

JVC

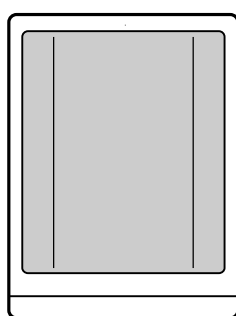
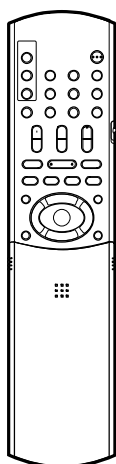
SERVICE MANUAL

COMPACT COMPONENT SYSTEM

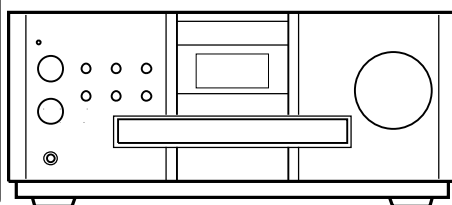
EX-A1

Area suffix

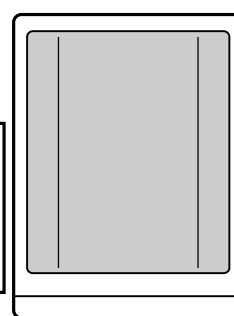
A	-----	Australia
B	-----	U.K.
E	-----	Continental Europe
EN	-----	Northern Europe
EV	-----	Eastern Europe
EE	-----	Russian Federation



(SP-EXA1)



(CA-EXA1)



(SP-EXA1)



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SPECIFICATION

General	Power source		AC 230 V 50 Hz
	Power consumption		24 W (in operation) 1.1 W (on standby)
	Weight		3.0 kg
	External dimensions (W x H xD)		232 mm x 100 mm x 269 mm
DVD player	Playable discs		DVD VIDEO, DVD AUDIO, VCD, Super VCD, CD, CD-R/RW (CD, VCD, MP3, JPEG format), DVD-R/ RW (video format)
Video output	Color system		PAL
	Horizontal resolution		500 lines
	SCART connector x 1		
Audio output	Analog sound output	Speakers x 2	60 W (30W + 30W) at 4 Ω(10% THD)
		Output power (IEC 268-3)	Fitting impedance : 4 Ω to 16 Ω
		Headphones x 1	11 mW/32 Ω Fitting impedance : 16 Ω to 1 kΩ
		Subwoofer x 1	500 mVrms/10 kΩ
	Digital sound output	Optical x 1	-21 dBm to -15 dBm
Other output			AV COMPU LINK x 2 (Ø3.5)
Audio input	Sound input		AUX x 1
	Level 1		250 mV/50 kΩ
	Level 2		500 mV/50 kΩ
Tuner	FM tuner	Receiving frequency	87.5 MHz to 108.0 MHz
		Antenna	75Ω- unbalanced type
	AM tuner	Receiving frequency	522 kHz to 1629 kHz
		Antenna	External antenna jack (loop antenna)
Speaker	Type		1-way bass-reflex type Magnetically shielded type
	Speaker		8cm cone x 1
	Power handling capacity		30 W
	Impedance		4Ω
	Sound pressure level		81 dB/W m
	Dimension (W x H x D)		120 mm x161 mm x 239 mm
	Weight (1 unit)		1.6 kg

Designs and Specifications are subject to change without notice.

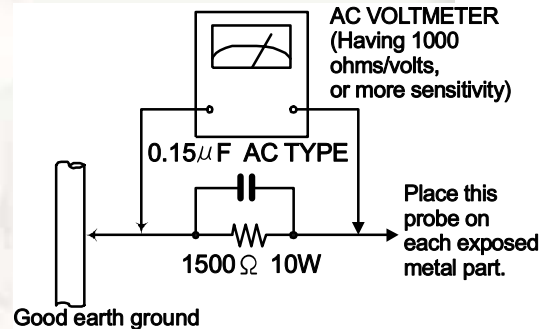
SECTION 1 PRECAUTION

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 (Δ) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
- (4) The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.
- (5) Leakage shock hazard testing
After reassembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.
 - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
 - Alternate check method
Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 Ω per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground. Measure the AC voltage across the resistor with the AC

voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



1.2 Warning

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

1.3 Caution


Burrs formed during molding may be left over on some parts of the chassis.

Therefore, pay attention to such burrs in the case of pre-forming repair of this system.

1.4 Critical parts for safety

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (\blacksquare), diode (\blacksquare) and ICP (\bullet) or identified by the " Δ " mark nearby are critical for safety. When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer.
(This regulation dose not Except the J and C version)

1.5 Safety Precautions (U.K only)

- (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.
- (2) Any unauthorised design alterations or additions will void the manufacturer's guarantee; furthermore the manufacturer cannot accept responsibility for personal injury or property damage resulting therefrom.
- (3) Essential safety critical components are identified by () on the Parts List and by shading on the schematics, and must never be replaced by parts other than those listed in the manual. Please note however that many electrical and mechanical parts in the product have special safety related characteristics. These characteristics are often not evident from visual inspection. Parts other than specified by the manufacturer may not have the same safety characteristics as the recommended replacement parts shown in the Parts List of the Service Manual and may create shock, fire, or other hazards.
- (4) The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

1.5.1 Warning

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

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

1.6 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.

1.6.1 Grounding to prevent damage by static electricity

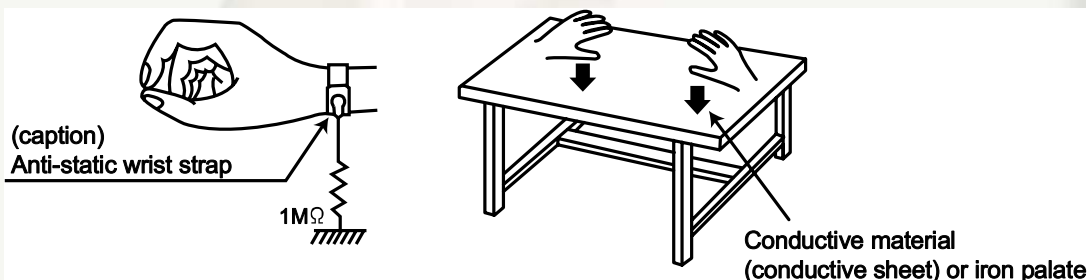
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as laser products. Be careful to use proper grounding in the area where repairs are being performed.

(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.

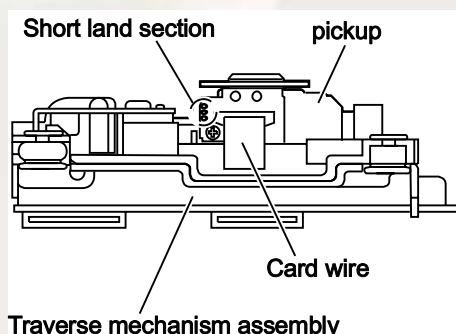
1.7 Handling the traverse unit (optical pickup)

- (1) Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.
- (2) Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.
- (3) Handle the flexible cable carefully as it may break when subjected to strong force.
- (4) It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it.

1.8 Attention when traverse unit is decomposed

***Please refer to "Disassembly method" in the text for the pickup unit.**

- Apply solder to the short land sections before the flexible wire is disconnected from the connector on the servo board. (If the flexible wire is disconnected without applying solder, the pickup may be destroyed by static electricity.)
- In the assembly, be sure to remove solder from the short land sections after connecting the flexible wire.



1.9 Important for laser products

1.CLASS 1 LASER PRODUCT


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

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

4.CAUTION : The CD,MD and DVD player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.

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

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

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

CAUTION : Visible and invisible laser radiation when open and interlock failed or defeated.
AVOID DIRECT EXPOSURE TO BEAM.

ADVARSEL : Synlig og usynlig laserstråling når maskinen er åben eller interlocken fejler. Undgå direkte eksponering til stråling.

WARNING : Synlig och osynlig laserstråling när den öppnas och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettuna tai viallisena olet alttiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL

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)	WARNING : Synlig och osynlig laserstråling när den öppnas och spärren är urkopplad. Betrakta ej strålen. (e)	VARO : Avattaessa ja suojalukitus ohitettuna tai viallisena olet alttiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi. (f)
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CLASS 1
LASER PRODUCT

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

SECTION 2

SPECIFIC SERVICE INSTRUCTIONS

The DVD mechanism was running changed.

The label is added to the lower left on the back of a center unit as the discernment method of a DVD mechanism from goods appearance.

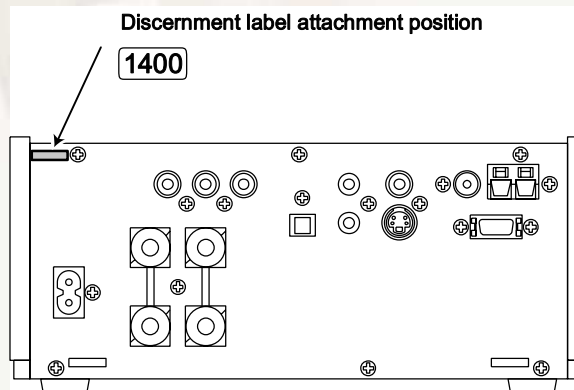
Please refer to each model and the following manuals about the goods with which the label is not stuck on the position of a figure.

EX-A1 B, E, EN version

MB156

EX-A1 EE, EV, A version

MB181



SECTION 3 DISASSEMBLY

3.1 Main body section

3.1.1 Removing the top cover (See Fig.1)

- (1) From the top side of the main body, remove the four screws **A** attaching the top cover.

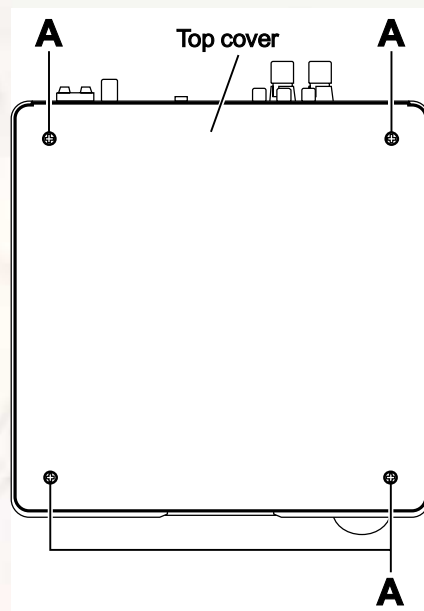


Fig.1

3.1.2 Removing the AL panel L and AL panel R (See Figs.2 to 7.)

- Remove the top cover.

- (1) Remove the two screws **B**, screw **C** and screw **C'** attaching the bridge A. (See Fig.2.)

Reference:

When attaching the screw **C'** attach the lug wire with it.
(See Fig.2.)

- (2) Remove the two screws **C** attaching the bridge B. (See Fig.2.)
- (3) Remove the two screws **C'** attaching the bridge C. (See Fig.2.)
- (4) From the back side of the main body, remove the three screws **D** attaching the bridge C. (See Fig.3.)

Reference:

When attaching the screws **C'** attach the lug wires with them. (See Fig.2.)

- (5) From the top side of the main body, remove the two screws **E** attaching the AL panel L and AL panel R. (See Fig.4.)
- (6) From the bottom side of the main body, remove the three screws **F** attaching the wood bar. (See Fig.5.)
- (7) Remove the six screws **G** and two screws **H** attaching the AL panel L and AL panel R. (See Fig.6.)
- (8) Remove the AL panel L and AL panel R in the direction of the arrow 2 while extending the back section of the AL panel L and AL panel R in the direction of the arrow 1. (See Fig.7.)

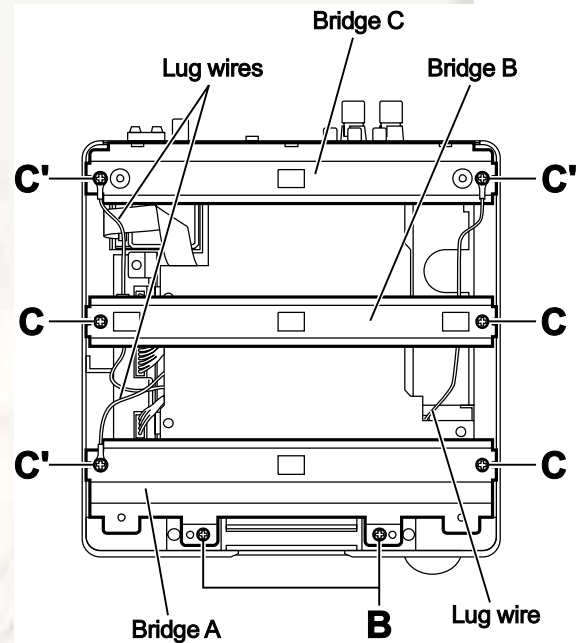


Fig.2

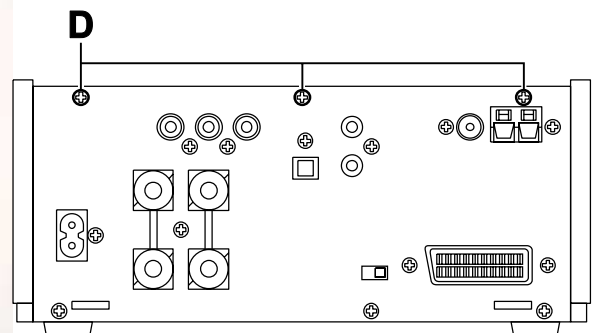


Fig.3

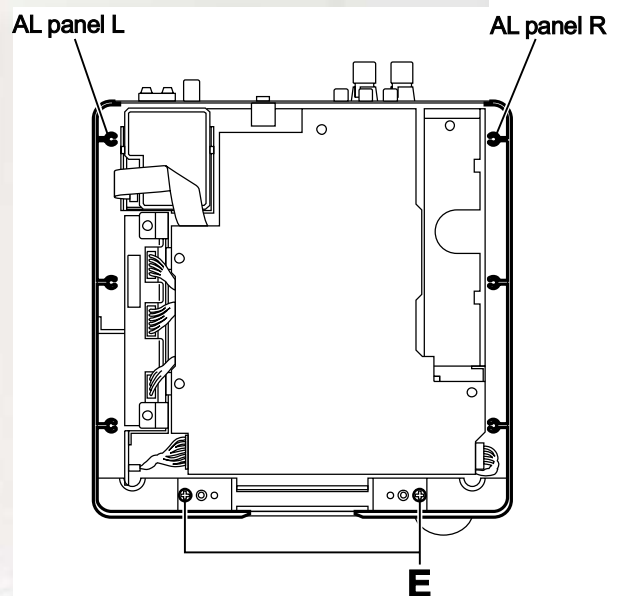


Fig.4

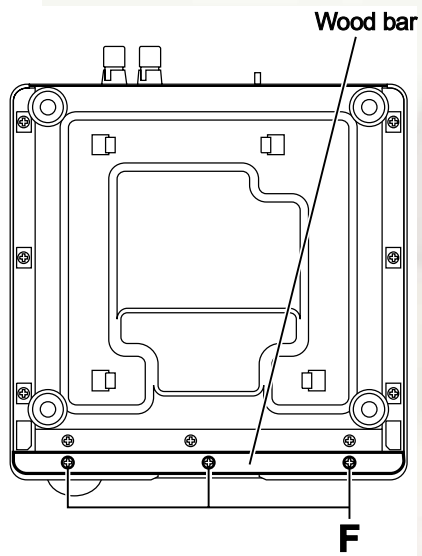


Fig.5

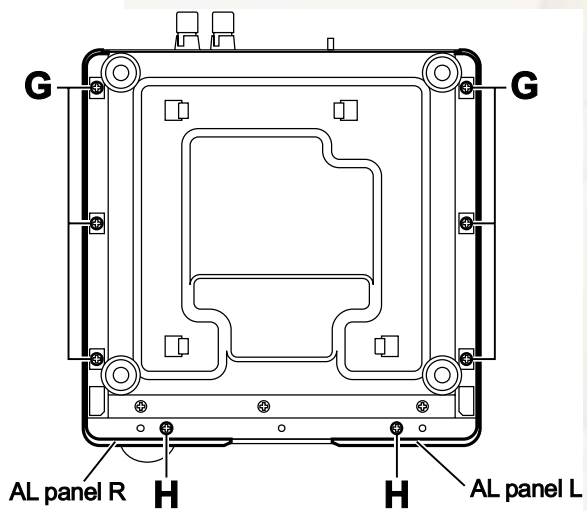


Fig.6

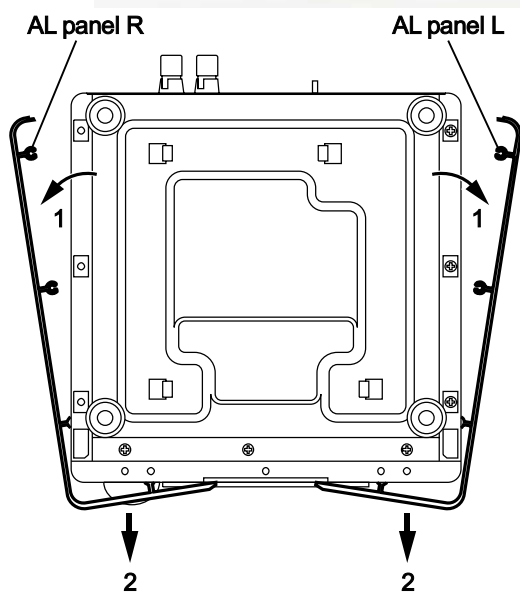


Fig.7

3.1.3 Removing the front panel assembly (See Fig.8)

- Remove the top cover, AL panel L and AL panel R.
 - (1) Removing the three screws **J** attaching the front panel assembly. (See Fig.8.)
 - (2) Release the claws **a** attaching the front panel assembly and remove the front panel assembly in the direction of the arrow. (See Fig.8.)

Note:

When attaching the front panel assembly, confirm that the connector [CN804](#) on the front board is disconnected in the connector [CN704](#) on the micom board certainly.

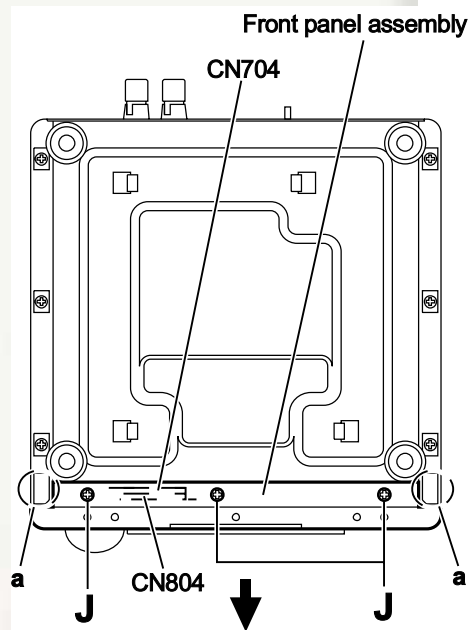


Fig.8

3.1.4 Removing the rear panel (See Fig.9.)

[For A version]

From the back side of the main body, remove the sixteen screws **K** and screw **L** attaching the rear panel.

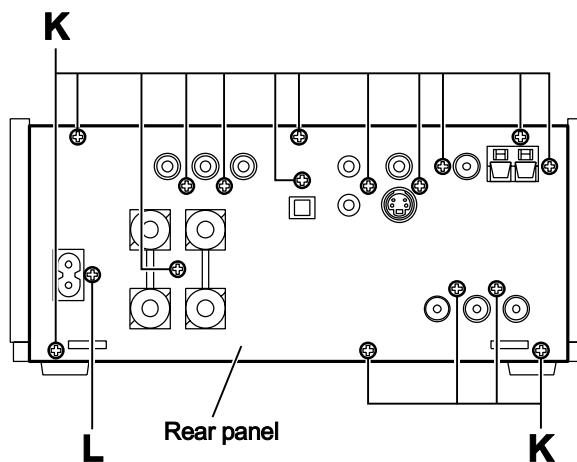
[For B/E/EN/EV/EE version]

From the back side of the main body, remove the fifteen screws **K** and screw **L** attaching the rear panel.

3.1.5 Removing the switching power unit (See Figs.9 and 10)

- Remove the top cover, AL panel L and AL panel R.
 - (1) From the back side of the main body, remove the screw **L** attaching the switching power unit. (See Fig.9.)
 - (2) From the right side of the main body, disconnect the wire from the connector **CN201** on the main board. (See Fig.10.)
 - (3) Remove the screw **M** attaching the switching power unit. (See Fig.10.)
 - (4) From the top side of the switching power unit, remove the spacer fixing the lug wire. (See Fig.10.)
 - (5) Take out the switching power unit from the main body in the direction of the arrow. (See Fig.10.)

[For A version]



[For B/E/EN/EV/EE version]

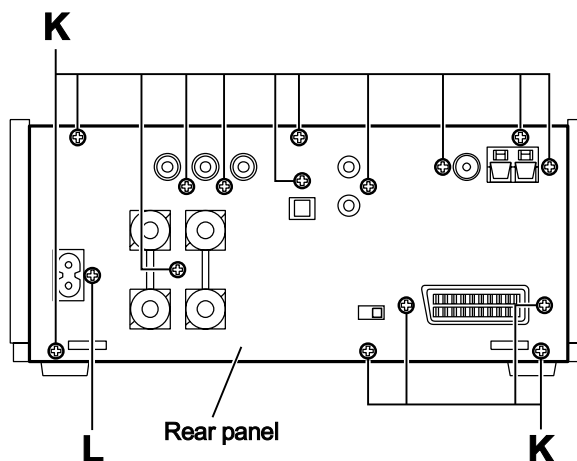


Fig.9

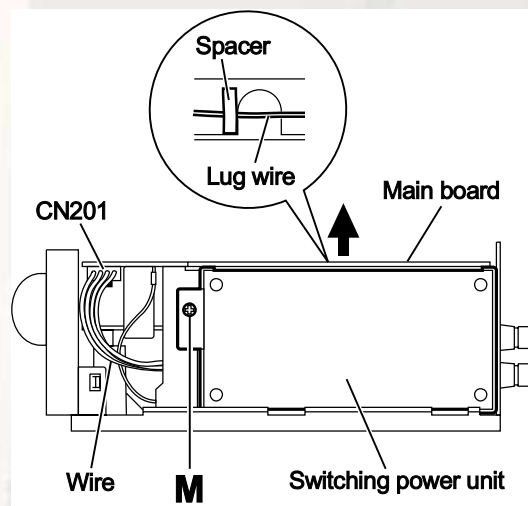


Fig.10

3.1.6 Removing the tuner (See Figs.11 and 12)

- Remove the top cover and rear panel.

- (1) From the top side of the main body, remove the two screws **N** attaching the bridge C. (See Fig.11.)

Reference:

When attaching the screws **N**, attach the lug wires with them. (See Fig.11.)

- (2) Release the claws **b** of the tuner holder and take out the tuner from the main body. (See Fig.12.)
- (3) Disconnect the card wire from the connector **CN1** on the tuner. (See Fig.12.)

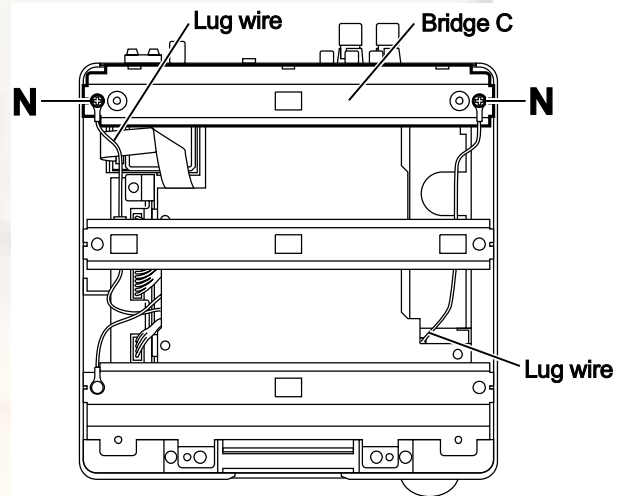


Fig.11

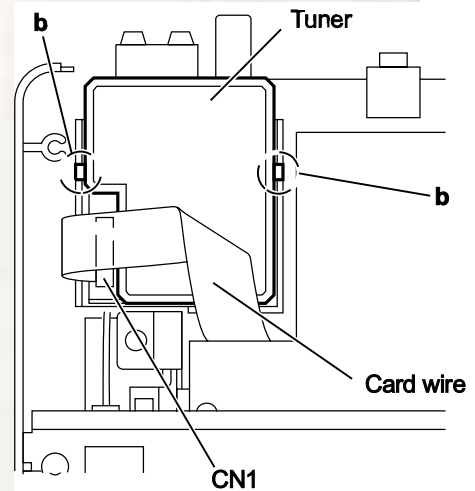


Fig.12

3.1.7 Removing the headphone board (See Fig.13)

- Remove the top cover, AL panel L, AL panel R and front panel assembly.

- (1) From the left side of the main body, disconnect the wire from the connector **CN401** on the main board.
- (2) Remove the screw **P** attaching the headphone board.
- (3) Remove the engagement section **c** toward this side, remove the headphone board from the joint **d** in the direction of the arrow.

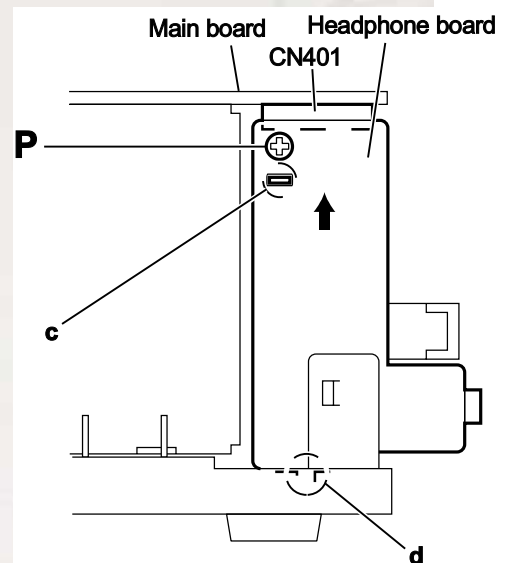


Fig.13

3.1.8 Removing the main board

(See Figs.14 and 15)

- Remove the top cover, AL panel L, AL panel R, rear panel and switching power unit.

Reference:

Remove the front panel assembly as required.

- (1) From the top side of the main body, disconnect the card wires from the connectors (CN202 and CN204) on the main board. (See Fig.14.)
- (2) Disconnect the wires from the connectors (CN205 and CN401) on the main board. (See Fig.14.)
- (3) Disconnect the wire from the connector CN706 on the micom board. (See Fig.14.)
- (4) Disconnect the wires from the connectors (CN310 and CN312) on the digital amplifier board assembly. (See Fig.14.)
- (5) Remove the screw **Q** attaching the lug wire to the bracket A. (See Fig.14.)
- (6) Disconnect the lug wire from TP201 on the main board. (See Fig.14.)
- (7) Remove the spacer fixing the lug wire. (See Fig.15.)
- (8) Remove the four screws **R** attaching the main board and remove the main board from the main body. (See Fig.15.)

Reference:

When attaching the main board, attach the screws **R** after fitting the holes of the main board to the joints **e** and **f** of the main body. (See Fig.15.)

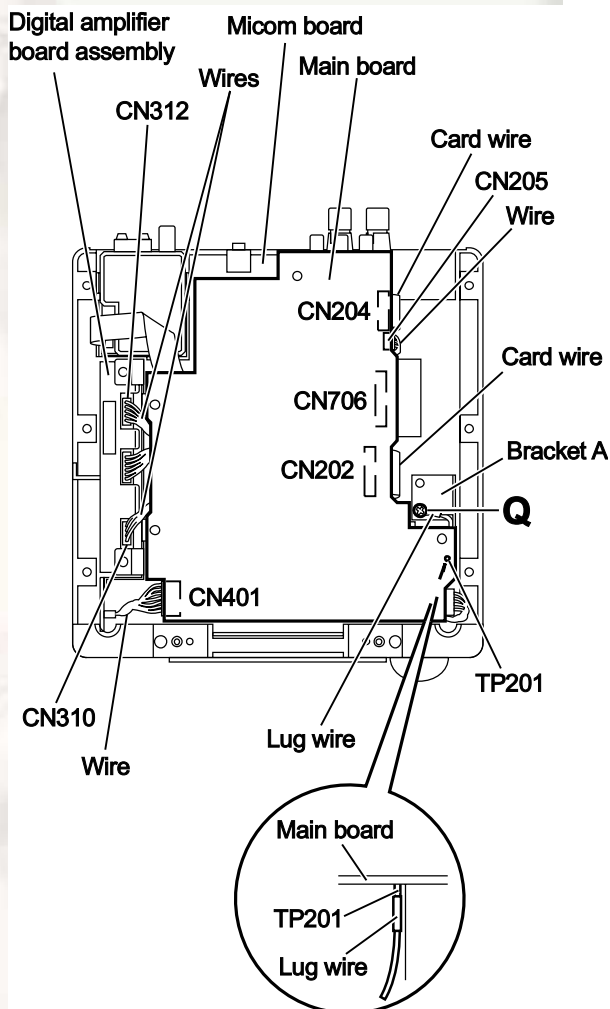


Fig.14

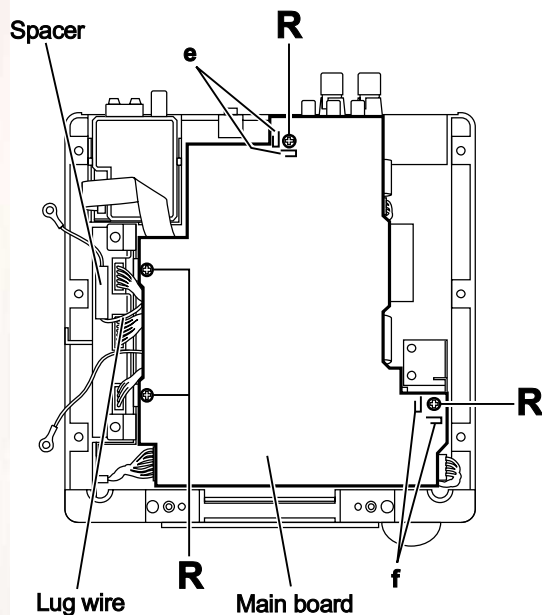


Fig.15

3.1.9 Removing the micom board (See Figs.16 and 17)

- Remove the top cover, AL panel L, AL panel R, front panel assembly, rear panel, switching power unit and main board.
 - From the top side of the main body, disconnect the card wires from the connectors (CN631 and CN701) on the micom board. (See Fig.16.)
 - Disconnect the card wire from the connector CN705 on the micom board and take out the tuner after releasing the claws g of the tuner holder. (See Fig.16.)

Reference:

Remove the tuner as required.

- Disconnect the wire from the connector CN311 on the digital amplifier board assembly. (See Fig.16.)
- Disconnect the card wire from the connector CN611 on the main board. (See Fig.17.) **[For A version]**
- Disconnect the card wire from the connector CN601 on the main board. (See Fig.17.) **[For B/E/EN/EV/EE version]**
- Remove the two screws S and screw S' attaching the micom board. (See Fig.17.)

Reference:

- When attaching the screw S', attach the bracket D with it. (See Fig.17.)
- When attaching the micom board, attach the screw S and screw S' after fitting the holes of the main board to the joints (h,i,j,k) of the main body. (See Fig.17.)

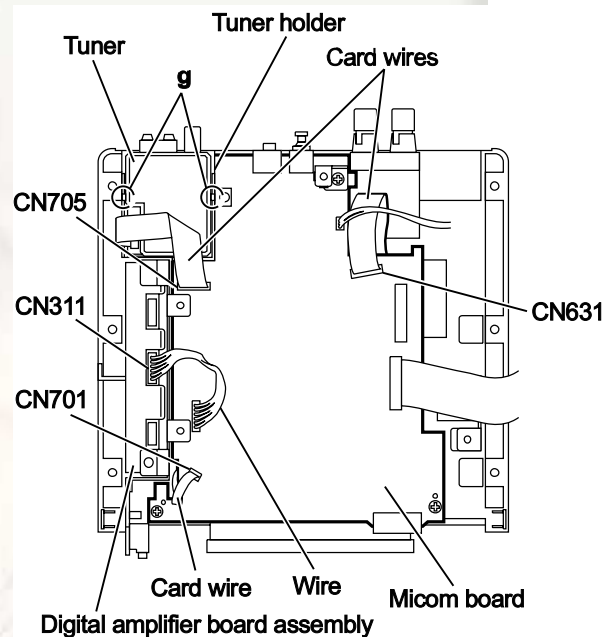


Fig.16

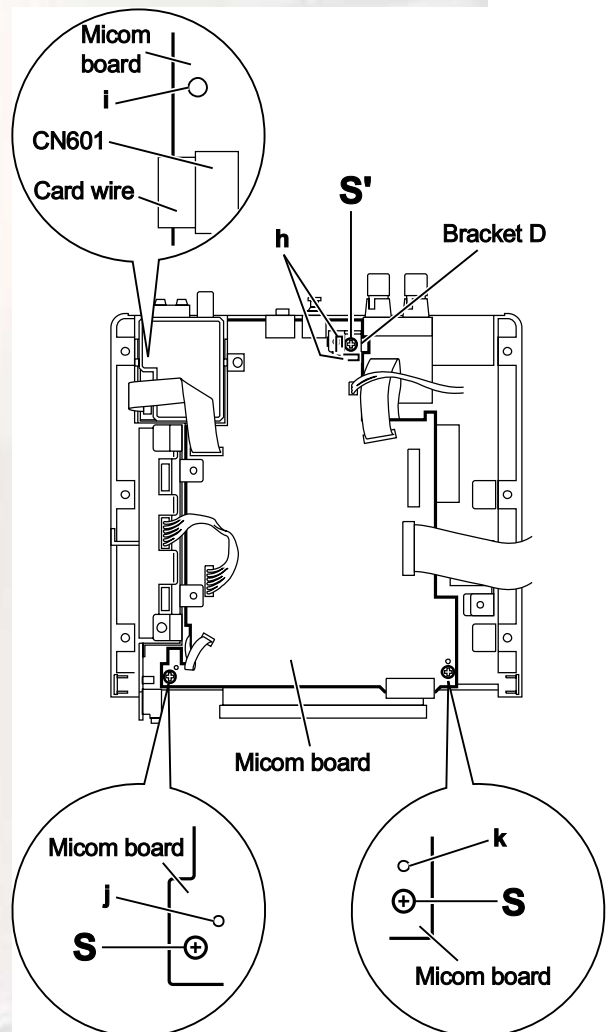


Fig.17

3.1.10 Removing the digital amplifier board

(See Figs.18 to 20)

- Remove the top cover, AL panel L, AL panel R, front panel assembly, rear panel, switching power unit, main board and micro board.

(1) From the back side of the main body, disconnect the card wire from the connector **CN313** on the digital amplifier board assembly. (See Fig.18.)

Reference:

When connecting the wire, connect the wire to connector **CN313** on the digital amplifier board assembly after pass it through the section **m** of the side cover L. (See Fig.18.)

(2) From the top side of the main body, remove the two screws **T** and two screws **U** attaching the bracket C. (See Fig.18.)
 (3) Take out the bracket C with the headphone board from the main body.

Reference:

When attaching the bracket C to the bottom chassis, attach it after fitting the holes to the projections **n** of the bottom chassis. (See Fig.18.)

(4) Take out the digital amplifier board assembly.
 (5) Release the joints (**p,q,r**) of the deus case A and deus case B, and remove the deus case A in the direction of the arrow. (See Fig.19.)
 (6) Remove the screw **V** attaching the heat sink. (See Fig.20.)
 (7) Remove the solder from the soldered sections (**s,t**) attaching the digital amplifier board to the deus case B and bend the joints (**u,v**) in the direction of the arrow. (See Fig.20.)
 (8) Take out the digital amplifier board from the deus case B.

Reference:

When attaching the digital amplifier board to the deus case B, fit the joints (**u,v,w,x**) of the deus case B to the holes of the digital amplifier board. (See Fig.20.)

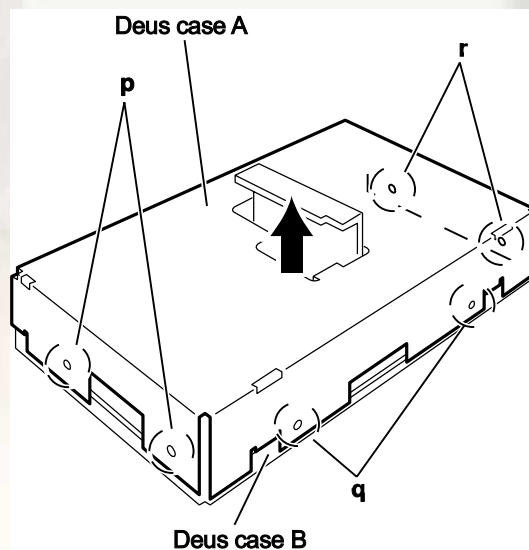


Fig.19

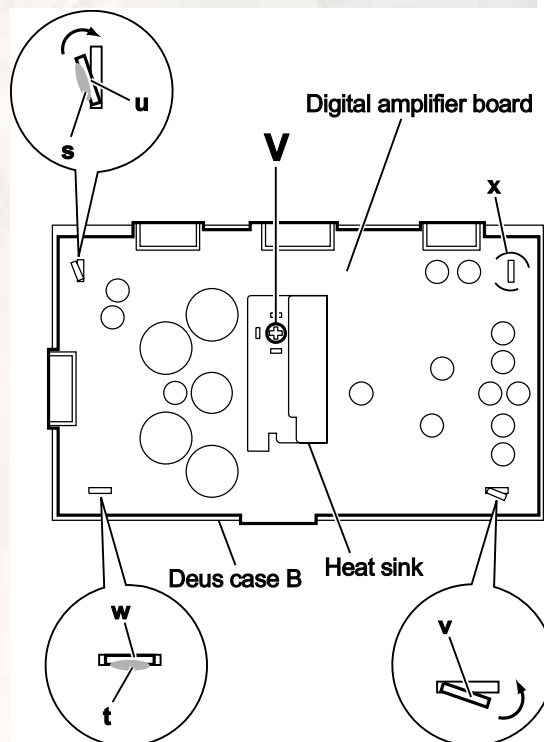


Fig.20

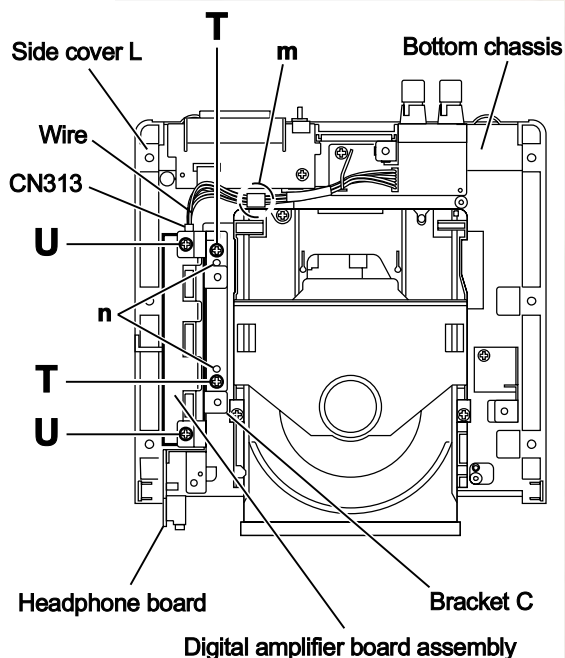


Fig.18

3.1.11 Removing the speaker terminal board (See Fig.21.)

- Remove the top cover, AL panel L, AL panel R, front panel assembly, the rear panel, switching power unit, main board and micom board.

(1) From the back side of the main body, disconnect the wire from the connector **CN313** on the digital amplifier board assembly.

Reference:

When connecting the wire, connect the wire to connector **CN313** on the digital amplifier board assembly after pass it through the section **y** of the side cover L. (See Fig.21.)

(2) From the top side of the main body, remove the screw **W** attaching the speaker terminal board.

Reference:

When attaching the speaker terminal board, attach the screw **W** after fitting the hole of the speaker terminal board to the joint **z** of the side cover R.

3.1.12 Removing the component video terminal board (See Fig.21) [For A version]

- Remove the top cover, AL panel L, AL panel R, front panel assembly, rear panel, switching power unit, main board and micom board.

From the top side of the main body, remove the screw **X** attaching the component video terminal board.

Reference:

When attaching the component video terminal board, attach the screw **X** after fitting the hole of the component video terminal board to the joint **aa** of the side cover L.

3.1.13 Removing the scart terminal board (See Fig.22) [For B/E/EN/EV/EE version]

- Remove the top cover, AL panel L, AL panel R, front panel assembly, rear panel, switching power unit, main board and micom board.

From the top side of the main body, remove the screw **X** attaching the scart terminal board.

Reference:

When attaching the scart terminal board, attach the screw **X** after fitting the hole of the scart terminal board to the joint **aa** of the side cover L.

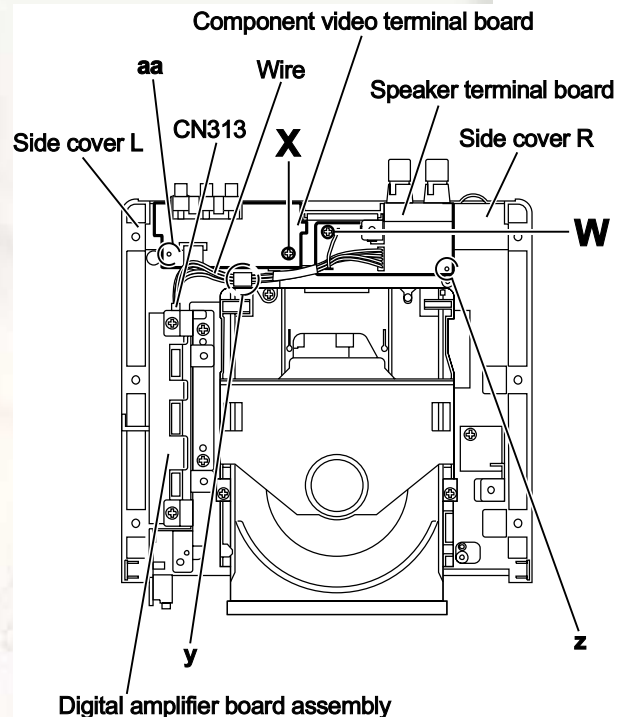


Fig.21

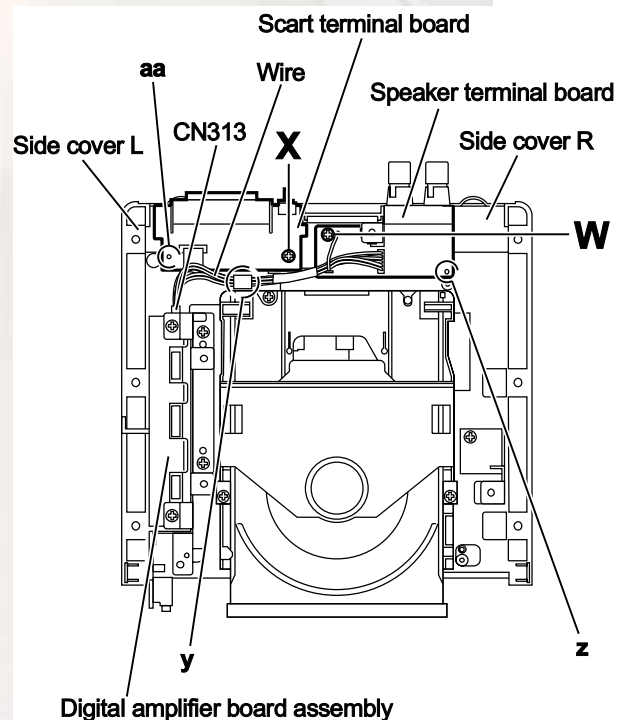


Fig.22

3.1.14 Removing the DVD mechanism assembly

(See Fig.23.)

- Remove the top cover, AL panel L, AL panel R, front panel assembly, rear panel, switching power unit, main board and the micom board.

- (1) From the top side of the main body, remove the three screws **Y** attaching the DVD mechanism assembly.
- (2) Take out the DVD mechanism assembly from the main body.

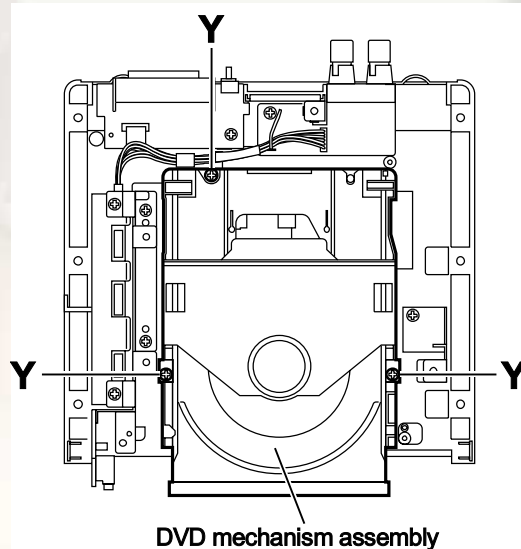


Fig.23

3.1.15 Removing the front board

(See Figs.24 and 25)

- Remove the top cover, AL panel L, AL panel R and front panel assembly.

- (1) From the front side of the front panel assembly, pull out the volume assembly in the direction of the arrow. (See Fig.24.)
- (2) From the inside of the front panel assembly, remove the ten screws **Z** attaching the front board. (See Fig.25.)
- (3) Release the two claws **ab** of the indicator attaching the front board and take out the front board from the front panel assembly. (See Fig.25.)

Reference:

When attaching the front board, attach the screws **Z** after fitting the holes of the front board to the projections **ac** of the front panel assembly. (See Fig.25.)

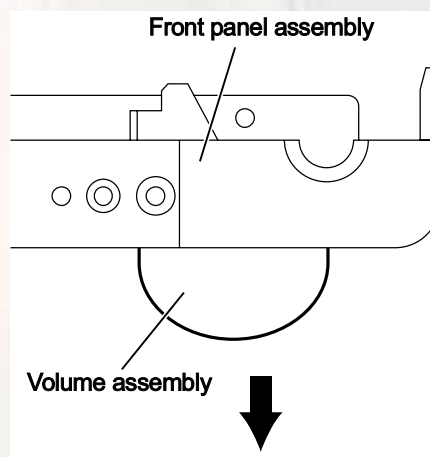


Fig.24

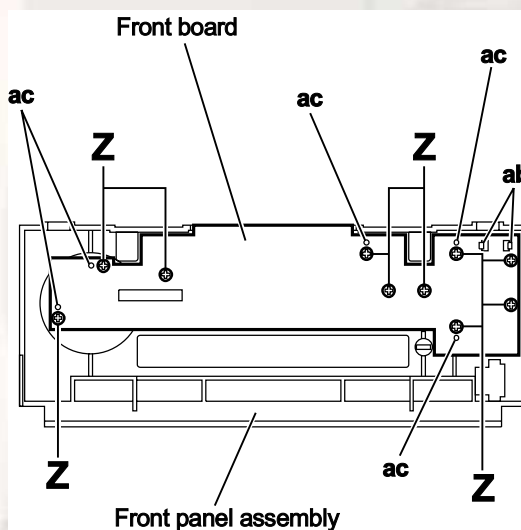


Fig.25

3.2 DVD mechanism section

- Remove the DVD mechanism assembly from the main body.
(See "3.1.13 Removing the DVD mechanism assembly".)

3.2.1 Removing the tray assembly

(See Figs.1 to 3)

- (1) From the right side of the DVD mechanism assembly, push the slide cam and pull the tray assembly out of the DVD mechanism assembly in the direction of the arrow. (See Fig.1.)
- (2) From the top side of the DVD mechanism assembly, remove the two screws **A** attaching the leaf spring to the bushing and remove the leaf spring. (See Fig.2.)
- (3) Remove the bushing of the tray assembly from the projection **a** on the DVD mechanism assembly and move the tray assembly in the direction of the arrow. (See Fig.3.)
- (4) Remove the claw **b** of the tray assembly from the DVD mechanism assembly and take out the tray assembly. (See Fig.3.)

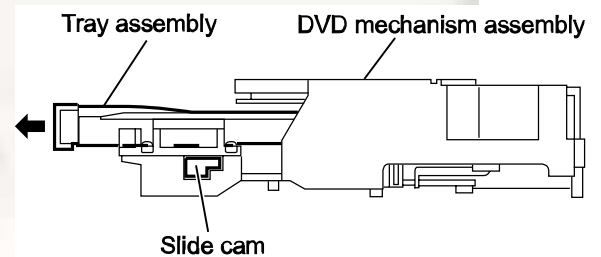


Fig.1

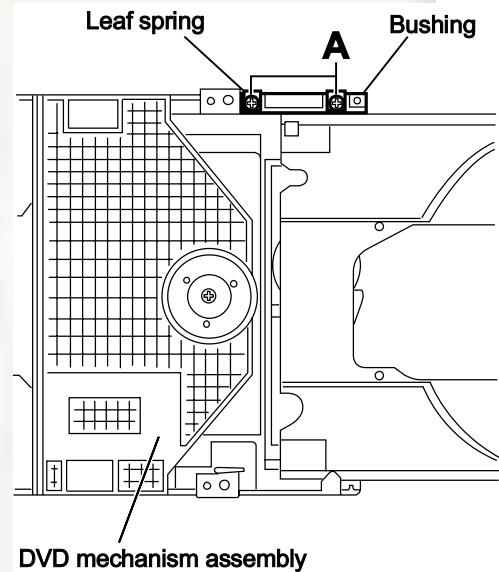


Fig.2

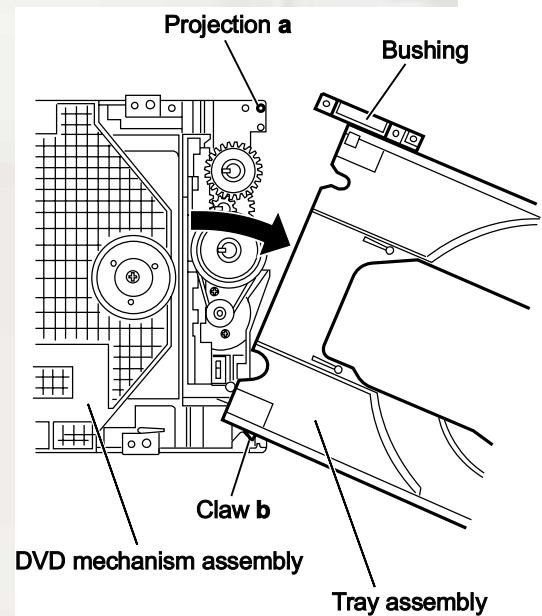


Fig.3

3.2.2 Removing the traverse mechanism assembly (See Figs.4)

- (1) From the bottom side of the DVD mechanism assembly, remove the four screws **B** attaching the traverse mechanism assembly and take out the DVD traverse mechanism assembly with the DVD servo board.

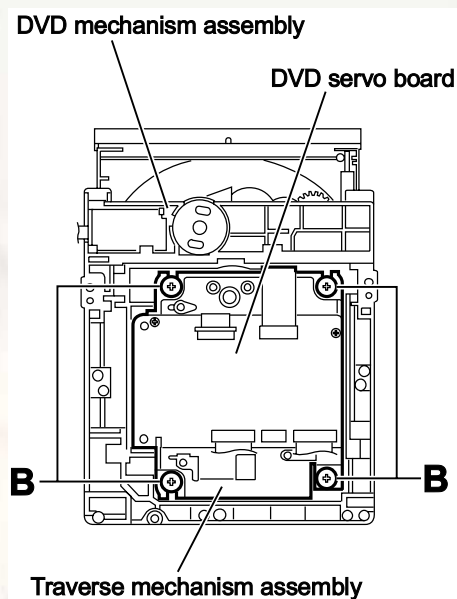


Fig.4

3.2.3 Removing the DVD servo board (See Figs.5 and 6)

- Remove the traverse mechanism assembly.

- (1) From the side of the traverse mechanism assembly, solder the short land sections **c** on the pickup. (See Fig.5.)
- (2) From the bottom side of the traverse mechanism assembly, release the lock of the connector **CN101** on the DVD servo board in the direction of the arrow 1 and disconnect the card wire. (See Fig.6.)

Caution:

- Solder the short land sections **c** on the pickup before disconnecting the card wire from the connector **CN101** on the DVD servo board. If the card wire is disconnected without attaching solder, the pickup may be destroyed by static electricity. (See Figs.5 and 6.)
 - When attaching the DVD servo board, be sure to remove solders from the short land sections **c** after connecting the card wire to the connector **CN101** on the DVD servo board. (See Figs.5 and 6.)
- (3) Disconnect the card wire from the connector **CN201** on the DVD servo board. (See Fig.6.)
 - (4) Remove the two screws **C** attaching the DVD servo board. (See Fig.6.)
 - (5) Remove the DVD servo board from the engagement section **d** in an upward and remove the engagement section **f** in the direction 3 while removing the engagement section **e** in the direction of the arrow 2. (See Fig.6.)

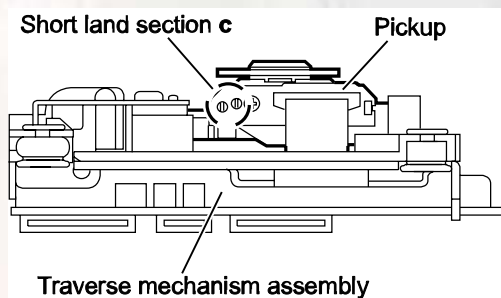


Fig.5

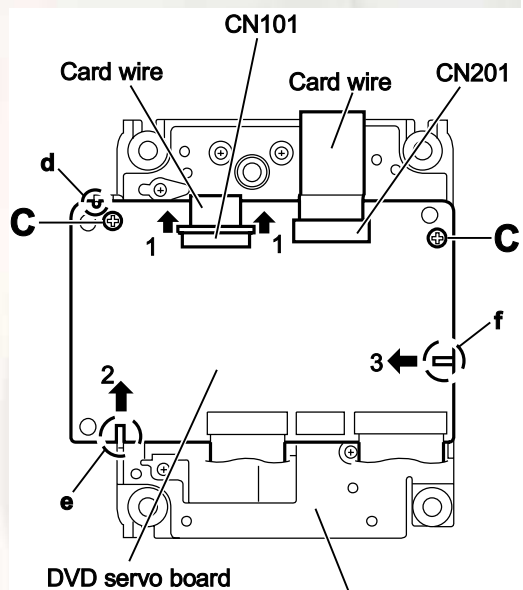


Fig.6

3.2.4 Removing the pickup (See Figs.5,7 to 9)

- Remove the traverse mechanism assembly.

- (1) From the side of the traverse mechanism assembly, solder the short land sections **c** on the pickup. (See Fig.5.)
- (2) Release the lock of the connector on the pickup in the direction of the arrow and disconnect the card wire. (See Fig.7.)

Caution:

- Solder the short land sections **c** on the pickup before disconnecting the card wire from the connector on the pickup. If the card wire is disconnected without attaching solder, the pickup may be destroyed by static electricity. (See Figs.5 and 7.)
- When attaching the pickup, be sure to remove solders from the short land sections **c** after connecting the card wire to the connector on the pickup. (See Figs.5 and 7.)

- (3) Remove the screw **D** attaching the plate and thrust spring. (See Fig.7.)
- (4) Remove the engagement section **g** attaching the plate to the feed holder and remove the plate with the thrust spring. (See Fig.7.)
- (5) Remove the shaft of the pickup from the section **h** on the traverse mechanism assembly and remove the shaft from the section **i** while moving it in the direction of the arrow. (See Fig.8.)
- (6) Remove the pickup from the section **j** of the traverse mechanism assembly and take out the pickup with the shaft. (See fig.8.)
- (7) From the bottom side of the pickup, remove the two screws **E** attaching the SW actuator and LEAD spring. (See Fig.99.)
- (8) Pull the shaft out of the pickup. (See Fig.9.)

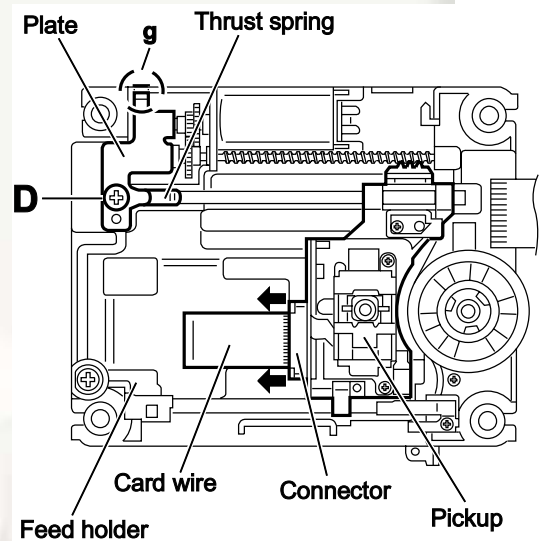


Fig.7

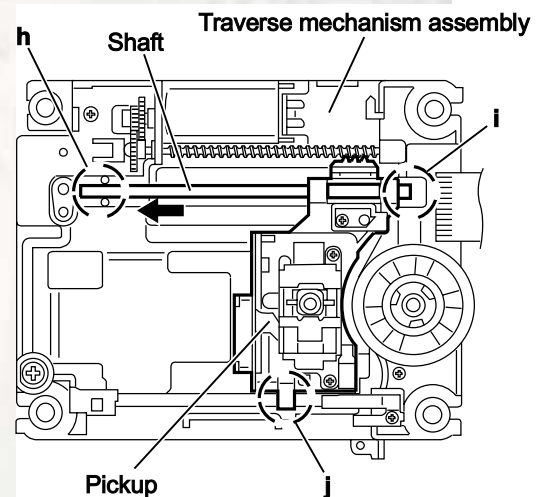


Fig.8

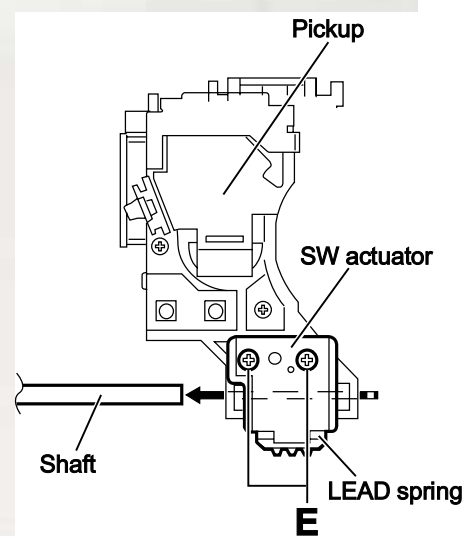


Fig.9

3.2.5 Attaching the pickup (See Figs.5,7 to 10)

- See "3.2.4 Removing the pickup".
- (1) Attach the shaft, SW actuator and LEAD spring to the pickup. (See Fig.9.)
- (2) Align the pickup to the section **j** of the traverse mechanism assembly first, and set the both ends of the shaft of the pickup in the sections **g** and **i** of the traverse mechanism assembly. (See Fig.8.)
- (3) Attach the plate and thrust spring. (See Fig.7.)
- (4) Remove solders from the short land sections **c** after connecting the card wire to the connector on the pickup. (See Figs.5 and 7.)
- (5) Turn the feed gear **M** in the direction of the arrow 1 to move the pickup in the direction of the arrow 2. (See Fig.10.)

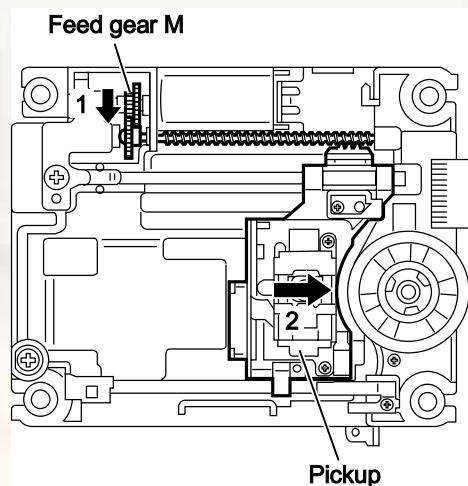


Fig.10

3.2.6 Removing the feed motor (See Figs.7,11 and 12)

- Remove the traverse mechanism assembly.
- (1) From the top side of the traverse mechanism assembly, remove the screw **D** attaching the plate and thrust spring. (See Fig.7.)
- (2) Remove the engagement section **g** attaching the plate to the feed holder and remove the plate with the thrust spring. (See Fig.7.)
- (3) Remove the wires from the soldered section **k** on the spindle motor board. (See Fig.11.)

Reference:

When attaching the feed motor, pass the wire through the section **m** on the spindle base. (See Fig.11.)

- (4) Remove the feed holder, feed motor, lead screw, feed gear **E** and feed gear **M** at the same time after removing the two screws **F** attaching the feed holder. (See Fig.11.)
- (5) From the side of the feed holder, remove the two screws **G** attaching the feed motor. (See Fig.12.)

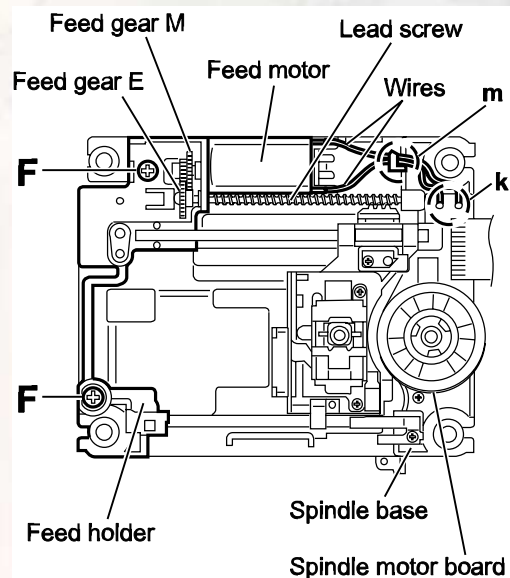


Fig.11

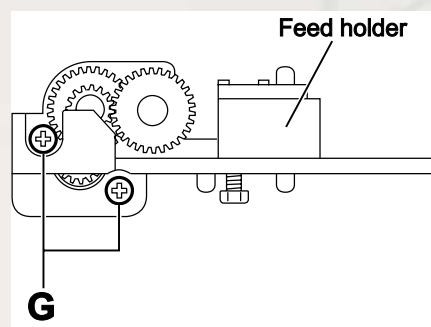


Fig.12

3.2.7 Removing the spindle motor board (See Figs.11 and 13)

- Remove the traverse mechanism assembly.
 - Remove the DVD servo board.
- (1) From the top side of the traverse mechanism assembly, remove the wires from the soldered section **k** on the spindle motor board. (See Fig.11.)
 - (2) From the bottom side of the traverse mechanism assembly, remove the three screws **H** attaching the spindle motor board. (See Fig.13.)

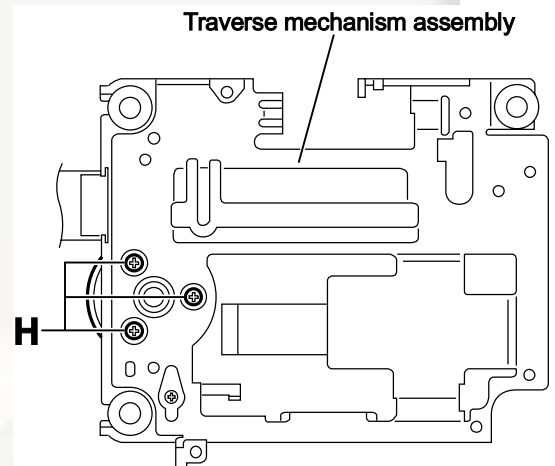


Fig.13

3.2.8 Removing the switch board (See Fig.14.)

- (1) From the bottom side of the DVD mechanism assembly, remove the wires from the soldered section **n** on the switch board.
- (2) Lift the switch board while pressing the claw **p** of the DVD mechanism assembly in the direction of the arrow and remove it from the section **q**.

Reference:

- Put the wires on the section **r** after attaching the switch board to the DVD mechanism assembly.
- Fix the claw **p** on the DVD mechanism assembly with bonds after attaching the switch board.

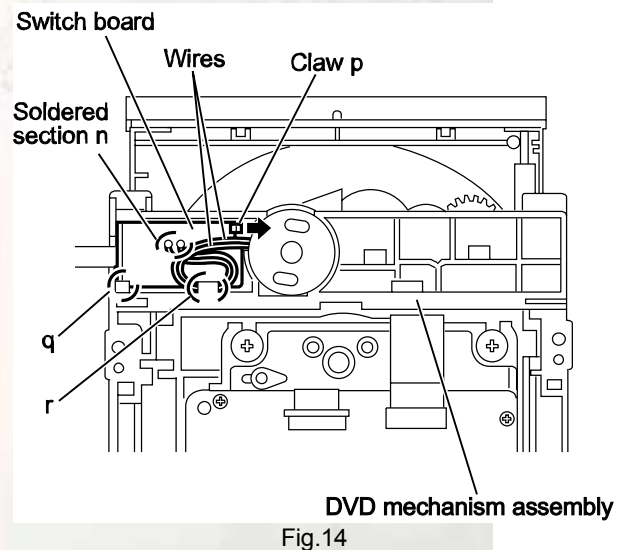


Fig.14

3.2.9 Removing the motor (See Figs.14 and 15)

- Remove the tray assembly.
- (1) From the bottom side of the DVD mechanism assembly, remove the wires from the soldered section **n** on the switch board.
 - (2) From the top side of the DVD mechanism assembly, remove the belt from the motor pulley. (See Fig.15.)

Note:

Take care not to attach grease on the belt.

- (3) Remove the two screws **J** attaching the motor to the DVD mechanism assembly and take out the motor from the bottom side of the DVD mechanism assembly. (See Fig.15.)

Reference:

Put the wires on the section **r** after attaching the motor to the DVD mechanism assembly. (See Fig.14.)

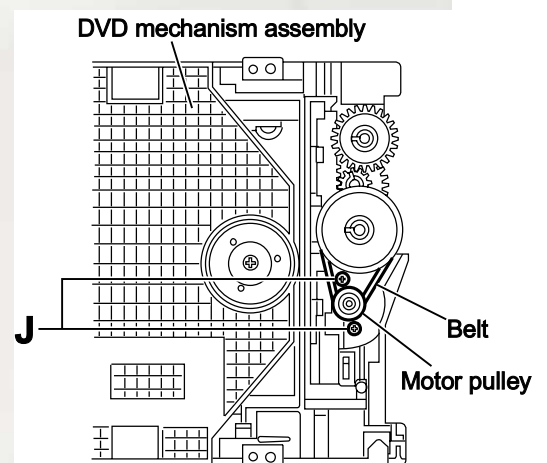


Fig.15

SECTION 4 ADJUSTMENT

4.1 Jigs and test instruments

- Remote controller
- Test disc : VT501, VT502

4.2 Adjustment and check method

(Please make sure to set Audio mode on Remote controller)

While pressing both the [STOP] key and [PLAY/PAUSE] key on the main unit, insert the AC power cord in an outlet.

Indication
TES E0
1
or
TES E3h
1

Area suffix indication

1:JC 2:1U 3:D 4:E 5:2U 6:3U
7:UB 8:UT 9:4U 10:UY 11:EE 12:UF

Region indication

Received region data are assigned by a bit unit.

Bit0:Region 1
Bit1:Region 2
Bit2:Region 3
Bit3:Region 4
Bit4:Region 5
Bit5:Region 6
Bit6:Region 7
Bit7:Region 8

When 1 is made more than 2 bits, HEX displays a region number and distinguishes it by displaying h.

Press the [MENU] key on the remote controller.

Indication
XXXX

Index indication of device key
(For DVD-Audio)

Press the [MENU] key on the remote controller.

Indication
X.XX XX
SC:

Version indication of system control microcomputer

SYS : System control microcomputer

A version of a ROM collection is displayed in the right side of version indication of a system control microcomputer.

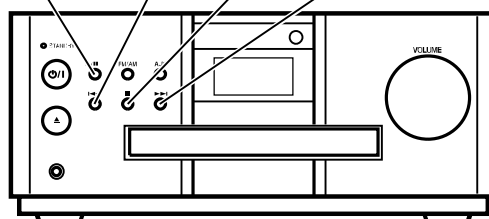
Press the [ON SCREEN] key on the remote controller.

Indication
XXX
UT:

Version indication of unit

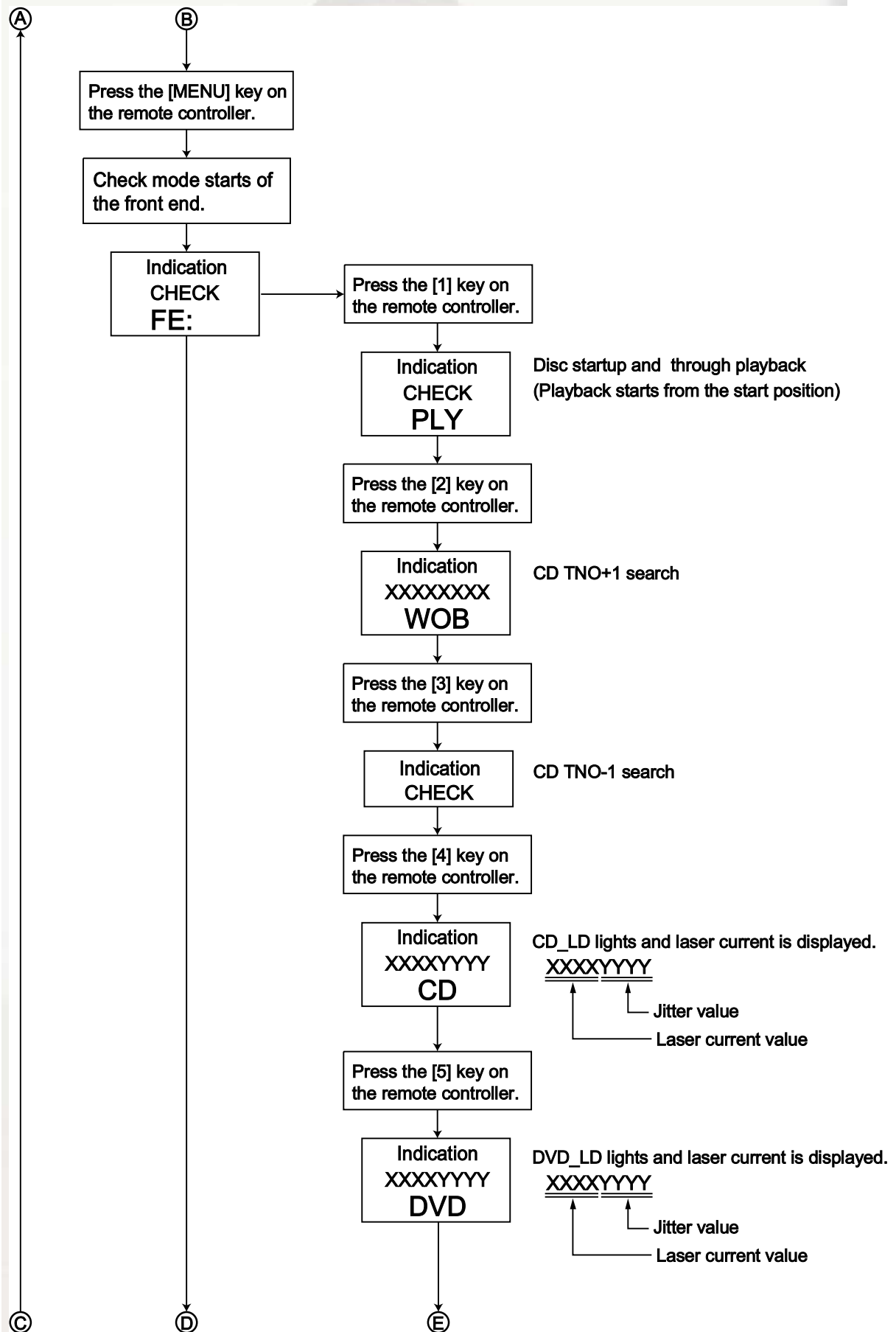
* Indication returns to version indication of a system control microcomputer by pushing an ON SCREEN key again.

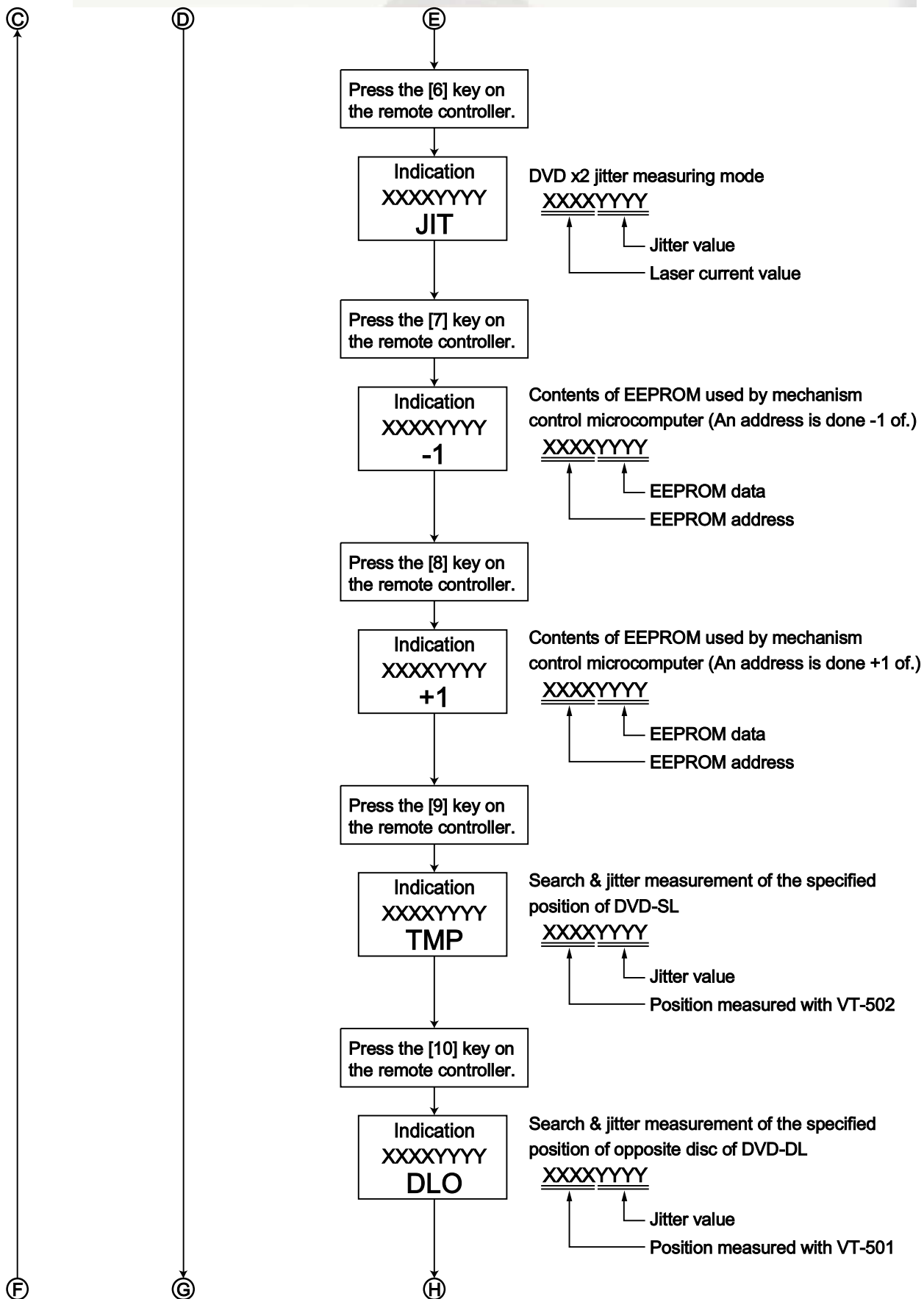
PLAY/PAUSE B.SKIP STOP F.SKIP

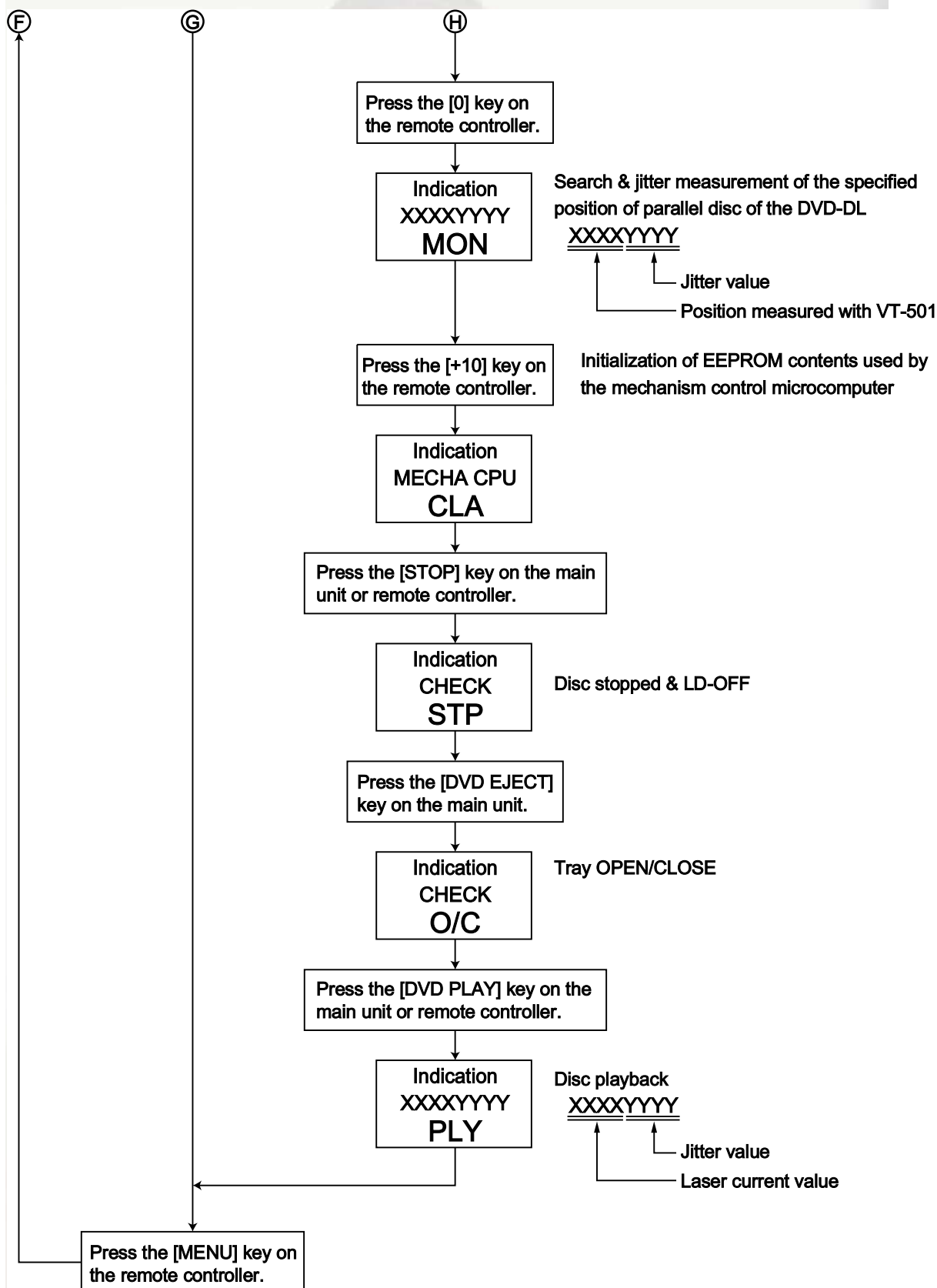


A

B







* Cancellation of a test mode

Push the [STANDBY] key on the main unit or remote controller.

Cancellation of a test mode can execute any step in adjustment.

SECTION 5 TROUBLESHOOTING

This service manual does not describe TROUBLESHOOTING.





JVC

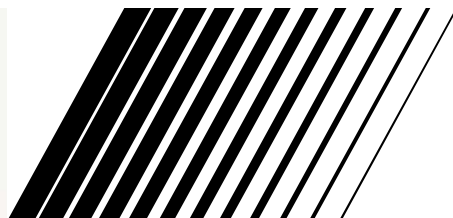
Victor Company of Japan, Limited
AV & MULTIMEDIA COMPANY AUDIO/VIDEO SYSTEMS CATEGORY 10-1, 1chome, Ohwatari-machi, Maebashi-city, 371-8543, Japan

(No.MB349)



Printed in Japan
VPT

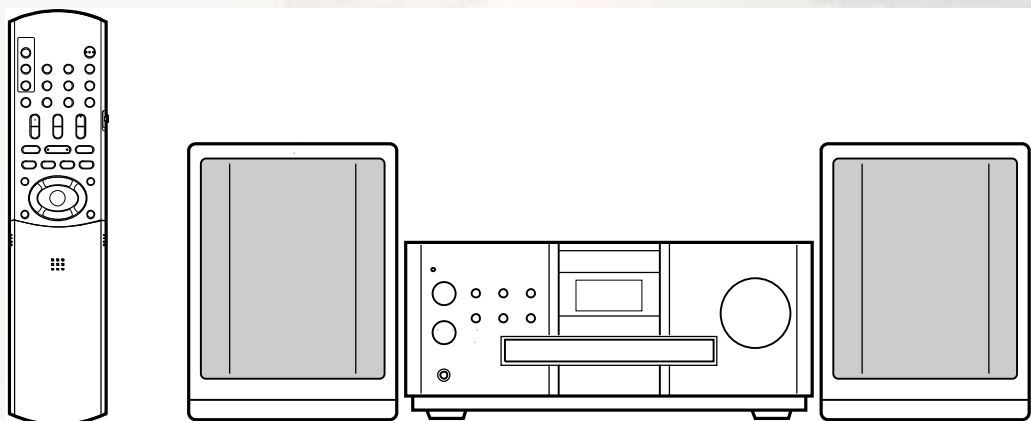
JVC



COMPACT COMPONENT SYSTEM

EX-A1

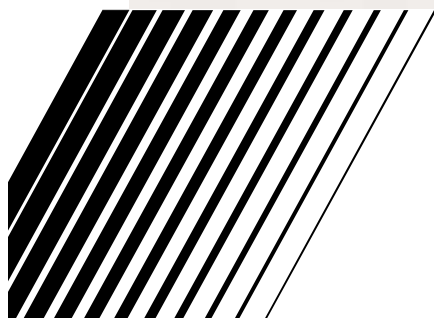
Consists of CA-EXA1 and SP-EXA1



WOOD CONE



INSTRUCTIONS



LVT1284-012A
[A]

Warnings, cautions and others


CAUTION

To reduce the risk of electrical shocks, fire, etc.:

1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

CAUTION — button!

Disconnect the mains plug to shut the power off completely (the STANDBY lamp goes off).

The  button in any position does not disconnect the mains line.

- When the system is on standby, the STANDBY lamp lights red.
- When the system is turned on, the STANDBY lamp goes off. The power can be remote controlled.

CAUTION

- Do not block the ventilation openings or holes.
(If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
- Do not place any naked flame sources, such as lighted candles, on the apparatus.
- When discarding batteries, environmental problems must be considered and local rules or laws governing the disposal of these batteries must be followed strictly.
- Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

IMPORTANT FOR LASER PRODUCTS

1. CLASS 1 LASER PRODUCT

2. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.

3. **CAUTION:** Visible and invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.

4. REPRODUCTION OF LABEL: CAUTION LABEL, PLACED INSIDE THE UNIT.

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)	WARNING : Synlig og osynlig laserstråling når den åbnes og spærren er urkopplad. Betrakta ej strålen. (s)	VARO : Avattaessa ja suojalukitus ohitettuna tai viallisena olet alttiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi! (f)
--	---	---	---

CAUTION – Proper Ventilation

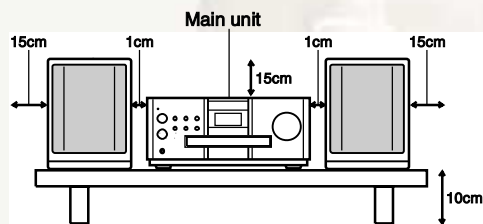
To avoid risk of electric shock and fire and to protect from damage, locate the apparatus as follows:

Top/Front/Back/Sides: No obstructions should be placed in the areas shown by the dimensions below.

Bottom: Place on the level surface. Maintain adequate air path for ventilation by placing on a stand with a height of 10 cm more.

In addition, maintain the best possible air circulation.

Front view



Side view

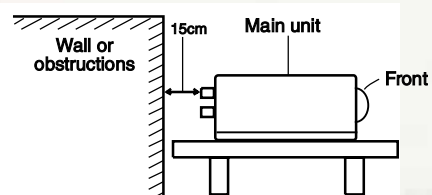


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How to read this manual

- Operations are described by mainly using the remote control buttons. If there are the same marks on the main unit, the buttons on the main unit can also be used.
- The following marks tell you for which type of the discs the operation can be made.

DVD VIDEO **DVD AUDIO** **VCD** **SVCD** **C D** **MP3**

JPEG

- The illustrations and TV screens may be different between the actual case and the description.
- "VCD" is an abbreviation of "Video CD".
- "SVCD" is an abbreviation of "Super Video CD".

Notes on handling

■ Important cautions

Installation of the system

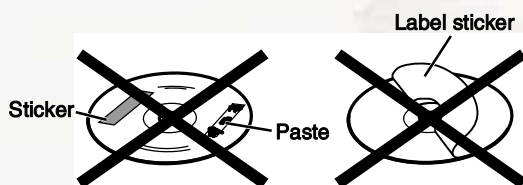
- Select a place which is level, dry and neither too hot nor too cold; between 5°C and 35°C.
- Leave sufficient distance between the system and the TV.
- Do not use the system in a place subject to vibration.

Power cord

- Do not handle the power cord with wet hands!
- A small amount of power is always consumed while the power cord is connected to the wall outlet.
- When unplugging the power cord from the wall outlet, always pull on the plug, not the power cord.

To prevent malfunctions of the system

- There are no user-serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
- Do not insert any metallic object into the system.
- Do not use any non-standard shape disc (like a heart, flower or credit card, etc.) available on the market, because it may damage the system.
- Do not use a disc with tape, stickers, or paste on it, because it may damage the system.



Note about copyright laws

Check the copyright laws in your country before recording from DVDs, Super Video CDs (SVCDs), VCDs and CDs. Recording of copyrighted material may infringe copyright laws.

Note about copy guard system

DVDs are protected by copy guard system. When you connect the system to your VCR directly, the copy guard system activates and the picture may not be played back correctly.

■ Safety precautions

Avoid moisture, water and dust

Do not place the system in moist or dusty places.

Avoid high temperatures

Do not expose the system to direct sunlight and do not place it near a heating device.

When you are away

When away on travel or for other reasons for an extended period of time, disconnect the power cord plug from the wall outlet.

Do not block the vents

Blocking the vents may damage the system.

Care of the cabinet

When cleaning the system, use a soft cloth and follow the relevant instructions on the use of chemically-coated cloths. Do not use benzene, thinner or other organic solvents including disinfectants. These may cause deformation or discoloring.

If water gets inside the system

Turn the system off and disconnect the power cord plug from the wall outlet, then call the store where you made your purchase. Using the system in this condition may cause fire or electrical shock.

■ When condensation or water drops adhere to the lens

In any of the following cases, condensation or water drops may adhere to the lens to prevent the system from working properly:

- Immediately after roomheating starts
- When the system is installed in a steamy or damp space
- When the system is suddenly moved from a cold place to a warm space

In any of these cases, leave the system turned on for 1 or 2 hours before use.

Supplied accessories

Check to be sure you have all of the supplied accessories.

The number in parentheses is the quantity of the pieces supplied. If anything is missing, contact your dealer immediately.

- Remote control (1)
- Batteries (2)
- FM antenna (1)
- AM loop antenna (1)
- Power cord (1)
- Composite video cord (1)
- Speaker cords (2)

- *Manufactured under license from Dolby Laboratories. "Dolby", "MLP Lossless", and the double-D symbol are trademarks of Dolby Laboratories.*
- *"DTS" and "DTS 2.0+DIGITAL OUT" are registered trademarks of Digital Theater Systems, Inc.*
- *This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.*

About discs

Playable disc types

This system has been designed to play back the following discs:

DVD VIDEO, DVD AUDIO, VCD, SVCD, CD

This system can also play back the following discs:

- Finalized DVD-R/RW discs recorded in the DVD VIDEO format.
- CD-R/RW discs recorded in the following formats
- Music CDs (finalized discs)
- VCDs
- SVCDs
- MP3/JPEG discs recorded in ISO 9660 (for details, refer to "About MP3/JPEG discs")

However, some discs may not be played back because of their disc characteristics, recording conditions, or damage or stain on them.

Only sounds can be played back from the following discs:

MIX-MODE CD CD-G
CD-EXTRA CD TEXT

Discs you can play:

Disc Type	Mark (Logo)	Video Format	Region Code Number*
DVD VIDEO		PAL/NTSC	4/ALL
DVD AUDIO		—	—
VCD		PAL/NTSC	—
SVCD		PAL/NTSC	—
CD		—	—
CD-R		—	—
CD-RW		—	—

* Note on Region Code

DVD players and DVD VIDEOs have their own Region Code numbers. This system can only play back a DVD VIDEO recorded with the Region Code number and video format mentioned above.

Examples:



If a DVD VIDEO with an improper Region Code number is loaded, "REGION CODE ERROR!" appears on the TV screen and playback cannot start.

- On some DVD VIDEOs, DVD AUDIOs, VCDs or SVCDs, their actual operation may be different from what is explained in this manual. This is due to the disc programming and disc structure, not a malfunction of this system.

Discs that cannot be played back

- The following discs cannot be played back: DVD-ROM, DVD-RAM, DVD-R/RW (recorded in VR format), CD-ROM, CD-I (CD-I Ready), Photo CD, SACD, etc.

Playing back these discs will generate noise and damage the speakers.

Damaged discs and discs in an extraordinary shape (other than a disc of 12 cm or 8 cm in diameter) cannot be played back.

About MP3/JPEG discs

Playable MP3/JPEG discs and files

- Discs recorded in the ISO 9660 format are playable (except discs recorded in the "packet write" format (UDF format)).
- Discs recorded in the multi-session format are also playable.
- Files with an extension of ".mp3," ".jpg" or ".jpeg" (extensions with uppercase and lowercase letters mixed are also acceptable) are playable.

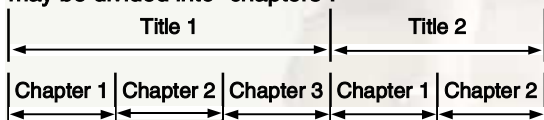
Notes on MP3/JPEG discs and files

- A disc may not be played, or reading it may take a long time depending on its recording conditions or properties.
- The time needed for reading varies with the number of groups or tracks (files) recorded on the disc.
- If a character other than single byte English characters is used in the file name of an MP3/JPEG file, the track/file name will not be displayed correctly.
- The order of tracks/groups displayed on the MP3 Control screen, and the order of files/groups displayed on the JPEG Control screen may be different from that of files/folders displayed on PC's monitor screen.
- An off-the-shelf MP3 disc may be played in an order different from that indicated on the label attached to the disc.
- Playing an MP3 file including a still image may take a long time. The elapsed time is not displayed until playing starts. If playing starts, the elapsed time may not be displayed correctly.
- This system does not handle the ID3 tag of the MP3 file.
- For an MP3 file, a disc with a sampling frequency of 44.1 kHz and transmission rate of 128 kbps is recommended.
- This system can play a baseline JPEG file, excluding monochromatic JPEG files.
- This system can play JPEG data taken with a digital camera conforming to the DCF (Design Rule for Camera File System) standard (when a function is applied such as the automatic rotation function of a digital camera, data goes beyond the DCF standard, so the image may not be displayed).
- If data has been processed, edited and restored with PC image editing software, the data may not be displayed.
- This system cannot play animations such as MOTION JPEG, or still images (TIFF etc.) other than JPEG, and image data with sound.
- The resolution of 640 x 480 pixels is recommended for JPEG files. If a file has been recorded at a resolution of more than 640 x 480 pixels, display may take a long time. An image with a resolution of more than 8192 x 7680 pixels cannot be displayed.
- Files recorded on DVD-R/RW discs cannot be played back.

Disc structure

DVD VIDEO

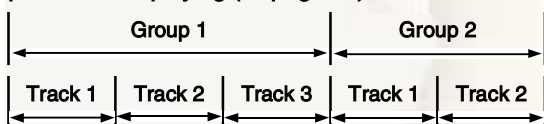
A DVD VIDEO consists of “titles” and each title may be divided into “chapters”.



DVD AUDIO

A DVD AUDIO consists of “groups” and each group may be divided into “tracks”.

Some discs include a “bonus group” that requires a password for playing (see page 28).

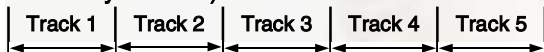


VCD/SVCD/CD

VCD, SVCD and CD consist of “tracks”.

In general, each track has its own track number.

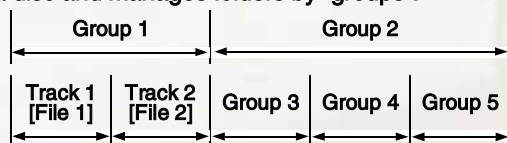
(On some discs, each track may also be further divided by indexes.)



MP3 [JPEG] discs

On an MP3 [JPEG] disc, each still picture (material) is recorded as a track [file]. Tracks [Files] are usually grouped into a folder. Folders can also include other folders, creating hierarchical folder layers.

This unit simplifies the hierarchical construction of a disc and manages folders by “groups”.



This product can recognize up to 1000 tracks [files] in a disc. Also, the product can recognize up to 150 tracks [files] per group and up to 99 groups in a disc. Since the unit ignores the tracks [files] whose numbers are exceeding 150 and the groups whose numbers are exceeding 99, they cannot be played back.

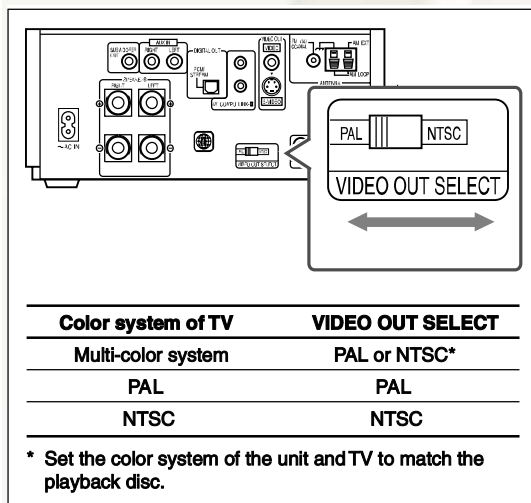
- If there is any type of files other than MP3 [JPEG] files in a folder, those files are also counted in the total file number.

To select the color system

This system is compatible with PAL and NTSC color systems.

In standby mode, select PAL or NTSC to match your TV.

If the VIDEO OUT SELECT switch is switched over when the power is ON, turn off the power, and then turn it on again.



- Before playing back a disc, it is also required to select the correct monitor type in the PICTURE menu according to the aspect ratio of your TV (☞ page 30).

NOTE

If you play back an NTSC disc with this setting set to "PAL".

You can watch the playback pictures (the disc will be reproduced using "PAL 60" format), but the TV screen may rolls over upward and downward rapidly.

NOTE

If you play back a PAL disc with this setting set to "NTSC".

You can watch the playback pictures, but the following symptoms may occur:

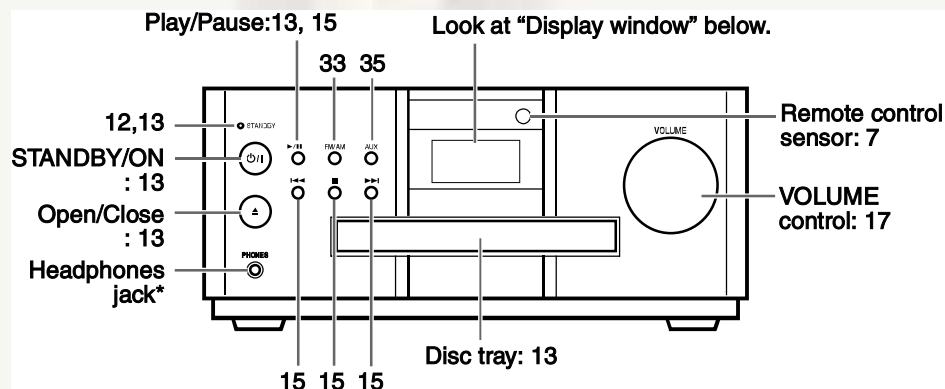
- The items on the disc menu will be blurred, and be shown slightly shifted when highlighted.
- The aspect ratio of the picture may differ from the original aspect ratio.
- The picture movement is not smooth.

Description of parts

Introduction

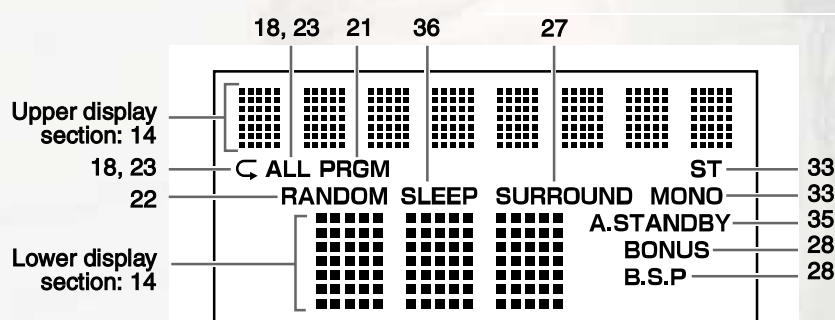
The numbers represent the page numbers.

Front panel

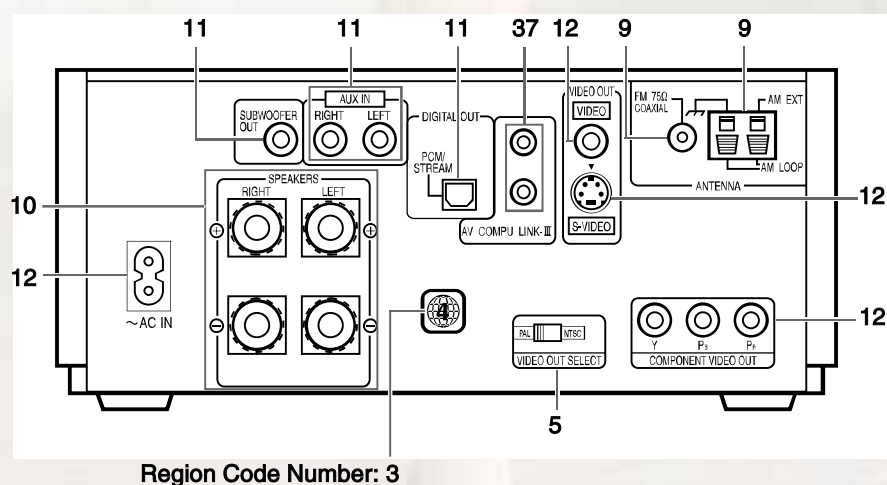


* Connect a pair of headphones (commercially available) with a stereo mini plug. If the headphones are connected, the speakers and subwoofer will not produce any sound.

Display window

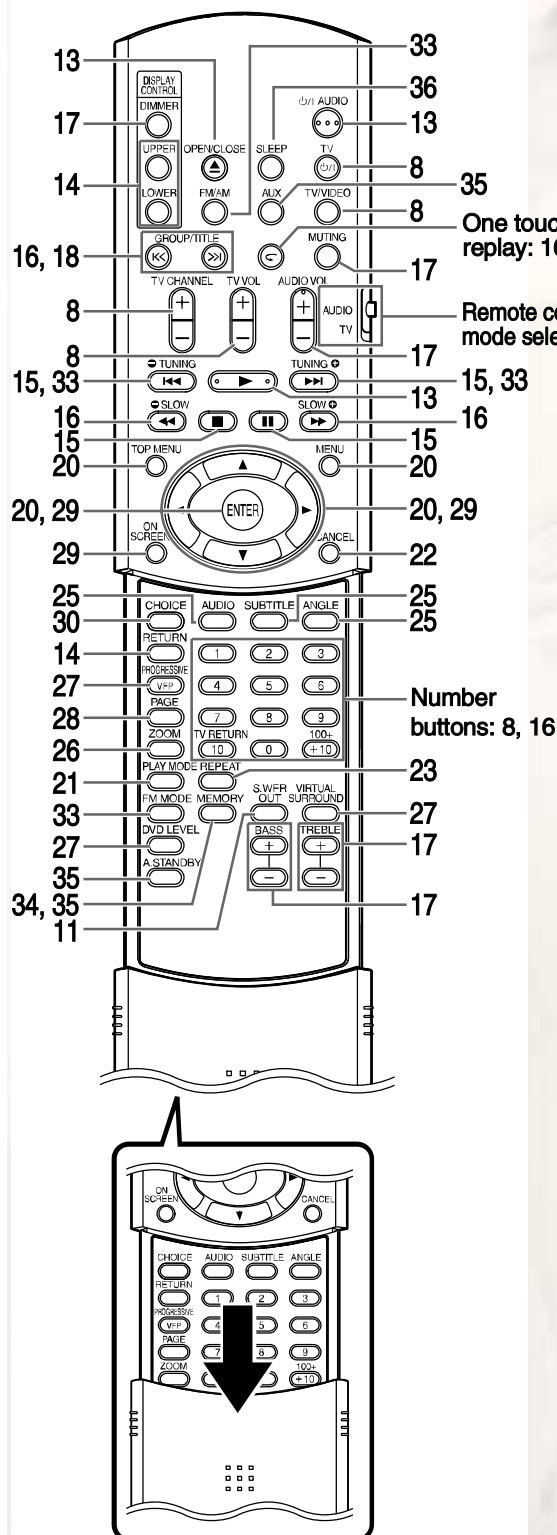


Rear panel

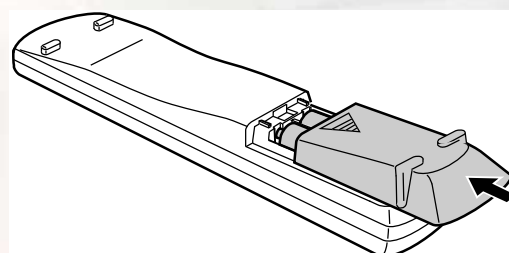
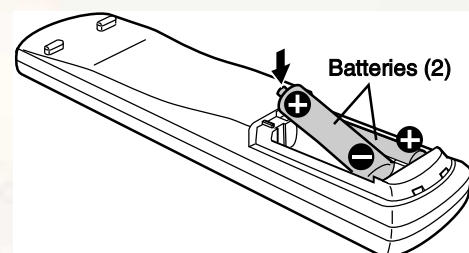
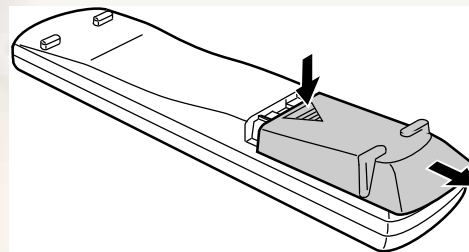


Using the remote control

The numbers represent the page numbers.



Putting the batteries in the remote control



If the range or effectiveness of the remote control decreases, replace the batteries. Use two R6P (SUM-3)/AA(15F) type dry-cell batteries.

CAUTION

- Do not use a used battery and a new battery together.
- Do not use different types of batteries at the same time.
- Take out the batteries if the remote control is not to be used for a long time. Otherwise it may cause a leakage.

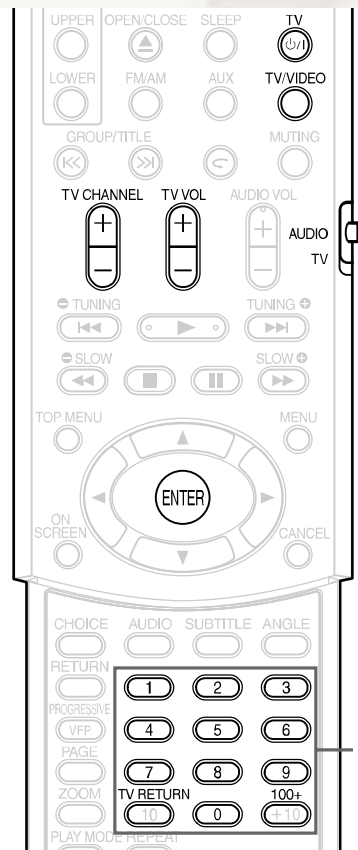
Remote control operation

When operating the remote control, point it towards the front panel of the main unit. If the remote control is operated from a direction that is extremely oblique or when there is an obstacle in the way, signals may not be transmitted.

If the remote control sensor is exposed to a strong light such as direct sunlight, correct operation may not be carried out.

This page is for when operating your TV using the remote control of this product.

Operating the TV using the remote control



Number buttons

Setting the manufacturer's code

- 1 Slide the remote control mode selector to the TV side.



- 2 Keep pressing down TV.

NOTE

Keep pressing down TV until Step 4 is complete.

- 3 Press ENTER and release.

- 4 Press number buttons (1-9, 0).

Examples:

For a Hitachi TV: Press 1, then 0.

For a Toshiba TV: Press 0, then 8.

If there are more than one manufacturer's codes, try them in turn and select the one that causes the product to work properly.

Manufacturer	Code	Manufacturer	Code
JVC	01	Samsung	12
Hitachi	10	Sanyo	13
Magnavox	02	Sharp	06
Mitsubishi	03	Sony	07
Panasonic	04, 11	Toshiba	08
RCA	05	Zenith	09

NOTE

Manufacturer's codes may be changed without notice. You may not be able to operate a TV produced by the manufacturer shown above.

- 5 Release TV.

For TV operation

Operate the remote control by pointing it towards the TV.

	Turn ON/OFF the power.
	Change channels.
	Adjust volume.
	Select channels. *1
	Alternates between the previously selected channel and the current channel.
	Switch TV and video input.

*1 Make sure to slide the remote control mode selector to the TV side in advance.

NOTE

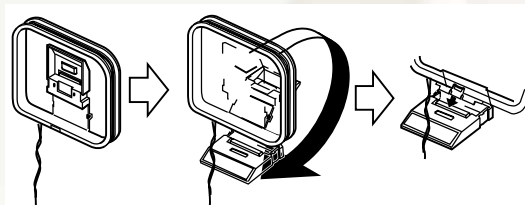
When the batteries are replaced, perform the manufacturer's code setting again.

Connecting up – Do not turn on the power until the connection is complete –

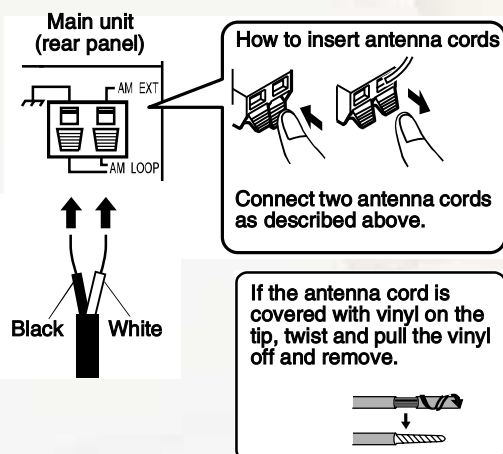
Connecting antennas

Connecting AM loop antenna (supplied)

1 Set up the AM loop antenna.



2 Connect antenna cords.

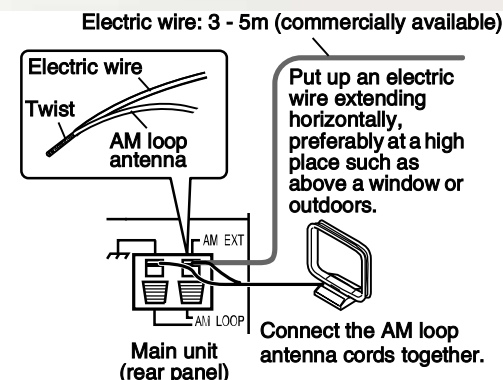


3 Turn the AM loop antenna to the direction of the best radio reception.

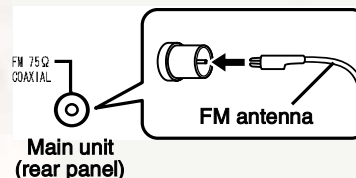
Locate the AM loop antenna as far away from the main unit as possible.

- Do not locate the AM loop antenna on a metallic table or close to a TV, personal computer, etc. Otherwise it may result in bad radio reception.

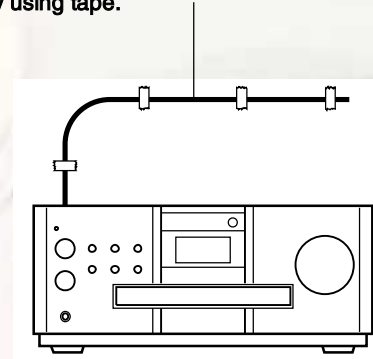
■ When good radio reception cannot be obtained with the supplied AM loop antenna



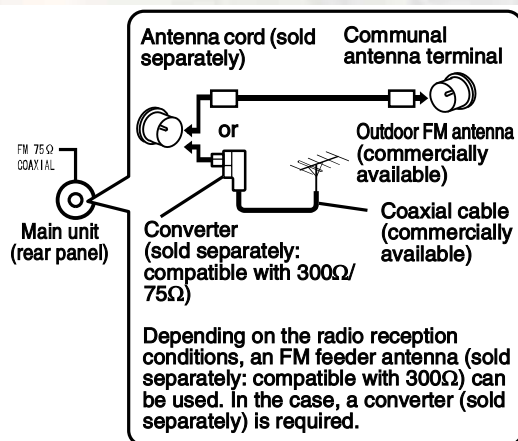
Connecting FM antenna (supplied)



Put the antenna up straight in the direction where the best radio reception can be obtained, and fix by using tape.



■ When good radio reception cannot be obtained with the supplied antenna or when using a communal antenna

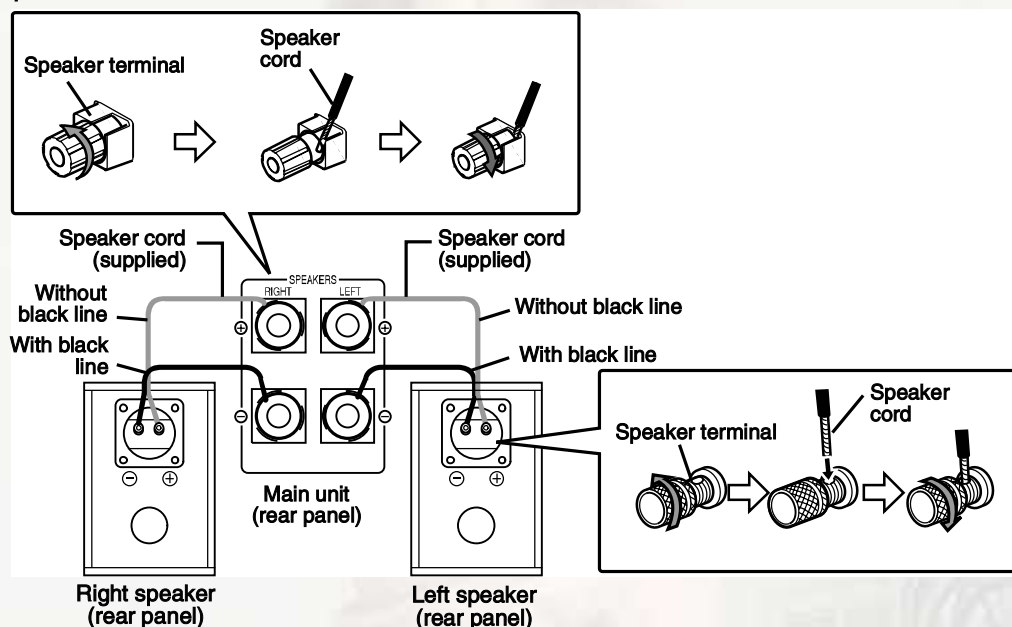


For details of connecting a separately sold antenna, refer to the user guide for the antenna or converter.

When positioning the antenna, listen to an actual radio program (refer to "Listening to a radio broadcast" on page 33).

Connecting speakers

There is no difference between the left and right speakers.

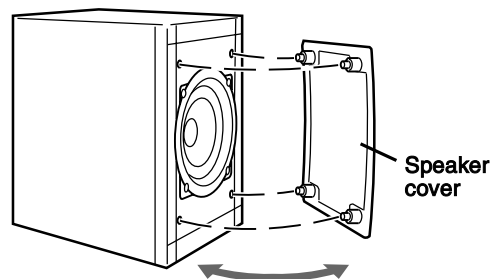


CAUTION

- **DO NOT** connect more than one speaker to one speaker terminal.
- The speakers of this product are magnetically shielded, but color irregularities may occur on the TV depending on how the speakers are installed. Keep in mind the following.
 1. Turn off the main power of your TV before installing the speakers. Wait for about 30 minutes before turning on the TV again.
 2. If color irregularity occurs in pictures, keep a distance of more than 10 cm between the TV and the speakers.

The speakers employ natural wood for the diaphragm and the cabinet in order to reproduce the original sound faithfully. The appearance will therefore be different for each unit.

Speaker cover can be detached.



NOTE

- Impedance of speaker that can be connected to the main unit is within a range of 4Ω to 16Ω .
- In order to have a sufficient cooling effect, leave a space of more than 1cm between the main unit and the speakers or other objects.

Connecting other devices

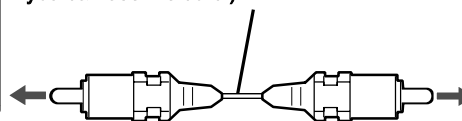
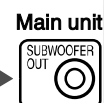
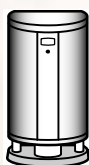
This page is for when connecting the main unit with other devices.

Connecting subwoofer

With an amplifier-built in subwoofer (sold separately), you can enjoy a more dynamic bass sound. Refer to the manual of the subwoofer for details.

Amplifier-built in subwoofer
(sold separately)

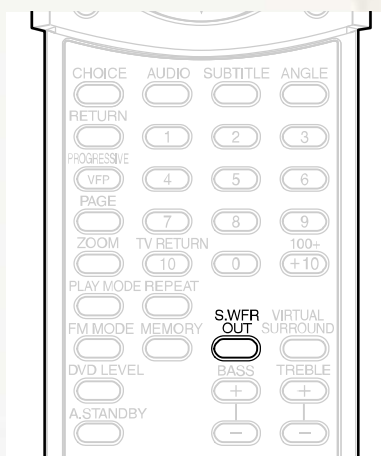
Audio cord (sold separately)
(If an audio cord comes with the amplifier-built-in subwoofer,
you can use the cord.)



When you want to hear sound from the subwoofer, press **S.WFR OUT** on the remote control to display “SUB WFR ON” (Sub Woofer ON) on the display window on the main unit. Each time you press the button, the display toggles between “ON” and “OFF”.

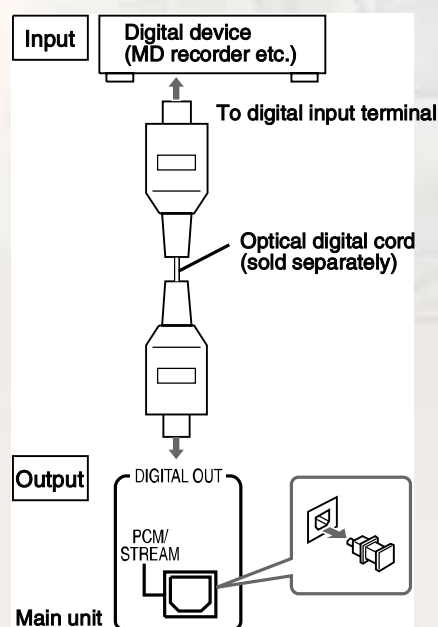
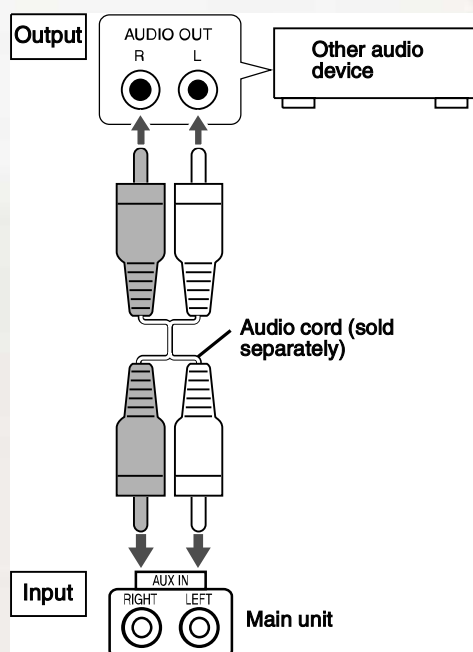
NOTE

When “SUB WFR ON” is selected, bass sound from the left and right speakers will be automatically lowered and the bass sound will be emitted mainly from the subwoofer.



Connecting with a digital device

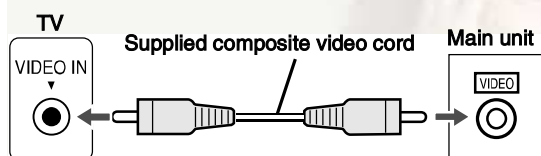
Connecting with other audio device



CAUTION

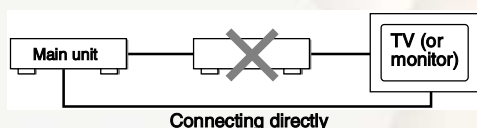
- For details of signals to be output, refer to page 31.
- If connecting the main unit with equipment with the function of a Dolby Digital decoder, the setting in “D. RANGE COMPRESSION” of “AUDIO” (page 31) will be invalid regarding sound from the digital audio output of the main unit.

Connecting with TV



CAUTION

Connect the main unit directly with a TV (or a monitor) without routing through a VCR. Otherwise it may cause picture distortion while playing.



Also, when connecting the main unit to a TV with a VCR built in, there may be picture distortion while playing.

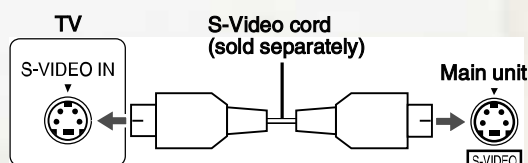
NOTE

Please check that the setting for VIDEO OUT SELECT (PAL / NTSC) on the rear panel of the main unit and the color system on your TV set are the same. (→ page 5)

When a clearer picture is desired

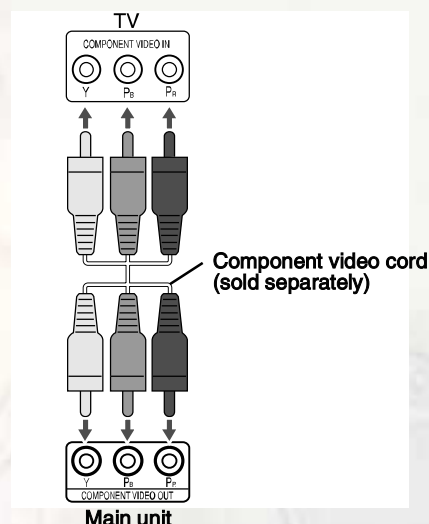
You can enjoy pictures of better quality using the following cord instead of the supplied video cord.

Connecting by using the S-Video cord



Connecting by using the component video cord

You can enjoy better quality pictures than when using the S-Video cord.



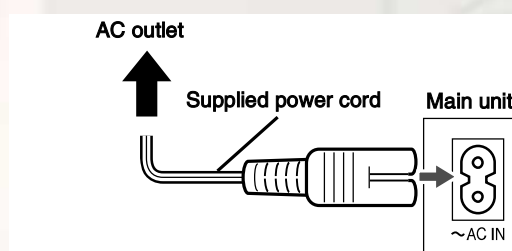
CAUTION

Use one of either the S-Video cord or the component video cord. If both cords are used, pictures may not be played properly.

NOTE

- In order to enjoy pictures with Progressive mode (→ page 27), the TV is required to have Progressive video input.
- If the component video input jacks of your TV are BNC type, use a plug adapter (not supplied) to convert the plugs.

Connecting the power cord

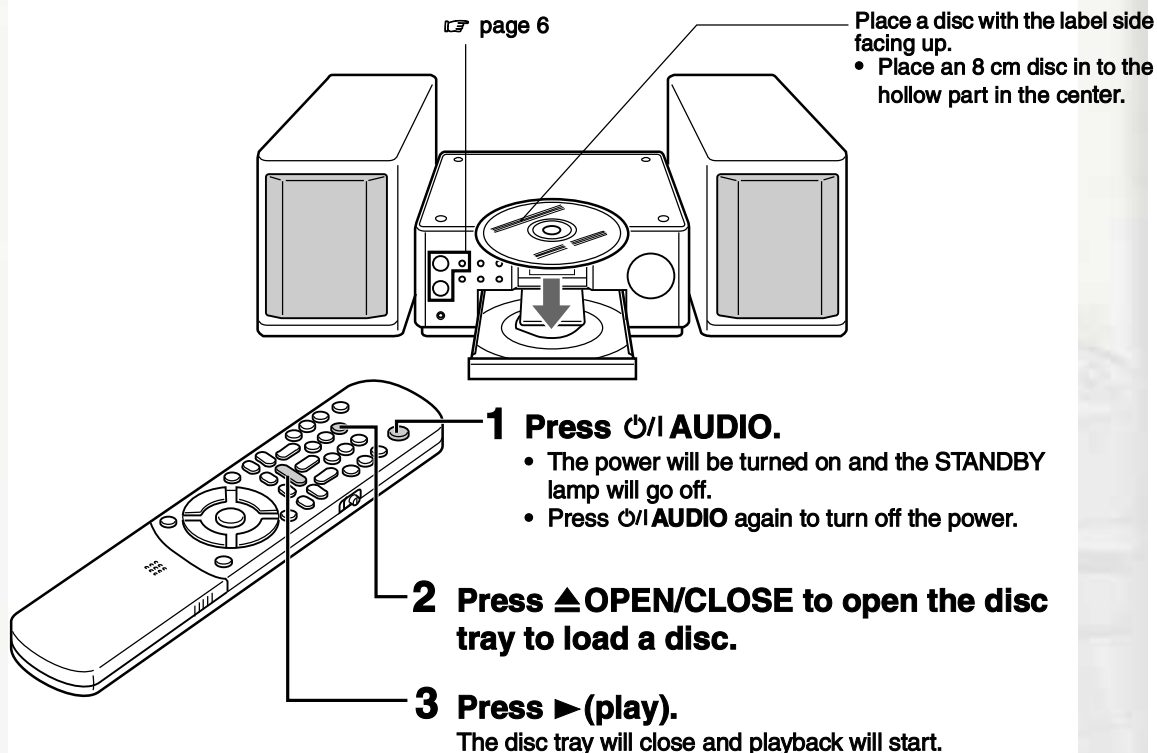


- Connect the power cord after all other connections are complete.
- The STANDBY lamp (on the front panel) will be lit.

Playing discs

Playback

DVD VIDEO **DVD AUDIO** **VCD** **SVCD** **CD** (Refer to page 17 for playing MP3 and JPEG.)



- The power will be turned on when any of , , or on the main unit and , , or on the remote control is pressed while the power is off.

If any button other than or is pressed, the source will also be changed (if there is a disc loaded, playback will start).

NOTE

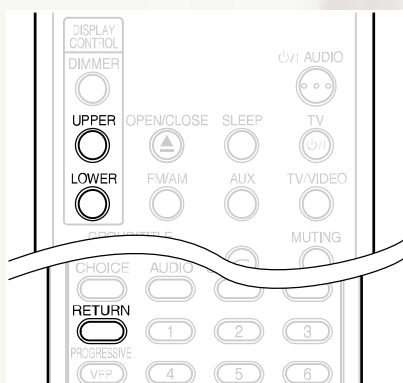
- A menu screen may be displayed after starting playback of a DVD. In this case, select a desired item to playback by using the following buttons on the remote control.
 - Select a desired item using and press .
 - Select a desired item using the number buttons.
 - Depending on the disc, actual operation may be different from the description.



Screens displayed on the TV when the power is turned ON.

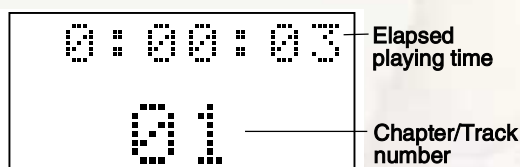
The following messages appear depending on the status of the system.
(When FM/AM or AUX is selected as a source, the messages do not appear.)

NOW READING	Appears when the system is reading the disc information. Wait for a while.
REGION CODE ERROR!	Appears when the Region Code of the DVD does not match the code the system supports. (Refer page 3)
NO DISC	Appears when no disc is loaded.
OPEN	Appears when opening the disc tray.
CLOSE	Appears when closing the disc tray.
CANNOT PLAY THIS DISC	Appears when trying to play back an unplayable disc.



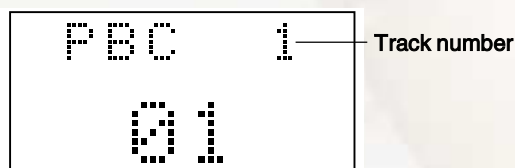
Display window during disc playback

Example: When a DVD VIDEO or DVD AUDIO is played



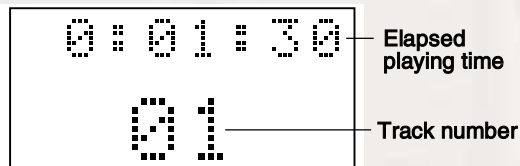
If "BONUS" or "B.S.P" is displayed during a DVD AUDIO playback, refer to page 28.

Example: When a SVCD or VCD is played

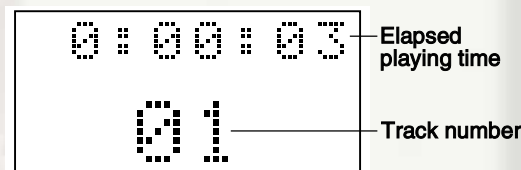


- PBC (Play Back Control): A signal recorded in a VCD (version 2.0) for controlling playback. It is possible to enjoy interactive software or software with a search function using a menu screen recorded in a PBC compatible VCD. To play a disc with the PBC function OFF, carry out the following operations.
 - Designate the track number using the number buttons while the disc is stopped.
 - Designate the track number using ◀◀ or ▶▶ while the disc is stopped, and then press ▶(play).
- Press **RETURN** to go back to the upper layer during the PBC playback of a VCD or SVCD.

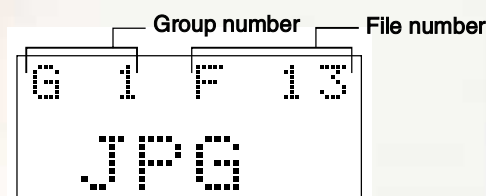
Example: When a CD is played



Example: When an MP3 disc is played



Example: When a JPEG disc is played



To switch the display

Press **UPPER** or **LOWER**. Each time you press the button, the display will be alternated.

Display examples

DVD VIDEO

UPPER: → 0:00:03 (Elapsed playing time) → T1 C3 (Title and Chapter number)
No display ←

LOWER: → 03 (Chapter number) → T1 (Title number) → DVD

DVD AUDIO

UPPER: → 0:00:03 (Elapsed playing time) → G1 T3 (Group and Track number)
No display ←

LOWER: → 03 (Track number) → G1 (Group number) → DVD

VCD/SVCD

UPPER: → 0:00:03 (Elapsed playing time) → No display
PBC 2 (PBC and Track number appear only when PBC function is played) ←

LOWER: → 02 (Track number) → VCD

CD

UPPER: → 0:00:03 (Elapsed playing time) → No display

LOWER: → 02 (Track number) → CD

MP3 disc

UPPER: → 0:00:03 (Elapsed playing time) → G1 T3 (Track number)
No display ←

LOWER: → G1 (Group number) → MP3 → 03 (Track number)

JPEG disc

UPPER: → G1 F3 (Group number and File number) → No display

LOWER: JPG

NOTE

Abbreviations

G: Group

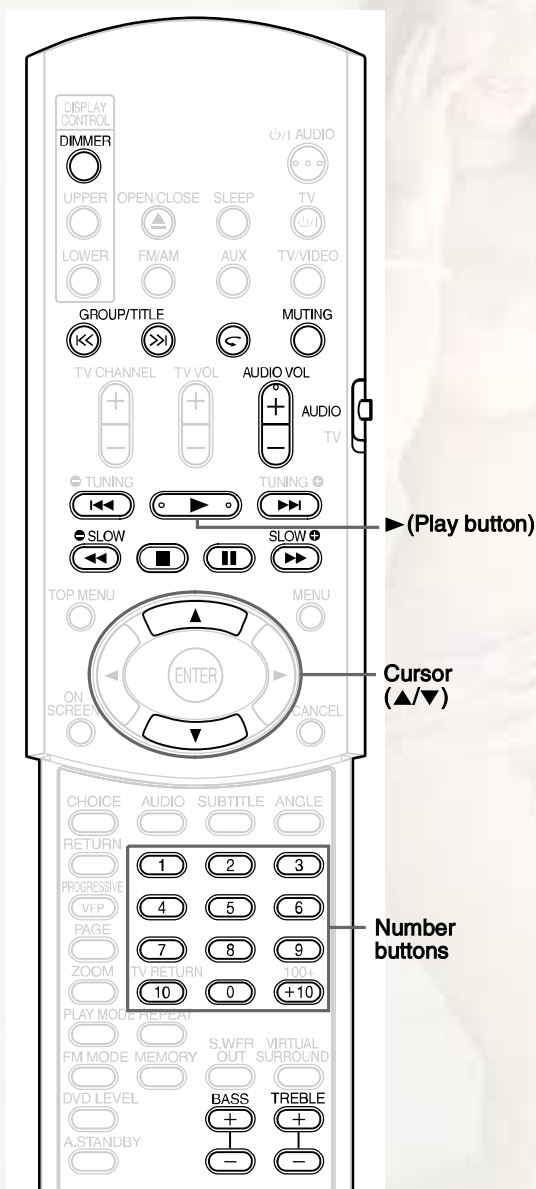
T: Title (DVD VIDEO)

Track (DVD AUDIO and MP3)

C: Chapter

F: File

Playing discs (continued)



Select what you want to play by using the number buttons

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG

NOTE

- Set the remote control mode selector to **AUDIO** before using the number buttons.
- For a VCD or SVCD, this operation can be carried out when the disc is stopped, or during playback without the PBC function.
- For a DVD AUDIO, CD, MP3 or JPEG, this operation can also be carried out when the disc is stopped.
- This operation may not be carried out for some discs.



Designate the chapter number or track number to play during playback.

Refer to "How to use the number buttons" on page 16.

To stop playback

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG

Press **■** during playback.

To pause playback

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG

Press **⏸** during playback.

To resume normal playback, press **▶** (play).

- Press **⏸** to pause during JPEG disc slide-show. Press **▶** (play) to start playback from the next file.
- It is not possible to pause by pressing **▶/⏸** on the main unit during JPEG disc slide-show.

To advance picture frame-by-frame

DVD VIDEO SVCD VCD

Press **⏮** during pause.

Each time you press the button, picture will be advanced frame-by-frame.

Fast reverse/Fast forward search

DVD VIDEO DVD AUDIO VCD SVCD C D

There are two methods.

- **Press **⏮** or **⏭** during playback.**
Each time you press the button, the speed increases (×2, ×5, ×10, ×20, ×60). To restore the normal speed, press **▶** (play).
- **Hold down **⏮** or **⏭**.**
Fast reverse/Fast forward search can be carried out only while the button is pressed (×5→×20).

NOTE

- Fast reverse/Fast forward search cannot be carried out for MP3 and JPEG.
- For a DVD VIDEO, SVCD or VCD, no sound comes out during fast reverse/fast forward search.
- For a CD or DVD AUDIO, sound is intermittent during fast reverse/fast forward search.

Playing back from a position 10 seconds before (One Touch Replay)

DVD
VIDEO

Press during playback.

NOTE

- This operation may not be carried out for some discs.
- It is not possible to go back to the immediately previous title.

Slow Motion Playback

DVD **VCD** **SVCD**
VIDEO

Press **SLOW** or **SLOW** during pause.

- Each time you press the button, the speed increases.
- Press to pause playback, and press (play) to resume normal playback.

NOTE

- No sound will be produced.
- The picture motion in the reverse direction may not be smooth.
- For a VCD or SVCD, Slow Motion Playback can be carried out in the forward direction only.

Skip to the beginning of the selection

DVD **DVD** **VCD** **SVCD** **C D** **MP3** **JPEG**
VIDEO AUDIO

Press or during playback*.

- Each time you press the button, the previous or next beginning of chapter/track/file to the current position will be skipped to.
- Press once to skip back to the beginning of the chapter or track currently being played (except for JPEG).
- Press **GROUP/TITLE** or to select the title or group.
- During playback of a JPEG disc, press or cursor to play the next file, or press or cursor to play the previous file.

NOTE

- * For a VCD or SVCD, this operation can be carried out during playback without the PBC function.
- Except for a DVD VIDEO, this operation can also be carried out while the disc is stopped.
- This operation may not be carried out for some discs.

How to use the number buttons

Examples:

5:
20: →

15: →
25: → →



Guide icons displayed on the TV screen (On-screen guide)



: Play



: Pause



: Fast reverse/Fast forward search



: Slow Motion Playback (reverse/forward directions)



: Containing multi-angle views
(page 25)



: Containing multi-audio languages
(page 25)



: Containing multi-subtitle languages
(page 25)



: The disc cannot accept the operation you have attempted.

To change the brightness of the display window (DIMMER)

Press DIMMER repeatedly.

- The modified brightness will be stored even after the power is turned off.

The items below can be carried out for all sources.

Adjusting the volume

Press AUDIO VOL +/-.

NOTE

The volume can be adjusted by turning the VOLUME control on the main unit.

Adjusting sound quality

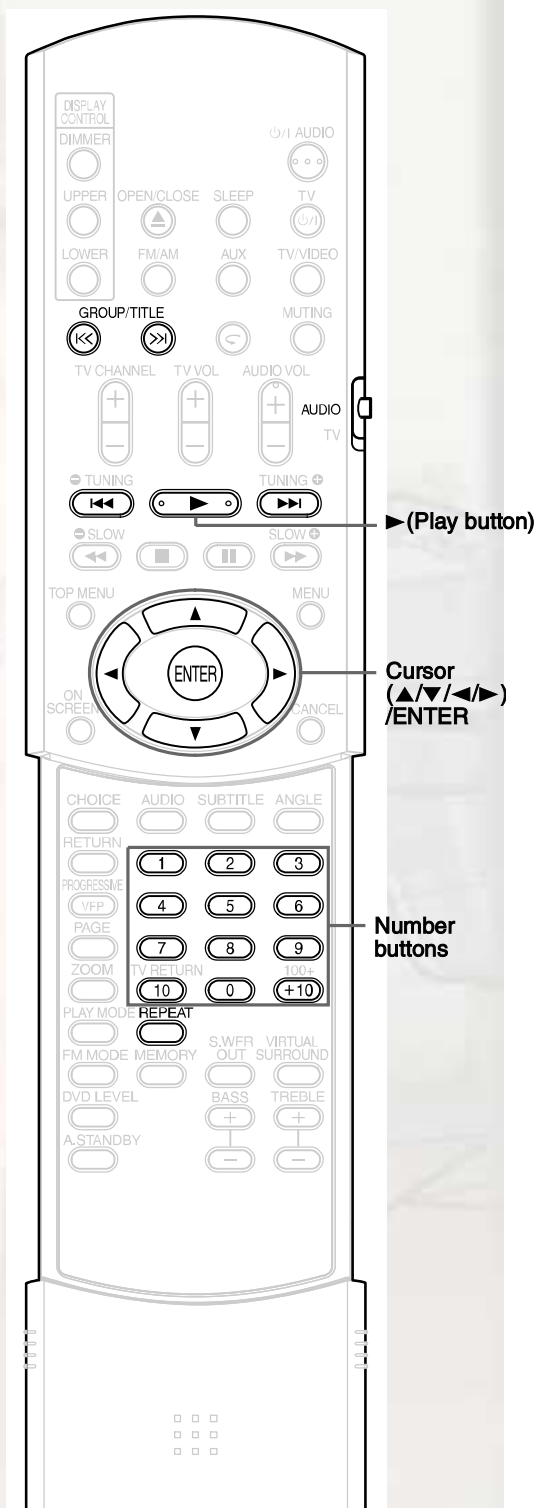
Bass: Press BASS +/-.

Treble: Press TREBLE +/-.

Turning off the sound temporarily (MUTING)

Press MUTING.

- No sound will come out from the speakers, headphones and the subwoofer.
- Press **MUTING** again to restore the sound. When the power is turned off once and turned on again, the sound will be restored.



NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



Playback

MP3 **JPEG**

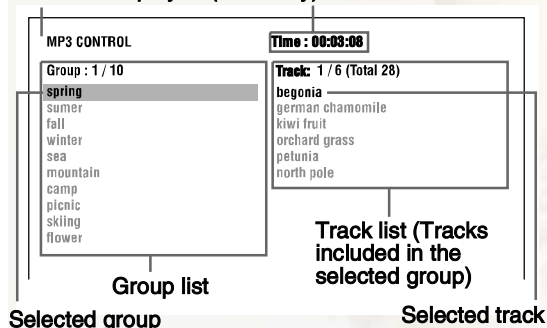
Display of an MP3 disc is described here as an example.
For a JPEG disc, read "track" as "file".

NOTE

When playing a disc containing both MP3 and JPEG files, set one of them to be played (see page 30).

1 Load a disc.

TV screen Elapsed time of the track currently being played (MP3 only).



2 Press cursor ▲/▼ to select a group.

3 Press cursor ► to move to the track list.

- Press cursor ◀ to go back to the group list.

4 Press cursor ▲/▼ to select a track.

5 Press ►(play) or ENTER.

NOTE

- **GROUP/TITLE** ◀◀, ▶▶ can also be used in Step 2.
- The number buttons can also be used in Step 4. In this case, Steps 3 and 5 are not needed. (For how to use the number buttons, refer to page 16).
- ◀◀◀ or ▶▶▶ can also be used in Step 4. In this case, Step 3 is not needed.

Repeat playback

MP3 **JPEG**

1 Press REPEAT while the disc is stopped.

Each time you press the button, the Repeat type will be alternated.

Repeat types	Display on the TV screen	Display on the display window on the main unit
Repeats the current track (only for MP3).	REPEAT TRACK	↺
Repeats the current group.	REPEAT GROUP	↺ ALL *
Repeats the entire disc.	REPEAT ALL	↺ ALL
Cancels repeat.	No display	No display
Repeats the current track during a Program or Random Playback (only for MP3).	REPEAT STEP	↺
Repeats all programmed tracks or the all tracks for Random play (only for MP3).	REPEAT ALL	↺ ALL

* represents blinking.

2 Press ►(play).

NOTE

- The Repeat types can be changed during playback.
- The Repeat mode will be automatically cancelled if there is a file that cannot be played (see page 3).

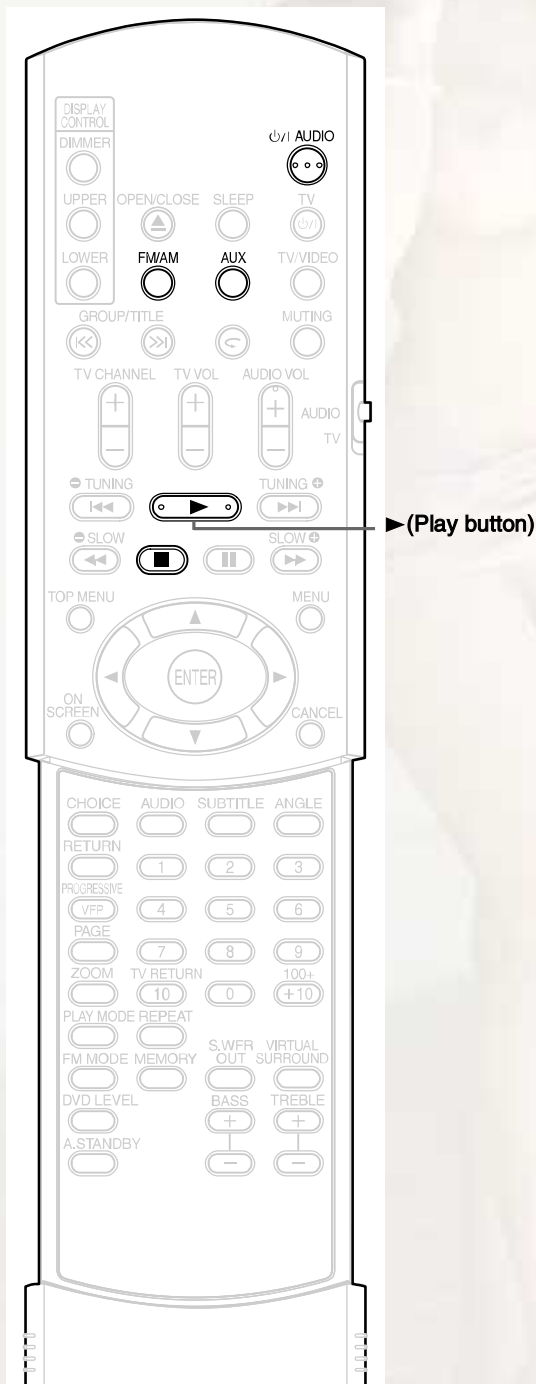
Slide-Show Playback **JPEG**

- In Step 5, for a JPEG disc, when ►(play) is pressed, files will be continuously played from the selected file (Slide-Show Playback), and when ENTER is pressed, only a selected file will be played.
- Display time for a file in Slide-Show Playback is about 3 seconds.
- When all files are played through, the playback will be automatically stopped.

Resume Playback

DVD VIDEO DVD AUDIO VCD SVCD

When playback is stopped in the middle, playback can be started from the stopped scene. This is called Resume function.



How to suspend playback

Perform any of the following operations during playback.

Press ■ once.*

Press ⏻/I **AUDIO** to turn off the power.

Change the source to FM/AM or AUX.*

* Even if the power is turned off by pressing ⏻/I **AUDIO** after this, the position where playback has been stopped will be stored.



To start playback from the stored position

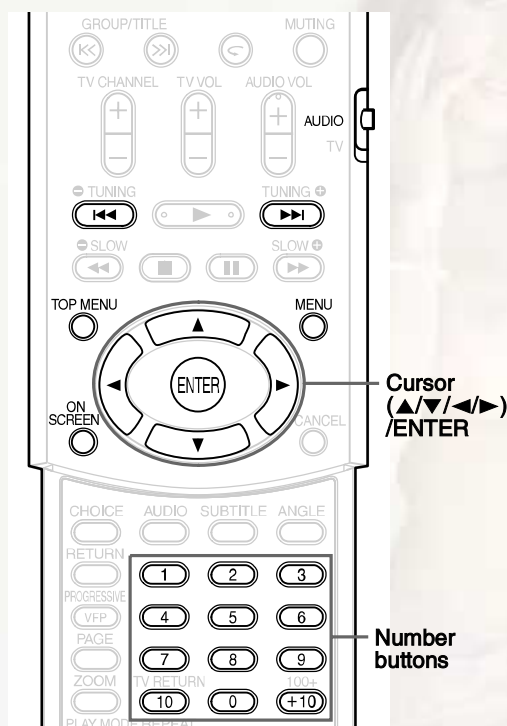
Press ▶ (play).

NOTE

- This function does not work in Program Playback or Random Playback.
- The position where playback starts again may be a little different from the stopped position.
- When a disc menu is displayed, the Resume function may not work.
- The audio language, the subtitle language and the angle at that time are stored as well as the stopped position.
- The stored position will be cleared if the disc tray is opened. Further, if ■ is pressed during playback, "RESUME" will be displayed. If ■ is pressed at this time, "RESUME OFF" will be displayed and the stored information will be cleared.
- At the time of purchase, Resume is set to ON. Resume can be set to OFF (ⓘ page 31).

Select the scene to be played

Advanced operations



NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



- out only when the PBC function is off.
- This operation cannot be carried out for a disc without a menu screen.
- Playback may start for some discs without pressing ENTER.

Designate the time (Time search)

DVD VIDEO DVD AUDIO VCD SVCD CD

- Press **ON SCREEN** twice during playback*².
The menu bar will be displayed (see page 29).
- Press cursor **◀/▶** to select **⌚**.
- Press **ENTER**.
- Input the time*³ using the number buttons (1-9, 0).

Example: When you want to play a DVD VIDEO from the position of (0 hour) 23 minutes 45 seconds, press the buttons in the order:

0 → 2 → 3 → 4 → 5

“minutes” and “seconds” can be omitted.

- If you input wrong numbers, press cursor **◀** to delete the numbers and re-input.

- Press **ENTER**.

To delete the menu bar, press **ON SCREEN**.

NOTE

- This function does not work for a DVD VIDEO with no time information recorded.
- This function does not work during Program or Random Playback.
- ^{*2} For a CD, this operation can always be carried out, while, for a VCD and a SVCD, the operation can be carried out when the disc is stopped or during playback without the PBC function.
- ^{*3} Time search for a DVD VIDEO is from the beginning of the title, for a DVD AUDIO from the beginning of the track being played. Time search for a VCD, a SVCD and a CD is as follows:
 - When the disc is stopped, time search is from the beginning of the disc.
 - When the disc is being played, time search is within the track currently being played.

Select from the menu

DVD VIDEO DVD AUDIO VCD SVCD

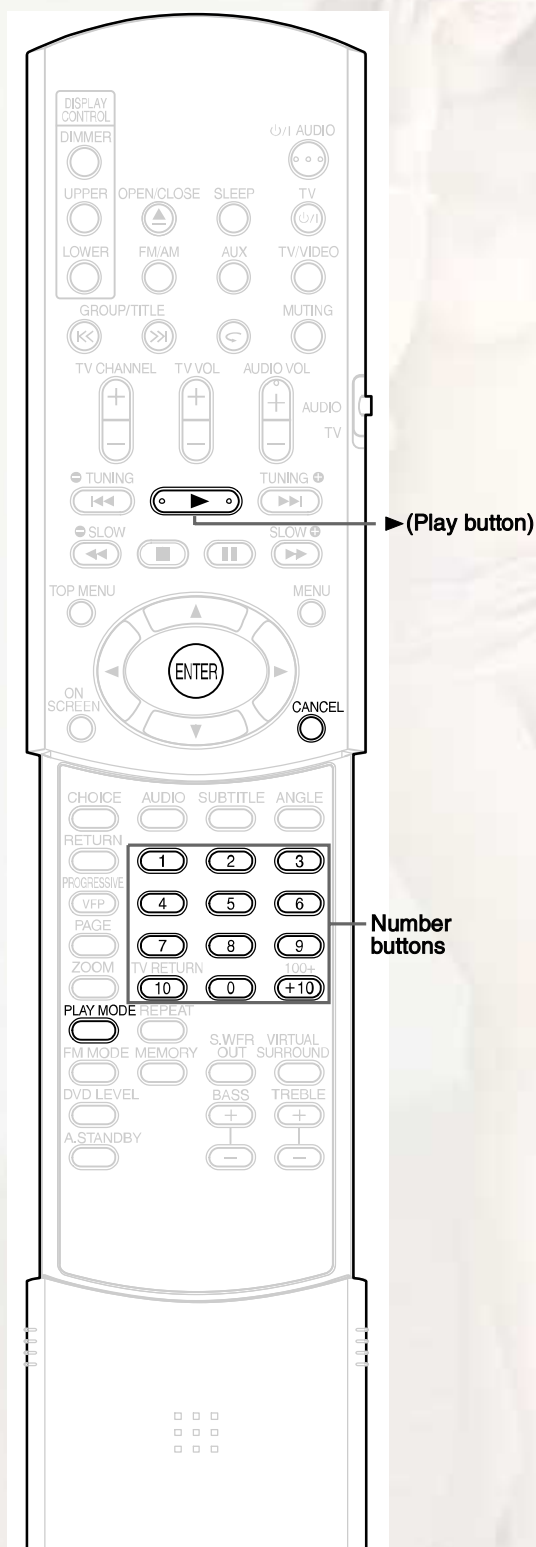
- Press **MENU** or **TOP MENU** while the disc is stopped or during playback*¹.
 - The disc menu screen will be displayed.
 - Only **TOP MENU** can be used for DVD AUDIOS.
- Press cursor **▲/▼/◀/▶** (only for a DVD VIDEO or DVD AUDIO) or the number buttons to select the scene to be played.
 - Refer to “How to use the number buttons” (see page 16).
 - When the menu screen has a couple of pages, press **◀◀** or **▶▶** to change the page (only for a VCD and SVCD).
- Press **ENTER**.

NOTE

^{*1} For a VCD and SVCD, this operation can be carried

Program Playback/Random Playback

DVD VIDEO DVD AUDIO VCD SVCD CD MP3



Play the disc in the desired order (Program Playback)

It is possible to program a maximum of 99 tracks or chapters. The same track or chapter can be programmed more than once.

- 1 While the disc is stopped, press **PLAY MODE** repeatedly to display **"PRGM"** on the display window on the main unit.

"PRGM" is an abbreviation for PROGRAM.

Example: For DVD VIDEO

PROGRAM		TV screen	
No.	Group/Title	Track/Chapter	
1			
2			
3			
4			
5			
6			
7			
8			

- 2 Create a program following the description on the TV screen.

Refer to "How to use the number buttons" (page 16).

- The input content varies depending on the disc type.
 - DVD VIDEO: Titles and chapters
 - VCD, SVCD, CD: Tracks
 - DVD AUDIO, MP3: Groups and tracks
- To select a DVD AUDIO bonus group, carry out the operations of "Playing the Bonus Group" on page 28 in advance to erase the display "BONUS".
- If the number of tracks or chapters input is greater than 99, "FULL" will be displayed.
- In the case of a CD, SVCD or VCD, when the total playback time reaches 9 hours 59 minutes 59 seconds, "--:--" will be displayed on the display window (It is possible to continue programming).

NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



To program on the display window on the main unit, operate as follows.

- (1) Select a group/title using the number buttons.
Display example of the upper display window: T2 C--
- (2) Designate a track/chapter number using the number buttons.
Display example of the upper display window: T2 C3
 - Refer to "How to use the number buttons" (☞ page 16).
 - The program number will be displayed on the lower display window (Example: "P2").
- (3) Repeat the above operations (1) and (2) to complete the program. Then, advance to Step 3.

NOTE

(Only for a DVD VIDEO, a DVD AUDIO or an MP3)
If you press **ENTER** instead of designating a track/chapter number, "ALL" is displayed and all of the tracks/chapters included in the selected group/title are programmed.

3 Press ►(play).

- To resume normal playback, press **PLAY MODE** repeatedly to display "NORMAL" on the display window on the main unit while the disc is stopped. The program content will not be erased.
- The following operations erase the program content.
 - Hold down **CANCEL** until "CLEAR!" appears on the display window with the program preference screen displayed (if **CANCEL** is pressed and released quickly, programs will be erased one by one).
 - Open the disc tray
 - Turn off the power

Playing the disc in a random order (Random Playback)

1 Press **PLAY MODE** repeatedly to display "RANDOM" on the display window on the main unit while the disc is stopped.

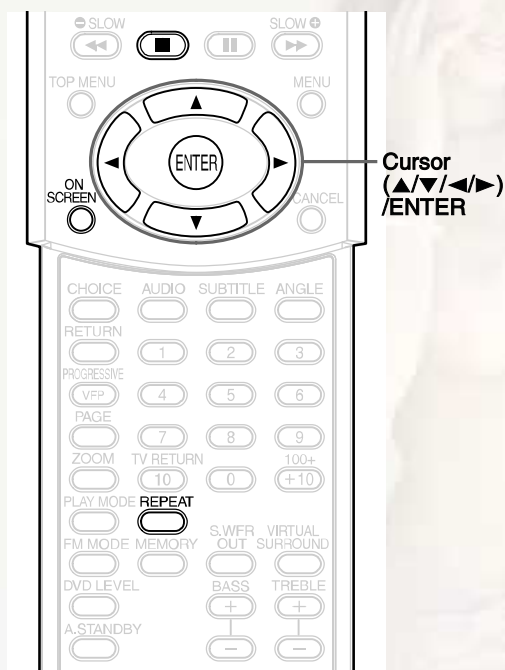
- "RANDOM" will also be displayed on the TV screen.

2 Press ►(play).

- The same chapter or track will not be played twice.
- To resume normal playback, press **PLAY MODE** repeatedly to display "NORMAL" on the display window on the main unit while the disc is stopped.
- Random Playback will also be cancelled by carrying out the following operations.
 - Open the disc tray
 - Turn off the power
- The previous track will not be returned to even if ◀◀ is pressed repeatedly during Random Playback (the beginning of the current chapter or track will be returned to).

Repeat Playback

Refer to page 18 for Repeat Playback of MP3 and JPEG files.



For CD/VCD/SVCD

Repeat types	Display on the TV screen	Display on the main unit
Repeats the current track	TRACK	
Repeats all tracks	ALL	ALL
Cancels repeat	OFF	No display

NOTE

- For a DVD AUDIO and CD, this operation can always be carried out, while, for a VCD and SVCD, the operation can be carried out when the disc is stopped or during playback without the PBC function.
- It is possible to set Repeat on the menu bar. For how to operate, refer to "Playing the designated part repeatedly (A-B Repeat Playback)" (page 24).
- The abbreviations displayed on the main unit are as follows.
 - TRK : Track
 - CHP : Chapter
 - TL. : Title
 - GR. : Group
- For a DVD VIDEO and DVD AUDIO, if the source is switched to FM/AM or AUX, the Repeat mode will be cancelled.

Playing the title/chapter/group/track/all tracks repeatedly (REPEAT)

DVD VIDEO DVD AUDIO VCD SVCD CD

1 Press REPEAT during playback.

Each time you press the button, the Repeat type will be alternated.

Example:

TV screen Display window on the main unit

CHAP ↺

For DVD VIDEO

Repeat types	Display on the TV screen	Display on the main unit
Repeats the current chapter	CHAP.	
Repeats the current title	TITLE	ALL *
Cancels repeat	OFF	No display

For DVD AUDIO

Repeat types	Display on the TV screen	Display on the main unit
Repeats the current track	TRACK	
Repeats the current group	GROUP	ALL *
Cancels repeat	OFF	No display

* represents blinking.

Repeat Playback during Program or Random Playback

Repeat types	Display on the TV screen	Display on the main unit
Repeats the current chapter or track	STEP or REPEAT STEP	
Repeats all programmed tracks or all the tracks in Random Playback	ALL or REPEAT ALL	ALL
Cancels repeat	OFF or No display	No display

Playing the designated part repeatedly (A-B Repeat Playback)

DVD VIDEO DVD AUDIO VCD SVCD C D

1 Press ON SCREEN twice during playback.

The menu bar (☞ page 29) will be displayed.

2 Press cursor ◀/▶ to select

☞ OFF.

3 Press ENTER.

4 Press cursor ▲/▼ to display

A-B.

Other Repeat modes can be selected here. For other Repeat modes, refer to "Playing the title/chapter/group/track/all tracks repeatedly (REPEAT)" (☞ page 23).

5 Press ENTER at the start point of the part to be repeated (designating A point).

- The icon on the menu bar will be ☞ A-.

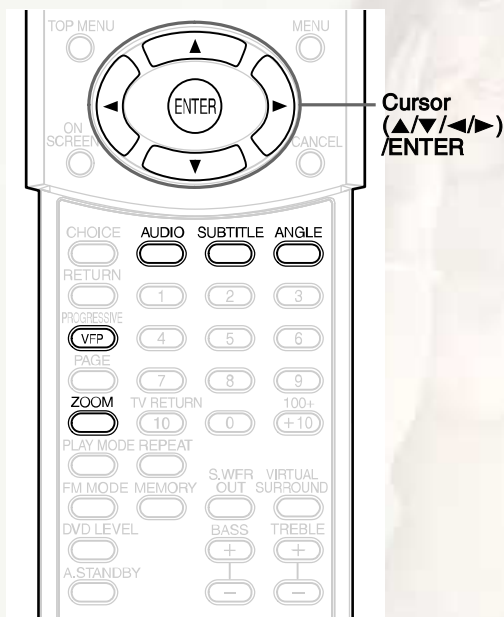
6 Press ENTER at the end point of the part to be repeated (designating B point).

- The icon on the menu bar will be ☞ A-B. ☞ will appear blinking on the display window on the main unit and the part between A and B points will be played repeatedly.
- A-B Repeat Playback will be cancelled by carrying out the following operations.
 - Press ■.
 - Select ☞ A-B and press ENTER twice.

NOTE

A-B Repeat Playback is possible only within the same title or track. A-B Repeat Playback cannot be carried out during PBC playback, Program Playback, Random Playback and Repeat Playback.

Other convenient functions



Selecting the audio language

DVD VIDEO DVD AUDIO VCD SVCD

- 1 Press **AUDIO** during playback of a disc containing several audio languages.

Example: TV screen

- Each time you press the button, the audio language will be alternated. Also, the audio language can be changed by pressing cursor **▲/▼**.
- For a language code such as "AA", refer to "Language codes" (page 39).
- "ST", "L" and "R" displayed when playing a VCD or SVCD respectively represent "Stereo", "left sound" and "right sound".

- 2 Wait for a few seconds or press **ENTER**.

NOTE

It is possible to operate by using the menu bar (page 29).

Selecting the subtitles

DVD VIDEO SVCD DVD AUDIO

(only for moving image)

- 1 Press **SUBTITLE** during playback of a disc containing subtitles in several languages.

Example: TV screen

- Each time you press the button, the subtitle will be alternated between ON/OFF.

- 2 Press cursor **▲/▼** to select a subtitle language.

- For a language code such as "AA", refer to "Language codes" (page 39).
- The manner of displaying subtitle languages may be different depending on the disc.

- 3 Wait for a few seconds or press **ENTER**.

NOTE

- It is possible to operate by using the menu bar (page 29).
- For a SVCD, each time you press **SUBTITLE** in Step 1, the subtitle type and ON/OFF will be alternated.

Selecting a view angle

DVD VIDEO DVD AUDIO

(only for moving image)

- 1 Press **ANGLE** during playback of a scene containing multi-view angles.

Example: TV screen

- Each time you press the button, the angle will be alternated. Also, the angle can be changed by pressing cursor **▲/▼**.

- 2 Wait for a few seconds or press **ENTER**.

NOTE

It is possible to operate by using the menu bar (page 29).

Enlarging the picture (ZOOM)

DVD VIDEO VCD SVCD JPEG DVD AUDIO

(only for moving image)

1 Press ZOOM during playback or while paused.

- Each time you press the button, the picture magnification will be changed.
- (For a JPEG) You cannot change the picture magnification during slide-show playback.

2 Select the portion you want to see by using cursor $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$.

- To resume normal playback, select "OFF" in Step 1.

3 Press cursor $\blacktriangle/\blacktriangledown$ to select an item to be adjusted.

4 Press ENTER.

Example:

TV screen



5 Press cursor $\blacktriangle/\blacktriangledown$ to change the value.

6 Press ENTER.

To adjust other items, go back to Step 3.

7 Press VFP.

NOTE

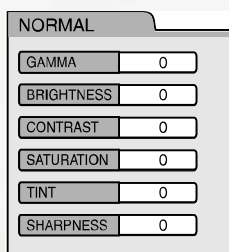
- If no operation is made for several seconds during the procedure, the settings made so far will be automatically stored.
- "VFP" is an abbreviation of "Video Fine Processor".

Adjusting the picture quality (VFP)

DVD VIDEO DVD AUDIO VCD SVCD JPEG

1 Press VFP during playback or while paused.

"VFP SET" will appear on the display window on the main unit and the current setting will be displayed on the TV screen.

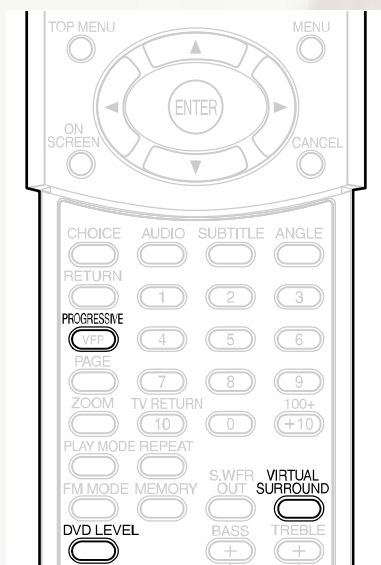


- Gamma: Controls brightness of neutral tints while maintaining brightness of dark and bright portions.
- Sharpness: Controls screen sharpness.

2 Press cursor $\blacktriangleleft/\blacktriangleright$ to select VFP mode.

- It is recommended to select "NORMAL" usually, or "CINEMA" in a dark room. When either "NORMAL" or "CINEMA" is selected, go to Step 7.
- When either "USER 1" or "USER 2" is selected, the adjustment can be carried out in detail in the operations after Step 3.

Other convenient functions (continued)



Creating realistic sound (VIRTUAL SURROUND)

DVD VIDEO **DVD AUDIO** **VCD** **SVCD** **C D** **MP3**

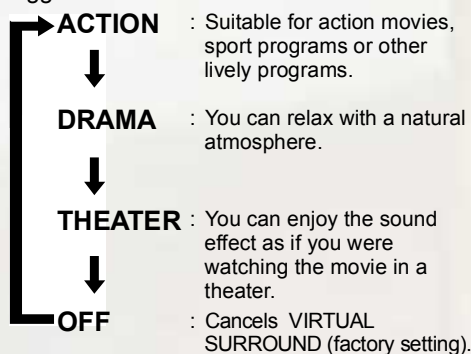
The two speakers produce an effect resembling surround-sound.

1 Press VIRTUAL SURROUND during playback.

Example: TV screen

VIRTUAL SURROUND

- Each time you press the button, the display toggles as follows.



- While VIRTUAL SURROUND is activated, "SURROUND" appears on the display window.

NOTE

- Virtual Surround is effective for the speakers and headphones.
- When noise is produced or sound is distorted, set VIRTUAL SURROUND to "OFF".
- You cannot operate some types of DVD AUDIO discs.
- "V.SUR." displayed on the display window is an abbreviation of "Virtual Surround".

Adjusting playback level (DVD LEVEL)

DVD VIDEO **DVD AUDIO**

The audio of a DVD VIDEO and DVD AUDIO may be recorded at a lower level (volume) than for other types of disc. If the difference is not to your liking, adjust the DVD Level.

1 Press DVD LEVEL during playback.

- Each time you press the button, the level will be alternated among "NOR" (Normal), "MID" (Middle) and "HIG" (High).
- Select the level while listening to the sound played.

NOTE

- DVD Level is effective only for playback of a DVD.
- Even if the DVD Level is changed, the output level from the digital audio output terminal will not be changed.
- This operation can be carried out while the disc is stopped or paused.

Enjoying better pictures (PROGRESSIVE)

In the Progressive mode, better pictures can be enjoyed.

CAUTION

- In order to enjoy pictures in the Progressive mode, the following requirements should be met.
 - There must be a component video input terminal on the TV set connected to the main unit.
 - The main unit and the TV set must be connected using a component video cord (☞ page 12).
 When the above requirements are not satisfied, leave the main unit in the Interlace mode. If the Progressive mode is set, pictures may be distorted.
- When the VIDEO OUT SELECT switch is set to PAL, there will be no PROGRESSIVE output to the component video terminal.

NOTE

Progressive mode:

All scanned lines will be displayed at once. Pictures of higher resolution than those in the Interlace mode can be realized.

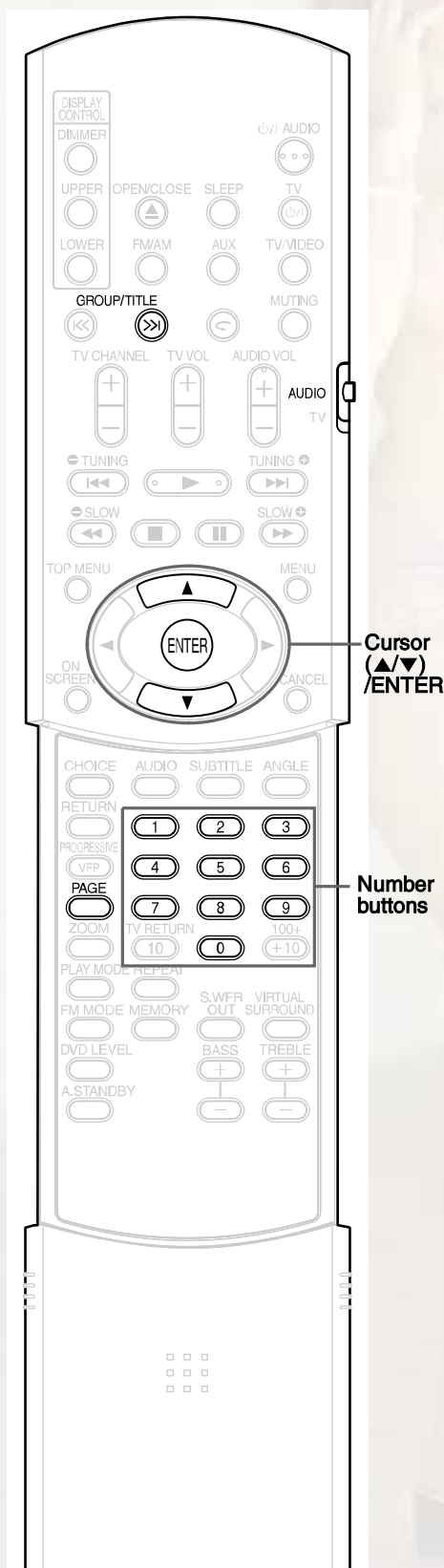
Interlace mode:

This is a conventional image method. Half of the scanned lines displayed in the Progressive mode will appear, alternating with the other half.

Display "PROGRESS" by holding down PROGRESSIVE during playback or while the disc is stopped, or when there is no disc loaded.

- Each time you hold down the button, the mode will be alternated between the Progressive mode and the Interlace mode.
- The display window displays "PROGRESS" when in the Progressive mode, and "INTER." when in the Interlace mode.

**DVD
AUDIO**



NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



Playing the Bonus Group

There are some DVD AUDIO discs with a special group, called "Bonus Group", recorded.

NOTE

This operation can be carried out when "BONUS" is lit on the display window on the main unit.

1 Press GROUP/TITLE >>I repeatedly during playback to select a bonus group.

"KEY_ _ _ _" appears on the TV screen, and on the display window on the main unit.

2 Press the number buttons to enter a pin code (4 digits).

The method of getting a pin code may be different depending on the disc.

3 Press ENTER.

- When a correct pin code is entered, "BONUS" disappears and the playback of the bonus group starts.
- If an incorrect pin code is entered, try entering a correct pin code again.

Browsable Still Pictures (B.S.P.)

There are some DVD AUDIO discs with still pictures recorded. Among the still pictures, there are pictures called B.S.P. (Browsable Still Pictures). With these pictures, it is possible to switch a picture as if turning over pages.

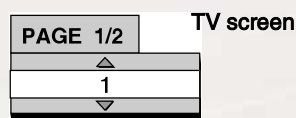
NOTE

This operation can be carried out when "B.S.P." is lit on the display window on the main unit.

1 Press PAGE during playback.

Each time you press the button, the still picture will be switched over. It is also possible to switch the picture using cursor ▲/▼.

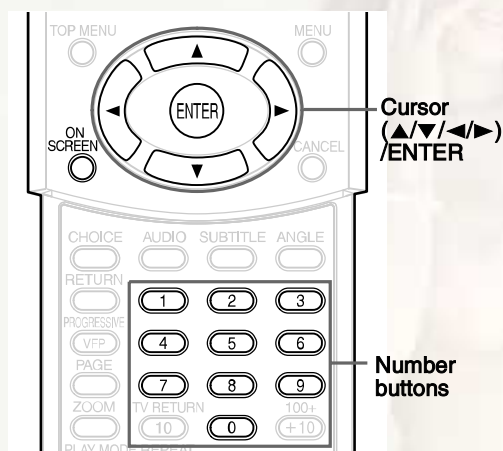
Example:



2 Wait for a few seconds or press ENTER.

Using the menu bar

DVD VIDEO DVD AUDIO VCD SVCD CD



NOTE

- Set the remote control mode selector to **AUDIO** before using the number buttons.
- This operation can be carried out when there is a disc loaded. There are some functions that may not work while the disc is stopped.

1 Press ON SCREEN twice.

"ON SCREEN" will appear on the display window on the main unit. The status bar and the menu bar will appear on the TV screen.



The above is an example for a DVD VIDEO.

2 Press cursor ◀/▶ to select an item to be operated.

3 Press ENTER.

- The selected function can be set. For the setting content, refer to the following "Functions list".
- The currently active function shows blue.
- To delete the menu bar, press **ON SCREEN**.

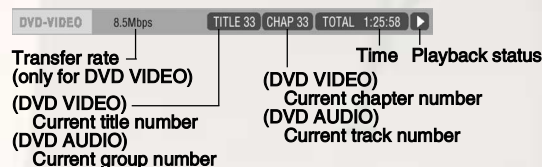
Functions list

For the functions with no special description for the operations, press cursor ◀/▶ to select, and press **ENTER** to determine.

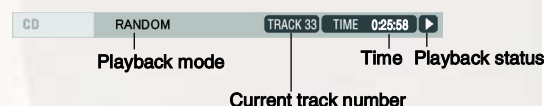
TIME Time display selection	Select this to change time information displayed on the display window on the main unit and the status bar. Each time ENTER is pressed, the display will be alternated. DVD VIDEO/DVD AUDIO (operating during playback) TOTAL : Elapsed playing time of current title/group. T.REM : Remaining time of current title/group TIME : Elapsed playing time of current chapter/track. REM : Remaining time of current chapter/track CD (operating during playback)/VCD/SVCD TIME : Elapsed playing time of current track. REM : Remaining time of current track. TOTAL : Elapsed playing time of disc. T.REM : Remaining time of disc.
 Repeat mode	☞ page 23
 Time search	☞ page 20
 CHAP.▶ / TRACK▶ Chapter search (DVD VIDEO)/Track search (DVD AUDIO)	Select a chapter/track. Press the number buttons to input the chapter/track number and press ENTER . Examples: 5: 5 24: 2 → 4
 Audio language/Audio (DVD VIDEO/DVD AUDIO/VCD/SVCD)	☞ page 25
 Subtitle language (DVD VIDEO/SVCD)	☞ page 25
 1/3 View angle (DVD VIDEO/DVD AUDIO)	☞ page 25
 PAGE -/- Page switch (DVD AUDIO)	Switch the still pictures (B.S.P.) recorded on a DVD AUDIO disc. (☞ page 28)

Information displayed on the status bar

DVD VIDEO/DVD AUDIO (the example below is for a DVD VIDEO)



VCD/SVCD/CD (the example below is for a CD)



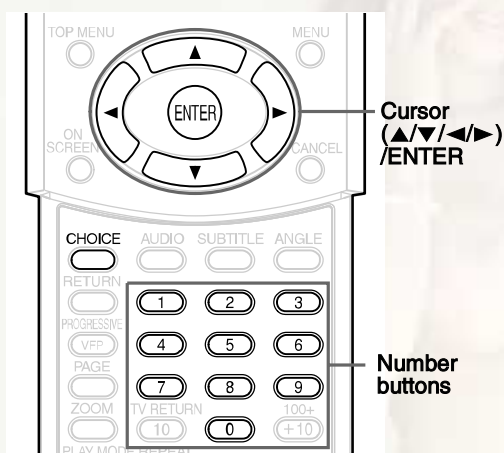
NOTE

The playback status mark has the same meaning of the mark on the On-screen guide (☞ page 16).

Preferences

Advanced operations

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG



The initial settings of the system can be changed according to the environment the system is used in.

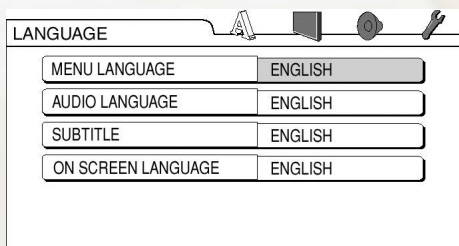
NOTE

- Set the remote control mode selector to **AUDIO** before using the number buttons.
- The top and bottom of the preference screen may not be displayed on a wide TV. Adjust the picture size on the TV.

Basic operations

1 Press CHOICE while the disc is stopped or no disc is loaded ("NO DISC" is displayed).

- "SETTING" will appear on the display window on the main unit and the following screen will be displayed on the TV.



- Proceed with operations by following the description on the TV screen.



LANGUAGE





NOTE

- If the selected language is not recorded on the disc, the optimum language set for the disc will be displayed.
- For a language code such as "AA", refer to the "Language codes" (page 39).

Items	Contents
MENU LANGUAGE	Select the language for the DVD VIDEO menu.
AUDIO LANGUAGE	Select the audio language for the DVD VIDEO.
SUBTITLE	Select the subtitle language for the DVD VIDEO.
ON SCREEN LANGUAGE	Select the language displayed on the preference screens.



PICTURE

Items	Contents (: Initial setting)
MONITOR TYPE	<p>Select a display method suitable for your TV.</p> <p>16 : 9 NORMAL: Select this when the aspect ratio of your wide TV is fixed to 16:9 (when playing a DVD VIDEO recorded at 4:3, the system automatically adjusts the screen width of the output signal).</p>  <p>16 : 9 AUTO: Select this when your TV is an ordinary wide TV.</p>  <p>4 : 3 LB (Letter Box) : Select this when the aspect ratio of your TV is conventional 4:3. While viewing a wide screen picture, the black bars appear on the top and bottom of the screen.</p>  <p>4 : 3 PS (Pan Scan): Select this when the aspect ratio of your TV is conventional 4:3. While viewing a wide screen picture, the left and right edges of the picture will not be shown on the screen. (If the disc is not compatible with Pan Scan, the picture will be displayed at the Letter Box ratio.)</p> 
PICTURE SOURCE	<p>Select an item suitable to the video source.</p> <p>AUTO: The video source type (a video or film) is automatically selected.</p> <p>FILM: Select this item when you want to view a film or video recorded with the progressive scan method.</p> <p>VIDEO: Select this item when you want to view a normal video.</p>
SCREEN SAVER	<p>Select the Screen Saver mode between ON / OFF (Screen Saver activates when there is no operation made for about 5 minutes since a still picture was last displayed).</p>
MP3/JPEG	<p>If there are both MP3 and JPEG files on a disc, you can select which files to play. When the preference has been changed, open/close the tray and turn on the power again. (A disc with only one of MP3 file or JPEG file recorded can be played regardless of this preference.)</p>

Preferences (continued)

PICTURE



AUDIO

Items	Contents (: initial setting)
DIGITAL AUDIO OUTPUT	<p>Select an output signal type from the following in accordance with the device connected to the digital audio output terminal (AV amplifier, etc.). (See the list below for the preference items and output signal.)</p> <p>PCM ONLY: Device corresponding only to linear PCM.</p> <p>DOLBY DIGITAL/PCM: Dolby digital decoder or a device having the same function.</p> <p>STREAM/PCM : DTS/Dolby digital decoder or a device having the same function.</p>
DOWN MIX	<p>Switch signal from the digital output terminal of the DVD VIDEO according to the connected device. Select this when Digital Audio Output is set to "PCM ONLY".</p> <p>DOLBY SURROUND : A Dolby Pro Logic decoder-built-in device.</p> <p>STEREO: An ordinary device.</p> <ul style="list-style-type: none"> When Virtual Surround is ON, Down Mix does not work.
D (Dynamic). RANGE COMPRESSION	<p>To make adjustments for the difference between a high volume and a low volume when playing back with low volume (only for a DVD recorded with Dolby digital).</p> <p>AUTO : D. Range Compression automatically works.</p> <p>ON: D. Range Compression always works.</p>



OTHERS

Items	Contents (: initial setting)
RESUME	Select ON /OFF. (page 19)
ON SCREEN GUIDE	Select ON /OFF. (page 16)
AV COMPULINK MODE	<p>(page 37)</p> <p>DVD1 : Connect to the video-3 input on the TV set or the DVD input on the AV amplifier.</p> <p>DVD2: Connect to the video-1 input of the TV set.</p> <p>DVD3: Connect to the video-2 input of the TV set.</p>
PARENTAL LOCK	<p>Set the Parental Lock function to cut off violent scenes or replace the scenes with others. (This is effective only for discs equipped with the Parental Lock function.)</p> <p>COUNTRY CODE (page 32) Select your country.</p> <p>SET LEVEL: The restriction is stricter as the number becomes smaller. "NONE" is no restriction.</p> <p>PASSWORD (essential): Enter four-digit number as your password using the number buttons (1-9, 0) every time. (Enter "8888" if you forget your password.) The password is required at the time of playback.</p> <ul style="list-style-type: none"> If you enter a wrong password three times, "EXIT" will be automatically selected.

List of relationships of DIGITAL AUDIO OUTPUT preference items and output signal

Playback disc	DIGITAL AUDIO OUTPUT preference		
	Stream/PCM	DOLBY DIGITAL/PCM	PCM only
48 kHz, 16/20/24 bits Linear PCM DVD VIDEO 96 kHz linear PCM DVD VIDEO	48 kHz, 16 bits stereo linear PCM		
48/96/192 kHz, 16/20/24 bits linear PCM DVD AUDIO	48 kHz, 16 bits stereo linear PCM		
44.1/88.2/176.4k Hz, 16/20/24 bits linear PCM DVD AUDIO	44.1 kHz, 16 bits stereo linear PCM		
DTS DVD VIDEO	DTS bit stream	48 kHz, 16 bits stereo linear PCM	
DOLBY DIGITAL DVD VIDEO/ DVD AUDIO	DOLBY DIGITAL bit stream		48 kHz, 16 bits stereo linear PCM
CD/VCD/SVCD	44.1 kHz, 16 bits stereo linear PCM/48kHz, 16 bits linear PCM		
DTS CD	DTS bit stream	44.1 kHz, 16 bits linear PCM	
MP3 disc	No output		

NOTE

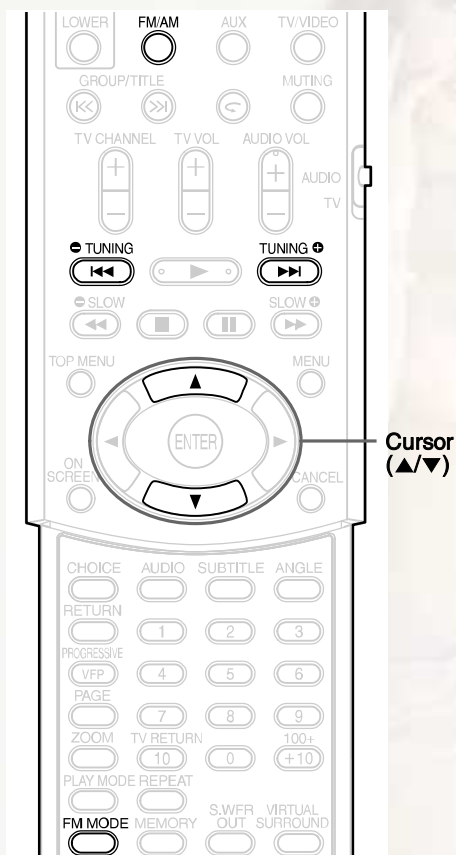
- For a DVD VIDEO without content protection set, there is a 20 bit or 24 bit output at the digital audio output terminal.

Country/Area codes

Advanced operations

AD	Andorra	ES	Spain	LC	Saint Lucia	SD	Sudan
AE	United Arab Emirates	ET	Ethiopia	LI	Liechtenstein	SE	Sweden
AF	Afghanistan	FI	Finland	LK	Sri Lanka	SG	Singapore
AG	Antigua and Barbuda	FJ	Fiji	LR	Liberia	SH	Saint Helena
AI	Anguilla	FK	Falkland Islands (Malvinas)	LS	Lesotho	SI	Slovenia
AL	Albania	FM	Micronesia (Federated States of)	LT	Lithuania	SJ	Svalbard and Jan Mayen
AM	Armenia	FO	Faroe Islands	LU	Luxembourg	SK	Slovakia
AN	Netherlands Antilles	FR	France	LV	Latvia	SL	Sierra Leone
AO	Angola	FX	France, Metropolitan	LY	Libyan Arab Jamahiriya	SM	San Marino
AQ	Antarctica	GA	Gabon	MA	Morocco	SN	Senegal
AR	Argentina	GB	United Kingdom	MC	Monaco	SO	Somalia
AS	American Samoa	GD	Grenada	MD	Moldova, Republic of	SR	Suriname
AT	Austria	GE	Georgia	MG	Madagascar	ST	Sao Tome and Principe
AU	Australia	GF	French Guiana	MH	Marshall Islands	SV	El Salvador
AW	Aruba	GH	Ghana	ML	Mali	SY	Syrian Arab Republic
AZ	Azerbaijan	GI	Gibraltar	MM	Myanmar	SZ	Swaziland
BA	Bosnia and Herzegovina	GL	Greenland	MN	Mongolia	TC	Turks and Caicos Islands
BB	Barbados	GM	Gambia	MO	Macau	TD	Chad
BD	Bangladesh	GN	Guinea	MP	Northern Mariana Islands	TF	French Southern Territories
BE	Belgium	GP	Guadeloupe	MQ	Martinique	TG	Togo
BF	Burkina Faso	GQ	Equatorial Guinea	MR	Mauritania	TH	Thailand
BG	Bulgaria	GR	Greece	MS	Montserrat	TJ	Tajikistan
BH	Bahrain	GS	South Georgia and the South Sandwich Islands	MT	Malta	TK	Tokelau
BI	Burundi	GT	Guatemala	MU	Mauritius	TM	Turkmenistan
BJ	Benin	GU	Guam	MV	Maldives	TN	Tunisia
BM	Bermuda	GW	Guinea-Bissau	MW	Malawi	TO	Tonga
BN	Brunei Darussalam	GY	Guyana	MX	Mexico	TP	East Timor
BO	Bolivia	HK	Hong Kong	MY	Malaysia	TR	Turkey
BR	Brazil	HM	Heard Island and McDonald Islands	MZ	Mozambique	TT	Trinidad and Tobago
BS	Bahamas	HN	Honduras	NA	Namibia	TV	Tuvalu
BT	Bhutan	HR	Croatia	NC	New Caledonia	TW	Taiwan
BV	Bouvet Island	HT	Haiti	NE	Niger	TZ	Tanzania, United Republic of
BW	Botswana	HU	Hungary	NF	Norfolk Island	UA	Ukraine
BY	Belarus	ID	Indonesia	NG	Nigeria	UG	Uganda
BZ	Belize	IE	Ireland	NI	Nicaragua	UM	United States Minor Outlying Islands
CA	Canada	IL	Israel	NL	Netherlands	US	United States
CC	Cocos (Keeling) Islands	IN	India	NO	Norway	UY	Uruguay
CF	Central African Republic	IO	British Indian Ocean Territory	NP	Nepal	UZ	Uzbekistan
CG	Congo	IQ	Iraq	NR	Nauru	VA	Vatican City State (Holy See)
CH	Switzerland	IR	Iran (Islamic Republic of)	NU	Niue	VC	Saint Vincent and the Grenadines
CI	Côte d'Ivoire	IS	Iceland	NZ	New Zealand	VE	Venezuela
CK	Cook Islands	IT	Italy	OM	Oman	VG	Virgin Islands (British)
CL	Chile	JM	Jamaica	PA	Panama	VI	Virgin Islands (U.S.)
CM	Cameroon	JO	Jordan	PE	Peru	VN	Viet Nam
CN	China	JP	Japan	PF	French Polynesia	VU	Vanuatu
CO	Colombia	KE	Kenya	PG	Papua New Guinea	WF	Wallis and Futuna Islands
CR	Costa Rica	KG	Kyrgyzstan	PH	Philippines	WS	Samoa
CU	Cuba	KH	Cambodia	PK	Pakistan	YE	Yemen
CV	Cape Verde	KI	Kiribati	PL	Poland	YT	Mayotte
CX	Christmas Island	KM	Comoros	PM	Saint Pierre and Miquelon	YU	Yugoslavia
CY	Cyprus	KN	Saint Kitts and Nevis	PR	Puerto Rico	ZA	South Africa
CZ	Czech Republic	KP	Korea, Democratic People's Republic of	PT	Portugal	ZM	Zambia
DE	Germany	KR	Korea, Republic of	PW	Palau	ZR	Zaire
DJ	Djibouti	KW	Kuwait	PY	Paraguay	ZW	Zimbabwe
DK	Denmark	KY	Cayman Islands	QA	Qatar		
DM	Dominica	KZ	Kazakhstan	RE	Réunion		
DO	Dominican Republic	LA	Lao People's Democratic Republic	RO	Romania		
DZ	Algeria	LB	Lebanon	RU	Russian Federation		
EC	Ecuador			RW	Rwanda		
EE	Estonia			SA	Saudi Arabia		
EG	Egypt			SB	Solomon Islands		
EH	Western Sahara			SC	Seychelles		
ER	Eritrea						

Listening to a radio broadcast



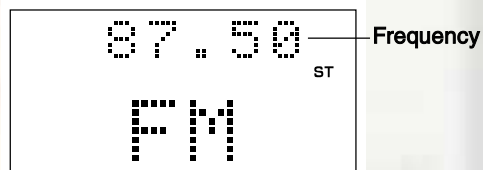
You can tune in to FM or AM.

Selecting a station

1 Press FM/AM.

Each time you press the button, the band will be alternated between FM and AM.

Example:



2 Press TUNING ◀ or TUNING ▶ to select the station (frequency).

Automatic tuning:

Hold down **TUNING ◀** or **TUNING ▶** until the system starts searching, and then release the button.

When a station of sufficient signal strength is tuned in to, the system stops searching automatically.

To stop searching manually, press **TUNING ◀** or **TUNING ▶**.

Manual tuning:

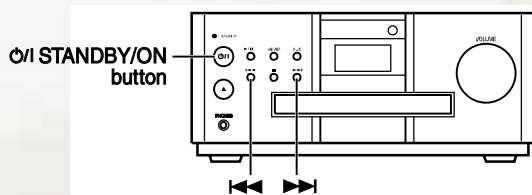
Each time you press **TUNING ◀** or **TUNING ▶**, the frequency changes.

- When an FM stereo program is received, the "ST" (Stereo) indicator lights.
- You can also select the station with cursor ▲/▼.

Setting the AM tuner interval spacing

Some countries space AM stations 9 kHz apart, and other countries use 10 kHz spacing.

On the main unit ONLY:



To select 10 kHz intervals, while holding down **▶▶** on the main unit in Standby mode, press **O/I STANDBY/ON** on the main unit to turn on the power. "10 kHz" appears on the display window.

To select 9 kHz intervals, while holding down **◀◀** on the main unit in Standby mode, press **O/I STANDBY/ON** on the main unit to turn on the power. "9 kHz" appears on the display window.

NOTE

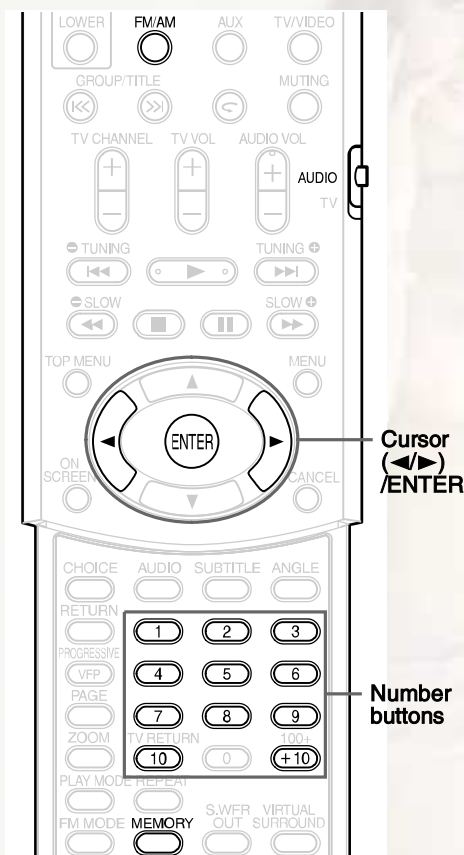
If the interval spacing is switched, the memory in which the radio stations were stored will be erased.

NOTE

*If the stereo FM program currently tuned in to is noisy, you can improve the reception by pressing **FM MODE** to switch to the monaural mode ("MONO" lights). If you press **FM MODE** again, or tune in to another station, the receiving mode returns automatically to the stereo mode.*

Tuning in to a preset station

Listening to radio



Presetting stations in the system allows you to easily tune in to a station.

NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



3 Select the number you want to store by pressing cursor **</>** while the memory number is blinking.

- You can also select the number by using the number buttons.
- Refer to "How to use the number buttons" (page 16).

4 Press **MEMORY** or **ENTER** while the selected number is blinking.

"SET" will be displayed and the selected station will be stored.

NOTE

Storing a new station to a used number erases the previously stored station.

Tuning in to a preset station

1 Press **FM/AM** repeatedly to select either FM or AM.

2 Press the number buttons to select the memory number of a station you want to tune in to.

Refer to "How to use the number buttons" (page 16).

You can also select by pressing cursor **</>**.

Presetting stations

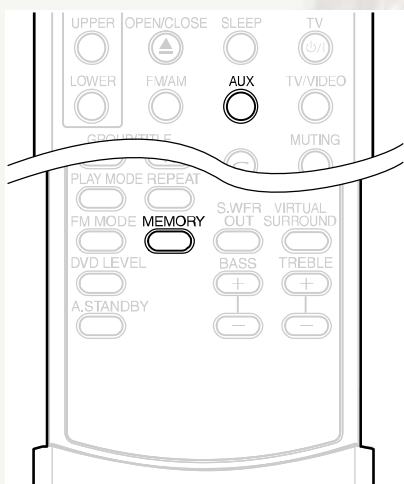
The system stores up to 30 FM stations and up to 15 AM stations.

1 Select a station you want to store (page 33 for how to select).

2 Press **MEMORY**.

Figures (memory number) blink on the display window for about 5 seconds.

Listening to the sound of other audio device




Connect the other audio device to this system in advance (☞ page 11).

- 1 Press AUX.**
The source changes to AUX.
- 2 Play the other audio device.**
For details, refer to the manual of the device connected.
- 3 Adjust the volume and the sound quality of the system**
(☞ page 17).

Adjust the sound input level of the audio device

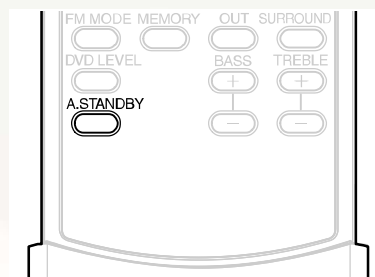
You can adjust the sound input level of another audio device connected to the AUX jack.

- 1 Press AUX.**
The source changes to AUX.
- 2 Hold down MEMORY until an input level is displayed.**
Each time you hold down the button, it switches as follows:
LEVEL 1: Select this normally.

LEVEL 2: Select this when the input level from the other device is too high and the sound is distorted.

The initial setting is "LEVEL1".

Auto Standby

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG



If there is no operation for 3 minutes while the disc is stopped, the power will be automatically turned off.

- 1 Press A.STANDBY during playback or while the disc is stopped, or no disc is loaded ("NO DISC" is displayed).**

"A.S.ON" (Auto Standby On) and "A.STANDBY" will be lit on the display window on the main unit.

When a stopped state is entered (after playback is finished, for example), "A.STANDBY" starts blinking.

This means that the power will be turned off automatically if there is no operation for 3 minutes. And, 20 seconds before the power is turned off, "POWER OFF" will appear blinking.

Releasing Auto Standby

Press **A.STANDBY**.
"A.S.OFF" (Auto Standby Off) will appear and "A.STANDBY" will be turned off on the display window on the main unit.

NOTE

When the source is FM/AM or AUX, Auto Standby does not work.

Sleep Timer

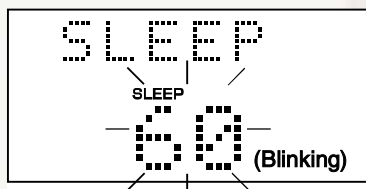


When the time you specify elapses, the system will be turned off by itself.

Press SLEEP.

Each time you press the button, the time indicated on the display window on the main unit changes (in minutes).

Example: When Sleep Timer is set to 60 minutes



Sleep Timer will be automatically set in a few seconds, and the indication will disappear.

NOTE

When Sleep Timer is set, the display window darkens automatically.

Changing the time

Reselect the time by pressing **SLEEP** repeatedly.

Confirming the time

Press **SLEEP** once while Sleep Timer is set.

Releasing

Press **SLEEP** repeatedly until "OFF" appears.

NOTE

Sleep Timer will also be released when the power is turned off.

Tray Lock

You can lock the disc tray to prevent the disc from being ejected.

Setting

Turn off the power. And while holding down ■ (Stop) on the main unit, press ▲ (Open/Close). "LOCKED" appears on the display window on the main unit.

Releasing

Carry out the same operations as those for setting. "UNLOCKED" appears on the display window on the main unit.

Using AV COMPU LINK

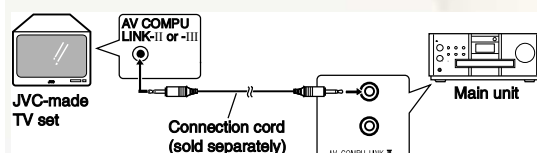
When the TV set or device to be connected is a JVC product equipped with the AV COMPU LINK-II or -III jack, connecting them to the AV COMPU LINK jack on the system will allow you to control the other devices by operating one device.

Connection and setting

NOTE

- Refer to "Others" (page 31) to set the AV COMPU LINK mode.
- Also carefully read manuals of devices to be connected.

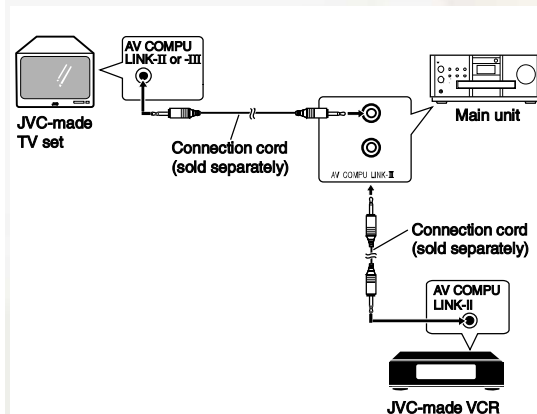
Connection with a TV set



TV input jack	Setting of AV COMPU LINK mode
Video 1	DVD 2
Video 3	DVD 1

- Connect to the Video 3 (DVD) input jack on your TV set. If Video 3 is for DV/Movie input, read the following descriptions:

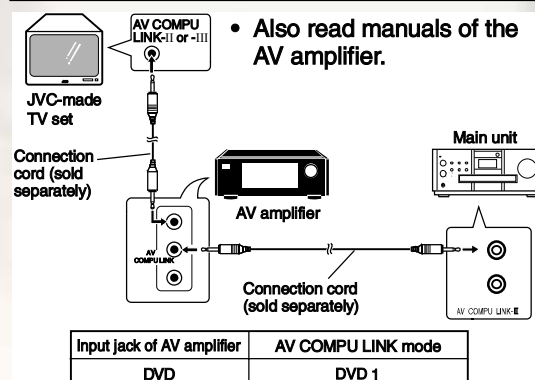
Connection with a TV set and a VCR



TV input jack	AV COMPU LINK mode	Remote-control code of VCR
Video 1	DVD 2	B
Video 2	DVD 3	A

- When using with initial settings, connect to Video 3 (if not set to DV/Movie input). Set the remote-control code to "A".

Connection with a TV set and an AV amplifier



NOTE

For proper operation, be sure to connect the DIGITAL OUT jack to the DVD sound input terminal on the AV amplifier.

Operations

- 1 Turn on the main power of the TV set.
- 2 Insert a disc or videotape into the source device (the system or a VCR).
- 3 Press the play button on the source device.
 - The TV set will be turned on.
 - TV input will be switched to external input (Video 1, 2 or 3) of the source device.
 - The AV amplifier will be turned on.
 - The source of the AV amplifier will be switched to the device on which the play button has been pressed.

When you encounter a problem that seems to be a fault, check the following points before contacting your JVC service center:

Power source

- **Power does not come on.**
 - The power cord is not connected to the main unit or an AC outlet.
 - Connect the power cord correctly. (☞ page 12)

Operation

- **You cannot operate any button.**
 - Some specific operations may be inhibited for some discs.
- **The remote control does not work.**
 - The dry-cell batteries have run out.
 - Replace the batteries. (☞ page 7)
- **A disc cannot be played back.**
 - In the case of DVD VIDEO discs
 - Check the Region Code number of the disc. (☞ page 3)
 - "PLAYABLE Err" is displayed on the display window.
 - It is not a disc that can be played on this system.
 - Check the disc type. (☞ page 3)
 - Parental Lock is set. (☞ page 31)

About images

- **No picture appears.**
 - The video cord is not connected correctly.
 - ☞ page 12
 - Both of the component video jack and S-video jack are connected.
 - Connect either. (☞ page 12)
- **The picture is distorted.**
 - A VCR is connected between the main unit and the TV set.
 - Connect the main unit directly to the TV set. (☞ page 12)
 - Although this system is connected to a non-Progressive TV set, DVD's scan mode is set to "PROGRESS".
 - Set the scan mode to "INTER.". (☞ page 27)
- **The screen size is abnormal.**
 - The screen size is set improperly.
 - Set "MONITOR TYPE" according to the TV set you are using. (☞ page 30)

- **The TV screen darkens.**
 - "SCREEN SAVER" is set.
 - If set, press any button. (☞ page 30)
- **The screen cannot be switched.**
 - The Progressive mode is applied only to component video output.
- **The screen rolls over upward and downward.**
 - Select a color system correctly. (☞ page 5)

About sound

- **There is no sound.**
 - Speakers are not connected correctly.
 - ☞ page 10
 - The sound is muted.
 - ☞ page 17
 - "NO AUDIO" is displayed on the display window.
 - The disc may have been produced through illegal copying.
 - Confirm at the store where you bought the disc.
- **The sound is weak compared with TV or Video.**
 - "DVD LEVEL" is set to "NOR".
 - Set to other than "NOR". (☞ page 27)
- **The sound is distorted.**
 - The volume is turned up too high.
 - Turn down the volume. (☞ page 17)
- **No sound comes out of the subwoofer.**
 - "SUB WFR" is turned off.
 - Press **S.WFR OUT** to turn on. (☞ page 11)

About radio

- **The sound is noisy while receiving./Receiving is disabled.**
 - The antenna is not connected correctly.
 - Connect the antenna correctly. (☞ page 9)

Others

- **It is not possible to switch audio or subtitles between languages.**
 - The disc does not contain 2 or more languages.
 - If only a single language is recorded on the disc, switching to another language is impossible. (☞ page 25)
- **No subtitle is displayed.**
 - The disc does not contain any subtitles.
 - A DVD VIDEO without subtitles cannot display any subtitles.
 - The subtitle language is set to "OFF".
 - Specify a language. (☞ page 30)
 - Before or after A point or B point in A-B Repeat Playback, no subtitle may be displayed.
- **The disc cannot be ejected.**
 - Tray Lock is set.
 - ☞ page 36
- **"LR ONLY" is displayed on the display window (for a DVD AUDIO).**
 - Because, for the track being played back, down mix is inhibited for multi-channel sound, the sound of L and R is output directly (a normal action).

If the system does not work properly despite correction measures above

Many functions of this system are implemented by microcomputers. If pressing any button does not result in the normal action, disconnect the power plug from the outlet, wait for a while, and reconnect the system.

Code	Language	Code	Language
AA	Afar	MK	Macedonian
AB	Abkhazian	ML	Malayalam
AF	Afrikaans	MN	Mongolian
AM	Ameharic	MO	Moldavian
AR	Arabic	MR	Marathi
AS	Assamese	MS	Malay (MAY)
AY	Aymara	MT	Maltese
AZ	Azerbaijani	MY	Burmese
BA	Bashkir	NA	Nauru
BE	Byelorussian	NE	Nepali
BG	Bulgarian	NL	Dutch
BH	Bihari	NO	Norwegian
BI	Bislama	OC	Occitan
BN	Bengali, Bangla	OM	(Afan) Oromo
BO	Tibetan	OR	Oriya
BR	Breton	PA	Panjabi
CA	Catalan	PL	Polish
CO	Corsican	PS	Pashto, Pushto
CS	Czech	PT	Portuguese
CY	Welsh	QU	Quechua
DA	Danish	RM	Rhaeto-Romance
DZ	Bhutani	RN	Kirundi
EL	Greek	RO	Rumanian
EO	Esperanto	RU	Russian
ET	Estonian	RW	Kinyarwanda
EU	Basque	SA	Sanskrit
FA	Persian	SD	Sindhi
FI	Finnish	SG	Sangho
FJ	Fiji	SH	Serbo-Croatian
FO	Faroese	SI	Singhalese
FY	Frisian	SK	Slovak
GA	Irish	SL	Slovenian
GD	Scots Gaelic	SM	Samoan
GL	Galician	SN	Shona
GN	Guarani	SO	Somali
GU	Gujarati	SQ	Albanian
HA	Hausa	SR	Serbian
HI	Hindi	SS	Siswati
HR	Croatian	ST	Sesotho
HU	Hungarian	SU	Sundanese
HY	Armenian	SV	Swedish
IA	Interlingua	SW	Swahili
IE	Interlingue	TA	Tamil
IK	Inupiak	TE	Telugu
IN	Indonesian	TG	Tajik
IS	Icelandic	TH	Thai
IW	Hebrew	TI	Tigrinya
JI	Yiddish	TK	Turkmen
JW	Javanese	TL	Tagalog
KA	Georgian	TN	Setswana
KK	Kazakh	TO	Tonga
KL	Greenlandic	TR	Turkish
KM	Cambodian	TS	Tsonga
KN	Kannada	TT	Tatar
KO	Korean (KOR)	TW	Twi
KS	Kashmiri	UK	Ukrainian
KU	Kurdish	UR	Urdu
KY	Kirghiz	UZ	Uzbek
LA	Latin	VI	Vietnamese
LN	Lingala	VO	Volapuk
LO	Laothian	WO	Wolof
LT	Lithuanian	XH	Xhosa
LV	Latvian, Lettish	YO	Yoruba
MG	Malagasy	ZU	Zulu
MI	Maori		

Specifications

Reference

General

Power source: AC 240 V \sim , 50 Hz
Power consumption: 24 W (in operation)
1.1 W (on standby)
Weight: 3.0 kg
External dimensions
(W \times H \times D): 232 mm \times 100 mm \times 269 mm

DVD player

Playable discs: DVD VIDEO, DVD AUDIO, VCD,
Super VCD, CD, CD-R/RW (CD,
VCD, MP3, JPEG format), DVD-R/
RW (video format)

Video output

Color system: PAL/NTSC selectable
Horizontal resolution: 500 lines
Composite \times 1: 1.0 V (p-p)/75 Ω ,
synchronization negative
S-video \times 1: Y output: 1.0 V (p-p)/75 Ω ,
synchronization negative
C output: 0.286 V (p-p)/75 Ω
Component \times 1: Y output: 1.0 V (p-p)/75 Ω
P_B/P_R output: 0.7 V (p-p)/75 Ω

Audio output

Analog sound output:
Speakers \times 2
Output power
(IEC 268-3): 60 W (30 W + 30 W)
at 4 Ω (10% THD)
Fitting impedance: 4 Ω to 16 Ω
Headphones \times 1: 11 mW/32 Ω
Fitting impedance: 16 Ω to 1 k Ω
Subwoofer \times 1: 500 mVrms/10 k Ω
Digital sound output:
Optical \times 1: -21 dBm to -15 dBm

Other output

AV COMPU LINK \times 2 (ϕ 3.5)

Audio Input

Sound input: AUX \times 1
Level 1: 250 mV/50 k Ω
Level 2: 500 mV/50 k Ω

Tuner

FM tuner:
Receiving frequency: 87.50 MHz to 108.00 MHz
Antenna: 75 Ω - unbalanced type
AM tuner:
Receiving frequency: 531 kHz to 1710 kHz
(at 9 kHz interval space)
530 kHz to 1710 kHz
(at 10 kHz interval space)
Antenna: External antenna jack (loop
antenna)

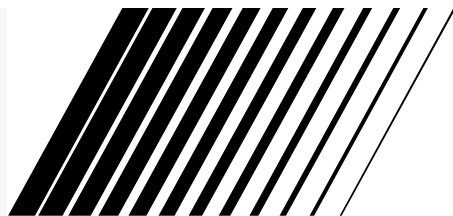
Speaker

Type: 1-way bass-reflex type
Magnetically shielded type
Speaker: 8 cm cone \times 1
Power handling capacity: 30 W
Impedance: 4 Ω
Sound pressure level: 81 dB/W \cdot m
Dimension (W \times H \times D): 120 mm \times 161 mm \times 239 mm
Weight (1 unit): 1.6 kg

Designs and Specifications are subject to change
without notice.

JVC

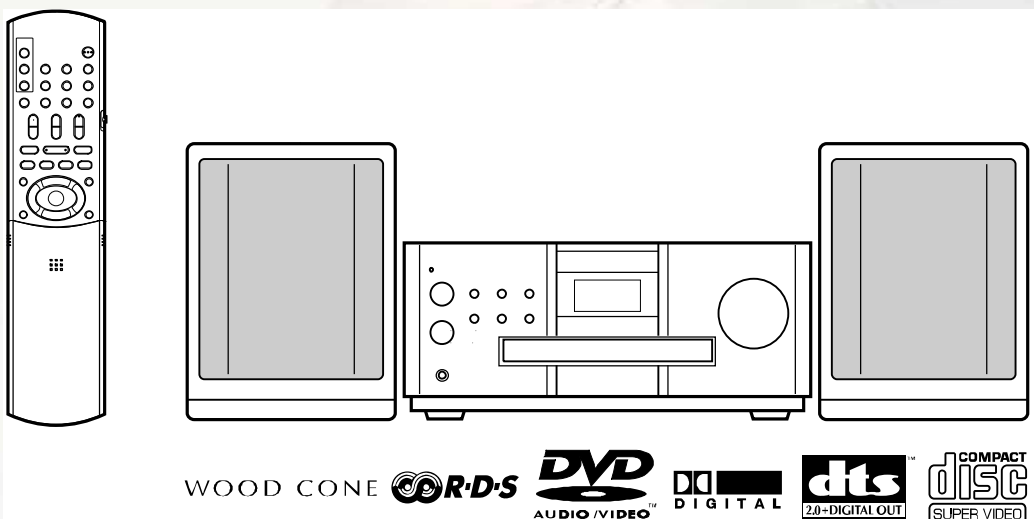
JVC



COMPACT COMPONENT SYSTEM

EX-A1

Consists of CA-EXA1 and SP-EXA1



INSTRUCTIONS

LVT1284-004A
[B]

Warnings, cautions and others


CAUTION

To reduce the risk of electrical shocks, fire, etc.:

1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

CAUTION — button!

Disconnect the mains plug to shut the power off completely (the STANDBY lamp goes off).

The  button in any position does not disconnect the mains line.

- When the system is on standby, the STANDBY lamp lights red.
- When the system is turned on, the STANDBY lamp goes off. The power can be remote controlled.

CAUTION

- Do not block the ventilation openings or holes.
(If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
- Do not place any naked flame sources, such as lighted candles, on the apparatus.
- When discarding batteries, environmental problems must be considered and local rules or laws governing the disposal of these batteries must be followed strictly.
- Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

IMPORTANT FOR LASER PRODUCTS

1. CLASS 1 LASER PRODUCT

2. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.

3. **CAUTION:** Visible and invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.

4. REPRODUCTION OF LABEL: CAUTION LABEL, PLACED INSIDE THE UNIT.

CAUTION : Visible and invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM.

ADVARSEL : Synlig og usynlig laserstråling når maskinen er åben eller interlocken fejler. Undgå direkte eksponering til stråling.

WARNING : Synlig och osynlig laserstrålning när den öppnas och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettuna tai viallisena olet alttiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteiden kohdistumista suoraan itseesi.

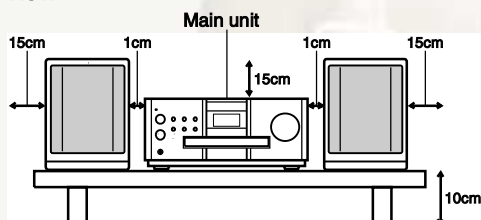
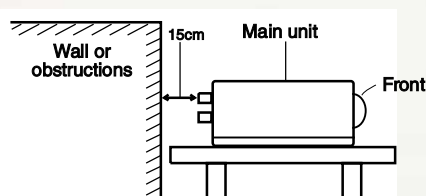
CAUTION – Proper Ventilation

To avoid risk of electric shock and fire and to protect from damage, locate the apparatus as follows:

Top/Front/Back/Sides: No obstructions should be placed in the areas shown by the dimensions below.

Bottom: Place on the level surface. Maintain adequate air path for ventilation by placing on a stand with a height of 10 cm more.

In addition, maintain the best possible air circulation.

Front view**Side view****IMPORTANT for the U.K.**

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

BE SURE to replace the fuse only with an identical approved type, as originally fitted.

If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If this product is not supplied fitted with a mains plug then follow the instructions given below:

IMPORTANT:

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:

Blue : Neutral

Brown : Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT - CONSULT A COMPETENT ELECTRICIAN.

SAFETY INSTRUCTIONS
“SOME DOS AND DON'TS ON THE SAFE USE OF EQUIPMENT”

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

Do read the operating instructions before you attempt to use the equipment.

Do ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made and in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug when making or changing connections.

Do consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

Do be careful with glass panels or doors on equipment.

DON'T continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way — switch off, withdraw the mains plug and consult your dealer.

DON'T remove any fixed cover as this may expose dangerous voltages.

DON'T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode.

Switch off using the switch on the equipment and make sure that your family know how to do this.

Special arrangements may need to be made for infirm or handicapped people.

DON'T use equipment such as personal stereos or radios so that you are distracted from the requirements of traffic safety. It is illegal to watch television whilst driving.

DON'T listen to headphones at high volume as such use can permanently damage your hearing.

DON'T obstruct the ventilation of the equipment, for example with curtains or soft furnishings.

Overheating will cause damage and shorten the life of the equipment.

DON'T use makeshift stands and NEVER fix legs with wood screws — to ensure complete safety always fit the manufacturer's approved stand or legs with the fixings provided according to the instructions.

DON'T allow electrical equipment to be exposed to rain or moisture.

ABOVE ALL

— NEVER let anyone, especially children, push anything into holes, slots or any other opening in the case.

— this could result in a fatal electrical shock.

— NEVER guess or take chances with electrical equipment of any kind — it is better to be safe than sorry!

E43486-340B

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How to read this manual

- Operations are described by mainly using the remote control buttons. If there are the same marks on the main unit, the buttons on the main unit can also be used.
- The following marks tell you for which type of the discs the operation can be made.



- The illustrations and TV screens may be different between the actual case and the description.
- "VCD" is an abbreviation of "Video CD".
- "SVCD" is an abbreviation of "Super Video CD".

Special cautions

Notes on handling

■ Important cautions

Installation of the system

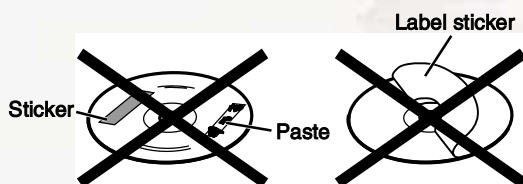
- Select a place which is level, dry and neither too hot nor too cold; between 5°C and 35°C.
- Leave sufficient distance between the system and the TV.
- Do not use the system in a place subject to vibration.

Power cord

- Do not handle the power cord with wet hands!
- A small amount of power is always consumed while the power cord is connected to the wall outlet.
- When unplugging the power cord from the wall outlet, always pull on the plug, not the power cord.

To prevent malfunctions of the system

- There are no user-serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
- Do not insert any metallic object into the system.
- Do not use any non-standard shape disc (like a heart, flower or credit card, etc.) available on the market, because it may damage the system.
- Do not use a disc with tape, stickers, or paste on it, because it may damage the system.



Note about copyright laws

Check the copyright laws in your country before recording from DVDs, Super Video CDs (SVCDs), VCDs and CDs. Recording of copyrighted material may infringe copyright laws.

Note about copy guard system

DVDs are protected by copy guard system. When you connect the system to your VCR directly, the copy guard system activates and the picture may not be played back correctly.

■ Safety precautions

Avoid moisture, water and dust

Do not place the system in moist or dusty places.

Avoid high temperatures

Do not expose the system to direct sunlight and do not place it near a heating device.

When you are away

When away on travel or for other reasons for an extended period of time, disconnect the power cord plug from the wall outlet.

Do not block the vents

Blocking the vents may damage the system.

Care of the cabinet

When cleaning the system, use a soft cloth and follow the relevant instructions on the use of chemically-coated cloths. Do not use benzene, thinner or other organic solvents including disinfectants. These may cause deformation or discoloring.

If water gets inside the system

Turn the system off and disconnect the power cord plug from the wall outlet, then call the store where you made your purchase. Using the system in this condition may cause fire or electrical shock.

■ When condensation or water drops adhere to the lens

In any of the following cases, condensation or water drops may adhere to the lens to prevent the system from working properly:

- Immediately after room heating starts
- When the system is installed in a steamy or damp space
- When the system is suddenly moved from a cold place to a warm space

In any of these cases, leave the system turned on for 1 or 2 hours before use.

Supplied accessories

Check to be sure you have all of the supplied accessories.

The number in parentheses is the quantity of the pieces supplied. If anything is missing, contact your dealer immediately.

- Remote control (1)
- Batteries (2)
- FM antenna (1)
- AM loop antenna (1)
- Power cord (1)
- Speaker cords (2)

- *Manufactured under license from Dolby Laboratories. "Dolby", "MLP Lossless", and the double-D symbol are trademarks of Dolby Laboratories.*
- *"DTS" and "DTS 2.0+DIGITAL OUT" are registered trademarks of Digital Theater Systems, Inc.*
- *This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.*

Playable disc types

This system has been designed to play back the following discs:

DVD VIDEO, DVD AUDIO, VCD, SVCD, CD

This system can also play back the following discs:

- Finalized DVD-R/RW discs recorded in the DVD VIDEO format.
- CD-R/RW discs recorded in the following formats
 - Music CDs (finalized discs)
 - VCDs
 - SVCDs
 - MP3/JPEG discs recorded in ISO 9660 (for details, refer to "About MP3/JPEG discs")

However, some discs may not be played back because of their disc characteristics, recording conditions, or damage or stain on them.

Only sounds can be played back from the following discs:

MIX-MODE CD CD-G
CD-EXTRA CD TEXT

Discs you can play:

Disc Type	Mark (Logo)	Video Format	Region Code Number*
DVD VIDEO		PAL	2/ALL
DVD AUDIO		—	—
VCD		PAL	—
SVCD		PAL	—
CD		—	—
CD-R		—	—
CD-RW		—	—

* Note on Region Code

DVD players and DVD VIDEOs have their own Region Code numbers. This system can only play back a DVD VIDEO recorded with the Region Code number and video format mentioned above.

Examples:



If a DVD VIDEO with an improper Region Code number is loaded, "REGION CODE ERROR!" appears on the TV screen and playback cannot start.

- On some DVD VIDEOs, DVD AUDIOs, VCDs or SVCDs, their actual operation may be different from what is explained in this manual. This is due to the disc programming and disc structure, not a malfunction of this system.

Discs that cannot be played back

- The following discs cannot be played back: DVD-ROM, DVD-RAM, DVD-R/RW (recorded in VR format), CD-ROM, CD-I (CD-I Ready), Photo CD, SACD, etc.
Playing back these discs will generate noise and damage the speakers.

Damaged discs and discs in an extraordinary shape (other than a disc of 12 cm or 8 cm in diameter) cannot be played back.

About MP3/JPEG discs

Playable MP3/JPEG discs and files

- Discs recorded in the ISO 9660 format are playable (except discs recorded in the "packet write" format (UDF format)).
- Discs recorded in the multi-session format are also playable.
- Files with an extension of ".mp3," ".jpg" or ".jpeg" (extensions with uppercase and lowercase letters mixed are also acceptable) are playable.

Notes on MP3/JPEG discs and files

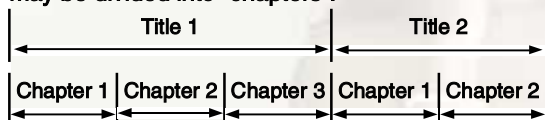
- A disc may not be played, or reading it may take a long time depending on its recording conditions or properties.
- The time needed for reading varies with the number of groups or tracks (files) recorded on the disc.
- If a character other than single byte English characters is used in the file name of an MP3/JPEG file, the track/file name will not be displayed correctly.
- The order of tracks/groups displayed on the MP3 Control screen, and the order of files/groups displayed on the JPEG Control screen may be different from that of files/folders displayed on PC's monitor screen.
- An off-the-shelf MP3 disc may be played in an order different from that indicated on the label attached to the disc.
- Playing an MP3 file including a still image may take a long time. The elapsed time is not displayed until playing starts. If playing starts, the elapsed time may not be displayed correctly.
- This system does not handle the ID3 tag of the MP3 file.
- For an MP3 file, a disc with a sampling frequency of 44.1 kHz and transmission rate of 128 kbps is recommended.
- This system can play a baseline JPEG file, excluding monochromatic JPEG files.
- This system can play JPEG data taken with a digital camera conforming to the DCF (Design Rule for Camera File System) standard (when a function is applied such as the automatic rotation function of a digital camera, data goes beyond the DCF standard, so the image may not be displayed).
- If data has been processed, edited and restored with PC image editing software, the data may not be displayed.
- This system cannot play animations such as MOTION JPEG, or still images (TIFF etc.) other than JPEG, and image data with sound.
- The resolution of 640 x 480 pixels is recommended for JPEG files. If a file has been recorded at a resolution of more than 640 x 480 pixels, display may take a long time. An image with a resolution of more than 8192 x 7680 pixels cannot be displayed.
- Files recorded on DVD-R/RW discs cannot be played back.

About discs (continued)

Disc structure

DVD VIDEO

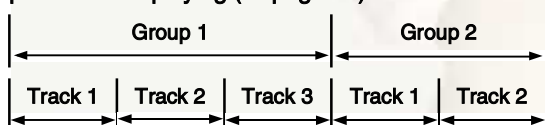
A DVD VIDEO consists of “titles” and each title may be divided into “chapters”.



DVD AUDIO

A DVD AUDIO consists of “groups” and each group may be divided into “tracks”.

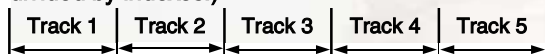
Some discs include a “bonus group” that requires a password for playing (see page 27).



VCD/SVCD/CD

VCD, SVCD and CD consist of “tracks”.

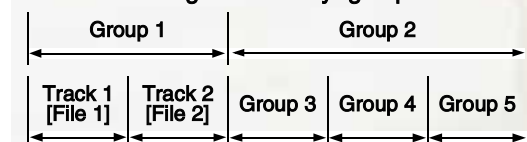
In general, each track has its own track number. (On some discs, each track may also be further divided by indexes.)



MP3 [JPEG] discs

On an MP3 [JPEG] disc, each still picture (material) is recorded as a track [file]. Tracks [Files] are usually grouped into a folder. Folders can also include other folders, creating hierarchical folder layers.

This unit simplifies the hierarchical construction of a disc and manages folders by “groups”.

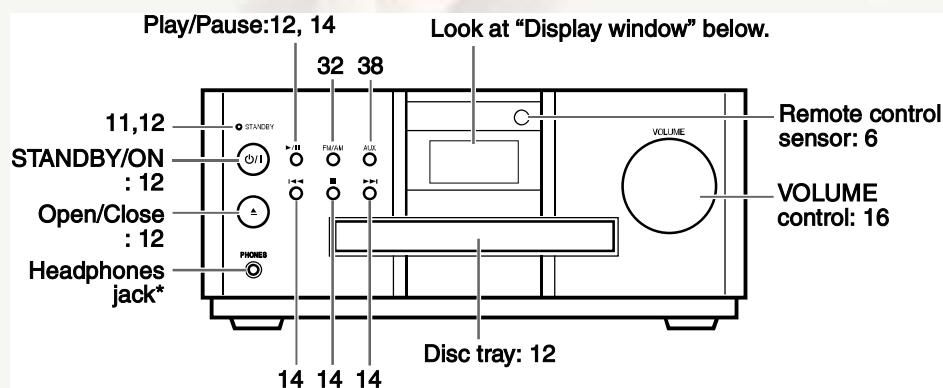


This product can recognize up to 1000 tracks [files] in a disc. Also, the product can recognize up to 150 tracks [files] per group and up to 99 groups in a disc. Since the unit ignores the tracks [files] whose numbers are exceeding 150 and the groups whose numbers are exceeding 99, they cannot be played back.

- If there is any type of files other than MP3 [JPEG] files in a folder, those files are also counted in the total file number.

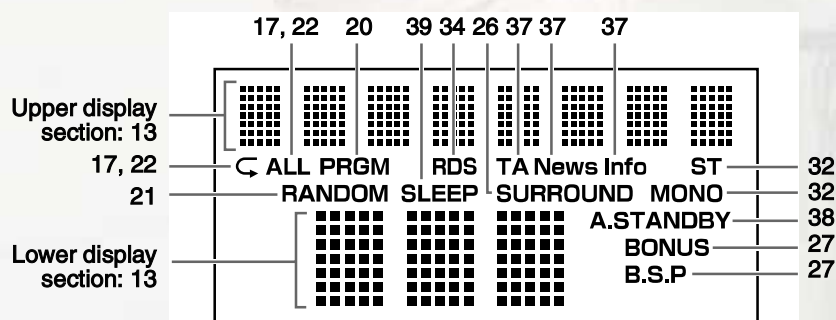
The numbers represent the page numbers.

Front panel

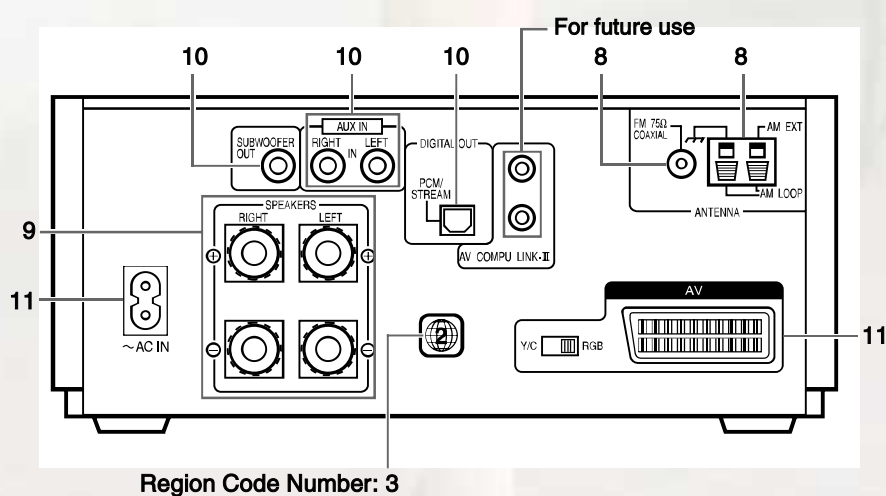


* Connect a pair of headphones (commercially available) with a stereo mini plug. If the headphones are connected, the speakers and subwoofer will not produce any sound.

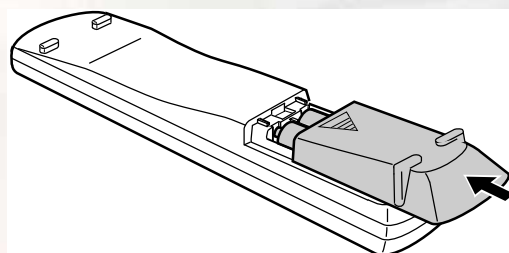
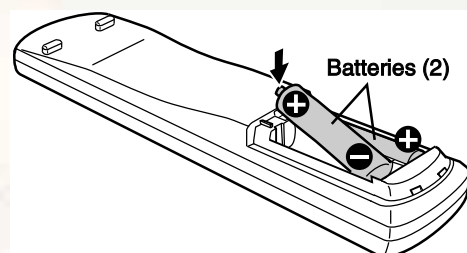
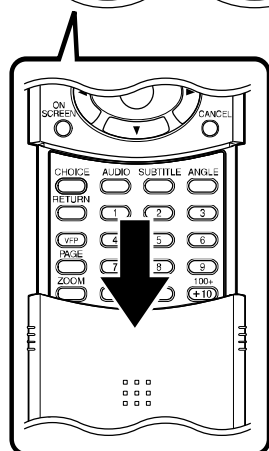
Display window



Rear panel



The numbers represent the page numbers.



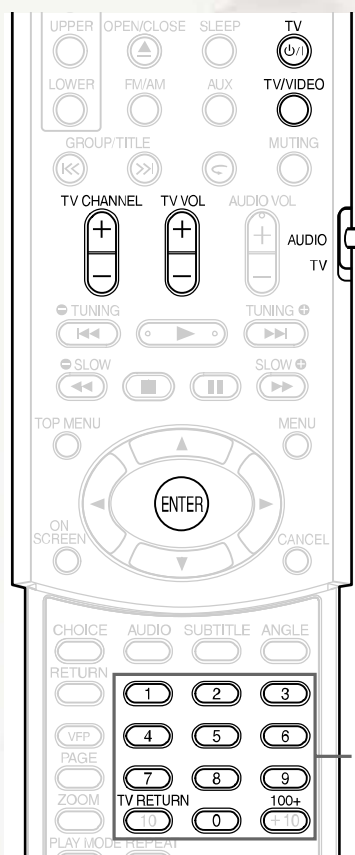
CAUTION

- ## Remote control operation

If the remote control sensor is exposed to a strong light such as direct sunlight, correct operation may not be carried out.

This page is for when operating your TV using the remote control of this product.

Operating the TV using the remote control



Number buttons

Setting the manufacturer's code

- Slide the remote control mode selector to the TV side.



- Keep pressing down **TV**.

NOTE

Keep pressing down **TV** until Step 4 is complete.

- Press **ENTER** and release.

- Press number buttons (1-9, 0).

Examples:

For a Hitachi TV: Press 0, then 7.

For a Toshiba TV: Press 2, then 9.

If there are more than one manufacturer's codes, try them in turn and select the one that causes the product to work properly.

Manufacturer	Code	Manufacturer	Code
JVC	01	Nordmende	13, 14, 18, 26-28
Akai	02, 05	Okano	09
Blaupunkt	03	Orion	15
Daewoo	10, 31, 32	Panasonic	16, 17
Fenner	04, 31, 32	Philips	10
Fisher	05	Saba	13, 14, 18, 26-28
Grundig	06	Samsung	10, 19, 32
Hitachi	07, 08	Sanyo	05
Inno-Hit	09	Schneider	02, 05
Irradio	02, 05	Sharp	20
Magnavox	10	Sony	21-25
Mitsubishi	11, 33	Telefunken	13, 14, 18, 26-28
Miver	03	Thomson	13, 14, 18, 26-28, 30
Nokia	12, 34	Toshiba	29

NOTE

Manufacturer's codes may be changed without notice. You may not be able to operate a TV produced by the manufacturer shown above.

5 Release **TV**.

For TV operation

Operate the remote control by pointing it towards the TV.

TV	Turn ON/OFF the power.
TV CHANNEL	Change channels.
TV VOL	Adjust volume.
1 ~ 9 / 0 / 100+ / +10	Select channels. *1
TV RETURN	Alternates between the previously selected channel and the current channel.
TV/VIDEO	Switch TV and video input.

*1 Make sure to slide the remote control mode selector to the TV side in advance.

NOTE

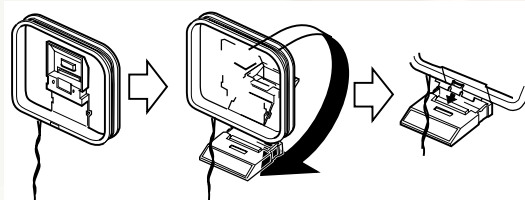
When the batteries are replaced, perform the manufacturer's code setting again.

Connecting up — Do not turn on the power until the connection is complete —

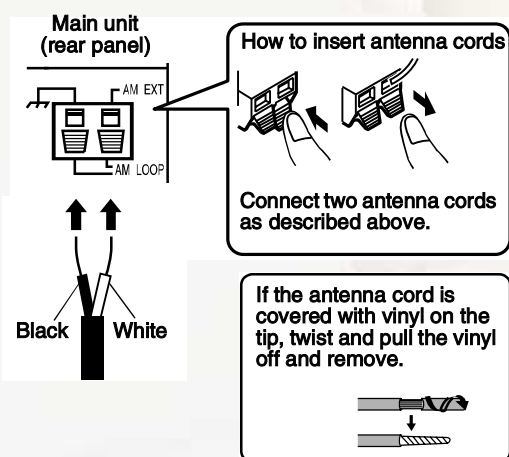
Connecting antennas

Connecting AM loop antenna (supplied)

1 Set up the AM loop antenna.



2 Connect antenna cords.



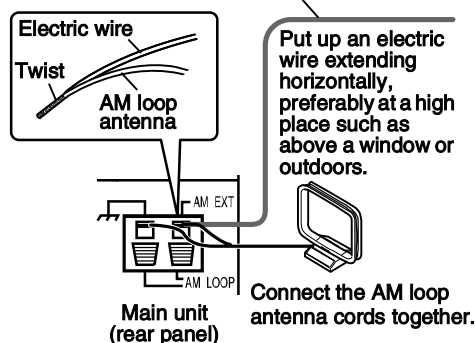
3 Turn the AM loop antenna to the direction of the best radio reception.

Locate the AM loop antenna as far away from the main unit as possible.

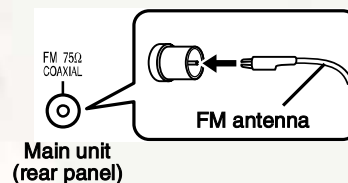
- Do not locate the AM loop antenna on a metallic table or close to a TV, personal computer, etc. Otherwise it may result in bad radio reception.

■ **When good radio reception cannot be obtained with the supplied AM loop antenna**

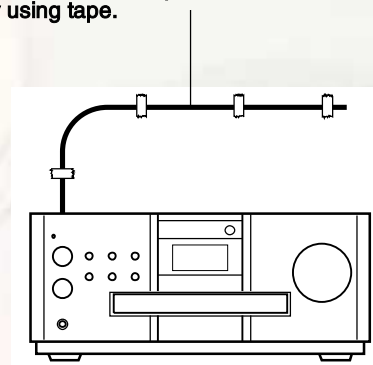
Electric wire: 3 - 5m (commercially available)



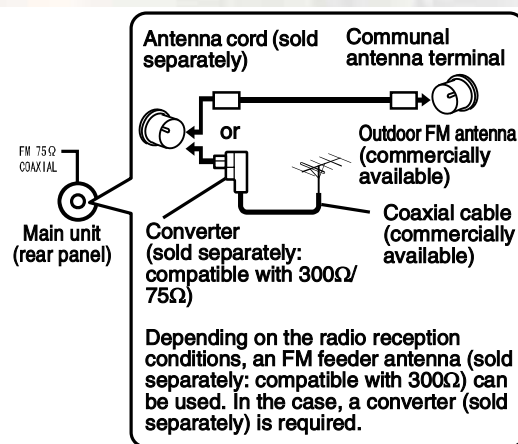
Connecting FM antenna (supplied)



Put the antenna up straight in the direction where the best radio reception can be obtained, and fix by using tape.



■ **When good radio reception cannot be obtained with the supplied antenna or when using a communal antenna**

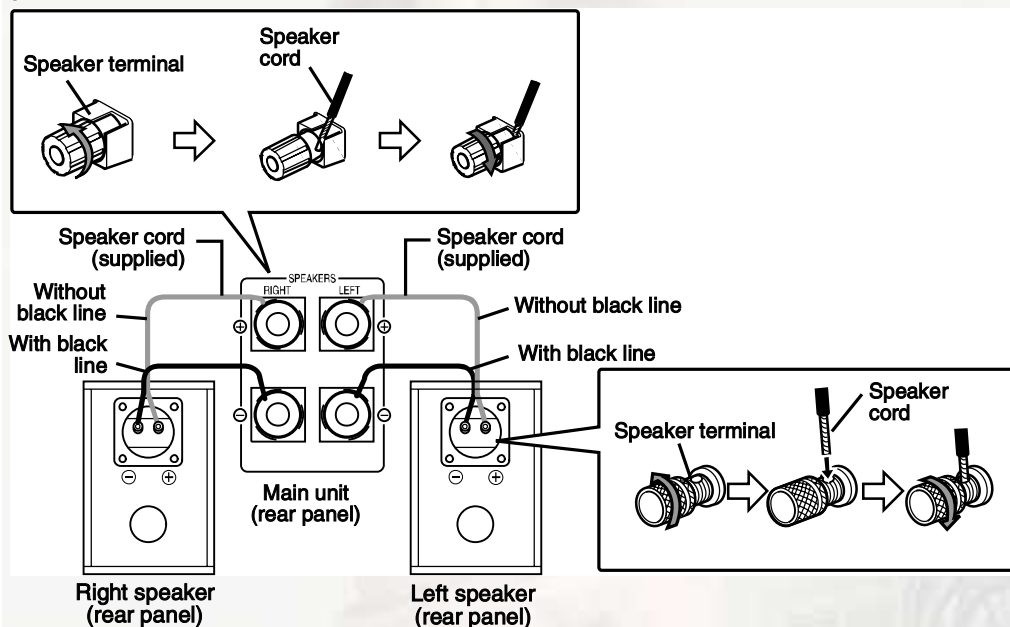


For details of connecting a separately sold antenna, refer to the user guide for the antenna or converter.

When positioning the antenna, listen to an actual radio program (refer to "Listening to a radio broadcast" on page 32).

Connecting speakers

There is no difference between the left and right speakers.

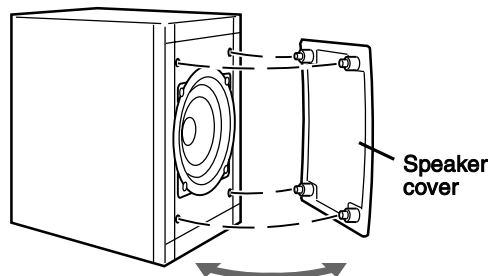


CAUTION

- **DO NOT** connect more than one speaker to one speaker terminal.
- The speakers of this product are magnetically shielded, but color irregularities may occur on the TV depending on how the speakers are installed. Keep in mind the following.
 1. Turn off the main power of your TV before installing the speakers. Wait for about 30 minutes before turning on the TV again.
 2. If color irregularity occurs in pictures, keep a distance of more than 10 cm between the TV and the speakers.

The speakers employ natural wood for the diaphragm and the cabinet in order to reproduce the original sound faithfully. The appearance will therefore be different for each unit.

Speaker cover can be detached.



NOTE

- Impedance of speaker that can be connected to the main unit is within a range of 4Ω to 16Ω .
- In order to have a sufficient cooling effect, leave a space of more than 1cm between the main unit and the speakers or other objects.

Connecting other devices

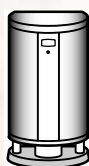
This page is for when connecting the main unit with other devices.

Connecting subwoofer

With an amplifier-built in subwoofer (sold separately), you can enjoy a more dynamic bass sound. Refer to the manual of the subwoofer for details.

Amplifier-built in subwoofer
(sold separately)

Audio cord (sold separately)
(If an audio cord comes with the amplifier-built in subwoofer,
you can use the cord.)



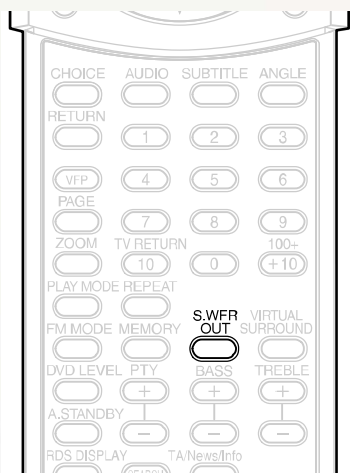
Main unit



When you want to hear sound from the subwoofer, press **S.WFR OUT** on the remote control to display "SUB WFR ON" (Sub Woofer ON) on the display window on the main unit. Each time you press the button, the display toggles between "ON" and "OFF".

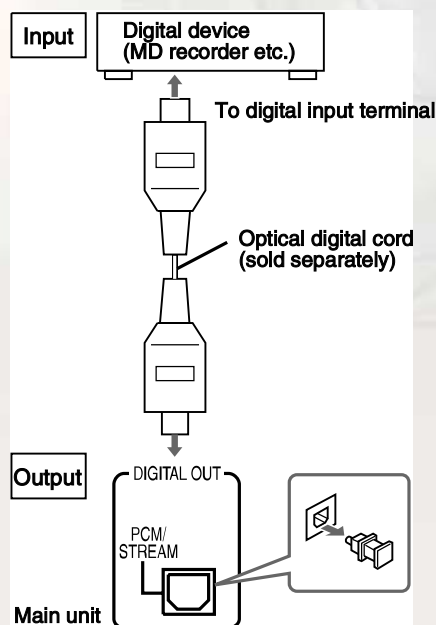
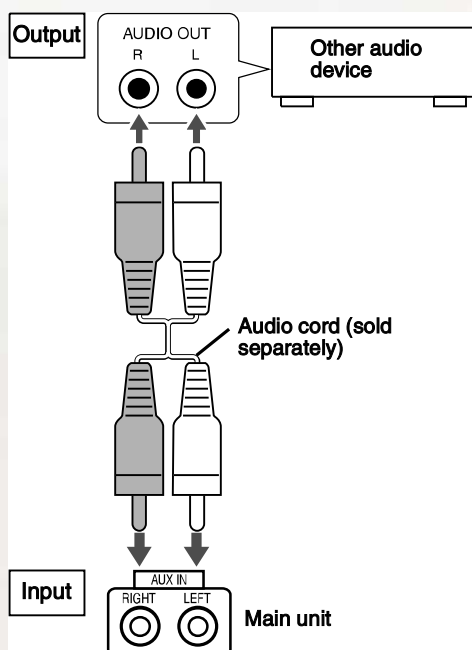
NOTE

When "SUB WFR ON" is selected, bass sound from the left and right speakers will be automatically lowered and the bass sound will be emitted mainly from the subwoofer.



Connecting with a digital device

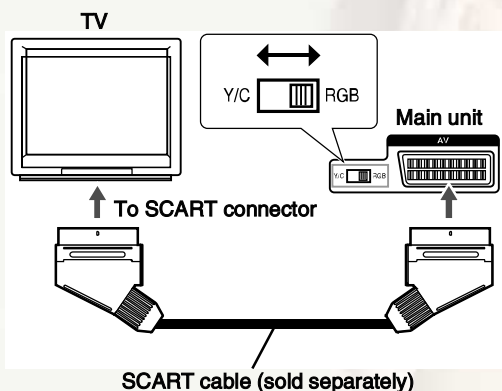
Connecting with other audio device



CAUTION

- For details of signals to be output, refer to page 30.
- If connecting the main unit with equipment with the function of a Dolby Digital decoder, the setting in "D. RANGE COMPRESSION" or "AUDIO" (page 30) will be invalid regarding sound from the digital audio output of the main unit.

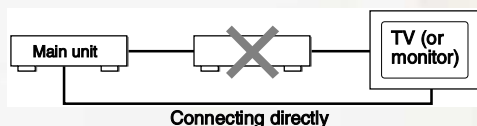
Connecting with TV



- In standby mode, set the RGB-Y/C selector correctly according to your TV.
- When the TV accommodates the RGB video signal, set the RGB-Y/C selector to RGB so that you can enjoy better-quality pictures.
- When the TV accommodates the S-video signal, set the RGB-Y/C selector to Y/C.
- When the TV accommodates the composite video signal only, set the RGB-Y/C selector to RGB.

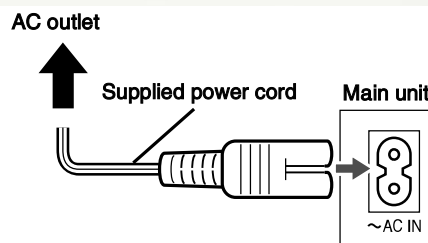
CAUTION

Connect the main unit directly with a TV (or a monitor) without routing through a VCR. Otherwise it may cause picture distortion while playing.



Also, when connecting the main unit to a TV with a VCR built in, there may be picture distortion while playing.

Connecting the power cord

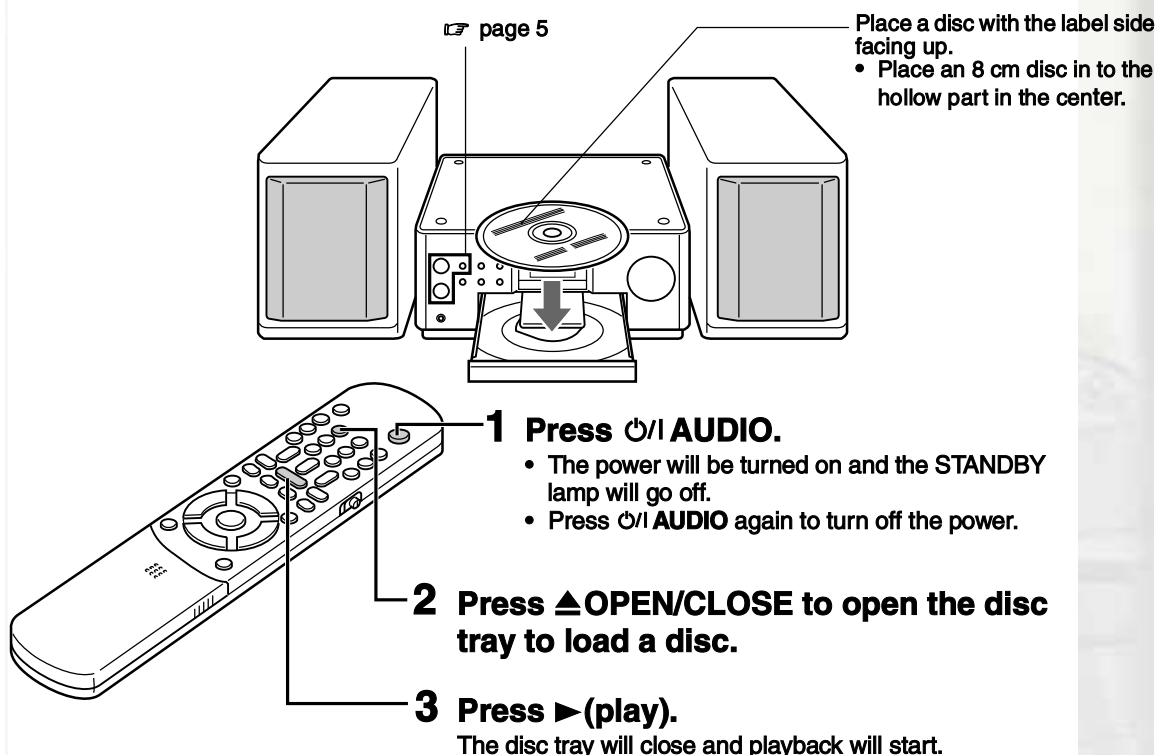


- Connect the power cord after all other connections are complete.
- The STANDBY lamp (on the front panel) will be lit.

Playing discs

Playback

DVD VIDEO **DVD AUDIO** **VCD** **SVCD** **C D** (Refer to page 16 for playing MP3 and JPEG.)



- The power will be turned on when any of , , or on the main unit and , , or on the remote control is pressed while the power is off.

If any button other than or is pressed, the source will also be changed (if there is a disc loaded, playback will start).

NOTE

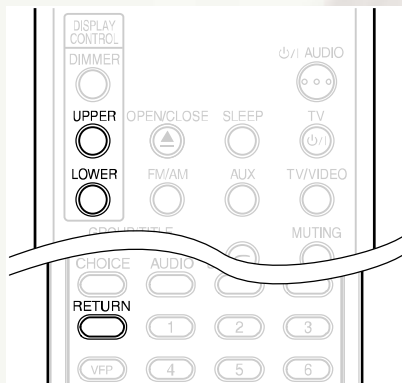
- A menu screen may be displayed after starting playback of a DVD. In this case, select a desired item to playback by using the following buttons on the remote control.
• Select a desired item using and press .
- Select a desired item using the number buttons.
- Depending on the disc, actual operation may be different from the description.

JVC

Screens displayed on the TV when the power is turned ON.

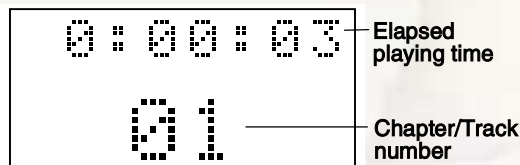
The following messages appear depending on the status of the system.
(When FM/AM or AUX is selected as a source, the messages do not appear.)

NOW READING	Appears when the system is reading the disc information. Wait for a while.
REGION CODE ERROR!	Appears when the Region Code of the DVD does not match the code the system supports. (page 3)
NO DISC	Appears when no disc is loaded.
OPEN	Appears when opening the disc tray.
CLOSE	Appears when closing the disc tray.
CANNOT PLAY THIS DISC	Appears when trying to play back an unplayable disc.



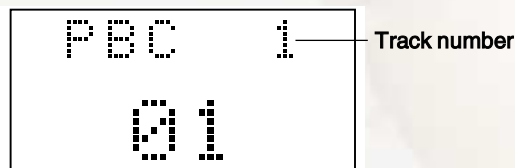
Display window during disc playback

Example: When a DVD VIDEO or DVD AUDIO is played



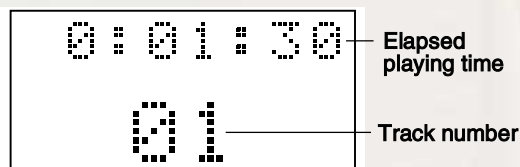
If "BONUS" or "B.S.P." is displayed during a DVD AUDIO playback, refer to page 27.

Example: When a SVCD or VCD is played

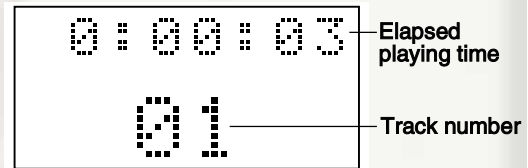


- **PBC (Play Back Control):** A signal recorded in a VCD (version 2.0) for controlling playback. It is possible to enjoy interactive software or software with a search function using a menu screen recorded in a PBC compatible VCD. To play a disc with the PBC function OFF, carry out the following operations.
 - Designate the track number using the number buttons while the disc is stopped.
 - Designate the track number using **◀◀** or **▶▶** while the disc is stopped, and then press **▶** (play).
- Press **RETURN** to go back to the upper layer during the PBC playback of a VCD or SVCD.

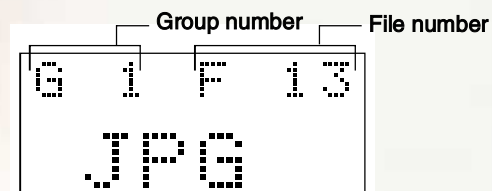
Example: When a CD is played



Example: When an MP3 disc is played



Example: When a JPEG disc is played



To switch the display

Press **UPPER** or **LOWER**. Each time you press the button, the display will be alternated.

Display examples

DVD VIDEO

UPPER: → 0:00:03 (Elapsed playing time) → T1 C3 (Title and Chapter number)
No display ←

LOWER: → 03 (Chapter number) → T1 (Title number) → DVD

DVD AUDIO

UPPER: → 0:00:03 (Elapsed playing time) → G1 T3 (Group and Track number)
No display ←

LOWER: → 03 (Track number) → G1 (Group number) → DVD

VCD/SVCD

UPPER: → 0:00:03 (Elapsed playing time) → No display
PBC 2 (PBC and Track number appear only when PBC function is played) ←

LOWER: → 02 (Track number) → VCD

CD

UPPER: → 0:00:03 (Elapsed playing time) → No display

LOWER: → 02 (Track number) → CD

MP3 disc

UPPER: → 0:00:03 (Elapsed playing time) → G1 T3 (Track number)
No display ←

LOWER: → G1 (Group number) → MP3 → 03 (Track number)

JPEG disc

UPPER: → G1 F3 (Group number and File number) → No display

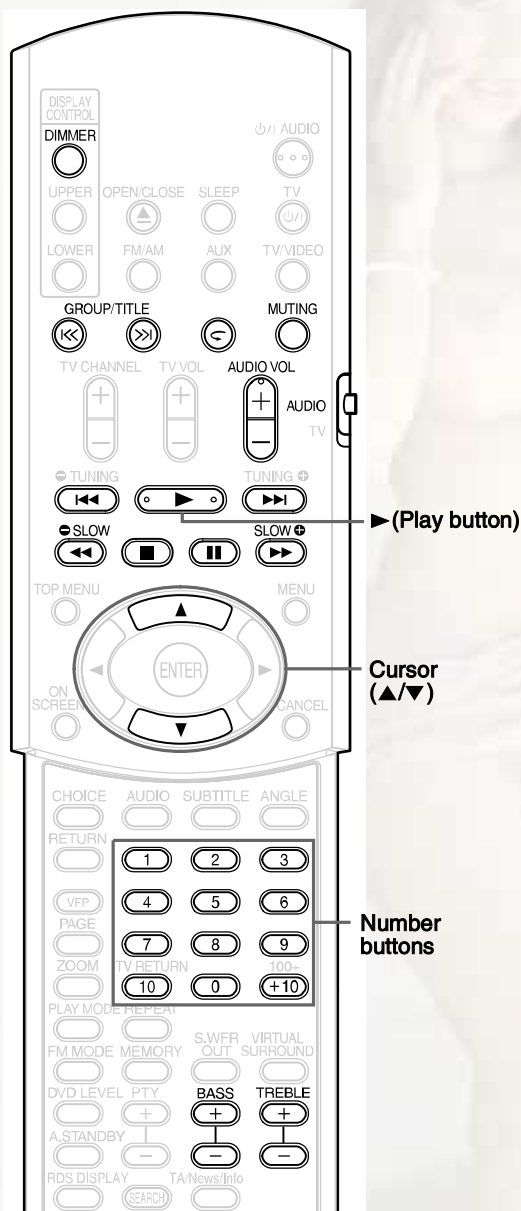
LOWER: JPG

NOTE

Abbreviations

- G: Group
- T: Title (DVD VIDEO)
Track (DVD AUDIO and MP3)
- C: Chapter
- F: File


Playing discs (continued)



Select what you want to play by using the number buttons

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG

NOTE

- Set the remote control mode selector to **AUDIO** before using the number buttons. 
- For a VCD or SVCD, this operation can be carried out when the disc is stopped, or during playback without the PBC function.
- For a DVD AUDIO, CD, MP3 or JPEG, this operation can also be carried out when the disc is stopped.
- This operation may not be carried out for some discs.

Designate the chapter number or track number to play during playback.

Refer to "How to use the number buttons" on page 15.

To stop playback

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG

Press **■** during playback.

To pause playback

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG

Press **⏸** during playback.

To resume normal playback, press **▶** (play).

- Press **⏸** to pause during JPEG disc slide-show. Press **▶** (play) to start playback from the next file.
- It is not possible to pause by pressing **▶**/**⏸** on the main unit during JPEG disc slide-show.

To advance picture frame-by-frame

DVD VIDEO SVCD VCD

Press **⏮** during pause.

Each time you press the button, picture will be advanced frame-by-frame.

Fast reverse/Fast forward search

DVD VIDEO DVD AUDIO VCD SVCD C D

There are two methods.

- Press **⏮** or **⏭** during playback. Each time you press the button, the speed increases (X2, X5, X10, X20, X60). To restore the normal speed, press **▶** (play).
- Hold down **⏮** or **⏭**. Fast reverse/Fast forward search can be carried out only while the button is pressed (X5 → X20).

NOTE

- Fast reverse/Fast forward search cannot be carried out for MP3 and JPEG.
- For a DVD VIDEO, SVCD or VCD, no sound comes out during fast reverse/fast forward search.
- For a CD or DVD AUDIO, sound is intermittent during fast reverse/fast forward search.

Playing back from a position 10 seconds before (One Touch Replay)

DVD VIDEO

Press  during playback.



NOTE

- This operation may not be carried out for some discs.
- It is not possible to go back to the immediately previous title.

Slow Motion Playback

DVD VIDEO VCD SVCD

Press **SLOW**  or **SLOW**  during pause.

- Each time you press the button, the speed increases.
- Press  to pause playback, and press  (play) to resume normal playback.








NOTE

- No sound will be produced.
- The picture motion in the reverse direction may not be smooth.
- For a VCD or SVCD, Slow Motion Playback can be carried out in the forward direction only.

Skip to the beginning of the selection

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG

Press  or  during playback*.


- Each time you press the button, the previous or next beginning of chapter/track/file to the current position will be skipped to.
- Press  once to skip back to the beginning of the chapter or track currently being played (except for JPEG).
- Press **GROUP/TITLE**  or  to select the title or group.
- During playback of a JPEG disc, press  or cursor  to play the next file, or press  or cursor  to play the previous file.

NOTE

- * For a VCD or SVCD, this operation can be carried out during playback without the PBC function.
- Except for a DVD VIDEO, this operation can also be carried out while the disc is stopped.
- This operation may not be carried out for some discs.

How to use the number buttons

Examples:

5:  15:  → 
 20:  →  25:  →  → 



Guide icons displayed on the TV screen (On-screen guide)



: Play



: Pause




: Fast reverse/Fast forward search



: Slow Motion Playback (reverse/forward directions)



: Containing multi-angle views
( page 24)



: Containing multi-audio languages
( page 24)



: Containing multi-subtitle languages
( page 24)



: The disc cannot accept the operation you have attempted.

To change the brightness of the display window (DIMMER)

Press DIMMER repeatedly.

- The modified brightness will be stored even after the power is turned off.

The items below can be carried out for all sources.

Adjusting the volume

Press AUDIO VOL +/-.

NOTE

The volume can be adjusted by turning the VOLUME control on the main unit.

Adjusting sound quality

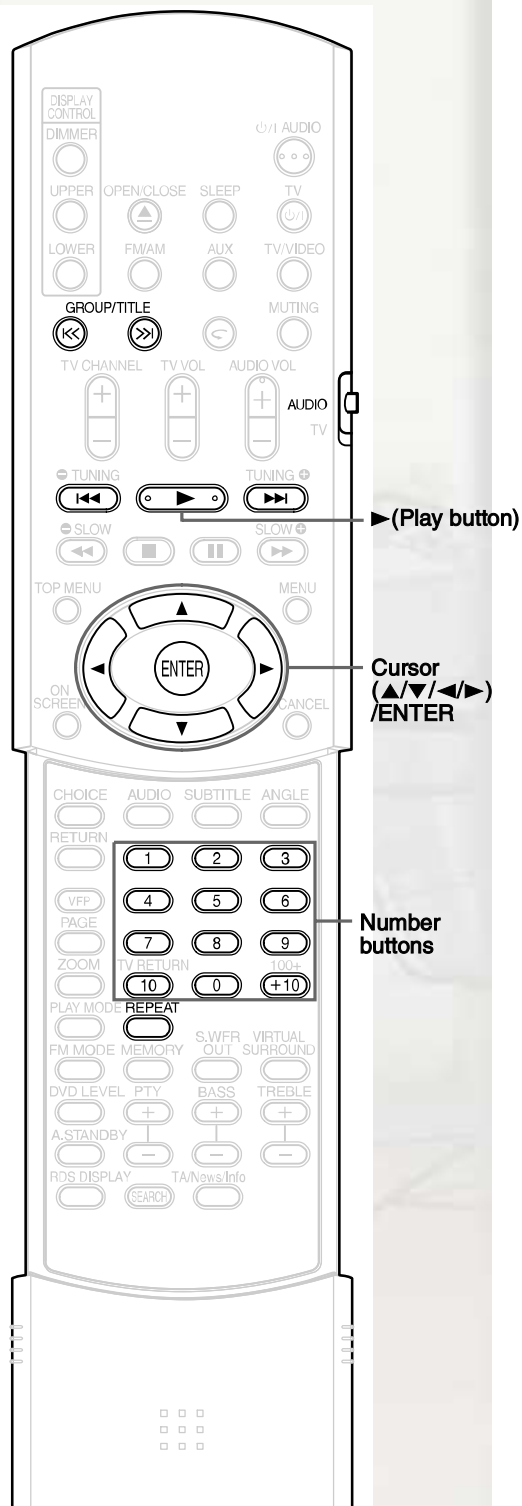
Bass: Press BASS +/-.

Treble: Press TREBLE +/-.

Turning off the sound temporarily (MUTING)

Press MUTING.

- No sound will come out from the speakers, headphones and the subwoofer.
- Press **MUTING** again to restore the sound. When the power is tuned off once and turned on again, the sound will be restored.



NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



Playback

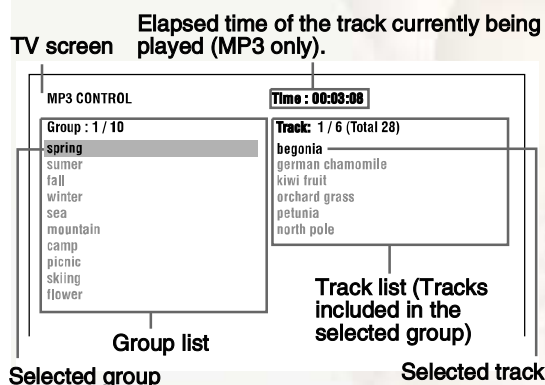
MP3 **JPEG**

Display of an MP3 disc is described here as an example.
For a JPEG disc, read "track" as "file".

NOTE

When playing a disc containing both MP3 and JPEG files, set one of them to be played (see page 29).

1 Load a disc.



2 Press cursor ▲/▼ to select a group.

3 Press cursor ► to move to the track list.

- Press cursor ◀ to go back to the group list.

4 Press cursor ▲/▼ to select a track.

5 Press ►(play) or ENTER.

NOTE

- **GROUP/TITLE** ◀◀, ▶▶ can also be used in Step 2.
- The number buttons can also be used in Step 4. In this case, Steps 3 and 5 are not needed. (For how to use the number buttons, refer to page 15).
- ◀◀◀ or ▶▶▶ can also be used in Step 4. In this case, Step 3 is not needed.

Repeat playback

MP3 **JPEG**

1 Press REPEAT while the disc is stopped.

Each time you press the button, the Repeat type will be alternated.

Repeat types	Display on the TV screen	Display on the display window on the main unit
Repeats the current track (only for MP3).	REPEAT TRACK	↶
Repeats the current group.	REPEAT GROUP	↶ ALL *
Repeats the entire disc.	REPEAT ALL	↶ ALL
Cancels repeat.	No display	No display
Repeats the current track during a Program or Random Playback (only for MP3).	REPEAT STEP	↶
Repeats all programmed tracks or the all tracks for Random play (only for MP3).	REPEAT ALL	↶ ALL

* represents blinking.

2 Press ►(play).

NOTE

- The Repeat types can be changed during playback.
- The Repeat mode will be automatically cancelled if there is a file that cannot be played (see page 3).

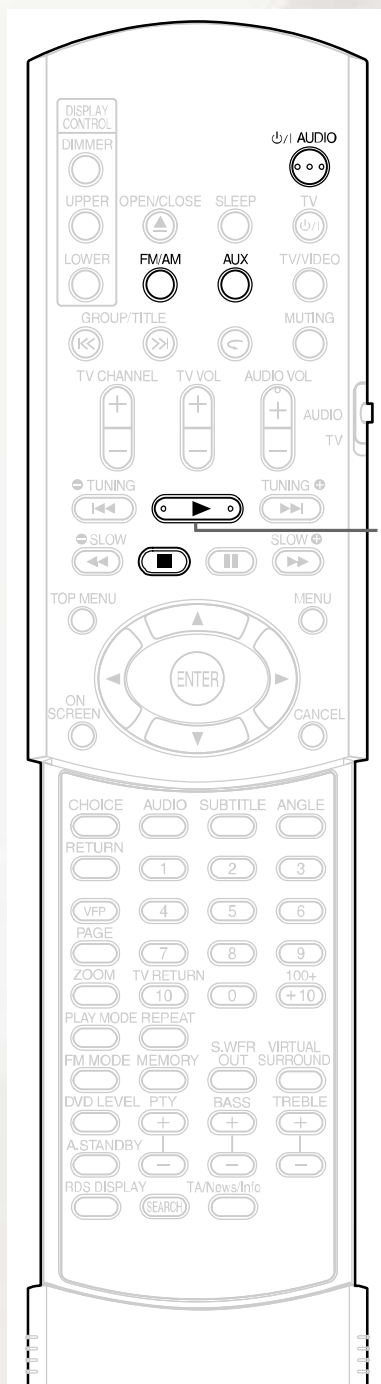
Slide-Show Playback **JPEG**

- In Step 5, for a JPEG disc, when ►(play) is pressed, files will be continuously played from the selected file (Slide-Show Playback), and when ENTER is pressed, only a selected file will be played.
- Display time for a file in Slide-Show Playback is about 3 seconds.
- When all files are played through, the playback will be automatically stopped.

Resume Playback

DVD VIDEO DVD AUDIO VCD SVCD

When playback is stopped in the middle, playback can be started from the stopped scene. This is called Resume function.



▶ (Play button)

How to suspend playback

Perform any of the following operations during playback.

Press ■ once.*

Press ⏻/AUDIO to turn off the power.

Change the source to FM/AM or AUX.*

* Even if the power is turned off by pressing ⏻/AUDIO after this, the position where playback has been stopped will be stored.



To start playback from the stored position

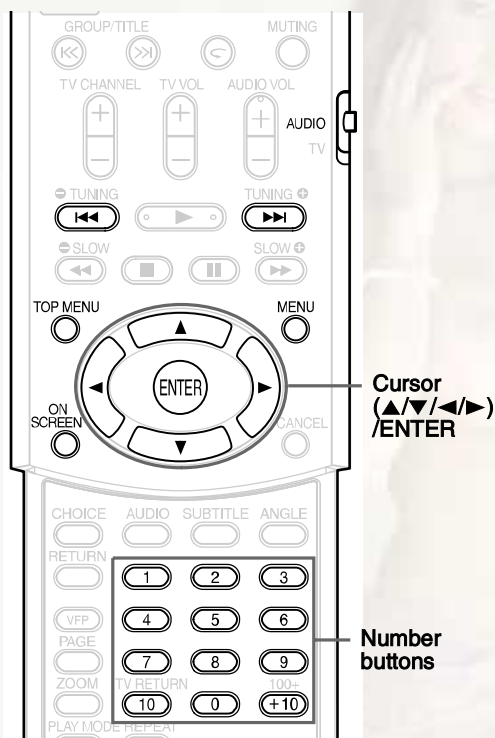
Press ▶ (play).

NOTE

- This function does not work in Program Playback or Random Playback.
- The position where playback starts again may be a little different from the stopped position.
- When a disc menu is displayed, the Resume function may not work.
- The audio language, the subtitle language and the angle at that time are stored as well as the stopped position.
- The stored position will be cleared if the disc tray is opened. Further, if ■ is pressed during playback, "RESUME" will be displayed. If ■ is pressed at this time, "RESUME OFF" will be displayed and the stored information will be cleared.
- At the time of purchase, Resume is set to ON. Resume can be set to OFF (see page 30).

Select the scene to be played

Advanced operations



NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



Select from the menu

DVD VIDEO **DVD AUDIO** **VCD** **SVCD**

- 1 Press MENU or TOP MENU while the disc is stopped or during playback*¹.**
 - The disc menu screen will be displayed.
 - Only **TOP MENU** can be used for DVD AUDIOS.
- 2 Press cursor ▲/▼/◀/▶ (only for a DVD VIDEO or DVD AUDIO) or the number buttons to select the scene to be played.**
 - Refer to "How to use the number buttons" (page 15).
 - When the menu screen has a couple of pages, press ◀◀ or ▶▶ to change the page (only for a VCD and SVCD).
- 3 Press ENTER.**

NOTE

*¹ For a VCD and SVCD, this operation can be carried

out only when the PBC function is off.

- This operation cannot be carried out for a disc without a menu screen.
- Playback may start for some discs without pressing ENTER.

Designate the time (Time search)

DVD VIDEO **DVD AUDIO** **VCD** **SVCD** **CD**

- 1 Press ON SCREEN twice during playback*².**
The menu bar will be displayed (page 28).
- 2 Press cursor ◀/▶ to select [⌚].**
- 3 Press ENTER.**
- 4 Input the time*³ using the number buttons (1-9, 0).**

Example: When you want to play a DVD VIDEO from the position of (0 hour) 23 minutes 45 seconds, press the buttons in the order:

0 → 2 → 3 → 4 → 5

"minutes" and "seconds" can be omitted.

- If you input wrong numbers, press cursor ◀ to delete the numbers and re-input.

- 5 Press ENTER.**

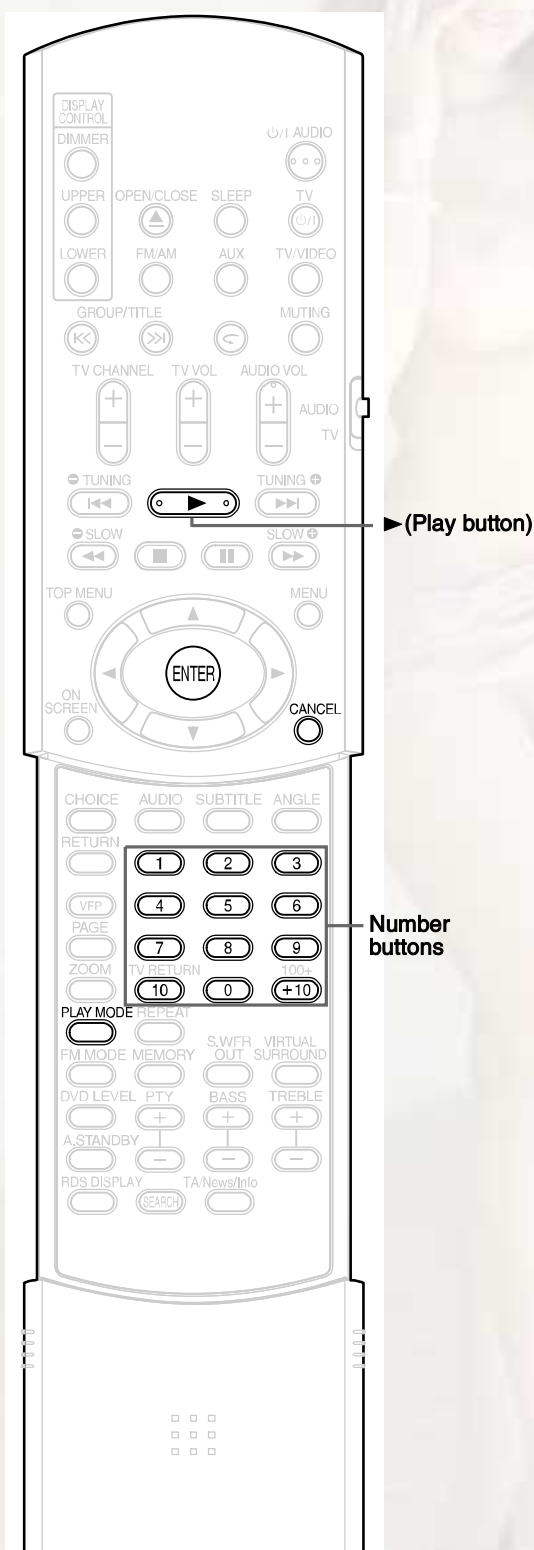
To delete the menu bar, press ON SCREEN.

NOTE

- This function does not work for a DVD VIDEO with no time information recorded.
- This function does not work during Program or Random Playback.
- *² For a CD, this operation can always be carried out, while, for a VCD and a SVCD, the operation can be carried out when the disc is stopped or during playback without the PBC function.
- *³ Time search for a DVD VIDEO is from the beginning of the title, for a DVD AUDIO from the beginning of the track being played. Time search for a VCD, a SVCD and a CD is as follows:
 - When the disc is stopped, time search is from the beginning of the disc.
 - When the disc is being played, time search is within the track currently being played.

Program Playback/Random Playback

DVD VIDEO DVD AUDIO VCD SVCD CD MP3



Play the disc in the desired order (Program Playback)

It is possible to program a maximum of 99 tracks or chapters. The same track or chapter can be programmed more than once.

1 While the disc is stopped, press **PLAY MODE** repeatedly to display **"PRGM"** on the display window on the main unit.

"PRGM" is an abbreviation for PROGRAM.

Example: For DVD VIDEO

PROGRAM			TV screen
No.	Group/Title	Track/Chapter	
1			Program screen
2			
3			
4			
5			
6			
7			
8			

2 Create a program following the description on the TV screen.

Refer to "How to use the number buttons" (page 15).

- The input content varies depending on the disc type.
 - DVD VIDEO: Titles and chapters
 - VCD, SVCD, CD: Tracks
 - DVD AUDIO, MP3: Groups and tracks
- To select a DVD AUDIO bonus group, carry out the operations of "Playing the Bonus Group" on page 27 in advance to erase the display "BONUS".
- If the number of tracks or chapters input is greater than 99, "FULL" will be displayed.
- In the case of a CD, SVCD or VCD, when the total playback time reaches 9 hours 59 minutes 59 seconds, "--:--" will be displayed on the display window (It is possible to continue programming).

NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



To program on the display window on the main unit, operate as follows.

- (1) Select a group/title using the number buttons.
Display example of the upper display window: T2 C--
- (2) Designate a track/chapter number using the number buttons.
Display example of the upper display window: T2 C3
 - Refer to "How to use the number buttons" (page 15).
 - The program number will be displayed on the lower display window (Example: "P2").
- (3) Repeat the above operations (1) and (2) to complete the program. Then, advance to Step 3.

NOTE

*(Only for a DVD VIDEO, a DVD AUDIO or an MP3)
If you press ENTER instead of designating a track/chapter number, "ALL" is displayed and all of the tracks/chapters included in the selected group/title are programmed.*

3 Press ►(play).

- To resume normal playback, press **PLAY MODE** repeatedly to display "NORMAL" on the display window on the main unit while the disc is stopped. The program content will not be erased.
- The following operations erase the program content.
 - Hold down **CANCEL** until "CLEAR!" appears on the display window with the program preference screen displayed (if **CANCEL** is pressed and released quickly, programs will be erased one by one).
 - Open the disc tray
 - Turn off the power

Playing the disc in a random order (Random Playback)

1 Press PLAY MODE repeatedly to display "RANDOM" on the display window on the main unit while the disc is stopped.

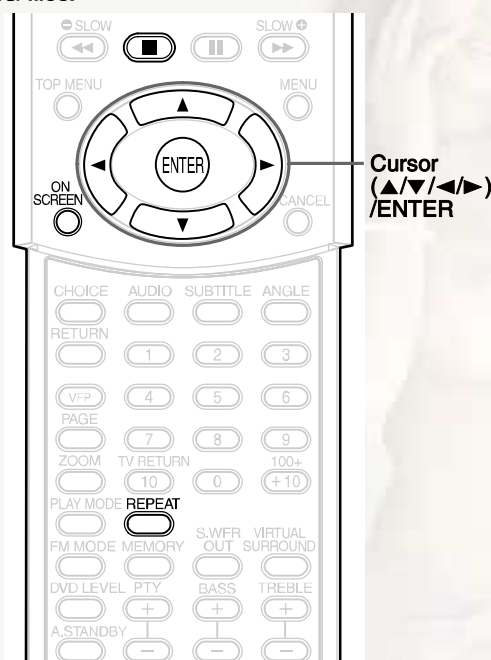
- "RANDOM" will also be displayed on the TV screen.

2 Press ►(play).

- The same chapter or track will not be played twice.
- To resume normal playback, press **PLAY MODE** repeatedly to display "NORMAL" on the display window on the main unit while the disc is stopped.
- Random Playback will also be cancelled by carrying out the following operations.
 - Open the disc tray
 - Turn off the power
- The previous track will not be returned to even if ◀◀ is pressed repeatedly during Random Playback (the beginning of the current chapter or track will be returned to).

Repeat Playback

Refer to page 17 for Repeat Playback of MP3 and JPEG files.



For CD/VCD/SVCD

Repeat types	Display on the TV screen	Display on the main unit
Repeats the current track	↶ TRACK	↶
Repeats all tracks	↶ ALL	↶ ALL
Cancels repeat	↶ OFF	No display

NOTE

- For a DVD AUDIO and CD, this operation can always be carried out, while, for a VCD and SVCD, the operation can be carried out when the disc is stopped or during playback without the PBC function.
- It is possible to set Repeat on the menu bar. For how to operate, refer to "Playing the designated part repeatedly (A-B Repeat Playback)" (page 23).
- The abbreviations displayed on the main unit are as follows.
 - TRK : Track
 - CHP : Chapter
 - TI. : Title
 - GR. : Group
- For a DVD VIDEO and DVD AUDIO, if the source is switched to FM/AM or AUX, the Repeat mode will be cancelled.

Playing the title/chapter/group/track/all tracks repeatedly (REPEAT)

DVD VIDEO DVD AUDIO VCD SVCD CD

1 Press REPEAT during playback.

Each time you press the button, the Repeat type will be alternated.

Example:

TV screen Display window on the main unit

↶ CHAP ↶

For DVD VIDEO

Repeat types	Display on the TV screen	Display on the main unit
Repeats the current chapter	↶ CHAP.	↶
Repeats the current title	↶ TITLE	↶ ALL *
Cancels repeat	↶ OFF	No display

For DVD AUDIO

Repeat types	Display on the TV screen	Display on the main unit
Repeats the current track	↶ TRACK	↶
Repeats the current group	↶ GROUP	↶ ALL *
Cancels repeat	↶ OFF	No display

* represents blinking.

Repeat Playback during Program or Random Playback

Repeat types	Display on the TV screen	Display on the main unit
Repeats the current chapter or track	↶ STEP or REPEAT STEP	↶
Repeats all programmed tracks or all the tracks in Random Playback	↶ ALL or REPEAT ALL	↶ ALL
Cancels repeat	↶ OFF or No display	No display

Playing the designated part repeatedly (A-B Repeat Playback)

DVD VIDEO DVD AUDIO VCD SVCD CD

1 Press ON SCREEN twice during playback.

The menu bar (☞ page 28) will be displayed.

2 Press cursor ◀/▶ to select

⏮ OFF .

3 Press ENTER.

4 Press cursor ▲/▼ to display

A-B .

Other Repeat modes can be selected here. For other Repeat modes, refer to "Playing the title/chapter/group/track/all tracks repeatedly (REPEAT)" (☞ page 22).

5 Press ENTER at the start point of the part to be repeated (designating A point).

- The icon on the menu bar will be ⏮ A- .

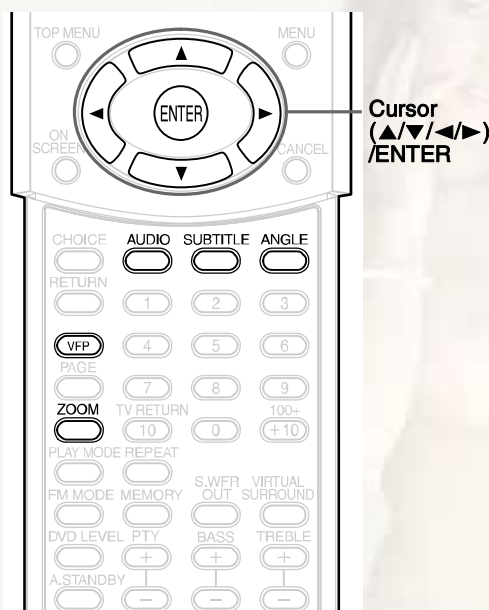
6 Press ENTER at the end point of the part to be repeated (designating B point).

- The icon on the menu bar will be ⏮ A-B .
⏮ will appear blinking on the display window on the main unit and the part between A and B points will be played repeatedly.
- A-B Repeat Playback will be cancelled by carrying out the following operations.
 - Press ■ .
 - Select ⏮ A-B and press ENTER twice.

NOTE

A-B Repeat Playback is possible only within the same title or track. A-B Repeat Playback cannot be carried out during PBC playback, Program Playback, Random Playback and Repeat Playback.

Other convenient functions



Selecting the audio language

DVD VIDEO DVD AUDIO VCD SVCD

1 Press AUDIO during playback of a disc containing several audio languages.

Example: TV screen

- Each time you press the button, the audio language will be alternated. Also, the audio language can be changed by pressing cursor $\blacktriangle/\blacktriangledown$.
- For a language code such as "AA", refer to "Language codes" (page 41).
- "ST", "L" and "R" displayed when playing a VCD or SVCD respectively represent "Stereo", "left sound" and "right sound".

2 Wait for a few seconds or press ENTER.

NOTE

It is possible to operate by using the menu bar (page 28).

Selecting the subtitles

DVD VIDEO SVCD DVD AUDIO

(only for moving image)

1 Press SUBTITLE during playback of a disc containing subtitles in several languages.

Example: TV screen

- Each time you press the button, the subtitle will be alternated between ON/OFF.

2 Press cursor $\blacktriangle/\blacktriangledown$ to select a subtitle language.

- For a language code such as "AA", refer to "Language codes" (page 41).
- The manner of displaying subtitle languages may be different depending on the disc.

3 Wait for a few seconds or press ENTER.

NOTE

- It is possible to operate by using the menu bar (page 28).
- For a SVCD, each time you press SUBTITLE in Step 1, the subtitle type and ON/OFF will be alternated.

Selecting a view angle

DVD VIDEO DVD AUDIO

(only for moving image)

1 Press ANGLE during playback of a scene containing multi-view angles.

Example: TV screen

- Each time you press the button, the angle will be alternated. Also, the angle can be changed by pressing cursor $\blacktriangle/\blacktriangledown$.

2 Wait for a few seconds or press ENTER.

NOTE

It is possible to operate by using the menu bar (page 28).

Enlarging the picture (ZOOM)

DVD VIDEO VCD SVCD JPEG DVD AUDIO

(only for moving image)

1 Press ZOOM during playback or while paused.

- Each time you press the button, the picture magnification will be changed.
- (For a JPEG) You cannot change the picture magnification during slide-show playback.

2 Select the portion you want to see by using cursor $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$.

- To resume normal playback, select "OFF" in Step 1.

3 Press cursor $\blacktriangle/\blacktriangledown$ to select an item to be adjusted.

4 Press ENTER.

Example:

TV screen



5 Press cursor $\blacktriangle/\blacktriangledown$ to change the value.

6 Press ENTER.

To adjust other items, go back to Step 3.

7 Press VFP.

NOTE

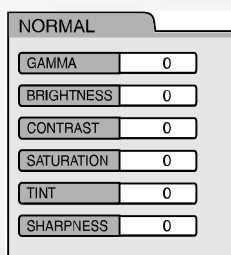
- If no operation is made for several seconds during the procedure, the settings made so far will be automatically stored.
- "VFP" is an abbreviation of "Video Fine Processor".

Adjusting the picture quality (VFP)

DVD VIDEO DVD AUDIO VCD SVCD JPEG

1 Press VFP during playback or while paused.

"VFP SET" will appear on the display window on the main unit and the current setting will be displayed on the TV screen.

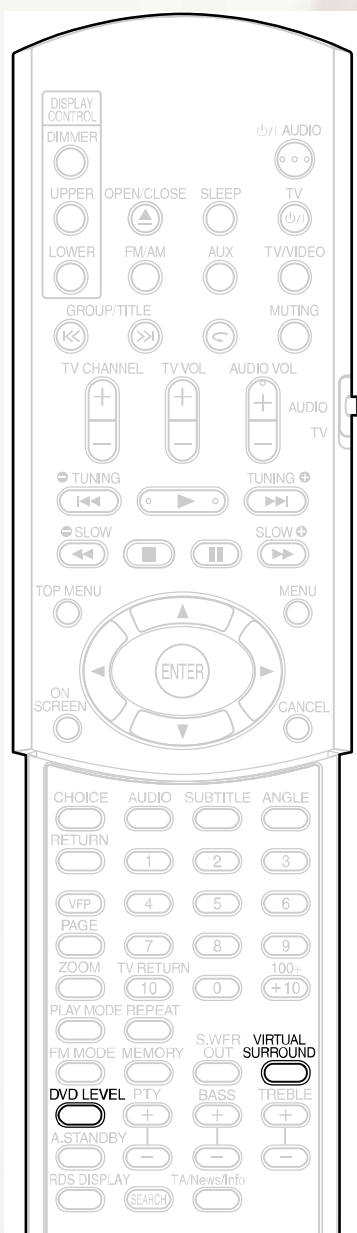


- Gamma: Controls brightness of neutral tints while maintaining brightness of dark and bright portions.
- Sharpness: Controls screen sharpness.

2 Press cursor $\blacktriangleleft/\blacktriangleright$ to select VFP mode.

- It is recommended to select "NORMAL" usually, or "CINEMA" in a dark room. When either "NORMAL" or "CINEMA" is selected, go to Step 7.
- When either "USER 1" or "USER 2" is selected, the adjustment can be carried out in detail in the operations after Step 3.

Other convenient functions (continued)



Creating realistic sound (VIRTUAL SURROUND)

DVD VIDEO **DVD AUDIO** **VCD** **SVCD** **C D** **MP3**

The two speakers produce an effect resembling surround-sound.

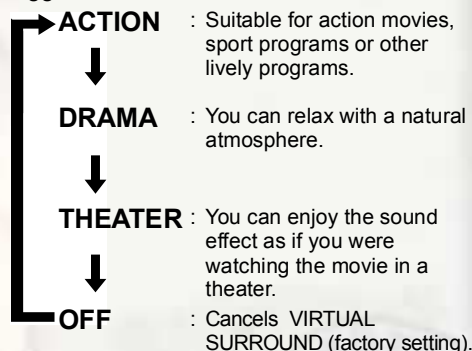
1 Press VIRTUAL SURROUND during playback.

Example:

TV screen

VIRTUAL SURROUND **OFF**

- Each time you press the button, the display toggles as follows.



- While VIRTUAL SURROUND is activated, "SURROUND" appears on the display window.

NOTE

- Virtual Surround is effective for the speakers and headphones.
- When noise is produced or sound is distorted, set VIRTUAL SURROUND to "OFF".
- You cannot operate some types of DVD AUDIO discs.
- "V.SUR." displayed on the display window is an abbreviation of "Virtual Surround".

Adjusting playback level (DVD LEVEL)

DVD VIDEO **DVD AUDIO**

The audio of a DVD VIDEO and DVD AUDIO may be recorded at a lower level (volume) than for other types of disc. If the difference is not to your liking, adjust the DVD Level.

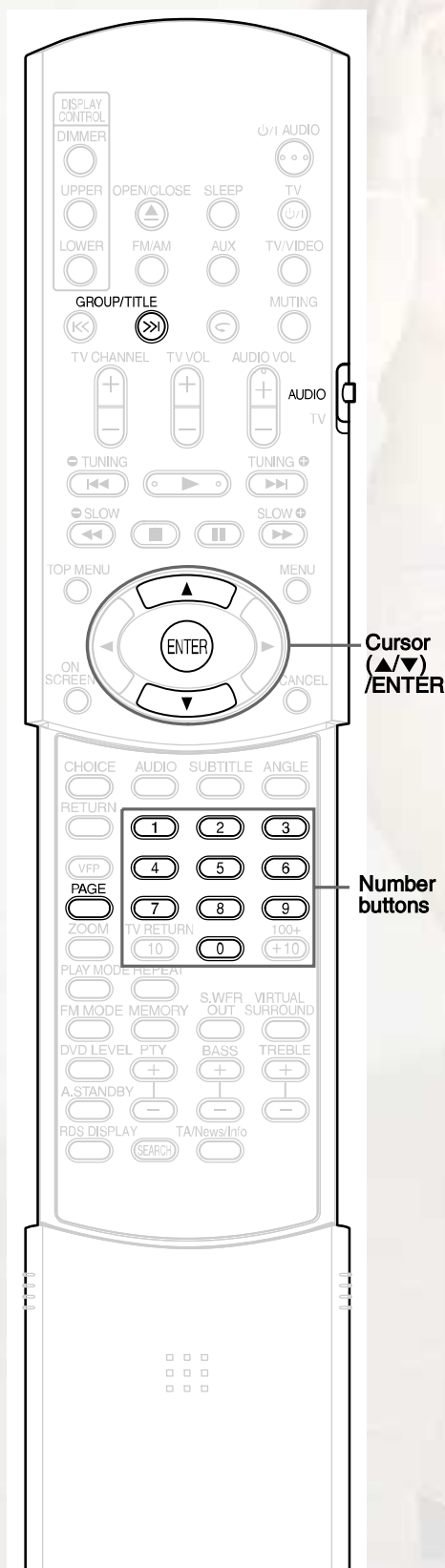
1 Press DVD LEVEL during playback.

- Each time you press the button, the level will be alternated among "NOR" (Normal), "MID" (Middle) and "HIG" (High).
- Select the level while listening to the sound played.

NOTE

- DVD Level is effective only for playback of a DVD.
- Even if the DVD Level is changed, the output level from the digital audio output terminal will not be changed.
- This operation can be carried out while the disc is stopped or paused.

**DVD
AUDIO**



NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



Playing the Bonus Group

There are some DVD AUDIO discs with a special group, called "Bonus Group", recorded.

NOTE

This operation can be carried out when "BONUS" is lit on the display window on the main unit.

1 Press GROUP/TITLE >> repeatedly during playback to select a bonus group.

"KEY_ _ _ _" appears on the TV screen, and on the display window on the main unit.

2 Press the number buttons to enter a pin code (4 digits).

The method of getting a pin code may be different depending on the disc.

3 Press ENTER.

- When a correct pin code is entered, "BONUS" disappears and the playback of the bonus group starts.
- If an incorrect pin code is entered, try entering a correct pin code again.

Browsable Still Pictures (B.S.P.)

There are some DVD AUDIO discs with still pictures recorded. Among the still pictures, there are pictures called B.S.P. (Browsable Still Pictures). With these pictures, it is possible to switch a picture as if turning over pages.

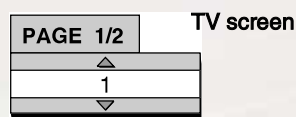
NOTE

This operation can be carried out when "B.S.P." is lit on the display window on the main unit.

1 Press PAGE during playback.

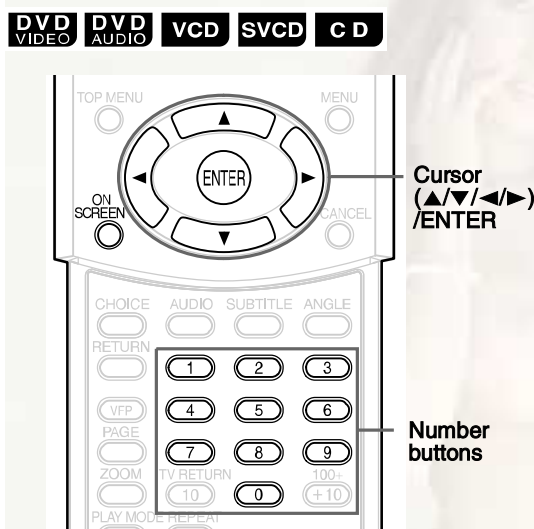
Each time you press the button, the still picture will be switched over. It is also possible to switch the picture using cursor ▲/▼.

Example:



2 Wait for a few seconds or press ENTER.

Using the menu bar



NOTE

- Set the remote control mode selector to **AUDIO** before using the number buttons.
- This operation can be carried out when there is a disc loaded. There are some functions that may not work while the disc is stopped.

1 Press ON SCREEN twice.

"ON SCREEN" will appear on the display window on the main unit. The status bar and the menu bar will appear on the TV screen.



The above is an example for a DVD VIDEO.

2 Press cursor ◀/▶ to select an item to be operated.

3 Press ENTER.

- The selected function can be set. For the setting content, refer to the following "Functions list".
- The currently active function shows blue.
- To delete the menu bar, press **ON SCREEN**.

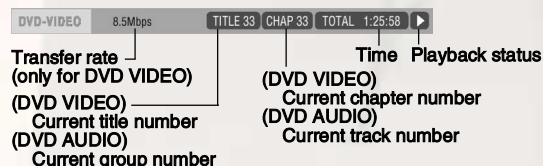
Functions list

For the functions with no special description for the operations, press cursor ▲/▼ to select, and press **ENTER** to determine.

TIME Time display selection	Select this to change time information displayed on the display window on the main unit and the status bar. Each time ENTER is pressed, the display will be alternated. DVD VIDEO/DVD AUDIO (operating during playback) TOTAL : Elapsed playing time of current title/group. T.REM : Remaining time of current title/group TIME : Elapsed playing time of current chapter/track. REM : Remaining time of current chapter/track CD (operating during playback)/VCD/SVCD TIME : Elapsed playing time of current track. REM : Remaining time of current track. TOTAL : Elapsed playing time of disc. T.REM : Remaining time of disc.
Repeat mode	⇨ page 22
Time search	⇨ page 19
CHAP.▶ / TRACK▶ Chapter search (DVD VIDEO)/Track search (DVD AUDIO)	Select a chapter/track. Press the number buttons to input the chapter/track number and press ENTER . Examples: 5: 24: →
Audio language/Audio (DVD VIDEO/DVD AUDIO/VCD/SVCD)	⇨ page 24
Subtitle language (DVD VIDEO/SVCD)	⇨ page 24
1/3 View angle (DVD VIDEO/DVD AUDIO)	⇨ page 24
PAGE -/- Page switch (DVD AUDIO)	Switch the still pictures (B.S.P.) recorded on a DVD AUDIO disc. (⇨ page 27)

Information displayed on the status bar

DVD VIDEO/DVD AUDIO (the example below is for a DVD VIDEO)



VCD/SVCD/CD (the example below is for a CD)



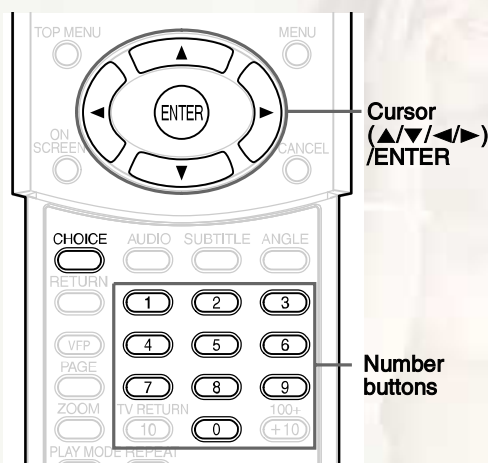
NOTE

The playback status mark has the same meaning of the mark on the On-screen guide (⇨ page 15).

Preferences

Advanced operations

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG



The initial settings of the system can be changed according to the environment the system is used in.

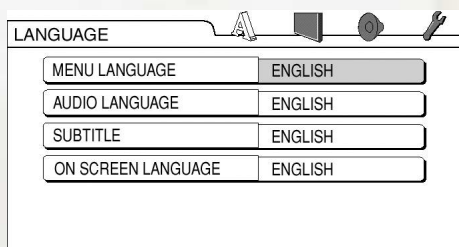
NOTE

- Set the remote control mode selector to **AUDIO** before using the number buttons.
- The top and bottom of the preference screen may not be displayed on a wide TV. Adjust the picture size on the TV.

Basic operations

1 Press CHOICE while the disc is stopped or no disc is loaded ("NO DISC" is displayed).

- "SETTING" will appear on the display window on the main unit and the following screen will be displayed on the TV.



- Proceed with operations by following the description on the TV screen.



LANGUAGE





NOTE

- If the selected language is not recorded on the disc, the optimum language set for the disc will be displayed.
- For a language code such as "AA", refer to the "Language codes" (page 41).

Items	Contents
MENU LANGUAGE	Select the language for the DVD VIDEO menu.
AUDIO LANGUAGE	Select the audio language for the DVD VIDEO.
SUBTITLE	Select the subtitle language for the DVD VIDEO.
ON SCREEN LANGUAGE	Select the language displayed on the preference screens.



PICTURE

Items	Contents (: initial setting)
MONITOR TYPE	<p>Select a display method suitable for your TV.</p> <p>16 : 9 NORMAL: Select this when the aspect ratio of your wide TV is fixed to 16:9 (when playing a DVD VIDEO recorded at 4:3, the system automatically adjusts the screen width of the output signal).</p>  <p>16 : 9 AUTO: Select this when your TV is an ordinary wide TV.</p>  <p>4 : 3 LB (Letter Box) : Select this when the aspect ratio of your TV is conventional 4:3. While viewing a wide screen picture, the black bars appear on the top and bottom of the screen.</p>  <p>4 : 3 PS (Pan Scan): Select this when the aspect ratio of your TV is conventional 4:3. While viewing a wide screen picture, the left and right edges of the picture will not be shown on the screen. (If the disc is not compatible with Pan Scan, the picture will be displayed at the Letter Box ratio.)</p> 
PICTURE SOURCE	<p>Select an item suitable to the video source.</p> <p>AUTO: The video source type (a video or film) is automatically selected.</p> <p>FILM: Select this item when you want to view a film or video recorded with the progressive scan method.</p> <p>VIDEO: Select this item when you want to view a normal video.</p>
SCREEN SAVER	<p>Select the Screen Saver mode between ON / OFF (Screen Saver activates when there is no operation made for about 5 minutes since a still picture was last displayed).</p>
MP3/JPEG	<p>If there are both MP3 and JPEG files on a disc, you can select which files to play. When the preference has been changed, open/close the tray and turn on the power again. (A disc with only one of MP3 file or JPEG file recorded can be played regardless of this preference.)</p>

Preferences (continued)

PICTURE



AUDIO

Items	Contents (: initial setting)
DIGITAL AUDIO OUTPUT	<p>Select an output signal type from the following in accordance with the device connected to the digital audio output terminal (AV amplifier, etc.). (See the list below for the preference items and output signal.)</p> <p>PCM ONLY: Device corresponding only to linear PCM.</p> <p>DOLBY DIGITAL/PCM: Dolby digital decoder or a device having the same function.</p> <p>STREAM/PCM : DTS/Dolby digital decoder or a device having the same function.</p>
DOWN MIX	<p>Switch signal from the digital output terminal of the DVD VIDEO according to the connected device. Select this when Digital Audio Output is set to "PCM ONLY".</p> <p>DOLBY SURROUND : A Dolby Pro Logic decoder-built-in device.</p> <p>STEREO: An ordinary device.</p> <ul style="list-style-type: none"> When Virtual Surround is ON, Down Mix does not work.
D (Dynamic). RANGE COMPRESSION	<p>To make adjustments for the difference between a high volume and a low volume when playing back with low volume (only for a DVD recorded with Dolby digital).</p> <p>AUTO : D. Range Compression automatically works.</p> <p>ON: D. Range Compression always works.</p>



OTHERS

Items	Contents (: initial setting)
RESUME	Select ON /OFF. (page 18)
ON SCREEN GUIDE	Select ON /OFF. (page 15)
AV COMPULINK MODE	This item is currently not used. (This is provided for future use.)
PARENTAL LOCK	<p>Set the Parental Lock function to cut off violent scenes or replace the scenes with others. (This is effective only for discs equipped with the Parental Lock function.)</p> <p>COUNTRY CODE (page 31) Select your country.</p> <p>SET LEVEL: The restriction is stricter as the number becomes smaller. "NONE" is no restriction.</p> <p>PASSWORD (essential): Enter four-digit number as your password using the number buttons (1-9, 0) every time. (Enter "8888" if you forget your password.) The password is required at the time of playback.</p> <ul style="list-style-type: none"> If you enter a wrong password three times, "EXIT" will be automatically selected.

List of relationships of DIGITAL AUDIO OUTPUT preference items and output signal

Playback disc	DIGITAL AUDIO OUTPUT preference		
	STREAM/PCM	DOLBY DIGITAL/PCM	PCM ONLY
48 kHz, 16/20/24 bits Linear PCM DVD VIDEO 96 kHz linear PCM DVD VIDEO	48 kHz, 16 bits stereo linear PCM		
48/96/192 kHz, 16/20/24 bits linear PCM DVD AUDIO	48 kHz, 16 bits stereo linear PCM		
44.1/88.2/176.4k Hz, 16/20/24 bits linear PCM DVD AUDIO	44.1 kHz, 16 bits stereo linear PCM		
DTS DVD VIDEO	DTS bit stream	48 kHz, 16 bits stereo linear PCM	
DOLBY DIGITAL DVD VIDEO/ DVD AUDIO	DOLBY DIGITAL bit stream		48 kHz, 16 bits stereo linear PCM
CD/VCD/SVCD	44.1 kHz, 16 bits stereo linear PCM/48kHz, 16 bits linear PCM		
DTS CD	DTS bit stream	44.1 kHz, 16 bits linear PCM	
MP3 disc	No output		

NOTE

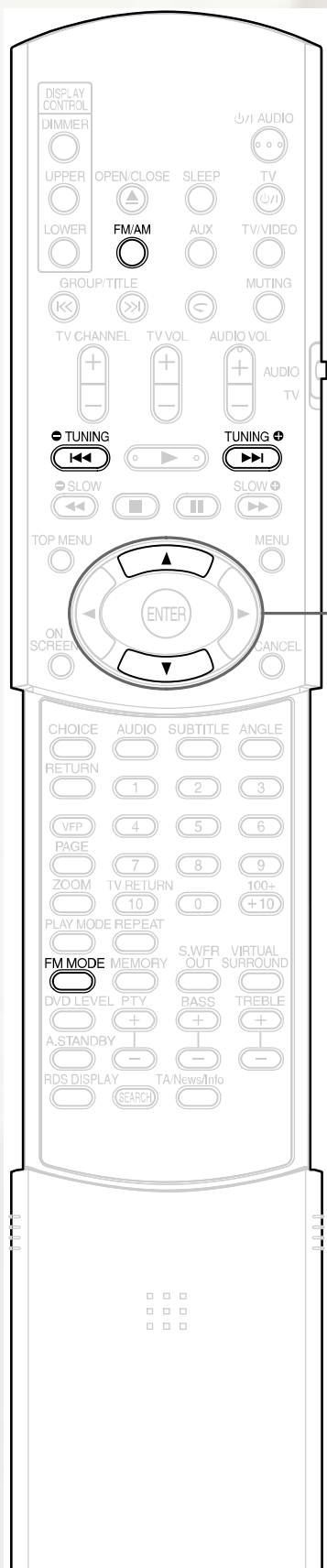
- For a DVD VIDEO without content protection set, there is a 20 bit or 24 bit output at the digital audio output terminal.

Country/Area codes

Advanced operations

AD	Andorra	ES	Spain	LC	Saint Lucia	SD	Sudan
AE	United Arab Emirates	ET	Ethiopia	LI	Liechtenstein	SE	Sweden
AF	Afghanistan	FI	Finland	LK	Sri Lanka	SG	Singapore
AG	Antigua and Barbuda	FJ	Fiji	LR	Liberia	SH	Saint Helena
AI	Anguilla	FK	Falkland Islands (Malvinas)	LS	Lesotho	SI	Slovenia
AL	Albania	FM	Micronesia (Federated States of)	LT	Lithuania	SJ	Svalbard and Jan Mayen
AM	Armenia	FO	Faroe Islands	LU	Luxembourg	SK	Slovakia
AN	Netherlands Antilles	FR	France	LV	Latvia	SL	Sierra Leone
AO	Angola	FX	France, Metropolitan	LY	Libyan Arab Jamahiriya	SM	San Marino
AQ	Antarctica	GA	Gabon	MA	Morocco	SN	Senegal
AR	Argentina	GB	United Kingdom	MC	Monaco	SO	Somalia
AS	American Samoa	GD	Grenada	MD	Moldova, Republic of	SR	Suriname
AT	Austria	GE	Georgia	MG	Madagascar	ST	Sao Tome and Principe
AU	Australia	GF	French Guiana	MH	Marshall Islands	SV	El Salvador
AW	Aruba	GH	Ghana	ML	Mali	SY	Syrian Arab Republic
AZ	Azerbaijan	GI	Gibraltar	MM	Myanmar	SZ	Swaziland
BA	Bosnia and Herzegovina	GL	Greenland	MN	Mongolia	TC	Turks and Caicos Islands
BB	Barbados	GM	Gambia	MO	Macau	TD	Chad
BD	Bangladesh	GN	Guinea	MP	Northern Mariana Islands	TF	French Southern Territories
BE	Belgium	GP	Guadeloupe	MQ	Martinique	TG	Togo
BF	Burkina Faso	GQ	Equatorial Guinea	MR	Mauritania	TH	Thailand
BG	Bulgaria	GR	Greece	MS	Montserrat	TJ	Tajikistan
BH	Bahrain	GS	South Georgia and the South Sandwich Islands	MT	Malta	TK	Tokelau
BI	Burundi	GT	Guatemala	MU	Mauritius	TM	Turkmenistan
BJ	Benin	GU	Guam	MV	Maldives	TN	Tunisia
BM	Bermuda	GW	Guinea-Bissau	MW	Malawi	TO	Tonga
BN	Brunei Darussalam	GY	Guyana	MX	Mexico	TP	East Timor
BO	Bolivia	HK	Hong Kong	MY	Malaysia	TR	Turkey
BR	Brazil	HM	Heard Island and McDonald Islands	MZ	Mozambique	TT	Trinidad and Tobago
BS	Bahamas	HN	Honduras	NA	Namibia	TV	Tuvalu
BT	Bhutan	HR	Croatia	NC	New Caledonia	TW	Taiwan
BV	Bouvet Island	HT	Haiti	NE	Niger	TZ	Tanzania, United Republic of
BW	Botswana	HU	Hungary	NF	Norfolk Island	UA	Ukraine
BY	Belarus	ID	Indonesia	NG	Nigeria	UG	Uganda
BZ	Belize	IE	Ireland	NI	Nicaragua	UM	United States Minor Outlying Islands
CA	Canada	IL	Israel	NL	Netherlands	US	United States
CC	Cocos (Keeling) Islands	IN	India	NO	Norway	UY	Uruguay
CF	Central African Republic	IO	British Indian Ocean Territory	NP	Nepal	UZ	Uzbekistan
CG	Congo	IQ	Iraq	NR	Nauru	VA	Vatican City State (Holy See)
CH	Switzerland	IR	Iran (Islamic Republic of)	NU	Niue	VC	Saint Vincent and the Grenadines
CI	Côte d'Ivoire	IS	Iceland	NZ	New Zealand	VE	Venezuela
CK	Cook Islands	IT	Italy	OM	Oman	VG	Virgin Islands (British)
CL	Chile	JM	Jamaica	PA	Panama	VI	Virgin Islands (U.S.)
CM	Cameroon	JO	Jordan	PE	Peru	VN	Viet Nam
CN	China	JP	Japan	PF	French Polynesia	VU	Vanuatu
CO	Colombia	KE	Kenya	PG	Papua New Guinea	WF	Wallis and Futuna Islands
CR	Costa Rica	KH	Kambodia	PH	Philippines	WS	Samoa
CU	Cuba	KI	Kiribati	PK	Pakistan	YE	Yemen
CV	Cape Verde	KM	Comoros	PL	Poland	YT	Mayotte
CX	Christmas Island	KN	Saint Kitts and Nevis	PM	Saint Pierre and Miquelon	YU	Yugoslavia
CY	Cyprus	KP	Korea, Democratic People's Republic of	PW	Palau	ZA	South Africa
CZ	Czech Republic	KR	Korea, Republic of	PY	Paraguay	ZM	Zambia
DE	Germany	KW	Kuwait	QA	Qatar	ZR	Zaire
DJ	Djibouti	KY	Cayman Islands	RE	Réunion	ZW	Zimbabwe
DK	Denmark	KZ	Kazakhstan	RO	Romania		
DM	Dominica	LA	Lao People's Democratic Republic	RU	Russian Federation		
DO	Dominican Republic	LB	Lebanon	RW	Rwanda		
DZ	Algeria			SA	Saudi Arabia		
EC	Ecuador			SB	Solomon Islands		
EE	Estonia			SC	Seychelles		
EG	Egypt						
EH	Western Sahara						
ER	Eritrea						

Listening to a radio broadcast



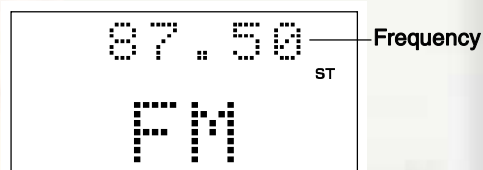
You can tune in to FM or AM.

Selecting a station

1 Press FM/AM.

Each time you press the button, the band will be alternated between FM and AM.

Example:



2 Press TUNING ◀ or TUNING ▶ to select the station (frequency).

Automatic tuning:

Hold down **TUNING ◀** or **TUNING ▶** until the system starts searching, and then release the button.

When a station of sufficient signal strength is tuned in to, the system stops searching automatically.

To stop searching manually, press **TUNING ◀** or **TUNING ▶**.

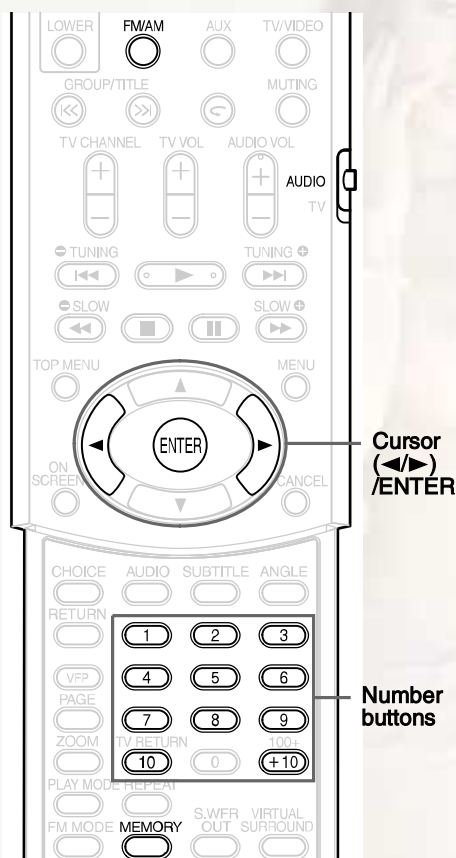
Manual tuning:

Each time you press **TUNING ◀** or **TUNING ▶**, the frequency changes.

- When an FM stereo program is received, the "ST" (Stereo) indicator lights.
- You can also select the station with cursor ▲/▼.

NOTE

*If the stereo FM program currently tuned in to is noisy, you can improve the reception by pressing **FM MODE** to switch to the monaural mode ("MONO" lights). If you press **FM MODE** again, or tune in to another station, the receiving mode returns automatically to the stereo mode.*



Presetting stations in the system allows you to easily tune in to a station.

NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



3 Select the number you want to store by pressing cursor while the memory number is blinking.

- You can also select the number by using the number buttons.
- Refer to "How to use the number buttons" (page 15).

4 Press MEMORY or ENTER while the selected number is blinking.

"SET" will be displayed and the selected station will be stored.

NOTE

Storing a new station to a used number erases the previously stored station.

Tuning in to a preset station

1 Press FM/AM repeatedly to select either FM or AM.

2 Press the number buttons to select the memory number of a station you want to tune in to.

Refer to "How to use the number buttons" (page 15).

You can also select by pressing cursor .

Presetting stations

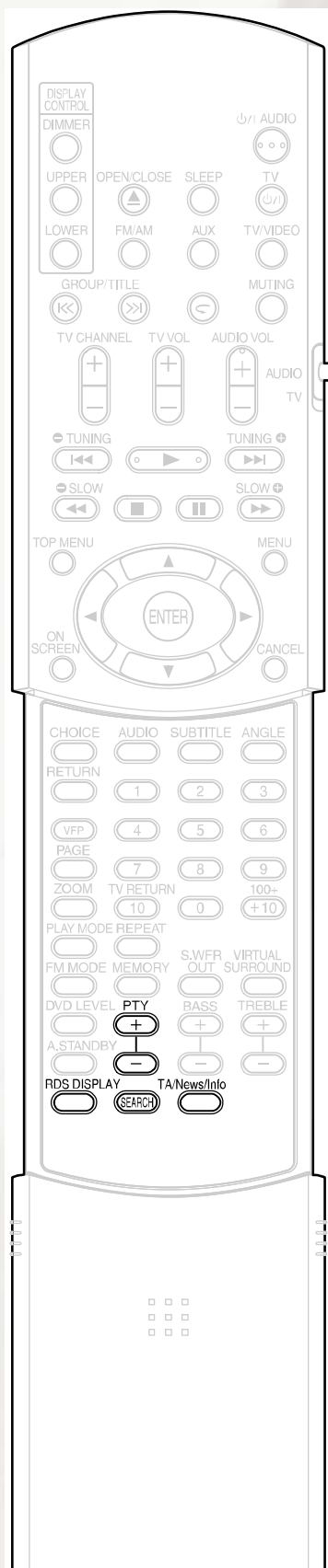
The system stores up to 30 FM stations and up to 15 AM stations.

1 Select a station you want to store (page 32 for how to select).

2 Press MEMORY.

Figures (memory number) blink on the display window for about 5 seconds.

Radio Data System (RDS)



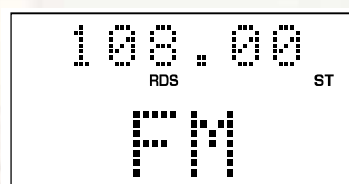
Receiving FM stations with RDS

RDS (Radio Data System) allows FM stations to send an additional signal along with their regular program signals.

For example, the stations send their station names, as well as information about what type of program they broadcast, such as sports or music, etc.

When tuned to an FM station which provides the RDS service, "RDS" appears on the display window on the main unit.

Example:



You can receive the following types of RDS signals.

PS (Program Service):

Shows commonly known station names.

PTY (Program Type):

Shows types of broadcast programs.

RT (Radio Text):

Shows text messages the station sends.

Enhanced Other Networks:

Refer to page 37.

NOTE

RDS may not work correctly if the received station is not transmitting the signals properly or if the signal strength is weak.

Alarm function

If an "Alarm !" (Emergency) signal is received from a station while listening to the FM station with RDS, the system automatically switches to the station broadcasting the "Alarm !" signal, except when you are listening to non-RDS stations (all AM and some FM stations).

Changing the RDS information

You can see RDS information on the display window on the main unit while listening to an FM station.

Press RDS DISPLAY repeatedly while listening to an FM station.

PS (Program Service):

While searching, "WAIT PS" appears and then the station names will be displayed. "NO PS" appears if no signal is sent.

PTY (Program Type):

While searching, "WAIT PTY" appears and then the type of the broadcast program will be displayed. "NO PTY" appears if no signal is sent.

RT (Radio Text):

While searching, "WAIT RT" appears and then text messages the station sends will be displayed. "NO RT" appears if no signal is sent.

NOTE

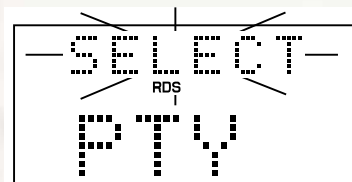
- If the system takes time to show the RDS information received from a station, "PS", "PTY" or "RT" may appear on the display window.
- When PS, PTY, or RT signals appear on the display window, some special characters and marks may not be displayed correctly.

Searching for programs by PTY codes (PTY Search)

One of the advantages of RDS is that you can locate a particular kind of program by specifying the corresponding PTY code.

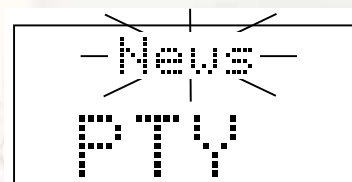
- The PTY Search is applicable only to the preset stations.

- 1 Press SEARCH when the source is FM.**



- 2 Press PTY  or PTY  repeatedly to select a PTY code while "SELECT" is flashing.**

Example: when "News" is selected as a PTY code



- Refer to page 36 for the PTY codes.

- 3 Press SEARCH.**

While searching, "SEARCH" and the selected PTY codes will be displayed.

Example: when "News" is selected as a PTY code



The system searches 30 preset FM stations, and stops when it finds the one you have selected. At this time the selected frequency and PTY code flash. When "SEARCH" is pressed while the selected frequency and PTY code are flashing, the system automatically starts to find the next station. After the frequency and PTY code stop flashing or if any other operation is done, the system automatically tunes in to the station.

To stop searching, press SEARCH.

If no program is found, "NOTFOUND" appears on the display window and the system returns to the last received station.

Radio Data System (RDS) (continued)

PTY codes:

News :	News.
Affairs :	Topical program expanding or enlarging upon the news—debate, or analysis.
Info :	Programs the purpose of which is to impart advice in the widest sense.
Sport :	Programs concerned with any aspect of sports.
Educate :	Educational programs.
Drama :	All radio plays and serials.
Culture :	Programs concerning any aspect of national or regional culture, including language, theater, etc.
Science :	Programs about natural sciences and technology.
Varied :	Used for mainly speech-based programs such as quizzes, panel games and personality interviews.
Pop M :	Commercial music of current popular appeal.
Rock M :	Rock music.
Easy M :	Current contemporary music considered to be “easy-listening”.
Light M :	Instrumental music, and vocal or choral works.
Classics :	Performances of major orchestral works, symphonies, chamber music, etc.
Other M :	Music not fitting into any of the other categories.
Weather :	Weather reports and forecasts.

Finance :	Stock market reports, commerce, trading, etc.
Children :	Programs targeted at a young audience.
Social :	Programs about sociology, history, geography, psychology and society.
Religion :	Religious programs.
Phone In :	Involving members of the public expressing their views either by phone or at a public forum.
Travel :	Travel information.
Leisure :	Programs about recreational activities.
Jazz :	Jazz music.
Country :	Songs which originate from, or continue the musical tradition of the American Southern States.
Nation M :	Current popular music of the nation or region in that country’s language.
Oldies :	Music from the so-called “golden age” of popular music.
Folk M :	Music which has its roots in the musical culture of a particular nation.
Document :	Programs concerning factual matters, presented in an investigative style.
TEST :	Broadcasts for testing emergency broadcast equipment or receiver.
Alarm ! :	Emergency announcement.

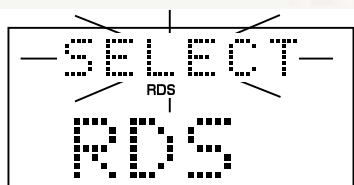
Classification of the PTY codes for some FM stations may be different from the above list.

Switching to a program type of your choice temporarily

The Enhanced Other Networks function allows the system to switch temporarily to a broadcast program of your choice (TA, News, or Info) from a different station when you are listening to a RDS station.

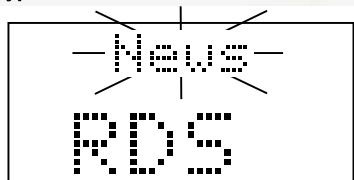
- Enhanced Other Networks function is applicable only to the preset stations.

1 Press TA/News/Info while listening to an FM station with RDS.



2 While "SELECT" is flashing, press **PTY** (+) or **PTY** (-) repeatedly to select the Enhanced Other Networks data type you want.

Example: when "News" is selected as the data type



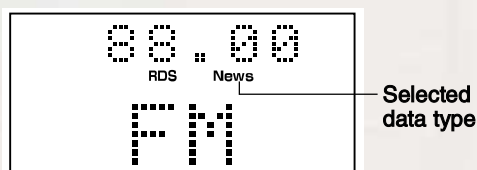
TA: Traffic announcement

News: News

Info: Programs the purpose of which is to impart advice in the widest sense.

OFF: The Enhanced Other Networks function is canceled.

3 While the data type is flashing, press TA/News/Info.



Now, this function is activated.

How the Enhanced Other Networks function actually works:

CASE 1

If there is no station broadcasting the program you have selected:

The system continues tuning in to the current station.



When a station starts broadcasting the program you have selected, the system automatically switches to the station. The data type starts flashing on the display window.



When the program is over, the system goes back to the previously tuned station, but the Enhanced Other Networks function still remains activated.

CASE 2

If there is a station broadcasting the program you have selected:

The system tunes in to the program. The data type starts flashing on the display window.



When the program is over, the system goes back to the previously tuned station, but the Enhanced Other Networks function still remains activated.

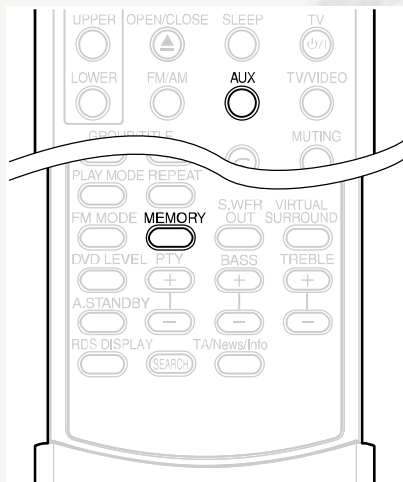
To cancel the Enhanced Other Networks function, select "OFF" in Step 2.

- The Enhanced Other Networks function will also be canceled when you change the source or when you turn off the main unit.

NOTE

- The Enhanced Other Networks data sent from some stations may not be compatible with this system.
- While listening to a program tuned in to by the Enhanced Other Networks function, the station does not change even if another network station starts broadcasting a program of the same Enhanced Other Networks data.
- If the stations alternate intermittently between the station tuned in to by the Enhanced Other Networks function and the currently tuned station, press TA/News/Info to cancel the Enhanced Other Networks function.

Listening to the sound of other audio device




Connect the other audio device to this system in advance (➡ page 10).

- 1 Press AUX.**
The source changes to AUX.
- 2 Play the other audio device.**
For details, refer to the manual of the device connected.
- 3 Adjust the volume and the sound quality of the system**
(➡ page 16).

Adjust the sound input level of the audio device

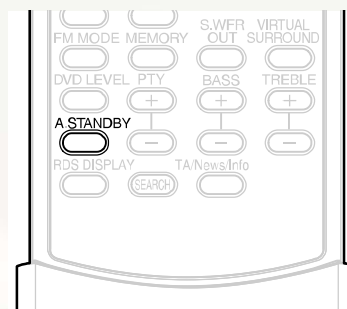
You can adjust the sound input level of another audio device connected to the AUX jack.

- 1 Press AUX.**
The source changes to AUX.
- 2 Hold down MEMORY until an input level is displayed.**
Each time you hold down the button, it switches as follows:
LEVEL 1: Select this normally.

LEVEL 2: Select this when the input level from the other device is too high and the sound is distorted.

The initial setting is "LEVEL1".

Auto Standby

DVD VIDEO DVD AUDIO VCD SVCD C D MP3 JPEG



If there is no operation for 3 minutes while the disc is stopped, the power will be automatically turned off.

- 1 Press A.STANDBY during playback or while the disc is stopped, or no disc is loaded ("NO DISC" is displayed).**

"A.S.ON" (Auto Standby On) and "A.STANDBY" will be lit on the display window on the main unit.

When a stopped state is entered (after playback is finished, for example), "A.STANDBY" starts blinking.

This means that the power will be turned off automatically if there is no operation for 3 minutes. And, 20 seconds before the power is turned off, "POWER OFF" will appear blinking.

Releasing Auto Standby

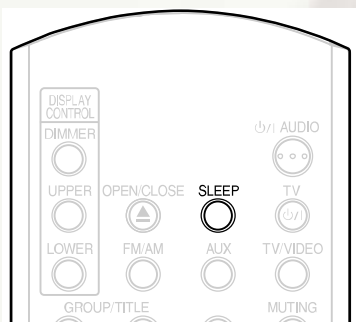
Press **A.STANDBY**.

"A.S.OFF" (Auto Standby Off) will appear and "A.STANDBY" will be turned off on the display window on the main unit.

NOTE

When the source is FM/AM or AUX, Auto Standby does not work.

Sleep Timer

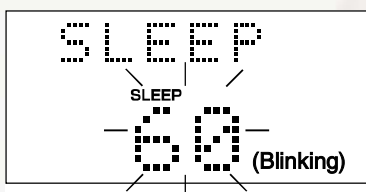


When the time you specify elapses, the system will be turned off by itself.

Press SLEEP.

Each time you press the button, the time indicated on the display window on the main unit changes (in minutes).

Example: When Sleep Timer is set to 60 minutes



Sleep Timer will be automatically set in a few seconds, and the indication will disappear.

NOTE

When Sleep Timer is set, the display window darkens automatically.

Changing the time

Reselect the time by pressing **SLEEP** repeatedly.

Confirming the time

Press **SLEEP** once while Sleep Timer is set.

Releasing

Press **SLEEP** repeatedly until "OFF" appears.

NOTE

Sleep Timer will also be released when the power is turned off.

Tray Lock

You can lock the disc tray to prevent the disc from being ejected.

Setting

Turn off the power. And while holding down ■(Stop) on the main unit, press ▲(Open/Close).

"LOCKED" appears on the display window on the main unit.

Releasing

Carry out the same operations as those for setting. "UNLOCKED" appears on the display window on the main unit.

Troubleshooting

When you encounter a problem that seems to be a fault, check the following points before contacting your JVC service center:

Power source

- **Power does not come on.**
 - The power cord is not connected to the main unit or an AC outlet.
→ Connect the power cord correctly. (☞ page 11)

Operation

- **You cannot operate any button.**
 - Some specific operations may be inhibited for some discs.
- **The remote control does not work.**
 - The dry-cell batteries have run out.
→ Replace the batteries. (☞ page 6)
- **A disc cannot be played back.**
 - In the case of DVD VIDEO discs
→ Check the Region Code number of the disc. (☞ page 3)
 - "PLAYABLE Err" is displayed on the display window.
It is not a disc that can be played on this system.
→ Check the disc type. (☞ page 3)
 - Parental Lock is set. (☞ page 30)

About images

- **No picture appears.**
 - The SCART cable is not connected correctly.
→ ☞ page 11
- **The picture is distorted.**
 - A VCR is connected between the main unit and the TV set.
→ Connect the main unit directly to the TV set. (☞ page 11)
- **The screen size is abnormal.**
 - The screen size is set improperly.
→ Set "MONITOR TYPE" according to the TV set you are using. (☞ page 29)

- **The TV screen darkens.**
 - "SCREEN SAVER" is set.
→ If set, press any button. (☞ page 29)

About sound

- **There is no sound.**
 - Speakers are not connected correctly.
→ ☞ page 9
 - The sound is muted.
→ ☞ page 16
 - "NO AUDIO" is displayed on the display window.
The disc may have been produced through illegal copying.
→ Confirm at the store where you bought the disc.
- **The sound is weak compared with TV or Video.**
 - "DVD LEVEL" is set to "NOR".
→ Set to other than "NOR". (☞ page 26)
- **The sound is distorted.**
 - The volume is turned up too high.
→ Turn down the volume. (☞ page 16)
- **No sound comes out of the subwoofer.**
 - "SUB WFR" is turned off.
→ Press **S.WFR OUT** to turn on. (☞ page 10)

About radio

- **The sound is noisy while receiving./Receiving is disabled.**
 - The antenna is not connected correctly.
→ Connect the antenna correctly. (☞ page 8)

Language codes

Others

- **It is not possible to switch audio or subtitles between languages.**
 - The disc does not contain 2 or more languages.
 - If only a single language is recorded on the disc, switching to another language is impossible. (☞ page 24)
- **No subtitle is displayed.**
 - The disc does not contain any subtitles.
 - A DVD VIDEO without subtitles cannot display any subtitles.
 - The subtitle language is set to "OFF".
 - Specify a language. (☞ page 29)
 - Before or after A point or B point in A-B Repeat Playback, no subtitle may be displayed.
- **The disc cannot be ejected.**
 - Tray Lock is set.
 - ☞ page 39
- **"LR ONLY" is displayed on the display window (for a DVD AUDIO).**
 - Because, for the track being played back, down mix is inhibited for multi-channel sound, the sound of L and R is output directly (a normal action).

If the system does not work properly despite correction measures above

Many functions of this system are implemented by microcomputers. If pressing any button does not result in the normal action, disconnect the power plug from the outlet, wait for a while, and reconnect the system.

Code	Language	Code	Language
AA	Afar	MK	Macedonian
AB	Abkhazian	ML	Malayalam
AF	Afrikaans	MN	Mongolian
AM	Ameharic	MO	Moldavian
AR	Arabic	MR	Marathi
AS	Assamese	MS	Malay (MAY)
AY	Aymara	MT	Maltese
AZ	Azerbaijani	MY	Burmese
BA	Bashkir	NA	Nauru
BE	Byelorussian	NE	Nepali
BG	Bulgarian	NL	Dutch
BH	Bihari	NO	Norwegian
BI	Bislama	OC	Occitan
BN	Bengali, Bangla	OM	(Afan) Oromo
BO	Tibetan	OR	Oriya
BR	Breton	PA	Panjabi
CA	Catalan	PL	Polish
CO	Corsican	PS	Pashto, Pushto
CS	Czech	PT	Portuguese
CY	Welsh	QU	Quechua
DA	Danish	RM	Rhaeto-Romance
DZ	Bhutani	RN	Kirundi
EL	Greek	RO	Rumanian
EO	Esperanto	RU	Russian
ET	Estonian	RW	Kinyarwanda
EU	Basque	SA	Sanskrit
FA	Persian	SD	Sindhi
FI	Finnish	SG	Sangho
FJ	Fiji	SH	Serbo-Croatian
FO	Faroese	SI	Singhalese
FY	Frisian	SK	Slovak
GA	Irish	SL	Slovenian
GD	Scots Gaelic	SM	Samoan
GL	Galician	SN	Shona
GN	Guarani	SO	Somali
GU	Gujarati	SQ	Albanian
HA	Hausa	SR	Serbian
HI	Hindi	SS	Siswati
HR	Croatian	ST	Sesotho
HU	Hungarian	SU	Sundanese
HY	Armenian	SV	Swedish
IA	Interlingua	SW	Swahili
IE	Interlingue	TA	Tamil
IK	Inupiak	TE	Telugu
IN	Indonesian	TG	Tajik
IS	Icelandic	TH	Thai
IW	Hebrew	TI	Tigrinya
JI	Yiddish	TK	Turkmen
JW	Javanese	TL	Tagalog
KA	Georgian	TN	Setswana
KK	Kazakh	TO	Tonga
KL	Greenlandic	TR	Turkish
KM	Cambodian	TS	Tsonga
KN	Kannada	TT	Tatar
KO	Korean (KOR)	TW	Twi
KS	Kashmiri	UK	Ukrainian
KU	Kurdish	UR	Urdu
KY	Kirghiz	UZ	Uzbek
LA	Latin	VI	Vietnamese
LN	Lingala	VO	Volapuk
LO	Laothian	WO	Wolof
LT	Lithuanian	XH	Xhosa
LV	Latvian, Lettish	YO	Yoruba
MG	Malagasy	ZU	Zulu
MI	Maori		

Specifications

General

Power source: AC 230 V~, 50 Hz
Power consumption: 24 W (in operation)
1.1 W (on standby)
Weight: 3.0 kg
External dimensions
(W × H × D): 232 mm × 100 mm × 269 mm

DVD player

Playable discs: DVD VIDEO, DVD AUDIO, VCD,
Super VCD, CD, CD-R/RW (CD,
VCD, MP3, JPEG format), DVD-R/
RW (video format)

Video output

Color system: PAL
Horizontal resolution: 500 lines
SCART connector × 1

Audio output

Analog sound output:
Speakers × 2
Output power
(IEC 268-3): 60 W (30W + 30 W)
at 4 Ω (10% THD)
Fitting impedance: 4 Ω to 16 Ω
Headphones × 1: 11 mW/32 Ω
Fitting impedance: 16 Ω to 1 kΩ
Subwoofer × 1: 500 mVrms/10 kΩ
Digital sound output:
Optical × 1: -21 dBm to -15 dBm

Other output

AV COMPU LINK × 2 (ø3.5)

Audio input

Sound input: AUX × 1
Level 1: 250 mV/50 kΩ
Level 2: 500 mV/50 kΩ

Tuner

FM tuner:
Receiving frequency: 87.50 MHz to 108.00 MHz
Antenna: 75 Ω- unbalanced type

AM tuner:
Receiving frequency: 522 kHz to 1629 kHz
Antenna: External antenna jack (loop
antenna)

Speaker

Type: 1-way bass-reflex type
Magnetically shielded type
8 cm cone × 1
Speaker:
Power handling capacity: 30 W
Impedance: 4 Ω
Sound pressure level: 81 dB/W·m
Dimension (W × H × D): 120 mm × 161 mm × 239 mm
Weight (1 unit): 1.6 kg

Designs and Specifications are subject to change
without notice.

JVC

JVC

SCHEMATIC DIAGRAMS

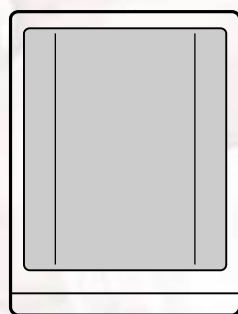
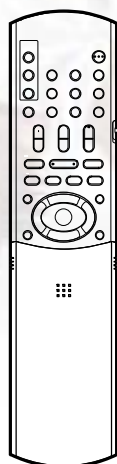
COMPACT COMPONENT SYSTEM

EX-A1

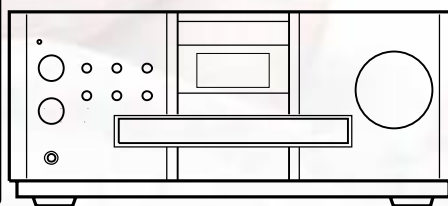
CD-ROM No.SML200501

Area suffix

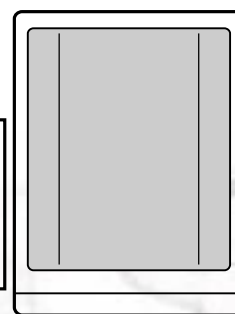
A	-----	Australia
B	-----	U.K.
E	-----	Continental Europe
EN	-----	Northern Europe
EV	-----	Eastern Europe
EE	-----	Russian Federation



(SP-EXA1)



(CA-EXA1)



(SP-EXA1)

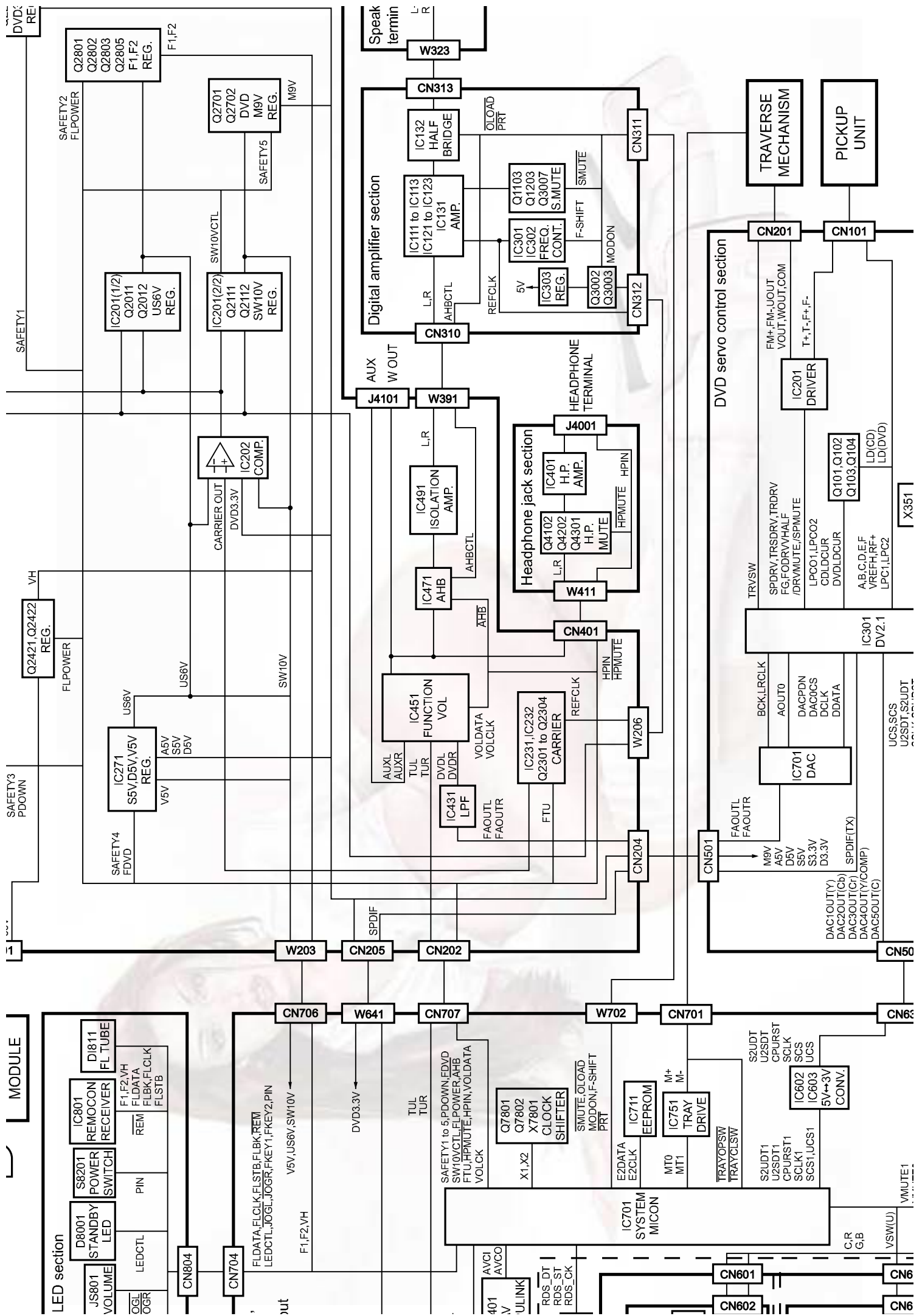


Contents

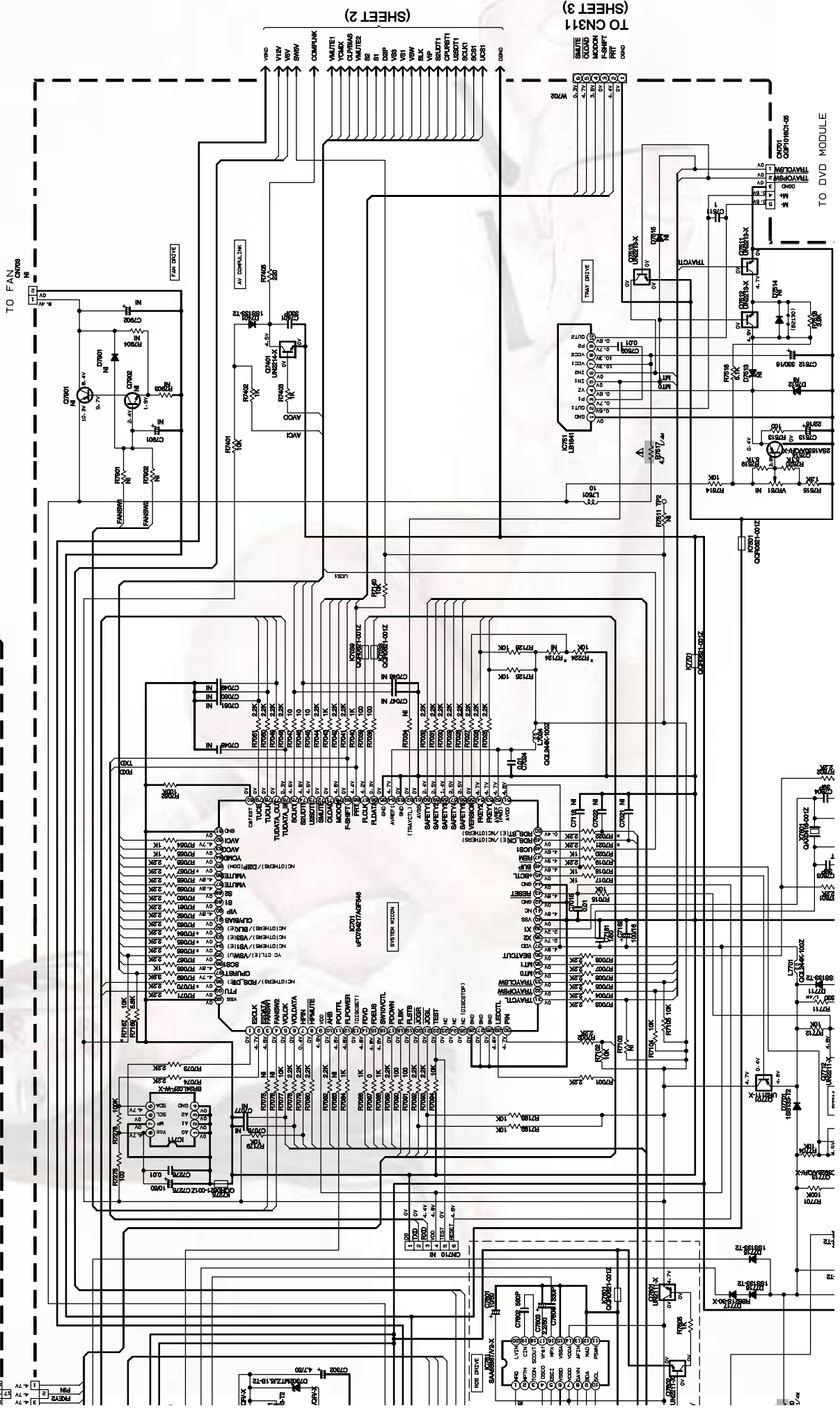
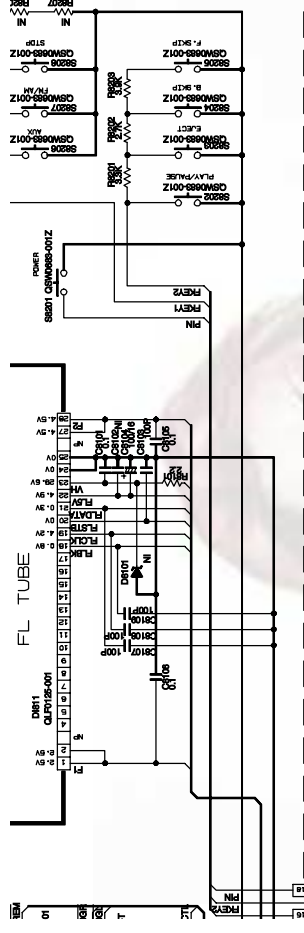
Block diagram	— — — — —	2-1
Standard schematic diagrams	— — — — —	2-2
Printed circuit boards	— — — — —	2-9 to 13

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 "A" mark nearby are critical for safety.





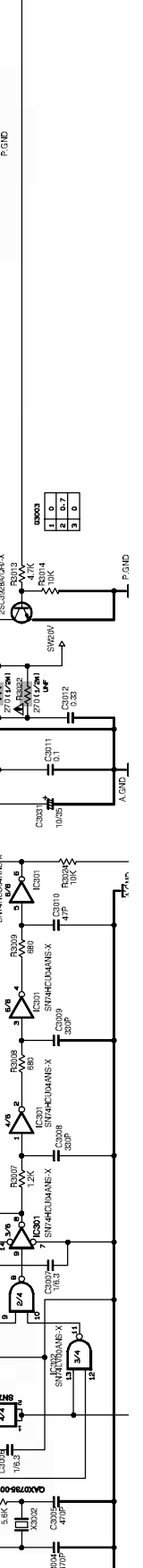
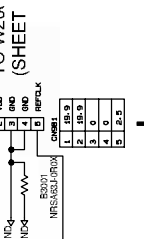
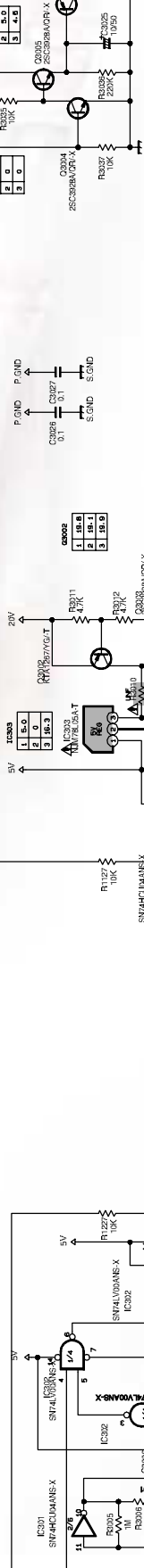
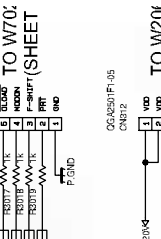
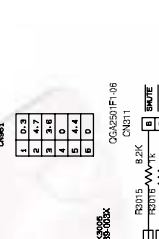
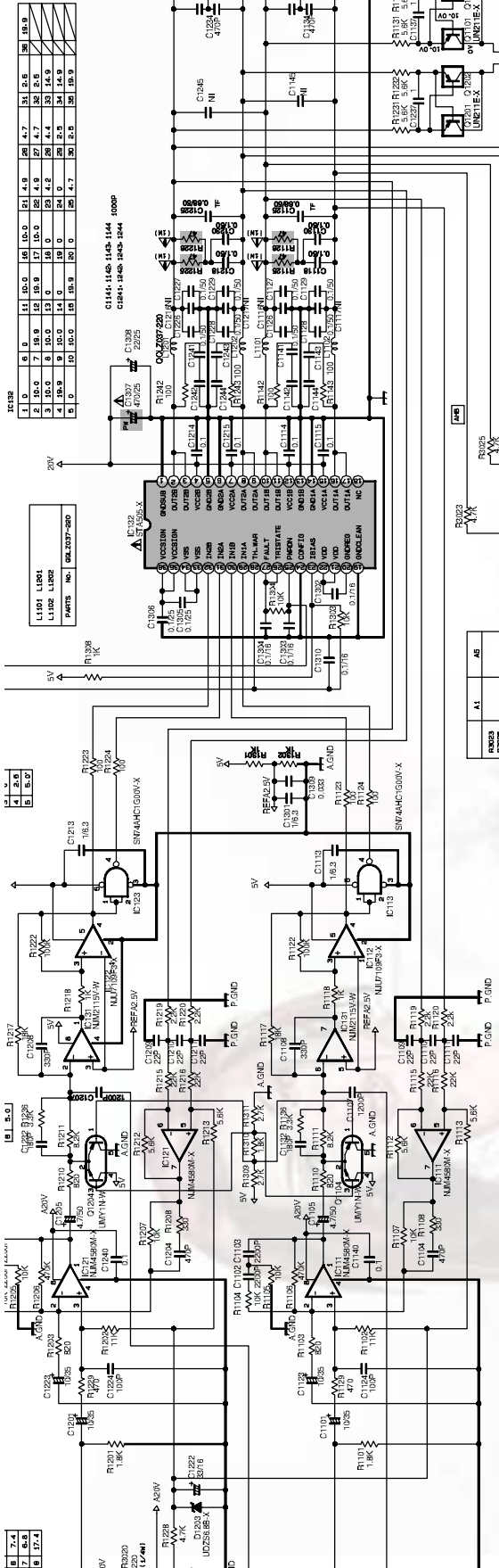
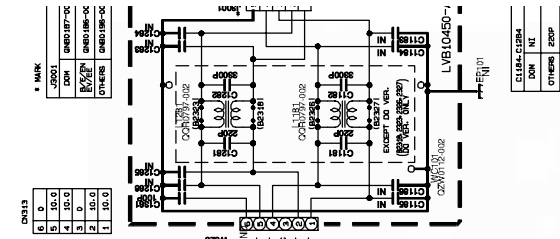
FL TUBE

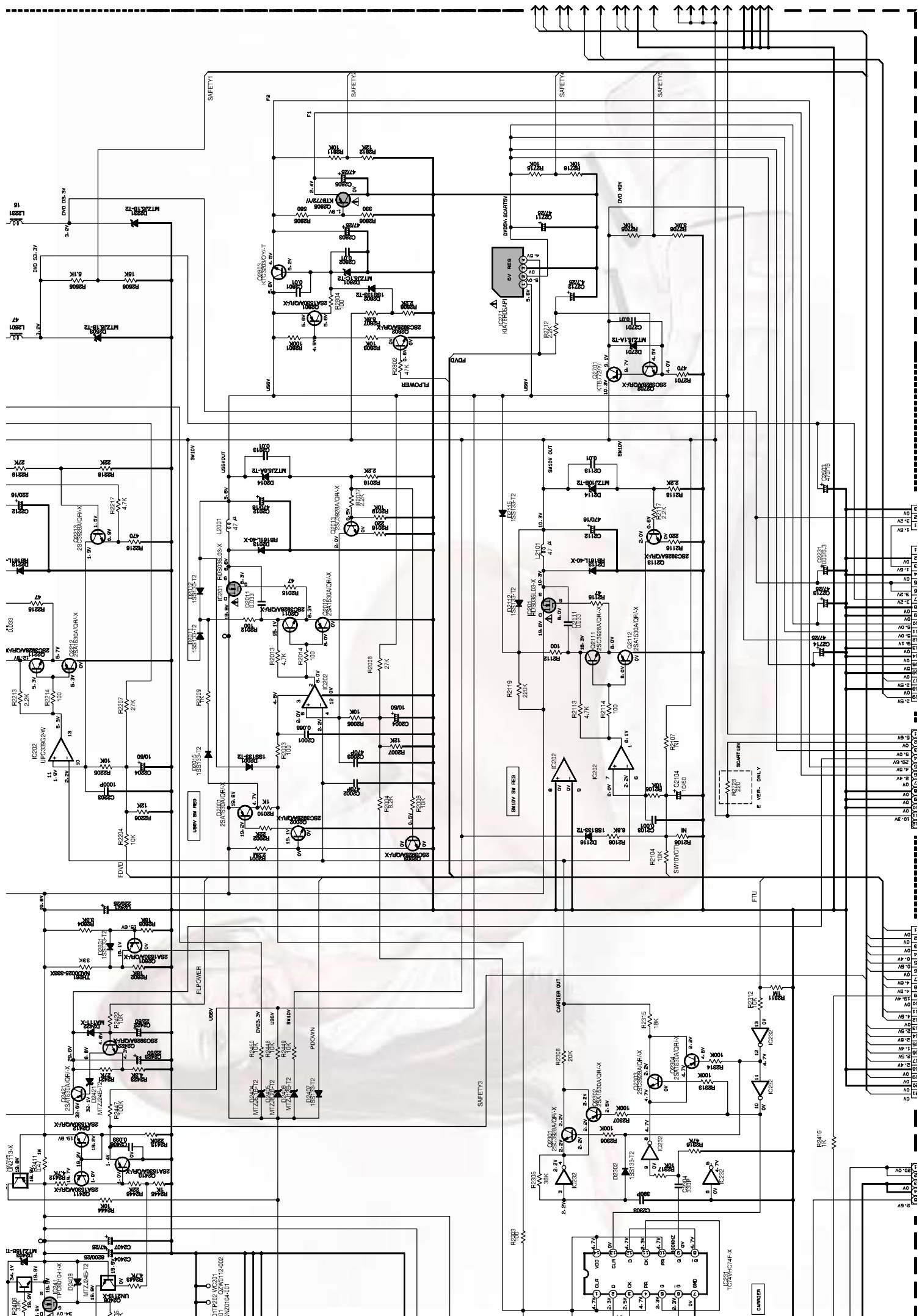


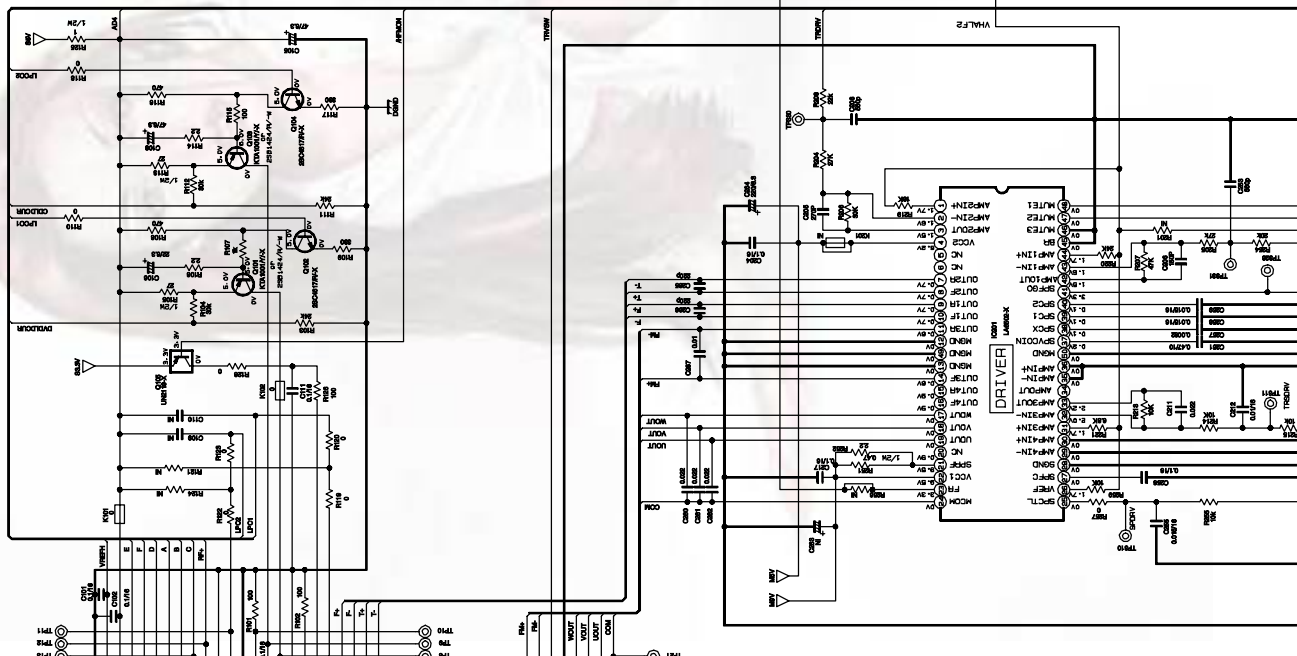
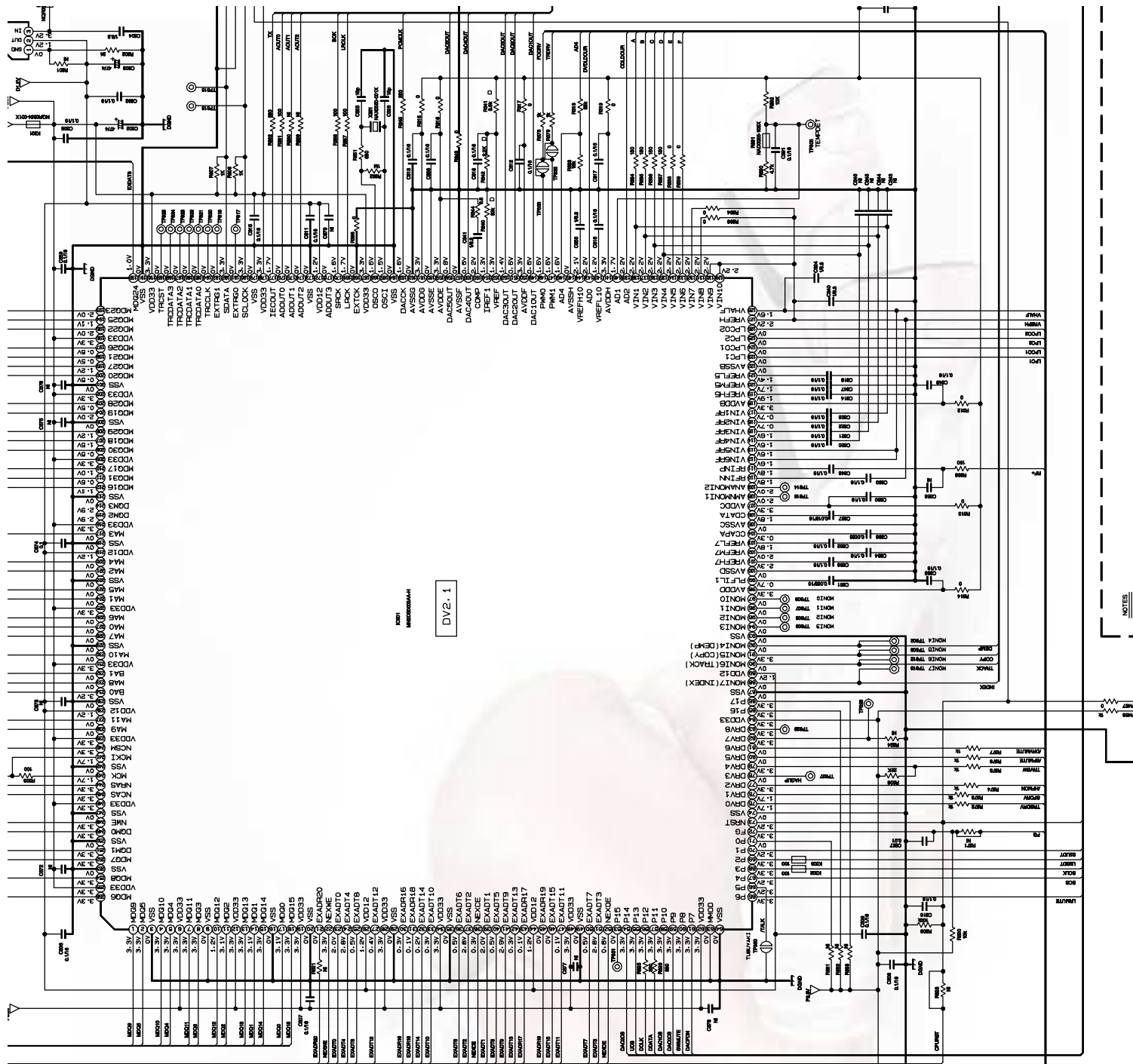
TO DVD MODULE

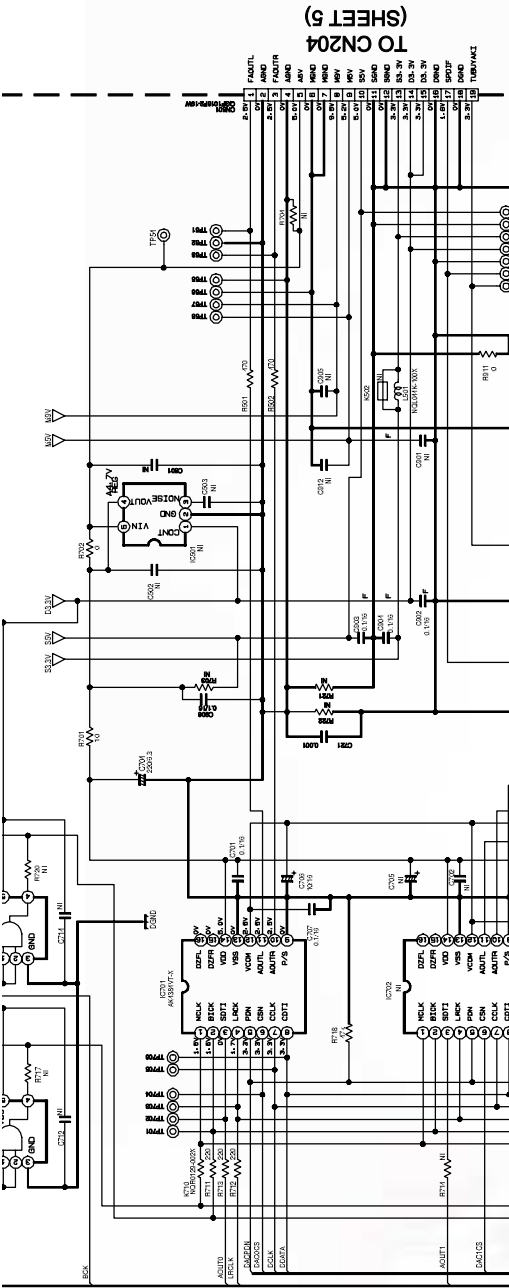
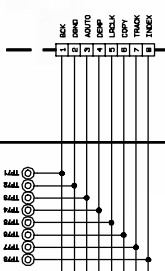
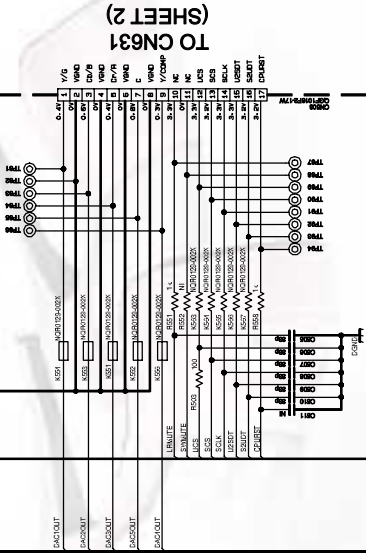
TO CN311 (SHEET 3)

(SHEET 2)

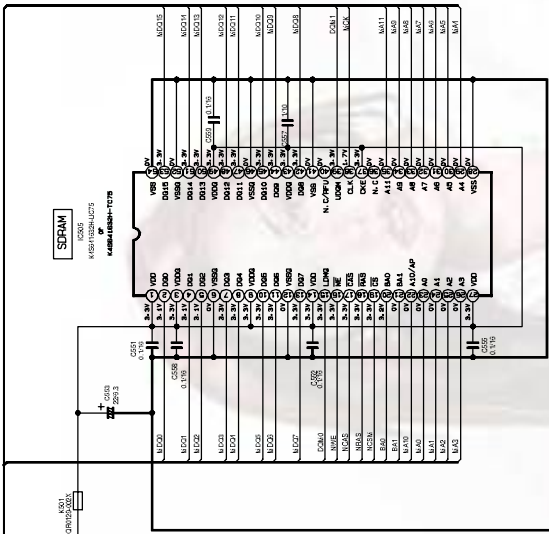
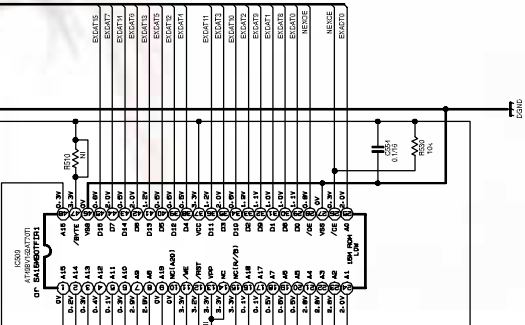




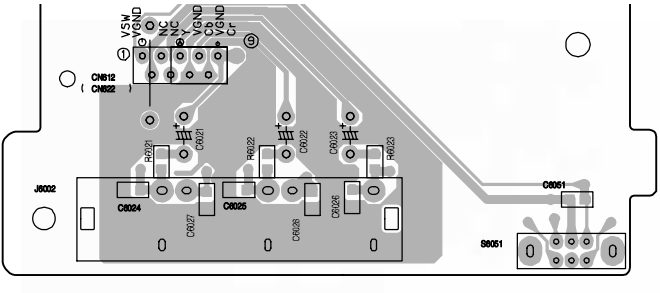




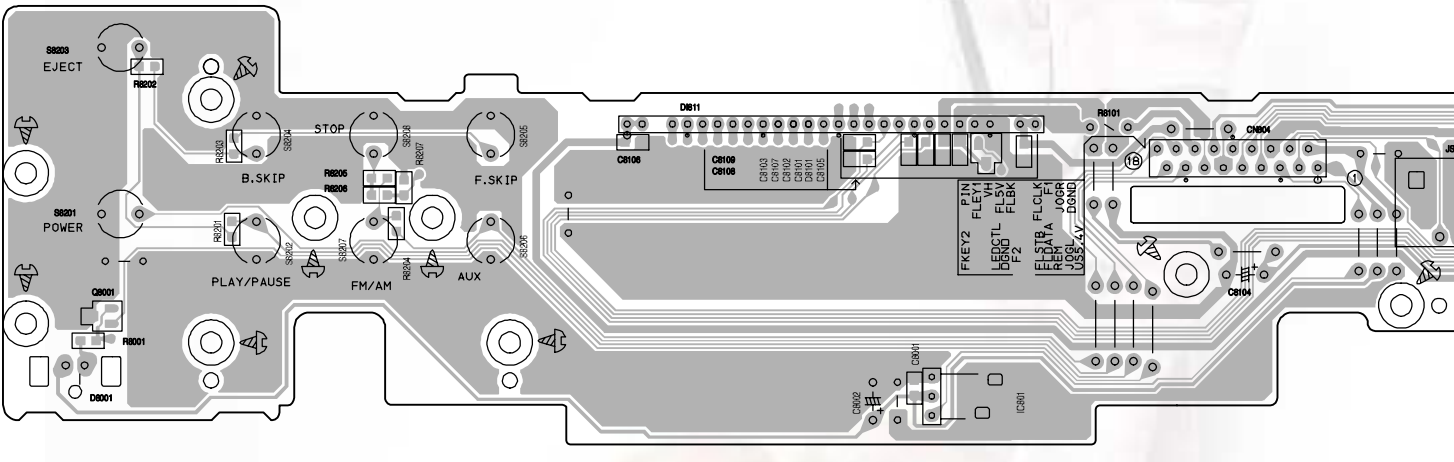
FLASH ROM



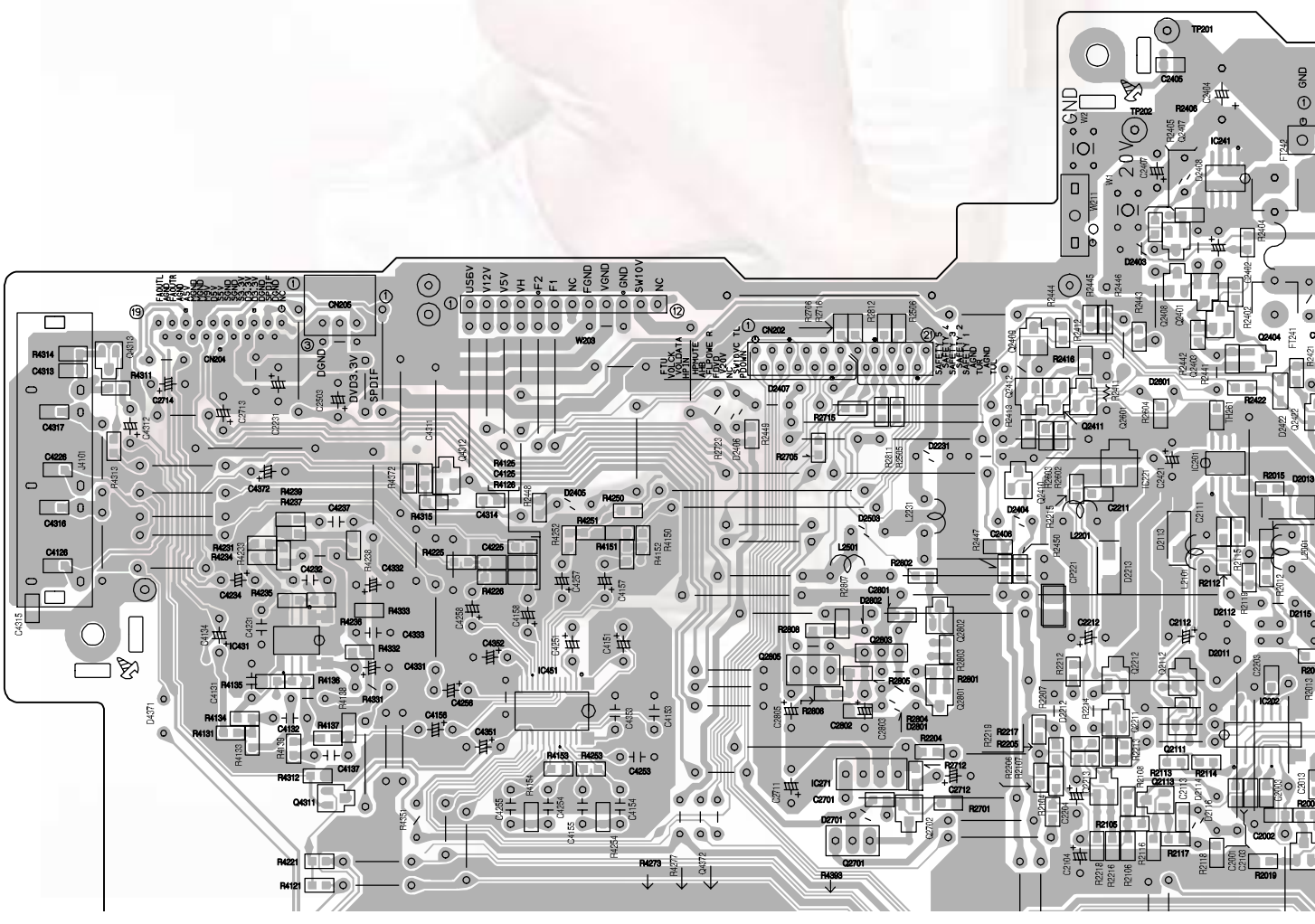
(Component video terminal)
[For A version]



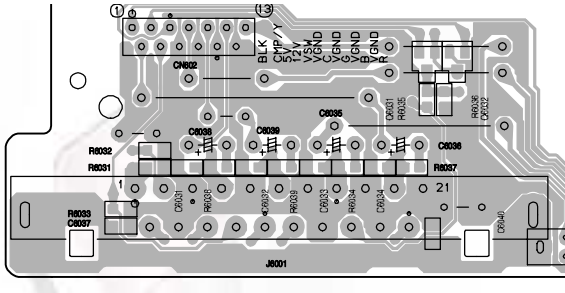
(Unit board)

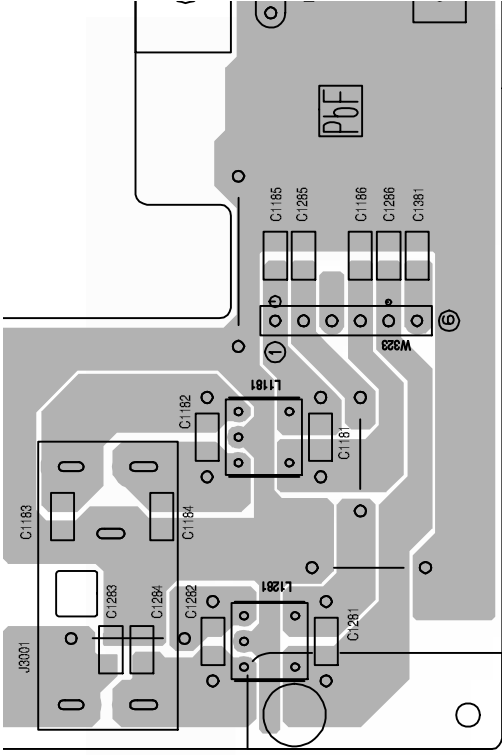
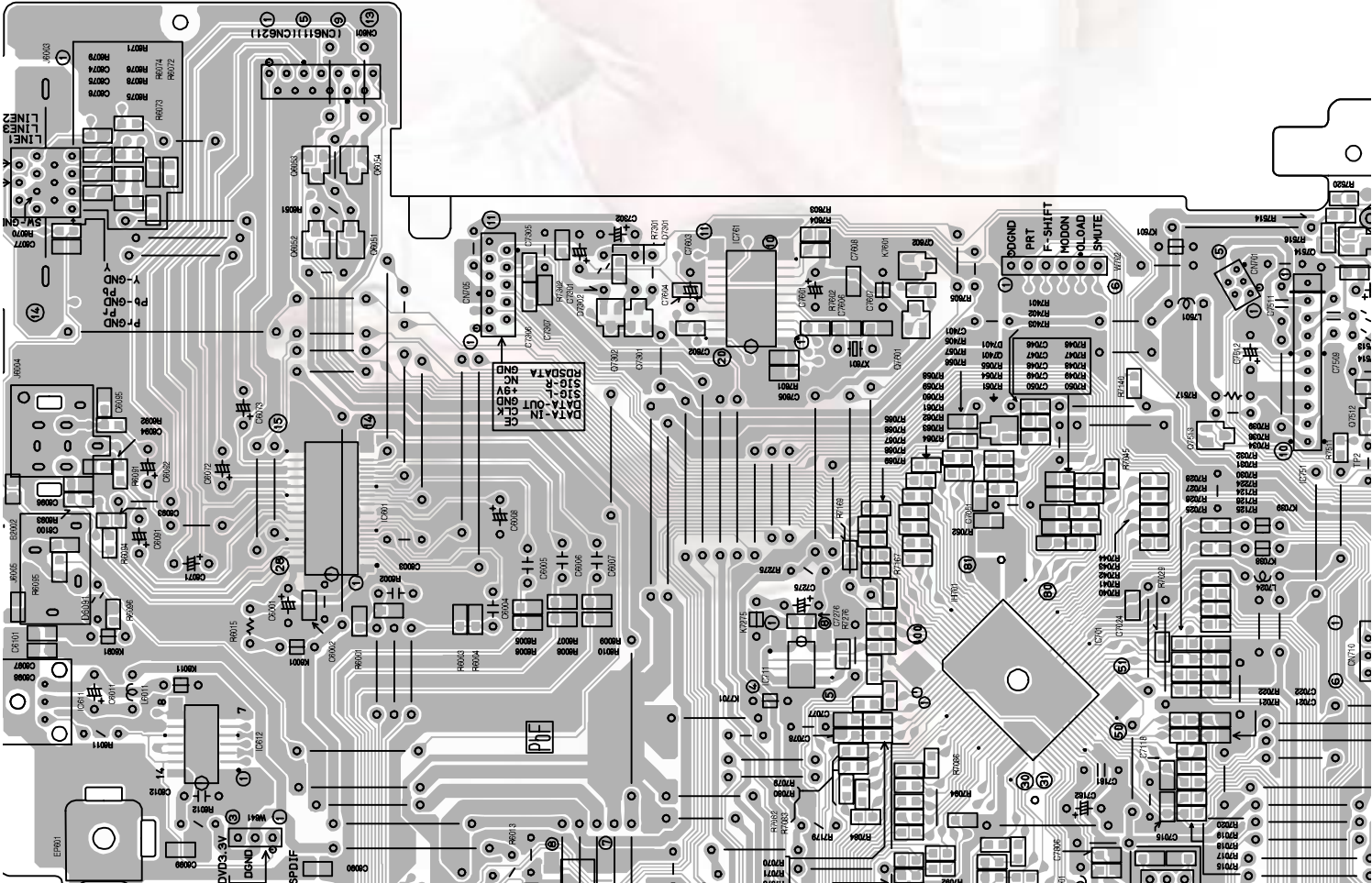


(Main board)

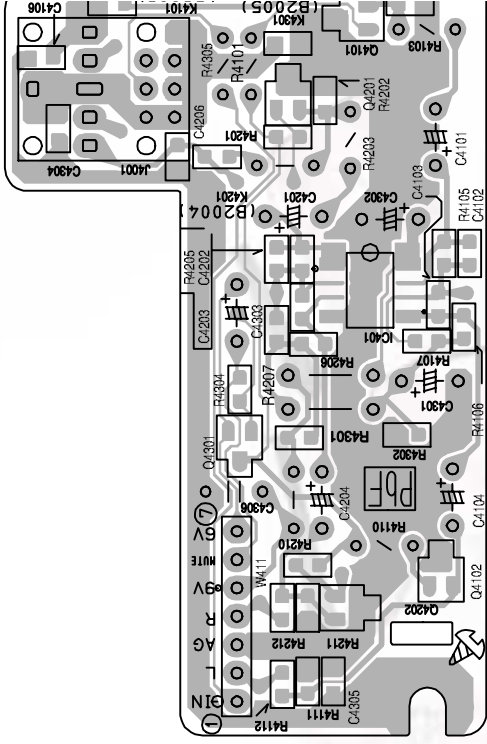


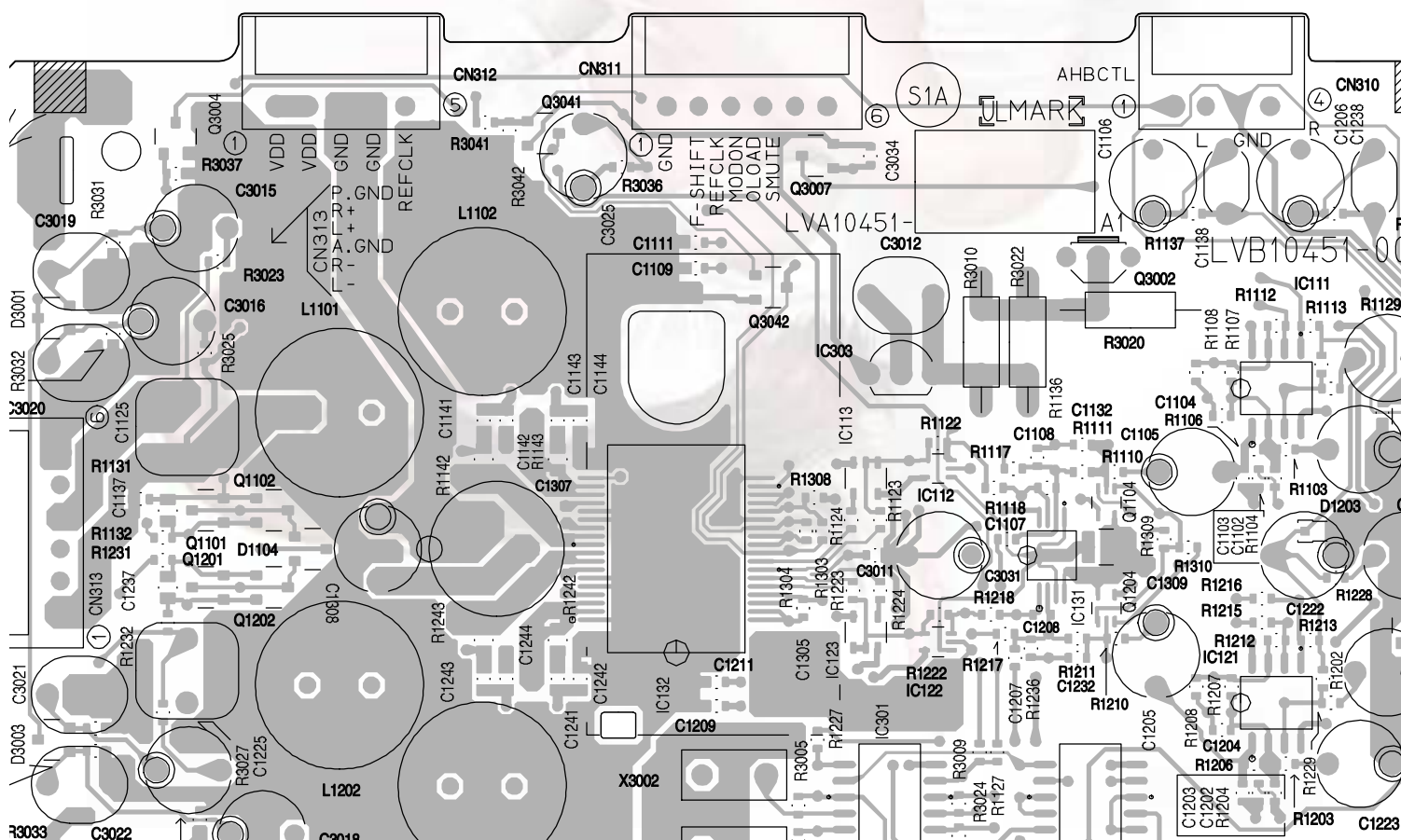
(Scart terminal board)
[For B/E/EN/EE version]



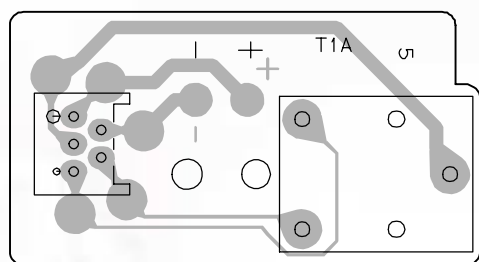


(Headphone board)





■ Switch board





JVC

Victor Company of Japan, Limited
V & MULTIMEDIA COMPANY AUDIO/VIDEO SYSTEMS CATEGORY 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

No.MB349SCH)

PARTS LIST

[EX-A1]

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

Area suffix

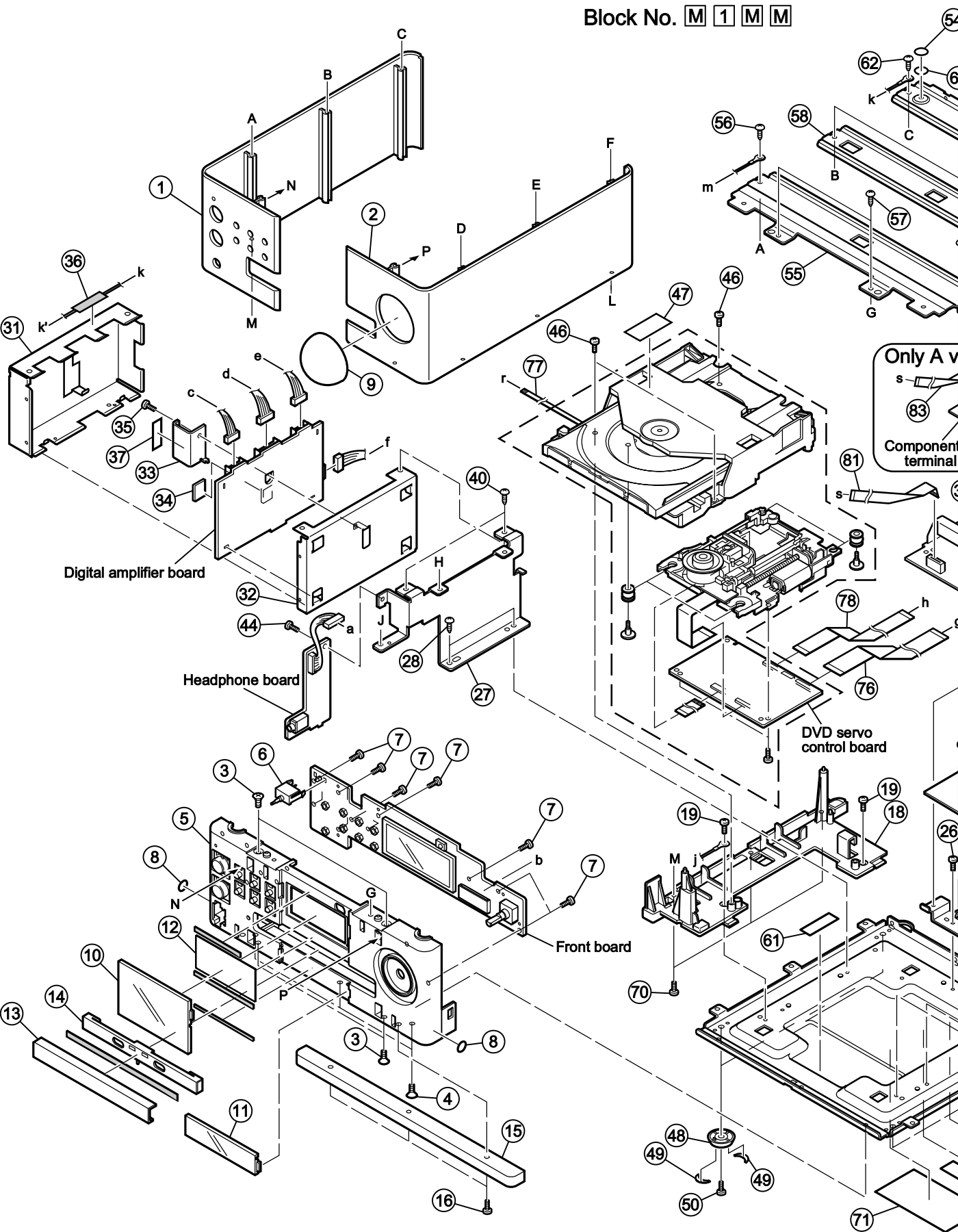
A	-----	Australia
B	-----	U.K.
E	-----	Continental Europe
EN	-----	Northern Europe
EV	-----	Eastern Europe
EE	-----	Russian Federation

- Contents -

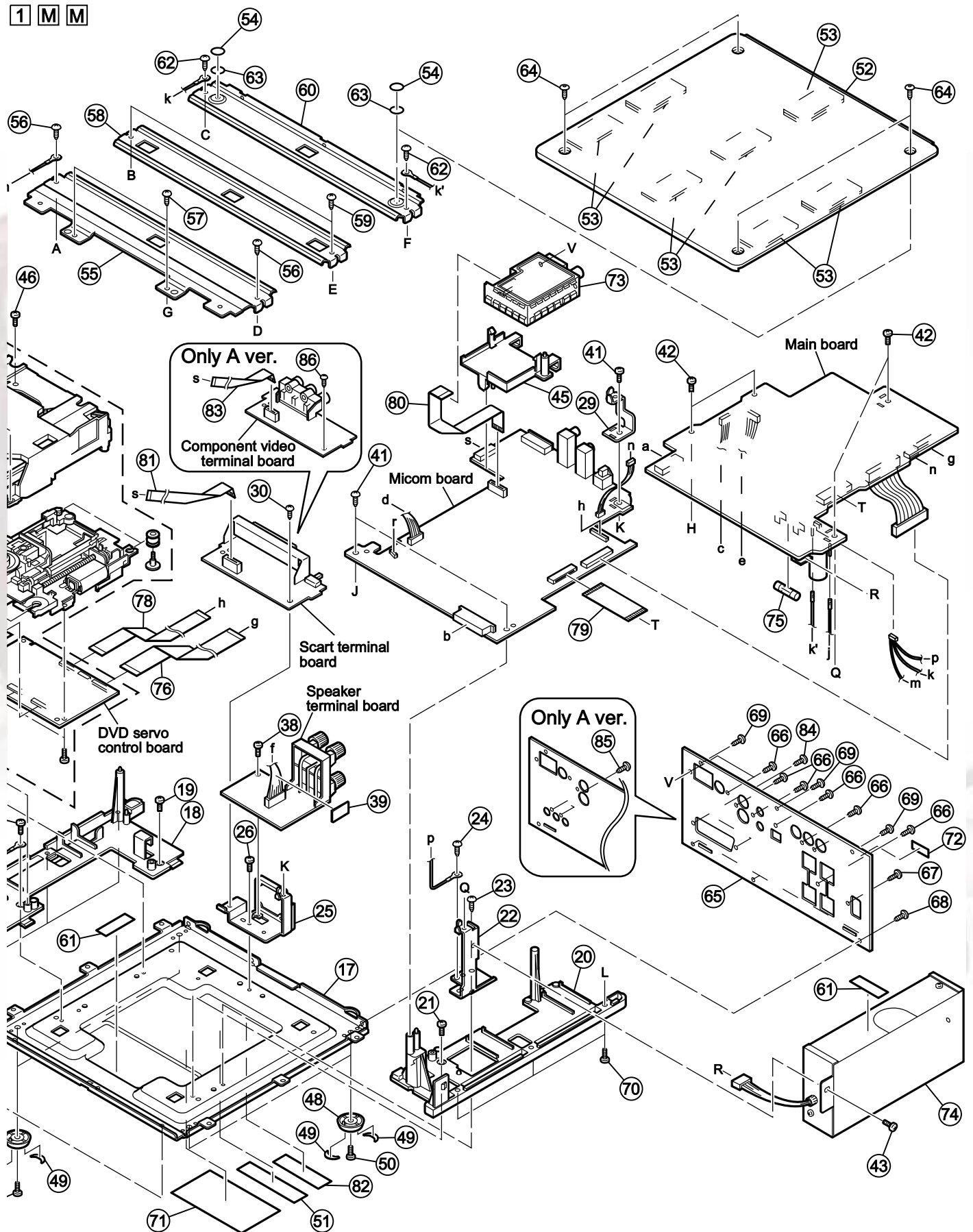
Exploded view of general assembly and parts list (Block No.M1)	— — — —	3- 2
Speaker assembly and parts list (Block No.M2)	— — — — — — — —	3- 6
DVD mechanism assembly and parts list (Block No.MJ)	— — — — — — — —	3- 7
DVD loading base assembly and parts list (Block No.MN)	— — — — — — — —	3- 9
Electrical parts list (Block No.01~05)	— — — — — — — — — —	3-11
Packing materials and accessories parts list (Block No.M3)	— — — — — — — —	3-22

Exploded view of general assembly and parts list

Block No. **M 1 M M**



1 M M



General Assembly

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

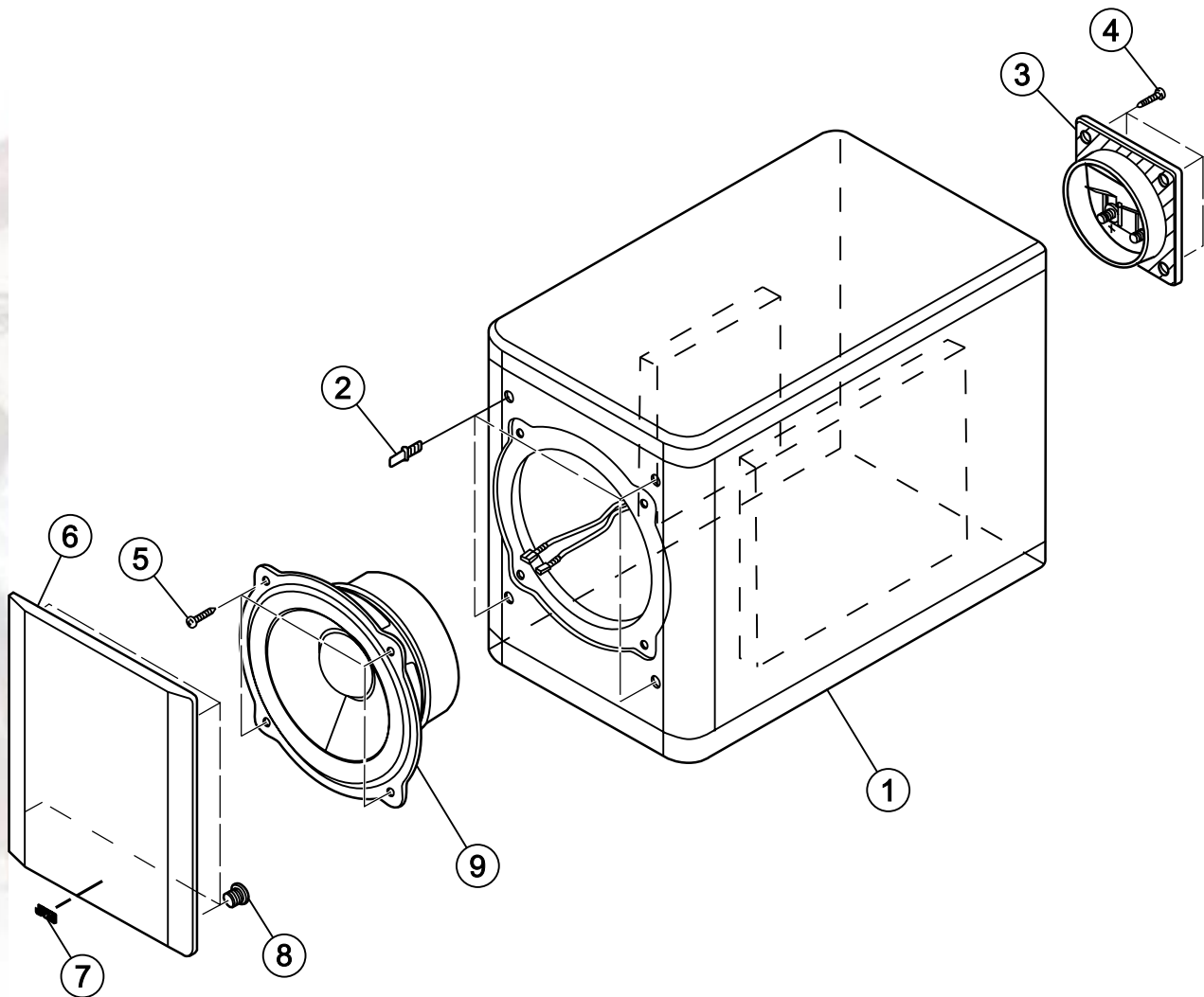
△	Symbol No.	Part No.	Part Name	Description	Local
1		LV10841-201A	AL PANEL L		
2		LV10842-201A	AL PANEL R		A
2		LV10842-202A	AL PANEL R		B,E,EE,EN,EV
3		QYSDSF3008Z	TAP SCREW	M3 x 8mm(x4)	
4		QYSSST3006ZA	TAP SCREW	M3 x 6mm(x3)	
5		LV10843-003A	FRONT PANEL		
6		LV43596-001A	INDICATOR		
7		QYSDSF2608Z	TAP SCREW	M2.6 x 8mm(x10)	
8		GN30007-003A	SPACER	(x2)	
9		LV34464-001A	VOLUME ASSY		
10		LV34428-002A	FRONT LENS A		
11		LV34429-001A	FRONT LENS B		
12		LV42851-008A	SCREEN		
13		LV34430-001A	FITTING COVER		
14		LV21349-001A	TRAY FITTING(A)		
15		LV34440-001A	WOOD BAR		
16		QYSDSF3012M	TAP SCREW	M3 x 12mm(x3)	
17		LV10844-001A	BOTTOM CHASSIS		
18		LV21591-001A	SIDE COVER L		
19		QYSBST3006E	TAP SCREW	M3 x 6mm(x2)	
20		LV21592-001A	SIDE COVER R		
21		QYSBST3006E	TAP SCREW	M3 x 6mm	
22		LV34431-001A	BRACKET A		
23		QYSBST3006E	TAP SCREW	M3 x 6mm	
24		QYSBST3006E	TAP SCREW	M3 x 6mm	
25		LV34432-001A	BRACKET B		
26		QYSBST3006E	TAP SCREW	M3 x 6mm	
27		LV34433-001A	BRACKET C		
28		QYSBST3006E	TAP SCREW	M3 x 6mm(x2)	
29		LV34465-001A	BRACKET D		
30		QYSBST3006E	TAP SCREW	M3 x 6mm	B,E,EE,EN,EV
31		LV34434-001A	DEUS CASE A		
32		LV34435-001A	DEUS CASE B		
33		LV43595-001A	HEAT SINK		
34		LV43407-005A	RUBBER SHEET		
35		QYSBST2606EA	TAP SCREW	M2.6 x 6mm	
36		LV30225-011A	SPACER		
37		LV43407-006A	RUBBER SHEET		
38		QYSBST3006E	TAP SCREW	M3 x 6mm	
39		LV30225-0R2A	SPACER		
40		QYSBST2606EA	TAP SCREW	M2.6 x 6mm(x2)	
41		QYSDSG3010N	TAP SCREW	M3 x 10mm(x3)	
42		QYSDSG3010N	TAP SCREW	M3 x 10mm(x4)	
43		QYSBSGY3008E	TAP SCREW	M3 x 8mm	
44		QYSDSG3010N	TAP SCREW	M3 x 10mm	
45		LV34439-001A	TUNER HOLDER		
46		QYSDSF3010Z	TAP SCREW	M3 x 10mm(x3)	
47		LV42035-002A	LASER CAUTION		
48		LV43597-001A	FOOT	(x4)	
49		LV43602-001A	FOOT FELT	(x8)	
50		QYSDST3006MA	TAP SCREW	M3 x 6mm(x4)	
51		LV41772-002A	CAUTION LABEL		
52		LV10845-202A	TOP COVER		
53		LV30225-0R2A	SPACER	(x10)	
54		LV30226-043A	SPACER	(x2)	
55		LV34436-001A	BRIDGE A		
56		QYSSSG3008EA	TAP SCREW	M3 x 8mm(x2)	
57		QYSDSF3010M	TAP SCREW	M3 x 10mm(x2)	
58		LV34437-001A	BRIDGE B		
59		QYSSSG3008EA	TAP SCREW	M3 x 8mm(x2)	
60		LV34438-002A	BRIDGE C		
61		LV30225-011A	SPACER	(x2)	
62		QYSSSG3008EA	TAP SCREW	M3 x 8mm(x2)	
63		GN30007-003A	SPACER	(x2)	
64		LV43598-001A	SPECIAL SCREW	(x4)	
65		LV21947-011A	REAR PANEL		A
65		LV21947-016A	REAR PANEL		EE
65		LV21947-003A	REAR PANEL		B,E,EN,EV
66		QYSBSGY3008E	TAP SCREW	M3 x 8mm(x8)	
67		QYSBSF3008MA	TAP SCREW	M3 x 8mm	
68		QYSBSGY3008E	TAP SCREW	M3 x 8mm(x3)	
69		QYSBSGY3008E	TAP SCREW	M3 x 8mm(x3)	
70		QYSBSGY3008E	TAP SCREW	M3 x 8mm(x6)	
71		LV43614-001A	LABEL		

△	Symbol No.	Part No.	Part Name	Description	Local
	72	LV44233-001A	LABEL		
	73	QAU0346-001	TUNER	TU 1	A
	73	QAU0347-001	TUNER		B,E,EE,EN,EV
△	74	QAL0511-008	SW POWER UNIT		
△	75	QMF51W2-6R3-J8	FUSE	F 2401 6.3A AC250V	
	76	QUQ110-1917AJ	FFC WIRE	19pin 17cm	
	77	QUQ110-0510AJ	FFC WIRE	5pin 10cm	
	78	QUQ110-1719AJ	FFC WIRE	17pin 19cm	
	79	QUQ412-2110CJ	FFC WIRE	21pin 10cm	
	80	QUQ412-1111CJ	FFC WIRE	11pin 11cm	
	81	QUQ412-1310CJ	FFC WIRE	13pin 10cm	B,E,EE,EN,EV
	82	LV41869-001A	APPROVAL LABEL		EV
	83	QUQ412-0910CJ	FFC WIRE	9pin 10cm	A
	84	QYSBSGY3008E	TAP SCREW	(x2)	B,E,EE,EN,EV
	85	QYSBSGY3008E	TAP SCREW	(x2)	A
	86	QYSBST3006E	TAP SCREW		A



Speaker assembly and parts list

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



The parts without symbol number are not service.

Speaker

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

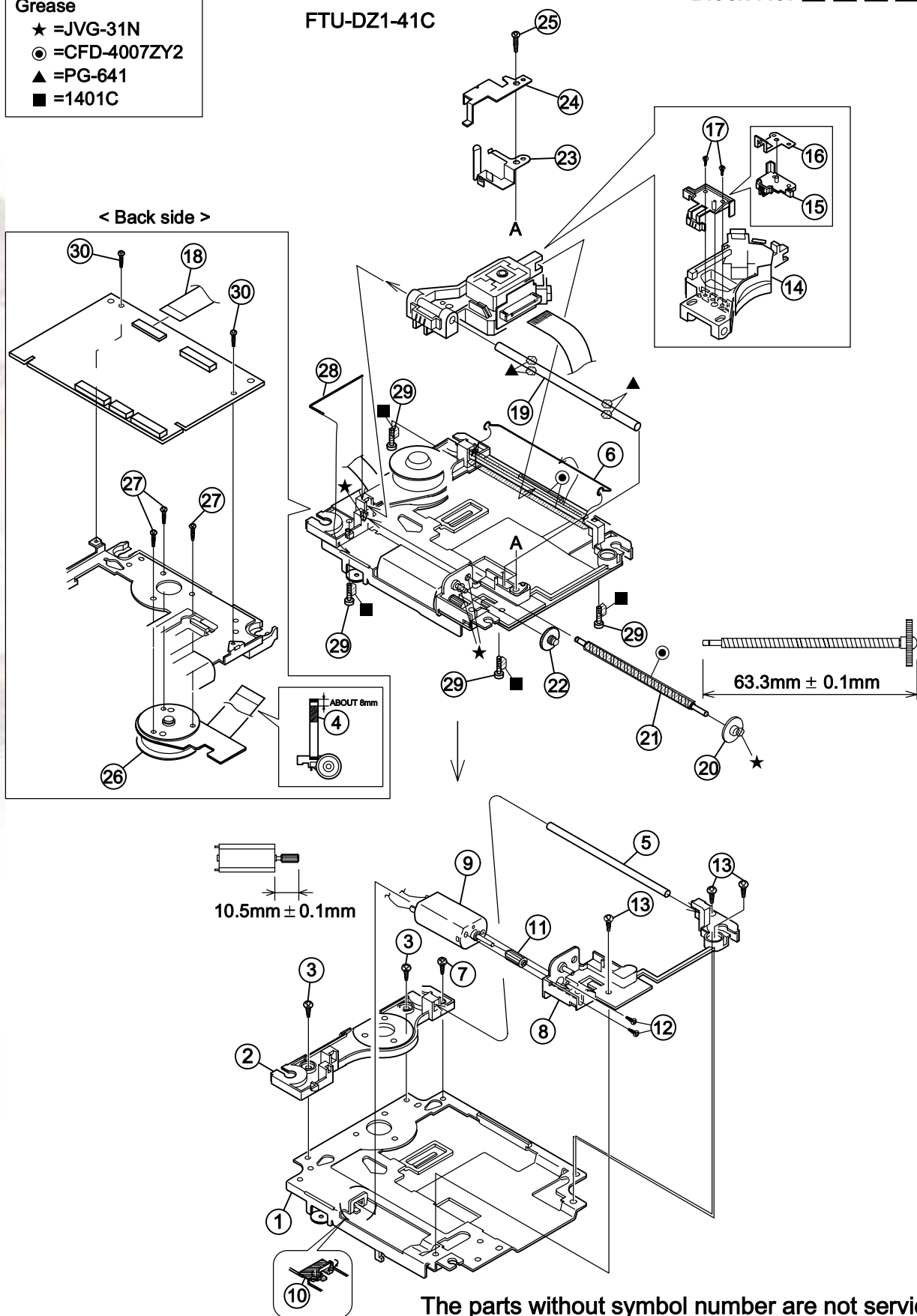
△	Symbol No.	Part No.	Part Name	Description	Local
	1	5100017601	SPEAKER BOX	(x2)	
	2	5800023731	LATCH	(x8)	
	3	1030004601	SPEAKER TERMINAL	(x2)	
	4	7001841606	TAPPING SCREW	(x8)	
	5	7008142004	TAPPING SCREW	(x8)	
	6	9908001601	SPEAKER NET	(x2)	
	7	5900016501	JVC MARK	(x2)	
	8	5600008001	HOLDER	(x8)	
	9	KK080006-01	CONE SPEAKER	(x2)	

DVD mechanism assembly and parts list

Block No. **M J M M**

- Grease**
 ★ =JVG-31N
 ◎ =CFD-4007ZY2
 ▲ =PG-641
 ■ =1401C

FTU-DZ1-41C



DVD mechanism

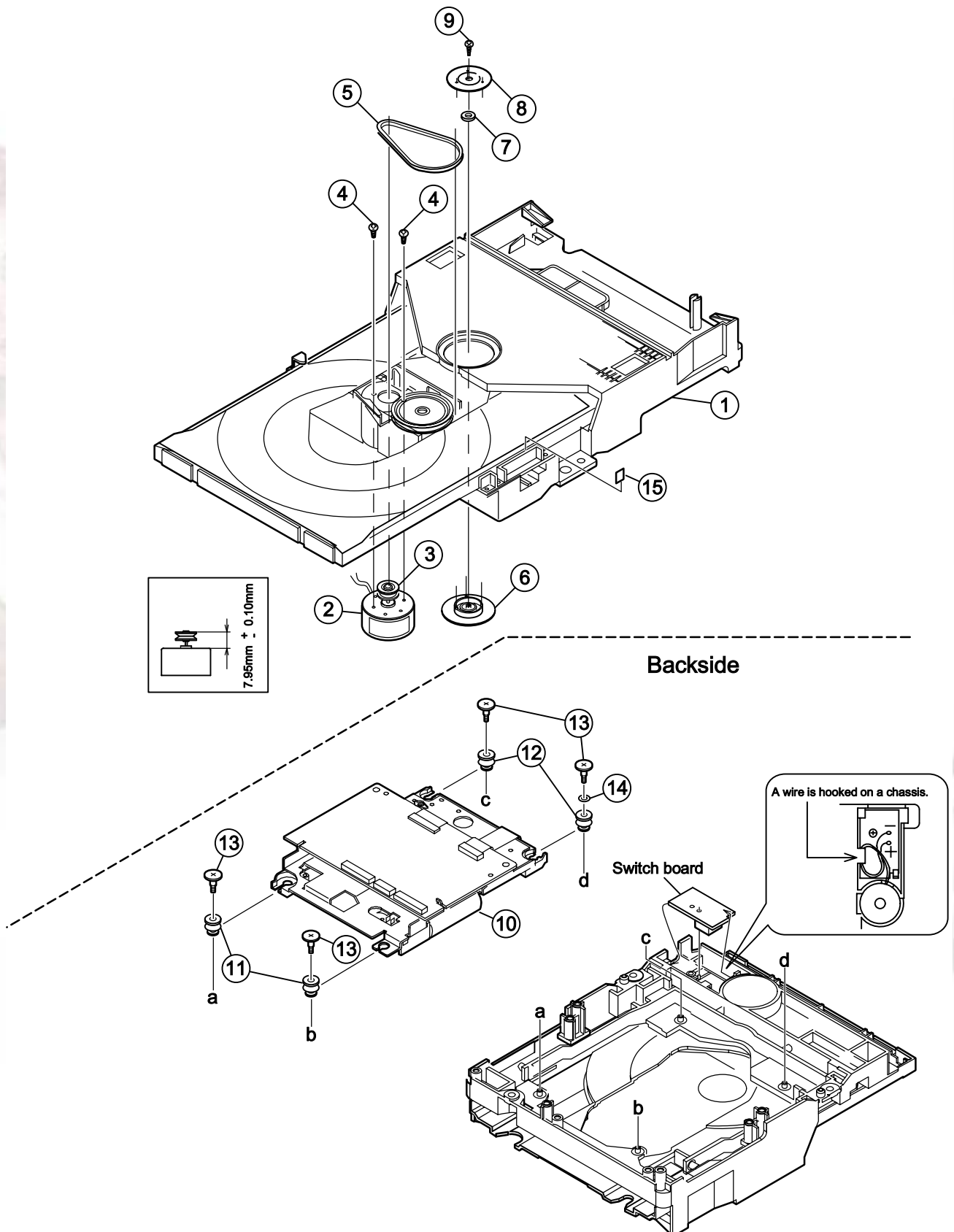
Block No. [M][J][M][M]

△	Symbol No.	Part No.	Part Name	Description	Local
	1	LV21814-001A	MECHA BASE		
	2	LE20731-002A	SPINDLE BASE		
	3	QYSDST2605MA	TAP SCREW	M2.6 x 5mm(x2)	
	4	LV30225-0X6A	SPACER		
	5	LE40931-001A	SHAFT		
	6	LE40995-001A	BAR SPRING		
	7	QYSPSTU2080MA	TAP SCREW	M2 x 8mm	
	8	LE20730-002A	FEED HOLDER		
	9	QAR0165-001	FEED MOTOR		
	10	LV30225-0X5A	SPACER		
	11	LV41510-001A	FEED GEAR T		
	12	QYSPSPU2040MA	SCREW	M2 x 4mm(x2)	
	13	QYSDST2605MA	TAP SCREW	M2.6 x 5mm(x3)	
△	14	QAL0577-001	P.UP		
	15	LE20732-001A	SW ACTUATOR		
	16	LE31093-001A	LEAD SPRING		
	17	QYSPSFU1740ZA	TAP SCREW	M1.7 x 4mm(x2)	
	18	QUQ105-2412AC	FFC WIRE	24pin 12cm	
	19	LE40931-001A	SHAFT		
	20	LE40855-002A	FEED GEAR E		
	21	LV41517-003A	LEAD SCREW		
	22	LE40930-001A	FEED GEAR M		
	23	LE40928-002A	THURUST SPRING		
	24	LE40927-002A	PLATE		
	25	QYSDST2614ZA	TAP SCREW	M2.6 x 14mm	
	26	QAR0334-001	S.MOTOR		
	27	QYSPSPU1760ZA	SCREW	M1.7 x 6mm(x3)	
	28	LE40994-001A	T.SPRING		
	29	LE40858-002A	SPECIAL SCREW	(x4)	
	30	QYSDST2004ZA	TAP SCREW	M2 x 4mm(x2)	

DVD loading base assembly and parts list

FMU-DZ1-41C

Block No. **M N M M**



The parts without symbol number are not service.

DVD loading base

Block No. [M][N][M][M]

△	Symbol No.	Part No.	Part Name	Description	Local
1		LE10283-014A	LOADER SUB ASSY		
2		QAR0197-001	MOTOR		
3		LV42087-002A	MOTOR PULLEY		
4		QYSPSPU1730ZA	SCREW	M1.7 x 3mm(x2)	
5		LE40897-001A	BELT		
6		LE31046-003A	CLAMPER		
7		LV42930-003A	P.C.MAGNET		
8		LE40899-001A	YOKE		
9		LE40906-002A	SPECIAL SCREW		
10		-----	DVD TRAMECHA UN		
11		LE40900-003A	INSULATOR	(x2)	
12		LE40900-005A	INSULATOR	(x2)	
13		LE40901-002A	SPECIAL SCREW	(x4)	
14		QYWFM419025	WASHER	9mm/4.1mm x 0.25mm	
15		LV30225-0S5A	SPACER		

Electrical parts list

Main board

Block No. [0][1]

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
△ IC201	RDS035L03-X	MOS FET			D2114	MTZJ10B-T2	Z DIODE		
IC202	UPC339G2-W	IC			D2115	1SS133-T2	SI DIODE		
△ IC221	RHP030N03-W	IC			D2116	1SS133-T2	SI DIODE		
IC231	TC74VHC74F-X	IC			D2212	1SS133-T2	SI DIODE		
IC232	TC74VHC14F-X	IC			D2213	RB161L-40-X	SB DIODE		
△ IC241	TPC8010-H-X	POWER MOS FET			D2231	MTZJ5.1B-T2	Z DIODE		
△ IC271	KIA78R05API	IC			D2301	MTZJ5.1B-T2	Z DIODE		
IC431	NJM4565M-W	IC			D2302	1SS133-T2	SI DIODE		
IC451	BD3870FS-X	IC			D2403	MTZJ15B-T2	Z DIODE		
IC471	NJM4565M-W	IC			D2404	MTZJ5.1B-T2	Z DIODE		
IC491	BA3121F-X	IC			D2405	MTZJ8.2B-T2	Z DIODE		
IC801	GP1UM261XKVF	IR DETECT UNIT			D2406	MTZJ12B-T2	Z DIODE		
					D2407	1SS133-T2	SI DIODE		
					D2408	MTZJ24B-T2	Z DIODE		
					D2421	MTZJ24B-T2	Z DIODE		
					D2422	MA111-X	SI DIODE		
					D2503	MTZJ5.1B-T2	Z DIODE		
Q2001	2SA1530A/QR/-X	TRANSISTOR			D2601	1SS133-T2	SI DIODE		
Q2002	2SC3928A/QR/-X	TRANSISTOR			D2701	MTZJ5.1A-T2	Z DIODE		
Q2003	2SC3928A/QR/-X	TRANSISTOR			D2801	MTZJ5.1C-T2	Z DIODE		
Q2011	2SC3928A/QR/-X	TRANSISTOR			D2802	1SS133-T2	SI DIODE		
Q2012	2SA1530A/QR/-X	TRANSISTOR			D4371	1SS133-T2	SI DIODE		
Q2013	2SC3928A/QR/-X	TRANSISTOR			D4372	MTZJ5.1A-T2	Z DIODE		
Q2111	2SC3928A/QR/-X	TRANSISTOR			D8001	SLR-343VC/NPQ-T	LED		
Q2112	2SA1530A/QR/-X	TRANSISTOR							
Q2113	2SC3928A/QR/-X	TRANSISTOR			C1281	NCS31HJ-221X	C CAPACITOR	220pF 50V J	B
Q2211	2SC3928A/QR/-X	TRANSISTOR			C1282	NCB31EK-332X	C CAPACITOR	3300pF 25V K	B
Q2212	2SA1530A/QR/-X	TRANSISTOR			C2001	NCB31CK-683X	C CAPACITOR	0.068uF 16V K	
Q2213	2SC3928A/QR/-X	TRANSISTOR			C2002	NCS31HJ-471X	C CAPACITOR	470pF 50V J	
Q2301	2SC3928A/QR/-X	TRANSISTOR			C2003	NCB31HK-471X	C CAPACITOR	470pF 50V K	
Q2302	2SA1530A/QR/-X	TRANSISTOR			C2004	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q2303	2SC3928A/QR/-X	TRANSISTOR			C2011	NCB31CK-333X	C CAPACITOR	0.033uF 16V K	
Q2304	2SA1530A/QR/-X	TRANSISTOR			C2012	QETN1CM-477Z	E CAPACITOR	470uF 16V M	
Q2401	UN2113-X	DIGI TRANSISTOR			C2013	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
Q2403	UN221E-X	TRANSISTOR			C2103	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
Q2404	2SC3928A/QR/-X	TRANSISTOR			C2104	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q2407	UN2211-X	TRANSISTOR			C2111	NCB31CK-333X	C CAPACITOR	0.033uF 16V K	
Q2408	UN2113-X	DIGI TRANSISTOR			C2112	QETN1CM-477Z	E CAPACITOR	470uF 16V M	
Q2409	UN2113-X	DIGI TRANSISTOR			C2113	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
Q2410	2SA1530A/QR/-X	TRANSISTOR			C2203	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
Q2411	2SA1530A/QR/-X	TRANSISTOR			C2204	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q2412	2SA1530A/QR/-X	TRANSISTOR			C2211	NCB31CK-333X	C CAPACITOR	0.033uF 16V K	
Q2421	2SA1530A/QR/-X	TRANSISTOR			C2212	QETN1CM-227Z	E CAPACITOR	220uF 16V M	
Q2422	2SC3928A/QR/-X	TRANSISTOR			C2231	QETN0JM-108Z	E CAPACITOR	1000uF 6.3V M	
Q2601	2SA1530A/QR/-X	TRANSISTOR			C2301	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	
Q2701	KTB772/Y/	TRANSISTOR			C2302	NCB31CK-683X	C CAPACITOR	0.068uF 16V K	
Q2702	2SC3928A/QR/-X	TRANSISTOR			C2303	NCS31HJ-331X	C CAPACITOR	330pF 50V J	
Q2801	2SA1530A/QR/-X	TRANSISTOR			C2303	NDC31HJ-391X	C CAPACITOR	390pF 50V J	
Q2802	2SC3928A/QR/-X	TRANSISTOR			C2304	NCB31HK-331X	C CAPACITOR	330pF 50V K	
Q2803	KTC3203/OY/-T	TRANSISTOR			C2402	QER61EM-476Z	E CAPACITOR	47uF 25V M	
△ Q2805	KTB772/Y/	TRANSISTOR			C2404	QEZO536-828	E CAPACITOR	8200uF	
Q4191	2SC3928A/QR/-X	TRANSISTOR			C2406	NCB31CK-333X	C CAPACITOR	0.033uF 16V K	
Q4192	2SA1530A/QR/-X	TRANSISTOR			C2407	QTE1E06-476Z	E CAPACITOR	47uF 25V	
Q4291	2SC3928A/QR/-X	TRANSISTOR			C2408	QFG32AJ-473	PP CAPACITOR	0.047uF 100V J	
Q4292	2SA1530A/QR/-X	TRANSISTOR			C2409	QTE1E06-476Z	E CAPACITOR	47uF 25V	
Q4311	2SC3928A/QR/-X	TRANSISTOR			C2421	QETN1EM-227Z	E CAPACITOR	220uF 25V M	
Q4312	UN211E-X	DIGI TRANSISTOR			C2422	QETN1HM-226Z	E CAPACITOR	22uF 50V M	
Q4313	2SC3661-X	TRANSISTOR			C2423	QETN1HM-226Z	E CAPACITOR	22uF 50V M	
Q4359	2SC3661-X	TRANSISTOR			C2503	QETN1CM-477Z	E CAPACITOR	470uF 16V M	
Q4371	2SC3928A/QR/-X	TRANSISTOR			C2701	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q4372	2SC3928A/QR/-X	TRANSISTOR			C2711	QTE1E06-476Z	E CAPACITOR	47uF 25V	
Q4373	2SC3928A/QR/-X	TRANSISTOR			C2712	QETN1EM-475Z	E CAPACITOR	4.7uF 25V M	
Q6031	UN2111-X	TRANSISTOR		B,E,EE, EN,EV	C2713	QTE1E06-476Z	E CAPACITOR	47uF 25V	
				B,E,EE, EN,EV	C2714	QTE1E06-476Z	E CAPACITOR	47uF 25V	
Q6032	UN2214-X	TRANSISTOR			C2801	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q8001	UN2111-X	TRANSISTOR			C2802	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
					C2803	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
D2001	1SS133-T2	SI DIODE			C2805	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
D2011	1SS133-T2	SI DIODE			C4125	NCS31HJ-221X	C CAPACITOR	220pF 50V J	
D2012	1SS133-T2	SI DIODE			C4126	NCS31HJ-221X	C CAPACITOR	220pF 50V J	
D2013	RB161L-40-X	SB DIODE			C4131	QFG32AJ-102Z	PP CAPACITOR	1000pF 100V J	
D2014	MTZJ5.6A-T2	Z DIODE			C4132	QFG32AJ-122Z	PP CAPACITOR	1200pF 100V J	
D2015	1SS133-T2	SI DIODE			C4134	QTE1E06-226Z	E CAPACITOR	22uF 25V	
D2112	1SS133-T2	SI DIODE			C4151	QTE1V06-106Z	E CAPACITOR	10uF 35V	
D2113	RB161L-40-X	SB DIODE			C4153	QFG32AJ-222Z	PP CAPACITOR	2200pF 100V J	
					C4154	QFVF1HJ-104Z	MF CAPACITOR	0.1uF 50V J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C4155	QFVF1HJ-104Z	MF CAPACITOR	0.1uF 50V J		C8002	QER61CM-226Z	E CAPACITOR	22uF 16V M	
C4156	QTE1H15-106Z	E CAPACITOR	10uF 50V		C8101	NCF21HZ-104X	C CAPACITOR	0.1uF 50V Z	
C4157	QETN1HM-106Z	E CAPACITOR	10uF 50V M		C8103	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C4158	QETN1HM-106Z	E CAPACITOR	10uF 50V M		C8104	QER61CM-107Z	E CAPACITOR	100uF 16V M	
C4159	QETN1HM-106Z	E CAPACITOR	10uF 50V M		C8105	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C4172	QFVF1HJ-474Z	MF CAPACITOR	0.47uF 50V J		C8106	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C4173	QFZ0217-473	PP CAPACITOR	0.047uF		C8107	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C4174	QFZ0217-473	PP CAPACITOR	0.047uF		C8108	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C4175	QTE1V06-106Z	E CAPACITOR	10uF 35V		C8109	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C4191	QTE1V06-106Z	E CAPACITOR	10uF 35V						
C4192	QTE1V06-106Z	E CAPACITOR	10uF 35V		R2001	NRSA63J-225X	MG RESISTOR	2.2MΩ 1/16W J	
C4225	NCS31HJ-221X	C CAPACITOR	220pF 50V J		R2002	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C4226	NCS31HJ-221X	C CAPACITOR	220pF 50V J		R2003	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C4231	QFG32AJ-102Z	PP CAPACITOR	1000pF 100V J		R2004	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
C4232	QFG32AJ-122Z	PP CAPACITOR	1200pF 100V J		R2005	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C4234	QTE1E06-226Z	E CAPACITOR	22uF 25V		R2006	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C4251	QTE1V06-106Z	E CAPACITOR	10uF 35V		R2007	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
C4253	QFG32AJ-222Z	PP CAPACITOR	2200pF 100V J		R2007	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
C4254	QFVF1HJ-104Z	MF CAPACITOR	0.1uF 50V J		R2008	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C4255	QFVF1HJ-104Z	MF CAPACITOR	0.1uF 50V J		R2009	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C4256	QTE1H15-106Z	E CAPACITOR	10uF 50V		R2010	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C4257	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R2012	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C4258	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R2013	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C4259	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R2014	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C4272	QFVF1HJ-474Z	MF CAPACITOR	0.47uF 50V J		R2015	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
C4273	QFZ0217-473	PP CAPACITOR	0.047uF		R2016	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
C4274	QFZ0217-473	PP CAPACITOR	0.047uF		R2017	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C4275	QTE1V06-106Z	E CAPACITOR	10uF 35V		R2018	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C4291	QTE1V06-226Z	E CAPACITOR	22uF 35V		R2019	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C4292	QTE1V06-106Z	E CAPACITOR	10uF 35V		R2104	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C4312	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R2105	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C4313	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R2108	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
C4314	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R2112	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C4315	NCF21CZ-105X	C CAPACITOR	1uF 16V Z		R2113	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C4316	NCB31CK-103X	C CAPACITOR	0.01uF 16V K		R2114	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C4317	NCB31CK-103X	C CAPACITOR	0.01uF 16V K		R2115	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
C4331	QETN1EM-107Z	E CAPACITOR	100uF 25V M		R2116	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
C4332	QTE1E06-476Z	E CAPACITOR	47uF 25V		R2117	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C4333	QCZ0202-155Z	C CAPACITOR	1.5uF 25V Z		R2118	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C4351	QETN1CM-107Z	E CAPACITOR	100uF 16V M		R2119	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
C4352	QETN1HM-476Z	E CAPACITOR	47uF 50V M		R2204	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C4353	QFVF1HJ-334Z	MF CAPACITOR	0.33uF 50V J		R2205	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C4359	QETN1CM-476Z	E CAPACITOR	47uF 16V M		R2206	NRSA63J-113X	MG RESISTOR	11kΩ 1/16W J	
C4371	QETN1CM-107Z	E CAPACITOR	100uF 16V M		R2206	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
C4372	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R2207	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C4373	QETN1HM-105Z	E CAPACITOR	1uF 50V M		R2212	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C4374	QTE1C05-227	E CAPACITOR	220uF 16V		R2213	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C4391	QETN1CM-227Z	E CAPACITOR	220uF 16V M		R2214	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C4392	QETN1EM-476Z	E CAPACITOR	47uF 25V M		R2215	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
C6021	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	A	R2216	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
C6022	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	A	R2217	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C6023	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	A	R2218	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C6024	NCS31HJ-101X	C CAPACITOR	100pF 50V J	A	R2219	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C6025	NCS31HJ-101X	C CAPACITOR	100pF 50V J	A	R2301	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
C6026	NCS31HJ-101X	C CAPACITOR	100pF 50V J	A	R2302	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C6027	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	A	R2303	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6028	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	A	R2305	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
C6031	NCS31HJ-181X	C CAPACITOR	180pF 50V J	B,E,EE, EN,EV	R2305	NRSA63J-363X	MG RESISTOR	36kΩ 1/16W J	
C6032	NCS31HJ-181X	C CAPACITOR	180pF 50V J	B,E,EE, EN,EV	R2306	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C6033	NCS31HJ-181X	C CAPACITOR	180pF 50V J	B,E,EE, EN,EV	R2307	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C6034	NCS31HJ-181X	C CAPACITOR	180pF 50V J	B,E,EE, EN,EV	R2308	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C6035	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	B,E,EE, EN,EV	R2308	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J	
C6036	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	B,E,EE, EN,EV	R2311	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
C6037	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	B,E,EE, EN,EV	R2312	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C6038	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	B,E,EE, EN,EV	R2313	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C6039	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	B,E,EE, EN,EV	R2314	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C6040	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	B,E,EE, EN,EV	R2315	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
C6051	NCS31HJ-101X	C CAPACITOR	100pF 50V J	A	R2316	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C8001	NCB31HK-102X	C CAPACITOR	1000pF 50V K	A	R2317	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
					R2402	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
					R2403	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
					R2404	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
					R2405	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
					R2406	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
					R2407	QRE141J-391Y	C RESISTOR	390Ω 1/4W J	
					R2411	QRT01DJ-R47X-M	MF RESISTOR	0.47Ω 1W J	
					R2412	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
					R2413	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R2416	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J		R4252	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R2421	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R4253	NRSA63J-394X	MG RESISTOR	390kΩ 1/16W J	
R2422	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4254	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R2423	NRSA63J-432X	MG RESISTOR	4.3kΩ 1/16W J		R4271	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R2441	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4272	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
R2442	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4273	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R2443	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R4274	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R2444	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4275	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R2445	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R4276	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R2446	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R4277	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R2447	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R4278	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R2448	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4279	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R2449	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4281	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R2450	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4291	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R2505	NRSA63J-512X	MG RESISTOR	5.1kΩ 1/16W J		R4292	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R2506	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		R4293	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R2602	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		R4311	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R2603	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		R4312	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R2604	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R4313	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R2701	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R4314	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R2705	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4315	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R2706	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J		R4331	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
R2712	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R4332	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R2715	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4333	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R2716	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4351	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
R2723	QRE141J-221Y	C RESISTOR	220Ω 1/4W J	B, E, EE, EN, EV	R4358	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R2801	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R4359	QRZ9006-4R7X	F.RESISTOR	4.7Ω 1/4W J	
R2802	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R4371	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
R2803	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4372	NRSA63J-513X	MG RESISTOR	51kΩ 1/16W J	
R2804	QRE141J-101Y	C RESISTOR	100Ω 1/4W J		R4373	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R2805	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J		R4374	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R2806	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		R4375	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
R2807	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		R4376	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R2808	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R4377	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R2811	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R4391	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
R2812	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J		R4392	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R3020	QRJ146J-221X	UNF C RESISTOR	220Ω 1/4W J	B	R4393	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R4121	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R4394	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R4125	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		R4395	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4126	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J		R4396	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4131	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R4397	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R4133	NRSA63D-472X	MG RESISTOR	4.7kΩ 1/16W D		R4398	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R4134	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J		R6021	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	A
R4135	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		R6022	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	A
R4136	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6023	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	A
R4137	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		R6031	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	B, E, EE, EN, EV
R4138	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R6032	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	B, E, EE, EN, EV
R4150	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6033	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	B, E, EE, EN, EV
R4151	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		R6034	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	B, E, EE, EN, EV
R4152	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		R6035	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	B, E, EE, EN, EV
R4153	NRSA63J-394X	MG RESISTOR	390kΩ 1/16W J		R6036	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	B, E, EE, EN, EV
R4154	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		R6037	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	B, E, EE, EN, EV
R4171	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J		R6038	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	B, E, EE, EN, EV
R4172	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J		R6039	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	B, E, EE, EN, EV
R4173	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J		R7021	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	B
R4174	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J		R7022	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	B
R4175	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R7064	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	B
R4176	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J		R7066	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	B
R4177	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R7067	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	B
R4178	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R7070	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	B
R4179	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R7167	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	B
R4181	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R8001	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R4191	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R8101	QRE141J-2R2Y	C RESISTOR	2.2Ω 1/4W J	
R4192	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R8201	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R4193	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R8202	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	
R4221	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R8203	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R4225	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		R8204	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R4226	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J		R8205	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4231	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		L1281	QQR0797-002	COIL		B
R4233	NRSA63D-472X	MG RESISTOR	4.7kΩ 1/16W D						
R4234	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J						
R4235	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J						
R4236	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R4237	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J						
R4238	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J						
R4250	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J						
R4251	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J						

△ Symbol No.	Part No.	Part Name	Description	Local
L2001	QQL28AK-470	CHOKE COIL	47uH K	
L2101	QQL28AK-470	CHOKE COIL	47uH K	
L2201	QQL28AK-470	CHOKE COIL	47uH K	
L2231	QQL70AK-150	DUCTOR	15uH K	
L2401	QQLZ003-1R0	COIL	1uH	
L2501	QQL70AK-470	COIL	47uH K	
CN201	QGA3901F1-04	CONNECTOR	W-B (1-4)	
CN202	QGF1205F1-21	CONNECTOR	FFC/FPC (1-21)	
CN204	QGF1016F3-19	CONNECTOR	FFC/FPC (1-19)	
CN205	QGA2501F1-03	CONNECTOR	W-B (1-3)	
CN401	QGA2501F1-07	CONNECTOR	W-B (1-7)	
CN602	QGF1205C1-13	CONNECTOR	FFC/FPC (1-13)	B,E,EE, EN,EV
CN612	QGF1205C1-09	CONNECTOR	FFC/FPC (1-9)	A
CN804	QGB1216K1-18S	CONNECTOR	B-B (1-18)	
△ CP221	ICP-S2.3-X	IC PROTECTOR	2.3A	
DI811	QLF0125-001	FL TUBE		
FT241	QNG0003-001Z	FUSE CLIP		
FT242	QNG0003-001Z	FUSE CLIP		
J4101	QNN0585-001	PIN JACK		
J6001	QNZ0625-001	RGB CONNECTOR		B,E,EE, EN,EV
J6002	QNN0386-001	PIN JACK		A
JS801	QSW1042-001	ROTARY ENCODER		
K4302	QQR0621-001Z	COIL		
S6051	QSW0454-001	SW		A
S6052	QSW0454-001	SW		B,E,EE, EN,EV
S8201	QSW0683-001Z	PUSH SW		
S8202	QSW0683-001Z	PUSH SW		
S8203	QSW0683-001Z	PUSH SW		
S8204	QSW0683-001Z	PUSH SW		
S8205	QSW0683-001Z	PUSH SW		
S8206	QSW0683-001Z	PUSH SW		
S8207	QSW0683-001Z	PUSH SW		
S8208	QSW0683-001Z	PUSH SW		
TH261	NAD0025-333X	N THERMISTOR	33kΩ	
TP201	QNZ0104-001	POST PIN		
TP202	QNZ0104-001	POST PIN		
W1	QUB072-22PPPP	SIN TWIST WIRE		
W2	QUB070-22PPPP	SIN TWIST WIRE		
WC201	QZW0112-002	WIRE CLAMP		

Micom board

Block No. [0][2]

△ Symbol No.	Part No.	Part Name	Description	Local
IC401	NJM4565M-W	IC		
IC601	MM1623XF-X	IC		
IC602	SN74AHCT08NS-X	IC		
IC603	SN74LVC08ANS-X	IC		
IC611	GP1FA352TZ	OPT TRANSMITTER		
IC701	UPD784217AGF546	IC(ROM MICOM)		
IC711	BR24L02F-W-X	IC		
IC751	LB1641	IC		
IC761	SAA6588T/V2-X	IC		B,E,EE, EN,EV
Q4101	2SC3661-X	TRANSISTOR		
Q4102	2SC3661-X	TRANSISTOR		
Q4201	2SC3661-X	TRANSISTOR		
Q4202	2SC3661-X	TRANSISTOR		
Q4301	UN211L-X	TRANSISTOR		
Q6052	UN2214-X	TRANSISTOR		B,E,EE, EN,EV
Q6053	UN2113-X	DIGI TRANSISTOR		B,E,EE, EN,EV
Q6054	UN2214-X	TRANSISTOR		B,E,EE, EN,EV
Q7301	2SA1530A/QR/-X	TRANSISTOR		
Q7302	2SC3928A/QR/-X	TRANSISTOR		
Q7401	UN2214-X	TRANSISTOR		
Q7511	UN2213-X	DIGI TRANSISTOR		

△ Symbol No.	Part No.	Part Name	Description	Local
Q7512	UN2213-X	DIGI TRANSISTOR		
Q7513	UN2213-X	DIGI TRANSISTOR		
Q7514	2SA1530A/QR/-X	TRANSISTOR		
Q7601	UN2111-X	TRANSISTOR		B,E,EE, EN,EV
Q7602	UN2211-X	TRANSISTOR		B,E,EE, EN,EV
Q7701	UN2111-X	TRANSISTOR		
Q7702	2SD601A/RS/-X	TRANSISTOR		
Q7712	UN2211-X	TRANSISTOR		
Q7713	2SC3928A/QR/-X	TRANSISTOR		
Q7801	KTC3195/O/-T	TRANSISTOR		
Q7802	KTC3195/O/-T	TRANSISTOR		
D6091	MTZJ6.2C-T2	Z DIODE		
D7001	MA111-X	SI DIODE		
D7301	1SS133-T2	SI DIODE		
D7302	MTZJ5.1B-T2	Z DIODE		
D7401	1SS133-T2	SI DIODE		
D7701	1SS133-T2	SI DIODE		
D7702	MTZJ10B-T2	Z DIODE		
D7703	MTZJ8.2B-T2	Z DIODE		
D7711	1SS133-T2	SI DIODE		
D7713	1SS133-T2	SI DIODE		
D7715	1SS133-T2	SI DIODE		
D7716	1SS133-T2	SI DIODE		
D7717	RB521S-30-X	SB DIODE		
C1181	NCS31HJ-221X	C CAPACITOR	220pF 50V J	
C1182	NCB31EK-332X	C CAPACITOR	3300pF 25V K	
C1184	NCS31HJ-221X	C CAPACITOR	220pF 50V J	
C1281	NCS31HJ-221X	C CAPACITOR	220pF 50V J	A,E,EE, EN,EV
C1282	NCB31EK-332X	C CAPACITOR	3300pF 25V K	A,E,EE, EN,EV
C1284	NCS31HJ-221X	C CAPACITOR	220pF 50V J	
C1381	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C4101	QKCC1AM-227Z	E CAPACITOR	220uF 10V M	
C4102	NCS31HJ-221X	C CAPACITOR	220pF 50V J	
C4103	NCS31HJ-151X	C CAPACITOR	150pF 50V J	
C4104	QER61HM-475Z	E CAPACITOR	4.7uF 50V M	
C4106	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	B,E,EE, EN,EV
C4201	QKCC1AM-227Z	E CAPACITOR	220uF 10V M	
C4202	NCS31HJ-221X	C CAPACITOR	220pF 50V J	
C4203	NCS31HJ-151X	C CAPACITOR	150pF 50V J	
C4204	QER61HM-475Z	E CAPACITOR	4.7uF 50V M	
C4206	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	B,E,EE, EN,EV
C4301	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C4302	QETN1CM-227Z	E CAPACITOR	220uF 16V M	
C4303	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M	
C4304	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C4305	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C6001	QETN1AM-477Z	E CAPACITOR	470uF 10V M	
C6002	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C6003	QFV61HJ-104Z	MF CAPACITOR	0.1uF 50V J	
C6004	QFV61HJ-104Z	MF CAPACITOR	0.1uF 50V J	
C6005	QFV61HJ-104Z	MF CAPACITOR	0.1uF 50V J	
C6006	QFV61HJ-104Z	MF CAPACITOR	0.1uF 50V J	
C6007	QFV61HJ-104Z	MF CAPACITOR	0.1uF 50V J	
C6008	QER61EM-226Z	E CAPACITOR	22uF 25V M	
C6011	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C6013	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C6014	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C6090	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6091	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	A
C6092	QETN0JM-477Z	E CAPACITOR	470uF 6.3V M	A
C6093	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	A
C6094	NCS31HJ-181X	C CAPACITOR	180pF 50V J	A
C6095	NCS31HJ-181X	C CAPACITOR	180pF 50V J	A
C6096	NCS31HJ-181X	C CAPACITOR	180pF 50V J	A
C6100	NCS31HJ-221X	C CAPACITOR	220pF 50V J	
C6101	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C7015	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C7024	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C7181	QCFB1HZ-105Y	C CAPACITOR	1uF 50V Z	
C7182	QER61CM-107Z	E CAPACITOR	100uF 16V M	
C7190	QETN1HM-105Z	E CAPACITOR	1uF 50V M	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C7191	QETN1HM-105Z	E CAPACITOR	1uF 50V M		R6009	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J	B,EE,EN,EV
C7275	QER61HM-106Z	E CAPACITOR	10uF 50V M		R6010	NRSA63J-241X	MG RESISTOR	240Ω 1/16W J	A
C7276	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R6010	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J	B,EE,EN,EV
C7301	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R6011	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
C7302	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M		R6013	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
C7305	NCB31HK-822X	C CAPACITOR	8200pF 50V K	B,EE,EN,EV	R6014	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
C7306	NCB31HK-822X	C CAPACITOR	8200pF 50V K	B,EE,EN,EV	△ R6015	QRZ9015-2R2X	FUSI RESISTOR	2.2Ω	
C7401	NCS31HJ-331X	C CAPACITOR	330pF 50V J		R6051	QRE141J-431Y	C RESISTOR	430Ω 1/4W J	B,EE,EN,EV
C7509	QCBB1HK-103Y	C CAPACITOR	0.01uF 50V K		R6091	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	A
C7511	QCFB1HZ-105Y	C CAPACITOR	1uF 50V Z		R6092	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	A
C7512	QETN1CM-337Z	E CAPACITOR	330uF 16V M		R6093	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	A
C7513	QETN1CM-226Z	E CAPACITOR	22uF 16V M		R6095	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C7601	QETN1HM-106Z	E CAPACITOR	10uF 50V M	B,EE,EN,EV	R6096	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C7602	NCB31HK-561X	C CAPACITOR	560pF 50V K	B,EE,EN,EV	R7001	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7603	QER61HM-225Z	E CAPACITOR	2.2uF 50V M	B,EE,EN,EV	R7002	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7604	NCB31HK-331X	C CAPACITOR	330pF 50V K	B,EE,EN,EV	R7003	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7605	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	B,EE,EN,EV	R7004	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7606	NCS31HJ-820X	C CAPACITOR	82pF 50V J	B,EE,EN,EV	R7005	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7607	NCS31HJ-470X	C CAPACITOR	47pF 50V J	B,EE,EN,EV	R7006	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7608	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	B,EE,EN,EV	R7007	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7701	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M		R7008	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7703	QETN1CM-107Z	E CAPACITOR	100uF 16V M		R7015	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C7711	QETN0JM-228Z	E CAPACITOR	2200uF 6.3V M		R7017	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C7712	QER61HM-225Z	E CAPACITOR	2.2uF 50V M		R7018	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C7801	NCS31HJ-102X	C CAPACITOR	1000pF 50V J		R7019	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7802	NCS31HJ-102X	C CAPACITOR	1000pF 50V J		R7020	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C7803	NCS31HJ-390X	C CAPACITOR	39pF 50V J		R7021	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	E,EE,EN,EV
C7804	NCS31HJ-390X	C CAPACITOR	39pF 50V J		R7022	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	E,EE,EN,EV
C7805	NCS31HJ-330X	C CAPACITOR	33pF 50V J		R7025	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7806	NCS31HJ-330X	C CAPACITOR	33pF 50V J		R7026	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4101	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J		R7027	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4102	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R7028	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4103	QRE141J-220Y	C RESISTOR	22Ω 1/4W J		R7029	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4105	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R7030	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4106	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R7031	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4107	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J		R7032	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4110	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J		R7038	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R4111	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R7039	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R4112	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R7040	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R4201	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R7041	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4202	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R7042	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4203	QRE141J-220Y	C RESISTOR	22Ω 1/4W J		R7043	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R4205	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R7044	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4206	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R7045	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R4207	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J		R7046	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R4210	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R7047	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R4211	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R7048	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4212	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R7049	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4301	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J		R7050	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4302	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R7051	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R4304	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R7052	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R4305	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J		R7054	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R6001	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		R7055	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R6002	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J		R7056	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6003	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		R7058	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6004	NRSA63J-361X	MG RESISTOR	360Ω 1/16W J		R7059	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6005	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	A	R7060	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6005	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J	B,EE,EN,EV	R7061	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6006	NRSA63J-361X	MG RESISTOR	360Ω 1/16W J	A	R7062	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6006	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J	B,EE,EN,EV	R7063	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6007	NRSA63J-131X	MG RESISTOR	130Ω 1/16W J	A	R7064	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	E,EE,EN,EV
R6007	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J	B,EE,EN,EV	R7066	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	E,EE,EN,EV
R6008	NRSA63J-241X	MG RESISTOR	240Ω 1/16W J	A	R7067	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	A,E,EE,EN,EV
R6008	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J	B,EE,EN,EV	R7068	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R6009	NRSA63J-131X	MG RESISTOR	130Ω 1/16W J	A	R7069	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
					R7070	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	E,EE,EN,EV
					R7071	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
					R7073	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
					R7074	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
					R7077	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local
R7078	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R7079	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R7080	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R7082	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R7084	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7086	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7087	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7088	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7089	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R7090	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R7091	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R7092	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R7093	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R7094	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7102	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7104	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7105	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7124	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7125	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7126	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7140	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7167	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	A,E,EE, EN,EV
R7169	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R7179	QRE141J-103Y	C RESISTOR	10kΩ 1/4W J	
R7192	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7193	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7224	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	A
R7275	QRE141J-101Y	C RESISTOR	100Ω 1/4W J	
R7276	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R7301	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7302	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R7401	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7402	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7403	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7405	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R7513	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R7514	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7515	NRSA63J-132X	MG RESISTOR	1.3kΩ 1/16W J	
R7516	NRSA63J-512X	MG RESISTOR	5.1kΩ 1/16W J	
△ R7517	QRZ9015-4R7X	FUSI RESISTOR	4.7Ω	
R7518	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R7519	NRSA63J-512X	MG RESISTOR	5.1kΩ 1/16W J	
R7520	NRSA63J-512X	MG RESISTOR	5.1kΩ 1/16W J	
R7601	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	B,E,EE, EN,EV
R7602	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	B,E,EE, EN,EV
R7603	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	B,E,EE, EN,EV
R7604	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	B,E,EE, EN,EV
R7605	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	B,E,EE, EN,EV
R7701	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R7702	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R7703	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R7704	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7711	QRE141J-331Y	C RESISTOR	330Ω 1/4W J	
R7712	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7715	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R7716	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
△ R7720	QRZ9015-2R2X	FUSI RESISTOR	2.2Ω	
R7801	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R7802	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R7803	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R7804	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
L1181	QQR0797-002	COIL		
L1281	QQR0797-002	COIL		A,E,EE, EN,EV
L6011	QQL244K-4R7Z	COIL	4.7uH K	
L7024	QQL244K-100Z	COIL	10uH K	
L7501	QQL244K-100Z	COIL	10uH K	
L7701	QQL244K-100Z	COIL	10uH K	
CN601	QGF1205F1-13	CONNECTOR	FFC/FPC (1-13)	B,E,EE, EN,EV
CN611	QGF1205F1-09	CONNECTOR	FFC/FPC (1-9)	A

△ Symbol No.	Part No.	Part Name	Description	Local
CN631	QGF1016C1-17	CONNECTOR	FFC/FPC (1-17)	
CN701	QGF1016C1-05	CONNECTOR	FFC/FPC (1-5)	
CN704	QGB1216J1-18S	CONNECTOR	B-B (1-18)	
CN705	QGF1205C1-11	CONNECTOR	FFC/FPC (1-11)	
CN706	QGA2501F1-12	CONNECTOR	W-B (1-12)	
CN707	QGF1205F1-21	CONNECTOR	FFC/FPC (1-21)	
EP601	QNZ0136-001Z	EARTH PLATE		
J3001	QNB0196-001	SPK TERMINAL		A B,E,EE, EN,EV
J3001	QNB0186-001	SPK TERMINAL		
J4001	QNS0223-001	3.5 JACK		
J6004	QNN0557-002	PIN JACK		A
J6005	QNS0089-001	3.5 JACK		
K4101	NQR0007-002X	FERRITE BEADS		
K4201	NQR0007-002X	FERRITE BEADS		
K4301	NQR0007-002X	FERRITE BEADS		
K6001	QQR0621-001Z	COIL		
K6011	QQR0621-001Z	COIL		
K6091	QQR0621-001Z	COIL		
K7038	QQR0621-001Z	COIL		
K7039	QQR0621-001Z	COIL		
K7275	QQR0621-001Z	COIL		
K7501	QQR0621-001Z	COIL		
K7601	QQR0621-001Z	COIL		B,E,EE, EN,EV
K7701	QQR0621-001Z	COIL		
WC101	QZW0112-002	WIRE CLAMP		
X7601	QAX0263-001Z	CRYSTAL	4.332MHz	B,E,EE, EN,EV
X7801	QAX0416-001Z	C RESONATOR	8.000MHz	

Digital amplifier board

Block No. [0][3]

△ Symbol No.	Part No.	Part Name	Description	Local
IC111	NJM4580M-X	IC		
IC112	NJU7109F3-X	IC		
IC113	SN74AHC1G00V-X	IC		
IC121	NJM4580M-X	IC		
IC122	NJU7109F3-X	IC		
IC123	SN74AHC1G00V-X	IC		
IC131	NJM2115V-W	IC		
△ IC132	STA505-X	IC		
IC301	SN74HCU04ANS-X	IC		
IC302	SN74LV00ANS-X	IC		
△ IC303	NJM78L05A-T	IC		
Q1101	UN211E-X	DIGI TRANSISTOR		
Q1102	UN211E-X	DIGI TRANSISTOR		
Q1103	2SC3661-X	TRANSISTOR		
Q1104	UMY1N-W	TRANSISTOR		
Q1201	UN211E-X	DIGI TRANSISTOR		
Q1202	UN211E-X	DIGI TRANSISTOR		
Q1203	2SC3661-X	TRANSISTOR		
Q1204	UMY1N-W	TRANSISTOR		
Q3002	KTA1267/YG/-T	TRANSISTOR		
Q3003	2SC3928A/QR/-X	TRANSISTOR		
Q3004	2SC3928A/QR/-X	TRANSISTOR		
Q3005	2SC3928A/QR/-X	TRANSISTOR		
Q3006	2SA1530A/QR/-X	TRANSISTOR		
Q3007	UN2112-X	DIGI TRANSISTOR		
D1104	MA152WK-X	SI DIODE		
D1203	UDZS6.8B-X	Z DIODE		
D3001	MA152WK-X	SI DIODE		
D3003	MA152WK-X	SI DIODE		
C1101	QTE1V06-106Z	E CAPACITOR	10uF 35V	
C1102	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C1103	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C1104	NCB31HK-471X	C CAPACITOR	470pF 50V K	
C1105	QTE1H06-475Z	E CAPACITOR	4.7uF 50V	
C1106	QTE1V06-106Z	E CAPACITOR	10uF 35V	
C1107	NCB31HK-122X	C CAPACITOR	1200pF 50V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C1108	NCB31HK-331X	C CAPACITOR	330pF 50V K		C3012	QFVF1HJ-334Z	MF CAPACITOR	0.33uF 50V J	
C1109	NCS31HJ-220X	C CAPACITOR	22pF 50V J		C3013	QETN1EM-107Z	E CAPACITOR	100uF 25V M	
C1110	NCS31HJ-220X	C CAPACITOR	22pF 50V J		C3015	QER61HM-106Z	E CAPACITOR	10uF 50V M	
C1111	NCS31HJ-220X	C CAPACITOR	22pF 50V J		C3016	QER61HM-106Z	E CAPACITOR	10uF 50V M	
C1113	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C3017	QER61HM-106Z	E CAPACITOR	10uF 50V M	
C1114	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		C3018	QER61HM-106Z	E CAPACITOR	10uF 50V M	
C1115	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		C3019	QFVF1HJ-474Z	MF CAPACITOR	0.47uF 50V J	
C1118	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		C3020	QFVF1HJ-474Z	MF CAPACITOR	0.47uF 50V J	
C1123	QTE1V06-106Z	E CAPACITOR	10uF 35V		C3021	QFVF1HJ-474Z	MF CAPACITOR	0.47uF 50V J	
C1124	NCS31HJ-101X	C CAPACITOR	100pF 50V J		C3022	QFVF1HJ-474Z	MF CAPACITOR	0.47uF 50V J	
C1125	QFVF1HJ-684Z	MF CAPACITOR	0.68uF 50V J		C3025	QER61HM-106Z	E CAPACITOR	10uF 50V M	
C1126	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		C3026	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C1127	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		C3027	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C1128	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		C3031	QTE1V06-106Z	E CAPACITOR	10uF 35V	
C1129	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		C3034	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C1130	NCB21HK-104X	C CAPACITOR	0.1uF 50V K						
C1132	NCS31HJ-181X	C CAPACITOR	180pF 50V J		R1101	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
C1133	NCB31HK-471X	C CAPACITOR	470pF 50V K		R1102	NRSA63J-113X	MG RESISTOR	11kΩ 1/16W J	
C1134	NCB31HK-471X	C CAPACITOR	470pF 50V K		R1103	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
C1137	NCB21CK-105X	C CAPACITOR	1uF 16V K		R1104	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C1140	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R1105	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C1141	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R1106	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
C1142	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R1107	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C1143	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R1108	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
C1144	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R1110	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
C1201	QTE1V06-106Z	E CAPACITOR	10uF 35V		R1111	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
C1202	NCB31HK-222X	C CAPACITOR	2200pF 50V K		R1112	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
C1203	NCB31HK-222X	C CAPACITOR	2200pF 50V K		R1113	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
C1204	NCB31HK-471X	C CAPACITOR	470pF 50V K		R1115	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C1205	QTE1H06-475Z	E CAPACITOR	4.7uF 50V		R1116	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C1206	QTE1V06-106Z	E CAPACITOR	10uF 35V		R1117	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
C1207	NCB31HK-122X	C CAPACITOR	1200pF 50V K		R1118	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C1208	NCB31HK-331X	C CAPACITOR	330pF 50V K		R1119	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C1209	NCS31HJ-220X	C CAPACITOR	22pF 50V J		R1120	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C1210	NCS31HJ-220X	C CAPACITOR	22pF 50V J		R1122	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C1211	NCS31HJ-220X	C CAPACITOR	22pF 50V J		R1123	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C1213	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		R1124	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C1214	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		△ R1125	NRS016J-470X	MG RESISTOR	47Ω 1W J	
C1215	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		△ R1126	NRS016J-470X	MG RESISTOR	47Ω 1W J	
C1218	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		R1127	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C1222	QTE1C06-336Z	E CAPACITOR	33uF 16V		R1129	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
C1223	QTE1V06-106Z	E CAPACITOR	10uF 35V		R1131	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
C1224	NCS31HJ-101X	C CAPACITOR	100pF 50V J		R1132	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
C1225	QFVF1HJ-684Z	MF CAPACITOR	0.68uF 50V J		R1133	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C1226	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		R1134	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
C1227	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		R1135	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C1228	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		R1136	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
C1229	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		R1137	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C1230	NCB21HK-104X	C CAPACITOR	0.1uF 50V K		R1142	NRSA02J-101X	MG RESISTOR	100Ω 1/10W J	
C1232	NCS31HJ-181X	C CAPACITOR	180pF 50V J		R1143	NRSA02J-101X	MG RESISTOR	100Ω 1/10W J	
C1233	NCB31HK-471X	C CAPACITOR	470pF 50V K		R1201	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
C1234	NCB31HK-471X	C CAPACITOR	470pF 50V K		R1202	NRSA63J-113X	MG RESISTOR	11kΩ 1/16W J	
C1237	NCB21CK-105X	C CAPACITOR	1uF 16V K		R1203	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
C1240	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R1204	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C1241	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R1205	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C1242	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R1206	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
C1243	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R1207	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C1244	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R1208	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
C1301	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		R1210	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
C1302	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1211	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
C1303	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1212	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
C1304	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1213	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
C1305	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R1215	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C1306	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R1216	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
△ C1307	QTMN1EM-477Z	E CAPACITOR	470uF 25V M		R1217	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
C1308	QTE1E06-226Z	E CAPACITOR	22uF 25V		R1218	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C1309	NFV41HJ-333X	MPPS CAPACITOR	0.033uF 50V J		R1219	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C1310	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1220	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C3002	NDC31HJ-471X	C CAPACITOR	470pF 50V J		R1222	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C3003	NDC31HJ-471X	C CAPACITOR	470pF 50V J		R1223	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C3004	NDC31HJ-471X	C CAPACITOR	470pF 50V J		R1224	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C3005	NDC31HJ-471X	C CAPACITOR	470pF 50V J		△ R1225	NRS016J-470X	MG RESISTOR	47Ω 1W J	
C3006	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		△ R1226	NRS016J-470X	MG RESISTOR	47Ω 1W J	
C3007	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		R1227	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C3008	NCB31HK-331X	C CAPACITOR	330pF 50V K		R1228	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C3009	NCB31HK-331X	C CAPACITOR	330pF 50V K		R1229	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
C3010	NCS31HJ-470X	C CAPACITOR	47pF 50V J		R1231	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
C3011	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R1232	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R1233	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		IC505	K4S641632H-UC75	IC		
R1234	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		IC505	or K4S641632H-TC75	IC(DIGITAL)		
R1235	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		IC505	or K4S641632F-TC60	IC		
R1236	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		IC505	or K4S641632F-TC75	IC(DIGITAL)		
R1237	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		IC509	SA16M90TFIR1	IC		
R1242	NRSA02J-101X	MG RESISTOR	100Ω 1/10W J		IC701	AK4384VT-X	IC		
R1243	NRSA02J-101X	MG RESISTOR	100Ω 1/10W J		IC701	or AK4384ET-X	IC		
R1301	NRSA63F-102X	MG RESISTOR	1kΩ 1/16W F						
R1302	NRSA63F-102X	MG RESISTOR	1kΩ 1/16W F		Q101	KTA1001/YI-X	TRANSISTOR		
R1303	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		Q101	or 2SB1424/R/-W	TRANSISTOR		
R1304	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		Q102	2SC4617/R/-X	TRANSISTOR		
R1308	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		Q103	KTA1001/YI-X	TRANSISTOR		
R1309	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J		Q103	or 2SB1424/R/-W	TRANSISTOR		
R1310	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J		Q104	2SC4617/R/-X	TRANSISTOR		
R1311	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J		Q105	UN2119-X	TRANSISTOR		
R3003	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J						
R3004	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		C101	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R3005	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J		C102	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R3006	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		C103	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R3007	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J		C104	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R3008	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		C105	NEA70JM-476X	E CAPACITOR	47uF 6.3V M	
R3009	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		C106	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
△ R3010	QRK126J-271X	UNF C RESISTOR	270Ω 1/2W J		C107	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R3011	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		C108	NEA70JM-476X	E CAPACITOR	47uF 6.3V M	
R3012	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		C111	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R3013	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		C204	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R3014	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		C205	NCB31HK-271X	C CAPACITOR	270pF 50V K	
R3015	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		C206	NDC31HJ-151X	C CAPACITOR	150pF 50V J	
R3016	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		C208	NCB31HK-561X	C CAPACITOR	560pF 50V K	
R3017	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		C211	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
R3018	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		C212	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
R3019	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		C217	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
△ R3020	QRJ146J-221X	UNF C RESISTOR	220Ω 1/4W J	A.E.EE, EN, EV	C251	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
△ R3022	QRK126J-271X	UNF C RESISTOR	270Ω 1/2W J		C253	NCB31HK-561X	C CAPACITOR	560pF 50V K	
R3023	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		C255	NCB31CK-153X	C CAPACITOR	0.015uF 16V K	
R3024	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		C256	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R3025	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		C257	NCB31HK-822X	C CAPACITOR	8200pF 50V K	
R3027	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		C258	NCB31CK-153X	C CAPACITOR	0.015uF 16V K	
R3029	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		C259	NCB31CK-153X	C CAPACITOR	0.015uF 16V K	
R3031	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		C260	NCB31EK-223X	C CAPACITOR	0.022uF 25V K	
R3032	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		C261	NCB31EK-223X	C CAPACITOR	0.022uF 25V K	
R3033	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		C262	NCB31EK-223X	C CAPACITOR	0.022uF 25V K	
R3034	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		C264	NEA70JM-227X	E CAPACITOR	220uF 6.3V M	
R3035	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		C301	NEA70GM-227X	E CAPACITOR	220uF 4V M	
R3036	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J		C302	NEA70GM-476X	E CAPACITOR	47uF 4V M	
R3037	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		C303	NEA70GM-476X	E CAPACITOR	47uF 4V M	
					C304	NCB31CK-105X	C CAPACITOR	1uF 16V K	
L1101	QQLZ037-220	COIL	22uH		C305	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
L1102	QQLZ037-220	COIL	22uH		C306	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
L1201	QQLZ037-220	COIL	22uH		C307	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
L1202	QQLZ037-220	COIL	22uH		C308	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
CN310	QGA2501F1-04	CONNECTOR	W-B (1-4)		C309	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
CN311	QGA2501F1-06	CONNECTOR	W-B (1-6)		C310	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
CN312	QGA2501F1-05	CONNECTOR	W-B (1-5)		C311	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
CN313	QGA2501F1-06	CONNECTOR	W-B (1-6)		C312	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
K3001	NQR0389-003X	FERRITE BEADS			C313	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
K3002	NQR0389-003X	FERRITE BEADS			C314	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
K3003	NQR0389-003X	FERRITE BEADS			C315	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
K3004	NQR0389-003X	FERRITE BEADS			C316	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
K3005	NQR0389-003X	FERRITE BEADS			C317	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
X3001	QAX0734-001	C RESONATOR	400.00kHz		C318	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
X3002	QAX0735-001	C RESONATOR	420.00kHz		C319	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
					C320	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
					C321	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
					C322	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
					C323	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
					C324	NCB21CK-105X	C CAPACITOR	1uF 16V K	
					C325	NDC31HJ-180X	C CAPACITOR	18pF 50V J	
					C326	NDC31HJ-150X	C CAPACITOR	15pF 50V J	
					C327	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
					C330	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
					C331	NCB31CK-333X	C CAPACITOR	0.033uF 16V K	
					C332	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
					C333	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
					C334	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
					C335	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
					C337	NCB31CK-183X	C CAPACITOR	0.018uF 16V K	
					C338	NCB31HK-562X	C CAPACITOR	5600pF 50V K	

DVD module board

Block No. [0][4]

△ Symbol No.	Part No.	Part Name	Description	Local
IC201	LA6502-X	IC		
IC301	MN2DS0003AA-H	IC		
IC302	LM1117MP-ADJ-X	IC		
IC453	S-80827CNNB-W	IC		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C339	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R254	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J	
C340	NCB21CK-105X	C CAPACITOR	1uF 16V K		R255	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C341	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		R257	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C347	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R259	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C348	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R302	NRSA63J-240X	MG RESISTOR	24kΩ 1/16W J	
C349	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R303	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C350	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R306	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C356	NCB21CK-105X	C CAPACITOR	1uF 16V K		R307	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C359	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R308	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C371	NCB21CK-105X	C CAPACITOR	1uF 16V K		R309	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C374	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R310	NRS125J-R47X	MG RESISTOR	0.47kΩ 1/2W J	
C391	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R312	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C392	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R313	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C455	NCB31CK-103X	C CAPACITOR	0.01uF 16V K		R314	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C505	NDC31HJ-330X	C CAPACITOR	33pF 50V J		R315	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C506	NDC31HJ-330X	C CAPACITOR	33pF 50V J		R316	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C507	NDC31HJ-330X	C CAPACITOR	33pF 50V J		R317	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C508	NDC31HJ-330X	C CAPACITOR	33pF 50V J		R318	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
C509	NDC31HJ-330X	C CAPACITOR	33pF 50V J		R319	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C510	NDC31HJ-330X	C CAPACITOR	33pF 50V J		R320	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C547	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R322	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C551	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R325	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
C552	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R326	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
C553	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M		R333	NRSA63J-163X	MG RESISTOR	16kΩ 1/16W J	
C554	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R334	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
C555	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R335	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
C556	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R336	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
C557	NCF31AZ-105X	C CAPACITOR	1uF 10V Z		R337	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
C558	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R338	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C559	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R339	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C701	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R340	NRSA63D-303X	MG RESISTOR	30kΩ 1/16W D	
C704	NEA70JM-227X	E CAPACITOR	220uF 6.3V M		R341	NRSA63D-362X	MG RESISTOR	3.6kΩ 1/16W D	
C706	NEA71CM-106X	E CAPACITOR	10uF 16V M		R342	NRSA63D-222X	MG RESISTOR	2.2kΩ 1/16W D	
C707	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R343	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C721	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R344	NRSA63J-6R8X	MG RESISTOR	6.8Ω 1/16W J	
C902	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R345	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
C903	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R351	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
C904	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R352	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
C906	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R357	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R101	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R358	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R102	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R361	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R103	NRSA63J-243X	MG RESISTOR	24kΩ 1/16W J		R362	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R104	NRSA63J-303X	MG RESISTOR	30kΩ 1/16W J		R363	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
R105	NRS125J-180X	MG RESISTOR	18Ω 1/2W J		R372	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R106	NRSA63J-2R2X	MG RESISTOR	2.2Ω 1/16W J		R373	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R107	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R378	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R108	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R379	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R109	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		R384	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R110	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R385	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R111	NRSA63J-243X	MG RESISTOR	24kΩ 1/16W J		R390	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R112	NRSA63J-303X	MG RESISTOR	30kΩ 1/16W J		R391	NAD0025-103X	N THERMISTOR	10kΩ	
R113	NRS125J-270X	MG RESISTOR	27Ω 1/2W J		R392	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R114	NRSA63J-2R2X	MG RESISTOR	2.2Ω 1/16W J		R393	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R115	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R394	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R116	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R395	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
R117	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		R457	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R118	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R458	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R119	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R501	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R120	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R502	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R122	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R503	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R123	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R551	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R125	NRS125J-1R0X	MG RESISTOR	1Ω 1/2W J		R553	NQR0129-002X	FERRITE BEADS		
R126	NRSA02J-101X	MG RESISTOR	100Ω 1/10W J		R554	NQR0129-002X	FERRITE BEADS		
R128	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R555	NQR0129-002X	FERRITE BEADS		
R204	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R556	NQR0129-002X	FERRITE BEADS		
R205	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R557	NQR0129-002X	FERRITE BEADS		
R206	NRSA63J-303X	MG RESISTOR	30kΩ 1/16W J		R558	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R207	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R701	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R208	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R702	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R213	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R710	NQR0129-002X	FERRITE BEADS		
R214	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R711	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R215	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R712	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R219	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		R713	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R220	NRSA63J-243X	MG RESISTOR	24kΩ 1/16W J		R716	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R221	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		R718	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R251	NRS125J-R47X	MG RESISTOR	0.47Ω 1/2W J		R719	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R252	NRSA63J-2R2X	MG RESISTOR	2.2Ω 1/16W J		R909	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
					R911	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	

△ Symbol No.	Part No.	Part Name	Description	Local
L501	NQL044K-100X	COIL	0.26Ω 10uH K	
CN101	QGF0523F1-24W	CONNECTOR	FFC/FPC (1-24)	
CN201	QGF1016F2-08W	CONNECTOR	FFC/FPC (1-8)	
CN501	QGF1016F2-19W	CONNECTOR	FFC/FPC (1-19)	
CN503	QGF1016F2-17W	CONNECTOR	FFC/FPC (1-17)	
K101	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K102	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
K301	NQR0354-001X	FERRITE BEADS		
K302	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
K303	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
K304	NQR0502-001X	FERRITE BEADS		
K501	NQR0129-002X	FERRITE BEADS		
K551	NQR0129-002X	FERRITE BEADS		
K552	NQR0129-002X	FERRITE BEADS		
K553	NQR0129-002X	FERRITE BEADS		
K554	NQR0129-002X	FERRITE BEADS		
K555	NQR0022-005X	FERRITE BEADS		
K556	NQR0129-002X	FERRITE BEADS		
X351	NAX0550-001X	CRYSTAL	27.000MHz	

DVD loading 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		

<MEMO>



Packing materials and accessories parts list

No additional / supplemental order of WARRANTY CARDS are available

B,E,EN,EV,EE Ver.

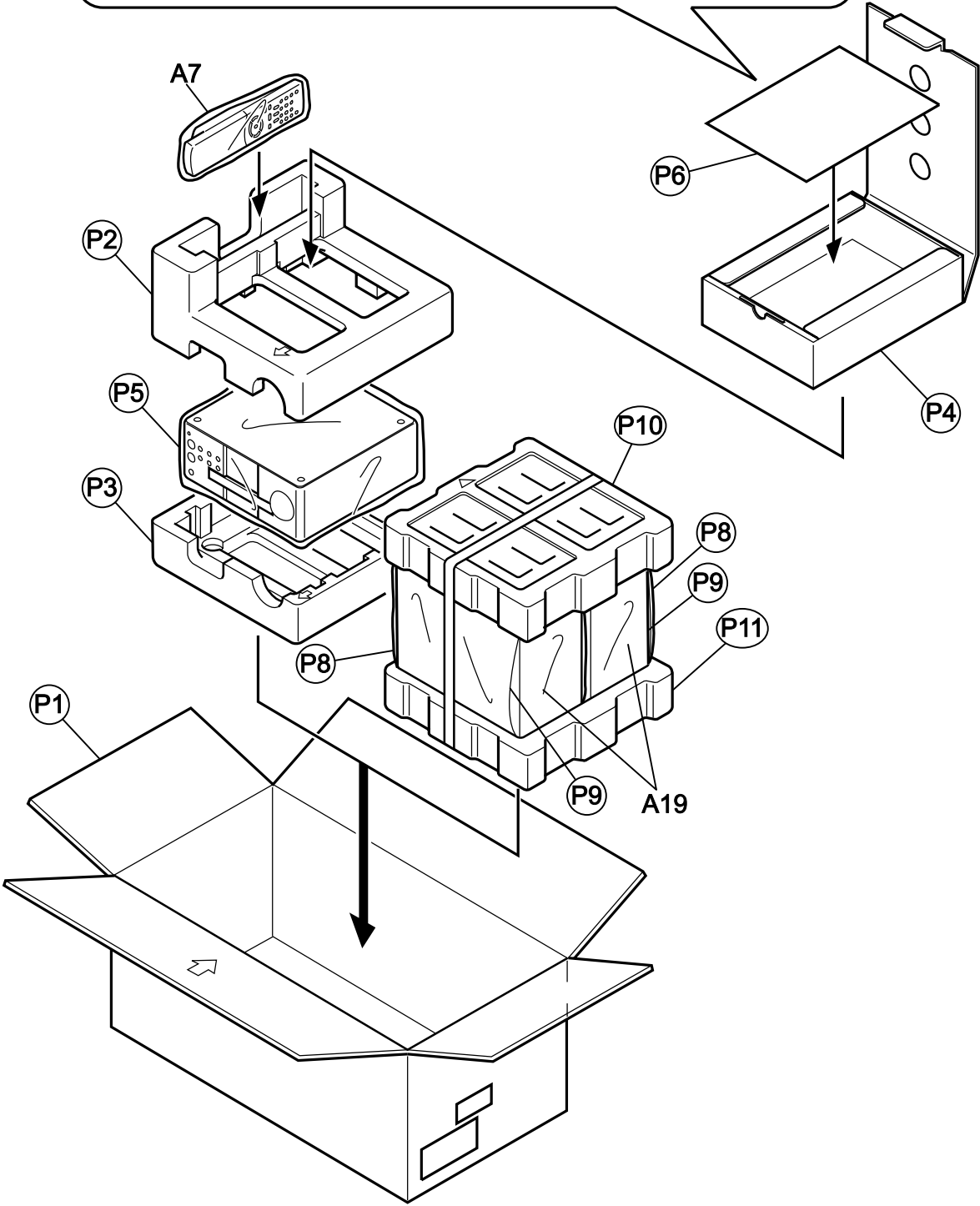
A1, A2, A3, A4,

A5, A6, A8, A9, A18

A Ver.

A10, A11, A12, A13,

A14, A15, A16, A17



Packing and Accessories

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

△	Symbol No.	Part No.	Part Name	Description	Local
	A 1	LVT1284-004A	INST BOOK	ENG	B
	A 1	LVT1284-005A	INST BOOK	GER,FRE,DUT	E
	A 1	LVT1284-016A	INST BOOK	RUS	EE
	A 1	LVT1284-006A	INST BOOK	GER,FRE,SPA,ITA,SWE,FIN,DAN	EN
	A 1	LVT1284-007A	INST BOOK	POL,HUN,CZE	EV
	A 2	QAL0457-001	ANT.WIRE		B,E,EE,EN,EV
	A 3	QAL0476-001	AM LOOP ANT		B,E,EE,EN,EV
	A 4	-----	WARRANTY CARD	BT-54023-1	B,E,EE,EN,EV
△	A 5	QMPL150-183-JC	POWER CORD(EU)	1.83m BLACK	E,EE,EN,EV
	A 6	QAM0530-001	SPEAKER CORD		B,E,EE,EN,EV
	A 7	RM-SEEXP1A	REMOCON UNIT		A
	A 7	RM-SEEXA1R-S	REMOCON UNIT		B,E,EE,EN,EV
	A 8	-----	BATTERY	(x2)	B,E,EE,EN,EV
	A 9	VNA3000-204	REGISTER CARD		B
	A 10	LVT1284-012A	INST BOOK		A
	A 11	QAL0457-001	ANT.WIRE		A
	A 12	QAL0476-001	AM LOOP ANT		A
	A 13	-----	WARRANTY CARD	BT-56012-1	A
△	A 14	QMPH010-183-JD	POWER CORD(EU)	1.83m BLACK	A
	A 15	QAM0530-001	SPEAKER CORD		A
	A 16	-----	BATTERY	(x2)	A
	A 17	QAM0216-001	SIGNAL CORD		A
△	A 18	QMPP060-183-JD	POWER CORD(EU)	1.83m BLACK	B
	A 19	SPEXA1K-SPBOX	SPEAKER BOX	(x2)	
	P 1	LV34466-007A	CARTON		A
	P 1	LV34466-014A	CARTON		EE
	P 1	LV34466-003A	CARTON		B,E,EN,EV
	P 2	LV10846-001A	CUSHION TOP		
	P 3	LV10847-001A	CUSHION BOTTOM		
	P 4	LV21595-001A	CARTON SPACER		
	P 5	QPC03505015P	POLY BAG	35cm x 50cm	
	P 6	QPA02503505P	POLY BAG	25cm x 35cm	
	P 8	8500051931	POLY BAG	(x2)	
	P 9	8500048041	MIRROR MAT	(x2)	
	P 10	8000050401	CUSHION(TOP)		
	P 11	8000050411	CUSHION(BOT)		