JVC

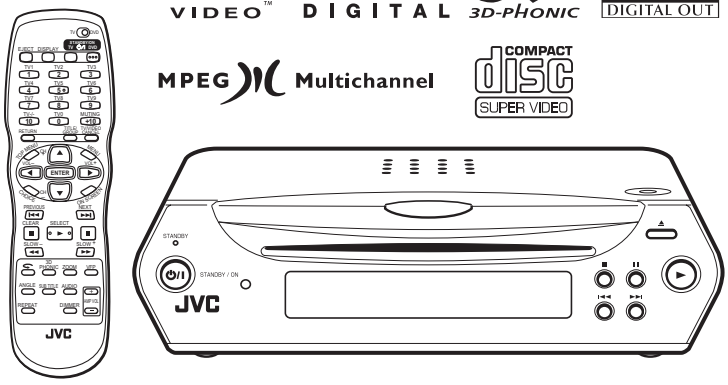
SERVICE MANUAL

DVD VIDEO PLAYER

XV-C5SL

Area Suffix

B ---------- U.K.
E ------ Continental Europe
EN ------- Northern Europe
EV --------- Eastern Europe
EE ---- Russian Federation
US ---------- Singapore
UG - Turkey,South Africa,Egypt
UB ---------- Hong Kong



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No.XA001
2003/5

SPECIFICATION

General	Readable discs	DVD VIDEO, DVD-R (Video format),DVD-RW (Video format), +RW(Video format), SVCD, Video CD,Audio CD (CD-DA), MP3 format,JPEG, CD-R/RW (CD-DA, SVCD,Video CD, MP3 format, JPEG)	
	Video format	PAL	
Other	Power requirements	AC 230 V , 50 Hz	
	Power consumption	12 W (POWER ON), 0.7 W (STANDBY mode)	
	Mass	1.7 kg	
	Dimensions (W x H x D)	218 mm x 58 mm x 270 mm	
Video outputs	VIDEO OUT (pin jack)	1.0 Vp-p (75 Ω)	
	Horizontal resolution	500 lines or more	
	RGB	700 mVp-p (75 Ω)	
Audio outputs	ANALOG OUT (pin jack)	2.0 Vrms (10 kΩ)	
	DIGITAL OUT (COAXIAL)	0.5 Vp-p (75 Ω termination)	
	DIGITAL OUT (OPTICAL)	-21 dBm to -15 dBm (peak)	
Audio characteristics	Frequency response	CD	(sampling frequency 44.1 kHz):2 Hz to 20 kHz
		DVD	(sampling frequency 48 kHz):2 Hz to 22 kHz
			(4 Hz to 20 kHz for DTS and Dolby Digital bitstream signals)
		DVD	(sampling frequency 96 kHz):2 Hz to 44 kHz
	Dynamic range	16 bit: More than 98 dB	
		20 bit: More than 100 dB	
		24 bit: More than 100 dB	
	Wow and flutter	Unmeasurable (less than + 0.002%)	
	Total harmonic distortion	less than 0.006%	

- Specifications and appearance are subject to change without prior notice.
- Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works.
- Manufactured under license from Digital Theater Systems, Inc. "DTS," "DTS Digital Surround," are trademarks of Digital Theater Systems, Inc.

Digital output signal chart

Disc type	Output		
	PCM ONLY	**DOLBY DIGITAL/PCM**	**STREAM/PCM**
DVD with 48 kHz 16/20/24 bit linear PCM	48 kHz 16 bit stereo linear PCM		
DVD with 96 kHz 16/20/24 bit linear PCM	48kHz 16 bit stereo linear PCM (Down sampling)		
DVD with DTS	No output		DTS bitstream
DVD with Dolby Digital	48 kHz 16 bit stereo linear PCM	Dolby Digital bitstream	
DVD with MPEG Multichannel	48 kHz 16 bit stereo linear PCM		MPEG bitstream
SVCD/Video CD/Audio CD	44.1 kHz 16 bit stereo linear PCM		
Audio CD with DTS	No output		DTS bitstream
CD-R/RW with MP3	Linear PCM		

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.

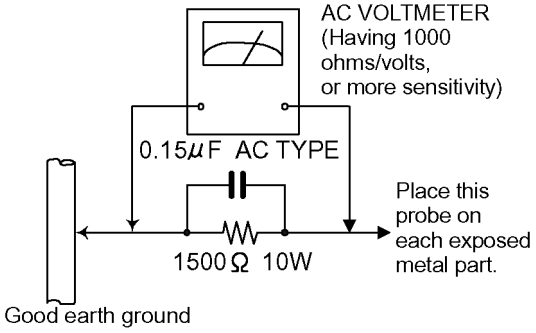
(2) Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturers warranty and will further relieve the manufacture of responsibility for personal injury or property damage 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 (⚠) 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 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 preforming 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 (▬), 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)

1.5 Preventing static electricity

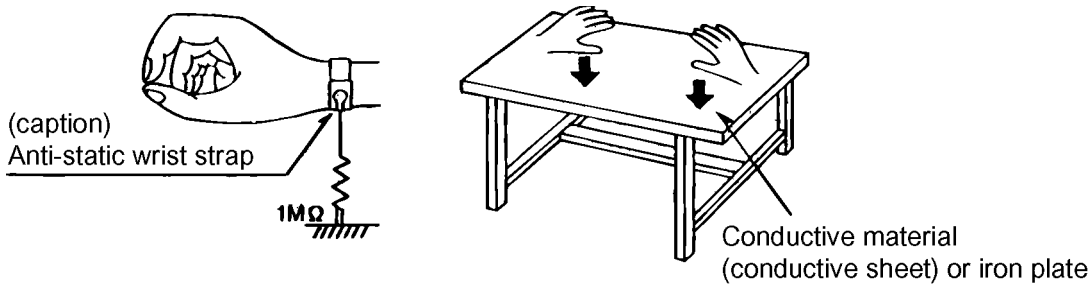
Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

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) I t 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 inter lock failed or defeated. Avoid direct exposure to beam.
(3) CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
(4) CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are de feated.
It is dangerous to defeat the safety switches.
(5) CAUTION : If safety switches malfunction, the laser is able to function.
(6) CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

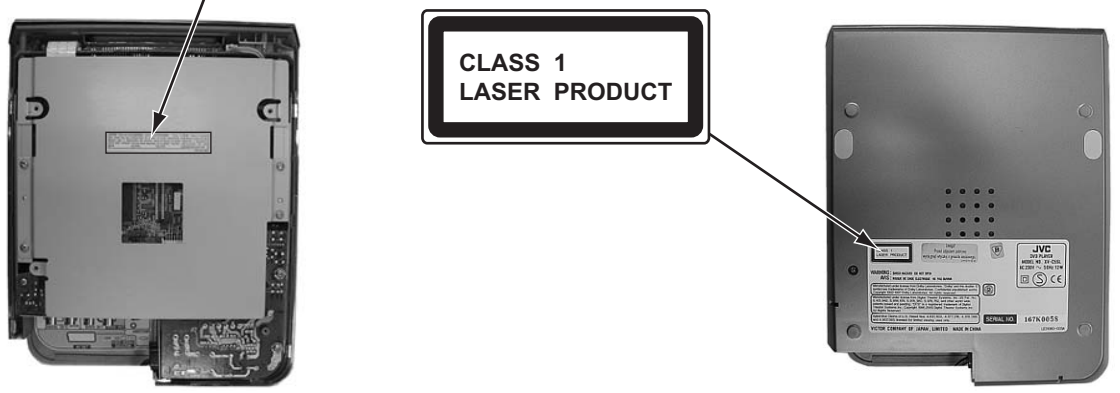
⚠CAUTION
Please use enough caution not to see the beam directly or touch it in case of anadjustment or operation check.

VARNING Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen.	**ADVARSEL** Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsasttelse for stråling.
VARO Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.	**ADVARSEL** Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABEL and PRINT

WARNING LABEL and PRINT

CAUTION : Visible and invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)	**ADVARSEL :** Synlig og usynlig laserstråling når maskinen er åben eller interlocken fejler. Undgå direkte eksponering til stråling. (d)	**VARNING :** Synlig och osynlig laserstrålning när den öppnas och spärren är urkopplad. Betrakta ej strålen. (s)	**VARO :** Avattaessa ja suojalukitus ohitettuna tai viallisena olet alttiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi. (f)



1.8 Precautions for Service

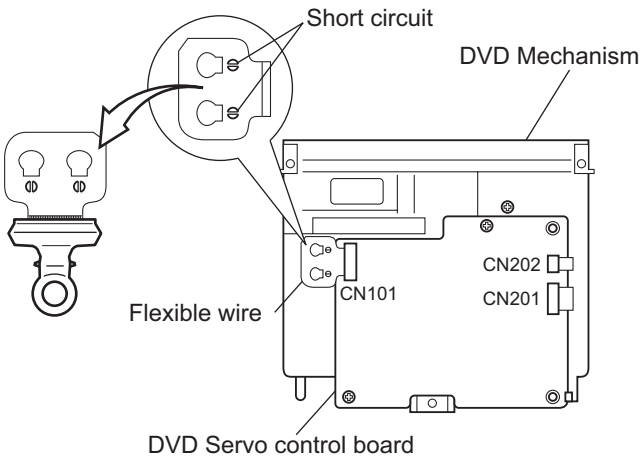
1.8.1 Handling of Traverse Unit and Laser Pickup

(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

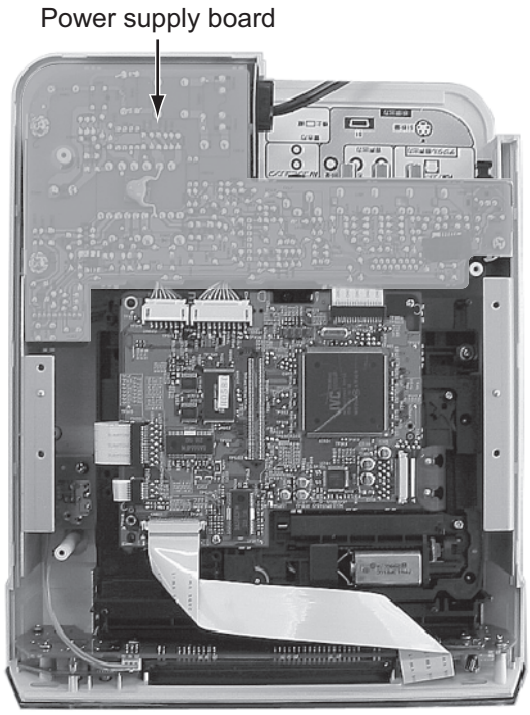
Laser diodes are easily destroyed by static electricity charged on clothingor the human body. Before repairing peripheral elements of the traverse unit or pickup, be sure to take the following electrostatic protection:

(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.



1.9 Caution on disassembly of the main body

The power supply board is a board at the power supply first level.
Since the pattern side of this board is not covered with anything after removing the bottom cover of the main body, be sure to pull out the power cord from the wall socket before disassembly and assembly procedure.
If turning the power on without the bottom cover, be careful enough not to touch the power supply board.



SECTION 2
Disassembly method

There is a part different from the photograph according to the destination though explains this disassembly method by using XV-C5SL for Eastern Europe.

2.1 Main body section

2.1.1 Removing the bottom cover (See Figure 1, Figure 2)

(1) Remove the three rubber caps on the bottom of the main body.
*Remove the rubber caps by peeling them with your nails because they are only inserted in the holes. (See Figure 2)
(2) Remove the three screws **A** (long) and one screw **B** (short) attaching the bottom cover on the bottom of the main body.
(3) Lift the bottom cover, and remove it.

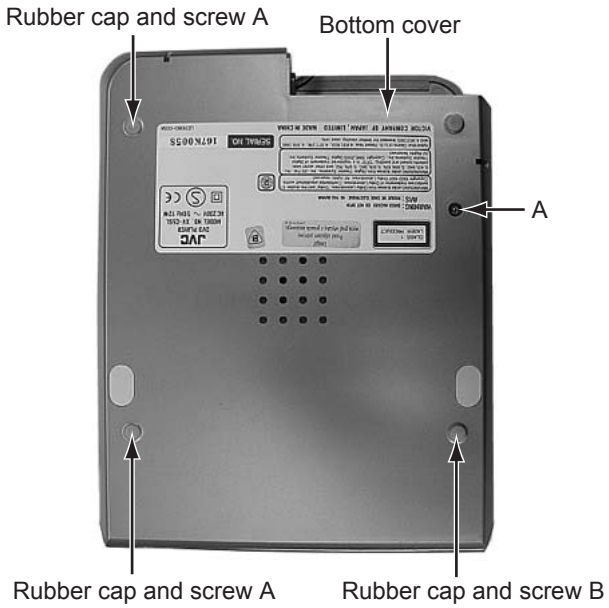


Fig.1

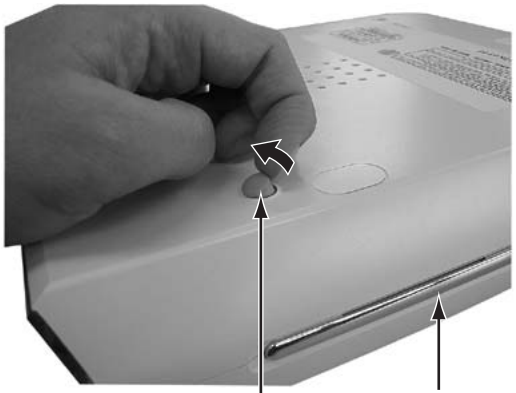


Fig.2

2.1.2 Removing the mechanism assembly (See Figure 3, Figure 4, Figure 5)

- Prior to the following procedure, remove the bottom cover.
  (1) Remove the four screws **C** attaching the bottom plate.
  (2) Disconnect the flat wire from the connector CN811 on the servo control board.
  (3) Disconnect the connector wire from the connector CN802 on the FL display board.
  (4) Remove the main body from the top cover.
  (5) Remove the three screws **D** attaching the mechanism assembly.
  (6) Disconnect the connector wires from the connector CN501 and CN502 on the servo control board.
  (7) Disconnect the card wire from the connector CN611 on the servo control board.

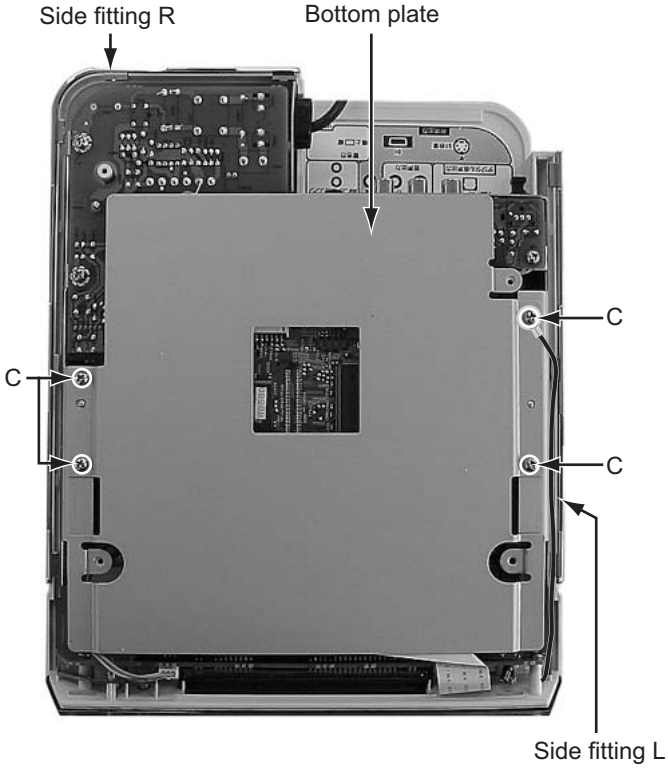


Fig.3

Fig.4

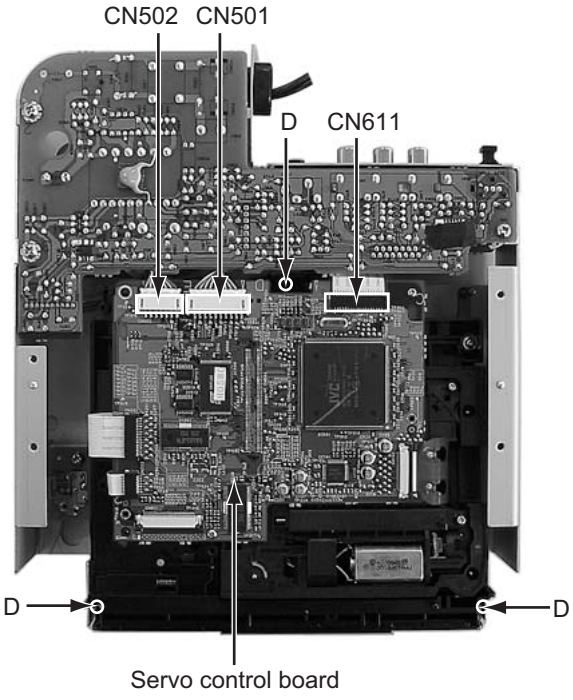


Fig.5

2.1.3 Removing the Power supply board (See Figure 6)

- Prior to the following procedure, remove the bottom cover and the mechanism assembly.
  (1) Remove the two screws **E** attaching the power supply board.
  (2) Remove the five screws **F** attaching the power supply board from the rear side.
  (3) Disconnect the card wire from the connector CN711 on the power supply board.
  (4) Remove the power cord from the socket P901 on the power supply board.
  *To remove the power supply board more easily, remove the cap of the optical jack.

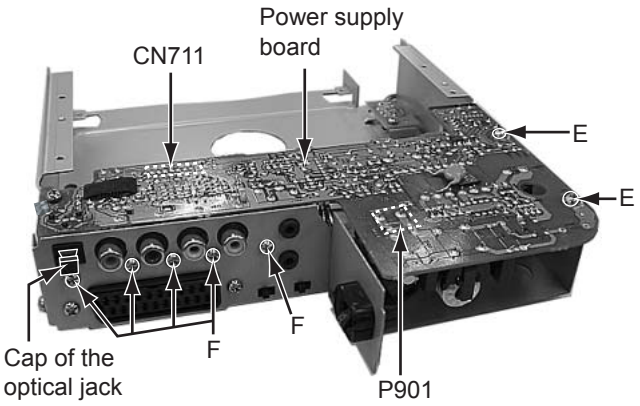


Fig.6

2.1.4 Removing the video output terminal board (See Figure 7)

- Prior to the following procedure, remove the bottom cover, the mechanism assembly, and the power supply board.
  (1) Remove one screw **G** attaching the video output terminal board.
  (2) Remove the two screws **H** attaching the video output terminal board from the rear side.

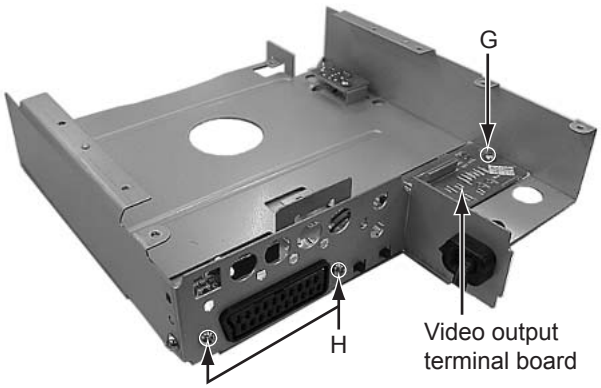


Fig.7

2.2 DVD mechanism assembly

2.2.1 Removing the DVD servo control board (See Figure 1)

Caution:

Be sure to solder the short land sections "**a**" on the flexible wire before disconnecting the flexible wire from connector CN101 on the DVD servo control board.
If the flexible wire is disconnected without attaching solder, the pickup unit may be destroyed by static electricity.

(1) From the back side of the DVD mechanism assembly, attach solder to the short land sections "**a**" of the flexible wire that is connected to the connector CN101 of the DVD servo control board.
(2) Disconnect the flexible wire from connector CN101 on the DVD servo control board.
(3) Disconnect the card wires from connectors CN201 and CN202 on the DVD servo control board.
(4) Remove the two screws **A** attaching the DVD servo control board.
(5) While pushing the claw "**b**" of the DVD mechanism assembly in the direction of the arrow, remove the DVD servo control board from the projections "**c**" and "**d**" in an upward direction.

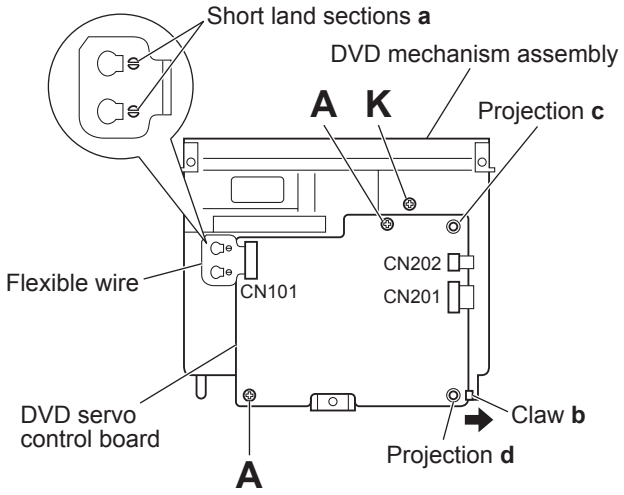


Fig.1

Caution:

In the assembly, be sure to remove solder from the short land sections "**a**" after connecting the flexible wire.

2.2.2 Removing the DVD traverse mechanism assembly (See Figure 2)

- Remove the DVD servo control board.
  (1) Remove the two screws **B** attaching the DVD traverse mechanism assembly.
  (2) Disengage the claw **e** attaching the DVD traverse mechanism assembly and then take out the DVD traverse mechanism assembly.

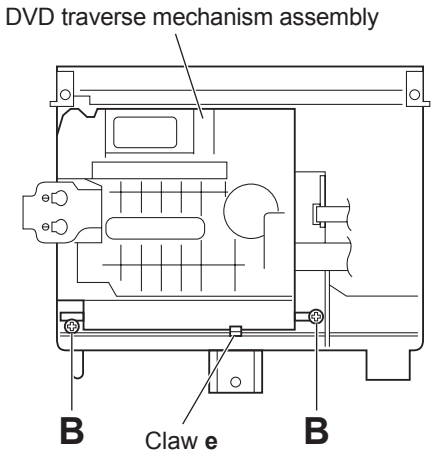


Fig.2

2.2.3 Removing the DVD pickup unit (See Figure 3, Figure 4, Figure 5)

- Remove the DVD servo control board.
- Remove the DVD traverse mechanism assembly.
  (1) From the top side of the DVD traverse mechanism assembly, remove the screw **C** attaching the bracket.
  (2) Remove the claw **f** attaching the thrust spring and then take out the thrust spring.
  (3) Remove the lead screw from the section **g** and then remove the shaft 1 from the section **h**.
  (4) Disengage the section **i** of the DVD pickup unit and then remove the DVD pickup unit with the shaft 1.
  (5) Pull the shaft 1 out of the DVD pickup unit.
  (6) Remove the two screws **D** attaching the SW. actuator.

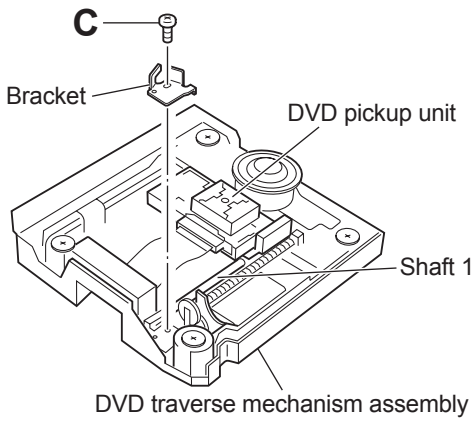


Fig.3

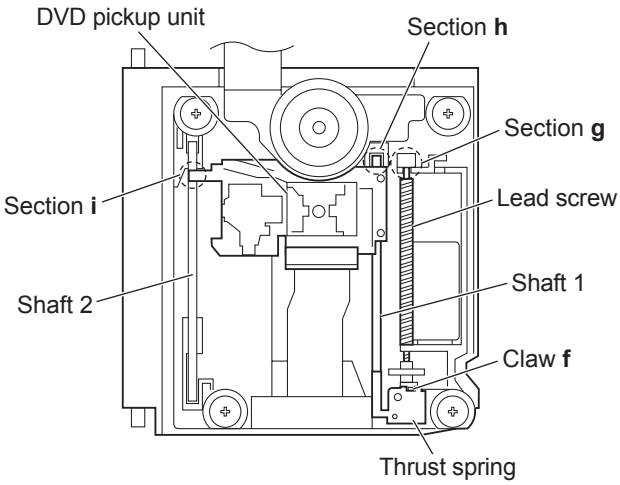


Fig.4

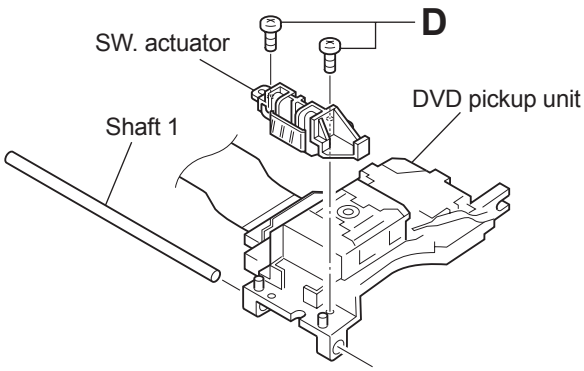


Fig.5

2.2.4 Attaching the DVD pickup unit (See Figure 3, Figure 4, Figure 5, Figure 6, Figure 7)

Reference:

Refer to the explanation of "Removing the DVD pickup unit" on the preceding page.

(1) Attach the SW. actuator and shaft 1 to the DVD pickup unit. (See Figure 5)

(2) Engage the section **i** of the DVD pickup unit to the shaft 2 of the DVD traverse mechanism assembly first, and set the both ends of the shaft 1 of the DVD pickup unit in the sections **h** and **h'** of the DVD traverse mechanism assembly.

(3) Slide the DVD pickup unit all the way in the direction of the arrow.

(4) Mesh the lead screw to the section **j** of DVD pickup unit and then set the end of the lead screw to the section **g**.

(5) Attach the thrust spring. (See Figure 4)

(6) Attach the bracket. (See Figure 3)

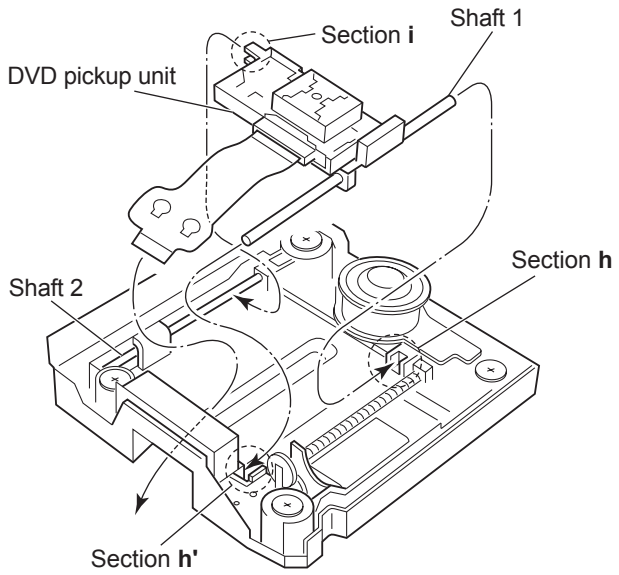


Fig.6

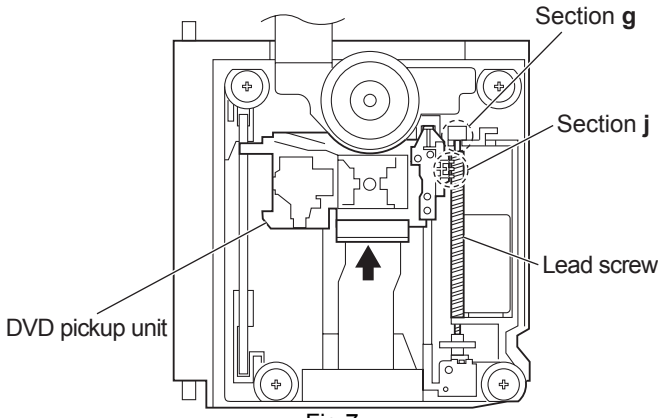


Fig.7

2.2.5 Removing the spindle motor board (See Figure 8, Figure 9)

- Remove the DVD servo control board.
- Remove the DVD traverse mechanism assembly.

(1) From the top side of the DVD traverse mechanism assembly, remove the feed motor wire that is soldered to the spindle motor board.

(2) From the back side of the DVD traverse mechanism assembly, remove the three screws **E** attaching the spindle motor board.

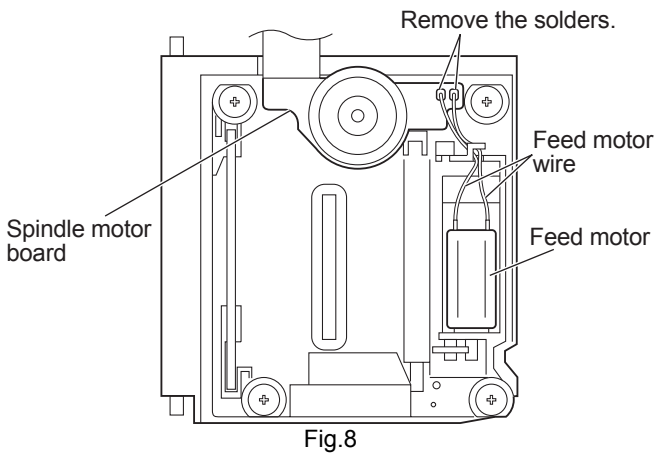


Fig.8

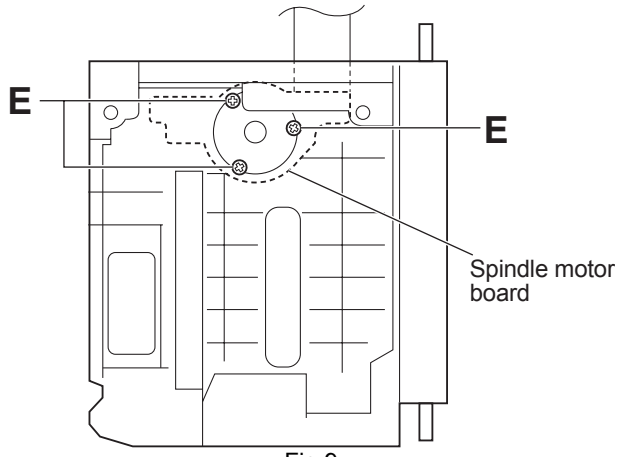


Fig.9

2.2.6 Removing the feed motor
(See Figure 10, Figure 11, Figure 12)

- Remove the DVD servo control board.
- Remove the DVD traverse mechanism assembly.
  (1) Remove the four screws **F** attaching the traverse mechanism assembly.
  (2) Take out the traverse mechanism assembly from the mechanism base.
  (3) Remove the screw **C** attaching the bracket and take out the bracket.
  (4) Disengage the claw **f** attaching the thrust spring and take out the thrust spring.
  (5) Pull out the lead screw in the direction of the arrow.
  (6) Remove the feed gear **M**.
  (7) Remove the feed motor wire that is soldered to the spindle motor board.
  (8) Remove the two screws **G** attaching the feed motor and take out the feed motor.

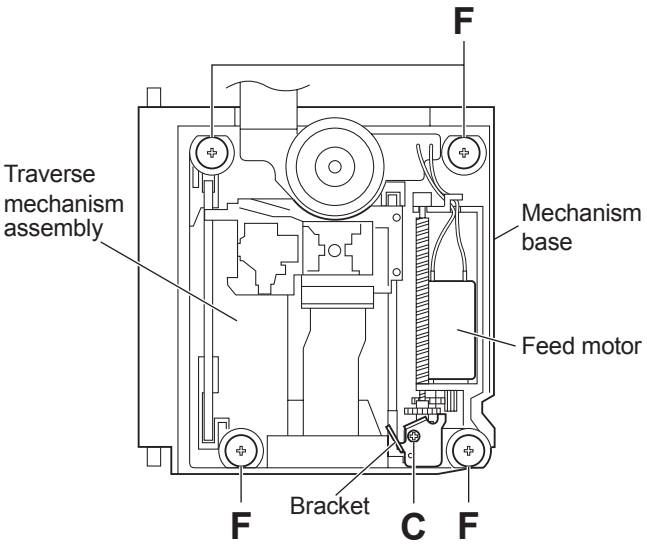


Fig.10

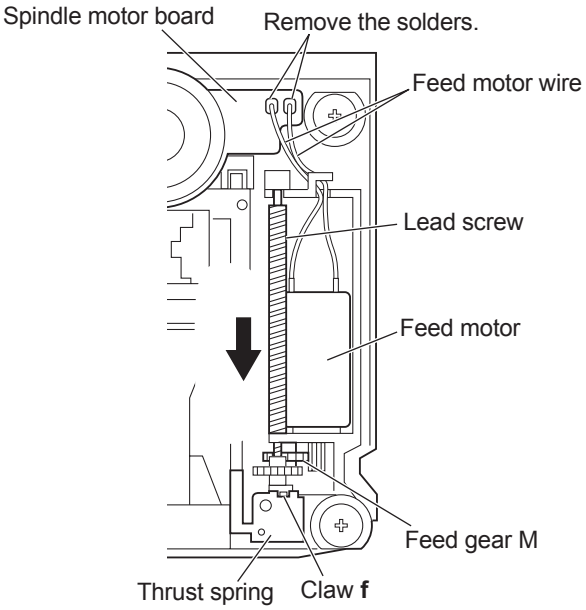


Fig.11

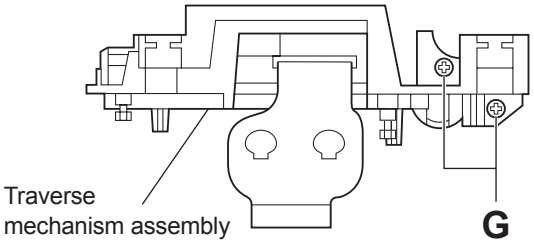


Fig.12

2.2.7 Removing the switch board (See Figure 13)

- Remove the DVD mechanism assembly.
  (1) From the top side of the DVD mechanism assembly, remove the screw **H** attaching the switch board.
  (2) Lift the switch board slightly and then remove the wire from connector CN101 on the switch board.

2.2.8 Removing the loading motor assembly (See Figure 1, Figure 13, Figure 14, Figure 15)

- Remove the DVD mechanism assembly.
  (1) From the back side of the DVD mechanism assembly, disconnect the card wire from connector CN202 on the DVD servo control board. (See Figure 1)
  (2) From the top side of the DVD mechanism assembly, remove the two screws **I** attaching the clamper base assembly.
  (3) Disconnect the wire from connector CN101 on the switch board while lifting the clamper base assembly slightly and remove the clamper base assembly.
  (4) Remove the screw **K** attaching the roller holder assembly. (See Figure 1)
  (5) Remove the three screws **J** attaching the roller holder assembly and take out the roller holder assembly.
  (6) Disconnect the wires from connectors CN103 and CN104 on the loading motor assembly.
  (7) Remove the belt of the loading motor assembly.
  (8) Remove the two screws **L** attaching the loading motor assembly and take out the loading motor assembly.

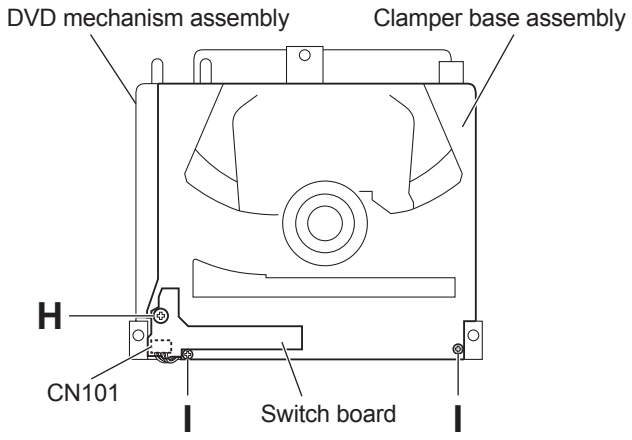


Fig.13

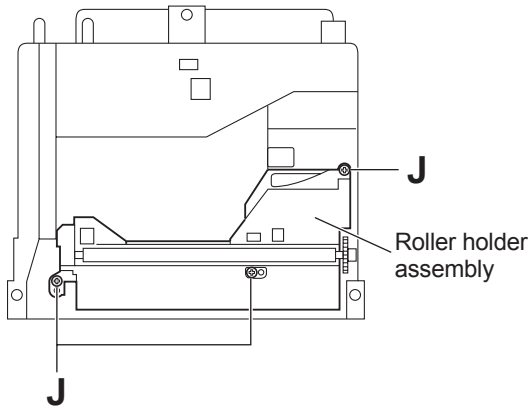


Fig.14

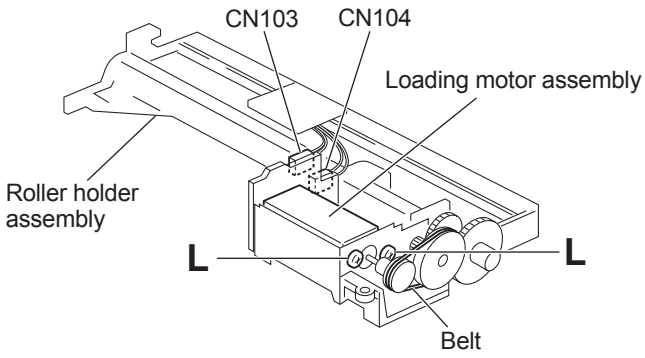


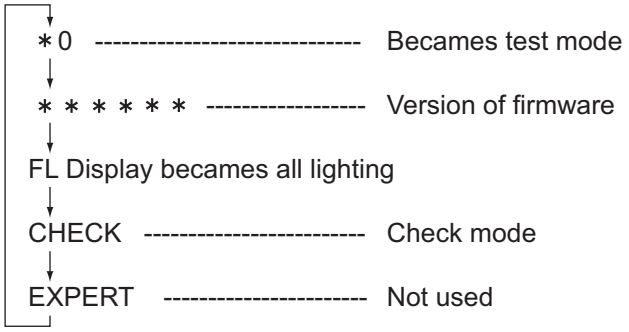
Fig.15

SECTION 3
Adjustment

3.1 Test mode setting method

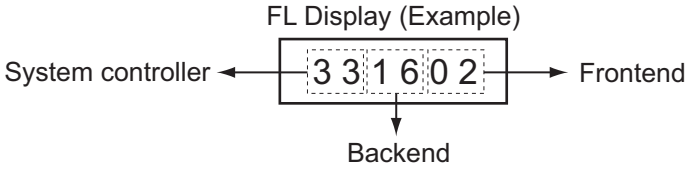
(1) Unplug the power plug.
(2) Insert power plug into outlet while pressing both "PLAY" key and "STOP" key of the main body.
(3) The FL display shows "∗0", and the main body turns to test mode. "∗" means the destination, and "0" means parameter adjustment status.
(4) To release test mode, press "POWER" key of the main body.

NOTE:
Each pressing of "CHOICE" key of the remote controller in test mode changes the mode as follows.



3.2 Method of displaying version of firmware

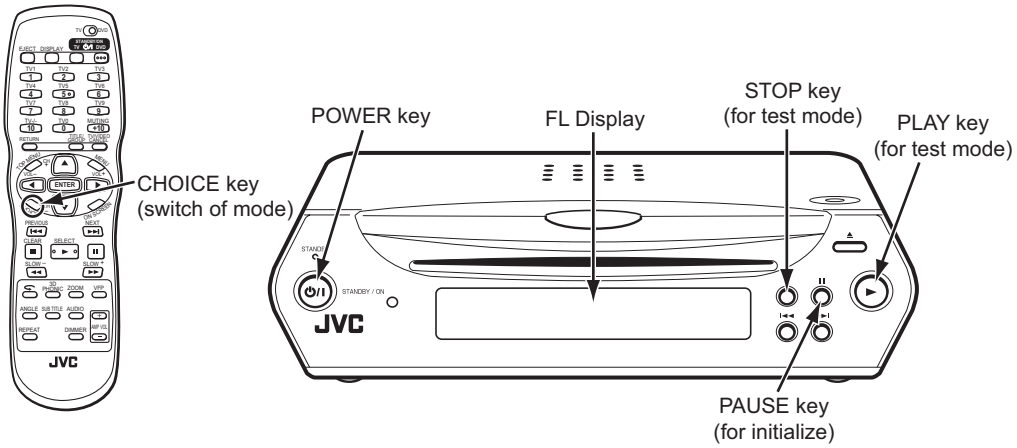
(1) Set the main body at test mode.
(2) Press "CHOICE" key of the remote controller once. Then, version number and alphabetical letter are displayed in the FL display as follows:



3.3 Initialization method

Please initialize according to the following procedures in the following case:
- Just after you upgrade the firmware.
- After you confirm the symptoms that a customer points out. First Initialize, and then confirm whether the symptoms are improved or not.
- After servicing, before returning the main body to a customer. (Initialized main body should be returned to a customer.)

(1) Set the main body at test mode.
(2) Press "PAUSE" key of the main body.
(3) When initialization is completed, the FL display changes from "∗0" to "∗00".(The left "0" of "00" is not always "0". It shows parameter adjustment status.)



3.4 All-initialization method

Please perform all-initialization according to the following procedures in the following case:

- Just after you exchange the pick-up.
- Just after you exchange the spindle motor.
- Just after you exchange the traverse mechanism base.

NOTE:

Please perform all-initialization when you exchange the parts above and also when you remove the parts above.

- Just after the flap adjustment of the pick-up guide shaft

(1) Set the main body at test mode.
(2) Press and hold "BACKWARD SKIP" key of the main body for more than 2 seconds.
(3) When all-initialization is completed, the FL display changes from "∗0" to "∗33".

NOTE:

After all-initialization, be sure to perform optimization adjustment of Front End parameter.

3.5 Optimization adjustment of Front End parameter

Adjustment to optimize Front End parameter must be performed in each mechanism assembly of this model for high-speed starting.Please perform optimization according to the following procedures just after all-initialization is completed and when FL display shows anything except "∗0" (For example when FL display shows "∗1", "∗2", and "∗3") at test mode.

(1) Press "POWER" key of the main body to turn the main body ON (not to set the main body at test mode).
(2) Insert the test disc VT-501 or commercial dual-layer DVD software.
(3) Remove the disc when the FL display changes from "READING" to disc information.
(4) Perform the same procedures as in (2) and (3) above by using the test disc CTS-1000 or commercial CD-DA software.
(5) Set the main body at test mode, and check that the FL display shows "∗0".

NOTE:

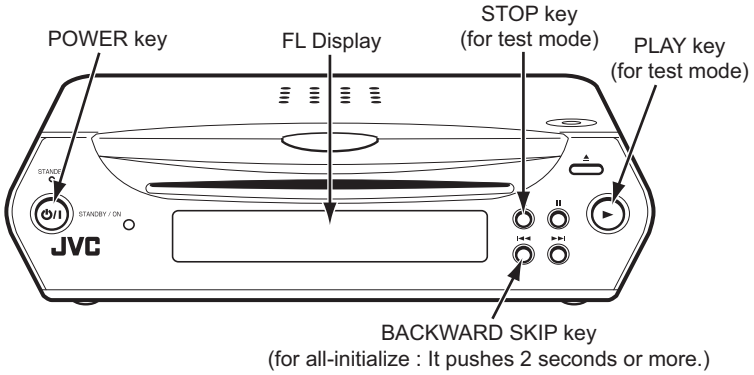
Status of this adjustment can be judged by the number displayed at test mode as follows:

DVD adjustment	CD adjustment	FL display at test mode
Adjusted	Adjusted	∗0
Not adjusted	Adjusted	∗1
Adjusted	Not adjusted	∗2
Not adjusted	Not adjusted	∗3

NOTE:

As for a disc used for adjustment,

- Disc should be mounted. ("Mounting" means to display "READING" after the disc is inserted and then display the disc information.) Disc need not be played.
- If you do not have test disc either VT-501 (DVD) or CTS-1000 (CD-DA), use a commercial disc (for DVD, dual-layer software) after seeing and checking that the disc is neither curved nor foreseen that it may shake at the time of playback.If you use a disc with bad features, starting time may be slow or disc may not be read.



3.6 Display of current value of laser

(1) Set the main body at test mode.
(2) Press "CHOICE" key of the remote controller three times. Then, FL display is displayed "CHECK".
(3) The laser current value can be switched between the value of CD and that of DVD by pressing the following key of the remote controller.

FL Display (Example)

2 5 3 0

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

The number shown in the FL display shows mA of current value of laser.The first two numbers ("25" in "2530") shows current value of laser at the time of adjustment after the latest all-initialization, 25mA in this example.The last two numbers ("30" in "2530") shows the present current value of laser, 30mA in this example.The first two numbers ("25" in "2530") usually shows current value of laser at the time of shipment, so you can see how the product has been deteriorated by comparing the first two numbers ("25" in "2530") and the last two numbers ("30" in "2530").

CD:

The laser current value of 49 mA or less is normal.The laser current value of over 50 mA is not normal. Laser diode of the pickup has been deteriorated.

DVD:

The laser current value of 64 mA or less is normal.The laser current value of over 65 mA is not normal. Laser diode of the pickup has been deteriorated.

To return to test mode, press "STOP" key of the main body.

3.7 Flap adjustment of the pick-up guide shaft

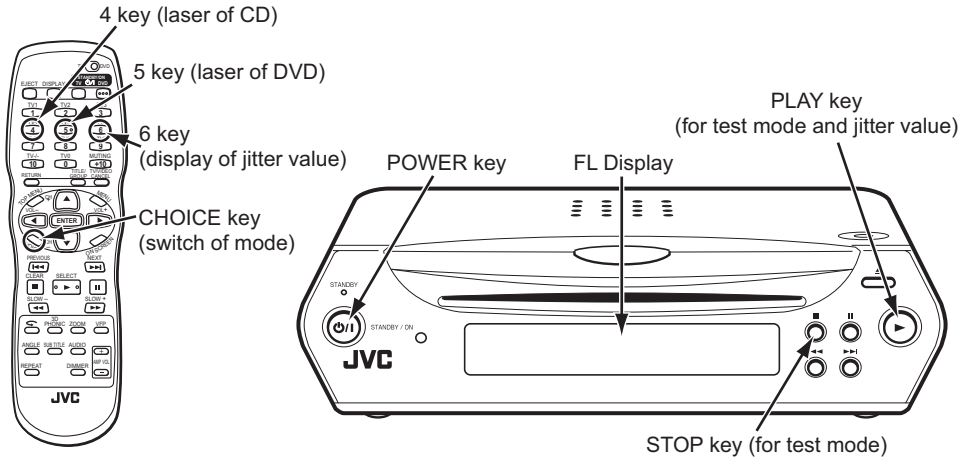
Please perform flap adjustment of the pick-up guide shaft in the following case:

- Just after you exchange the pick-up.
- Just after you exchange the spindle motor.
- Just after you exchange the traverse mechanism base.

NOTE:

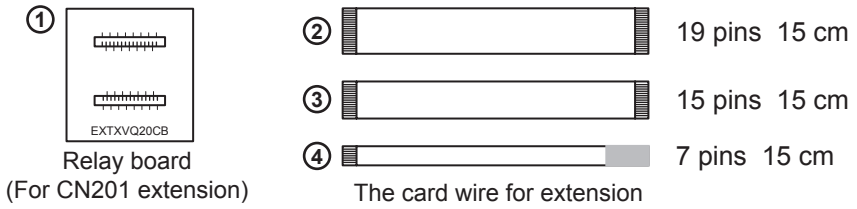
Please perform flap adjustment of the pick-up guide shaft when you exchange the parts above and also when you remove the parts above.

- When the reading accuracy of the signal is bad (There is a block noise in the screen, Screen stops in the outer circumference of a disc, etc.)



3.7.1 Tool for adjustment

* Relay board and extension cord (One set) --- Parts number : EXTXVQ20CB

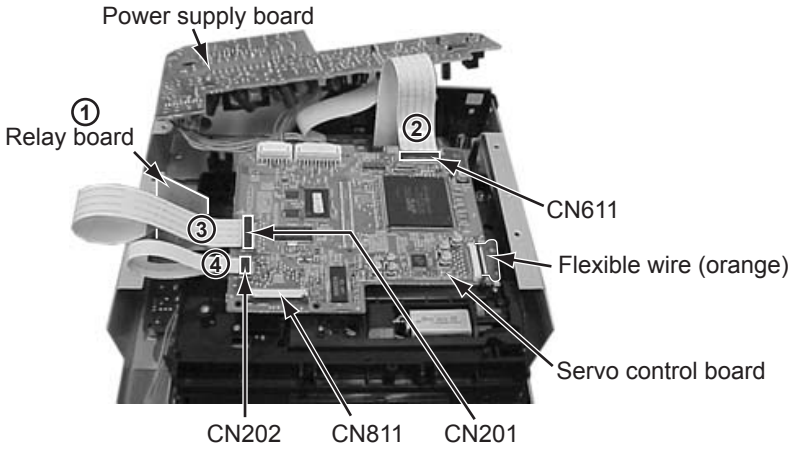


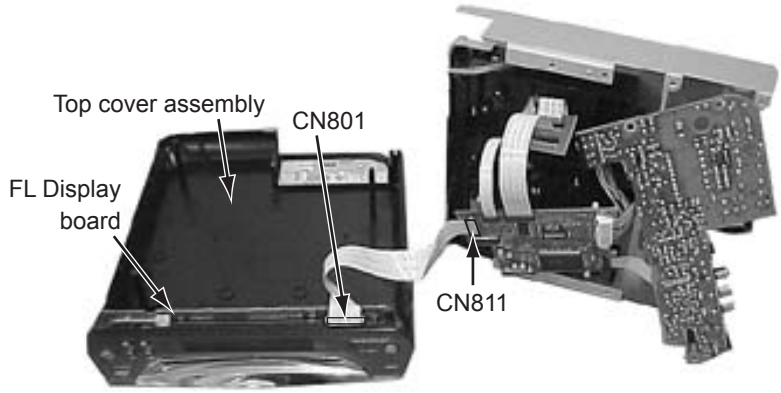
*The phillips screwdriver for adjustment --- goods on the market

*Test disc ---- Parts number : VT-501

3.7.2 Preparation for adjustment

(1) A bottom cover and a bottom plate are removed with reference to Disassembly method.
(2) Disconnect the card wire from connector CN811 on the servo control board.
(3) Disconnect the 3 pin wire from connector CN802 on the FL display board.
(4) A main part is removed from a top cover assembly.
(5) The screw which is fixing the servo control board is removed and it removes from a mechanism assembly.
(6) Remove the screws attaching the power supply board.
(7) Three card wires connected on the servo control board are substituted for the card wire for extension, and are extended.





(8) The flexible wire (orange) of a pickup is turned down and the whole mechanism assembly is stood perpendicularly.
(9) The direction switch in a rear panel is made into the "2" sides.
(10) The card wire connected from the connector CN801 of FL display board is connected to the connector CN811 on a servo control board.(It is not necessary to connect 3 pin wire.)

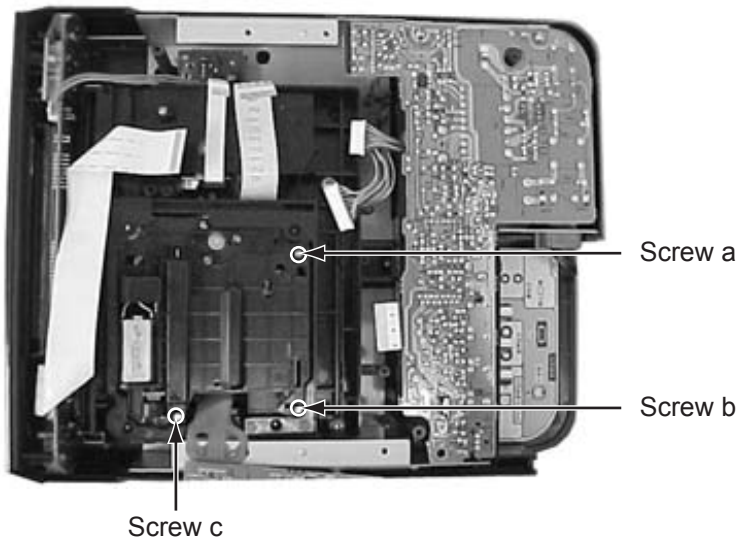
3.7.3 Adjustment

Keep in mind if a power supply board is touched, are dangerous at the time of adjustment.

(1) Set the main body at test mode.
(2) Press the "CHOICE" key of the remote controller three times, and the FL display is displayed "CHECK".
(3) Insert a test disc (VT-501), and press the "PLAY" key of the main body.
(4) After a few seconds, press the numeric key "6" of the remote controller. Then, the FL display is displays a jitter value.
(5) Turn the adjustment screws on the underside of the traverse mechanism with phillips screw driver until the maximum jitter value is displayed on the FL display. (In this model, a bigger jitter value means a better result.)

NOTE:

*Reference values to judge whether the jitter is allowable or not are displayed, instead of actual jitter values.
*Please be sure to perform "all-initialization" and "optimization adjustment of front end parameter" after adjusting.



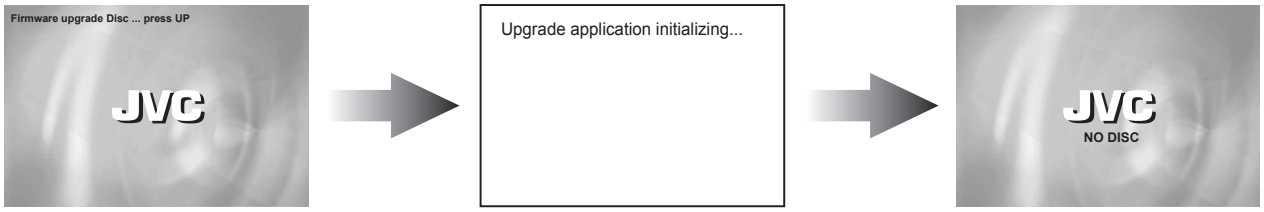
POINT:

Turn the adjustment screws **a** and **b** to the same angle in the right direction. And turn the adjustment screws **a** and **b** to the same angle in the left direction. Then, turn the screws **a** and **b** in either the right or the left direction to increase the number of jitter. Don't turn the adjustment screw **c**.

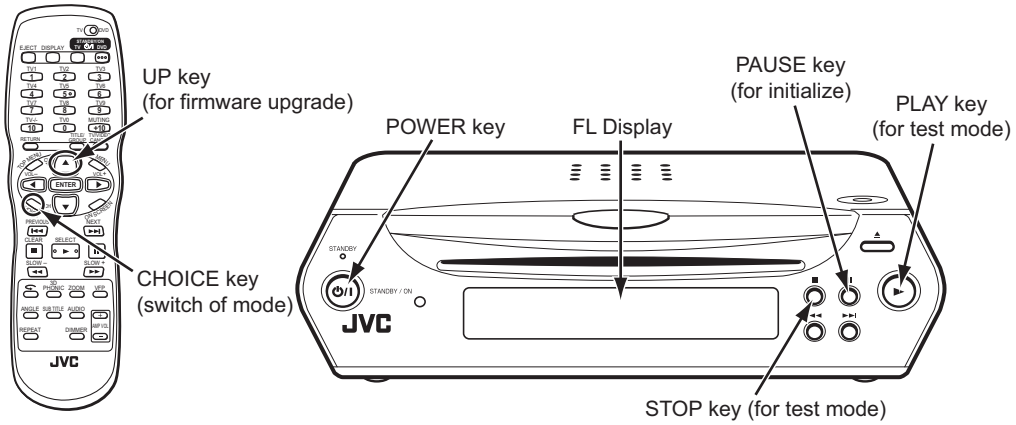
3.8 Upgrading of firmware

The latest firmware for upgrading is updated in "Optical disc CSG" page in JS-net.At the time of service, compare the version of the product and the latest version, and upgrade the old version into the latest version.

(1) Press "POWER" key of the main body to turn the main body on
(2) Insert the upgrade disc.
(3) When FL display of the main body changes from "READ" to "UP", press "cursor UP" key (▲) of the remote controller.
(4) The entire screen becomes blue, and upgrading starts.
(5) The tray opens automatically. Remove the upgrade disc.
(6) The screen returns to the normal screen. Then, press "POWER" key of the main body. When the stand-by indicator is lighted, upgrading is completed.
(7) Set the main body at test mode, and perform initialization. Then, confirm the version of the firmware.



After inserting the up-grade disc　　While upgrading (blue screen)　　When up-grade is completed



3.9 Confirm method of operation

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

Initialize	Refer to the initialization method.
All-initialize	Refer to the All-initialization method.
Parameter adjustment status	Set the main body at test mode, and check that the FL display shows "∗0".
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.
Insertion and extraction operation of a disk	Push an EJECT key and a disk should eject smoothly without an allophone. Moreover, insert similarly.
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.

3.10 Troubleshooting

3.10.1 Servo volume

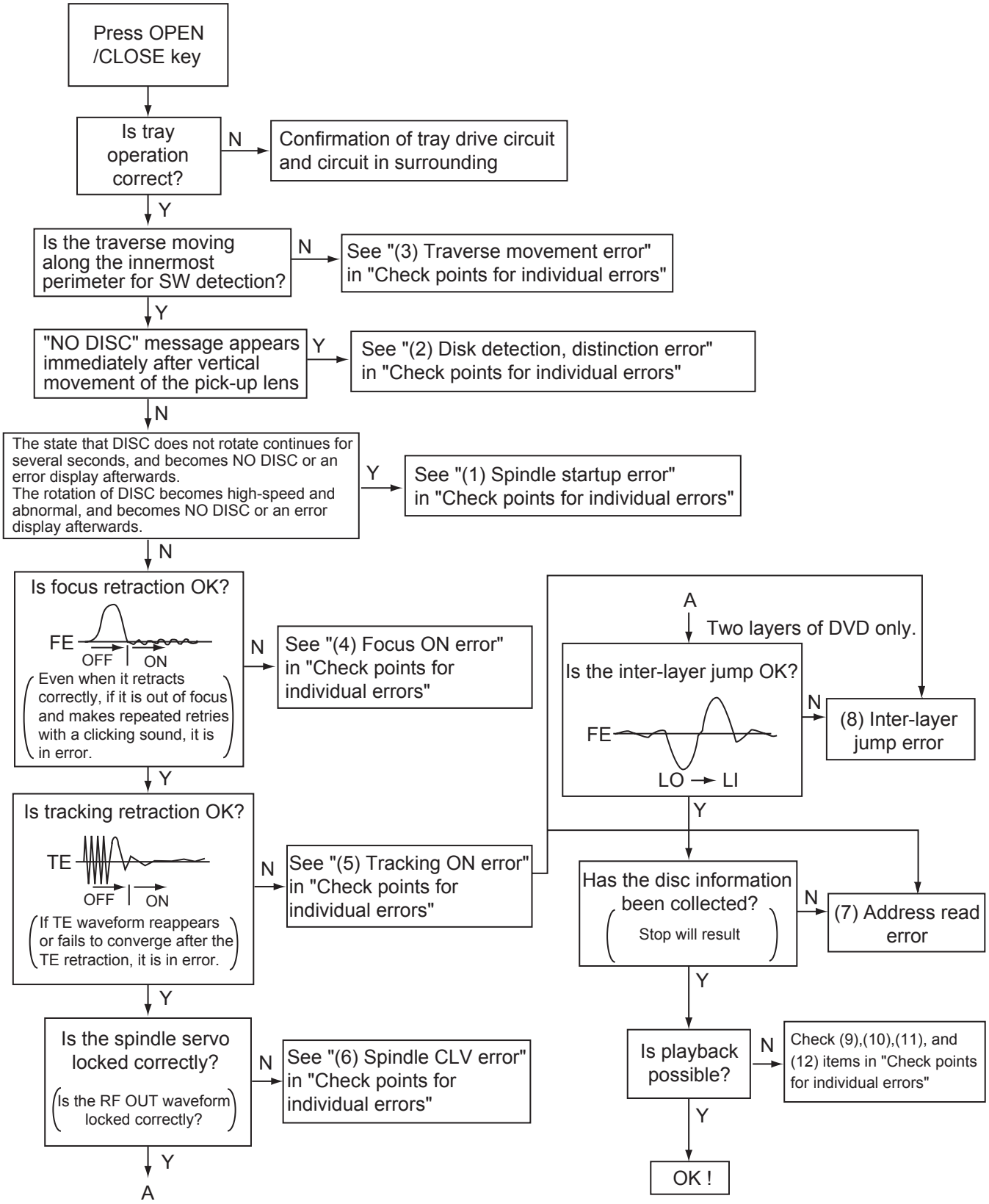


Fig.1

3.11 Check points for each error

3.11.1 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?

3.11.2 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 "21" (ASOUT) and IC101 "36"(RFENV) and IC101 "20" (FE-OUT)?

3.11.3 Traverse movement NG

(1) Defective traverse driver

- Has the voltage come between terminal of CN101 "29" and "30" ?

(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? (IC301 "56")

3.11.4 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.

3.11.5 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.

3.11.6 Spindle CLV NG

- IC101 -- "27"(ARF-), "26(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.

3.11.7 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
  The disc is dirty or the wound has adhered.

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

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

3.11.9 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?

3.11.10 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?

3.11.11Others

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

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

3.11.12CD 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

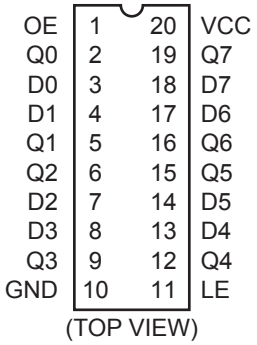
- --:-- is displayed during FL search.
  According to [It is not possible to search] for DVD(9), check the feed and tracking systems.
- No sound is output although the time is displayed.(CA-DA)
  DAC, etc, other than servo.
- The passage of time is not stable, or picture is abnormal.(V-CD)
- The wound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

SECTION 4

Description of major ICs

4.1 74LVC373APW-X (IC512, IC513) : Octal D-type transparet latch

• Pin Layout



• Pin function

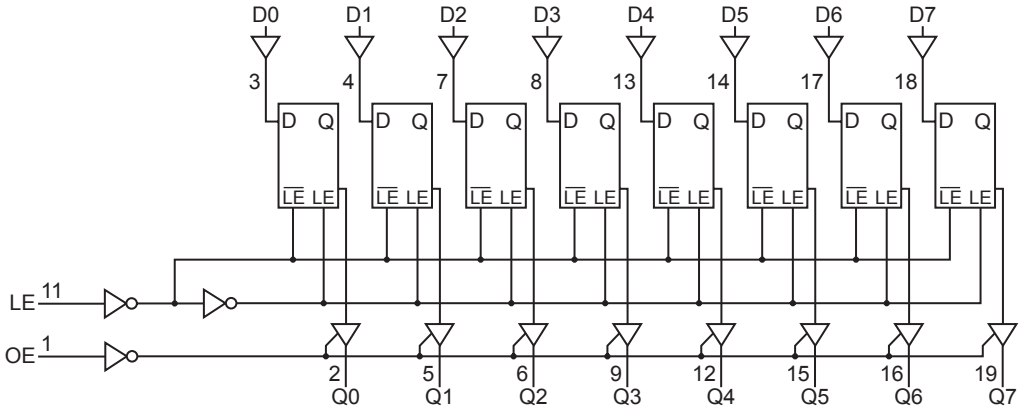
Symbol	Description
D0-D7	Data Inputs
LE	Latch enable Input (active-high)
OE	Output enable Input (active-low)
Q0-Q7	Data outputs
GND	Connect to ground
Vcc	Power supply

• Truth table

Operating modes	Inputs			Internal latches	Outputs
	OE	LE	Dn		Q0 to Q7
Enable and read register (trasparant mode)	L L	H H	L H	L H	L H
Latch and read register	L L	L L	l h	L H	H H
Latch register and disable outputs	H H	L L	l h	L H	Z Z

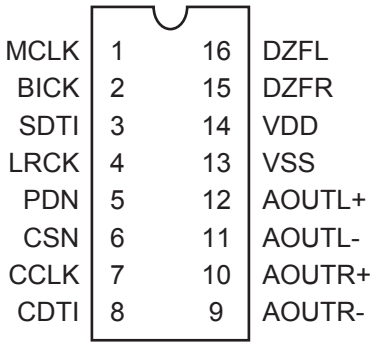
H=HIGH Voltage Levelh=HIGH Voltage level one setup time prior to the HIGH-to-LOW LE transitionL=LOW Vlotage Levell=LOW Voltage level one setup time prior to the HIGH-to-LOW LE transitionX=Don't careZ=High Impedance OFF-state

• Block Diagram

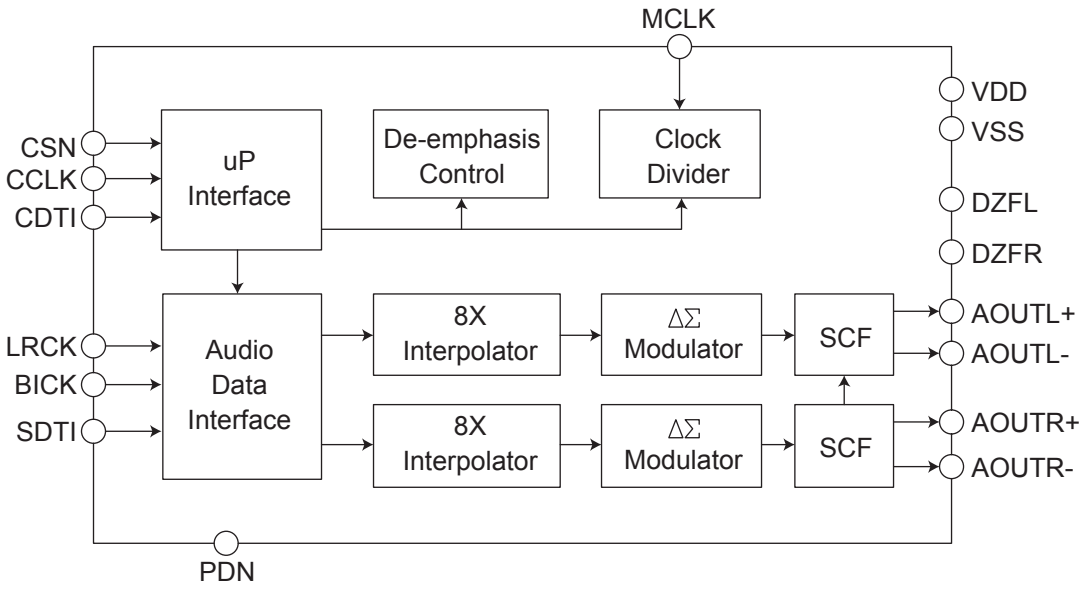


4.2 AK4381VT-X (IC702) : 2ch DAC

• Pin layout



• Block diagram

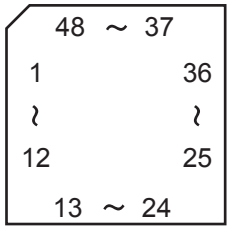


• Pin functions

Pin No.	Symbol	I/O	Description
1	MCLK	I	Master clock input terminal
2	BICK	I	Audio serial data clock terminal
3	SDTI	I	Audio serial data input terminal
4	LRCK	I	L/R Clock terminal
5	PDN	I	Power down mode terminal
6	CSN	I	Chip select
7	CCLK	I	Control data input terminal
8	CDTI	I	Control data input terminal
9	AOUTR-	O	Rch negative analog output terminal
10	AOUTR+	O	Rch positive analog output terminal
11	AOUTL-	O	Lch negative analog output terminal
12	AOUTL+	O	Lch positive analog output terminal
13	VSS	-	Connect to ground
14	VDD	-	Power supply terminal
15	DZFR	O	Rch data zero input detection terminal
16	DZFL	O	Lch data zero input detection terminal

4.3 AN8708FHK(IC101):Frontend processor

• Pin layout

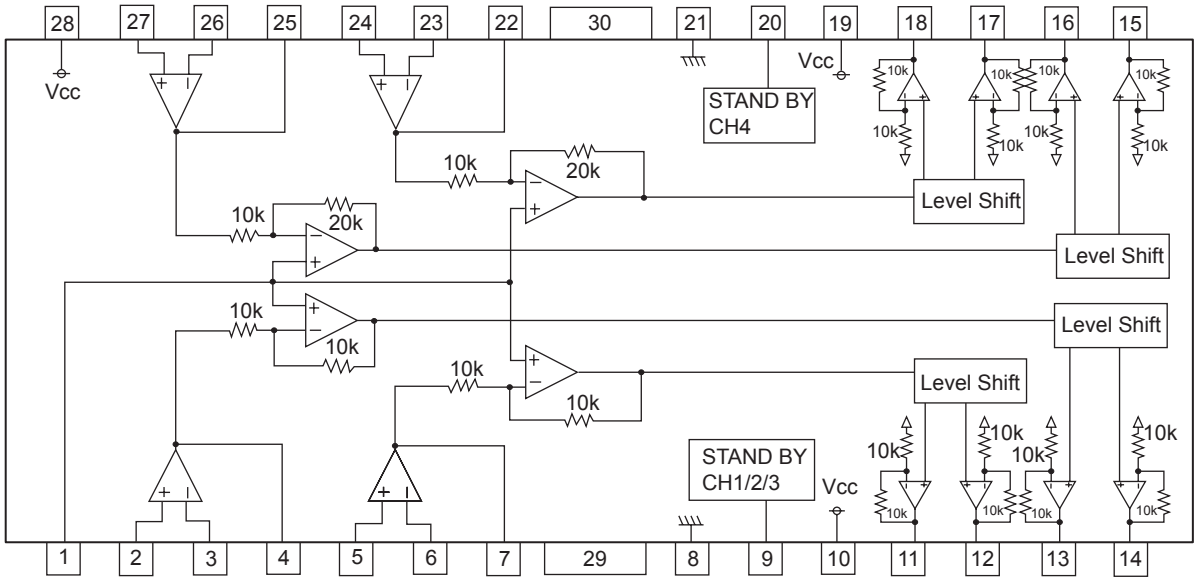


• Pin function

Pin No.	Symbol	I/O	Description
1	GND1	-	Connect to ground
2	LPC1	I	Laser input terminal (DVD)
3	LPC01	O	Laser drive output terminal (DVD)
4	LPC2	I	Laser input terminal (CD)
5	LPC02	O	Laser drive output terminal (CD)
6	FBAL	I	Focus balance control terminal
7	TBAL	I	Tracking balance control terminal
8	POFLT	O	Track detection filter terminal
9	SEN	I	SEN (Serial data input terminal)
10	SCK	I	SCK (Serial data input terminal)
11	STDI	I/O	STDI (Serial data input/output terminal)
12	VRE18	-	RF Standard voltage filter
13	TE	O	Tracking error signal output terminal
14	VSS	-	Connect to ground
15	OFTR	O	OFTR output
16	BDO	O	BDO output
17	VDD	-	Power supply terminal 3 (3.3V)
18	RSCL	-	Source terminal of standard current
19	GND2	-	Connect to ground
20	FE	O	Focus error signal output terminal
21	FS	O	Focus addition signal output terminal
22	VHALF	O	VHALF Voltage output terminal
23	MIRSL	O	MIRROR Slow envelope detection terminal
24	BDOSL	O	BDO Slow envelope detection terminal
25	VCC2	-	Power supply terminal 2 (3.3V)
26	FLTOP	O	Filter amplifier positive output terminal
27	FLTON	O	Filter amplifier negative output terminal
28	SAG	O	SAG Cancel detention terminal
29	DCAGC	O	FLT-DC Cut filter terminal
30	AGCG	O	AGC Amp.gain control terminal
31	TESTSG	I	TEST signal input terminal
32	RFINP	I	RF signal positive input terminal
33	RFINN	I	RF signal negative input terminal
34	DCRF	O	Filter terminal for RF all addition AMP.DC cut
35	PEAK	O	Peak envelope detection filter terminal
36	RFENV	O	RF Envelope output terminal
37	VCC1	-	Power supply terminal 2 (5V)
38,39	VIN5,6	I	Internal four division (CD) RF input terminal 1,2
40,41	VIN7,8	I	External two division (DVD) RF input terminal 1,2
42	VREF	-	VREF Voltage output terminal
43~46	VIN1~4	I	Internal four division (DVD) RF input terminal 1~4
47,48	VIN9,10	I	Three beam sub (CD) input terminal 1,2

4.4 BA5983FM-X (IC201) : 4-channel driver

• Block diagram



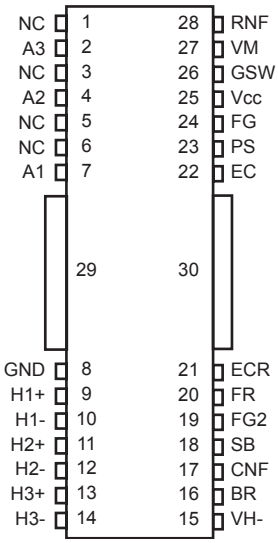
• Pin function

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

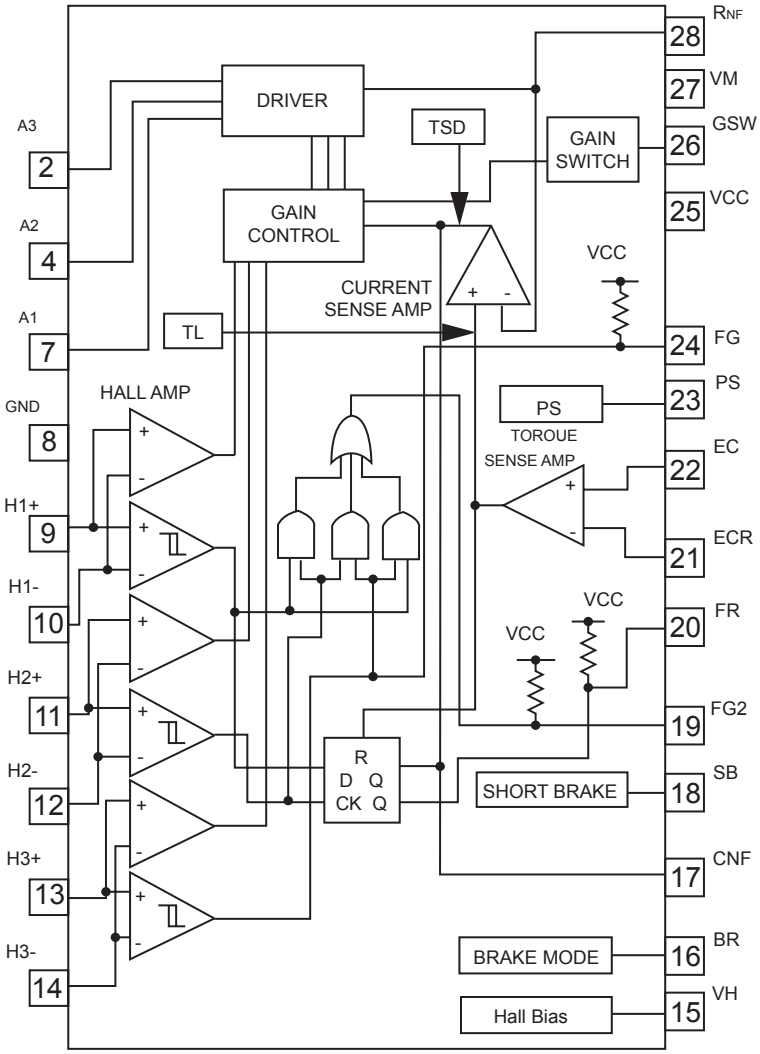
Pin No.	Symbol	I/O	Description
16	VO4(-)	O	Inverted output of CH4
17	VO3(+)	O	Non inverted output of CH3
18	VO3(-)	O	Inverted output of CH3
19	PowVcc2	-	Vcc for CH3/4 power block
20	STBY2	I	Input for Ch4 stand by control
21	GND	-	Substrate ground
22	OPOUT3	O	Output for CH3 OP-AMP
23	OPIN3(-)	I	Inverting 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

4.5 BA6664FM-X (IC251) : Spindle motor driver

• Pin layout



• Block diagram

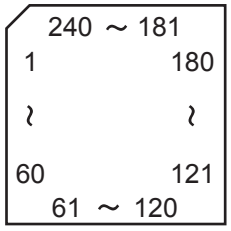


• Pin function (BA6664FM-X)

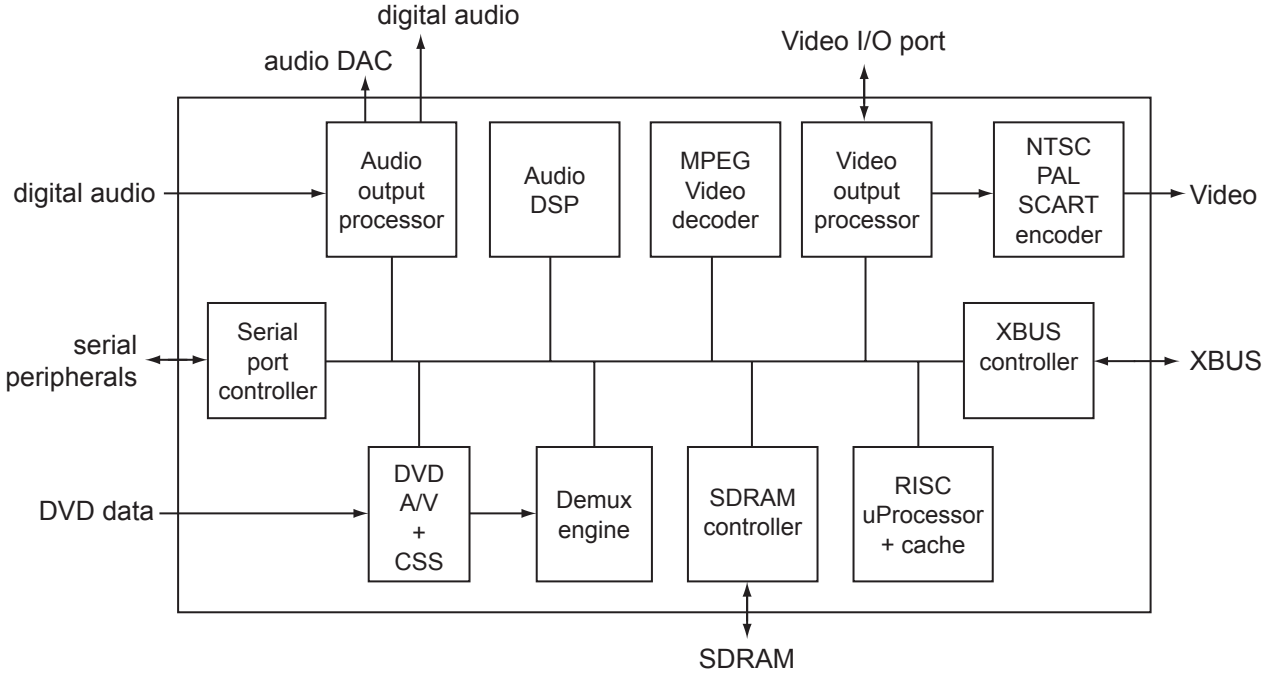
Pin No.	Symbol	I/O	Description
1	NC	-	Non connect
2	A3	O	Output 3 for spindle motor
3	NC	-	Non connect
4	A2	O	Output 2 for spindle motor
5	NC	-	Non connect
6	NC	-	Non connect
7	A1	O	Output 1 for spindle motor
8	GND	-	Connect to ground
9	H1+	I	Positive input for hall input AMP 1
10	H1-	I	Negative input 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

4.6 JCE8044(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

Pin No.	Symbol	I/O	Description
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
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	ADC	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

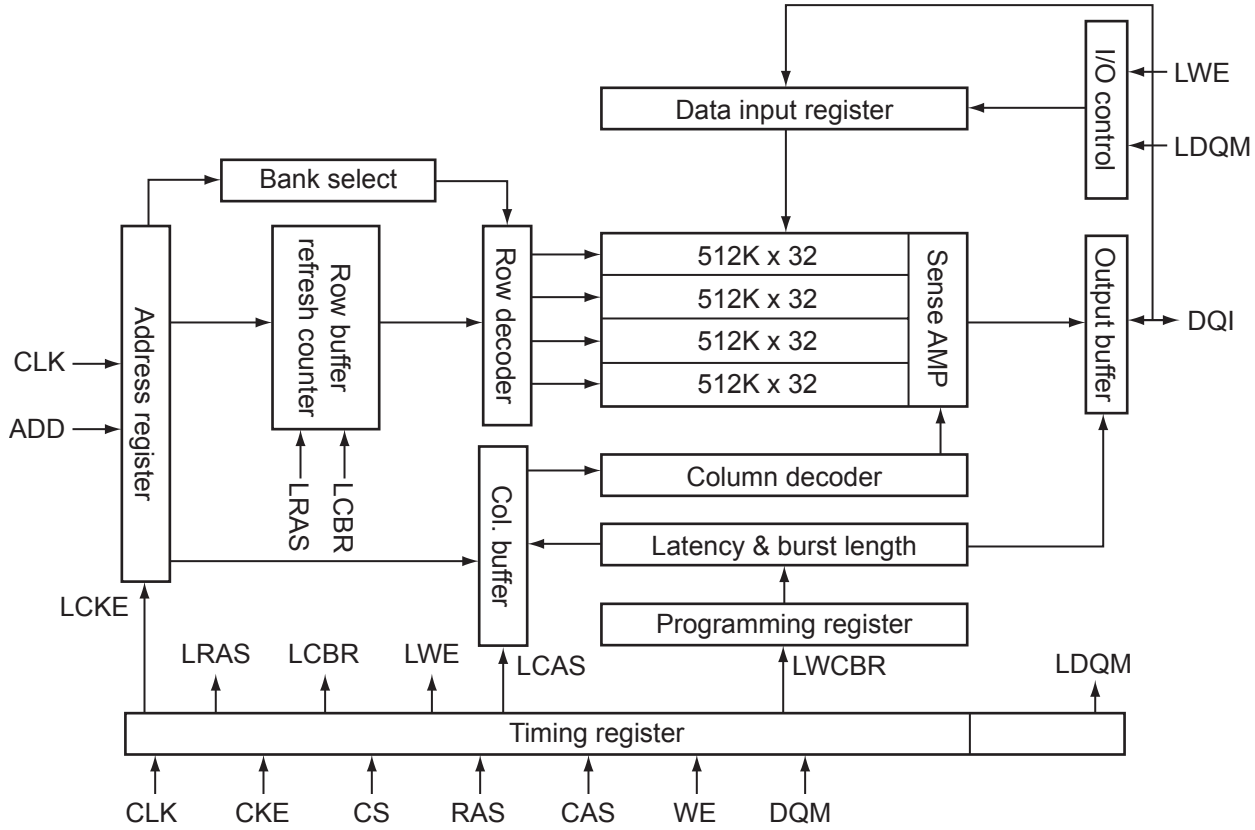
Pin No.	Symbol	I/O	Description
82	VSSio	-	Connect to ground
83	RXD1	I	UART1 Serial data input from external serial device, used for IR receiver
84	SSPIN1	I/O	SSP1 Data in or 16X clock for USART function in UART1
85	VSS	-	Connect to ground
86	SSPOUT1	I/O	SSP1 Data out or UART1 data-terminal-ready signal
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
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 Cb output for component Blue output)
113	VAA3	-	Power supply terminal for DAC analog 3.3V
114	Y/G	O	Video signal output (Luminance for S-Video and component Green output)
115	VSSA	-	Connect to ground for DAC analog
116	VREF	-	Non connect
117	VAA	-	
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	DISCSTP	-	Non connect
124	DISCSET	-	Non connect
125	VDDio	-	Power supply terminal 3.3V
126	SLEEP	-	Non connect
127	TRVSW	-	Non connect

Pin No.	Symbol	I/O	Description
128	HFMON	-	Non connect
129	SBAK	-	Non connect
130	HAGUP	-	Non connect
131	VI02	-	Non connect
132	VSSio	-	Connect to ground
133	DRVMUTE	-	Non connect
134	SPMUTE	-	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
157158	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
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
194195	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	SODCCS	I	SODC Chip select
203	ADSCIRQ	I	Interrupt input

Pin No.	Symbol	I/O	Description
204	VSSio	-	Connect to ground
205	XI09	I/O	Programmable general purpose external input/output
206~208	XID10~12	I/O	Programmable general purpose external input/output
209	ODCIRQ	I	Interrupt input
210	VDDio	-	Power supply terminal 3.3V
211	ODCIRQ2	I	Interrupt input
212	VDD	-	Power supply terminal 1.8V
213	DSYNC	I	DVD Parallel mode sector sync
214	ODCIRQ2	I	Interrupt input
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
225226	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
231232	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

4.7 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

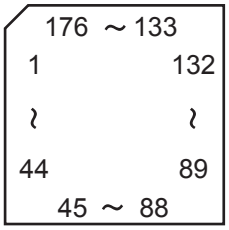
4.8 MN101C35DLS(IC701) : System controller

• Pin function

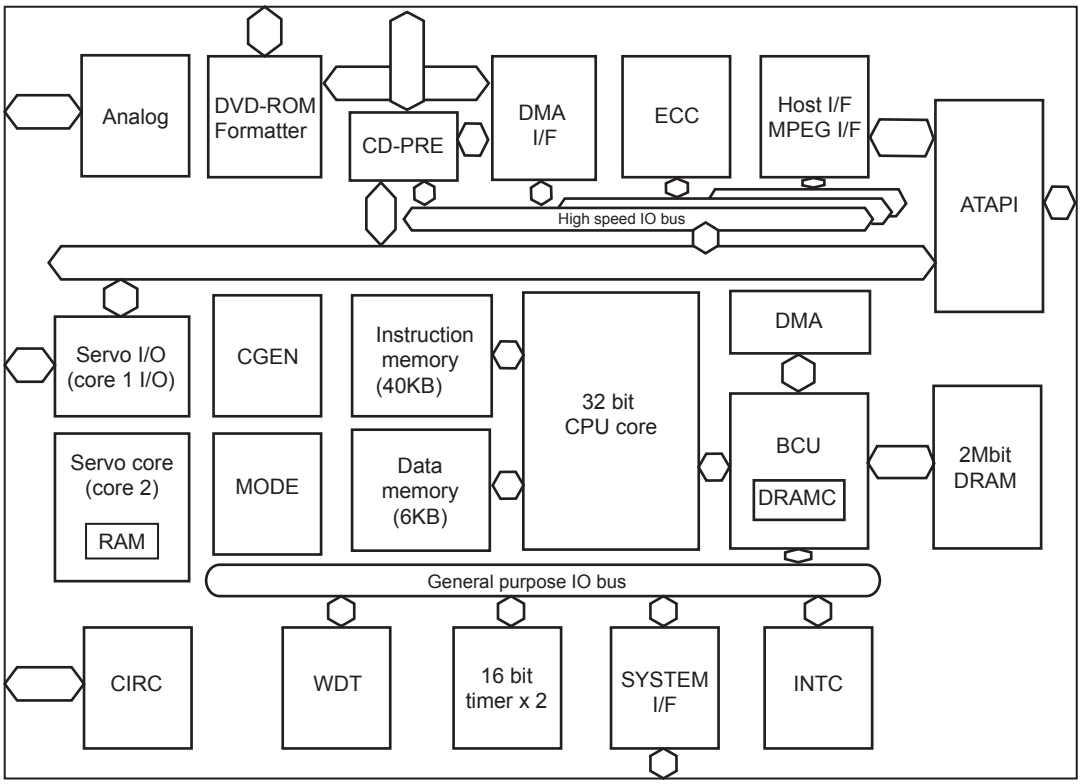
Pin No.	Symbol	I/O	Description
1	NC	-	Not use
2		-	Not use
3	DOM/EXP	I	Domestic / foreign countries specification detection terminal
4	Q20/Q25	I	Specification detection terminal
5	MCHANGE		
6,7	AVCO/AVCI	I/O	AV Compulink signal input/output terminal
8	VDD	-	Power supply terminal
9	OSC2	O	Crystal oscillation output terminal
10	OSC1	I	Crystal oscillation input terminal
11	VSS	-	Connect to ground
12	XI	-	Connect to ground
13	XO	-	Not use
14	MMOD	-	Connect to ground
15	VREF	-	Connect to ground
16	POWERSW	I	Power key input (S801)
17	PHOTOSW	I	Photo diode detection from loading motor
18	E/OTHER	I	Destination detection
19	NC	-	Not use
20	KEYIN1	I	Key matrix input 1
21	KEYIN2	I	Key matrix input 2
22	RGB	I	RGB / S-video change signal input
23	NTB	I	NTSC / PAL change signal input
24	VREF+	-	Power supply terminal (+B5V)
25	NC	-	Not use
26	RESET	I	Reset input
27	POWERTOP	O	POWER LED Control signal
28	PLAYTOP	-	Power supply terminal
29	POWERON	O	Power ON output
30	TCLOSE	O	Disc insert control signal output
31	TOPEN	O	Disc eject control signal output
32	/LMMUTE	O	Muting output
33	SWOPEN	I	Disc insert / eject detection switch input
34	SWUPDN	I	UP / DOWN Detection switch of traverse mechanism
35	REMO1	I	Remote control signal 1 input
36	REMO2	I	Remote control signal 2 input
37	CS	I	Chip select
38	V/H_SEL	I	Vertical / horizontal direction switch detection
39	TXD	I	SSP0 data input
40	RXD	O	SSP0 data output
41	SCK	I	SSP0 clock
42	INT		
43	MECHA_H/V	O	Vertical / horizontal direction mode signal
44	RESET	O	Unit microcomputer reset
45,46	NC	-	Not use
47	STANDBYLED	O	Standby LED control signal output
48~56		-	Not use
57~64	8G~1G	O	FL Grid control signal output
65~70		-	Not use
71~88	S18~S1	O	FL Segment control signal output
89~91		-	Not use
92	INT/PRG	-	Not use
93	MUTE	O	Muting output
94~99		-	Not use
100	VPP	-	Power supply terminal (-VDISP)

4.9 MN103S26EGB-H (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)

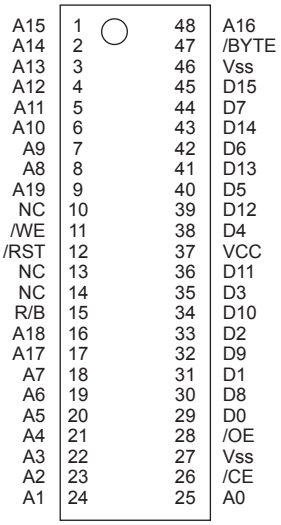
Pin No.	Symbol	I/O	Description
34	NCS	I	System control chip select
35	NWR	I	Writing system control
36	NRD	I	Read signal input from system controller
37~44	CPUDT7~0	I/O	System control data
45	CLKOUT1	-	Non connect
46	MMOD	I	Test mode switch signal
47	NRST	I	System reset
48	MSTPOL	I	Master terminal polarity 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	SDOUT	I/O	Serial data input/output terminal
54	CPSCK	O	Clock output for serial data
55	FEPEN	O	Front end processor serial enable signal output
56	PWM4	I	Traverse mechanism inner circumference detect switch
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	WOBBLEFIL	-	Non connect
62	PWM6	O	Connect to pick up unit
63	PWM7	O	Short brake terminal
64	PWM8	-	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	TILTN	-	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
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	AVSS	-	Connect to ground for analog circuit
86	ROUT	-	Non connect

Pin No.	Symbol	I/O	Description
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	AVDD	-	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	DSLF2,1	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
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

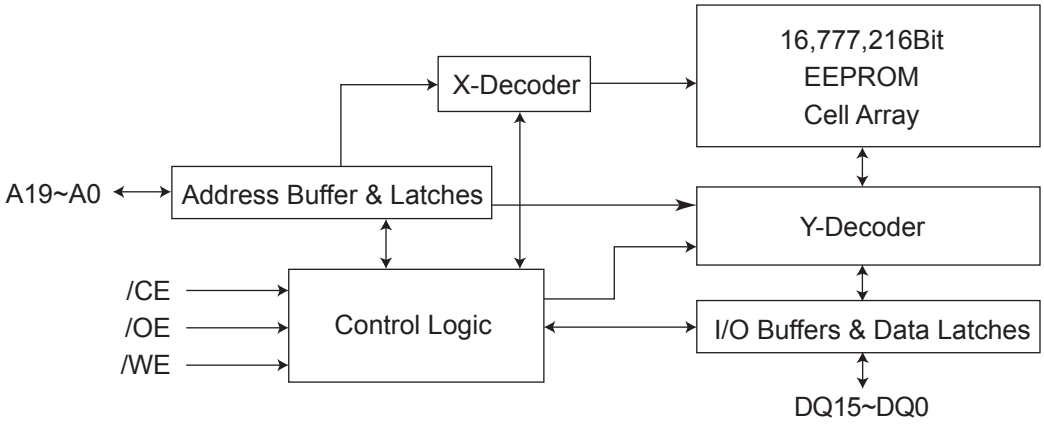
Pin No.	Symbol	I/O	Description
134	NCS3FX	I	ATAPI host chip select
135	NCS1FX	I	ATAPI host chip select
136	DA2	O	Data sampling clock output
137	DA0	I/O	ATAPI host address 0
138	NPDIAG	I/O	ATAPI slave master diagnosis input
139	DA1	I/O	ATAPI host address 1
140	NIOCS16	-	Non connect
141	INTRQ	O	ATAPI host 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

4.10 SST39VF160-7DD (IC509) : 16M EEPROM

• Pin layout



• 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	Connect to ground
NC	No Connection	

JVC
VICTOR COMPANY OF JAPAN, LIMITED
AV & MULTIMEDIA COMPANY OPTICAL DISC CATEGORY 1644, Shimotsuruma, Yamato, Kanagawa 242-8514, Japan

(No.XA001)

Printed in Japan
WPC

JVC

SCHEMATIC DIAGRAMS

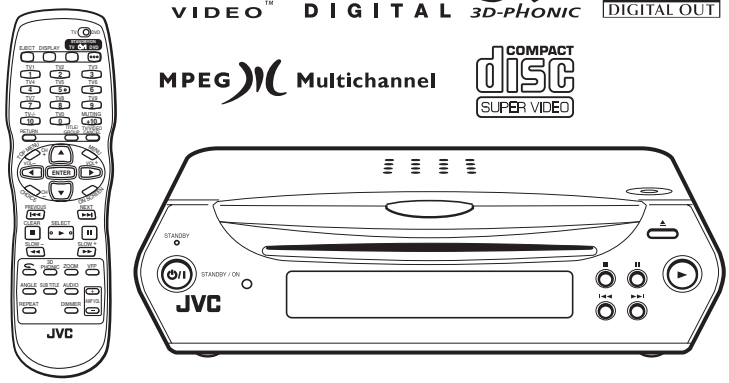
DVD VIDEO PLAYER

XV-C5SL

CD-ROM No.SML200305

Area Suffix

B ---------- U.K.
E ------ Continental Europe
EN ------- Northern Europe
EV --------- Eastern Europe
EE ---- Russian Federation
US ---------- Singapore
UG - Turkey,South Africa,Egypt
UB ---------- Hong Kong



Contents

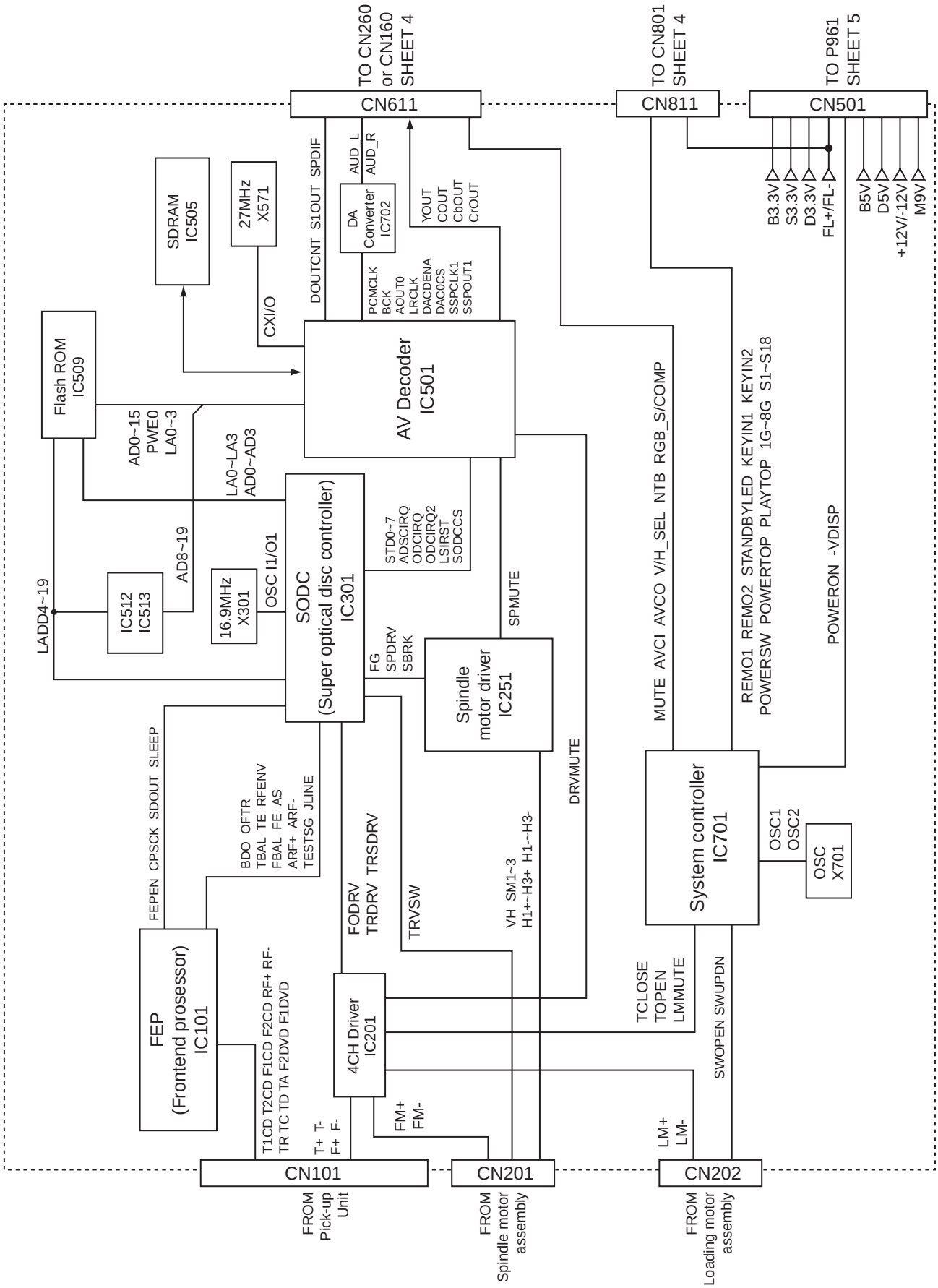
No.XA001SCH
2003/05

Safety precaution

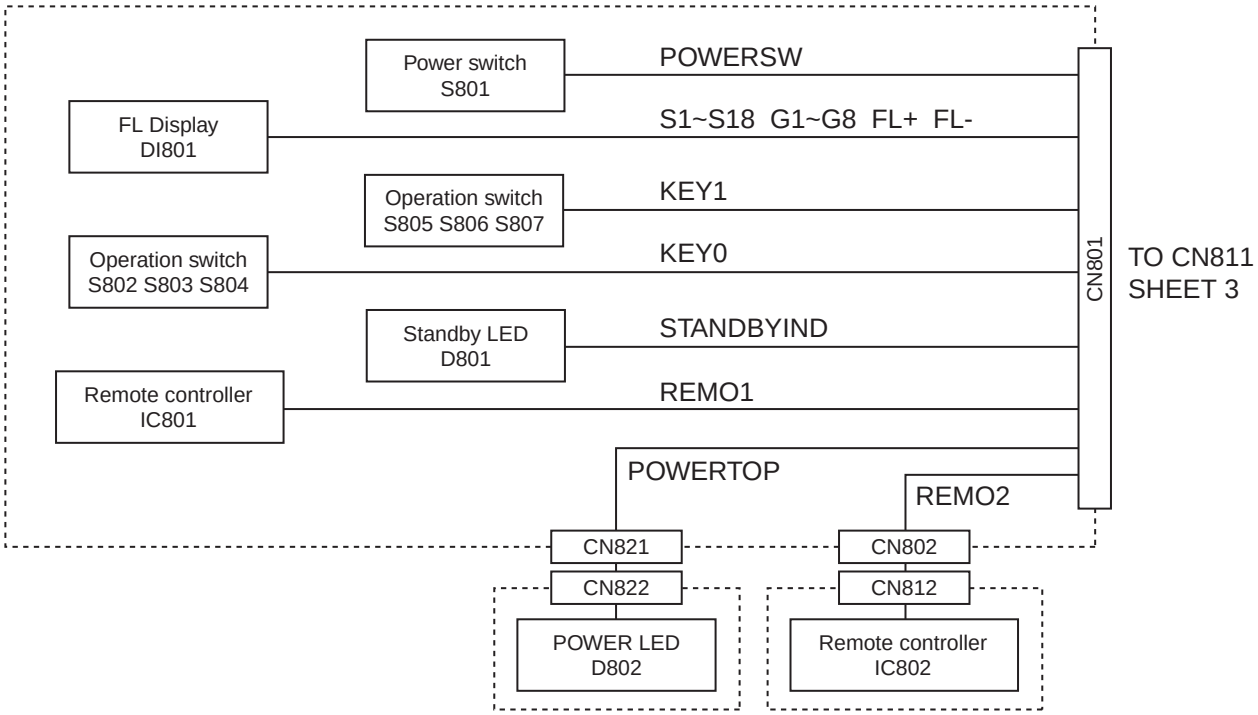
In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▬) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.
When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (Except the JC version)

Block diagrams

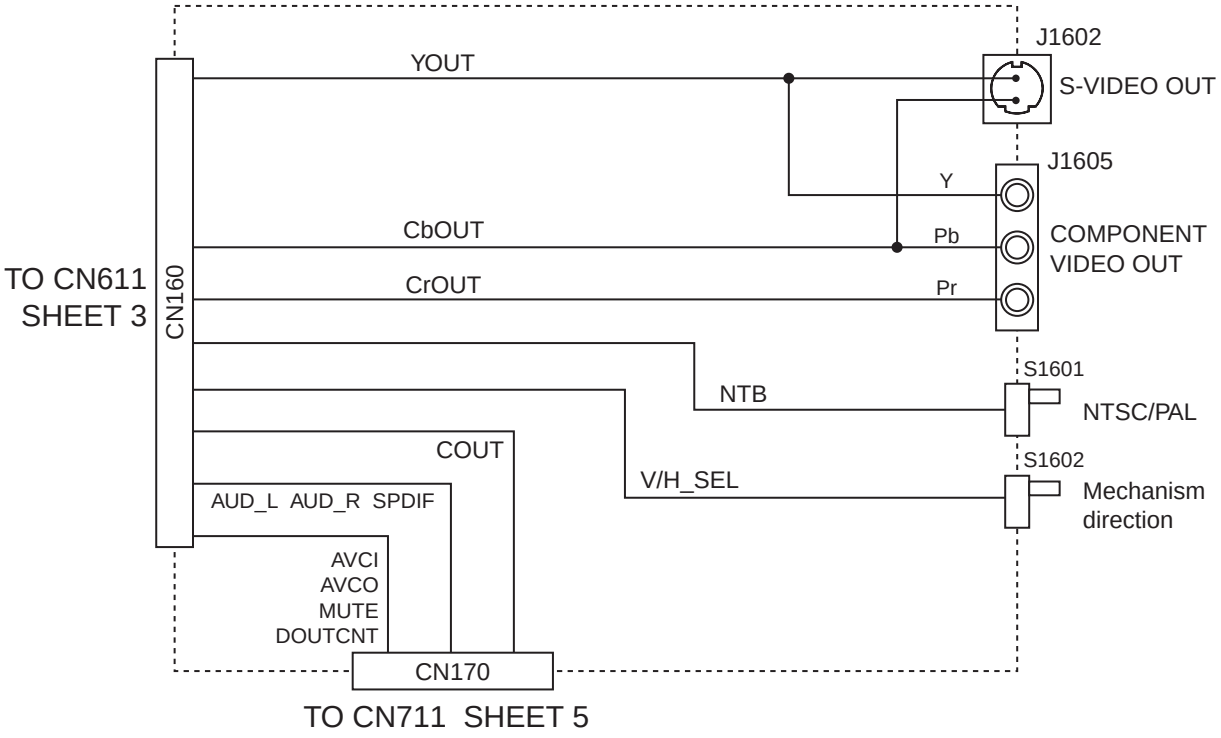
■ DVD Servo control & AV Decoder & system controller section (SHEET 1,2,3)



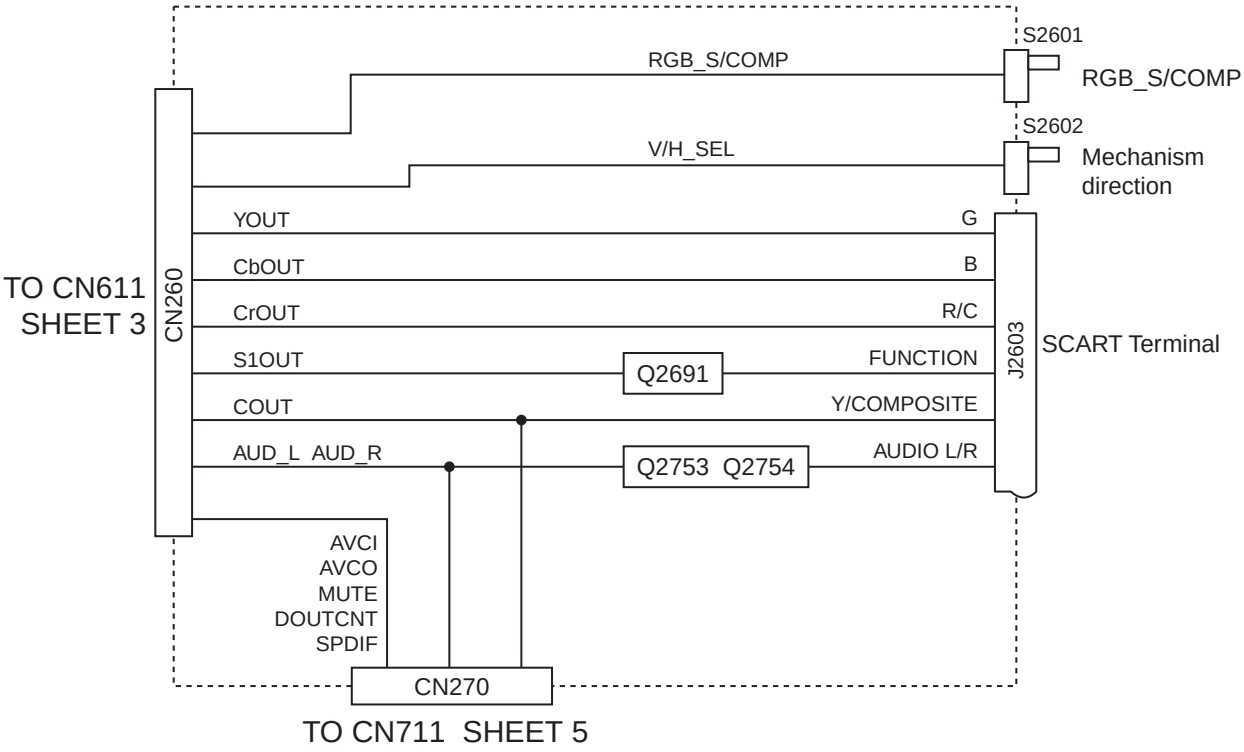
■ FL Display & operation switch section (SHEET 4)



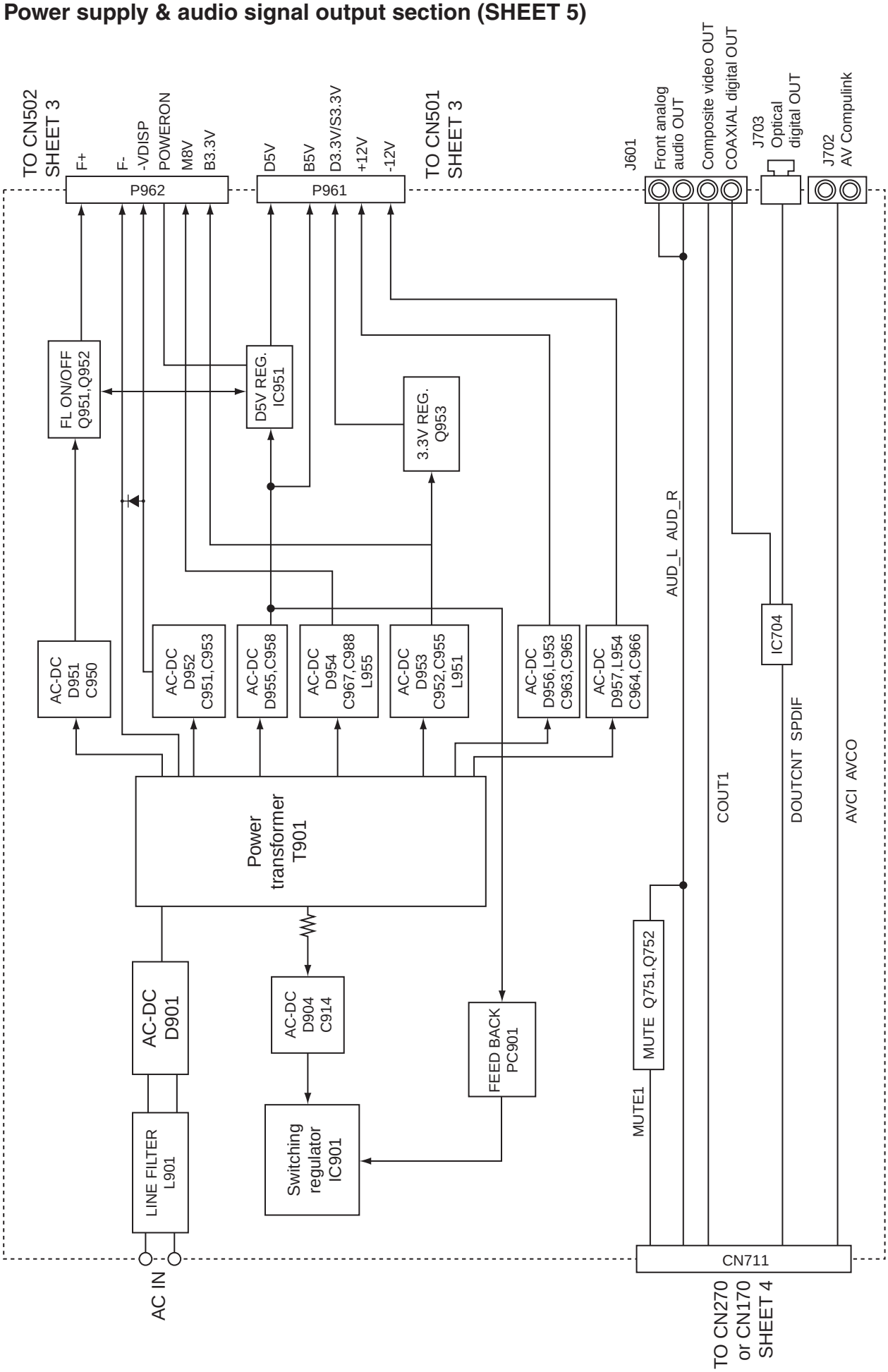
■ Video signal output section (SHEET 4) for except Europe



■ Video signal output section (SHEET 4) for only Europe



■ Power supply & audio signal output section (SHEET 5)



Standard schematic diagrams

■ Servo control section

To Pick-up unit

To Spindle motor assembly

To Loading motor assembly

CN101 QGF0522F1-30V

CN201 QGF1016F2-15W

CN202 QGF1015F2-07W

IC101 AN8708FHK (FEP)

IC201 BA5983FM-X DRIVER

IC251 BA6664FM-X SP MOTOR DRIVER

IC301 MN103S26EGB-H SODC

X301 NAX0542-001X 16.9MHz

	MN103S26EGA (V5.0)	MN103S26EGB-H (V5.1)
R350	0	NU
C360	NU	47/4

TO SHEET 3

TO SHEET 2

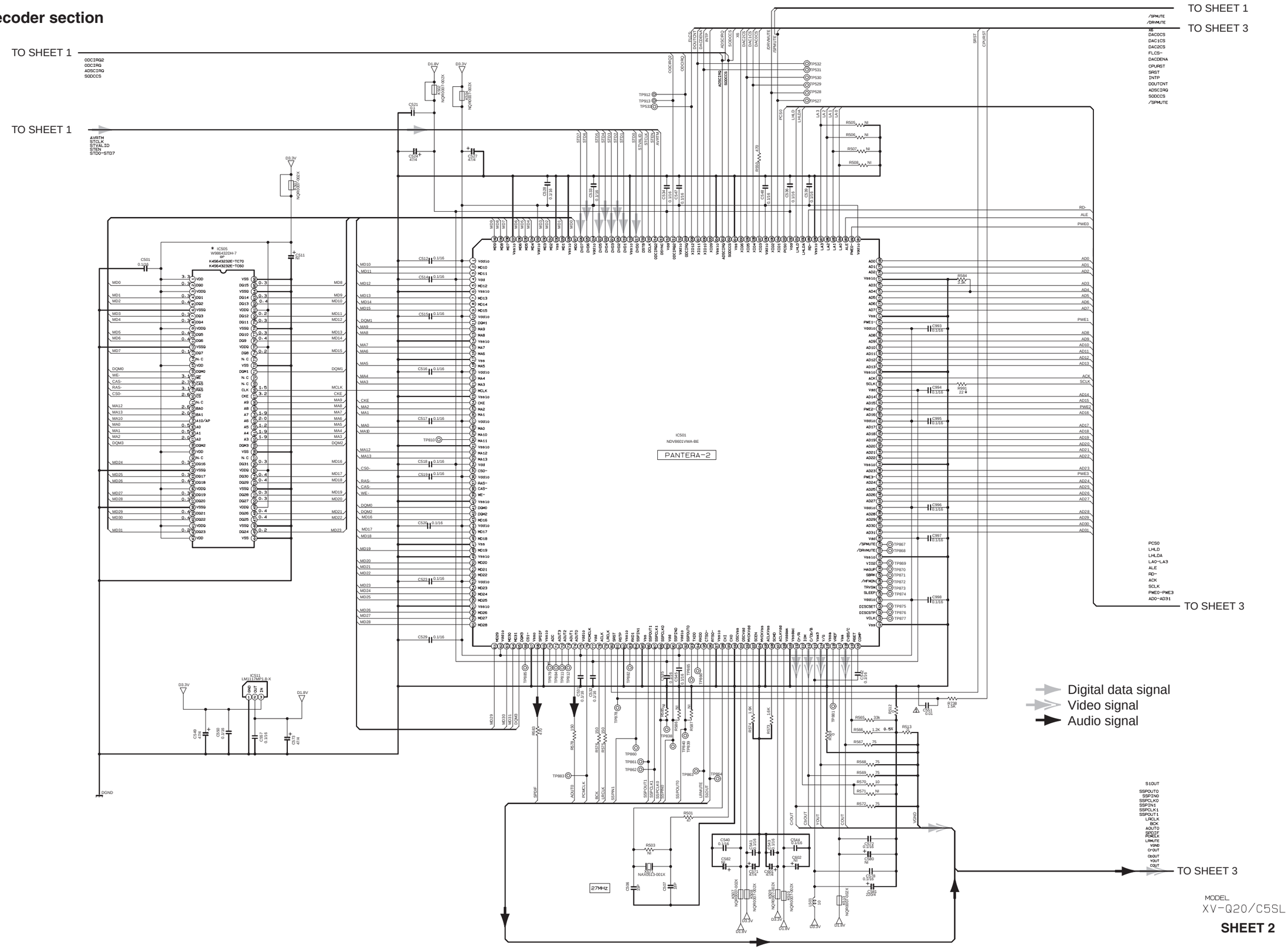
TO SHEET 3

TO SHEET 2

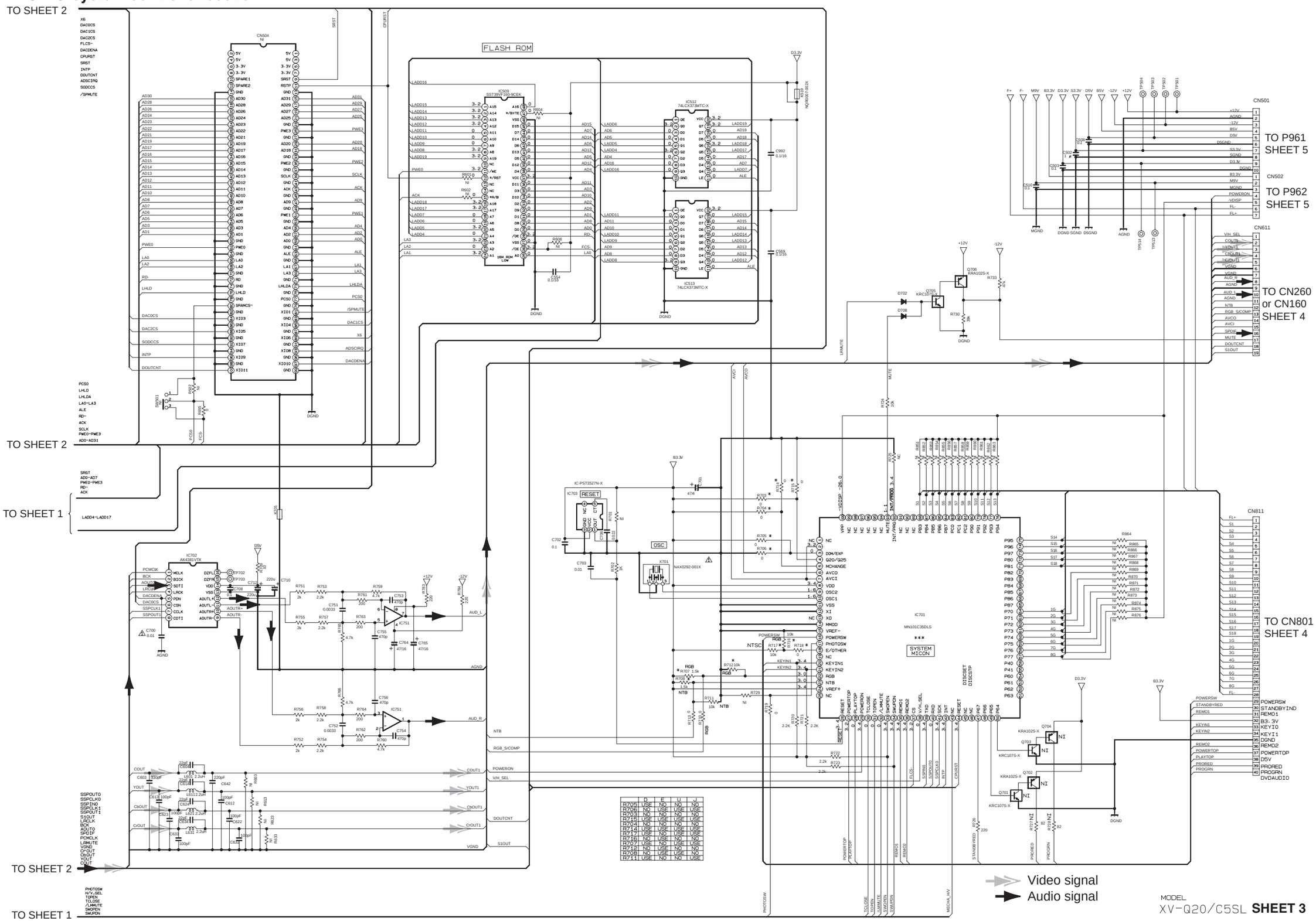
Digital data signal

MODEL XV-Q20/C5SL **SHEET 1**

■ AV Decoder section

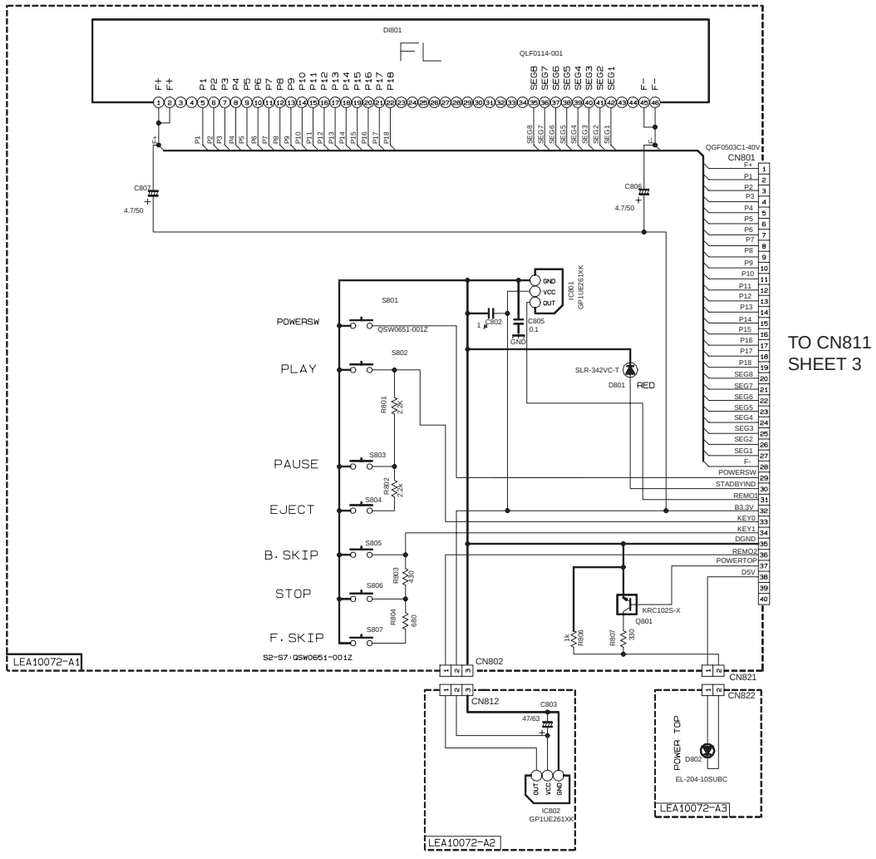


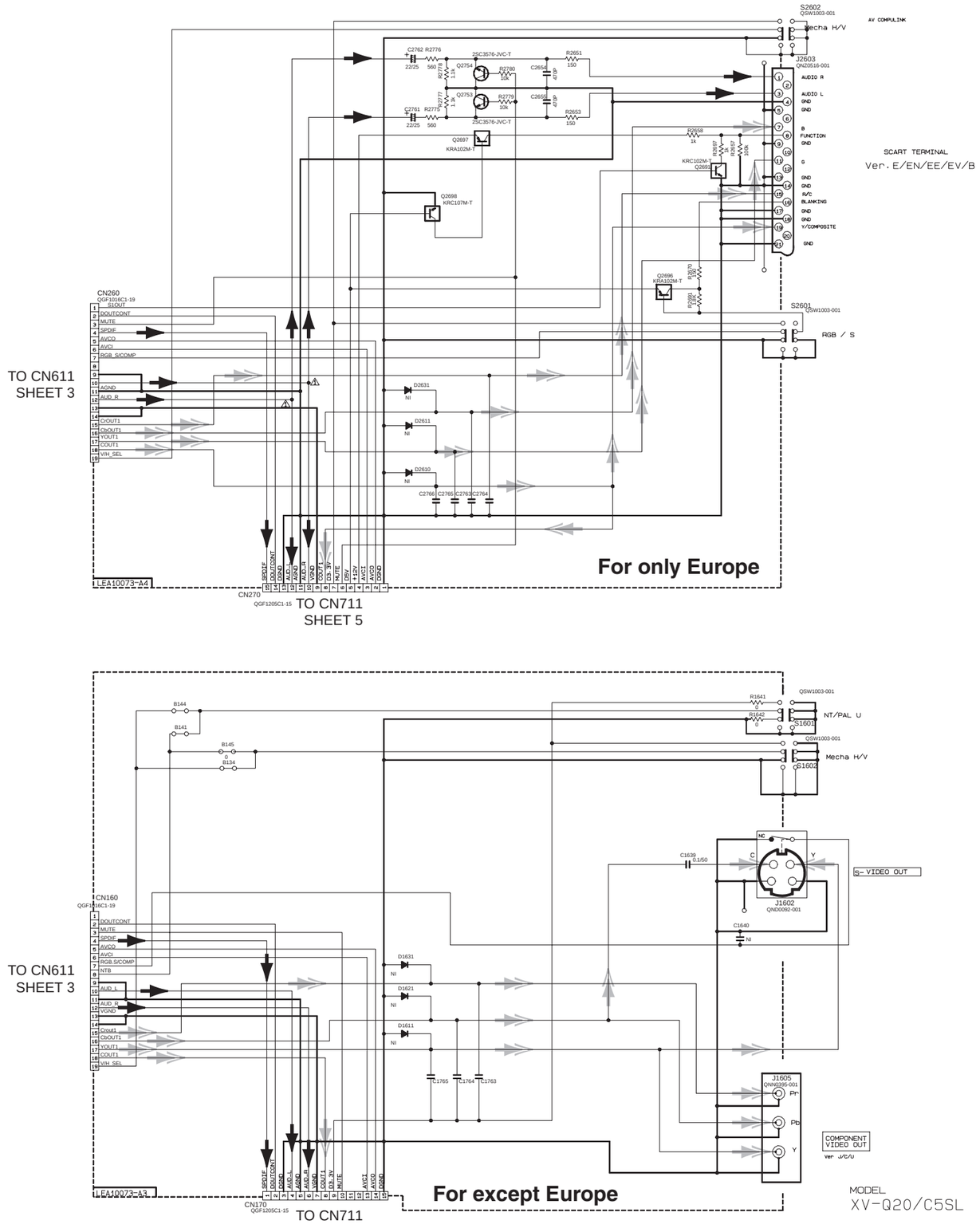
■ Flash ROM & system controller section



	D	M	U	J
R705	USE	NO	NO	NO
R706	NO	USE	USE	USE
R709	NO	NO	NO	NO
R715	USE	USE	USE	USE
R704	NO	NO	NO	NO
R714	USE	USE	USE	USE
R717	USE	NO	NO	NO
R716	NO	NO	NO	NO
R707	USE	NO	USE	USE
R712	NO	USE	NO	NO
R708	NO	USE	USE	USE
R711	USE	NO	NO	USE

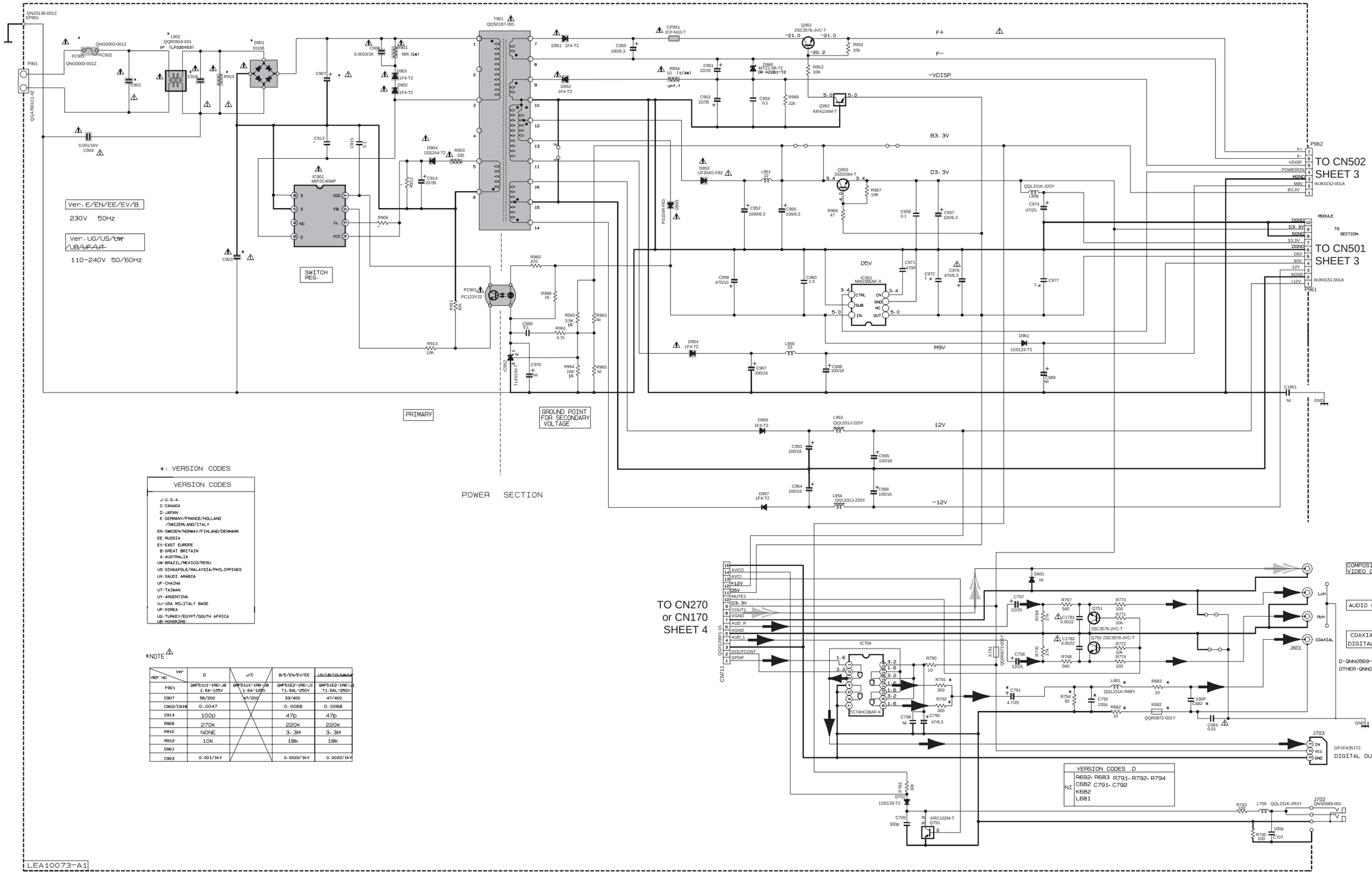
■ FL Display & video signal output section





SHEET 4

■ Power supply & audio output section



LEA10073-A1

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

Video signal
Audio signal

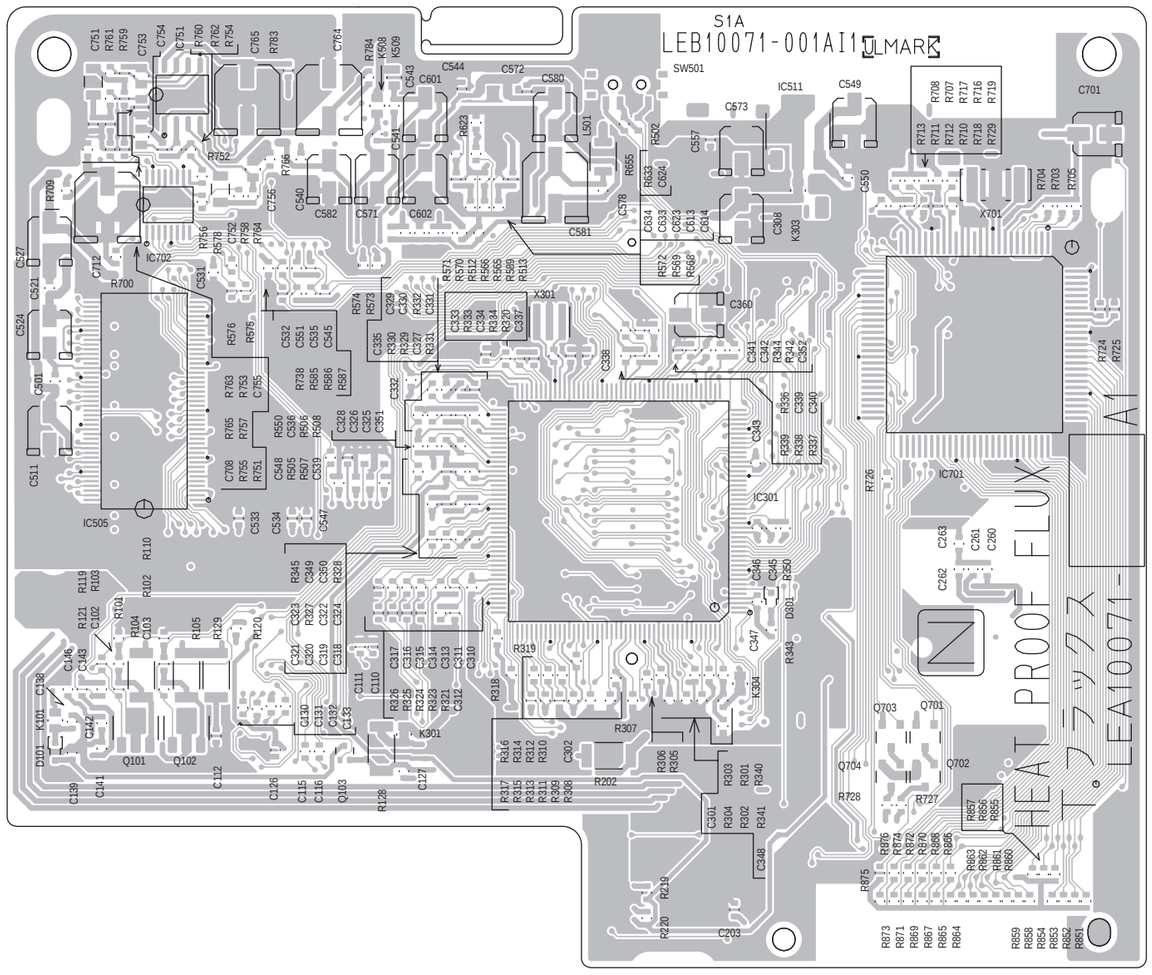
MODEL
XV-Q20/C5SL

SHEET 5

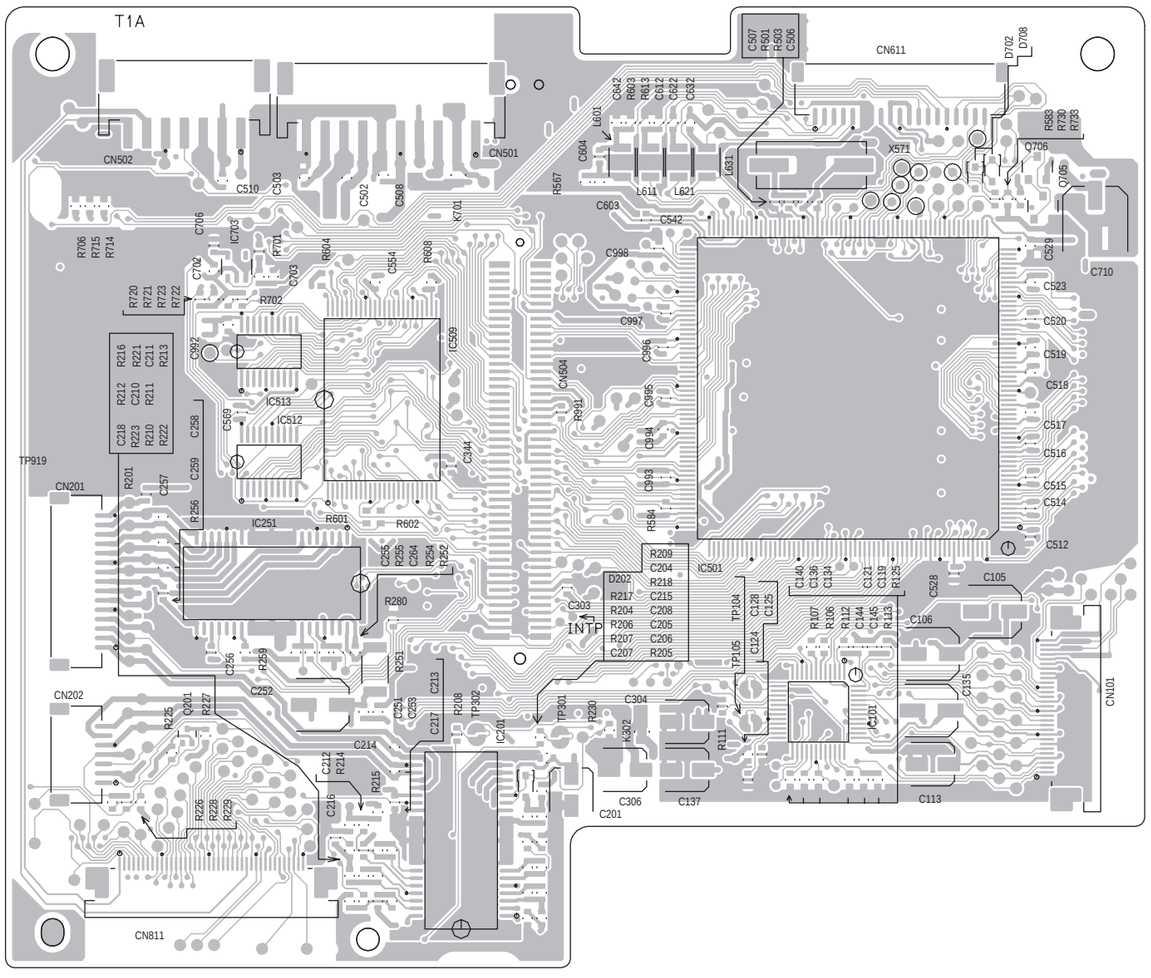
Printed circuit boards

■ Servo control board

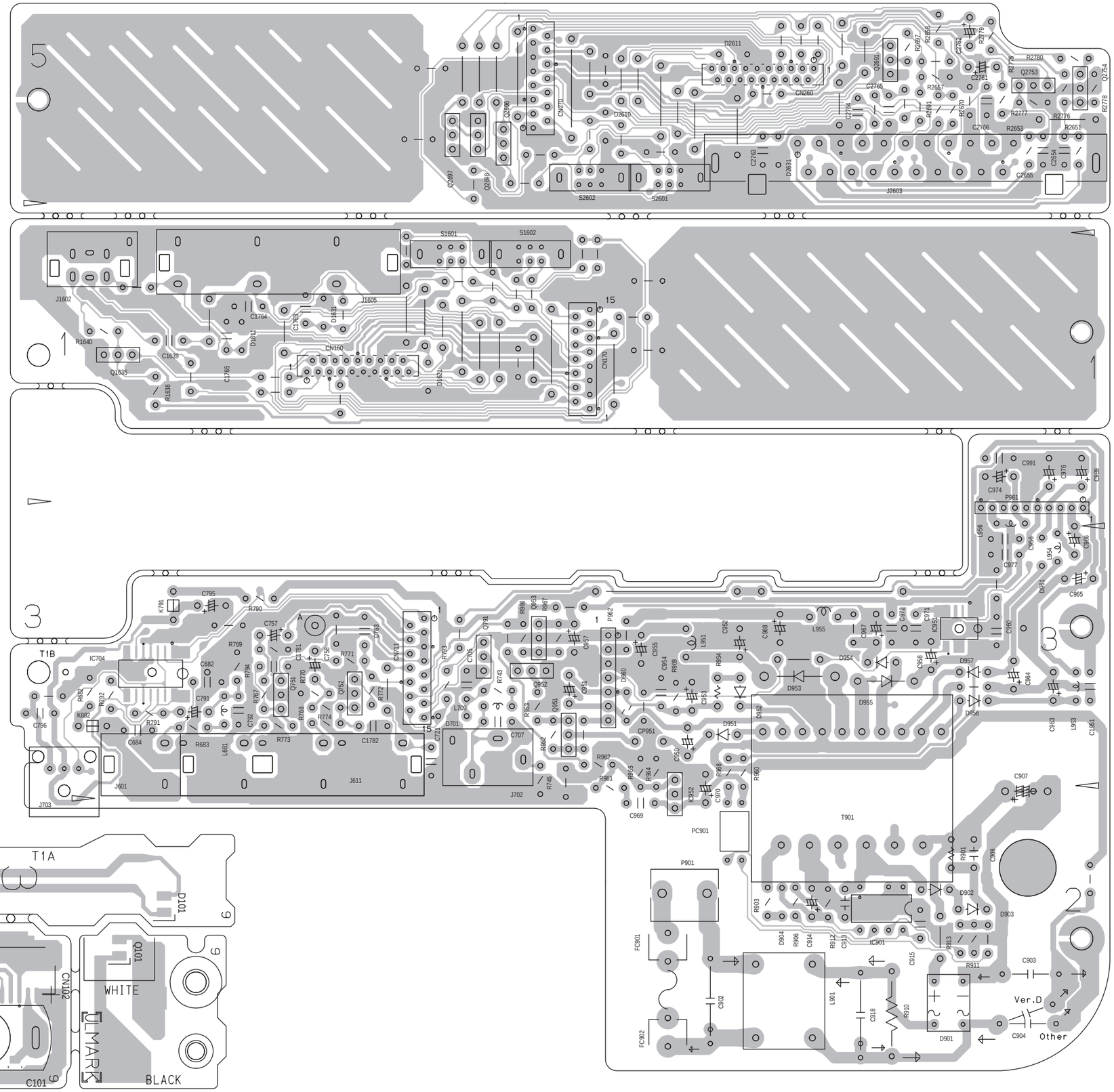
Forward side



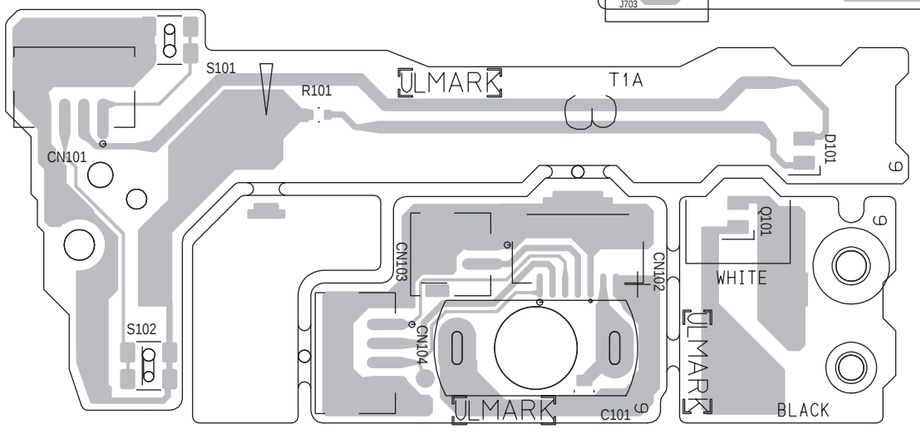
Reverse side



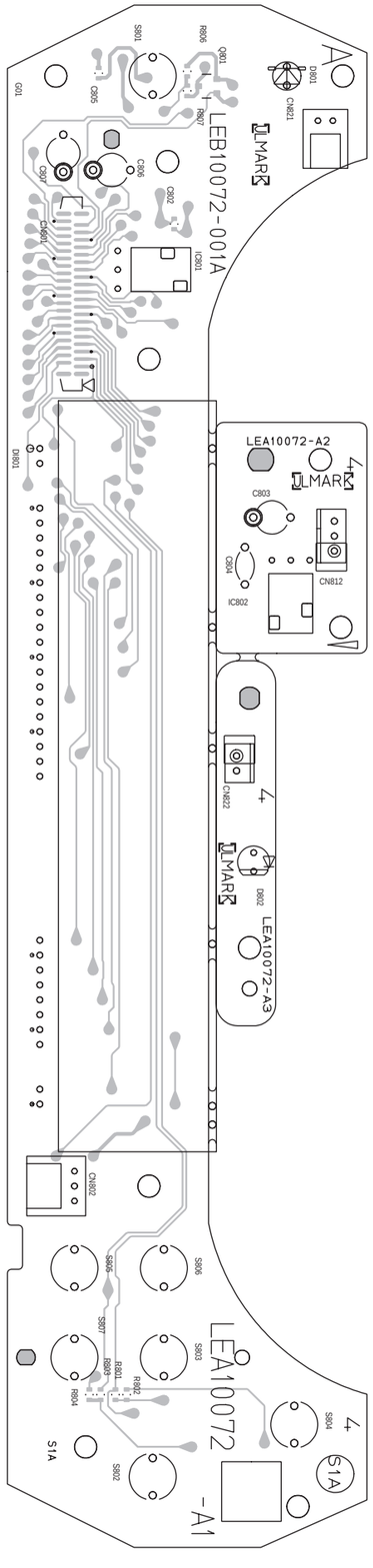
■ Power supply & AV signal output board



■ Loading mechanism board



■ FL Display board



<< MEMO >>

<< MEMO >>

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AV & MULTIMEDIA COMPANY OPTICAL DISC CATEGORY 1644, Shimotsuruma, Yamato, Kanagawa 242-8514, Japan

No.XA001SCH

Printed in japan
200305(V)

PARTS LIST

[XV-C5SL]

* All printed circuit boards and its assemblies are not available as service parts.
* (x_) in a description column shows the number of the used part.

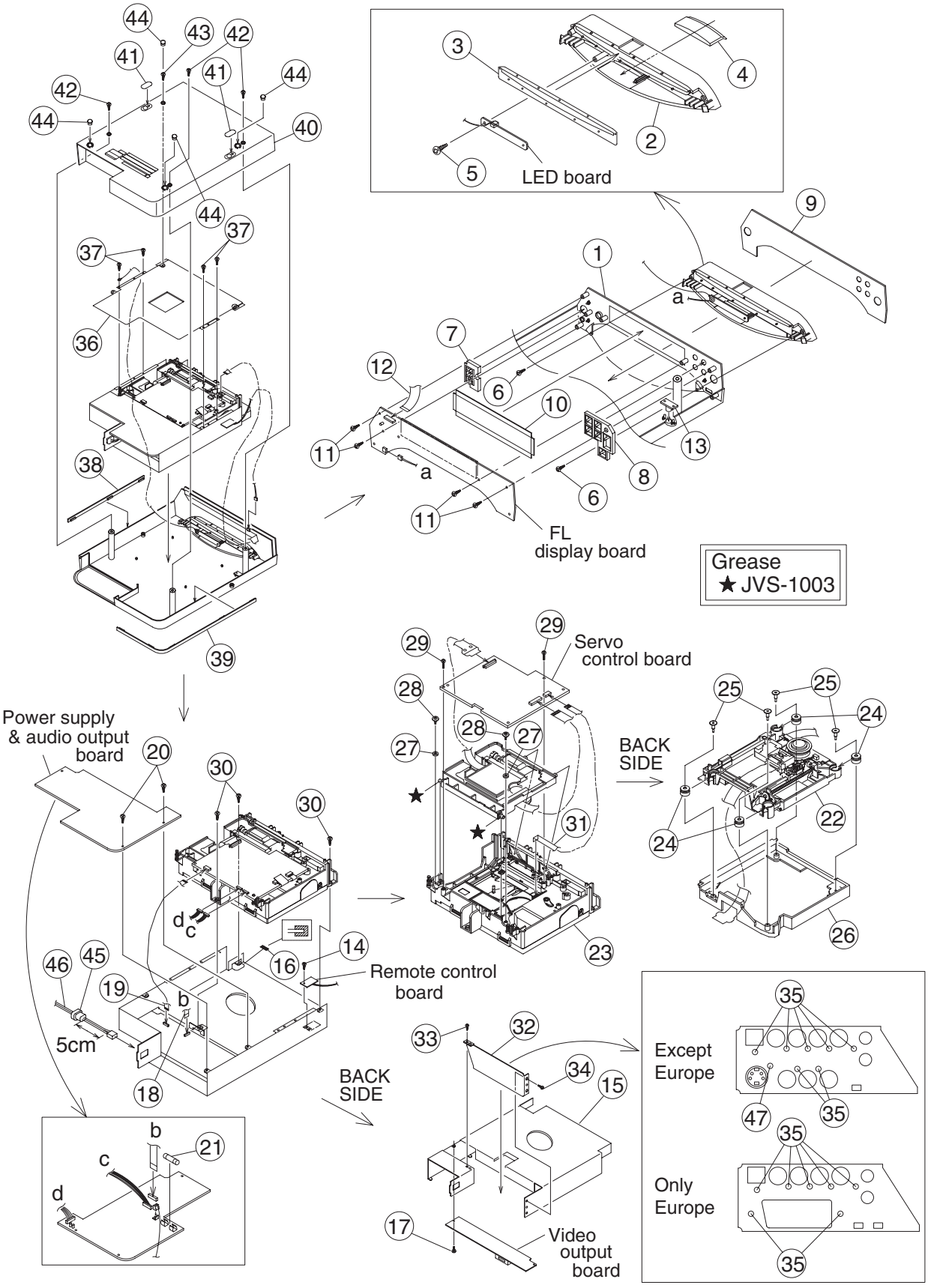
Area Suffix

B	U.K.
E	Continental Europe
EN	Northern Europe
EV	Eastern Europe
EE	Russian Federation
US	Singapore
UG	Turkey,South Africa,Egypt
UB	Hong Kong

- Contents -

Exploded view of general assembly and parts list

Block No.M1MM



General assembly

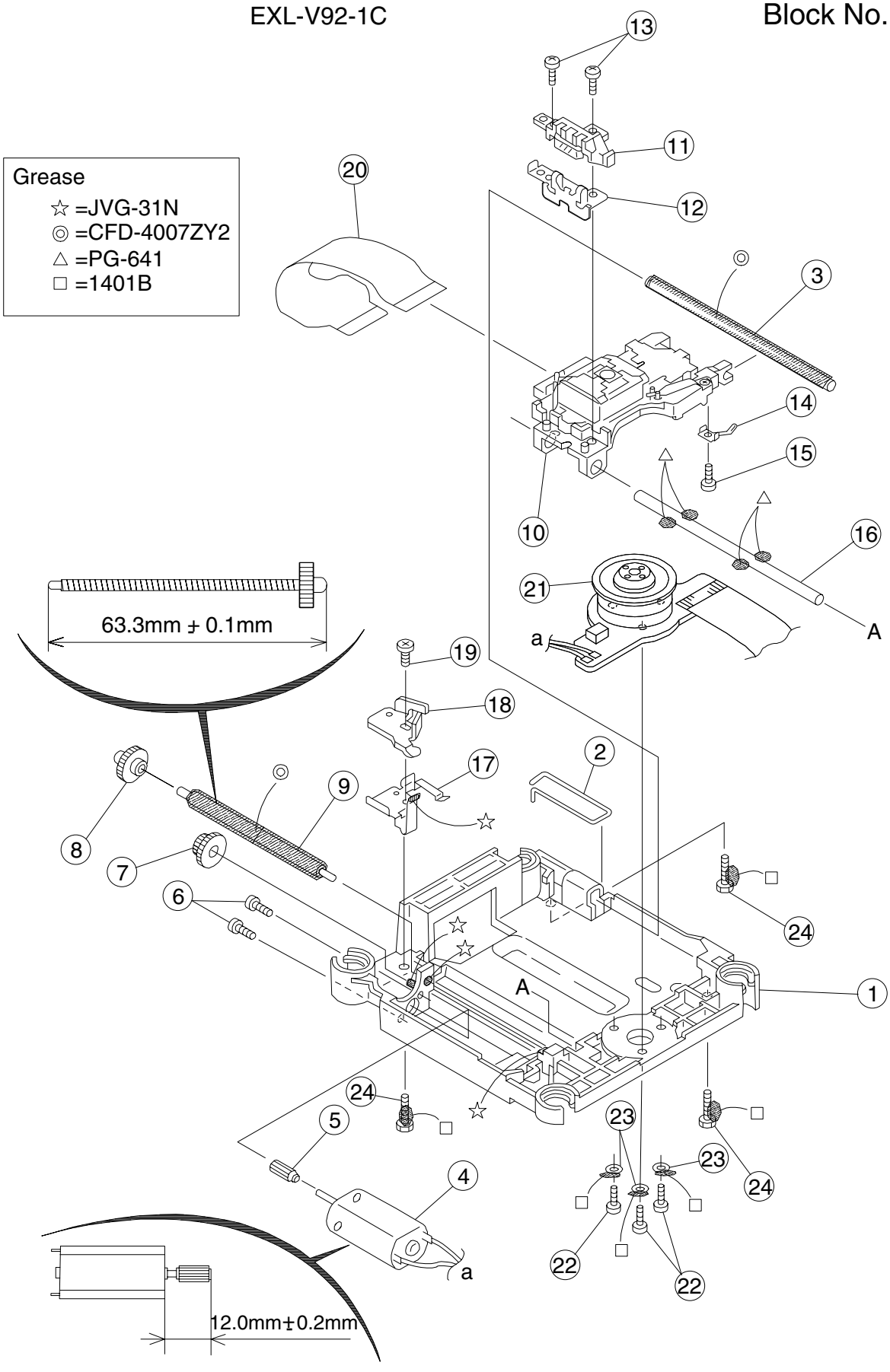
Block No. [M][1][M][M]

⚠ Symbol No.	Part No.	Part Name	Description	Local
1	LE10279-005A	CABINET(U)		B,E,EE,EN,EV
1	LE10279-006A	CABINET(U)		UB,UG,US
2	LE20683-002A	ORNAMENT		
3	LE31059-001A	SPACER ASSY		
4	LE31055-001A	INDICATOR		
5	QYSDSF2608Z	SCREW	LED CB	
6	QYSDSF2608Z	SCREW	ORNAMENT(x2)	
7	LE20701-002A	P.BUTTON ASSY	POWER	
8	LE20702-002A	P.BUTTON ASSY	PLAY	
9	LE20689-012A	WINDOW SCREEN		
10	LE40916-002A	FL SCREEN		
11	QYSDSF2608Z	SCREW	FRONT CB(x4)	
12	QUQ605-4018AF	FFC WIRE		
13	E408131-001	REMOTE LENS		
14	QYSBSG3008Z	TAPPING SCREW	REMOCON CB	
15	LE20690-002A	CHASSIS BASE		
16	LE30001-011A	SPACER		
17	QYSBSG3006E	TAPPING SCREW	TERMINL CB	
18	QUQ412-1510CJ	FFC WIRE		
19	QUQ110-1906AJ	FFC WIRE		
20	QYSBSG3008Z	TAPPING SCREW	POWER CB(x2)	
⚠ 21	QMF51E2-1R6-J1	FUSE	1.6A AC250V	
22	----------	DVD TRAVERSE MECHA		
23	----------	DVD LOADING MECHA		
24	LV43132-001A	INSULATOR	(x4)	
25	LE40860-001A	S. SCREW	(x4)	
26	LV21207-006A	DVD ELEVATOR		
27	VKZ4563-006	O-RING	(x2)	
28	GV40133-001A	SPECIAL SCREW	(x2)	
29	QYSBSF2006Z	SCREW	+LOADER(x2)	
30	QYSBSG3008Z	TAPPING SCREW	+CHASSIS(x3)	
31	QUQ110-0707BF	FFC WIRE		
32	LE31057-004A	REAR PLATE		B,E,EE,EN,EV
32	LE31057-005A	REAR PLATE		UB,UG,US
33	QYSBSGY3008N	SPECIAL SCREW	REAR PLATE	
34	QYSBST3004Z	SCREW	REAR PLATE	
35	QYSBSGY3008N	SPECIAL SCREW	REAR PLATE(x7)	
36	LE20691-002A	BOTTOM PLATE		
37	QYSBSG3008Z	TAPPING SCREW	BTTM PLATE(x4)	
38	LE20686-001A	FITTING(L)		
39	LE20688-001A	FITTING(R)		
40	LE10280-010A	CABINET(L)		EE
40	LE10280-009A	CABINET(L)		B,E,EN,EV
40	LE10280-014A	CABINET(L)		UG
40	LE10280-011A	CABINET(L)		UB,US
41	LE40925-001A	SHEET	(x2)	
42	QYSBSF3014N	SCREW	CABINET(x3)	
43	LE40938-001A	SPCIAL SCREW	CABINET	
44	LE40917-001A	FOOT	(x4)	
45	QZW0033-001	STRAIN RELIEF		
⚠ 46	QMPK190-200-JC	POWER CORD(EU)	2m BLACK	E,EE,EN,EV,UG,US
⚠ 46	QMPN160-200-JD	POWER CORD(EK)	2m BLACK	B,UB
47	QYSBSGY3008N	SPECIAL SCREW	S-VIDEO	UB,UG,US

DVD Traverse mechanism assembly and parts list

EXL-V92-1C

Block No.M2MM



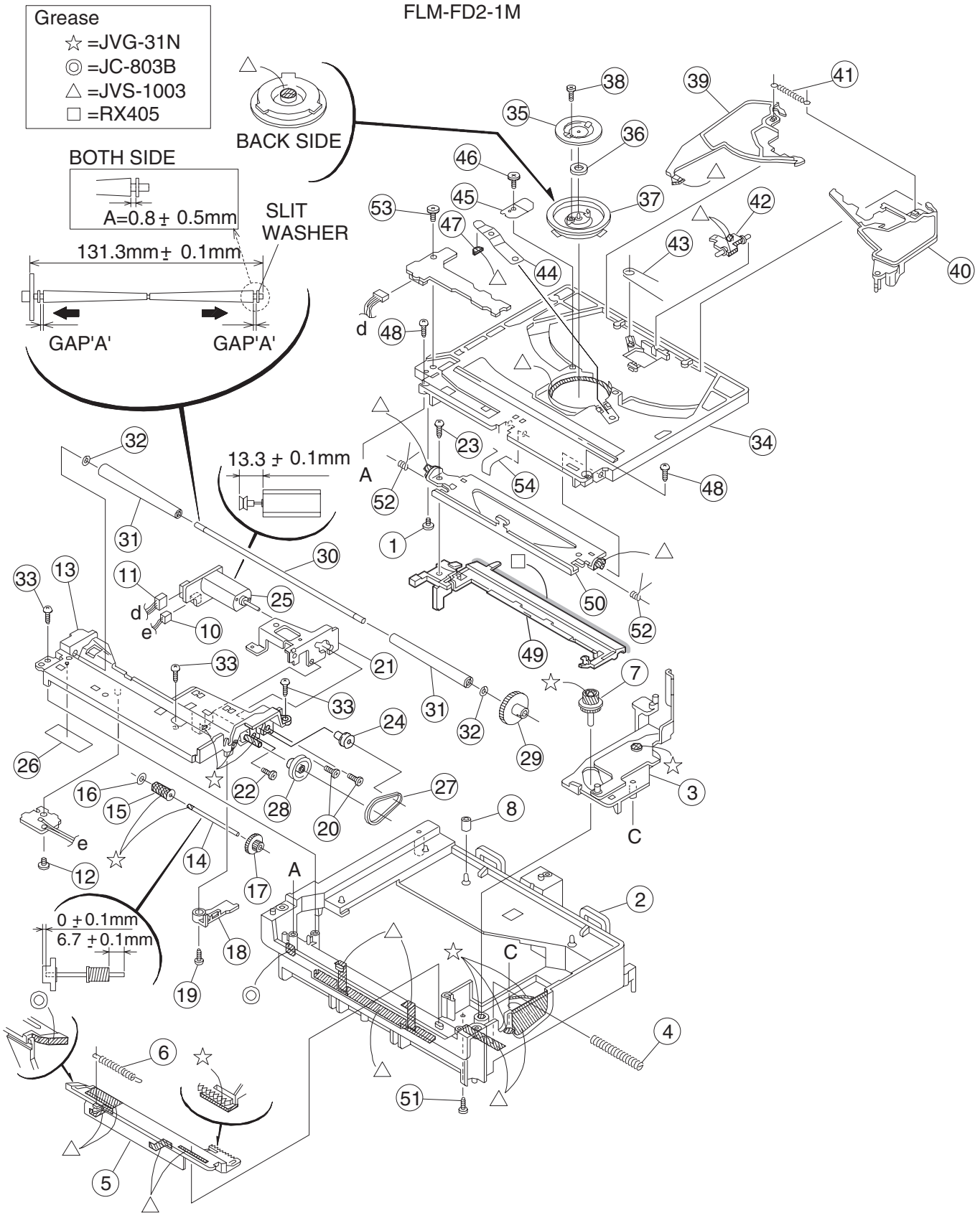
DVD Traverse mechanism

Block No. [M][2][M][M]

⚠ Symbol No.	Part No.	Part Name	Description	Local
1	LE10269-002A	MECHA BASE		
2	LE40857-001A	BAR SPRING		
3	LV41121-002A	SHAFT		
4	QAR0215-001	FEED MOTOR		
5	LV41510-001A	FEED GEAR T		
6	QYSPSPU2040M	SCREW	2mm x 4mm(x2)	
7	LE40854-002A	FEED GEAR M		
8	LE40855-001A	FEED GEAR E		
9	LE40918-001A	LEAD SCREW		
10	QAL0452-001	PICK UP		
11	LE20624-003A	SW ACTUATOR		
12	LE31011-001A	LEAD SPRING		
13	QYSPSFU1740Z	SCREW	1.7mm x 4mm(x2)	
14	LE31012-001A	P.U.SPRING		
15	QYSPSGU1430Z	SCREW	1.4mm x 3mm	
16	LV41121-002A	SHAFT		
17	LE31009-001A	T.SPRING		
18	LE31010-001A	BRACKET		
19	QYSDSF2005Z	SCREW	2mm x 5mm	
20	QAL0405-001	FPC		
21	QAR0273-001	SPINDLE MOTOR		
22	QYSPSPU1740Z	SCREW	1.7mm x 4mm(x3)	
23	QYWSS183803Z	WASHER	3.8mm x 3mm(x3)	
24	LE40858-002A	S.SCREW	(x3)	

DVD Loading mechanism assembly and parts list

Block No.M3MM



DVD Loading mechanism

Block No. [M][3][M][M]

⚠ Symbol No.	Part No.	Part Name	Description	Local
1	LV41741-002A	SPECIAL SCREW		
2	LV10647-006A	LOADING BASE		
3	LV33481-004A	KICK LEVER UNIT		
4	LV42819-002A	COMP.SPRING		
5	LV21204-003A	SLIDE CAM		
6	LV42977-001A	CAM SPRING		
7	LV33336-001A	UD GEAR		
8	LV43138-001A	DISC STOPPER		
10	WJM0294-002A	E-SI C WIRE C-F		
11	QJJ024-041504	SIN CR C-C WIRE		
12	LV43208-001A	SPECIAL SCREW		
13	LV33482-006A	R.HOLD ASS'Y		
14	LV42813-001A	WORM SHAFT		
15	LV42812-002A	WORM GEAR		
16	WFM214050	WASHER		
17	LV33335-002A	CONNECT GEAR		
18	LV33635-001A	SHAFT SUPPORTER		
19	QYSBSF2006Z	SCREW	2mm x 6mm	
20	QYSPSPU2045M	SCREW	2mm x 4.5mm(x2)	
21	LV33676-002A	ASSIST BRACKET		
22	QYSDST2005Z	SCREW	2mm x 5mm	
23	QYSBSF2006Z	SCREW	2mm x 6mm	
24	LV42811-001A	MOTOR PULLEY		
25	QAR0219-001	LOADING MOTOR		
26	VYSA1R4-056	SPACER		
27	LV42833-001A	BELT		
28	LV33334-001A	PULLEY GEAR		
29	LV42814-001A	ROLLER GEAR		
30	LV42815-002A	ROLLER SHAFT		
31	LV42816-001A	ROLLER	(x2)	
32	QYWDL265019	SLIT WASHER	6.5mm x 1mm(x2)	
33	QYSBSF2006Z	SCREW	2mm x 6mm(x3)	
34	LV10649-007A	CLAMPER BASE		
35	LV33344-001A	YOKE		
36	LV42930-003A	MAGNET		
37	LV33346-003A	DVD CLAMPER		
38	QYSPSGT1730M	MINI SCREW	1.7mm x 3mm	
39	LV33339-002A	SELECT LEVER L		
40	LV33340-002A	SELECT LEVER R		
41	LV42820-003A	TENSION SPRING		
42	LV42821-004A	SD STOPPER		
43	LV42822-002A	TOPSION SPRING		
44	LV33342-002A	CLAMPER SPRING		
45	LV42991-001A	STOPPER		
46	LV41741-002A	SPECIAL SCREW		
47	LV43038-001A	PAD		
48	QYSBSF2006Z	SCREW	2mm x 6mm(x2)	
49	LV10783-002A	PRESSURE PLATE		
50	LV42872-004A	PLATE ASS'Y		
51	QYSBSF2006Z	SCREW	2mm x 6mm	
52	LV42971-001A	TORSION SPRING	(x2)	
53	LV41741-002A	SPECIAL SCREW		
54	LV42965-001A	ROD SPRING		

Electrical parts list

Servo control & system control board

Block No. [0][1]

⚠ Symbol No.	Part No.	Part Name	Description	Local
IC101	AN8708FHK	IC		
IC201	BA5983FM-X	IC		
IC251	BA6664FM-X	IC		
IC301	MN103S26EGB-H	IC		
IC301 or	MN103S26EDC-H	IC		
IC501	JCE8044	IC		
IC501 or	JCE8045	IC		
IC501 or	NDV8602VWA	C CAPACITOR	#NCVpF 2	
IC501 or	NDV8601VWA-BE	C CAPACITOR	#NCVpF 1	
IC505	HY57V643220CT-5	IC		B,E,UG
IC505	K4S643232E-TC60	IC		
IC505 or	K4S643232E-TC70	IC		
IC505 or	W986432DH-7	IC		B,E,EV,UB,UG,US
IC505 or	HY57V643220CT-5	IC		EE,EN,UB,US
IC509	SST39VF160H05A1	IC		B,E,EN,EV
IC509	SST39VF160H05B1	IC		EE
IC509	*Part number will be described in MCI			US,UG,UB
IC511	LM1117MP1.8-X	IC		
IC512	74LVC373APW-X	IC(DIGITAL)		
IC513	74LVC373APW-X	IC(DIGITAL)		
IC701	MN101C35DLS	IC		
IC702	AK4381VT-X	IC		
IC703	IC-PST3527N-X	IC		
IC751	HA17558F-X	IC		
Q101	KTA1001/Y/-X	TRANSISTOR		
Q102	KTA1001/Y/-X	TRANSISTOR		
Q103	DTA144EE-X	DIGI TRANSISTOR		
Q705	KRC107S-X	DIGI TRANSISTOR		
Q706	KRA102S-X	DIGI TRANSISTOR		
D101	RB521S-30-X	SB DIODE		
D202	1SS355-X	SI DIODE		
D301	RB521S-30-X	SB DIODE		
D702	1SS355-X	SI DIODE		
D708	1SS355-X	SI DIODE		
C105	NEA70JM-476X	E CAPACITOR	47uF 6.3V M	
C106	NEA70JM-476X	E CAPACITOR	47uF 6.3V M	
C110	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C111	NCB31CK-472X	C CAPACITOR	4700pF 16V K	
C112	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C115	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C116	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C119	NCB31HK-561X	C CAPACITOR	560pF 50V K	
C121	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C124	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C125	NCB31HK-391X	C CAPACITOR	390pF 50V K	
C126	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C127	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C128	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C130	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C131	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C132	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C133	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C134	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	
C135	NEA70JM-476X	E CAPACITOR	47uF 6.3V M	
C136	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C137	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C138	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C140	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C141	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C142	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C143	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C146	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C204	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C205	NCS31HJ-121X	C CAPACITOR	120pF 50V J	
C207	NCB31HK-391X	C CAPACITOR	390pF 50V K	
C208	NCB31HK-391X	C CAPACITOR	390pF 50V K	
C211	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
C212	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C215	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C216	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C217	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C218	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C251	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C253	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C255	NCB31CK-153X	C CAPACITOR	0.015uF 16V K	
C256	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C257	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C258	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C259	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C260	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C261	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C262	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C263	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C264	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C301	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C302	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C303	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C304	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C306	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C308	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C310	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C311	NCB31HK-561X	C CAPACITOR	560pF 50V K	
C312	NCB31HK-561X	C CAPACITOR	560pF 50V K	
C313	NCB31HK-561X	C CAPACITOR	560pF 50V K	
C314	NCB31HK-331X	C CAPACITOR	330pF 50V K	
C315	NCB31HK-471X	C CAPACITOR	470pF 50V K	
C316	NCB31HK-271X	C CAPACITOR	270pF 50V K	
C317	NCS31HJ-121X	C CAPACITOR	120pF 50V J	
C318	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C319	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C320	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C321	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C322	NCB31HK-562X	C CAPACITOR	5600pF 50V K	
C323	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C324	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C325	NCS31HJ-470X	C CAPACITOR	47pF 50V J	
C326	NCB31CK-183X	C CAPACITOR	0.018uF 16V K	
C327	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C328	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C329	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C330	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C331	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C332	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C333	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C334	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C335	NCB31HK-681X	C CAPACITOR	680pF 50V K	
C337	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C338	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C339	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C340	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C341	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C343	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C345	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C346	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C347	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C348	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C349	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C350	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C352	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C360	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C501	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C502	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C503	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C506	NCS31HJ-150X	C CAPACITOR	15pF 50V J	
C507	NCS31HJ-180X	C CAPACITOR	18pF 50V J	
C508	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C510	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C512	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C514	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C515	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C516	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C517	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C518	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C519	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C520	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C521	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C523	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C524	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C527	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C528	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C529	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C531	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C532	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C533	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C534	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C535	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C536	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C539	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C540	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C541	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C542	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C543	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C544	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C545	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C547	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C548	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C549	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C550	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C551	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C554	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C557	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C569	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C571	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C572	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C573	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C578	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C581	NEA70GM-227X	E CAPACITOR	220uF 4V M	
C601	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C603	NCS31HJ-331X	C CAPACITOR	330pF 50V J	
C604	NCS31HJ-220X	C CAPACITOR	22pF 50V J	
C612	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C613	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C614	NCS31HJ-220X	C CAPACITOR	22pF 50V J	
C622	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C623	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C624	NCS31HJ-220X	C CAPACITOR	22pF 50V J	
C632	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C633	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C634	NCS31HJ-220X	C CAPACITOR	22pF 50V J	
C642	NCS31HJ-221X	C CAPACITOR	220pF 50V J	
C700	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C701	NEA70GM-476X	E CAPACITOR	47uF 4V M	
C702	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C703	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C706	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C708	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C710	NEA70JM-227X	E CAPACITOR	220uF 6.3V M	
C712	NEA70JM-227X	E CAPACITOR	220uF 6.3V M	
C751	NFV41HJ-332X	M.CAPA.C.M	3300pF 50V J	
C752	NFV41HJ-332X	M.CAPA.C.M	3300pF 50V J	
C753	NFV41HJ-471X	M.CAPA. I.M	470pF 50V J	
C754	NFV41HJ-471X	M.CAPA. I.M	470pF 50V J	
C755	NFV41HJ-471X	M.CAPA. I.M	470pF 50V J	
C756	NFV41HJ-471X	M.CAPA. I.M	470pF 50V J	
C764	NEA71CM-476X	E CAPACITOR	47uF 16V M	
C765	NEA71CM-476X	E CAPACITOR	47uF 16V M	
C992	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C993	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C994	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C995	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C996	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C997	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C998	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R101	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R102	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R103	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R104	NRS125J-270X	MG RESISTOR	27Ω 1/2W J	
R105	NRS125J-270X	MG RESISTOR	27Ω 1/2W J	
R106	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R107	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R110	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R111	NRVA63D-123X	CMF RESISTOR	12kΩ 1/16W D	
R112	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R113	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R119	NRSA63J-2R2X	MG RESISTOR	2.2Ω 1/16W J	
R120	NRSA63J-2R2X	MG RESISTOR	2.2Ω 1/16W J	
R121	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R125	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R128	NRS125J-1R0X	MG RESISTOR	1Ω 1/2W J	
R129	NRS125J-1R0X	MG RESISTOR	1Ω 1/2W J	
R201	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R202	NRS125J-1R0X	MG RESISTOR	1Ω 1/2W J	
R204	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R205	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R206	NRSA63J-303X	MG RESISTOR	30kΩ 1/16W J	
R207	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R208	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R209	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R210	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R211	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R212	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R213	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R214	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R215	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R216	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J	
R217	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R218	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R219	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R220	NRSA63J-243X	MG RESISTOR	24kΩ 1/16W J	
R221	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R222	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R223	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J	
R228	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R229	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R230	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R251	NRS125J-R47X	MG RESISTOR	0.47Ω 1/2W J	
R252	NRSA63J-2R2X	MG RESISTOR	2.2Ω 1/16W J	
R254	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J	
R255	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R256	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R259	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R280	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R301	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R302	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R303	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R304	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R305	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R306	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R307	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R308	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R309	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R313	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R317	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R320	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R321	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R323	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R324	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R325	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R326	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R327	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R328	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R329	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R330	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R331	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R332	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R333	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R334	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R336	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R337	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R338	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R339	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R340	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R341	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R342	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R343	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R344	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R345	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R501	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R512	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R513	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R550	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R565	NRVA63D-333X	CMF RESISTOR	33kΩ 1/16W D	
R566	NRVA63D-122X	CMF RESISTOR	1.2kΩ 1/16W D	
R567	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R568	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R569	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R570	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R572	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R573	NRSA63J-162X	MG RESISTOR	1.6kΩ 1/16W J	
R574	NRSA63J-162X	MG RESISTOR	1.6kΩ 1/16W J	
R575	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
R576	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
R578	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
R583	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R584	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R589	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R655	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R702	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R706	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R707	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	UB,UG,US
R708	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R709	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R710	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R712	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	B,E,EE,EN,EV
R713	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R714	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R715	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R716	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	B,E,EE,EN,EV
R717	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	UB,UG,US
R718	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R719	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R720	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R721	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R722	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R723	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R724	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R726	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R730	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
R733	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R738	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R751	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R752	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R753	NRVA63D-222X	CMF RESISTOR	2.2kΩ 1/16W D	
R754	NRVA63D-222X	CMF RESISTOR	2.2kΩ 1/16W D	
R755	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R756	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R757	NRVA63D-222X	CMF RESISTOR	2.2kΩ 1/16W D	
R758	NRVA63D-222X	CMF RESISTOR	2.2kΩ 1/16W D	
R759	NRVA63D-472X	CMF RESISTOR	4.7kΩ 1/16W D	
R760	NRVA63D-472X	CMF RESISTOR	4.7kΩ 1/16W D	
R761	NRVA63D-201X	CMF RESISTOR	200Ω 1/16W D	
R762	NRVA63D-201X	CMF RESISTOR	200Ω 1/16W D	
R763	NRVA63D-201X	CMF RESISTOR	200Ω 1/16W D	
R764	NRVA63D-201X	CMF RESISTOR	200Ω 1/16W D	
R765	NRVA63D-472X	CMF RESISTOR	4.7kΩ 1/16W D	
R766	NRVA63D-472X	CMF RESISTOR	4.7kΩ 1/16W D	
R783	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R784	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R991	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
L501	NQL044K-100X	COIL	10uH K	
L601	NQL024J-2R2X	COIL	2.2uH J	
L611	NQL024J-2R2X	COIL	2.2uH J	
L621	NQL024J-2R2X	COIL	2.2uH J	
L631	NQL024J-2R2X	COIL	2.2uH J	
CN101	QGF0523F1-30W	CONNECTOR	FFC/FPC (1-30)	
CN201	QGF1016F2-15W	CONNECTOR	FFC/FPC (1-15)	
CN202	QGF1016F2-07W	CONNECTOR	FFC/FPC (1-7)	
CN501	QGA2001F2-10X	CONNECTOR	W-B (1-10)	
CN502	QGA2001F2-07X	CONNECTOR	W-B (1-7)	
CN611	QGF1016F2-19W	CONNECTOR	FFC/FPC (1-19)	
CN811	QGF0522F1-40W	CONNECTOR	FFC/FPC (1-40)	
K101	NQR0007-002X	FERRITE BEADS		
K508	NQR0007-002X	FERRITE BEADS		
K509	NQR0007-002X	FERRITE BEADS		
X301	NAX0542-001X	C RESONATOR	16.93MHz	
X571	NAX0550-001X	CRYSTAL	27.000MHz	
X701	NAX0292-001X	C OSCILLATOR		

FL Display board

Block No. [0][2]

⚠ Symbol No.	Part No.	Part Name	Description	Local
IC801	GP1UE261XK	RM RECIVER		
IC802	GP1UE261XK	RM RECIVER		
Q801	KRC102S-X	DIGI TRANSISTOR		
D801	SLR-342VC-T	LED		
D802	204-10SUBC/A4UV	LED		
C802	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C803	QEKC0JM-476Z	E CAPACITOR	47uF 6.3V M	
C805	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C806	QEKC1HM-475Z	E CAPACITOR	4.7uF 50V M	
C807	QEKC1HM-475Z	E CAPACITOR	4.7uF 50V M	
R801	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R802	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R803	NRSA63J-431X	MG RESISTOR	430Ω 1/16W J	
R804	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R806	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R807	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
CN801	QGF0503C1-40V	CONNECTOR	FFC/FPC (1-40)	
CN802	QGA2001F1-03	CONNECTOR	W-B (1-3)	
CN812	QJK003-031203	SIN CR C-B WIRE		
CN821	QGA2001F1-02	CONNECTOR	W-B (1-2)	
CN822	QJK003-020902	SIN CR C-B WIRE		
DI801	QLF0114-001	FL TUBE		
S801	QSW0651-001Z	TACT SWITCH		
S802	QSW0651-001Z	TACT SWITCH		
S803	QSW0651-001Z	TACT SWITCH		
S804	QSW0651-001Z	TACT SWITCH		
S805	QSW0651-001Z	TACT SWITCH		
S806	QSW0651-001Z	TACT SWITCH		
S807	QSW0651-001Z	TACT SWITCH		
OT1	PU59915-105	SPACER		

Power supply & audio/video signal output board

Block No. [0][3]

⚠	Symbol No.	Part No.	Part Name	Description	Local
	IC704	TC74HC08AF-X	IC		
⚠	IC901	MIP2C40MP	IC		B,E,EE,EN,EV
⚠	IC901	MIP2C50MP	IC		UB,UG,US
	IC951	MM1565AF-X	IC	5.0V Regulator	
	IC952	TL431/A/-T	IC		
	Q751	2SC3576-JVC-T	TRANSISTOR		
	Q752	2SC3576-JVC-T	TRANSISTOR		
	Q791	KRC102M-T	DIGI TRANSISTOR		
	Q791 or	DTC114ESA-T	DIGITAL.TR TAPE		
	Q951	2SC3576-JVC-T	TRANSISTOR		
	Q952	KRA104M-T	DIGI TRANSISTOR		
	Q952 or	DTA144ESA-T	DIGITAL.TR TAPE		
	Q953	2SD2264/R/-T	TRANSISTOR		
	Q1635	KRC102M-T	DIGI TRANSISTOR		UB,UG,US
	Q1635 or	DTC114ESA-T	DIGITAL.TR TAPE		UB,UG,US
	Q2691	KRC102M-T	DIGI TRANSISTOR		B,E,EE,EN,EV
	Q2691 or	DTC114ESA-T	DIGITAL.TR TAPE		B,E,EE,EN,EV
	Q2696	KRA102M-T	DIGI TRANSISTOR		B,E,EE,EN,EV
	Q2696 or	DTC114ESA-T	DIGITAL.TR TAPE		B,E,EE,EN,EV
	Q2697	KRA102M-T	DIGI TRANSISTOR		B,E,EE,EN,EV
	Q2698	KRC107M-T	TRANSISTOR		B,E,EE,EN,EV
	Q2753	2SC3576-JVC-T	TRANSISTOR		B,E,EE,EN,EV
	Q2754	2SC3576-JVC-T	TRANSISTOR		B,E,EE,EN,EV
	D701	1SS133-T2	SI DIODE		
⚠	D901	DI106	BRIDGE DIODE		
⚠	D902	1F4-T2	FR DIODE		
⚠	D903	1F4-T2	FR DIODE		
⚠	D904	1SS244-T2	SI DIODE		
⚠	D951	1F4-T2	FR DIODE		
⚠	D952	1F4-T2	FR DIODE		
⚠	D953	UF304G-F82	FR DIOAE		
⚠	D954	1F4-T2	FR DIODE		
⚠	D955	PS154R-F83	DIODE		
	D956	1F4-T2	FR DIODE		
	D957	1F4-T2	FR DIODE		
	D960	MTZJ2.0B-T2	Z DIODE		
	D961	1SS133-T2	SI DIODE		
⚠	PC901	PC123Y22	IC(PHOTO COUPLER)		
	C682	QCBB1HK-331Y	C CAPACITOR	330pF 50V K	
	C684	QCBB1HK-103Y	C CAPACITOR	0.01uF 50V K	
	C705	QCBB1HK-331Y	C CAPACITOR	330pF 50V K	
	C707	QCBB1HK-101Y	C CAPACITOR	100pF 50V K	
	C757	QETN1EM-226Z	E CAPACITOR	22uF 25V M	
	C758	QETN1EM-226Z	E CAPACITOR	22uF 25V M	
	C763	QCBB1HK-222Y	C CAPACITOR	2200pF 50V K	
	C791	QETN1EM-475Z	E CAPACITOR	4.7uF 25V M	
	C792	QCBB1HK-151Y	C CAPACITOR	150pF 50V K	
	C795	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
	C796	QCBB1HK-223Y	C CAPACITOR	0.022uF 50V K	
⚠	C902	QFZ9073-683	MM CAPACITOR	0.068uF AC250V M	
⚠	C903	QCZ9079-222	C CAPACITOR	2200pF AC250V M	
⚠	C904	QCZ9079-102	C CAPACITOR	1000pF AC250V M	
	C907	QETM2GM-336	E CAPACITOR	33uF 400V M	B,E,EE,EN,EV
	C907	QETM2GM-476	E CAPACITOR	47uF 400V M	UB,UG,US
⚠	C908	QCZ0136-332Z	C CAPACITOR	3300pF 1kV K	
	C913	QCZ0302-470Z	C CAPACITOR	47pF 1kV J	
	C914	QEZ0598-226Z	E CAPACITOR	22uF	
	C915	QCBB1HK-104Y	C CAPACITOR	0.1uF 50V K	
⚠	C918	QFZ9073-683	MM CAPACITOR	0.068uF AC250V M	
	C950	QEZ0592-107Z	E CAPACITOR	100uF	
	C951	QETN1EM-226Z	E CAPACITOR	22uF 25V M	
	C952	QEZ0592-108Z	E CAPACITOR	1000uF	
	C953	QETN1VM-226Z	E CAPACITOR	22uF 35V M	
	C954	QCBB1HK-104Y	C CAPACITOR	0.1uF 50V K	
	C955	QETN0JM-227Z	E CAPACITOR	220uF 6.3V M	
	C956	QCBB1HK-104Y	C CAPACITOR	0.1uF 50V K	
	C957	QETN0JM-227Z	E CAPACITOR	220uF 6.3V M	
	C958	QEZ0529-477Z	E CAPACITOR	470uF 10V M	
	C960	QCFB1HZ-105Y	C CAPACITOR	1uF 50V Z	
	C963	QEZ0594-107Z	E CAPACITOR	100uF	
	C964	QEZ0594-107Z	E CAPACITOR	100uF	
	C965	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
	C966	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
	C967	QEZ0594-337Z	E CAPACITOR	330uF	
	C969	QCFB1HZ-105Y	C CAPACITOR	1uF 50V Z	
	C971	QCBB1HK-471Y	C CAPACITOR	470pF 50V K	
	C972	QCFB1HZ-105Y	C CAPACITOR	1uF 50V Z	
	C974	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
	C976	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	
	C977	QCFB1HZ-105Y	C CAPACITOR	1uF 50V Z	
	C988	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
	C989	QETN1EM-226Z	E CAPACITOR	22uF 25V M	
	C1639	QCFB1HZ-104Y	C CAPACITOR	0.1uF 50V Z	UB,UG,US
	C1781	QFLC1HJ-222Z	M CAPACITOR	2200pF 50V J	
	C1782	QFLC1HJ-222Z	M CAPACITOR	2200pF 50V J	
	C2654	QCBB1HK-471Y	C CAPACITOR	470pF 50V K	B,E,EE,EN,EV
	C2655	QCBB1HK-471Y	C CAPACITOR	470pF 50V K	B,E,EE,EN,EV
	C2761	QETN1EM-226Z	E CAPACITOR	22uF 25V M	B,E,EE,EN,EV
	C2762	QETN1EM-226Z	E CAPACITOR	22uF 25V M	B,E,EE,EN,EV
	R682	QRE141J-100Y	C RESISTOR	10Ω 1/4W J	
	R683	QRE141J-100Y	C RESISTOR	10Ω 1/4W J	
	R743	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
	R745	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
	R767	QRE141J-561Y	C RESISTOR	560Ω 1/4W J	
	R768	QRE141J-561Y	C RESISTOR	560Ω 1/4W J	
	R769	QRE141J-273Y	C RESISTOR	27kΩ 1/4W J	
	R770	QRE141J-273Y	C RESISTOR	27kΩ 1/4W J	
	R771	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
	R772	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
	R773	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
	R774	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
	R790	QRE141J-100Y	C RESISTOR	10Ω 1/4W J	
	R791	QRE141J-301Y	C RESISTOR	300Ω 1/4W J	
	R792	QRE141J-301Y	C RESISTOR	300Ω 1/4W J	
	R793	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
	R794	QRE141J-820Y	C RESISTOR	82Ω 1/4W J	
⚠	R901	QRL01DJ-683X	OMF RESISTOR	68kΩ 1W J	
⚠	R903	QRE141J-221Y	C RESISTOR	220Ω 1/4W J	
	R906	QRE141J-224Y	C RESISTOR	220kΩ 1/4W J	
⚠	R910	QRZ9037-335	COMP RESISTOR	3.3MΩ 1/2W K	
	R911	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
	R912	QRE141J-183Y	C RESISTOR	18kΩ 1/4W J	
	R913	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
	R952	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
	R953	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
⚠	R954	QRZ9005-100X	F.RESISTOR I.M.	10Ω	
	R960	QRE141J-471Y	C RESISTOR	470Ω 1/4W J	
	R961	QRE141J-472Y	C RESISTOR	4.7kΩ 1/4W J	
	R962	QRA14CF-3901Y	CMF RESISTOR	3.9kΩ 1/4W F	
	R964	QRA14CF-1002Y	CMF RESISTOR	10kΩ 1/4W F	
	R966	QRE141J-470Y	C RESISTOR	47Ω 1/4W J	
	R967	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
	R968	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J	
	R969	QRE141J-223Y	C RESISTOR	22kΩ 1/4W J	
	R1638	QRE141J-472Y	C RESISTOR	4.7kΩ 1/4W J	UB,UG,US
	R1640	QRE141J-822Y	C RESISTOR	8.2kΩ 1/4W J	UB,UG,US
	R2651	QRE141J-151Y	C RESISTOR	150Ω 1/4W J	B,E,EE,EN,EV
	R2653	QRE141J-151Y	C RESISTOR	150Ω 1/4W J	B,E,EE,EN,EV
	R2657	QRE141J-104Y	C RESISTOR	100kΩ 1/4W J	B,E,EE,EN,EV
	R2658	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J	B,E,EE,EN,EV
	R2670	QRE141J-151Y	C RESISTOR	150Ω 1/4W J	B,E,EE,EN,EV
	R2691	QRE141J-182Y	C RESISTOR	1.8kΩ 1/4W J	B,E,EE,EN,EV
	R2697	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J	B,E,EE,EN,EV
	R2775	QRE141J-561Y	C RESISTOR	560Ω 1/4W J	B,E,EE,EN,EV
	R2776	QRE141J-561Y	C RESISTOR	560Ω 1/4W J	B,E,EE,EN,EV
	R2777	QRE141J-112Y	C RESISTOR	1.1kΩ 1/4W J	B,E,EE,EN,EV
	R2778	QRE141J-112Y	C RESISTOR	1.1kΩ 1/4W J	B,E,EE,EN,EV
	R2779	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	B,E,EE,EN,EV
	R2780	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	B,E,EE,EN,EV
	L681	QQL231K-R68Y	COIL	0.68uH K	
	L709	QQL231K-2R2Y	UCTOR I.M	2.2uH K	
⚠	L901	QQR0816-001	LINE FILTER		

⚠ Symbol No.	Part No.	Part Name	Description	Local
L951	QQR1291-001Z	CHOKE COIL		
L953	QQL531J-220Y	COIL	22uH J	
L954	QQL531J-220Y	COIL	22uH J	
L955	QQR1291-001Z	CHOKE COIL		
L956	QQL231K-220Y	COIL	22uH K	
⚠ T901	QQS0197-001	SW TRANSF		
CN160	QGF1016C1-19	CONNECTOR	FFC/FPC (1-19)	UB,UG,US
CN170	QGF1205C1-15	CONNECTOR	FFC/FPC (1-15)	UB,UG,US
CN260	QGF1016C1-19	CONNECTOR	FFC/FPC (1-19)	B,E,EE,EN,EV
CN270	QGF1205C1-15	CONNECTOR	FFC/FPC (1-15)	B,E,EE,EN,EV
CN711	QGF1205C1-15	CONNECTOR	FFC/FPC (1-15)	
⚠ CP951	ICP-N10-T	IC PROTECTOR	400mA	
FC901	QNG0003-001Z	FUSE CLIP		
FC902	QNG0003-001Z	FUSE CLIP		
J601	QNN0568-001	JACK		
J702	QNS0219-001	3.5 JACK		
J703	GP1FA351TZ	OPT TRANSMITTER		
J1602	QND0092-001	S JACK		UB,UG,US
J1605	QNN0430-001	PIN JACK		UB,UG,US
J2603	QNZ0516-001	RGB CONNECTOR		B,E,EE,EN,EV
K682	QQR1183-001Z	FERRITE BEADS		
K791	QQR1183-001Z	FERRITE BEADS		
P901	QGA7901C1-02	CONNECTOR	W-B (1-2)	
P961	QJK021-101000	E-SI C WIRE C-B		
P962	WJK0152-002A	E-SI C WIRE C-B		
S1601	QSW1003-001	SLIDE SWITCH		UB,UG,US
S1602	QSW1003-001	SLIDE SWITCH		UB,UG,US
S2601	QSW1003-001	SLIDE SWITCH		B,E,EE,EN,EV
S2602	QSW1003-001	SLIDE SWITCH		B,E,EE,EN,EV
OT1	VYH7653-002	IC HOLDER		
OT2	VYH7653-004	IC HOLDER		

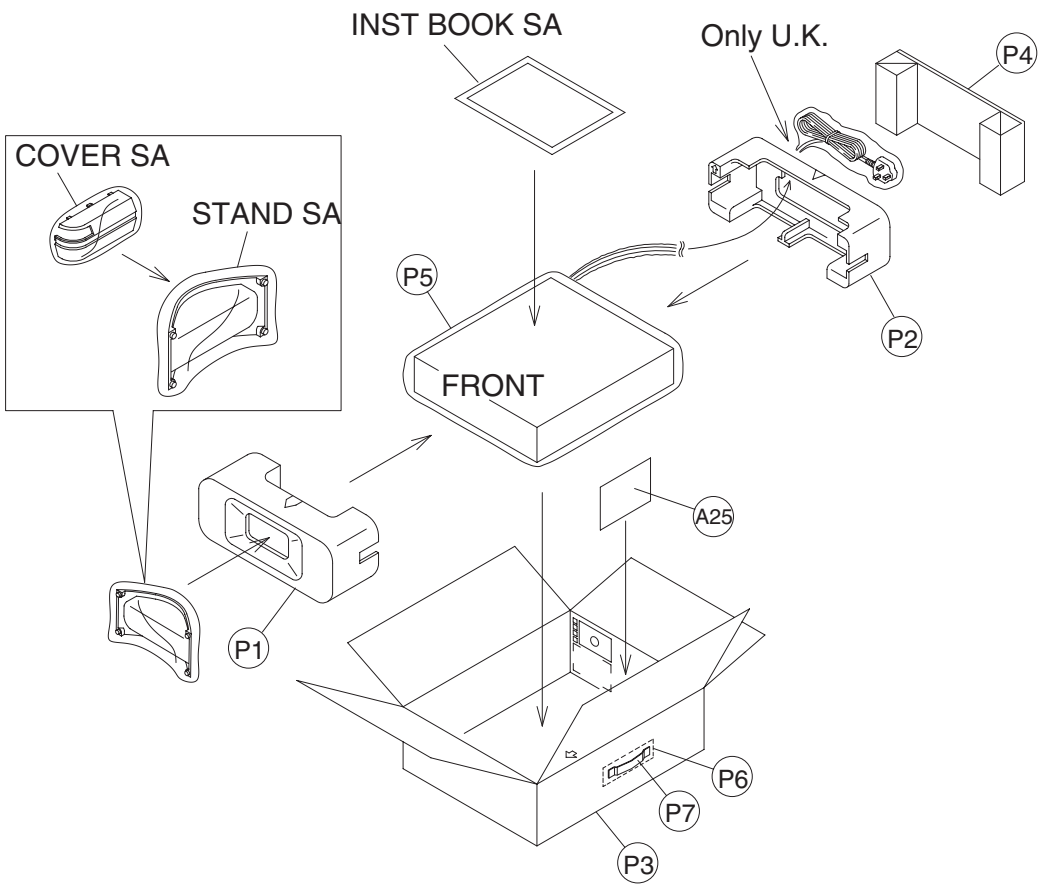
Loading mechanism board

Block No. [0][4]

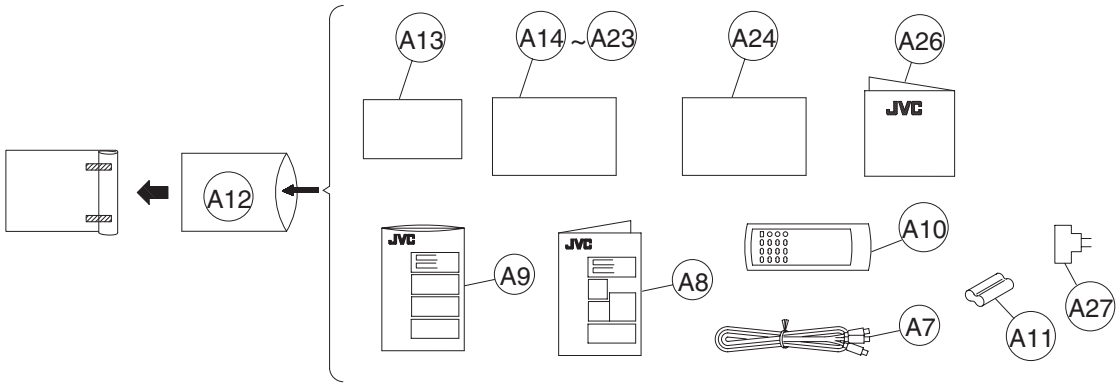
⚠ Symbol No.	Part No.	Part Name	Description	Local
Q101	PT100MF0MP1-X	PHOTO TR		
D101	GL100MN0MP1/M/X	PHOTO DIODE		
R101	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
CN101	QGA1501F2-04W	CONNECTOR	W-B (1-4)	
CN102	QGF1016F2-07W	CONNECTOR	FFC/FPC (1-7)	
CN103	QGA1501F2-02W	CONNECTOR	W-B (1-2)	
CN104	QGA1501F2-04W	CONNECTOR	W-B (1-4)	
S101	NSW0174-001X	PUSH SW		
S102	NSW0174-001X	PUSH SW		

Packing materials and accessories parts list

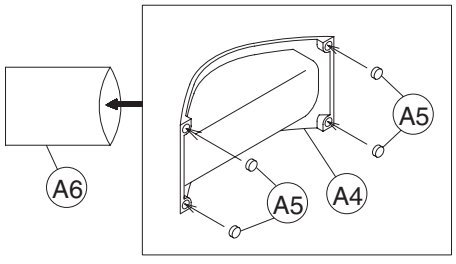
Block No.M4MM



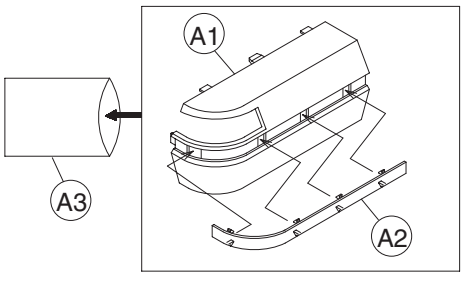
INST BOOK SA



STAND SA



COVER SA



Packing and accessories

Block No. [M][4][M][M]

⚠ Symbol No.	Part No.	Part Name	Description	Local
A 1	LE20682-005A	COVER		
A 2	LE20687-001A	FITTING(C)		
A 3	QPC01603015	POLY BAG	16cm x 30cm	
A 4	LE10281-005A	STAND		
A 5	LE40919-001A	SPACER	(x4)	
A 6	QPC01603015	POLY BAG	16cm x 30cm	
A 7	QAM0328-001	AV CORD 3P		
A 8	BT-54012-3	WARRANTY CARD	EV EE	EE,EV
A 9	BT-54008-2	WARRANTY CARD	B E EN	B,E,EN
A10	RM-SXV028A	REMOCON UNIT		B,E,EE,EN,EV
A10	RM-SXV029U	REMOCON UNIT		UB,UG,US
A11	----------	BATTERY	(x2)	
A12	QPC02504015P	POLY BAG	ACC INST	
A13	LE40934-002A	CAUTION SHEET		
A14	LET0227-003A	INST BOOK	English	B
A15	LET0227-004A	INST BOOK	German,French	E,EN
A16	LET0227-005A	INST BOOK	Dutch	E
A17	LET0227-006A	INST BOOK	Spanish,Italian	EN
A18	LET0227-007A	INST BOOK	Swedish,Finnish,Danish	EN
A19	LET0227-008A	INST BOOK		EE
A20	LET0227-009A	INST BOOK		EV
A21	LET0227-010A	INST BOOK		UB,US
A22	LET0227-012A	INST BOOK		UB,UG,US
A23	LET0227-011A	INST BOOK		UG
A24	LV30258-095A	UB SHEET		UB
A25	LE31083-001A	SHEET		UB,UG,US
A26	VNA3000-204	REGIST.CARD		B
⚠ A27	QAM0060-002	AC ADAPTOR		UG,US
P 1	LE20692-001A	PACKING PAD(F)	FRONT	
P 2	LE20693-001A	PACKING PAD(R)	REAR	
P 3	LE31058-005A	PACKIG CASE		B
P 3	LE31058-007A	PACKIG CASE		EE
P 3	LE31058-006A	PACKIG CASE		E,EN,EV
P 3	LE31058-008A	PACKIG CASE		UB
P 3	LE31058-012A	PACKING CASE		UG
P 3	LE31058-009A	PACKIG CASE		US
P 4	LE31063-001A	SHEET ASSY		B,UB
P 5	QPC03506015P	ENVELOPE	FOR SET	
P 6	LE31037-001A	BASE PLATE		UB,UG,US
P 7	LE31036-001A	HANDLE		UB,UG,US