	39MF			HL 2	LE31029-001A	LED HOLDER		
	C 915	NCB31HK-471X	C CAPACITOR				HS901	E70306-006	HEAT SINK		
△	C 921	QCZ9079-102	C CAPACITOR	1000PF			IC 1	MN101C57DLR	IC	SYSCOM MASK	
	C 922	QCZ0136-332Z	C CAPACITOR	3300PF			IC 2	XC61FN2712M-X	IC		
	C 928	NCB31CK-223X	C CAPACITOR	C			IC 3	GP1UD271XK	RM RECIVER		
	C 965	QE0528-108	E CAPACITOR	1000MF			△ IC901	STR-G6551R-F8	IC(HYBRID)		
	C 966	QETN1AM-477Z	E CAPACITOR	470MF 20% 10V			IC951	MM1565AF-X	IC		
	C 968	NCB21CK-105X	C CAPACITOR				IC952	PQ3RD23	IC		
	C 969	QETN0JM-227Z	E CAPACITOR	220MF 20% 6.3V			J 901	QNS0089-001	3.5 JACK	AV COMPULINK	
	C 972	NCS31HJ-471X	C CAPACITOR				J 902	QNZ0516-001	RGB CONNECTOR	PERICONE E	B,E,EN
	C 975	QE0528-108	E CAPACITOR	1000MF			JT911	QGD2501C1-04Z	SOCKET	FW901	
	C 976	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V			JT912	QGD2504C1-04Z	SOCKET	FW901	
	C 978	QETN0JM-227Z	E CAPACITOR	220MF 20% 6.3V			JT913	QGD2504C1-04Z	SOCKET	FW903	
	C 979	QE0528-108	E CAPACITOR	1000MF			K 902	QQR1183-001Z	FERRITE BEADS		
	C 980	QETN1AM-227Z	E CAPACITOR	220MF 20% 10V			K 904	QQR1183-001Z	FERRITE BEADS		
	C 981	NCB21CK-105X	C CAPACITOR				K 905	QQR1183-001Z	FERRITE BEADS		
	C 982	QE0532-187Z	E CAPACITOR	+12V			K 906	QQR1183-001Z	FERRITE BEADS		
	C 983	NCB21CK-105X	C CAPACITOR				△ L 901	QQR1105-001	LINE FILTER		
	C 984	QETN1CM-477Z	E CAPACITOR	+12V			L 909	QQL231K-2R2Y	INDUCTOR		
	C 985	QETN0JM-227Z	E CAPACITOR	220MF 20% 6.3V			L 952	QQR1291-001Z	CHOKE COIL		
	C 986	NCB21CK-334X	C RESISTOR				L 955	QQR1291-001Z	CHOKE COIL		
	C 987	QE0532-187Z	E CAPACITOR	-12V			L 957	QQL244K-100Z	INDUCTOR		
	C 989	QETN1CM-477Z	E CAPACITOR	-12V			L 959	QQL244K-100Z	INDUCTOR		
	C 990	NCB21CK-334X	C RESISTOR				L 960	QQR1291-001Z	CHOKE COIL		
	C 991	NCS31HJ-101X	C RESISTOR				P 901	QGA7901C1-02	CONNECTOR		
	CN 1	QGF1016C1-27	CONNECTOR				△ PC901	PC123Y02	IC(PHOTO COUPLE		
	CN 2	QGF1016C1-13	CONNECTOR				Q 1	KRC107S-X	DIGITAL.TR		
	CN 3	QGD2501C1-03Z	SOCKET				Q 2	KRA103S-X	DIGITAL.TR		
	CN 4	QGA2001C1-02	2P PLUG ASSY				Q 4	2SC1740S/RS/-T	TRANSISTOR		
	CN 5	QGA2001C1-02	2P PLUG ASSY				Q 5	KRC107S-X	DIGITAL.TR		
	CN 6	QGA2001C1-02	2P PLUG ASSY				Q 6	KRC107S-X	DIGITAL.TR		
	CN 7	QGF1016F3-13	CONNECTOR				Q 7	KRC107S-X	DIGITAL.TR		
	CN 8	QGD2504C1-04Z	SOCKET I.M				Q 8	KRA102S-X	DIGITAL.TR		
	CN 9	QJK018-021202	SIN CR C-B WIRE				Q 9	KRA102S-X	DIGITAL.TR		
	CN 10	QJK018-021202	SIN CR C-B WIRE				Q 10	2SC1740S/RS/-T	TRANSISTOR		
	CN 11	QJK018-021202	SIN CR C-B WIRE				Q 13	2SC1740S/RS/-T	TRANSISTOR		
	CN902	QGF1205C1-15	CONNECTOR	PERICONE E	B,E,EN		Q 910	2SC3576-JVC-T	TRANSISTOR	E MUTE	B,E,EN
	D 1	1SS355-X	DIODE C.M				Q 911	2SC3576-JVC-T	TRANSISTOR	E MUTE	B,E,EN
	D 2	SPR-39MVWF	LED	PROGRESSIVE			Q 991	KTC3199/Y/-T	TRANSISTOR		
	D 3	SPR-325MVWF/L-T	LED	STANDBY			R 1	NRSA63J-472X	MG RESISTOR		
	D 4	SELU2E10C	LED	EDGE LIGHT			R 2	NRSA63J-102X	MG RESISTOR		
	D 5	SELU2E10C	LED	DVD AUDIO			R 3	NRSA63J-472X	MG RESISTOR		

■ Electrical parts list (Main board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area
	R 4	NRSA63J-222X	MG RESISTOR		
	R 5	NRSA63J-222X	MG RESISTOR		
	R 6	NRSA63J-104X	MG RESISTOR		
	R 7	NRSA63J-103X	MG RESISTOR	U	A,US,UW
	R 9	NRSA63J-103X	MG RESISTOR		
	R 10	NRSA63J-103X	MG RESISTOR	D	A,US,UW
	R 11	NRSA63J-152X	MG RESISTOR	U	
	R 12	NRSA63J-102X	MG RESISTOR		
	R 13	NRSA63J-103X	MG RESISTOR		
	R 14	NRSA63J-222X	MG RESISTOR		
	R 15	NRSA63J-103X	MG RESISTOR		
	R 16	NRSA63J-103X	MG RESISTOR		
	R 17	NRSA63J-103X	MG RESISTOR		
	R 18	NRSA63J-270X	MG RESISTOR		
	R 19	NRSA63J-392X	MG RESISTOR		
	R 20	NRSA63J-332X	MG RESISTOR		
	R 21	NRSA63J-0R0X	MG RESISTOR		
	R 22	NRSA63J-0R0X	MG RESISTOR		
	R 23	NRSA63J-151X	MG RESISTOR		
	R 24	NRSA63J-750X	MG RESISTOR		
	R 25	NRSA63J-331X	MG RESISTOR		
	R 26	NRSA63J-331X	MG RESISTOR		
	R 27	NRSA63J-222X	MG RESISTOR		
	R 28	NRSA63J-222X	MG RESISTOR		
	R 29	NRSA63J-431X	MG RESISTOR		
	R 30	NRSA63J-681X	MG RESISTOR		
	R 31	NRSA63J-0R0X	MG RESISTOR		
	R 32	NRSA63J-182X	MG RESISTOR		
	R 33	NRSA63J-270X	MG RESISTOR		
	R 34	NRSA63J-105X	MG RESISTOR		
	R 35	NRSA63J-270X	MG RESISTOR		
	R 36	NRSA63J-222X	MG RESISTOR		
	R 37	NRSA63J-222X	MG RESISTOR		
	R 38	NRSA63J-750X	MG RESISTOR		
	R 40	NRSA63J-182X	MG RESISTOR		
	R 41	NRSA63J-182X	MG RESISTOR		
	R 42	NRSA63J-392X	MG RESISTOR		
	R 43	NRSA63J-103X	MG RESISTOR		
	R 44	NRSA63J-102X	MG RESISTOR	D/E	
	R 46	NRSA63J-472X	MG RESISTOR		
	R 50	NRSA63J-0R0X	MG RESISTOR		B,E,EN
	R 51	NRSA63J-0R0X	MG RESISTOR		A,US,UW
	R 53	NRSA63J-0R0X	MG RESISTOR		
	R 56	NRSA63J-392X	MG RESISTOR		
△	R 901	QRL01DJ-683X	OMF RESISTOR	68K 5% 1/1W	
	R 902	NRSA63J-390X	MG RESISTOR		
△	R 903	QRE141J-560Y	C RESISTOR	56 5% 1/4W	
	R 905	QRL027J-683	OMF RESISTOR	68K 5% 1/2W	
	R 906	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
△	R 907	QRT022J-R47	OMF RESISTOR	5% 1/2W	
	R 908	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 909	QRE141J-151Y	C RESISTOR	E	B,E,EN
	R 910	NRSA63J-562X	MG RESISTOR	E MUTE	B,E,EN
	R 911	NRSA63J-562X	MG RESISTOR	E MUTE	B,E,EN
	R 912	NRSA63J-561X	MG RESISTOR	E MUTE	B,E,EN
	R 913	NRSA63J-561X	MG RESISTOR	E MUTE	B,E,EN
	R 914	NRSA63J-103X	MG RESISTOR	E MUTE	B,E,EN
	R 915	NRSA63J-103X	MG RESISTOR	E MUTE	B,E,EN
	R 916	NRSA63J-151X	MG RESISTOR	E MUTE	B,E,EN
	R 917	NRSA63J-151X	MG RESISTOR	E MUTE	B,E,EN
	R 918	NRSA63J-101X	MG RESISTOR		
	R 920	QRZ9037-335	F RESISTOR	3.3M 1/0W	
△	R 921	QRL01DJ-470X	OMF RESISTOR	47 5% 1/1W	
	R 924	NRSA63J-101X	MG RESISTOR		
	R 951	NRSA63J-750X	MG RESISTOR	E	B,E,EN
	R 952	NRSA63J-750X	MG RESISTOR	E	B,E,EN

△	Item	Parts number	Parts name	Remarks	Area
	R 953	NRSA63J-750X	MG RESISTOR	E	B,E,EN
	R 954	NRSA63J-750X	MG RESISTOR		B,E,EN
	R 958	NRSA63J-0R0X	MG RESISTOR		
	R 960	NRSA63J-390X	MG RESISTOR		
	R 961	NRSA63J-681X	MG RESISTOR		
	R 962	NRSA63J-151X	MG RESISTOR		
	R 964	NRSA63J-104X	MG RESISTOR		
	R 969	NRSA63J-271X	MG RESISTOR		
	S 1	QSW0651-001Z	TACT SWITCH	POWER SW	
	S 2	QSW0651-001Z	TACT SWITCH	OPEN/CLOSE	
	S 3	QSW0651-001Z	TACT SWITCH	STOP	
	S 4	QSW0651-001Z	TACT SWITCH	PLAY	
	S 5	QSW0651-001Z	TACT SWITCH	PAUSE	
	S 6	QSW0651-001Z	TACT SWITCH	BW SKIP	
	S 7	QSW0651-001Z	TACT SWITCH	FW SKIP	
△	T 901	QQS0159-001	SW TRANSF		
	X 1	QAX0667-001Z	RESONATOR 1.M		

■ Electrical parts list (Surround audio board) Block No. 03

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	BK811	E409182-001SM	GRAND TERMINAL				J 401	QNN0514-001	PIN JACK		
	C 409	NCB31HK-152X	C CAPACITOR				K 411	NQR0007-002X	FERRITE BEADS		
	C 410	NCB31HK-152X	C CAPACITOR				K 412	NQR0007-002X	FERRITE BEADS		
	C 411	QFLC1HJ-122Z	M CAPACITOR	1200PF 5% 50V			K 413	NQR0007-002X	FERRITE BEADS		
	C 412	QFLC1HJ-122Z	M CAPACITOR	1200PF 5% 50V			K 414	NQR0007-002X	FERRITE BEADS		
	C 413	QFLC1HJ-472Z	M CAPACITOR	4700PF 5% 50V			K 415	NQR0007-002X	FERRITE BEADS		
	C 414	QFLC1HJ-472Z	M CAPACITOR	4700PF 5% 50V			K 416	NQR0007-002X	FERRITE BEADS		
	C 415	QFLC1HJ-121Z	M CAPACITOR	120PF 5% 50V			K 417	NRSA63J-0R0X	MG RESISTOR		
	C 416	QFLC1HJ-121Z	M CAPACITOR	120PF 5% 50V			K 418	NRSA63J-0R0X	MG RESISTOR		
	C 417	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V			K 419	NRSA63J-0R0X	MG RESISTOR		
	C 418	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V			K 420	NRSA63J-0R0X	MG RESISTOR		
	C 419	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V			K 421	NQR0007-002X	FERRITE BEADS		
	C 420	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V			K 422	NQR0007-002X	FERRITE BEADS		
	C 421	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V			Q 401	2SD2144S/VW/-T	TRANSISTOR		
	C 422	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V			Q 402	2SD2144S/VW/-T	TRANSISTOR		
	C 423	QTE1A48-476Z	E CAPACITOR				Q 403	2SC3576-JVC-T	TRANSISTOR		
	C 424	QTE1A48-476Z	E CAPACITOR				Q 404	2SC3576-JVC-T	TRANSISTOR		
	C 425	QTE1C28-107Z	E CAPACITOR				R 350	NRSA63J-561X	MG RESISTOR		
	C 426	QTE1C28-107Z	E CAPACITOR				R 351	NRSA63J-101X	MG RESISTOR		
	C 427	QTE1C28-107Z	E CAPACITOR				R 352	NRSA63J-101X	MG RESISTOR		
	C 428	QTE1C28-107Z	E CAPACITOR				R 353	NRSA63J-103X	MG RESISTOR		
	C 429	QTE0J28-227Z	E CAPACITOR				R 354	NRSA63J-103X	MG RESISTOR		
	C 430	NCB21AK-105X	C CAPACITOR				R 355	NRSA63J-221X	MG RESISTOR		
	C 431	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V			R 356	NRSA63J-221X	MG RESISTOR		
	C 432	QFVJ1HJ-224Z	MF CAPACITOR	.22MF 5% 50V			R 357	NRSA63J-221X	MG RESISTOR		
	C 433	QTE0J28-477Z	E CAPACITOR				R 358	NRSA63J-221X	MG RESISTOR		
	C 434	QTE0J28-477Z	E CAPACITOR				R 359	NRSA63J-470X	MG RESISTOR		
	C 435	NCB21AK-105X	C CAPACITOR				R 360	NRSA63J-470X	MG RESISTOR		
	C 441	NCB31HK-102X	C CAPACITOR				R 361	NRSA63J-220X	MG RESISTOR		
	C 442	NCB31HK-102X	C CAPACITOR				R 362	NRSA63J-470X	MG RESISTOR		
	C 451	QFLC1HJ-122Z	M CAPACITOR	1200PF 5% 50V			R 363	NRSA63J-332X	MG RESISTOR		
	C 452	QFLC1HJ-122Z	M CAPACITOR	1200PF 5% 50V			R 364	NRSA63J-332X	MG RESISTOR		
	C 453	QFLC1HJ-472Z	M CAPACITOR	4700PF 5% 50V			R 365	NRSA63J-100X	MG RESISTOR		
	C 454	QFLC1HJ-472Z	M CAPACITOR	4700PF 5% 50V			R 366	NRSA63J-100X	MG RESISTOR		
	C 455	QFLC1HJ-121Z	M CAPACITOR	120PF 5% 50V			R 367	NRSA63J-471X	MG RESISTOR		
	C 456	QFLC1HJ-121Z	M CAPACITOR	120PF 5% 50V			R 368	NRSA63J-471X	MG RESISTOR		
	C 457	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V			R 369	NRSA63J-471X	MG RESISTOR		
	C 458	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V			R 370	NRSA63J-471X	MG RESISTOR		
	C 459	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V			R 371	NRSA63J-471X	MG RESISTOR		
	C 460	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V			R 372	NRSA63J-471X	MG RESISTOR		
	C 461	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V			R 373	NRSA63J-470X	MG RESISTOR		
	C 462	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V			R 374	NRSA63J-471X	MG RESISTOR		
	C 463	QTE1A48-476Z	E CAPACITOR				R 375	NRSA63J-470X	MG RESISTOR		
	C 464	QTE1A48-476Z	E CAPACITOR				R 376	NRSA63J-471X	MG RESISTOR		
	C 465	QTE1C28-107Z	E CAPACITOR				R 377	NRSA63J-470X	MG RESISTOR		
	C 466	QTE1C28-107Z	E CAPACITOR				R 378	NRSA63J-471X	MG RESISTOR		
	C 467	QTE1C28-107Z	E CAPACITOR				R 389	NRSA63J-100X	MG RESISTOR		
	C 468	QTE1C28-107Z	E CAPACITOR				R 390	NRSA63J-100X	MG RESISTOR		
	C 469	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V			R 431	QRA14CF-1802Y	MF CAPACITOR	18 1/4W	
	C 470	NCB21AK-105X	C CAPACITOR				R 432	QRA14CF-1802Y	MF CAPACITOR	18 1/4W	
	C 473	QTE0J28-477Z	E CAPACITOR				R 433	QRA14CF-1802Y	MF CAPACITOR	18 1/4W	
	C 474	QTE0J28-477Z	E CAPACITOR				R 434	QRA14CF-1802Y	MF CAPACITOR	18 1/4W	
	C 475	NCB21AK-105X	C CAPACITOR				R 435	QRA14CF-3602Y	MF CAPACITOR	36 1/4W	
	C1425	QFLC1HJ-222Z	M CAPACITOR	2200PF 5% 50V			R 436	QRA14CF-3602Y	MF CAPACITOR	36 1/4W	
	C1426	QFLC1HJ-222Z	M CAPACITOR	2200PF 5% 50V			R 437	QRA14CF-1601Y	MF CAPACITOR	16 1/4W	
	C1465	QFLC1HJ-222Z	M CAPACITOR	2200PF 5% 50V			R 438	QRA14CF-1601Y	MF CAPACITOR	16 1/4W	
	C1466	QFLC1HJ-222Z	M CAPACITOR	2200PF 5% 50V			R 439	NRSA63J-303X	MG RESISTOR		
	C1467	QTE0J28-227Z	E CAPACITOR				R 440	NRSA63J-303X	MG RESISTOR		
	C1468	QFVJ1HJ-224Z	MF CAPACITOR	.22MF 5% 50V			R 441	NRSA63J-303X	MG RESISTOR		
	CN401	QGF1016C1-17	CONNECTOR				R 442	NRSA63J-303X	MG RESISTOR		
	IC411	MN35505-X	IC				R 443	NRSA63J-272X	MG RESISTOR		
	IC412	MN35505-X	IC				R 444	NRSA63J-272X	MG RESISTOR		
	IC811	NJM4580M-X	IC				R 445	NRSA63J-272X	MG RESISTOR		
	IC812	NJM4580M-X	IC				R 446	NRSA63J-272X	MG RESISTOR		
	IC821	NJM4580M-X	IC				R 447	NRSA63J-362X	MG RESISTOR		
	IC822	NJM4580M-X	IC				R 448	NRSA63J-362X	MG RESISTOR		

■ Electrical parts list (Surround audio board) Block No. 03

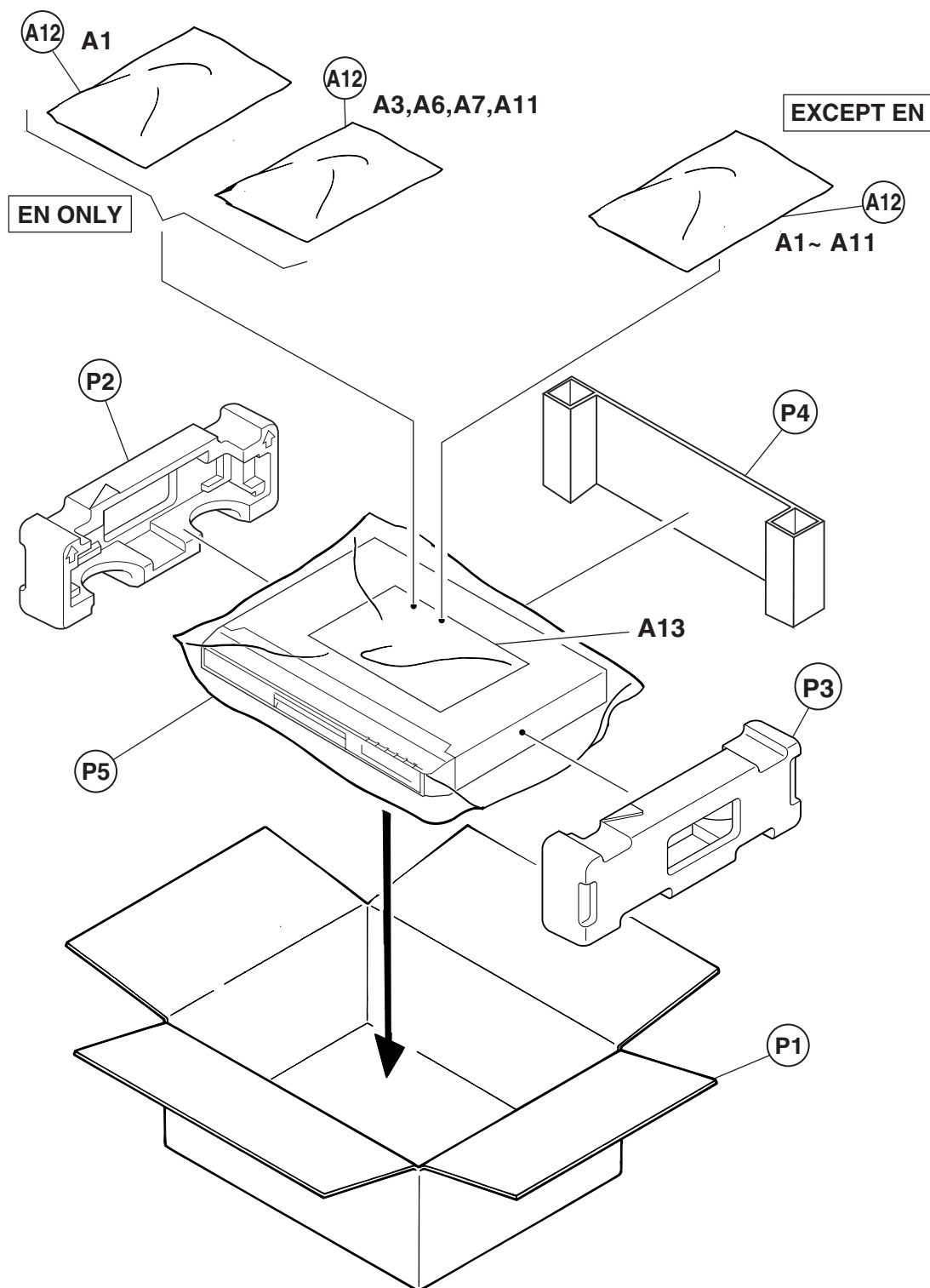
△	Item	Parts number	Parts name	Remarks	Area
	R 449	NRSA63J-751X	MG RESISTOR		
	R 450	NRSA63J-751X	MG RESISTOR		
	R 451	NRSA63J-751X	MG RESISTOR		
	R 452	NRSA63J-751X	MG RESISTOR		
	R 453	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 454	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 455	NRSA63J-183X	MG RESISTOR		
	R 456	NRSA63J-183X	MG RESISTOR		
	R 457	NRSA63J-273X	MG RESISTOR		
	R 458	NRSA63J-273X	MG RESISTOR		
	R 459	NRSA63J-561X	MG RESISTOR		
	R 460	NRSA63J-561X	MG RESISTOR		
	R 461	NRSA63J-101X	MG RESISTOR		
	R 462	NRSA63J-101X	MG RESISTOR		
	R 463	NRSA63J-103X	MG RESISTOR		
	R 464	NRSA63J-103X	MG RESISTOR		
	R 465	NRSA63J-221X	MG RESISTOR		
	R 466	NRSA63J-221X	MG RESISTOR		
	R 467	NRSA63J-221X	MG RESISTOR		
	R 468	NRSA63J-221X	MG RESISTOR		
	R 469	NRSA63J-470X	MG RESISTOR		
	R 470	NRSA63J-470X	MG RESISTOR		
	R 471	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R 472	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R 473	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R 474	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R 475	QRA14CF-3602Y	MF RESISTOR	36 1/4W	
	R 476	QRA14CF-3602Y	MF RESISTOR	36 1/4W	
	R 477	QRA14CF-1601Y	MF RESISTOR	16 1/4W	
	R 478	QRA14CF-1601Y	MF RESISTOR	16 1/4W	
	R 479	NRSA63J-303X	MG RESISTOR		
	R 480	NRSA63J-303X	MG RESISTOR		
	R 481	NRSA63J-303X	MG RESISTOR		
	R 482	NRSA63J-303X	MG RESISTOR		
	R 483	NRSA63J-272X	MG RESISTOR		
	R 484	NRSA63J-272X	MG RESISTOR		
	R 485	NRSA63J-272X	MG RESISTOR		
	R 486	NRSA63J-272X	MG RESISTOR		
	R 487	NRSA63J-362X	MG RESISTOR		
	R 488	NRSA63J-362X	MG RESISTOR		
	R 489	NRSA63J-751X	MG RESISTOR		
	R 490	NRSA63J-751X	MG RESISTOR		
	R 491	NRSA63J-751X	MG RESISTOR		
	R 492	NRSA63J-751X	MG RESISTOR		
	R 493	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 494	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 495	NRSA63J-183X	MG RESISTOR		
	R 496	NRSA63J-183X	MG RESISTOR		
	R 497	NRSA63J-273X	MG RESISTOR		
	R 498	NRSA63J-273X	MG RESISTOR		
	R 499	NRSA63J-561X	MG RESISTOR		

< MEMO >

Packing materials and accessories parts list

Block No. M4MM

Block No. M5MM



■ Packing parts list

Block No. M4MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	LE31032-017A	PACKING CASE	1		A
		LE31032-014A	PACKING CASE	1		B
		LE31032-022A	PACKING CASE	1		E,EN
		LE31032-015A	PACKING CASE	1		US
		LE31032-016A	PACKING CASE	1		UW
	P 2	LE20648-001A	PACKING PAD(L)	1	LEFT	
	P 3	LE20649-001A	PACKING PAD(R)	1	RIGHT	
	P 4	LE30920-003A	SHEET ASSY	1		A,B
	P 5	QPC06005515P	POLY BAG	1	FOR SET	

■ Accessories parts list

Block No. M5MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	LET0212-010A	INST BOOK	1	English	A
		LET0212-004A	INST BOOK	1	English	B
		LET0212-005A	INST BOOK	1	German,French,Dutch	E
		LET0212-007A	INST BOOK	1	Swedish,Finnish,Danish	EN
		LET0212-006A	INST BOOK	1	German,French,Spanish,Italian	EN
		LET0204-012A	INST BOOK	1	English,Chinese(Beujing)	US
		LET0212-015A	INST BOOK	1	English,Spanish,Portuguese	UW
△	A 2	QAM0112-001	AC PLUG ADAPTER	1		US,UW
	A 3	BT-56001-2	WARRANTY CARD	1		A
		BT-54008-4	WARRANTY CARD	1		B,E,EN
	A 4	BT-56002-2	SVC CENTER LIST	1		A
	A 5	VNA3000-204	REGIST.CARD	1		B
	A 6	QAM0328-001	AV CORD 3P	1		
	A 7	EWP302-011W	SIGNAL CORD	2		
	A 8	QAM0005-002	S-VIDEO CORD	1		A,US,UW
	A 9	QAM0326-001	1P PLUG CORD(JE	1		A,US,UW
	A 10	RM-SXV013U	REMOCON UNIT	1		A,US,UW
		RM-SXV012E	REMOCON UNIT	1		B,E,EN
	A 11	-----	BATTERY	2	FOR EXP.	
	A 12	QPC02504015P	POLY BAG	1	FOR ACC,INST	A,B,E,US,UW
		QPC02504015P	POLY BAG	2	FOR ACC,INST	EN
	A 13	LE40912-001A	CAUTION SHEET	1		B,E,EN