JVC

SERVICE MANUAL

DVD AUDIO/VIDEO PLAYER

XV-N510B,XV-N512S

Area Suffix	
J	U.S.A.
C	Canada

XV-N510BJC, XV-N510BCC, XV-N512SJC, XV-N512SCC

TABLE OF CONTENTS

No.YD016
2004/8

SPECIFICATION

XV-N510B,XV-N512S for J,C	
General	
Readable discs	DVD AUDIO, DVD VIDEO, DVD-R (Video format), DVD-RW (Video format/VR format), DVD-RAM (VR format), SVCD, Video CD, Audio CD (CD-DA), CD-R/RW (CD-DA, SVCD, Video CD, MP3/WMA format, JPEG)
Video format	REMOTE, 480i (Interlaced scan)/480p (Progressive scan) selectable
Other	
Power requirements	AC 120 V~, 60 Hz
Power consumption	13 W (POWER ON), 2.0 W (STANDBY mode)
Mass	1.9 k g (4.2 lbs)
Dimensions (W × H × D)	435 mm× 44 mm × 258.6 mm ((17-3/16 inch × 1-3/4 inch × 10-3/16 inch)
Video outputs	
COMPONENT (pin jacks)	Y Output: 1.0 Vp-p (75 Ω)
	PB/PR Output: 0.7 Vp-p (75 Ω)
VIDEO OUT (pin jack)	1.0 Vp-p (75 Ω)
S-VIDEO OUT (S jack)	Y Output: 1.0 Vp-p (75 Ω)
	C Output: 286 mVp-p (75 Ω)
Horizontal resolution	500 lines or more
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
	DVD (sampling frequency 192 kHz/176.4 kHz):2 Hz to 88 kHz
Dynamic range	16 bit: More than 98 dB
	20 bit/24 bit: More than 106 dB
Wow and flutter	Unmeasurable (less than +- 0.002%)
Total harmonic distortion	16 bit: less than 0.006%
	20 bit/24 bit: less than 0.005%

*** Notes for PX model (Check the specification indication on the rear panel.)**
Power requirements AC 110 V to 240 V , 50 Hz/60 Hz
Power consumption 13 W (POWER ON), 2.0 W(STANDBY mode)

- Manufactured under license from Dolby Laboratories. “Dolby”,”MLP Lossless and the double-D symbol are trademarks of Dolby Laboratories.
- “DTS” and “DTS Digital Surround” are registered trademarks of Digital Theater Systems, Inc.
- This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Digital output signal chart

Disc type	Output		
	PCM ONLY	DOLBY DIGITAL/PCM	STREAM/PCM
DVD with 48/44.1 kHz, 16/20/24 bit linear PCM DVD AUDIO with MLP	48/44.1 kHz, 16/20/24 bit, stereo linear PCM		
DVD with 192/176.4/96/88.2 kHz, 16/22/24 bit linear PCM DVD AUDIO with MLP	48/44.1 kHz, 16/20/24 bit, stereo linear PCM (Down sampling)		
DVD with DTS	48 kHz, 16 bit, stereo linear PCM		DTS bitstream
DVD with Dolby Digital	48 kHz, 16 bit, stereo linear PCM	Dolby Digital bitstream	
SVCD/Video CD/Audio CD	44.1 kHz, 16 bit, stereo linear PCM		
Audio CD with DTS	44.1kHz, 16 bit, stereo linear PCM		DTS bitstream
CD-R/RW with MP3/WMA	Linear PCM		

SECTION 1
PRECAUTION

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.

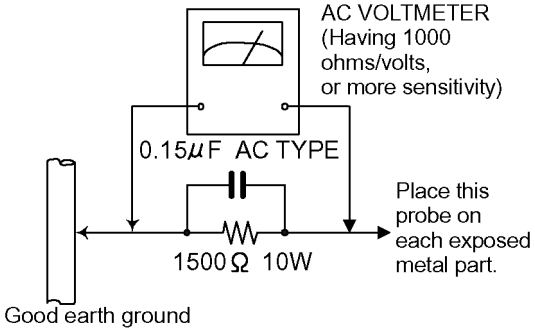
(2) Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturers warranty and will further relieve the manufacture of responsibility for personal injury or property damage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

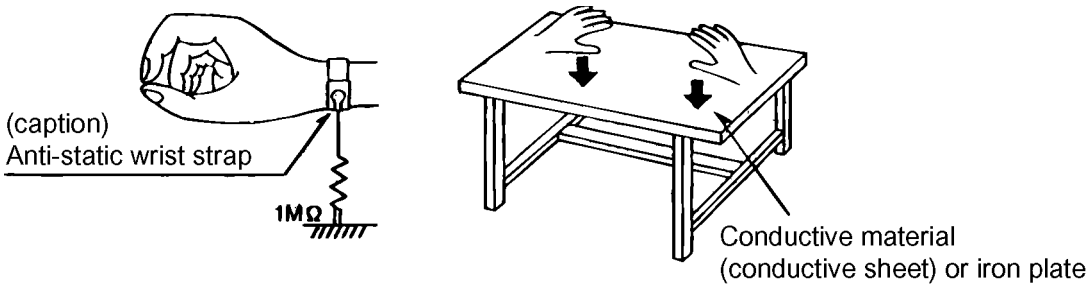
Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

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 Precautions for Service

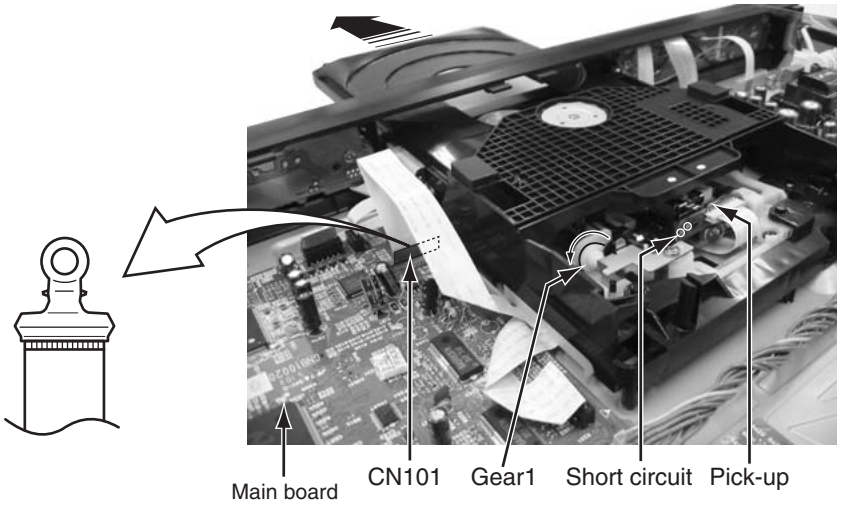
1.7.1 Handling of Traverse Unit and Laser Pickup

(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.

1.7.2 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) It solders to two short circuit sections on the substrate of a pick-up.
(4) After removing the flexible wire from the connector (CN101), short-circuit the flexible wire by the metal clip.
(5) Short-circuit the laser diode by soldering the land which is provided at the center of the flexible wire for the pickup. After completing the repair, remove the solder to open the circuit.



*Please refer to the disassembly method for details.

SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

This service manual does not describe SPECIFIC SERVICE INSTRUCTIONS.

SECTION 3
DISASSEMBLY

3.1 Main body section

3.1.1 Removing the top cover (See Figure 1)

(1) Remove the two screws **A** attaching the top cover on both sides of the main body.
(2) Remove the three screws **B** attaching the top cover on the back of the main body.
(3) Raise the both sides and lower part of the rear of the top cover, with opening them slightly in an outward direction. And the top cover will be removed.

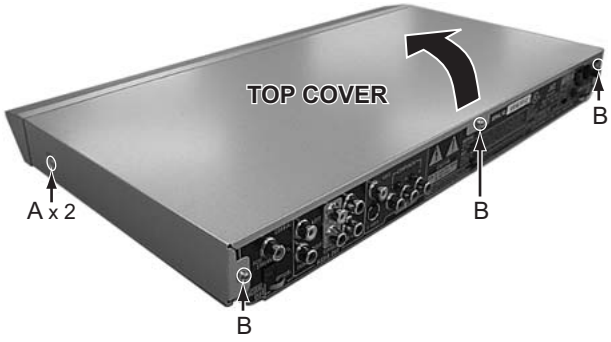


Fig.1

3.1.2 Removing the mechanism assembly (See Figure 2, Figure 3, Figure 4)

- Prior to performing the following procedure, remove the top cover.
- There is no need to remove the front panel assembly.

(1) Insert a kind of screwdriver in a hole located in the right side of mechanism assembly, and push a lever until it cannot be inserted any further.
(2) And then, a tray will come out. Remove the tray in an upper direction, with slightly opening the lower part of fitting in an outward direction.
(3) Remove the three screws **C** attaching the mechanism assembly.
(4) A tray is made to slide ahead.
(5) A gear 1 is turned counterclockwise. Then, a pick-up unit moves back.
(6) It solders to two **a** sections on the pick-up unit.
(7) Disconnect the card wire from connector CN201, CN202, CN101 on the main board.

ATTENTION:

Please extract the wire after short-circuited of two places on the wire in part **a** with solder. Please remove the solder two places of part **a** after connecting the wire with CN101 when reassembling.

CAUTION:

Be sure to solder the short land sections "**a**" on the pick-up unit before disconnecting the card wire from connector CN101 on the main board.
If the card wire is disconnected without attaching solder, the pick-up unit may be destroyed by static electricity.

(8) Remove the mechanism assembly by lifting the rear part of the mechanism assembly.

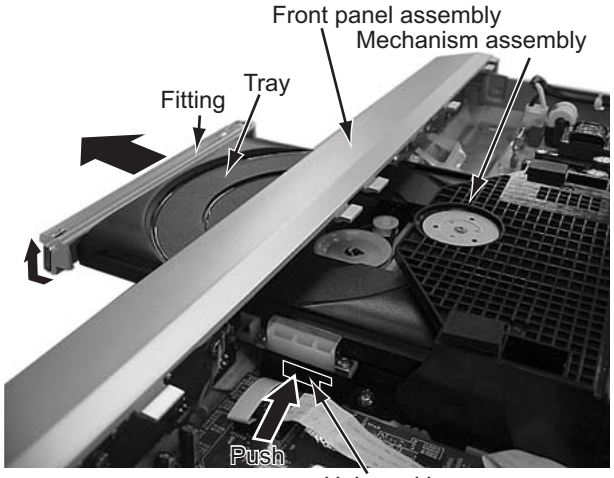


Fig.2

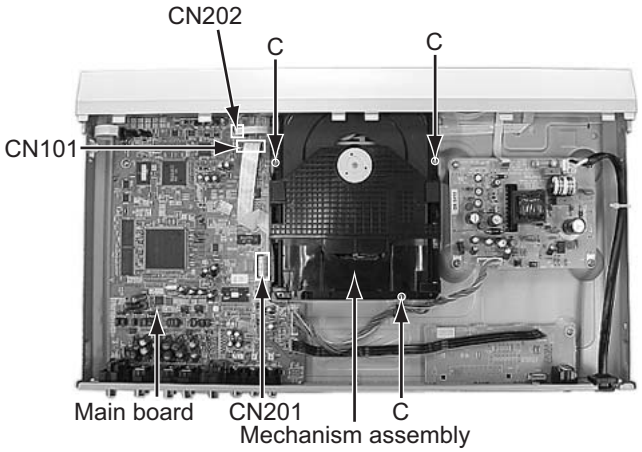


Fig.3

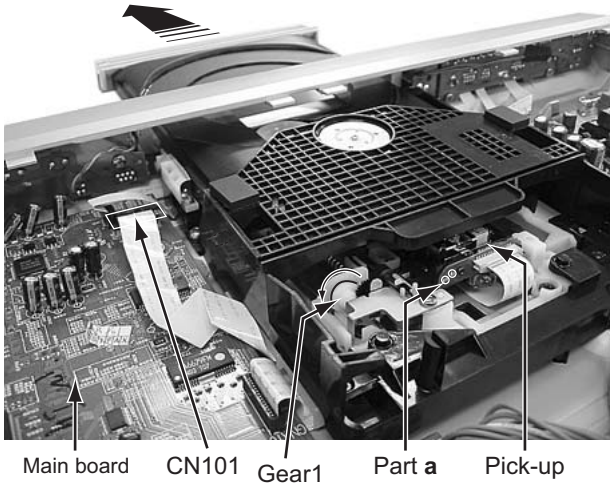


Fig.4

3.1.3 Removing the front panel assembly (See Figure 5, Figure 6, Figure 7)

- Prior to performing the following procedure, remove the top cover and mechanism assembly.
  (1) Disconnect the card wire from connector CN3 on the power board.
  (2) Hook **b** and **c** are removed respectively, and the front panel assembly is removed.
  (3) Remove the three screws **D** attaching the FL display board.
  (4) Disconnect the card wire from connector CN801 on the FL display board.

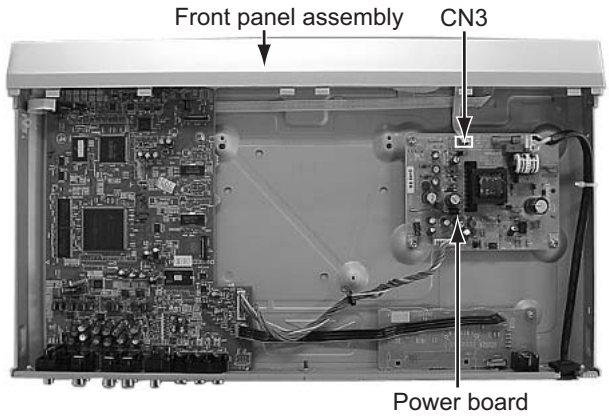


Fig.5

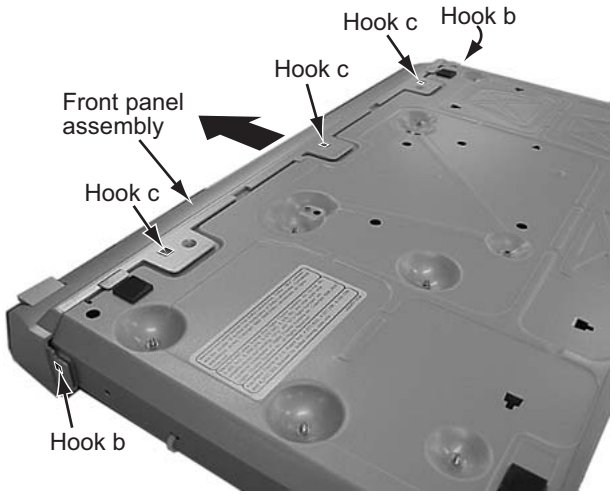


Fig.6

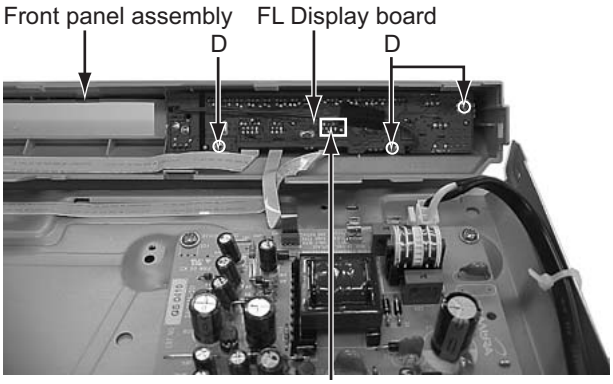


Fig.7

3.1.4 Removing the rear panel (See Figure 8)

- Prior to performing the following procedure, remove the top cover.
  (1) Remove the eight screws **E** attaching the rear panel.
  (2) Remove the power cord bushing.

Fig.8

3.1.5 Removing the main board and power board. (See Figure 9)

- Prior to performing the following procedure, remove the top cover and rear panel.
  (1) Remove the two screws **F** attaching the main board.
  (2) Disconnect the card wire from connector CN809, CN101, CN201, CN202 on the main board.
  (3) Disconnect the flat wire from connector CN633 on the main board.
  (4) Disconnect the socket wire from connector CN2 on the power board.
  (5) Remove the four screws **G** attaching the power board.
  (6) Disconnect the socket wire from connector CN1 on the power board.

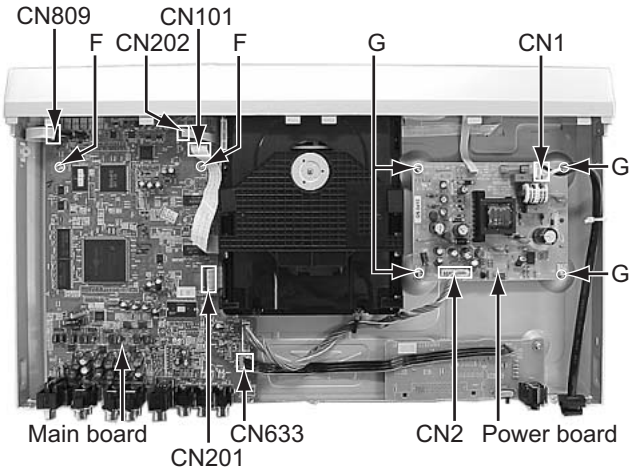


Fig.9

3.2 Loading mechanism assembly

3.2.1 Removing the tray (See Figure 1, Figure 2, Figure 3, Figure 4, Figure 5, Figure 6)

(1) Push **a** of the slide cam on the hole in the right side of the loading base by using a driver until it stops. (See Figure 1.)
(2) The tray comes out. Pull the tray in a front direction until it stops.
(3) Remove the two screws **A** attaching the slide bracket. (See Figure 2.)
(4) Tilt the tray in a direction of the arrow around the point in the left rear part of the tray. (See Figure 3.)
(5) The rail of the tray is removed from **b** of the loading base. Then, remove the tray upward. (See Figure 4.)

Attaching the tray:

Engage **c** of the loading base to the projection of the tray while tilting the tray to the left. Turn the tray in a direction of the arrow, and attach the slide bracket. (See Figure 5.)

Note:

Prior to the procedure above, move the slide cam in a direction of the arrow so that **d** of the slide cam can be inserted in **e** of the tray. (See Figure 6.)

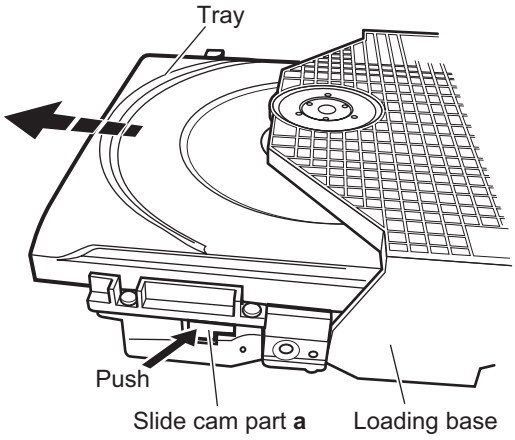


Fig.1

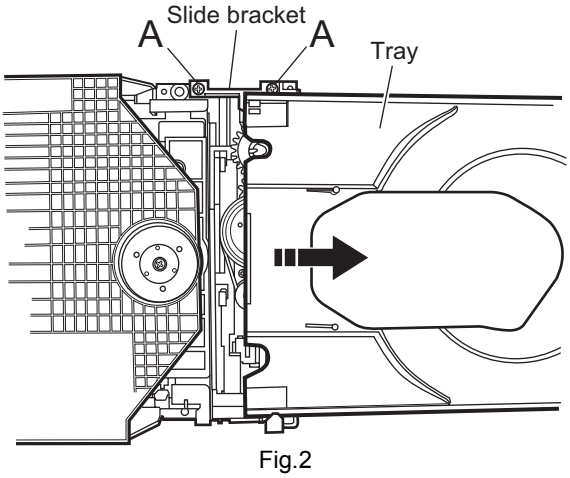


Fig.2

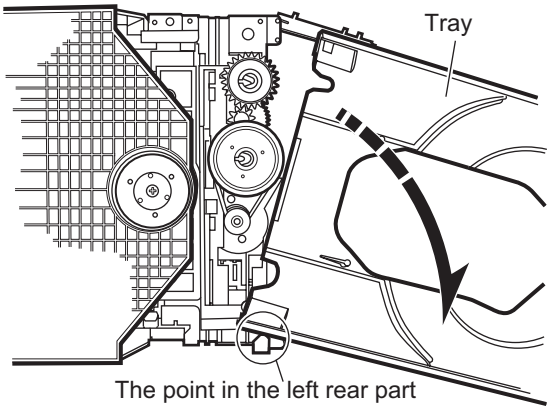


Fig.3

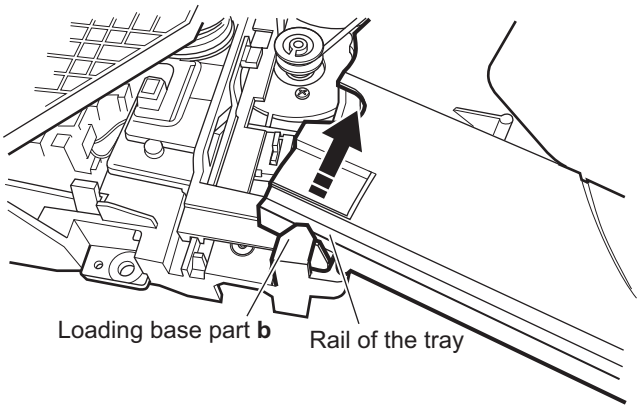


Fig.4

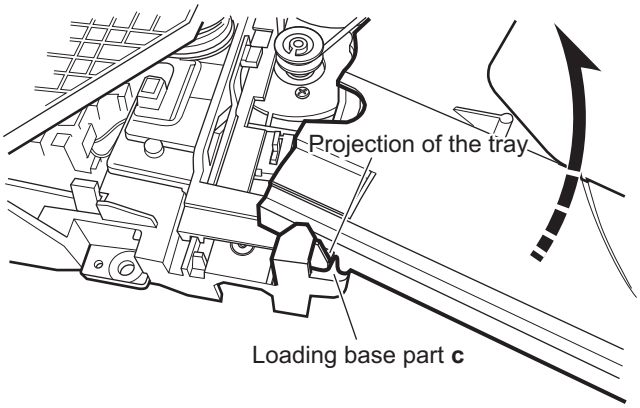


Fig.5

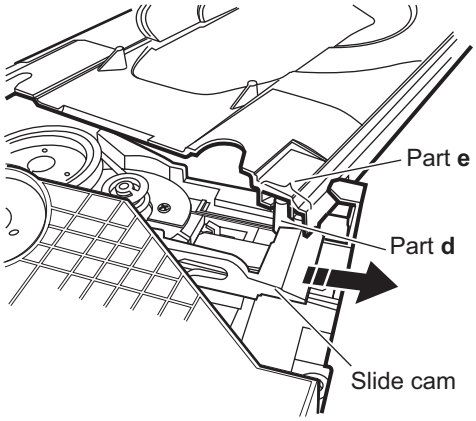


Fig.6

3.2.2 Removing the traverse mechanism assembly (See Figure 7)

(1) Reverse the loading mechanism assembly.
(2) A card wire is removed from a wire bracket.
(3) Remove the four screws **B** attaching the traverse mechanism assembly. Remove the traverse mechanism assembly upward.

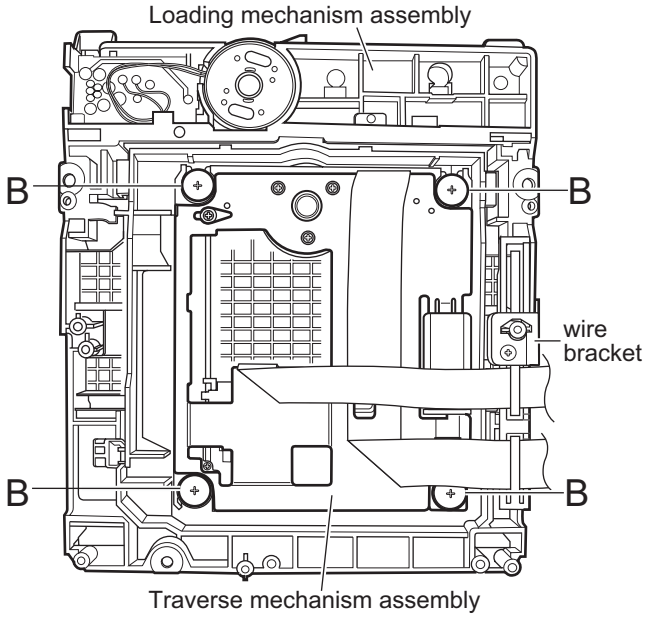


Fig.7

3.2.3 Removing the elevator (See Figure 8 and Figure 9)

• Prior to the following procedure, remove the traverse mechanism assembly.
(1) Remove the two arms of the elevator from the two parts **f** by moving the arms in a direction of the arrow.
(2) Pull out the elevator in a rear direction.

Attaching the elevator:

Engage the two holes **g** to the two shafts on the front part of the elevator. And then, attach the elevator.

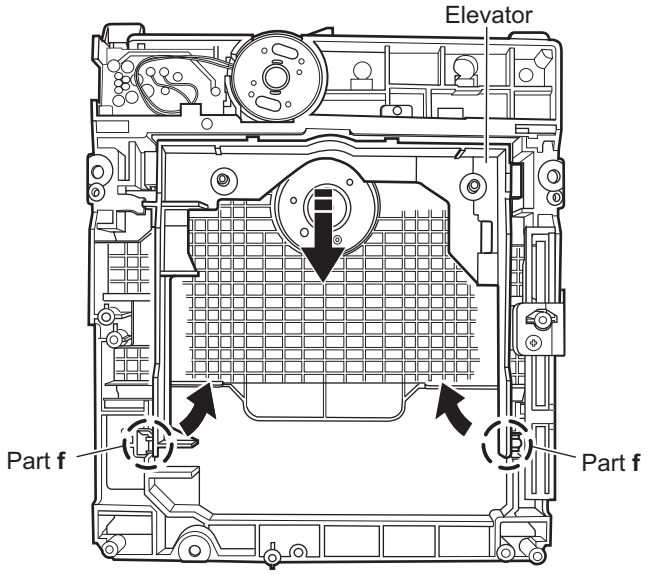


Fig.8

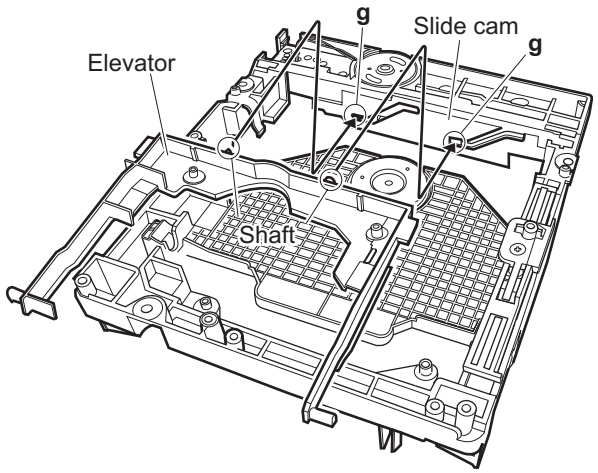


Fig.9

3.2.4 Removing the loading motor (See Figure 10 and Figure 11)

- Prior to the following procedure, remove the tray, the traverse mechanism assembly, and the elevator.
  (1) Remove the belt from the pulley.
  (2) Remove two screws **C** attaching the loading motor.
  (3) Remove two solders **h** on the switch board.

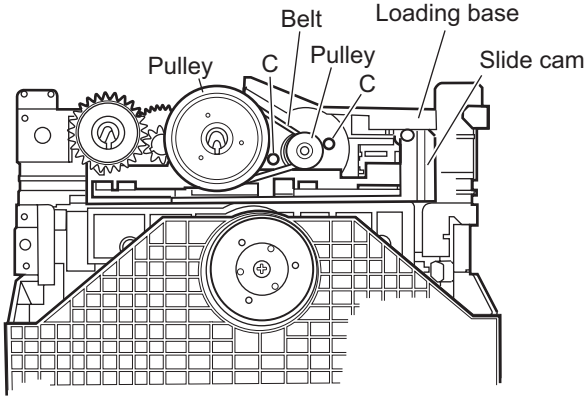


Fig.10

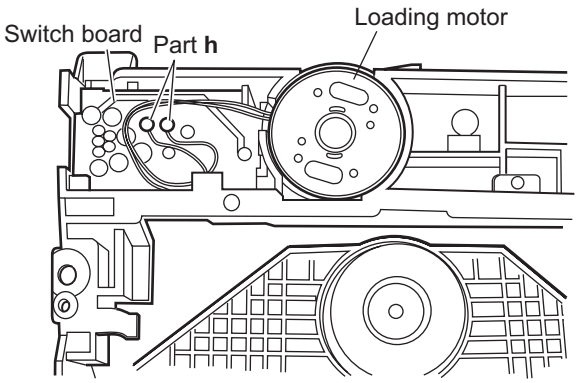


Fig.11

3.3 Traverse mechanism assembly

3.3.1 Removing the pickup (See Figure 12, Figure 13)

- Prior to the following procedure, remove the traverse mechanism assembly.
  (1) Remove one screw **D** attaching the plate.
  (2) Remove the plate and the leaf spring.
  (3) Lift **i** of the shaft **1**, and pull out the shaft **1** from **j**.
  (4) Remove **k** of the pickup from the shaft **2**.

Attaching the pickup:

(1) Engage **k** of the pickup to the shaft **2**.
(2) Insert the shaft **1** in **j**, and attach the shaft 1 to **i**.
(3) Attach the leaf spring, and then attach the plate. Fix the leaf spring and the plate by using the screw **D**.

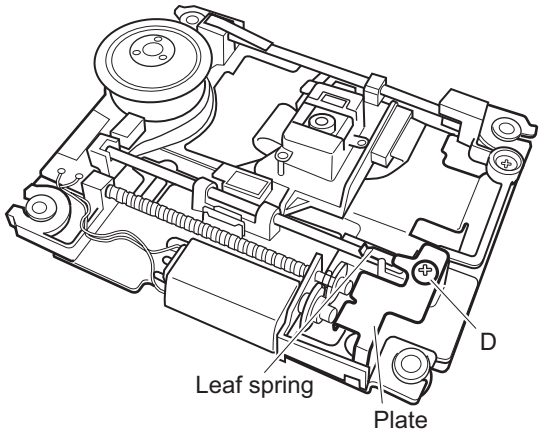


Fig.12

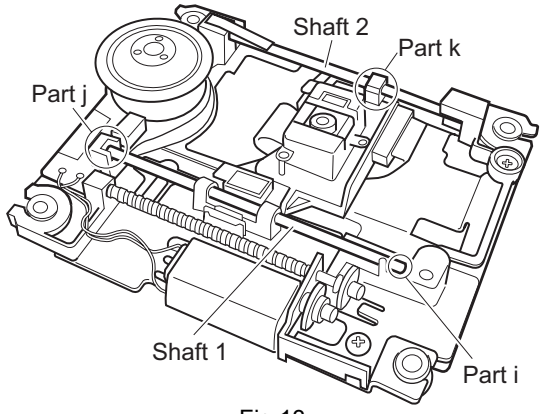


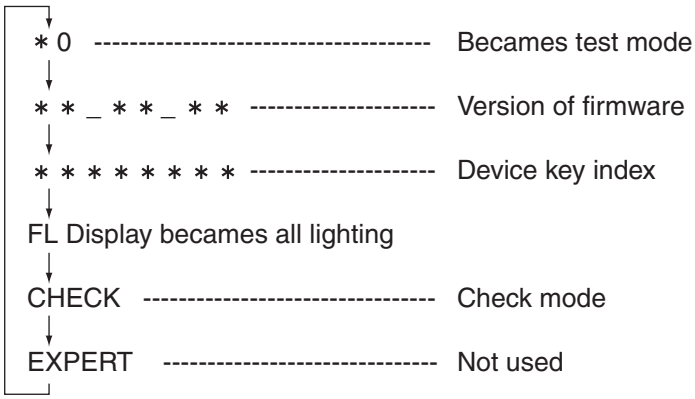
Fig.13

SECTION 4
ADJUSTMENT

4.1 Test mode setting method

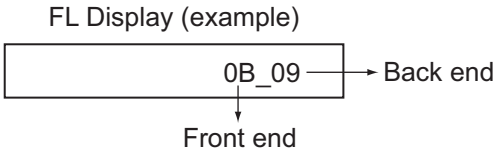
(1) Unplug the power plug.
(2) Insert power plug into outlet while pressing both "PLAY" key and "STOP" key of the main body.
(3) The FL display shows "∗0", and the main body turns to test mode. "∗" means the destination, and "0" means parameter adjustment status.The destination and a back end of version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

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



4.2 Method of displaying version of firmware

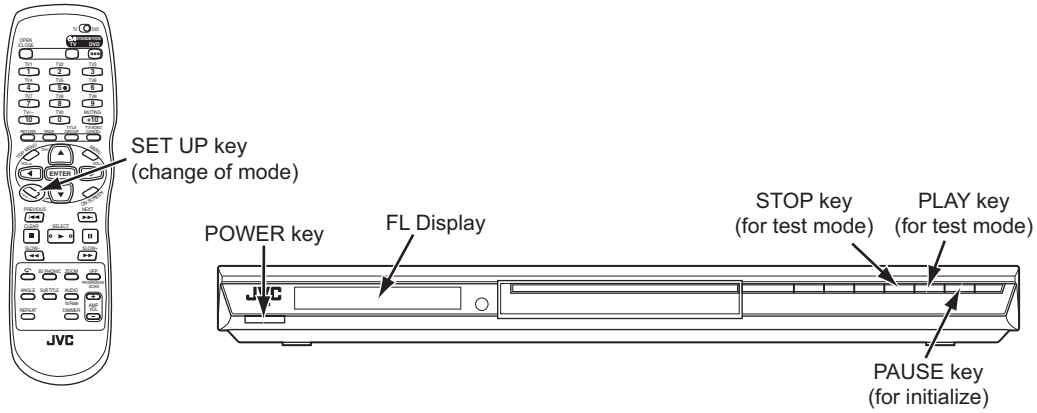
(1) Set the main body at test mode.
(2) Press "SET UP" key of the remote controller once. Then, version number and alphabetical letter of the front end and the back end are displayed in the FL display as follows:



4.3 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.)



4.4 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.

4.5 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 "READ" 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:

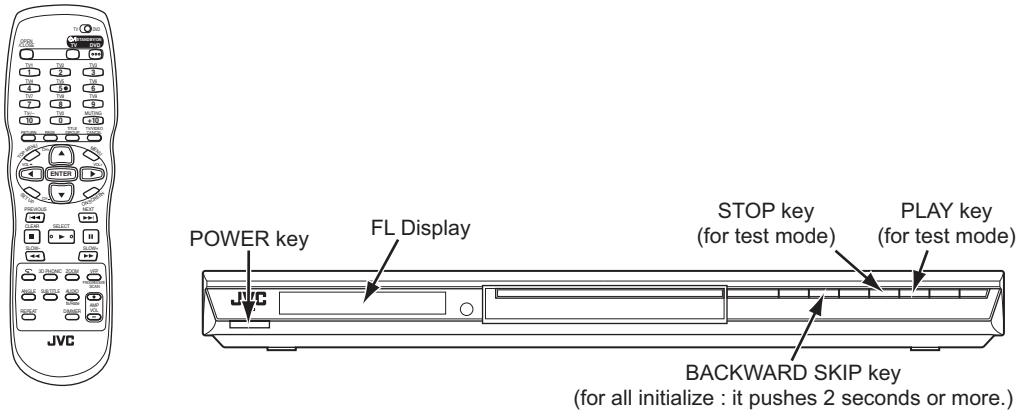
Status of this adjustment can be judged by the number displayed at test mode as follows:

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 "READ" 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.



4.6 Display of current value of laser

(1) Set the main body at test mode.
(2) Press "SET UP" key of the remote controller four 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)

2530 0000

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 65 mA or less is normal.
The laser current value of over 66 mA is not normal. Laser diode of the pickup has been deteriorated.

DVD:

The laser current value of 80 mA or less is normal.
The laser current value of over 81 mA is not normal. Laser diode of the pickup has been deteriorated.

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

4.7 Flap adjustment of the pick-up guide shaft

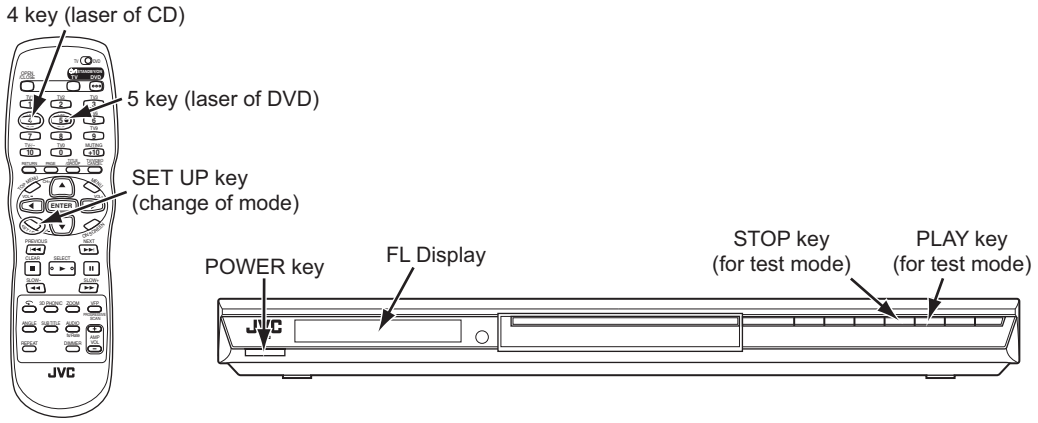
Please perform flap adjustment of the pick-up guide shaft in the following case:

- 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.)



4.7.1 Tool for adjustment

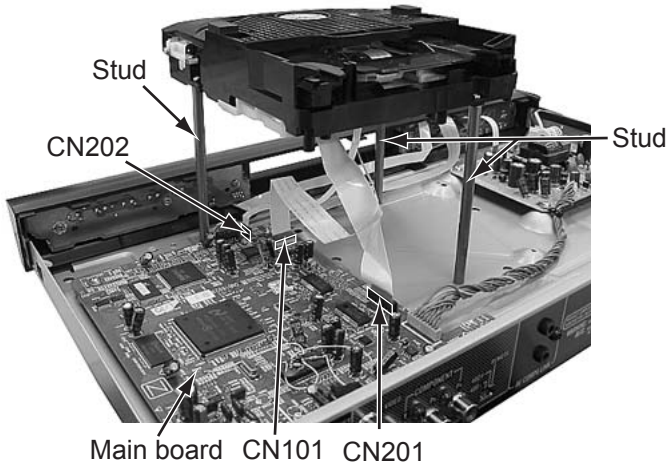
*Stud: One set (four studs), Part number: JIGXVS40 (Note: One of the four studs is not used here.)

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

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

4.7.2 Preparation for adjustment

(1) See the disassembly procedure, and remove the mechanism assembly from the main body.
(2) Attach the three studs to the mechanism assembly.
(3) Put the mechanism assembly in the canter of the main body, and connect the three card wire from the connector CN101,CN201,CN202 on the main board.

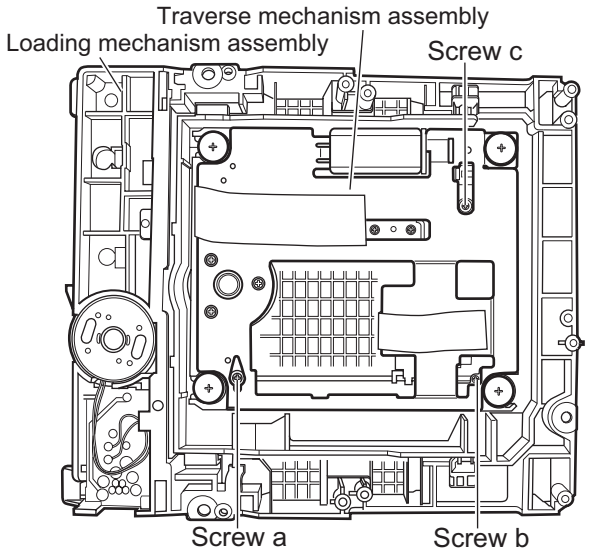


4.7.3 Adjustment

(1) Set the main body at test mode.
(2) Press the "SET UP" key of the remote controller four times, and the FL display is displayed "CHECK".
(3) Insert a test disc (VT-501), and press the numeric key "1" of the remote controller.
(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 **minimum** jitter value is displayed on the FL display.

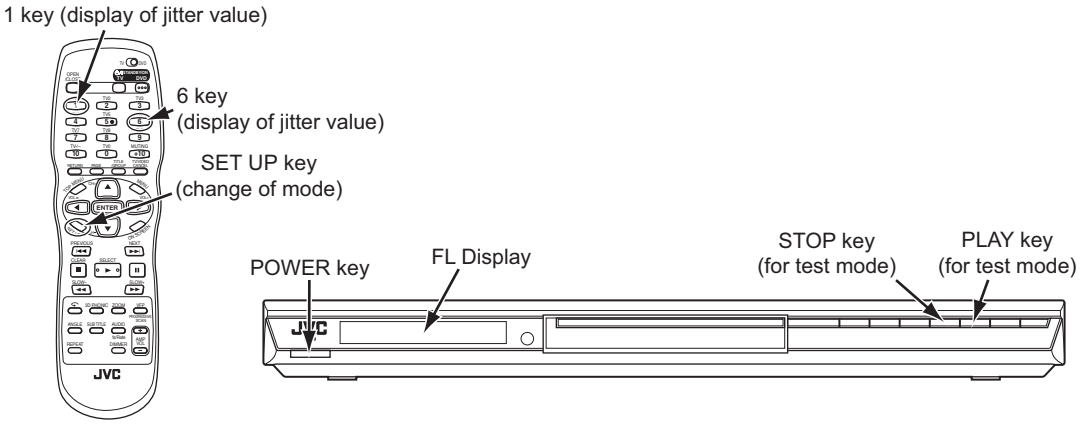
NOTE:

- 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:

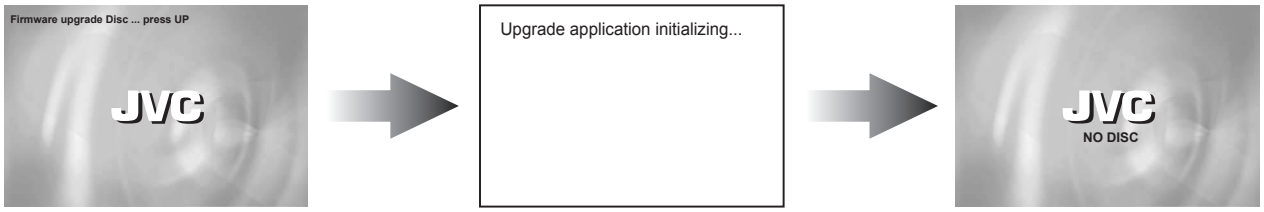
Turn the adjustment screws **a** and **b** to the same angle in the right direction. And turn the adjustment screws **a** and **b** to the same angle in the left direction. Then, turn the screws **a** and **b** in either the right or the left direction to increase the number of jitter. Don't turn the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



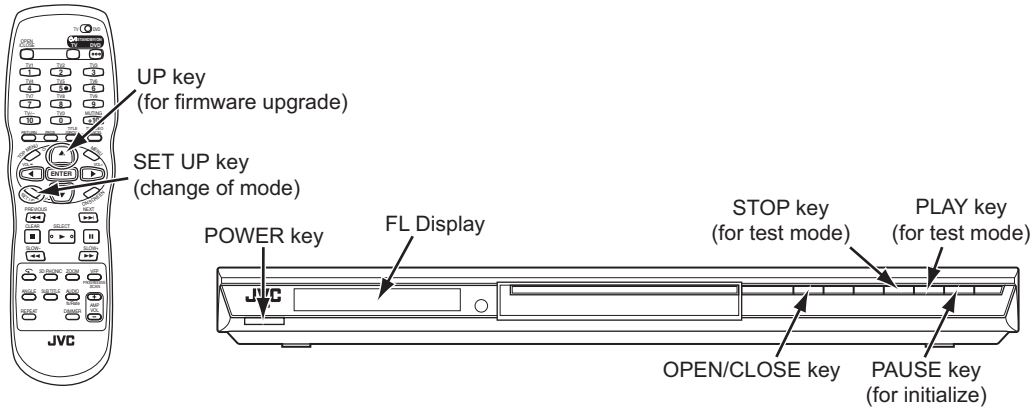
4.8 Upgrading of firmware

The latest firmware for upgrading is updated in "Digital Video Storage" 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) A power supply will be turned off if it waits for a while. 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



4.9 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.
Open and close movement of tray	When press OPEN/CLOSE button the tray should move smoothly without any noise.
Remote controller unit working	Check the correctly operation in use of remote controller unit.
Reading of TOC	Be not long in the malfunction.
Search	Both forward-searches and backward-searches should be able to be done.Do not stop be searching or after the search.
Skip	Both forward-skip and backward-skip should be able to be done.Do not stop be after the skip.
Playback	Do not find abnormality etc. of tone quality and the picture quality.
Most outside TITLE playback check	Play VT-501 TITLE 59 CHAPTER 1 , check normal playback.

SECTION 5
TROUBLESHOOTING

5.1 Servo volume

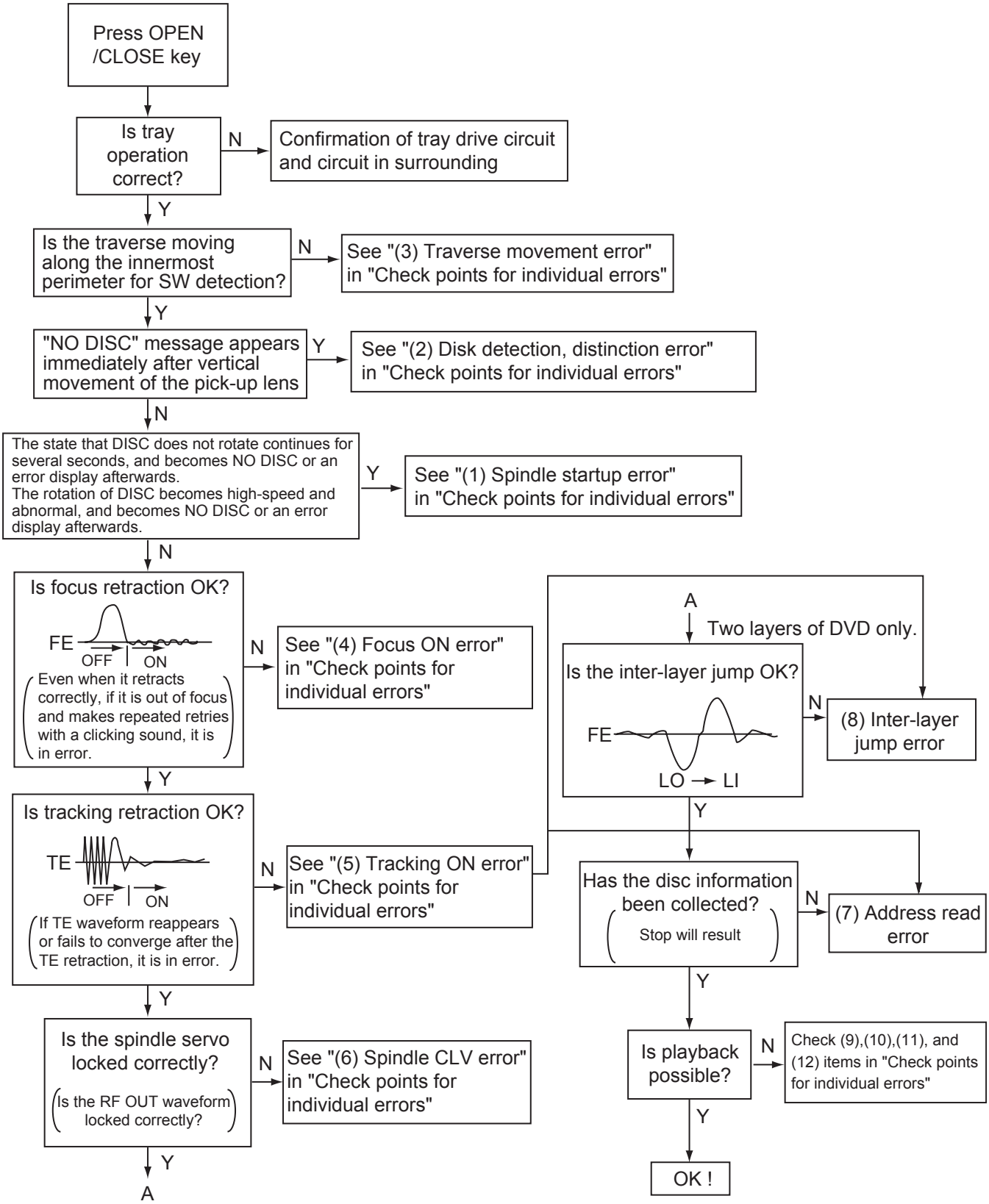


Fig.1

5.2 Check points for each error

5.2.1 Spindle start error

(1) Defective spindle motor

- Are there several ohms resistance between each pin of CN201 "1-2","2-3","1-3"?
  (The power supply is turned off and measured.)
- Is the sign wave of about 100mVp-p in the voltage had from each terminal?
  [CN201"10"(H1+),"11"(H1-),"7"(H2+),"8"(H2-),"5"(H3+),"6"(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"1,2,3" 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"25"(FG) according to the rotation of the motor?

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

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

5.2.3 Traverse movement NG

(1) Defective traverse driver

- Has the voltage come between terminal of CN101 "2" and "4" ?

(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 "10")

(4) TRVSW is the signal input from microcomputer? (IC301 "34")

5.2.4 Focus ON NG

- Is FE output ? --- Pattern, IC101
- Is FODRV signal sent ? (R209) --- Pattern, IC301 "6"
- Is driving voltage sent ?IC201 "13", "14" --- If NG, pattern, driver, mechanical unit .
- Mechanical unit is defective.

5.2.5 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.

5.2.6 Spindle CLV NG

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

5.2.7 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.

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

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

5.2.9 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?

5.2.10 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?

5.2.11 Others

- 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.

5.2.12 CD During normal playback operation

(1) Is TOC reading normal?

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

(2) Is playback afterwards possible?

(3) When can not do a normal playback

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

JVC
Victor Company of Japan, Limited
AV & MULTIMEDIA COMPANY DIGITAL VIDEO STORAGE CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.YD016)

Printed in Japan
WPC

JVC

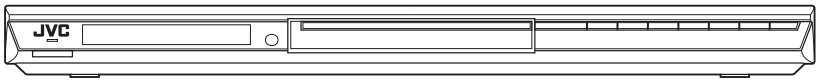
SCHEMATIC DIAGRAMS

DVD AUDIO/VIDEO PLAYER

XV-N510B,XV-N512S

CD-ROM No.SML200408

Area Suffix	
J	U.S.A.
C	Canada



XV-N510BJC, XV-N510BCC, XV-N512SJC, XV-N512SCC

No.YD016SCH
2004/8

CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components indentified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

1) All resistance values are in ohm. 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ(1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in µF, (P: PF).
3) All inductance values are in µH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

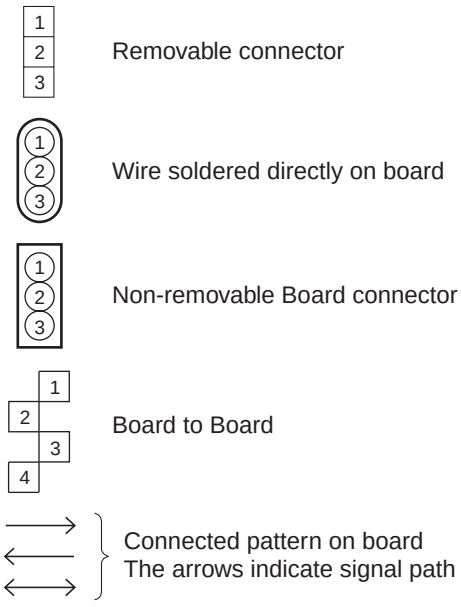
Note: The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

2. Indications of control voltage

AUX : Active at high.

$\overline{\text{AUX}}$ or AUX(L) : Active at low.

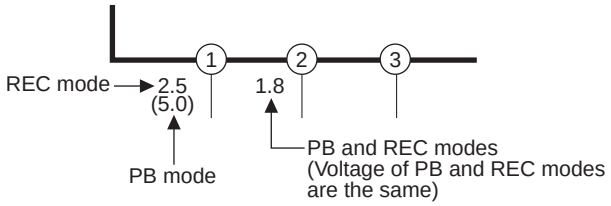
3. Interpreting Connector indications



Note: For the destination of each signal and further line connections that are cut off from the diagram, refer to "BOARD INTERCONNECTIONS"

4. Voltage measurement

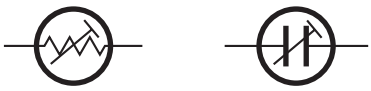
1) Regulator (DC/DC CONV) circuits
   REC : Colour bar signal.
   PB : Alignment tape (Colour bar).
   — : Unmeasurable or unnecessary to measure.
2) Indication on schematic diagram
   Voltage indications for REC and PB mode on the schematic diagram are as shown below.



Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

6. Indication of the parts for adjustments

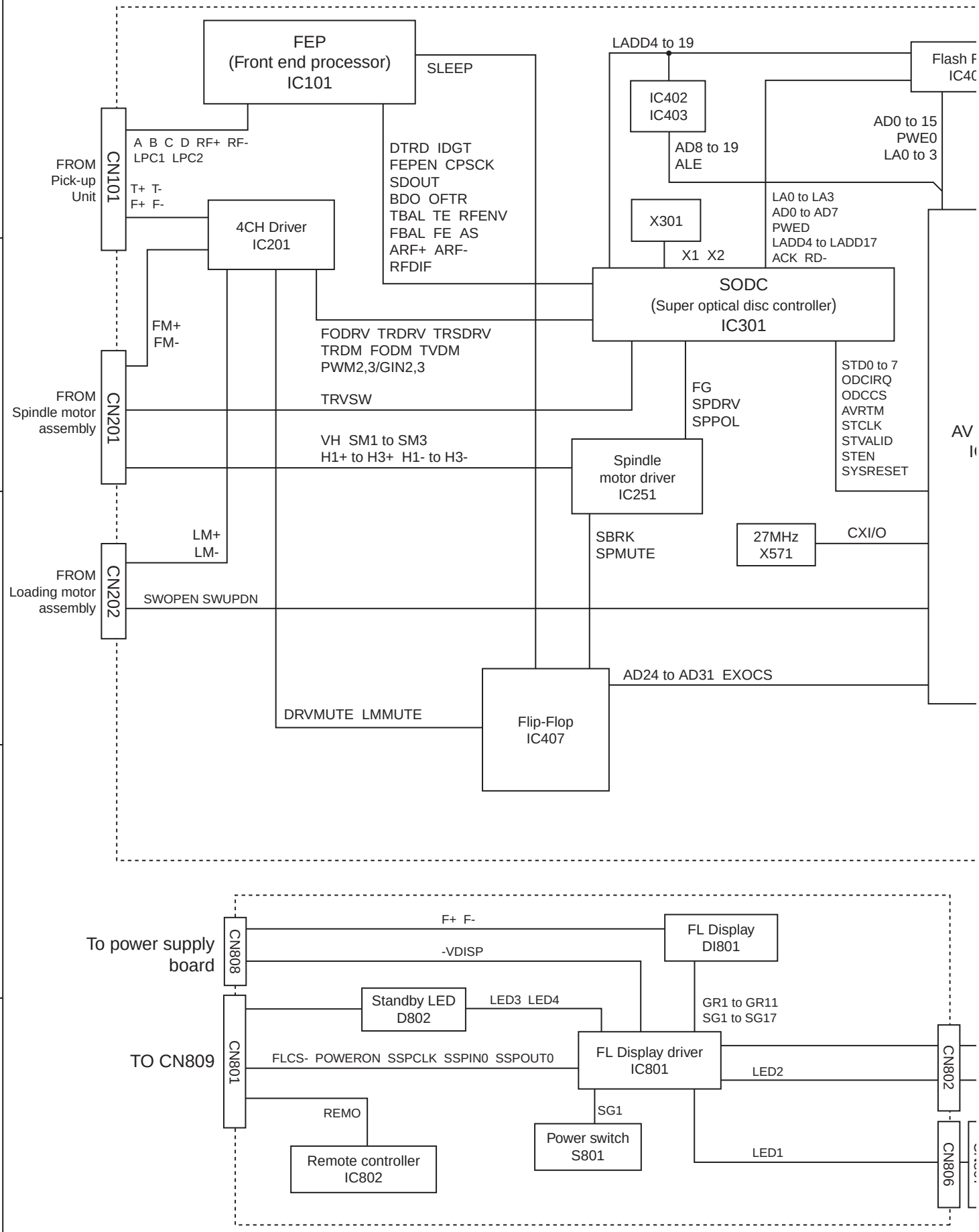
The parts for the adjustments are surrounded with the circle as shown below.

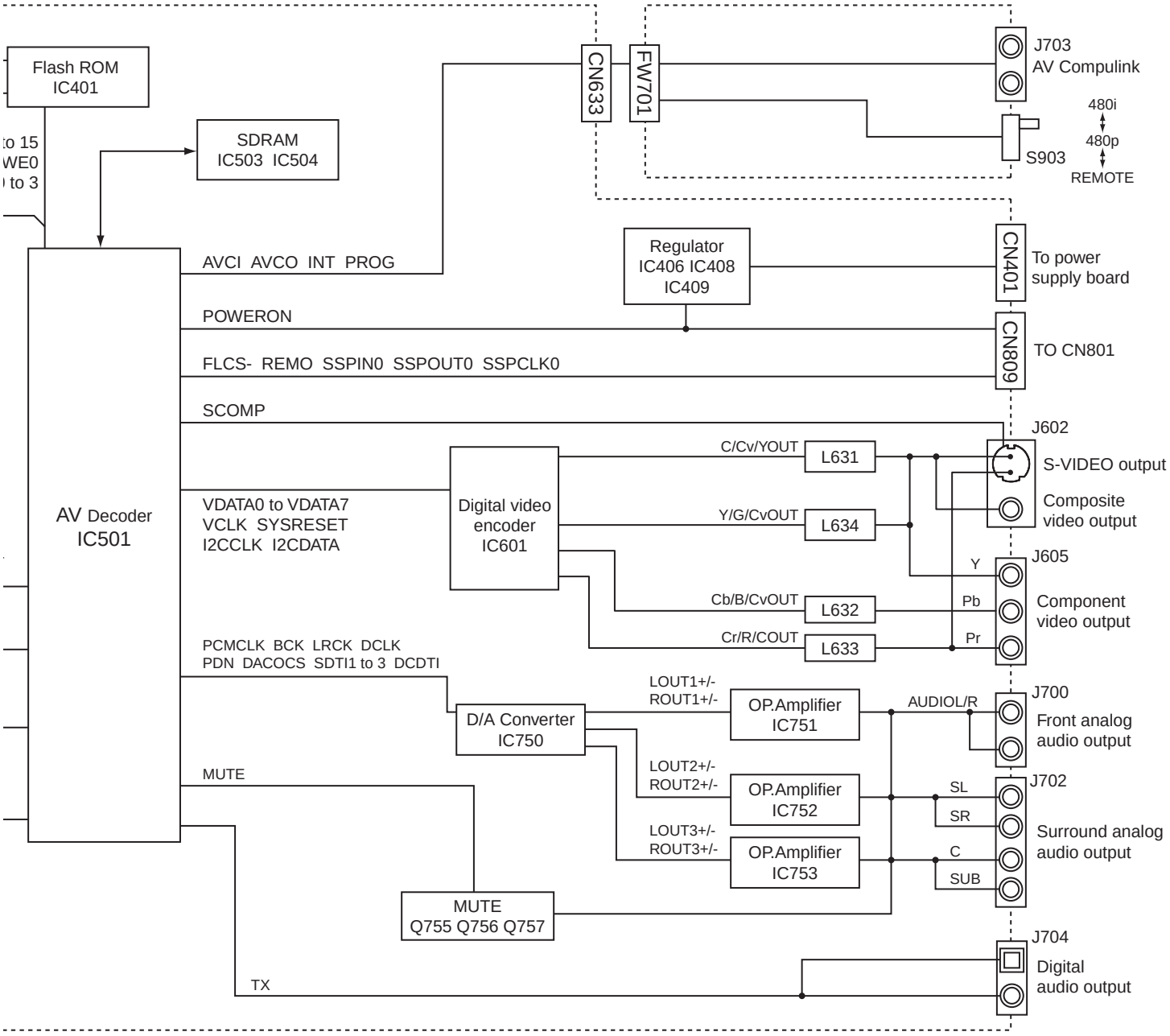


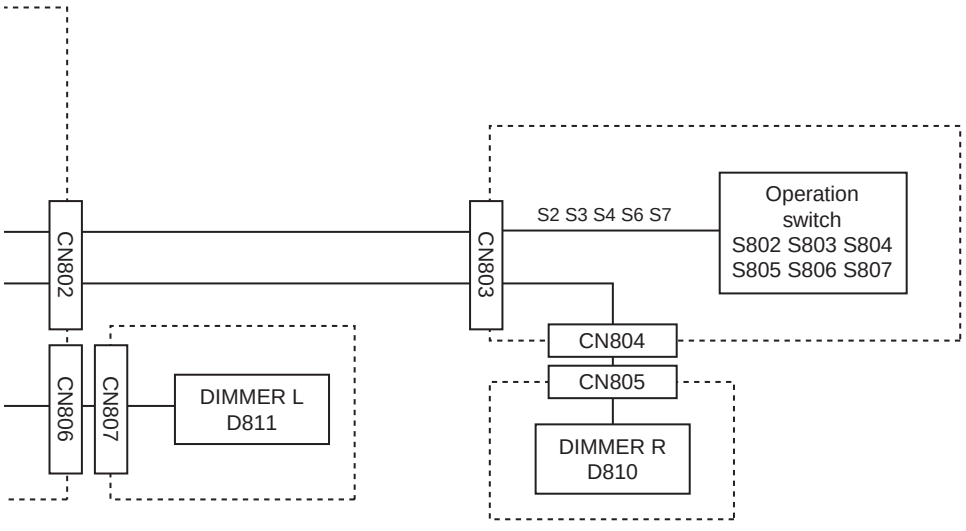
7. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.

Block diagram

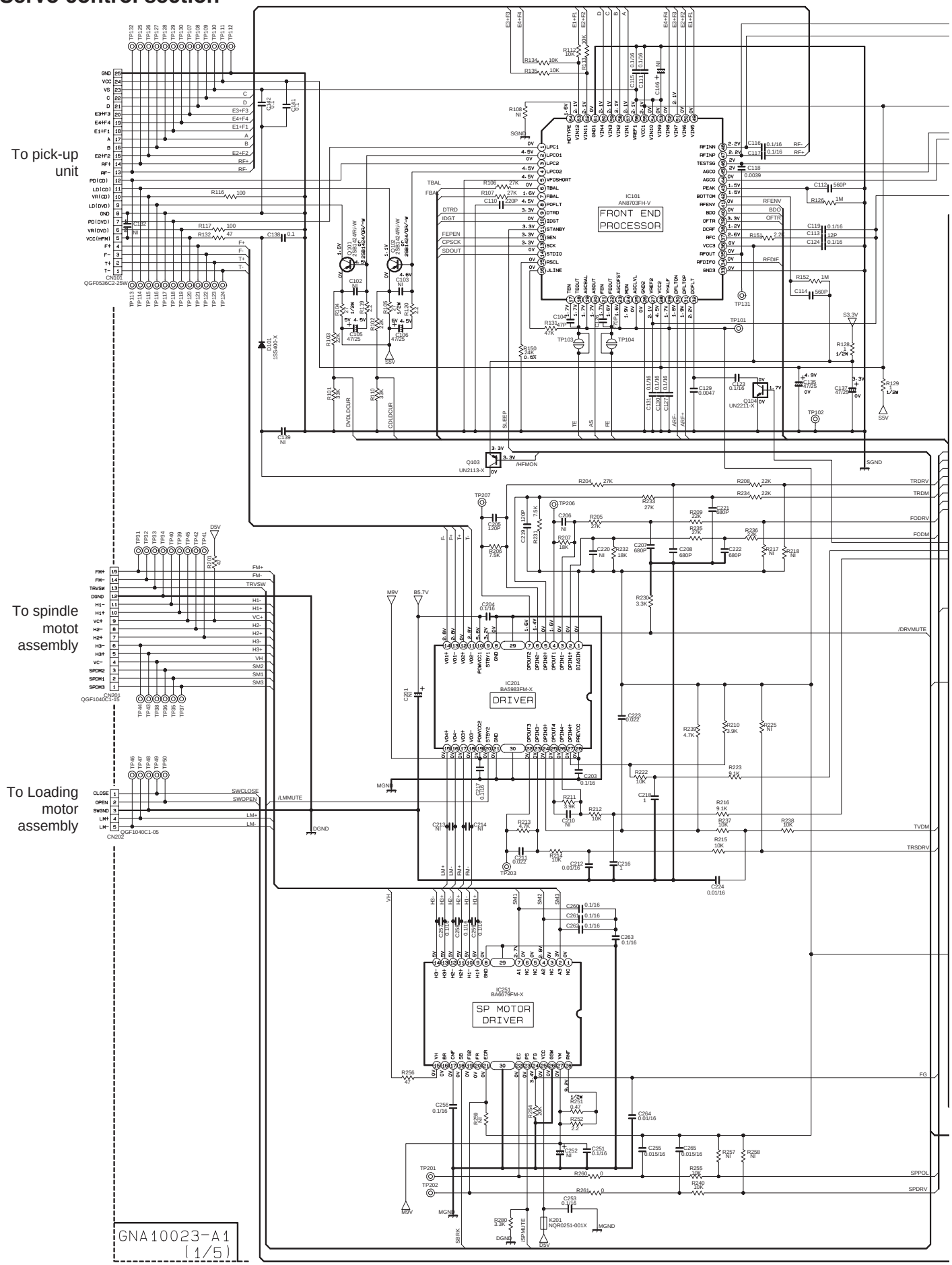


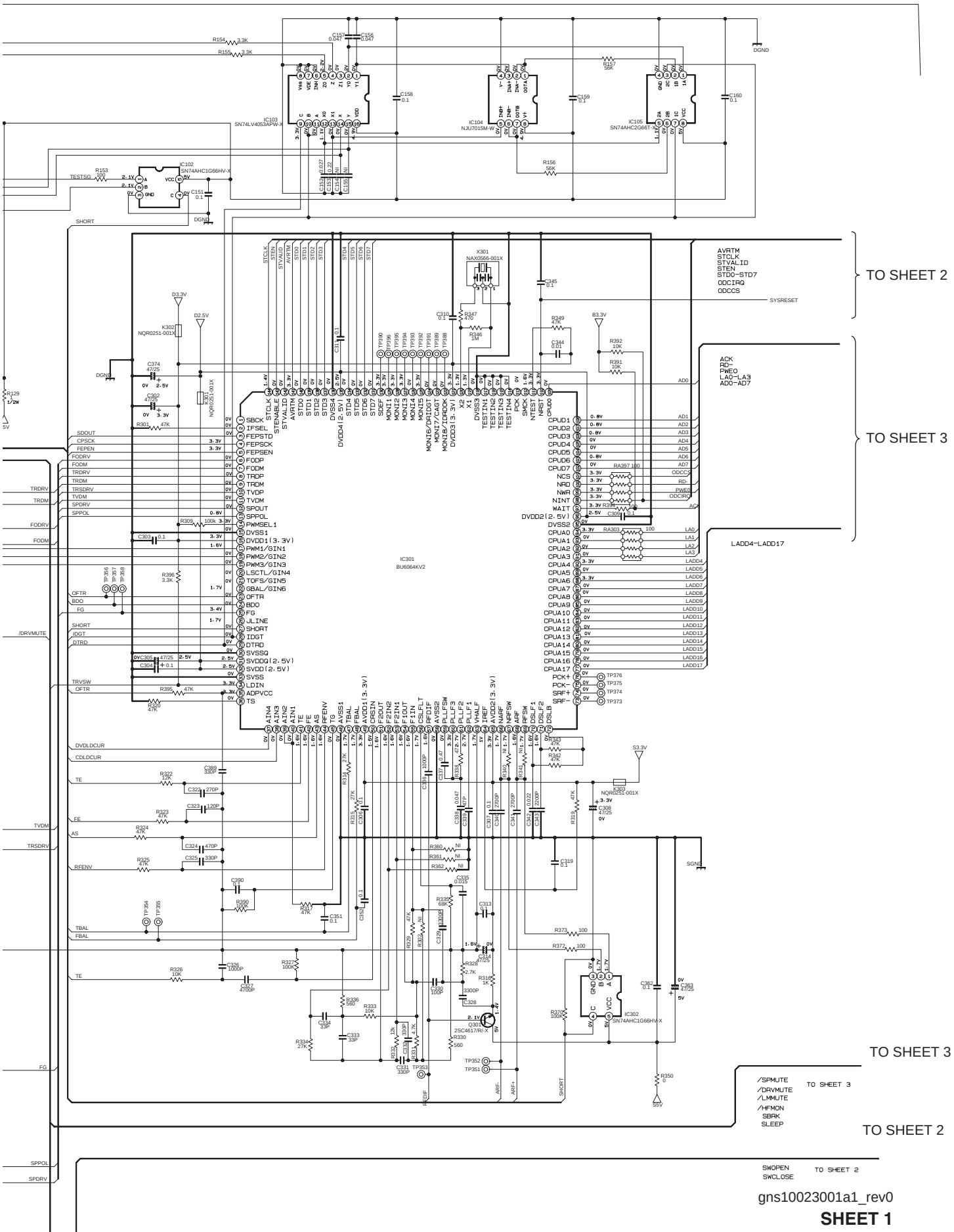

Flash ROM
IC401
SDRAM
IC503 IC504
CN633
FW701
J703
AV Compulink
480i
480p
S903
REMOTE
Regulator
IC406 IC408
IC409
CN401
To power
supply board
AVCI AVCO INT PROG
POWERON
CN809
TO CN801
FLCS- REMO SSPIN0 SSPOUT0 SSPCLK0
SCOMP
J602
AV Decoder
IC501
C/Cv/YOUT
L631
S-VIDEO output
Composite
video output
Y/G/CvOUT
L634
VDATA0 to VDATA7
VCLK SYSRESET
I2CCLK I2CDATA
Digital video
encoder
IC601
J605
Y
Cb/B/CvOUT
L632
Pb
Component
video output
Cr/R/COUT
L633
Pr
PCMCLK BCK LRCK DCLK
PDN DACOCS SDTI1 to 3 DCDTI
LOUT1+/-
ROUT1+/-
OP.Amplifier
IC751
AUDIOL/R
J700
Front analog
audio output
D/A Converter
IC750
LOUT2+/-
ROUT2+/-
OP.Amplifier
IC752
SL
SR
J702
Surround analog
audio output
LOUT3+/-
ROUT3+/-
OP.Amplifier
IC753
C
SUB
MUTE
MUTE
Q755 Q756 Q757
J704
Digital
audio output
TX


CN802
CN803
S2 S3 S4 S6 S7
Operation
switch
S802 S803 S804
S805 S806 S807
CN804
CN805
CN806
CN807
DIMMER L
D811
DIMMER R
D810

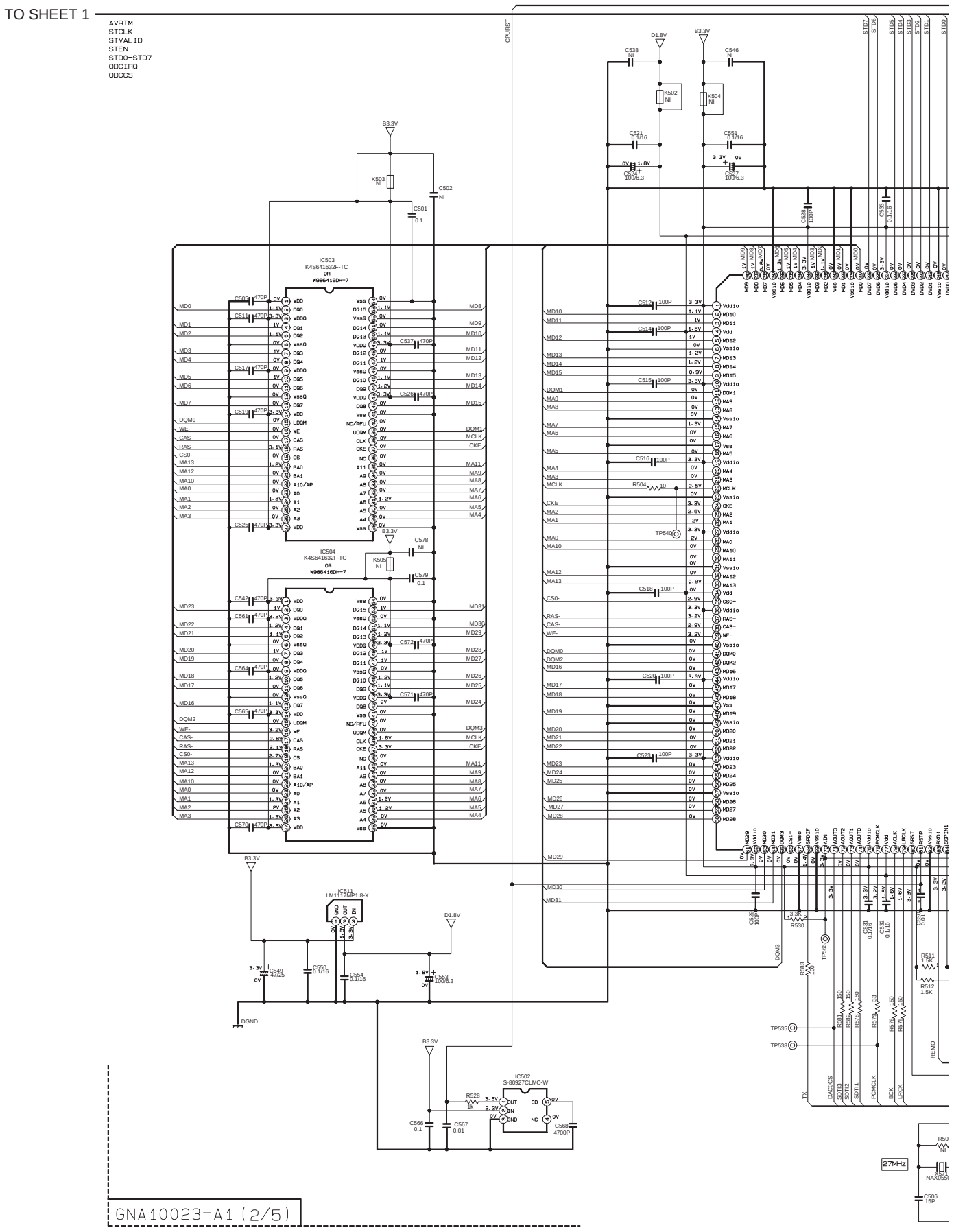
Standard schematic diagrams

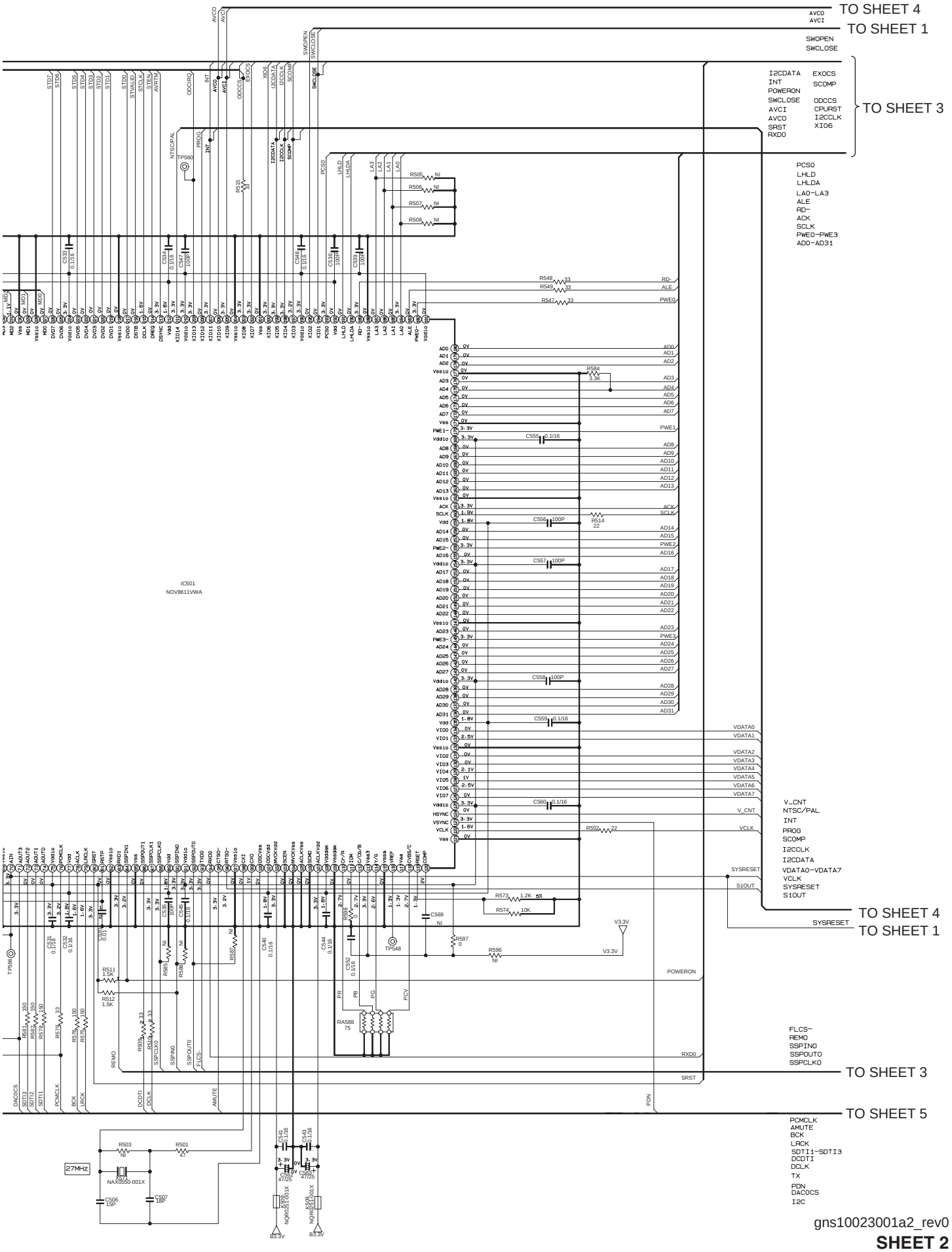
■ Servo control section



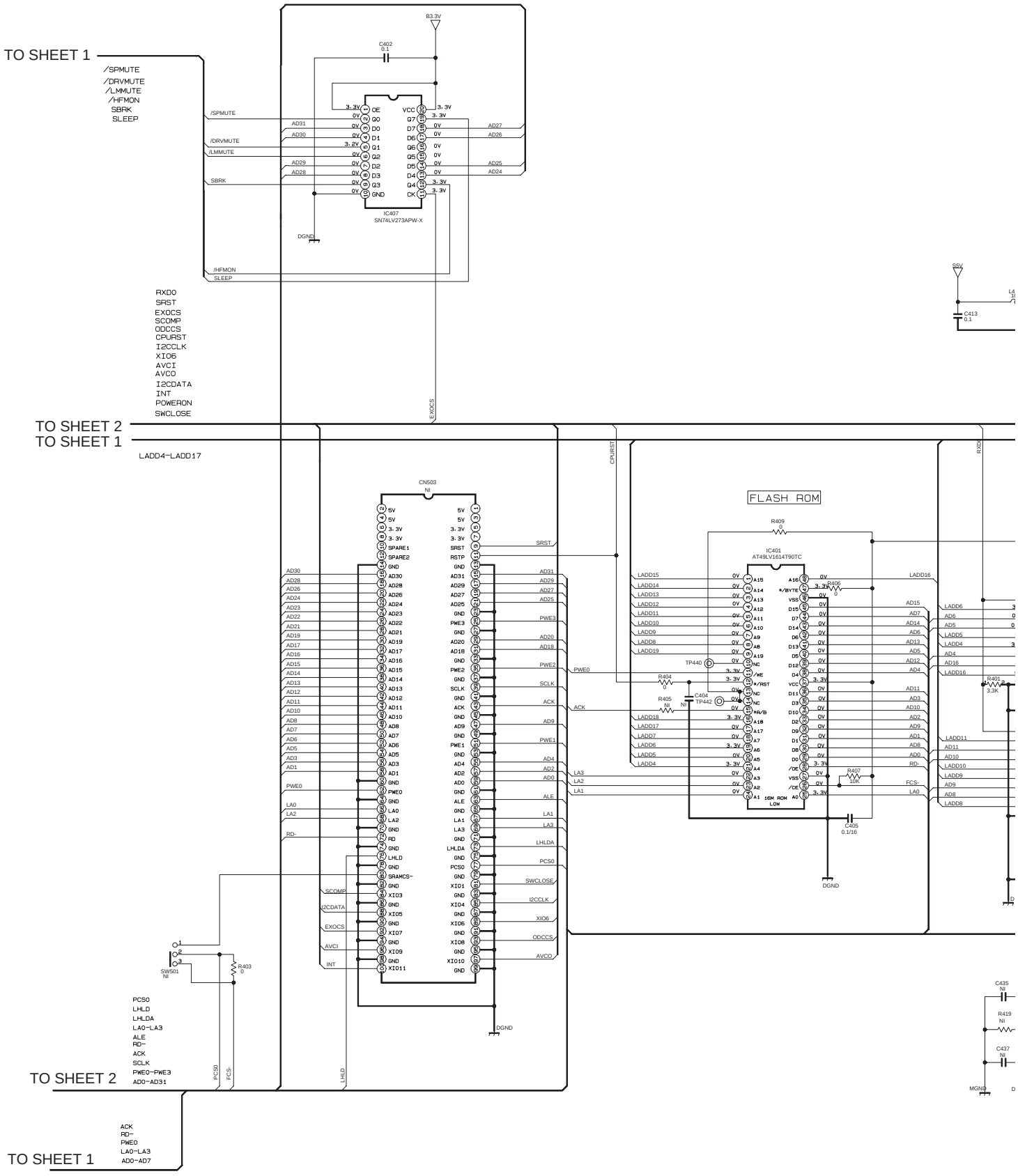

IC103
SN74LV4053APW-X
IC104
NJU7015M-V
IC105
SN74AHC2G66T-X
IC102
SN74AHC1G66HV-X
IC301
BU6064KV2
IC302
SN74AHC1G66HV-X
X301
NAX0566-001X
Q301
2SC4617/R/-X
K302
NQR0251-001X
K303
NQR0251-001X
TO SHEET 2
TO SHEET 3
TO SHEET 3
TO SHEET 2
AVRTM
STCLK
STVALID
STEN
STD0-STD7
ODCIRQ
ODCCS
SYSRESET
ACK
RD-
PWEO
LA0-LA3
AD0-AD7
LADD4-LADD17
/SPMUTE
/DRVMUTE
/LMMUTE
/HFMON
SBRK
SLEEP
SWOPEN
SWCLOSE
SHORT
gns10023001a1_rev0
SHEET 1

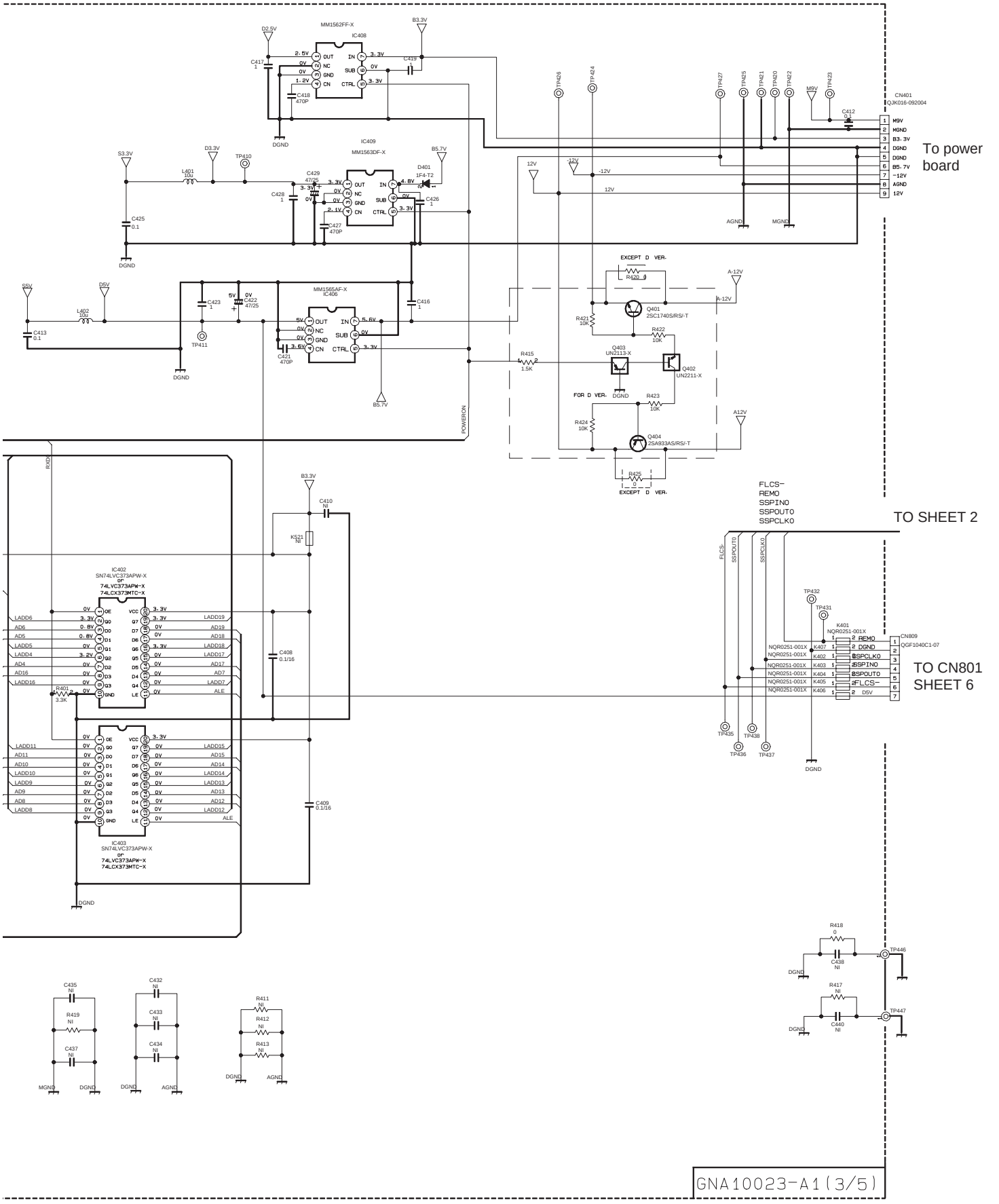
■ AV Decoder section




TO SHEET 4
TO SHEET 1
TO SHEET 3
TO SHEET 4
TO SHEET 1
TO SHEET 3
TO SHEET 5
IC501
NDV8611VWA
TP560
TP546
TP548
27MHz
X501
NAX0550-001X
AVCO
AVCI
SWOPEN
SWCLOSE
I2CDATA
INT
POWERON
SWCLOSE
AVCI
AVCO
SRST
RXD0
EXOCS
SCOMP
ODCCS
CPURST
I2CCLK
XI06
PCS0
LHLD
LHLDA
LA0-LA3
ALE
RD-
ACK
SCLK
PWE0-PWE3
AD0-AD31
VDATA0
VDATA1
VDATA2
VDATA3
VDATA4
VDATA5
VDATA6
VDATA7
V_CNT
NTSC/PAL
INT
PROG
SCOMP
I2CCLK
I2CDATA
VDATA0-VDATA7
VCLK
SYSRESET
S10UT
FLCS-
REMO
SSPINO
SSPOUTO
SSPCLKO
PDN
PCMCLK
AMUTE
BCK
LRCK
SDTI1-SDTI3
DCDTI
DCLK
TX
DACOCS
I2C
POWERON
RXD0
SRST
SYSRESET
gns10023001a2_rev0
SHEET 2
D
E
F
G
2-8

■ Flash ROM section

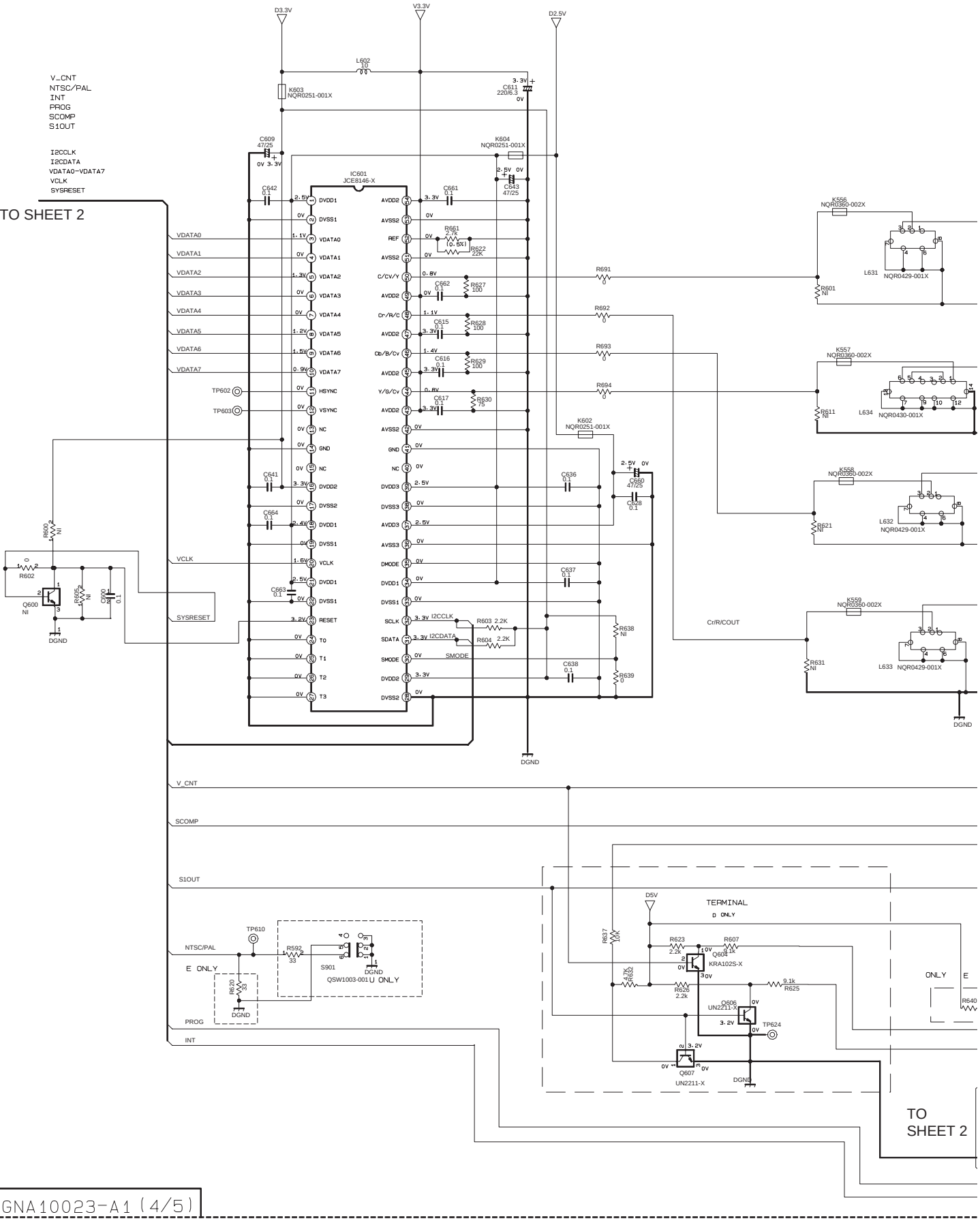




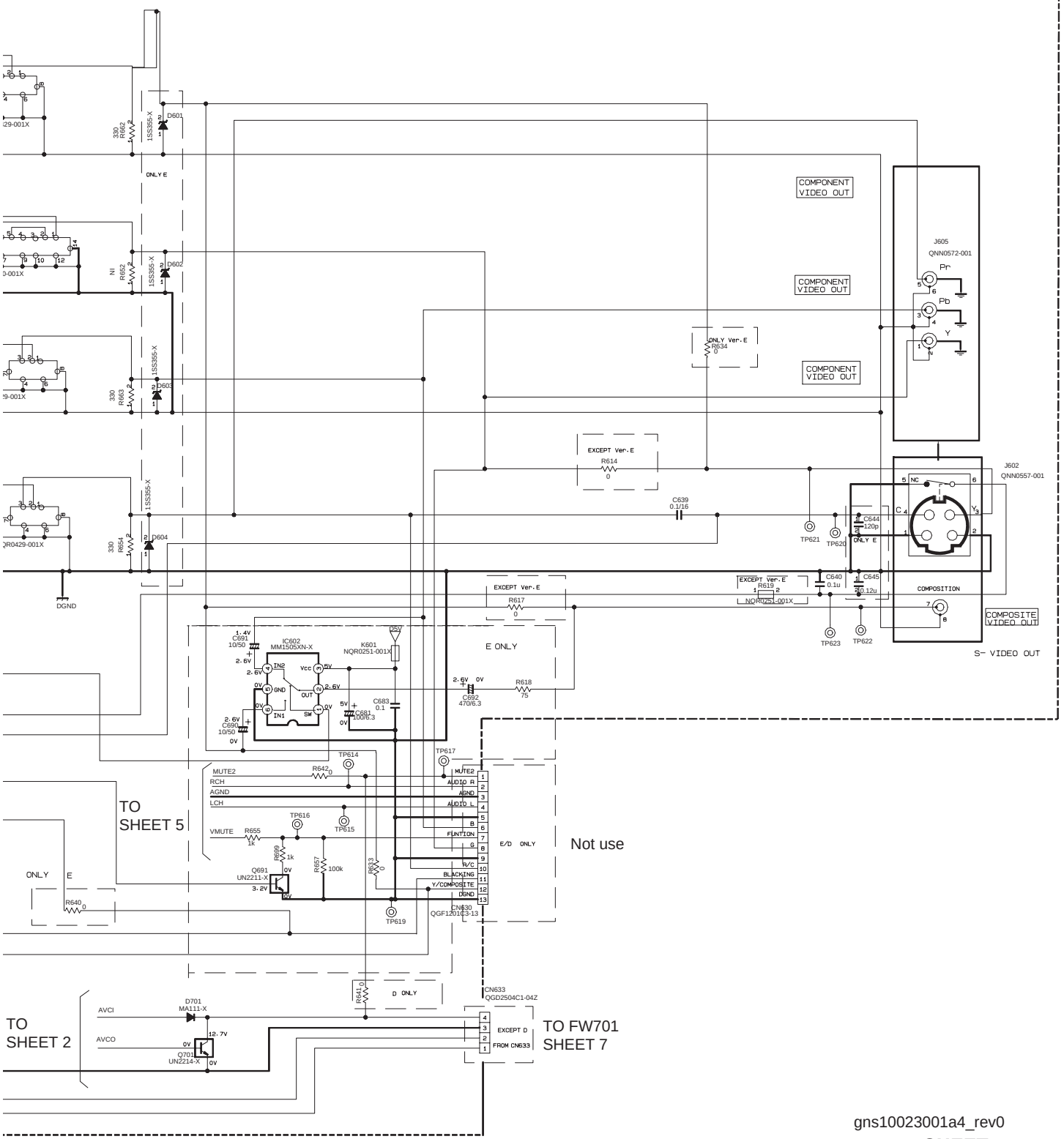
gns10023001a3_rev0

SHEET 3

■ Video signal control and output section

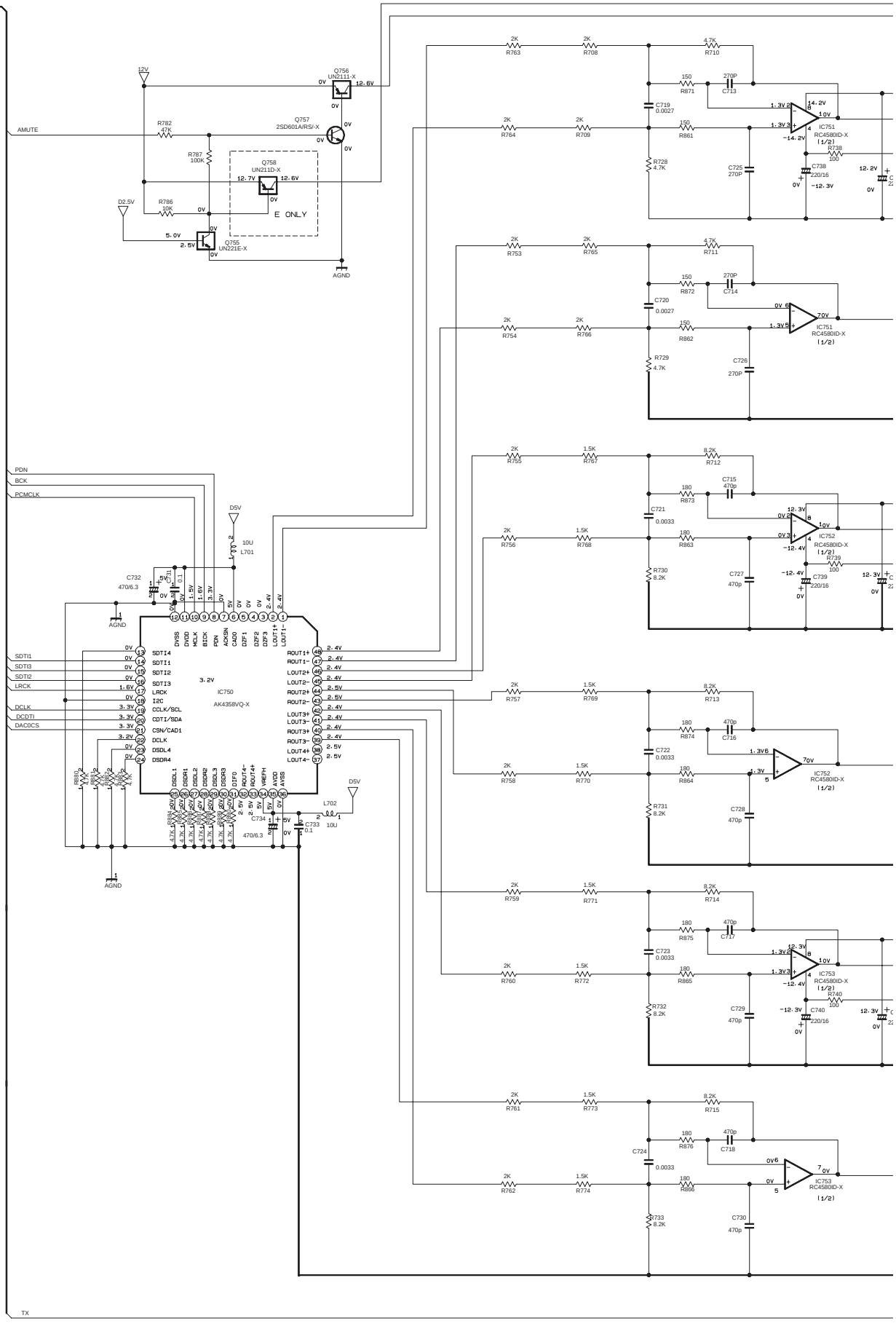


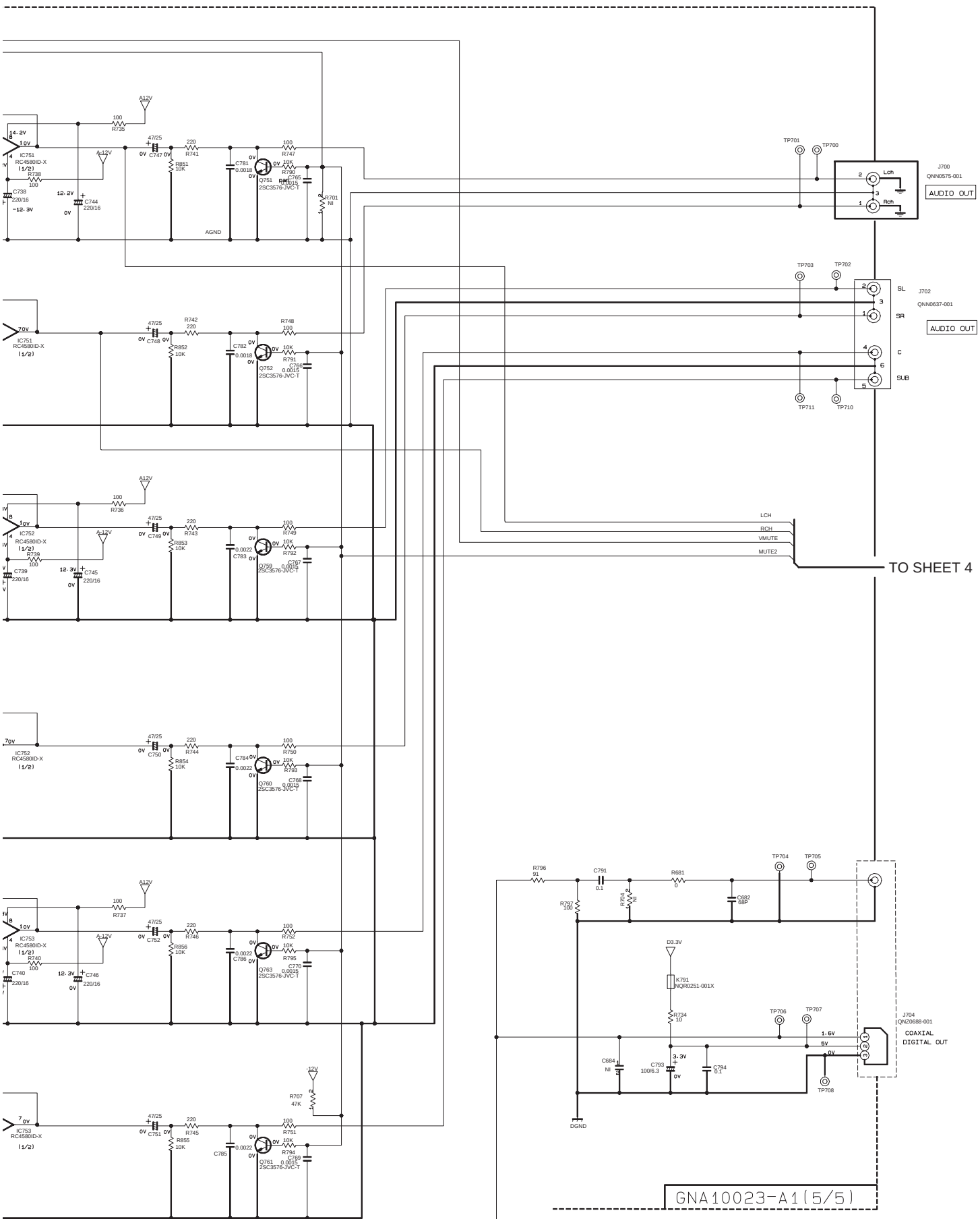
GNA10023-A1 (4/5)


COMPONENT VIDEO OUT
COMPONENT VIDEO OUT
COMPONENT VIDEO OUT
J605
QNN0572-001
Pr
Pb
Y
J602
QNN0557-001
S- VIDEO OUT
COMPOSITE VIDEO OUT
COMPOSITION
ONLY Ver.E
R634
0
EXCEPT Ver.E
R614
0
EXCEPT Ver.E
R619
NQR0251-001X
EXCEPT Ver.E
R617
0
ONLY E
E ONLY
D ONLY
E/D ONLY
EXCEPT D
FROM CN633
Not use
TO SHEET 5
TO SHEET 2
TO FW701 SHEET 7
IC602
MM1505XN-X
K601
NQR0251-001X
CN630
QGF1201C3-13
CN633
QGD2504C1-04Z
D601
D602
D603
D604
D701
MA111-X
Q691
UN2211-X
Q701
UN2214-X
C639
0.1/16
C644
120p
C640
0.1u
C645
10.12u
C691
10/50
C690
10/50
C681
100/6.3
C683
0.1
C692
470/6.3
R618
75
R642
0
R655
1k
R699
1k
R667
100k
R633
0
R640
0
R641
0
R652
R662
R663
R654
330
1SS355-X
TP614
TP615
TP616
TP617
TP619
TP620
TP621
TP622
TP623
DGND
MUTE2
RCH
AGND
LCH
VMUTE
AUDIO R
AUDIO L
B
FUNTION
G
R/C
BLACKING
V/COMPOSITE
DGND
AVCI
AVCO
gns10023001a4_rev0

SHEET 4

■ Audio signal control and output section

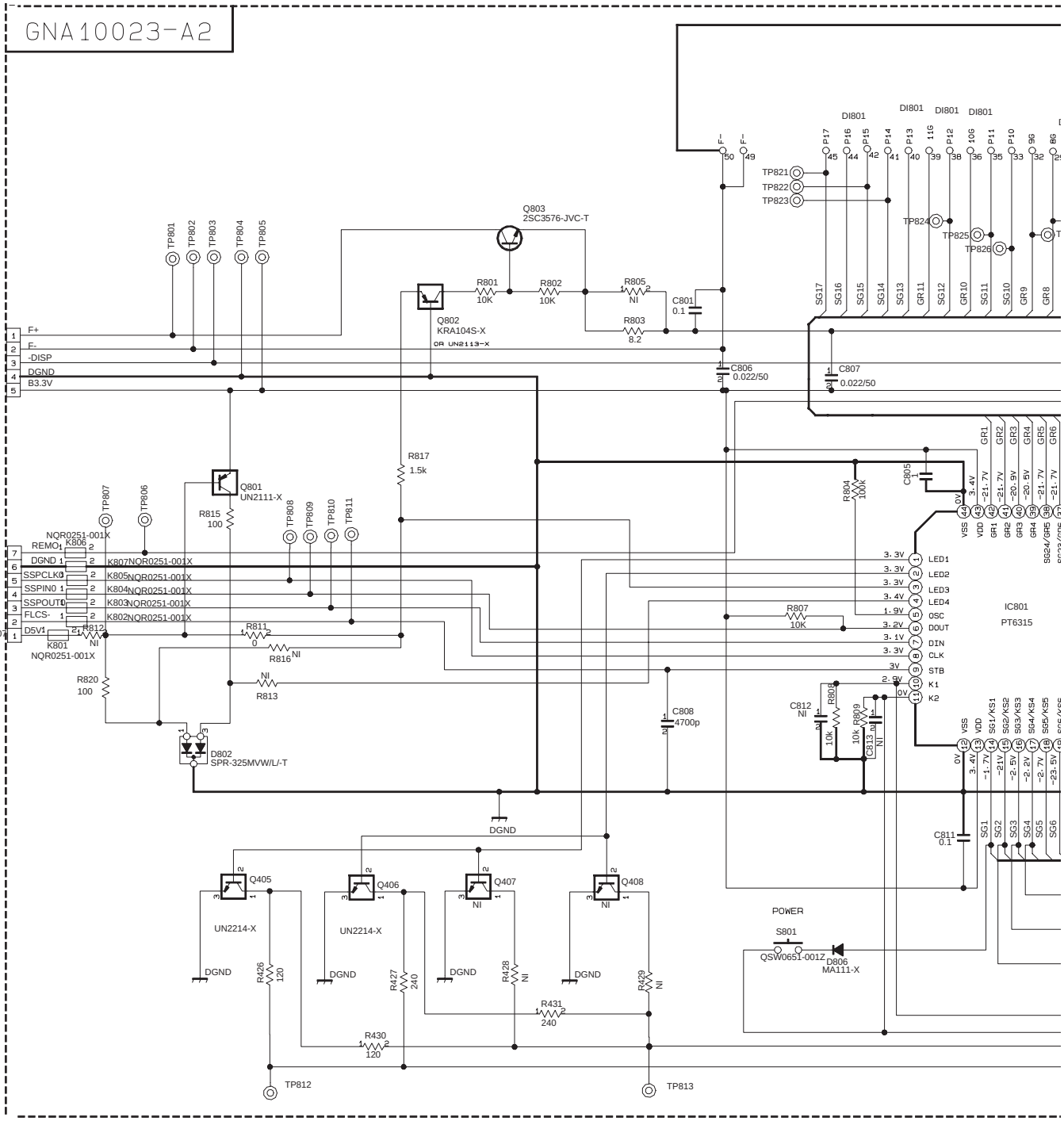


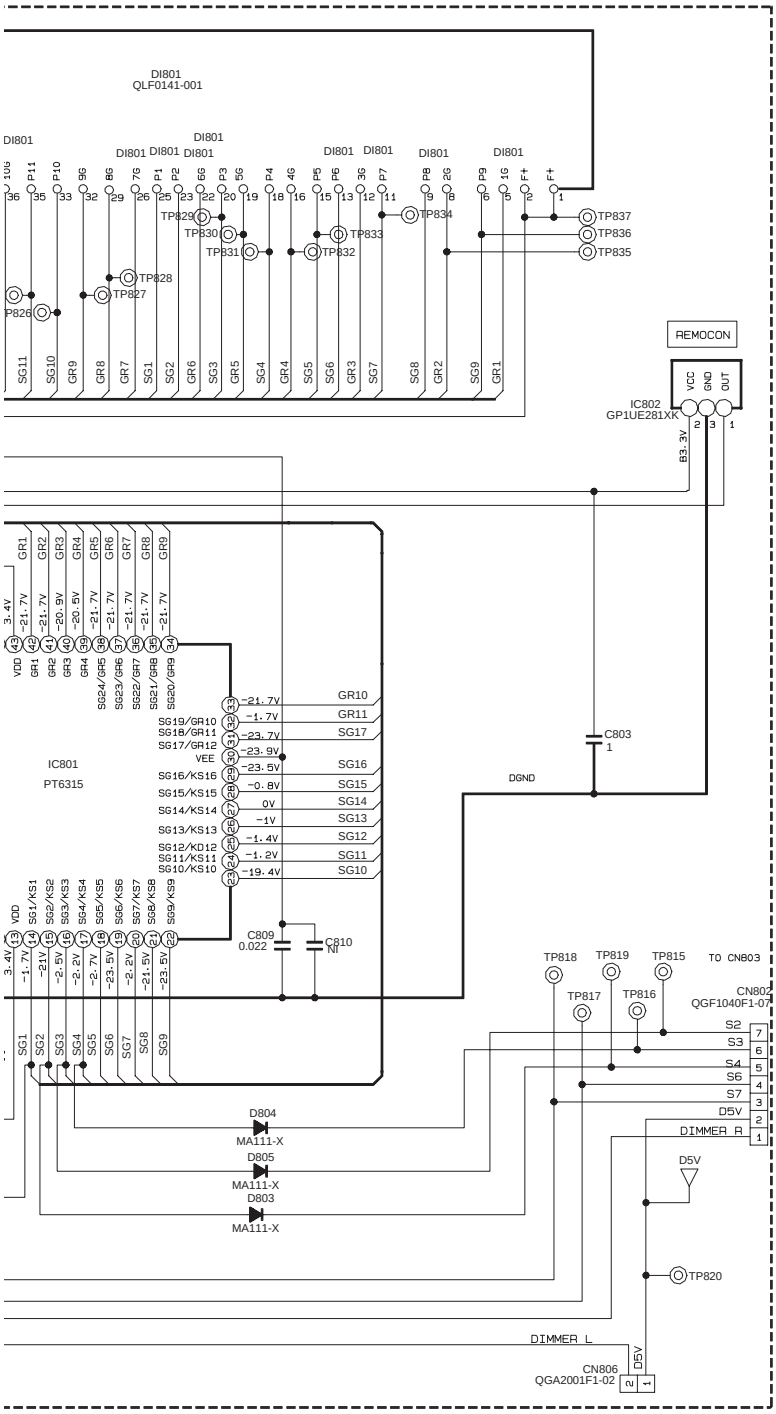


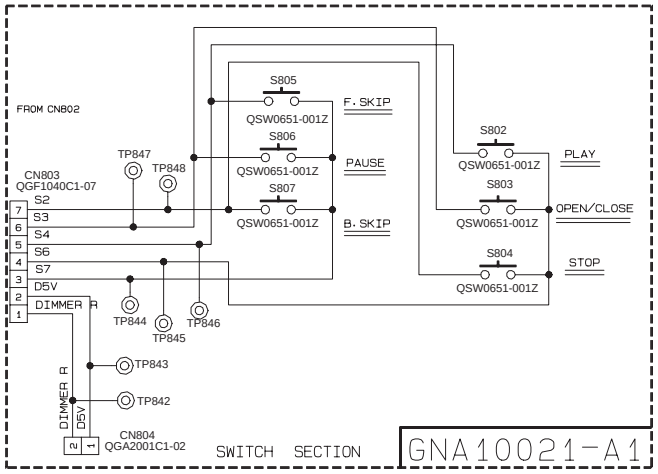
gns10023001a5_rev0

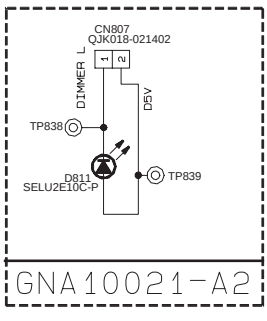
SHEET 5

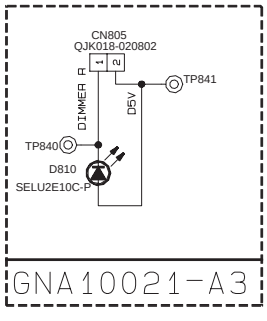
■ FL Display and operation switch section







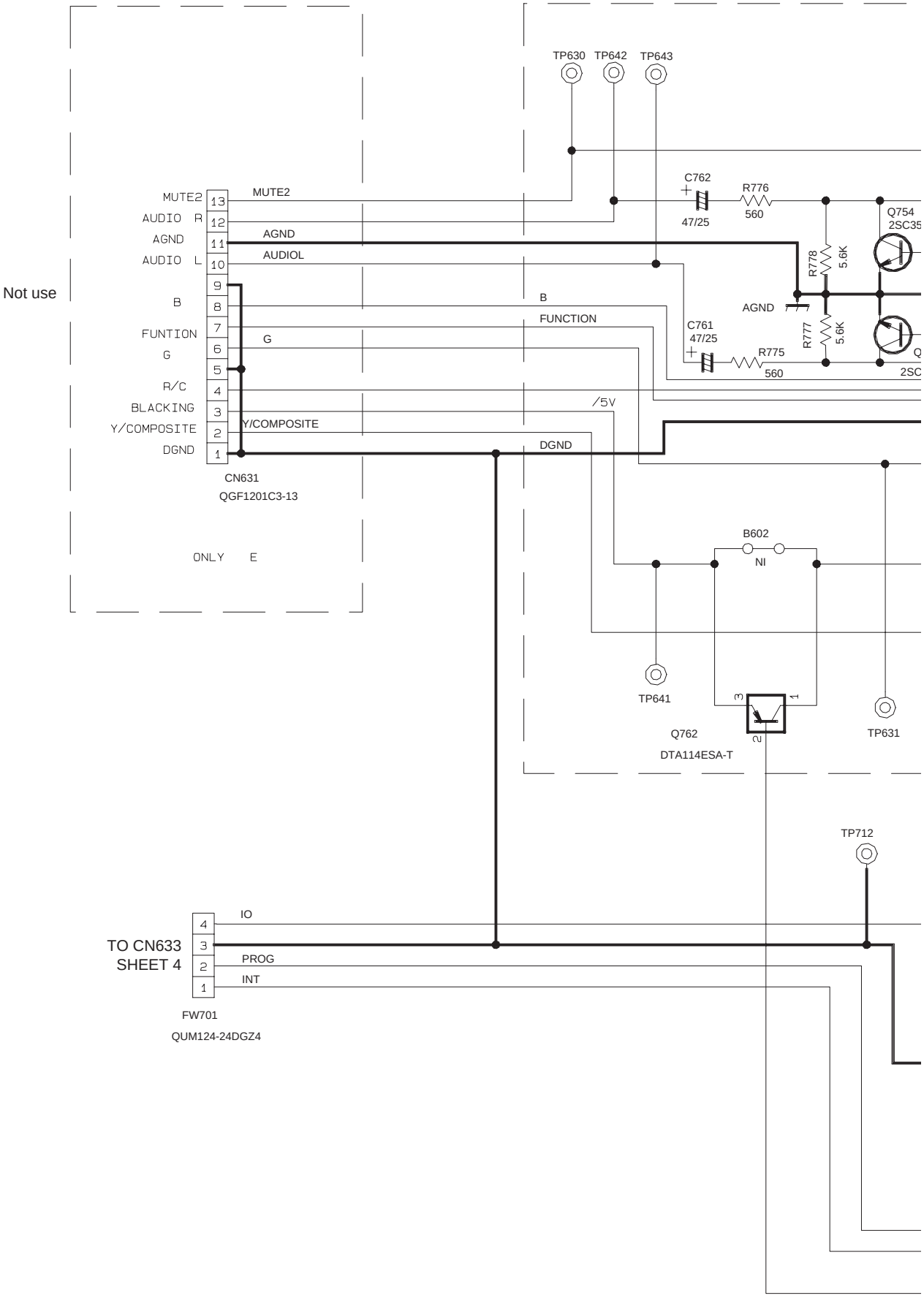


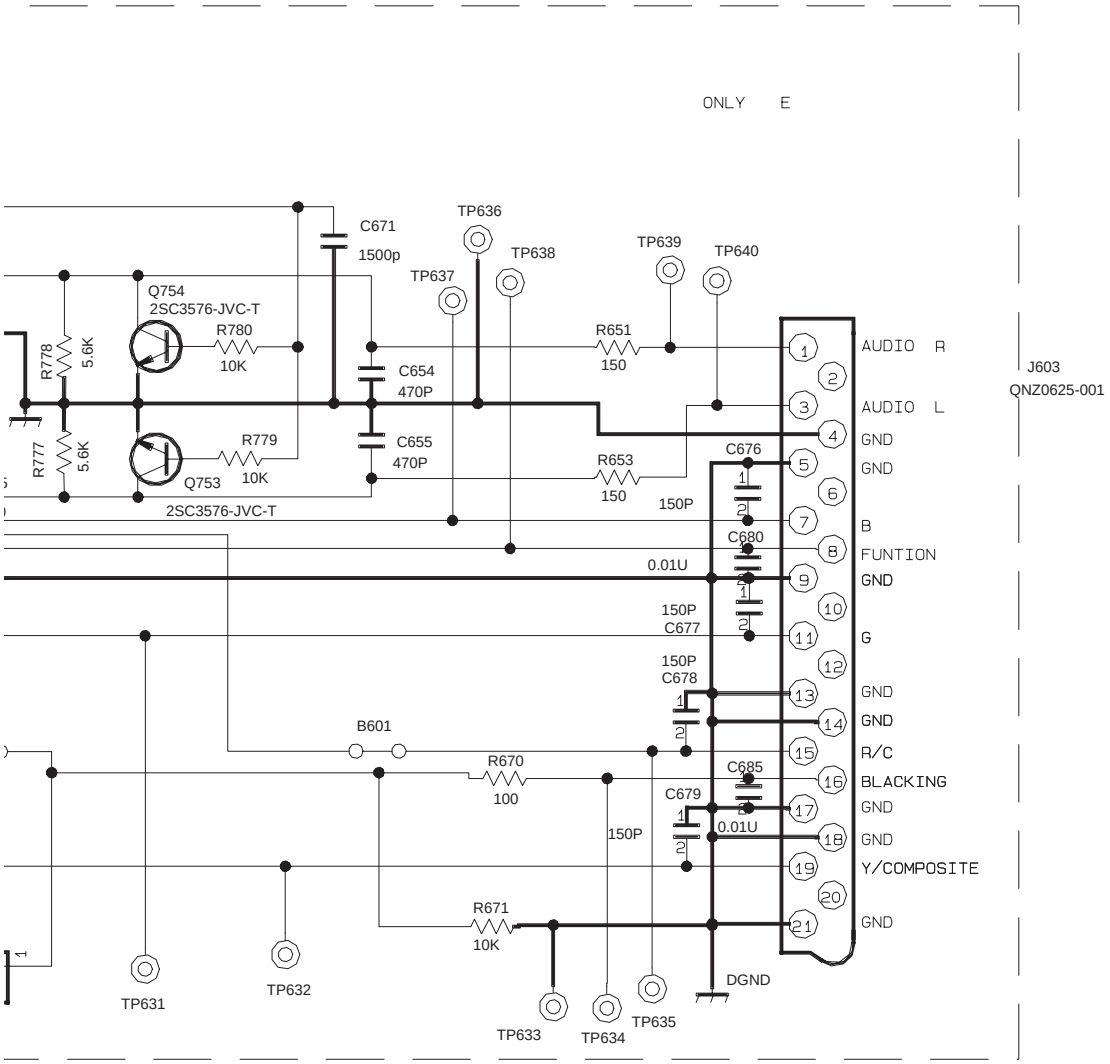


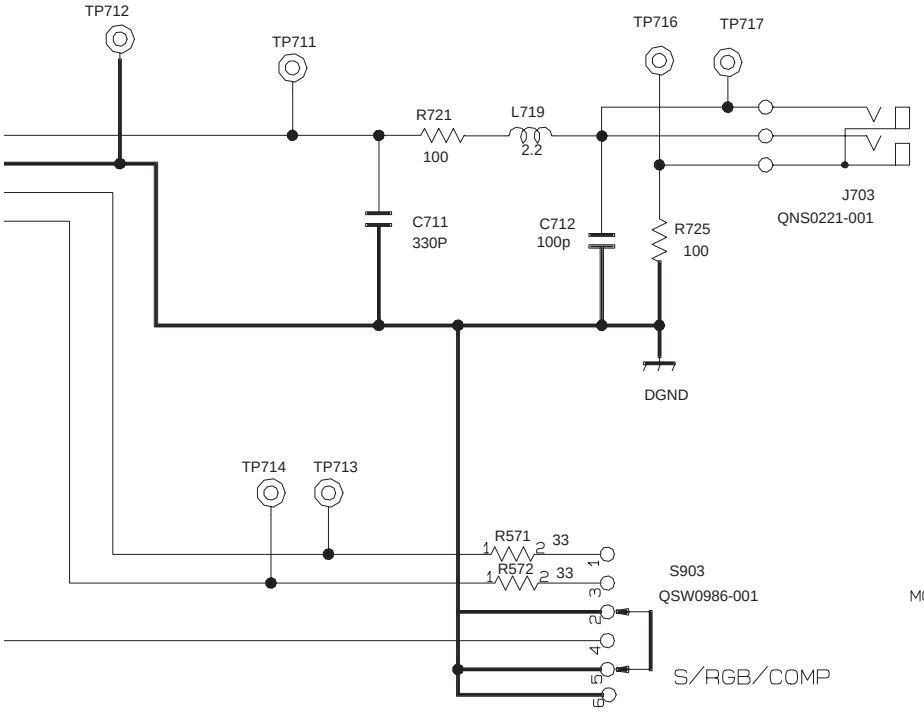
gns10023001a6_rev0

SHEET 6

■ SCART Terminal section







EXCEPT D

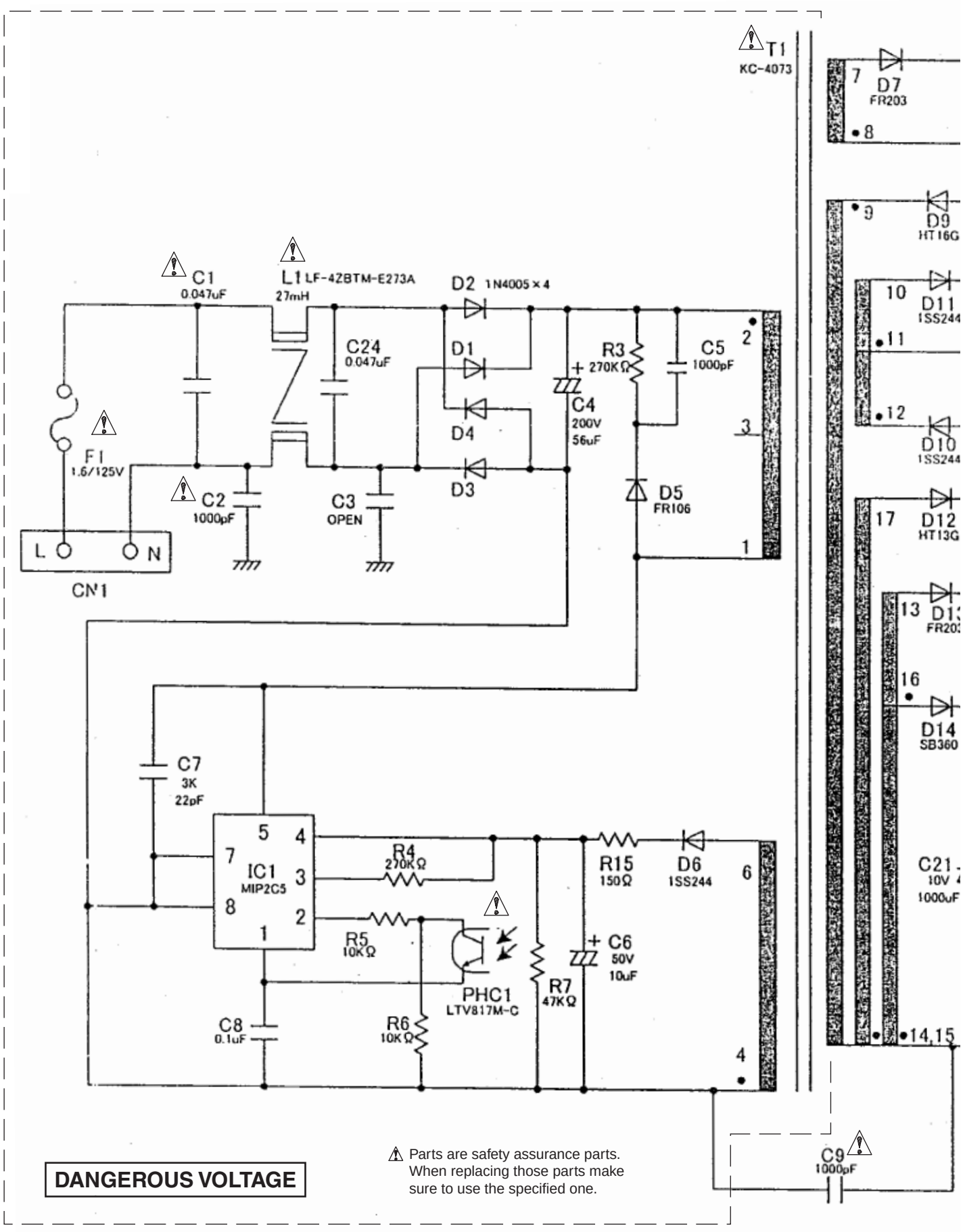
MODEL

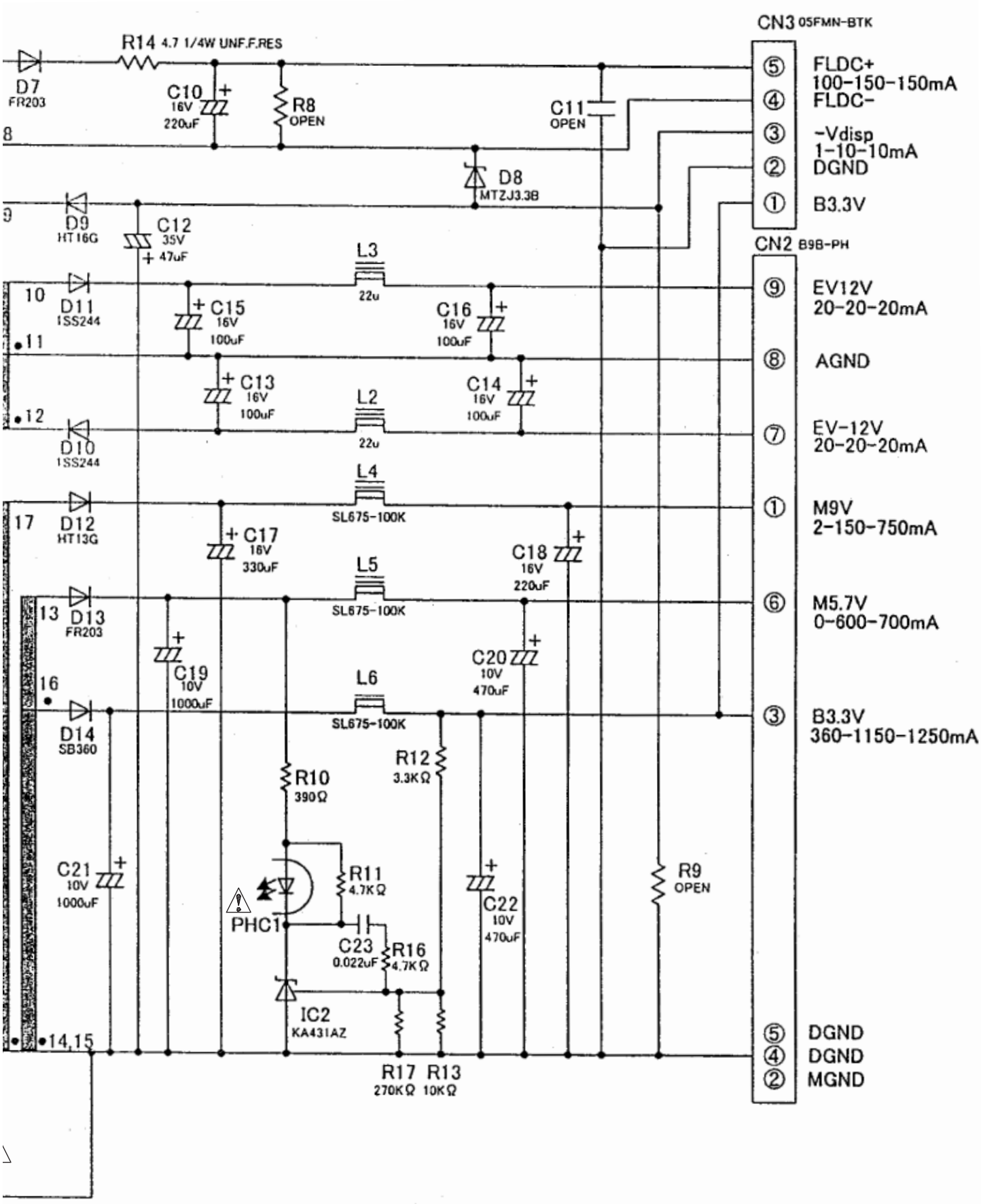
XV-N510

gns10023001a7_rev0

SHEET 7

■ Power supply section <04> QAL0579-001



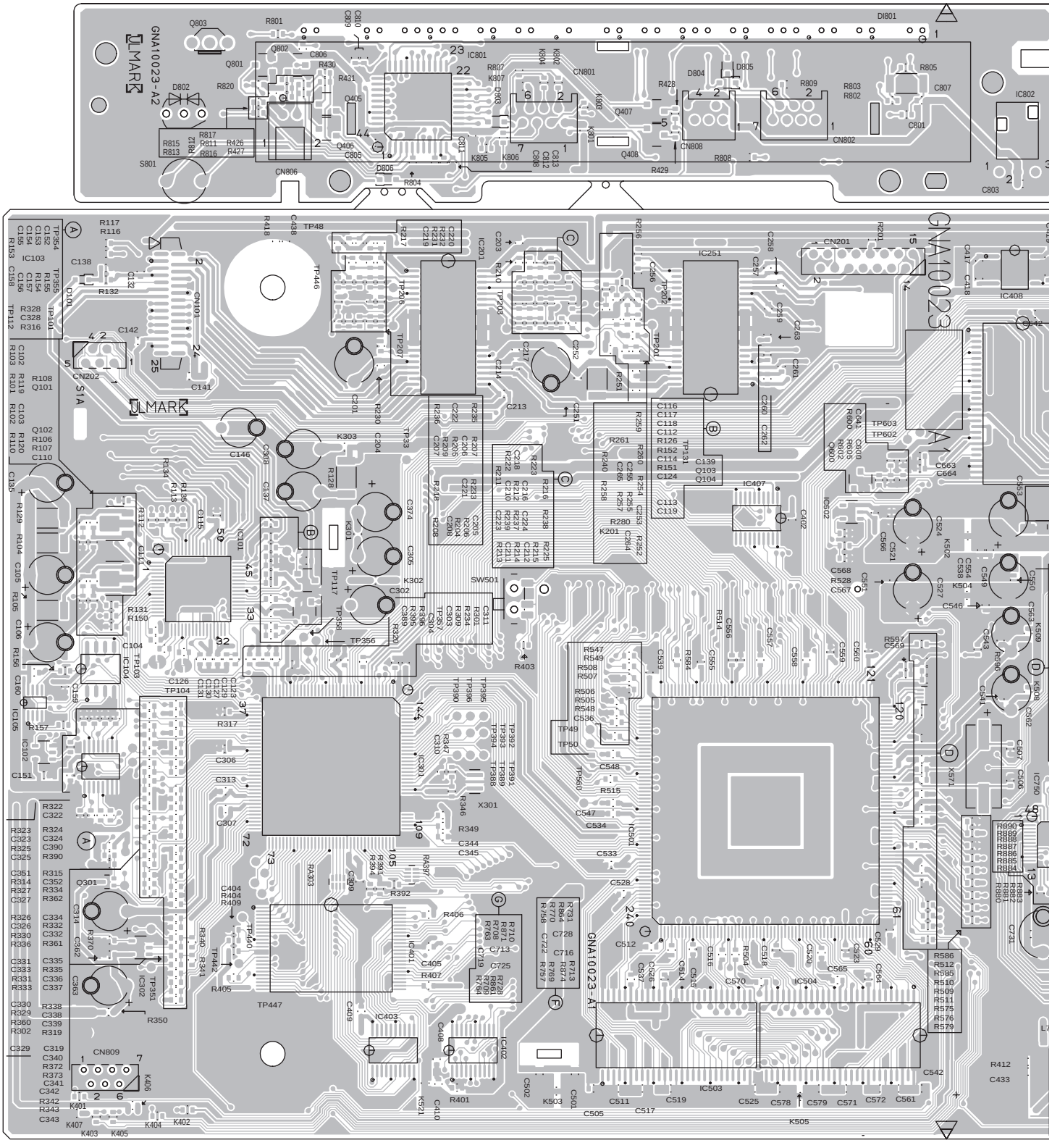


4C-M5-0194_rev0

SHEET 8

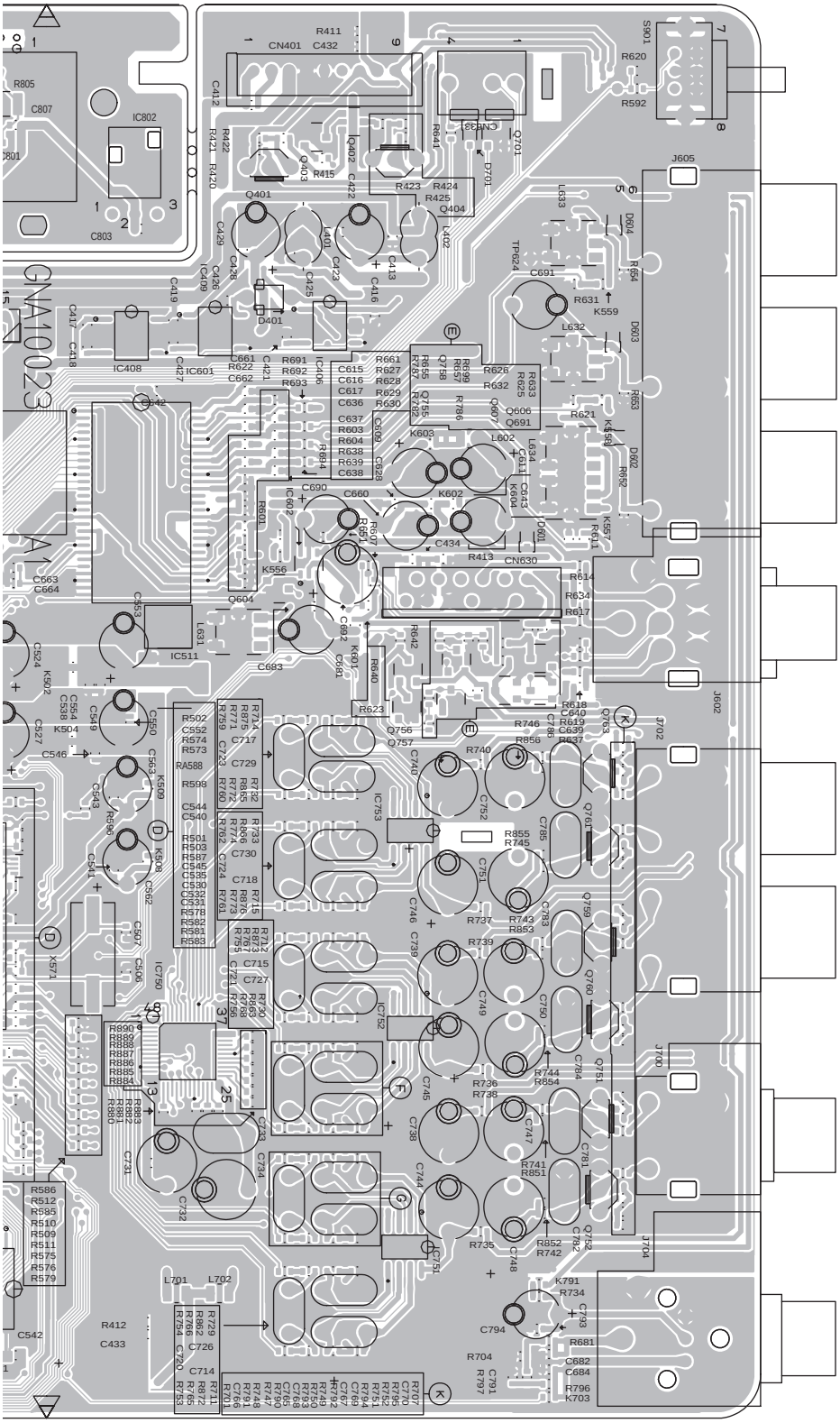
Printed circuit boards

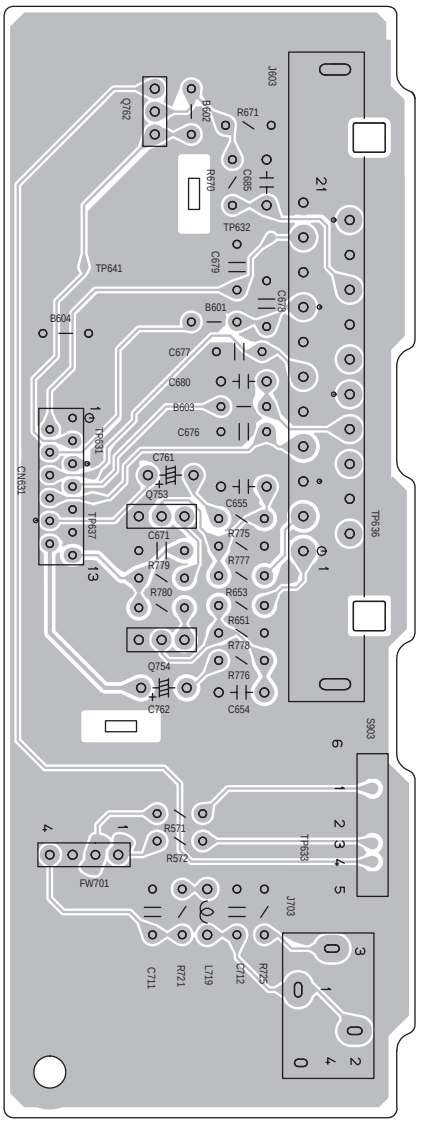
■ Main board (Forward side) <01> GNB10023-001A



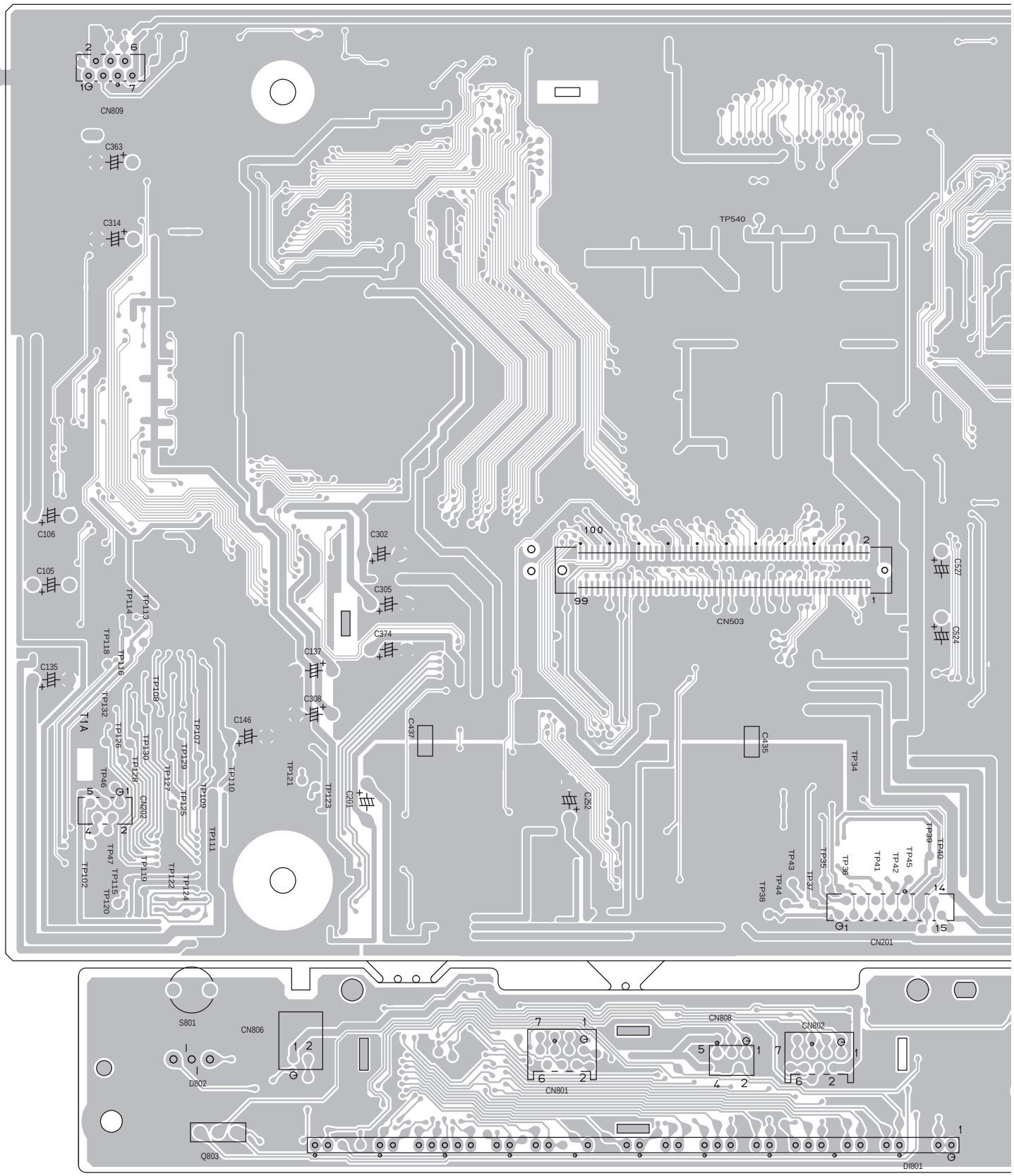
A B C D

■ Scart board <03> GNB10022-001C



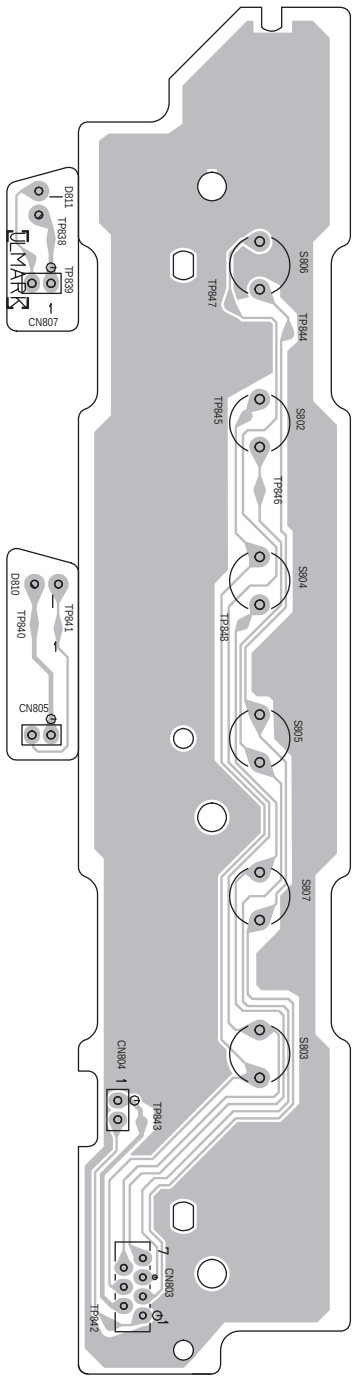


■ Main board (Reverse side) <01> GNB10023-001A



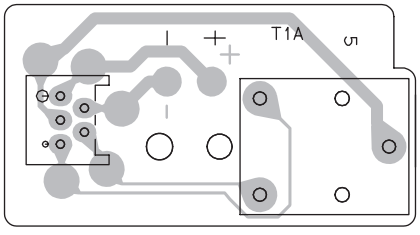
■ Operation switch board

<02> GNB10021-001A



■ Switch board

<05> LEB10070-001A



JVC

Victor Company of Japan, Limited
AV & MULTIMEDIA COMPANY DIGITAL VIDEO STORAGE CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

No.YD016SCH

Printed in Japan
WPC

PARTS LIST

[XV-N510B,XV-N512S]

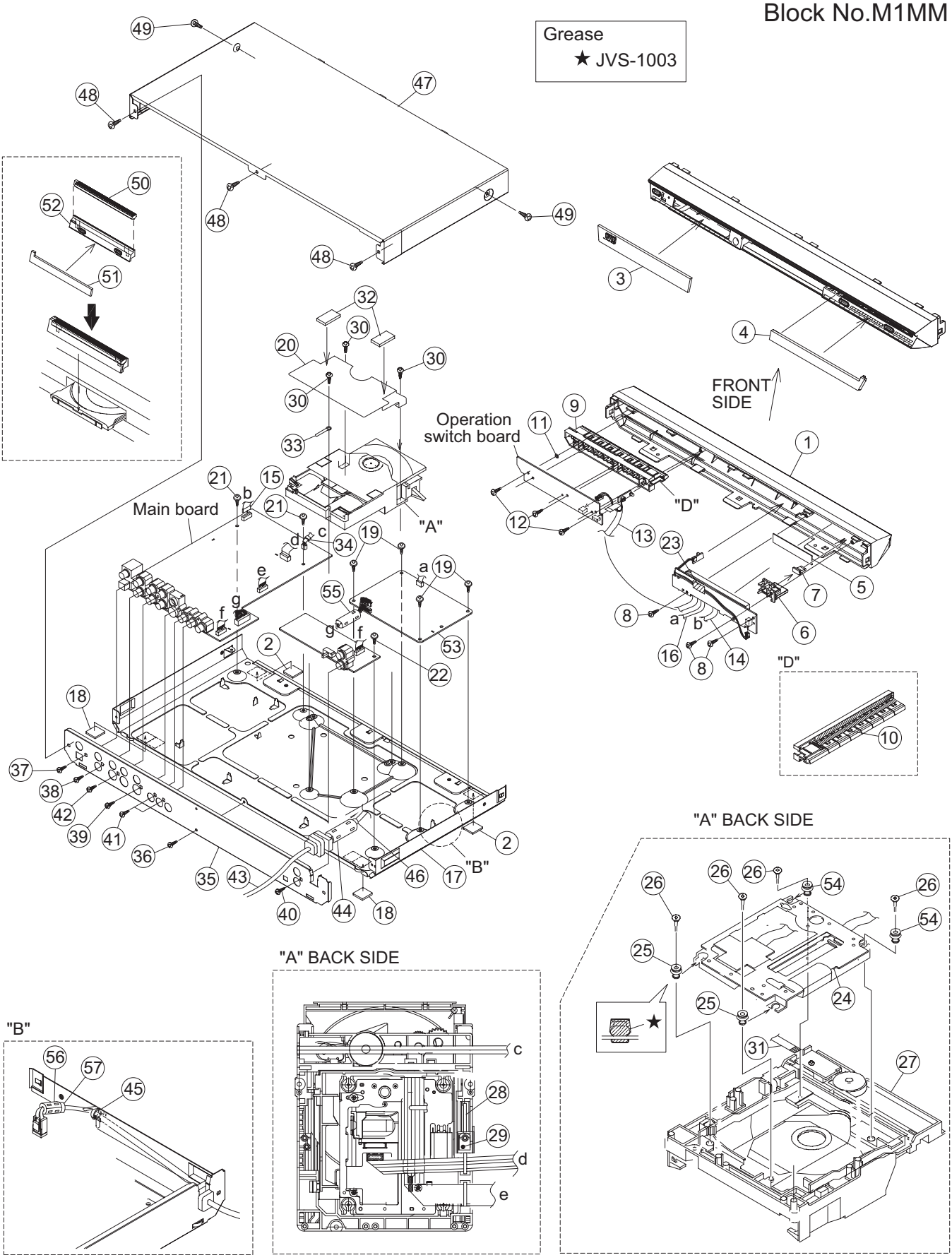
* All printed circuit boards and its assemblies are not available as service parts.
* (x_) in a description column shows the number of the used part.

Area Suffix	
J	U.S.A.
C	Canada

- Contents -

Exploded view of general assembly and parts list

Block No.M1MM



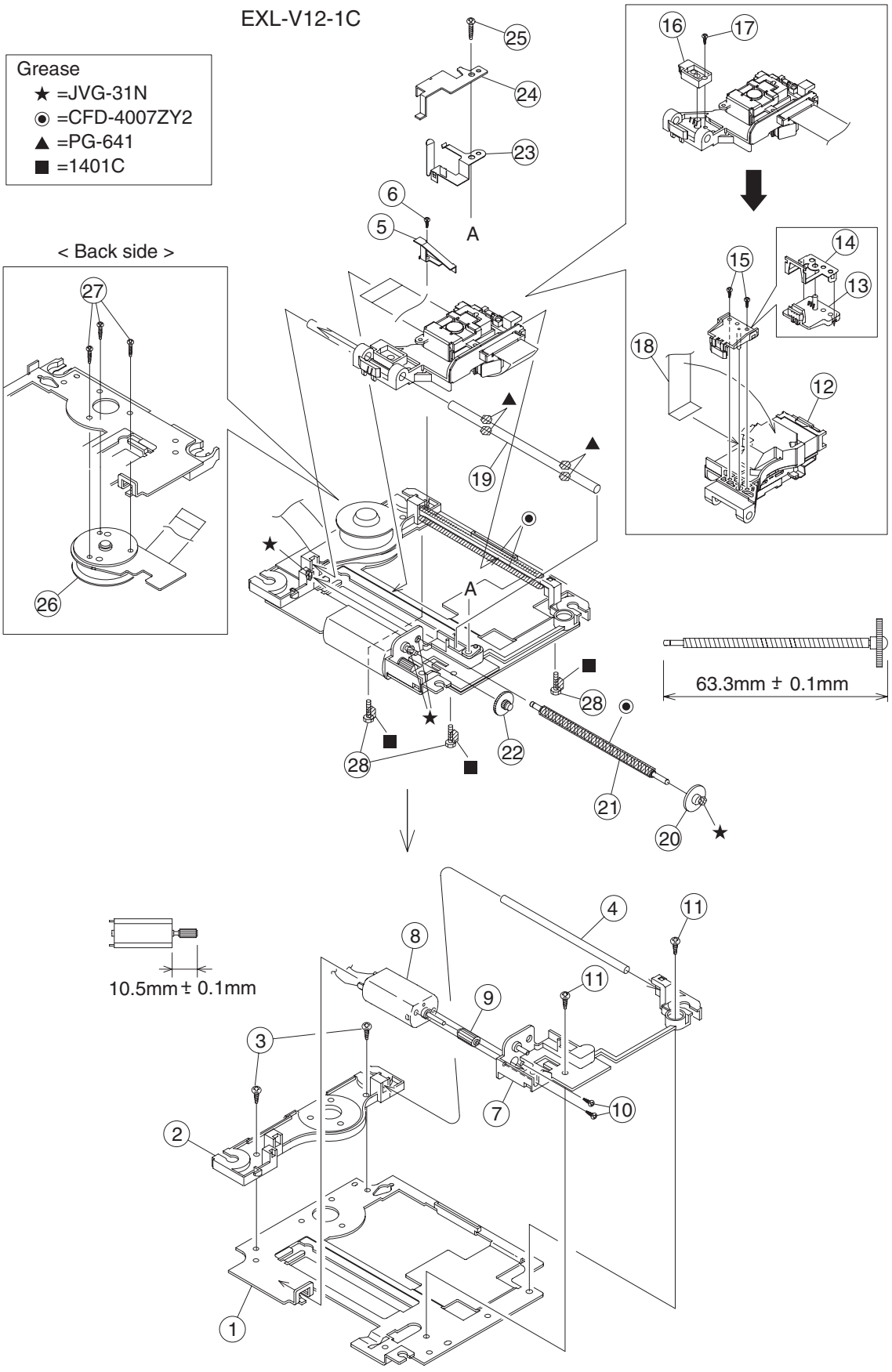
General assembly

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

⚠ Symbol No.	Part No.	Part Name	Description	Local
1	GN10055-006A	FRONT PANEL		only 510
1	GN10055-007A	FRONT PANEL		only 512
2	GN40054-002A	FELT SPACER	FRONT FOOT(x2)	
3	GN20092-001A	WINDOW SCREEN		only 510
3	GN20092-009A	WINDOW SCREEN		only 512
4	GN20093-005A	WINDOW SCREEN		only 510
4	GN20093-014A	WINDOW SCREEN		only 512
5	GN30092-001A	FL SCREEN		only 510
5	GN30092-002A	FL SCREEN		only 512
6	GN20091-001A	PUSH BUTTON	BK POWER	only 510
6	GN20091-002A	PUSH BUTTON	SL POWER	only 512
7	GN30093-001A	INDICATOR	POWER	
8	QYSDSF2608ZA	TAP SCREW	POWER SW.CB.(x3)	
9	GN20090-204A	PUSH BUTTON	BK PLAY	only 510
9	GN20090-205A	PUSH BUTTON	SL PLAY	only 512
10	GN30006-026A	SPACER		
11	GN30007-011A	SPACER		
12	QYSDSF2608ZA	TAP SCREW	PLAY SW.CB.(x3)	
13	QUQ210-0725DJ	FFC WIRE	VFD+SW	
14	QUQ210-0744CJ	FFC WIRE	VFD+MAIN	
15	QQR1609-001	F.CORE		
16	QUQ210-0508CJ	FFC WIRE	VFD+POWER	
17	GN10056-003A	CHASSIS BASE		
18	GN40054-002A	FELT SPACER	REAR FOOT(x2)	
19	QYSBSGG3006EA	TAP SCREW	POWER CB+CHASSIS(x4)	
20	GN30082-001A	SHIELD		
21	QYSBSGG3006EA	TAP SCREW	MAIN CB+CHASSIS(x2)	
22	QYSBSGG3006EA	TAP SCREW	SCART PCB+CHASS	
23	LE30001-031A	SPACER		
24	----------	TRAVERSE MECHANISM		
25	LE40900-003A	INSULATOR	REAR(x2)	
26	LE40901-001A	SPECIAL SCREW	FOR INSULATOR(x4)	
27	----------	LOADING MECHANISM		
28	GN30102-001A	FFC HOLDER		
29	QYSDSF2608ZA	TAP SCREW	FOR FFC HOLEDR	
30	QYSBSG3008ZA	TAP SCREW	MECHA+CHASSIS(x3)	
31	QUQ210-0520CJ	FFC WIRE		
32	GN30006-024A	SPACER	(x2)	
33	VKZ4001-110	WIRE HOLDER		
34	QQR1426-001	F.CORE		
35	GN20095-051A	REAR PANEL		only 510
35	GN20095-052A	REAR PANEL		only 512
36	QYSBSGY3008MA	TAP SCREW	REAR+CHASSIS	
37	QYSBSGY3008MA	TAP SCREW	OPT/COAXIAL	
38	QYSBSGY3008MA	TAP SCREW	AUDIO OUT	
39	QYSBSGY3008MA	TAP SCREW	VIDEO OUT	
40	QYSBSGY3008MA	TAP SCREW	COMPU LINK	
41	QYSBSGY3008MA	TAP SCREW	COMPONENT(x2)	
42	QYSBSGY3008MA	TAP SCREW	5.1CH OUT	
⚠ 43	QMPD450-200-JN	POWER CORD(US/CA)	2m BLACK	
44	QQR0491-001	FERRITE CORE	TDK (GRAY)	
45	QZW0004-001	WIRE CLAMP		
46	QZW0004-001	WIRE CLAMP		
47	GN20094-003A/S/	METAL COVER		only 510
47	GN20094-004A/S/	METAL COVER		only 512
48	QYSBSGG3008EA	TAP SCREW	REAR(x3)	
49	QYSDSG3008MA	TAP SCREW	BK SIDE(x2)	only 510
49	QYSDSG3008NA	TAP SCREW	SL SIDE(x2)	only 512
50	GN20097-004A	FITTING LENS(M	LEFT	only 510
50	GN20097-005A	FITTING LENS(M	LEFT	only 512
51	GN20096-006A	WINDOW SCREEN		only 510
51	GN20096-012A	WINDOW SCREEN		only 512
52	GN20089-001A	FITTING BASE		only 510
52	GN20089-002A	FITTING BASE		only 512
⚠ 53	QAL0579-001	POWER CB ASSY		
54	LE40900-005A	INSULATOR	FRONT(x2)	
55	QQR0491-001	FERRITE CORE	TDK (GRAY)	
56	QQR0594-001	NOISE FILTER		
57	QZW0004-001	WIRE CLAMP		

DVD Traverse mechanism assembly and parts list

Block No.M2MM



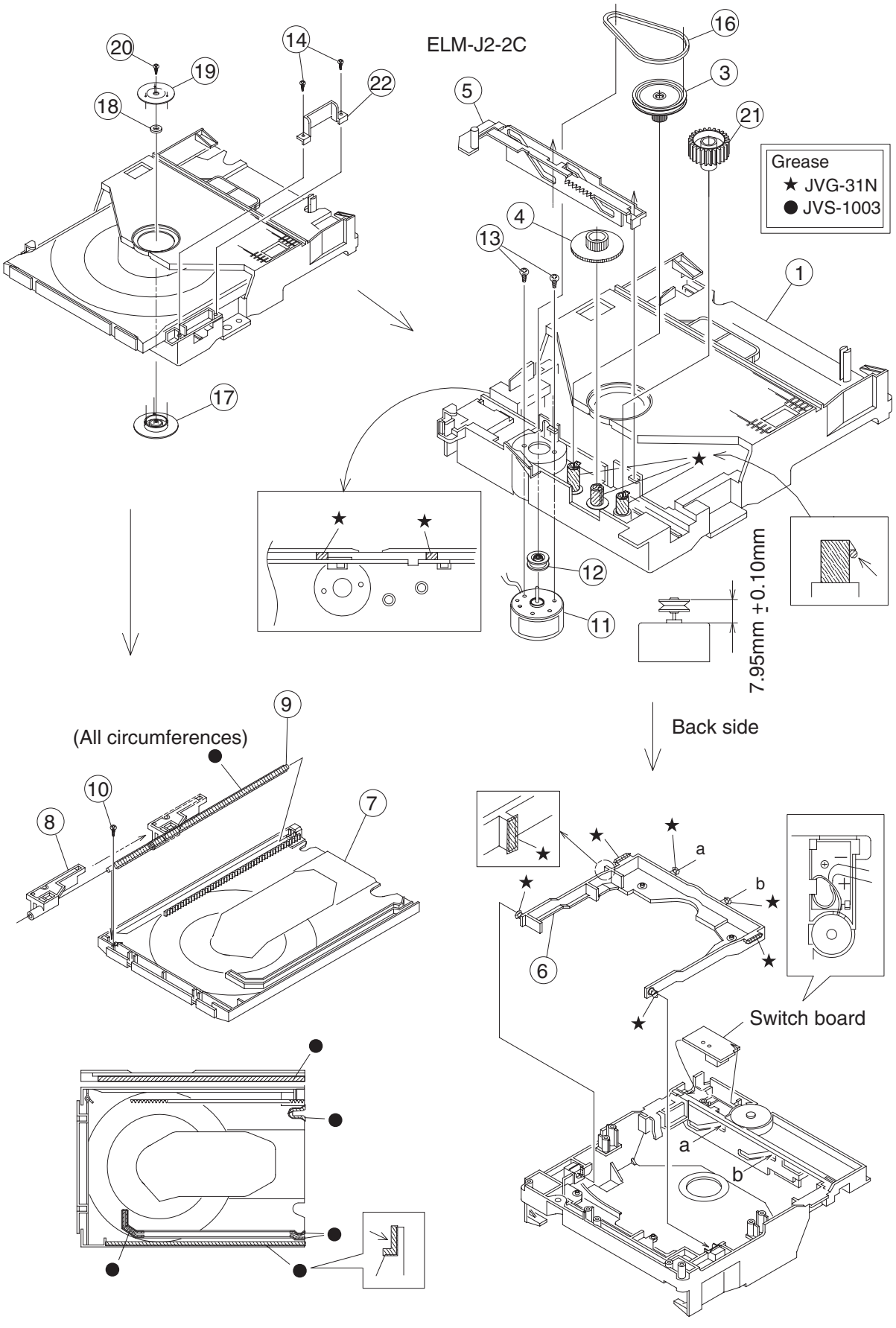
DVD Traverse mechanism

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

⚠ Symbol No.	Part No.	Part Name	Description	Local
1	LE20697-003A	MECHA BASE		
2	LE20699-002A	SPINDLE BASE		
3	QYSDST2604M	SCREW	M2.6 x 4mm(x2)	
4	LE40931-001A	SHAFT		
5	LV33991-001A	ADJUST SPRING		
6	QYSPSFU2040M	TAP SCREW	M2 x 4mm	
7	LE20698-004A	FEED HOLDER		
8	QAR0215-001	FEED MOTOR		
9	LV41510-001A	FEED GEAR T		
10	QYSPSPU2040M	SCREW	M2 x 4mm(x2)	
11	QYSDST2604M	SCREW	M2.6 x 4mm(x2)	
12	QAL0569-001	PICK UP		
13	LE20700-001A	SW ACTUATOR		
14	LE31067-002A	LEAD SPRING		
15	QYSPSFU1740Z	TAP SCREW	M1.7 x 4mm(x2)	
16	LE40929-001A	SW.LEVER		
17	QYSPSFU1740Z	TAP SCREW	M1.7 x 4mm	
18	QUQ105-2528AC	FFC		
19	LE40931-001A	SHAFT		
20	LE40855-002A	FEED GEAR E		
21	LE40918-001A	LEAD SCREW		
22	LE40930-001A	FEED GEAR M		
23	LE40928-002A	THURUST SPRING		
24	LE40927-002A	PLATE		
25	QYSDST2614Z	TAPPING SCREW	M2.6 x 14mm	
26	QAR0311-001	S.MOTOR		
27	QYSPSPU1740Z	SCREW	M1.7 x 4mm(x3)	
28	LE40858-002A	SPECIAL 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	LE10275-006A	LOADING BASE		
3	LE31043-001A	PULLEY GEAR		
4	LE31042-001A	MIDDLE GEAR		
5	LE20665-005A	SLIDE CAM		
6	LE20666-003A	ELEVATOR		
7	LE10276-002A	TRAY		
8	LE31045-001A	BUSHING		
9	LE40898-001A	SHAFT		
10	QYSSSF2008Z	TAP SCREW	M2 x 8mm	
11	QAR0197-001	MOTOR		
12	LV42087-002A	MOTOR PULLEY		
13	QYSPSPU1730Z	SCREW	FOR MOTOR(x2)	
14	QYSDSF2008Z	TAP SCREW	M2 x 8mm(x2)	
16	LE40897-001A	BELT		
17	LE31046-003A	CLAMPER		
18	LV42930-003A	MAGNET		
19	LE40899-001A	YOKE		
20	LE40906-001A	SPECIAL SCREW		
21	LE31044-001A	IDLE GEAR		
22	LE40937-003A	LEAF SPRING		

Electrical parts list

Main board

Block No. [0][1]

⚠ Symbol No.		Part No.	Part Name	Description	Local
IC101		AN8703FH-V	IC		
IC102		SN74AHC1G66HV-X	IC		
IC103		SN74LV4053APW-X	IC		
IC104		NJU7015M-W	IC		
IC105		SN74AHC2G66T-X	IC		
IC201		BA5983FM-X	IC		
IC251		BA6679FM-X	LSI		
IC301		BU6064KV2	IC		
IC302		SN74AHC1G66HV-X	IC		
IC401		AT49BV162H10D5	IC (FLASH)		
IC402		SN74LVC373APW-X	IC(DIGITAL)		
IC402	or	74LVC373APW-X	IC(DIGITAL)		
IC402	or	74LCX373MTC-X	IC(DIGITAL)		
IC403		SN74LVC373APW-X	IC(DIGITAL)		
IC403	or	74LVC373APW-X	IC(DIGITAL)		
IC403	or	74LCX373MTC-X	IC(DIGITAL)		
IC406		MM1565AF-X	IC	5.0V Regulator	
IC407		SN74LV273APW-X	IC		
IC408		MM1562FF-X	IC	2.5V Regulator	
IC409		MM1563DF-X	IC	3.3V Regulator	
IC501		NDV8611VWA	IC		
IC502		S-80927CLMC-W	IC		
IC503		W986416DH-7	IC		
IC503	or	K4S641632F-TC75	IC(DIGITAL)		
IC504		W986416DH-7	IC		
IC504	or	K4S641632F-TC75	IC(DIGITAL)		
IC511		LM1117MP1.8-X	IC		
IC601		JCE8146-X	IC		
IC750		AK4358VQ-X	IC		
IC751		RC4580ID-X	IC		
IC752		RC4580ID-X	IC		
IC753		RC4580ID-X	IC		
IC801		PT6315	IC		
IC802		GP1UE281XK	RM RECEIVER		
Q101		2SB1424/R/-W	TRANSISTOR		
Q101	or	2SB1424/QR/-W	TRANSISTOR		
Q102		2SB1424/R/-W	TRANSISTOR		
Q102	or	2SB1424/QR/-W	TRANSISTOR		
Q103		KRA104S-X	DIGI TRANSISTOR		
Q103	or	UN2113-X	TRANSISTOR		
Q104		KRC102S-X	DIGI TRANSISTOR		
Q104	or	UN2211-X	TRANSISTOR		
Q301		2SC4617/R/-X	TRANSISTOR		
Q405	or	KRC107S-X	DIGI TRANSISTOR		
Q405		UN2214-X	TRANSISTOR		
Q406	or	KRC107S-X	DIGI TRANSISTOR		
Q406		UN2214-X	TRANSISTOR		
Q701		KRC107S-X	DIGI TRANSISTOR		
Q701	or	UN2214-X	TRANSISTOR		
Q751		2SC3576-JVC-T	TRANSISTOR		
Q752		2SC3576-JVC-T	TRANSISTOR		
Q755		KRC109S-X	TRANSISTOR		
Q755	or	UN221E-X	TRANSTSTOR		
Q756		KRA102S-X	DIGI TRANSISTOR		
Q756	or	UN2111-X	TRANSISTOR		
Q757		2SD601A/RS/-X	TRANSISTOR		
Q757	or	2SC2412K/RS/-X	TRANSISTOR		
Q759		2SC3576-JVC-T	TRANSISTOR		
Q760		2SC3576-JVC-T	TRANSISTOR		
Q761		2SC3576-JVC-T	TRANSISTOR		
Q763		2SC3576-JVC-T	TRANSISTOR		
Q801		KRA102S-X	DIGI TRANSISTOR		
Q801	or	UN2111-X	TRANSISTOR		
Q802		KRA104S-X	DIGI TRANSISTOR		
Q802	or	UN2113-X	TRANSISTOR		
Q803		2SC3576-JVC-T	TRANSISTOR		
D101		1SS400-X	SI DIODE		
D401		1F4-T2	FR DIODE		
D701		1SS355-X	SI DIODE		
D701	or	MA111-X	SI DIODE		

⚠ Symbol No.		Part No.	Part Name	Description	Local
D802		SPR-325MVW/L/-T	LED	GREEN-RED	
D803		1SS355-X	SI DIODE		
D803	or	MA111-X	SI DIODE		
D804		1SS355-X	SI DIODE		
D804	or	MA111-X	SI DIODE		
D805		1SS355-X	SI DIODE		
D805	or	MA111-X	SI DIODE		
D806		1SS355-X	SI DIODE		
D806	or	MA111-X	SI DIODE		
C104		NDC31HJ-470X	C CAPACITOR	47pF 50V J	
C105		QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C106		QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C110		NCB31HK-221X	C CAPACITOR	220pF 50V K	
C111		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C112		NCB31HK-561X	C CAPACITOR	560pF 50V K	
C113		NDC31HJ-120X	C CAPACITOR	12pF 50V J	
C114		NCB31HK-561X	C CAPACITOR	560pF 50V K	
C115		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C116		NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C117		NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C118		NCB31HK-392X	C CAPACITOR	3900pF 50V K	
C119		NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C123		NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C124		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C126		NCB31HK-271X	C CAPACITOR	270pF 50V K	
C127		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C129		NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C130		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C131		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C135		QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C137		QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C138		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C141		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C142		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C151		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C152		NCB31CK-273X	C CAPACITOR	0.027uF 16V K	
C153		NCB31AK-224X	C CAPACITOR	0.22uF 10V K	
C156		NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C157		NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C158		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C159		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C160		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C203		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C204		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C205		NCB31HK-121X	C CAPACITOR	120pF 50V K	
C207		NCB31HK-681X	C CAPACITOR	680pF 50V K	
C208		NCB31HK-681X	C CAPACITOR	680pF 50V K	
C211		NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C212		NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C213		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C216		NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C217		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C218		NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C219		NCB31HK-121X	C CAPACITOR	120pF 50V K	
C221		NCB31HK-681X	C CAPACITOR	680pF 50V K	
C222		NCB31HK-681X	C CAPACITOR	680pF 50V K	
C223		NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C224		NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C251		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C253		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C255		NCB31CK-153X	C CAPACITOR	0.015uF 16V K	
C256		NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C257		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C258		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C259		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C260		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C261		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C262		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C263		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C264		NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C265		NCB31CK-153X	C CAPACITOR	0.015uF 16V K	
C302		QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C303		NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C304	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C305	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C306	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C307	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C308	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C309	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C310	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C311	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C313	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C314	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C319	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C322	NCB31HK-271X	C CAPACITOR	270pF 50V K	
C323	NCB31HK-121X	C CAPACITOR	120pF 50V K	
C324	NCB31HK-471X	C CAPACITOR	470pF 50V K	
C325	NCB31HK-331X	C CAPACITOR	330pF 50V K	
C326	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C327	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C328	NCB31HK-332X	C CAPACITOR	3300pF 50V K	
C329	NCB31HK-332X	C CAPACITOR	3300pF 50V K	
C330	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C331	NCB31HK-331X	C CAPACITOR	330pF 50V K	
C332	NCB31HK-331X	C CAPACITOR	330pF 50V K	
C333	NDC31HJ-330X	C CAPACITOR	33pF 50V J	
C334	NDC31HJ-330X	C CAPACITOR	33pF 50V J	
C335	NCB31CK-153X	C CAPACITOR	0.015uF 16V K	
C336	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C337	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
C338	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C339	NDC31HJ-470X	C CAPACITOR	47pF 50V J	
C340	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C341	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C342	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C343	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C344	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C345	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C351	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C352	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C362	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C363	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C374	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C389	NCB31HK-331X	C CAPACITOR	330pF 50V K	
C390	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C402	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C405	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C408	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C409	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C412	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C413	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C416	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C417	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C418	NCB31HK-471X	C CAPACITOR	470pF 50V K	
C419	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C421	NCB31HK-471X	C CAPACITOR	470pF 50V K	
C422	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C423	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C425	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C426	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C427	NCB31HK-471X	C CAPACITOR	470pF 50V K	
C428	NCB31CK-105X	C CAPACITOR	1uF 16V K	
C429	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C501	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C505	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C506	NDC31HJ-150X	C CAPACITOR	15pF 50V J	
C507	NDC31HJ-180X	C CAPACITOR	18pF 50V J	
C511	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C512	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C514	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C515	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C516	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C517	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C518	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C519	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C520	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C521	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C523	NCB31CK-101X	C CAPACITOR	100pF 16V K	
C524	QETN0JM-107Z	E CAPACITOR	100uF 6.3V M	
C525	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C526	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C527	QETN0JM-107Z	E CAPACITOR	100uF 6.3V M	
C528	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C529	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C530	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C531	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C532	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C533	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C534	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C535	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C536	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C537	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C539	NCB31CK-101X	C CAPACITOR	100pF 16V K	
C540	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C541	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C542	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C543	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C544	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C545	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C547	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C548	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C549	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C550	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C551	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C552	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C553	QETN0JM-107Z	E CAPACITOR	100uF 6.3V M	
C554	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C555	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C556	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C557	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C558	NCB31HK-101X	C CAPACITOR	100pF 50V K	
C559	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C560	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C561	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C562	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C563	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C564	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C565	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C566	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C567	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C568	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C570	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C571	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C572	NCB31CK-471X	C CAPACITOR	470pF 16V K	
C579	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C600	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C609	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C611	QETN0JM-227Z	E CAPACITOR	220uF 6.3V M	
C615	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C616	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C617	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C628	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C636	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C637	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C638	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C639	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C640	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C641	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C642	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C643	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C660	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C661	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C662	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C663	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C664	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C682	NDC31HJ-680X	C CAPACITOR	68pF 50V J	
C713	QFLC1HJ-271Z	M CAPACITOR	270pF 50V J	
C714	QFLC1HJ-271Z	M CAPACITOR	270pF 50V J	
C715	QFLC1HJ-471Z	M CAPACITOR	470pF 50V J	
C716	QFLC1HJ-471Z	M CAPACITOR	470pF 50V J	
C717	QFLC1HJ-471Z	M CAPACITOR	470pF 50V J	
C718	QFLC1HJ-471Z	M CAPACITOR	470pF 50V J	
C719	QFLC1HJ-272Z	M CAPACITOR	2700pF 50V J	
C720	QFLC1HJ-272Z	M CAPACITOR	2700pF 50V J	
C721	QFLC1HJ-332Z	M CAPACITOR	3300pF 50V J	
C722	QFLC1HJ-332Z	M CAPACITOR	3300pF 50V J	
C723	QFLC1HJ-332Z	M CAPACITOR	3300pF 50V J	
C724	QFLC1HJ-332Z	M CAPACITOR	3300pF 50V J	
C725	QFLC1HJ-271Z	M CAPACITOR	270pF 50V J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C726	QFLC1HJ-271Z	M CAPACITOR	270pF 50V J	
C727	QFLC1HJ-471Z	M CAPACITOR	470pF 50V J	
C728	QFLC1HJ-471Z	M CAPACITOR	470pF 50V J	
C729	QFLC1HJ-471Z	M CAPACITOR	470pF 50V J	
C730	QFLC1HJ-471Z	M CAPACITOR	470pF 50V J	
C731	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C732	QTE0J24-477Z	E CAPACITOR	470uF 6.3V	
C733	QFVJ1HJ-104Z	MF CAPACITOR	0.1uF 50V J	
C734	QTE0J24-477Z	E CAPACITOR	470uF 6.3V	
C738	QTE1C24-227Z	E CAPACITOR	220uF 16V	
C739	QTE1C24-227Z	E CAPACITOR	220uF 16V	
C740	QTE1C24-227Z	E CAPACITOR	220uF 16V	
C744	QTE1C24-227Z	E CAPACITOR	220uF 16V	
C745	QTE1C24-227Z	E CAPACITOR	220uF 16V	
C746	QTE1C24-227Z	E CAPACITOR	220uF 16V	
C747	QTE1H28-476Z	E CAPACITOR	47uF 50V	
C748	QTE1H28-476Z	E CAPACITOR	47uF 50V	
C749	QTE1H28-476Z	E CAPACITOR	47uF 50V	
C750	QTE1H28-476Z	E CAPACITOR	47uF 50V	
C751	QTE1H28-476Z	E CAPACITOR	47uF 50V	
C752	QTE1H28-476Z	E CAPACITOR	47uF 50V	
C765	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
C766	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
C767	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
C768	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
C769	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
C770	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
C781	QFLC1HJ-182Z	M CAPACITOR	1800pF 50V J	
C782	QFLC1HJ-182Z	M CAPACITOR	1800pF 50V J	
C783	QFLC1HJ-222Z	M CAPACITOR	2200pF 50V J	
C784	QFLC1HJ-222Z	M CAPACITOR	2200pF 50V J	
C785	QFLC1HJ-222Z	M CAPACITOR	2200pF 50V J	
C786	QFLC1HJ-222Z	M CAPACITOR	2200pF 50V J	
C791	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C793	QETN0JM-107Z	E CAPACITOR	100uF 6.3V M	
C794	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C801	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C803	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C805	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C806	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C807	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C808	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C809	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C811	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
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	
R112	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R113	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R116	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R117	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R119	NRSA63J-2R2X	MG RESISTOR	2.2Ω 1/16W J	
R120	NRSA63J-2R2X	MG RESISTOR	2.2Ω 1/16W J	
R126	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	
R131	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R132	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R134	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R135	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R150	NRVA63D-243X	CMF RESISTOR	24kΩ 1/16W D	
R151	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R152	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R153	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R154	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R155	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R156	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R157	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R201	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R204	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R205	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R206	NRSA63J-752X	MG RESISTOR	7.5kΩ 1/16W J	
R207	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R208	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R209	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R210	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R211	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R212	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R213	NRSA63J-472X	MG RESISTOR	4.7kΩ 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	
R222	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R223	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J	
R230	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R231	NRSA63J-752X	MG RESISTOR	7.5kΩ 1/16W J	
R232	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R233	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R234	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R235	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R236	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R237	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R238	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R239	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R240	NRSA63J-103X	MG RESISTOR	10kΩ 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	
R260	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R261	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R280	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R301	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R309	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R314	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R315	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R316	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R317	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R319	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R320	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R322	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R323	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R324	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R325	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R326	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R327	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R328	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	
R329	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R330	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R331	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R332	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R333	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R334	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R335	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
R336	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R338	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R342	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R343	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R346	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R347	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R349	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R350	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R370	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R372	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R373	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R390	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R391	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R392	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R394	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R395	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R396	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R401	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R403	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R404	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R406	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R407	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R409	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R418	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R420	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R425	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R426	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J	
R427	NRSA63J-241X	MG RESISTOR	240Ω 1/16W J	
R430	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J	
R431	NRSA63J-241X	MG RESISTOR	240Ω 1/16W J	
R501	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R502	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R504	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R509	NRSA63J-330X	MG RESISTOR	33Ω 1/16W J	
R510	NRSA63J-330X	MG RESISTOR	33Ω 1/16W J	
R511	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R512	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R514	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R515	NRSA63J-330X	MG RESISTOR	33Ω 1/16W J	
R528	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R547	NRSA63J-330X	MG RESISTOR	33Ω 1/16W J	
R548	NRSA63J-330X	MG RESISTOR	33Ω 1/16W J	
R549	NRSA63J-330X	MG RESISTOR	33Ω 1/16W J	
R573	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R574	NRSA63J-103X	MG RESISTOR	10kΩ 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	
R579	NRSA63J-330X	MG RESISTOR	33Ω 1/16W J	
R581	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
R582	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
R583	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R584	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R597	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R598	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R602	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R603	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R604	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R614	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R617	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R619	NQR0251-001X	FERRITE BEADS		
R622	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R627	NRVA63D-101X	CMF RESISTOR	100Ω 1/16W D	
R628	NRVA63D-101X	CMF RESISTOR	100Ω 1/16W D	
R629	NRVA63D-101X	CMF RESISTOR	100Ω 1/16W D	
R630	NRVA63D-750X	CMF RESISTOR	75Ω 1/16W D	
R639	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R654	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R661	NRVA63D-272X	CMF RESISTOR	2.7kΩ 1/16W D	
R662	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R663	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R681	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R691	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R692	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R693	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R694	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R707	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R708	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R709	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R710	NRVA63D-472X	CMF RESISTOR	4.7kΩ 1/16W D	
R711	NRVA63D-472X	CMF RESISTOR	4.7kΩ 1/16W D	
R712	NRVA63D-822X	CMF RESISTOR	8.2kΩ 1/16W D	
R713	NRVA63D-822X	CMF RESISTOR	8.2kΩ 1/16W D	
R714	NRVA63D-822X	CMF RESISTOR	8.2kΩ 1/16W D	
R715	NRVA63D-822X	CMF RESISTOR	8.2kΩ 1/16W D	
R728	NRVA63D-472X	CMF RESISTOR	4.7kΩ 1/16W D	
R729	NRVA63D-472X	CMF RESISTOR	4.7kΩ 1/16W D	
R730	NRVA63D-822X	CMF RESISTOR	8.2kΩ 1/16W D	
R731	NRVA63D-822X	CMF RESISTOR	8.2kΩ 1/16W D	
R732	NRVA63D-822X	CMF RESISTOR	8.2kΩ 1/16W D	
R733	NRVA63D-822X	CMF RESISTOR	8.2kΩ 1/16W D	
R734	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R735	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R736	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R737	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R738	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R739	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R740	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R741	NRVA63D-221X	CMF RESISTOR	220Ω 1/16W D	
R742	NRVA63D-221X	CMF RESISTOR	220Ω 1/16W D	
R743	NRVA63D-221X	CMF RESISTOR	220Ω 1/16W D	
R744	NRVA63D-221X	CMF RESISTOR	220Ω 1/16W D	
R745	NRVA63D-221X	CMF RESISTOR	220Ω 1/16W D	
R746	NRVA63D-221X	CMF RESISTOR	220Ω 1/16W D	
R747	NRVA63D-101X	CMF RESISTOR	100Ω 1/16W D	
R748	NRVA63D-101X	CMF RESISTOR	100Ω 1/16W D	
R749	NRVA63D-101X	CMF RESISTOR	100Ω 1/16W D	
R750	NRVA63D-101X	CMF RESISTOR	100Ω 1/16W D	
R751	NRVA63D-101X	CMF RESISTOR	100Ω 1/16W D	
R752	NRVA63D-101X	CMF RESISTOR	100Ω 1/16W D	
R753	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R754	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R755	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R756	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R757	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R758	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R759	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R760	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R761	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R762	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R763	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R764	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R765	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R766	NRVA63D-202X	CMF RESISTOR	2kΩ 1/16W D	
R767	NRVA63D-152X	CMF RESISTOR	1.5kΩ 1/16W D	
R768	NRVA63D-152X	CMF RESISTOR	1.5kΩ 1/16W D	
R769	NRVA63D-152X	CMF RESISTOR	1.5kΩ 1/16W D	
R770	NRVA63D-152X	CMF RESISTOR	1.5kΩ 1/16W D	
R771	NRVA63D-152X	CMF RESISTOR	1.5kΩ 1/16W D	
R772	NRVA63D-152X	CMF RESISTOR	1.5kΩ 1/16W D	
R773	NRVA63D-152X	CMF RESISTOR	1.5kΩ 1/16W D	
R774	NRVA63D-152X	CMF RESISTOR	1.5kΩ 1/16W D	
R782	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R786	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R787	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R790	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R791	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R792	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R793	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R794	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R795	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R796	NRSA63J-910X	MG RESISTOR	91Ω 1/16W J	
R797	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R801	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R802	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R803	NRS125J-8R2X	MG RESISTOR	8.2Ω 1/2W J	
R804	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R807	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R808	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R809	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R811	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R815	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R817	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R820	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R851	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R852	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R853	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R854	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R855	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R856	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R861	NRVA63D-151X	CMF RESISTOR	150Ω 1/16W D	
R862	NRVA63D-151X	CMF RESISTOR	150Ω 1/16W D	
R863	NRVA63D-181X	CMF RESISTOR	180Ω 1/16W D	
R864	NRVA63D-181X	CMF RESISTOR	180Ω 1/16W D	
R865	NRVA63D-181X	CMF RESISTOR	180Ω 1/16W D	
R866	NRVA63D-181X	CMF RESISTOR	180Ω 1/16W D	
R871	NRVA63D-151X	CMF RESISTOR	150Ω 1/16W D	
R872	NRVA63D-151X	CMF RESISTOR	150Ω 1/16W D	
R873	NRVA63D-181X	CMF RESISTOR	180Ω 1/16W D	
R874	NRVA63D-181X	CMF RESISTOR	180Ω 1/16W D	
R875	NRVA63D-181X	CMF RESISTOR	180Ω 1/16W D	
R876	NRVA63D-181X	CMF RESISTOR	180Ω 1/16W D	
R880	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R881	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R882	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R883	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R884	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R885	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R886	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R887	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R888	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R889	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R890	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
RA303	NRZ0052-101W	NET RESISTOR	100Ω 1/32W J	
RA397	NRZ0052-101W	NET RESISTOR	100Ω 1/32W J	
RA588	NRZ0052-750W	NET RESISTOR	75Ω 1/32W J	
L401	QQL244K-100Z	COIL	10uH K	
L402	QQL244K-100Z	COIL	10uH K	
L602	NQL77GM-100X	COIL	10uH M	
L631	NQR0429-001X	LPF		
L632	NQR0429-001X	LPF		
L633	NQR0429-001X	LPF		
L634	NQR0430-001X	COIL		
L701	NQL77GM-100X	COIL	10uH M	
L702	NQL77GM-100X	COIL	10uH M	
CN101	QGF0536C2-25W	CONNECTOR	FFC/FPC (1-25)	
CN201	QGF1040C1-15	CONNECTOR	FFC/FPC (1-15)	
CN202	QGF1040C1-05	CONNECTOR	FFC/FPC (1-5)	
CN401	QJK016-092004	SIN CR C-B WIRE		
CN633	QGD2504C1-04Z	CONNECTOR	(1-4)	
CN801	QGF1040F1-07	CONNECTOR	FFC/FPC (1-7)	
CN802	QGF1040F1-07	CONNECTOR	FFC/FPC (1-7)	
CN806	QGA2001F1-02	CONNECTOR	W-B (1-2)	
CN808	QGF1040F1-05	CONNECTOR	FFC/FPC (1-5)	
CN809	QGF1040C1-07	CONNECTOR	FFC/FPC (1-7)	
DI801	QLF0146-001	FL TUBE		
J602	QNN0557-001	PIN JACK		
J605	QNN0572-001	PIN JACK		
J700	QNN0672-001	PIN JACK		
J702	QNN0637-001	PIN JACK		
J704	QNZ0688-001	PIN+OPT JACK		
K201	NQR0251-001X	FERRITE BEADS		
K301	NQR0251-001X	FERRITE BEADS		
K302	NQR0251-001X	FERRITE BEADS		
K303	NQR0251-001X	FERRITE BEADS		
K401	NQR0251-001X	FERRITE BEADS		
K402	NQR0251-001X	FERRITE BEADS		
K403	NQR0251-001X	FERRITE BEADS		
K404	NQR0251-001X	FERRITE BEADS		
K405	NQR0251-001X	FERRITE BEADS		
K406	NQR0251-001X	FERRITE BEADS		
K407	NQR0251-001X	FERRITE BEADS		
K508	NQR0251-001X	FERRITE BEADS		
K509	NQR0251-001X	FERRITE BEADS		
K556	NQR0360-002X	FERRITE BEADS		
K557	NQR0360-002X	FERRITE BEADS		
K558	NQR0360-002X	FERRITE BEADS		
K559	NQR0360-002X	FERRITE BEADS		
K602	NQR0251-001X	FERRITE BEADS		
K603	NQR0251-001X	FERRITE BEADS		
K604	NQR0251-001X	FERRITE BEADS		
K703	NQR0251-001X	FERRITE BEADS		
K791	NQR0251-001X	FERRITE BEADS		
K801	NQR0251-001X	FERRITE BEADS		
K802	NQR0251-001X	FERRITE BEADS		
K803	NQR0251-001X	FERRITE BEADS		
K804	NQR0251-001X	FERRITE BEADS		
K805	NQR0251-001X	FERRITE BEADS		
K806	NQR0251-001X	FERRITE BEADS		
K807	NQR0251-001X	FERRITE BEADS		
S801	QSW0651-001Z	TACT SWITCH		
X301	NAX0566-001X	C RESONATOR	16.934MHz	
X571	NAX0550-001X	CRYSTAL	27.000MHz	
OT1	GN30101-002A	FL HOLDER		510C,510J,512C
OT2	GN30006-007A	VFD SPACER		510C,510J,512C
OT3	GN30101-002A	FL HOLDER		512J
OT4	GN30006-007A	VFD SPACER		512J

Operation switch board

Block No. [0][2]

⚠ Symbol No.	Part No.	Part Name	Description	Local
D810	SELU2E10C-P	LED		
D811	SELU2E10C-P	LED		
CN803	QGF1040C1-07	CONNECTOR	FFC/FPC (1-7)	
CN804	QGA2001C1-02	CONNECTOR	W-B (1-2)	
CN805	QJK018-020802	SIN CR C-B WIRE		
CN807	QJK018-021402	SIN CR C-B WIRE		
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		

Scart board

Block No. [0][3]

⚠ Symbol No.	Part No.	Part Name	Description	Local
C711	QCBB1HK-331Y	C CAPACITOR	330pF 50V K	
C712	QCBB1HK-101Y	C CAPACITOR	100pF 50V K	
R571	QRE141J-330Y	C RESISTOR	33Ω 1/4W J	
R572	QRE141J-330Y	C RESISTOR	33Ω 1/4W J	
R721	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
R725	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
L719	QQL231K-2R2Y	COIL	2.2uH K	
FW701	QUM124-24DGZ4	PARA RIBON WIRE		
J703	QNS0221-001	3.5 JACK		
S903	QSW1033-001	SLIDE SWITCH		

Power board

Block No. [0][4]

⚠ Symbol No.	Part No.	Part Name	Description	Local
FG1	QNZ0660-001Z	FG TERMINAL		
FG2	QNZ0660-001Z	FG TERMINAL		
⚠ PHC1	LTV-817M/BC/	PhotoCouppler		
IC1	MIP2C5	IC		
IC2	MM1431AT-T	IC		
D6	ISS244-T2	Diode		
D10	ISS244-T2	Diode		
D11	ISS244-T2	Diode		
⚠ C2	QCZ9071-102	C CAPACITOR	1000pF AC400V M	
⚠ C9	QCZ9071-102	C CAPACITOR	1000pF AC400V M	
C13	QEZ0655-107Z	CAPACITOR	100uF	
C15	QEZ0655-107Z	CAPACITOR	100uF	
C17	QEZ0655-337Z	CAPACITOR	330uF	
C19	QEZ0654-108Z	CAPACITOR	1000uF	
C21	QEZ0654-108Z	CAPACITOR	1000uF	
⚠ L1	LF-4ZBTM-E273A	Inductor		
L2	QQL071J-220Y	Inductor	22uH J	
L3	QQL071J-220Y	Inductor	22uH J	
L4	SL675-100K	Inductor		
L5	SL675-100K	Inductor		
L6	SL675-100K	Inductor		
⚠ T1	KC-4073	Trans		
⚠ F1	QMF51U1-1R6-J1	FUSE	1.6A AC125V	

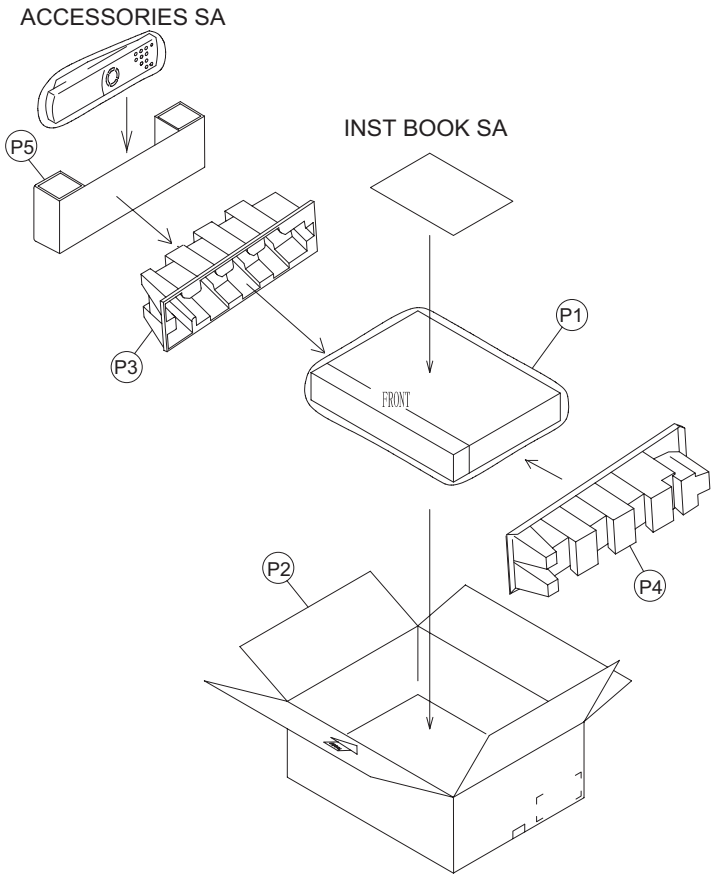
Switch board

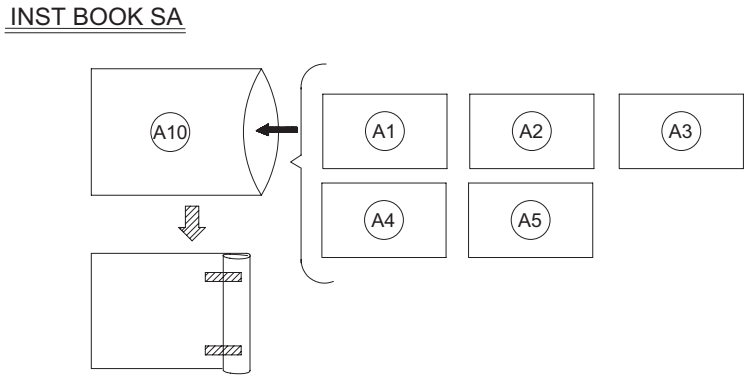
Block No. [0][5]

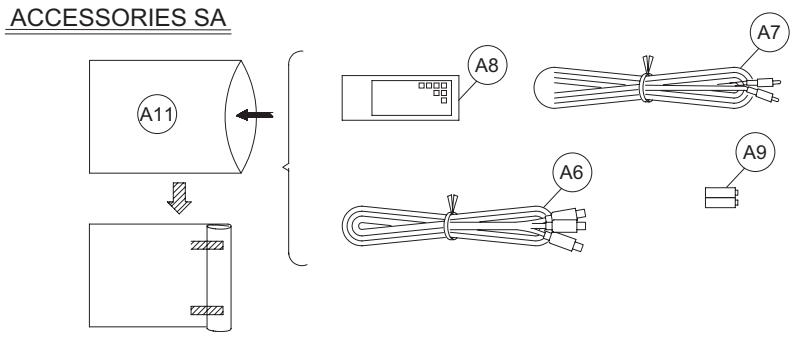
⚠ Symbol No.	Part No.	Part Name	Description	Local
CN1	QGF1016F3-05	CONNECTOR	FFC/FPC (1-5)	
S1	QSW1007-001	DETECT SWITCH	DET SW	

Packing materials and accessories parts list

Block No.M4MM







Packing and accessories

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

⚠ Symbol No.	Part No.	Part Name	Description	Local
A 1	GN40059-001A	INSERT SHEET		
A 2	GNT0055-002B	INST BOOK	ENG/FRE(C)	only ver.C
A 2	GNT0055-001B	INST BOOK	ENGLISH(J/UJ)	only ver.J
A 3	YU20333	SAFETY INST.		
A 4	BT-51034-2	J=REGIST CARD		only ver.J
A 5	BT-52006-2	WARRANTY CARD		only ver.C
A 6	QAM0328-001	AV CORD 3P		
A 7	QAM0591-001	SIGNAL CORD	(x2)	
A 8	RM-SXV065A	REMOCON UNIT		
A 9	----------	BATTERY	R6TYPE(x2)	
A10	QPC02504015P	POLY BAG	FOR INST	
A11	QPC01503515	POLY BAG	FOR ACC	
P 1	QPC06005515P	POLY BAG	FOR SET	
P 2	GN10057-013A	PACKING CASE		only 510
P 2	GN10057-014A	PACKING CASE		only 512
P 3	GN20098-001A	PACKING PAD(L)		
P 4	GN20099-001A	PACKING PAD(R)		
P 5	GN30094-004A	SHEET ASSY		