

JVC

SERVICE MANUAL

CD RECEIVER

KD-LH401

Area suffix

E ----- Continental Europe
EX ----- Central Europe

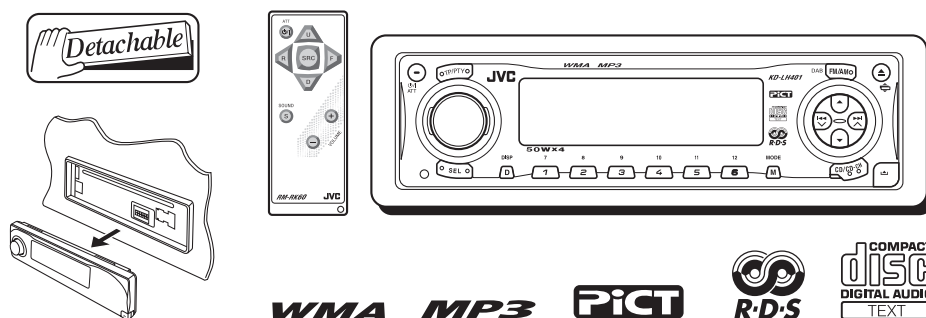


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SPECIFICATION

AUDIO AMPLIFIER SECTION

Maximum Power Output	Front	50 W per channel
	Rear	50 W per channel
Continuous Power Output (RMS)	Front	19 W per channel into 4 Ω , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
	Rear	19 W per channel into 4 Ω , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
Load Impedance		4 Ω (4 Ω to 8 Ω allowance)
Equalizer Control Range	Frequencies	60 Hz, 150 Hz, 400 Hz,, 1 kHz, 2.4 kHz, 6 kHz, 12 kHz
	Level	± 10 dB
Frequency Response		40 Hz to 20 000 Hz
Signal-to-Noise Ratio		70 dB
Line-Out Level/Impedance		5.0 V/20 k Ω load (full scale)
Output Impedance		1 k Ω
Other terminals		SUBWOOFER
		Changer control
		Steering wheel remote input

TUNER SECTION

Frequency Range	FM	87.5 MHz to 108.0 MHz
	AM	(MW) 522 kHz to 1 620 kHz
		(LW) 144 kHz to 279 kHz
[FM Tuner]	Usable Sensitivity	11.3 dBf (1.0 μ V/75 Ω)
	50 dB Quieting Sensitivity	16.3 dBf (1.8 μ V/75 Ω)
	Alternate Channel Selectivity (400 kHz)	65 dB
	Frequency Response	40 Hz to 15 000 Hz
	Stereo Separation	30 dB
	Capture Ratio	1.5 dB
[MW Tuner]	Sensitivity	20 μ V
	Selectivity	35 dB
[LW Tuner]	Selectivity	50 μ V

CD PLAYER SECTION

Type		Compact disc player
Signal Detection System		Non-contact optical pickup (semiconductor laser)
Number of channels		2 channels (stereo)
Frequency Response		5 Hz to 20 000 Hz
Dynamic Range		96 dB
Signal-to-Noise Ratio		98 dB
Wow and Flutter		Less than measurable limit
MP3 (MPEG1/2 Audio Layer 3)	Max. Bit Rate	320 Kbps
WMA (Windows Media Audio)	Max. Bit Rate	192 Kbps

GENERAL

Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)
Grounding System		Negative ground
Allowable Operating Temperature		0°C to +40°C
Dimensions (W \times H \times D)	Installation Size (approx.)	182 mm \times 52 mm \times 159 mm
	Panel Size (approx.)	188 mm \times 58 mm \times 12 mm
Mass (approx.)		1.6 kg (excluding accessories)

Design and specifications are subject to change without notice.

SECTION 1 PRECAUTION

1.1 Safety Precautions



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 performing repair of this system.



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

1.2 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.

1.2.1 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.

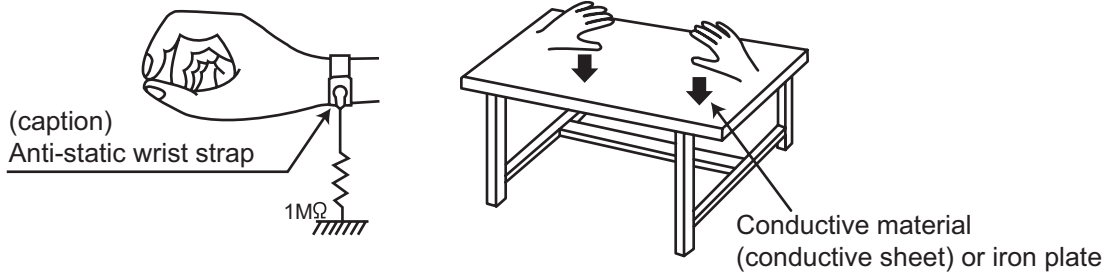
Be careful to use proper grounding in the area where repairs are being performed.

(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.

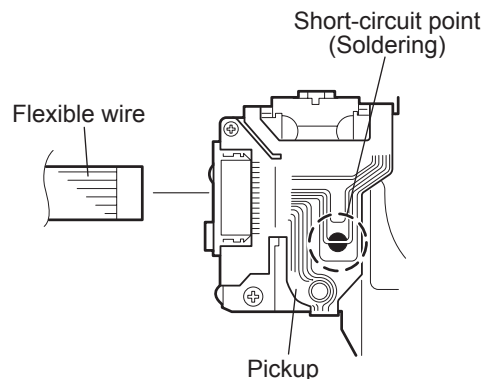
1.3 Handling the traverse unit (optical pickup)

- (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.

1.4 Attention when traverse unit is decomposed

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

- Apply solder to the short land before the flexible wire is disconnected from the connector on the pickup unit. (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 after connecting the flexible wire.



1.5 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.

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

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

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL

CLASS 1
LASER PRODUCT

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

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

VARNING : Synlig och osynlig laserstråling när den öppnas och spärren är urkopplad. Betrakta ej strålen. (s)

VARO : Avattaessa ja suojalukitus ohitettuna tai viallisena olet alltiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi. (f)

SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

This service manual does not describe SPECIFIC SERVICE INSTRUCTIONS.

SECTION 3 DISASSEMBLY

3.1 Main body section

3.1.1 Removing the front panel assembly

(See Fig.1)

- (1) Push the detach button in the lower right part of the front panel assembly.
- (2) Remove the front panel assembly.

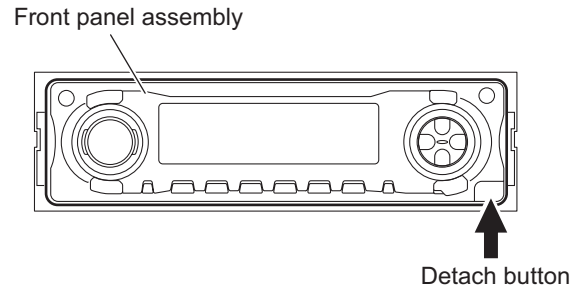
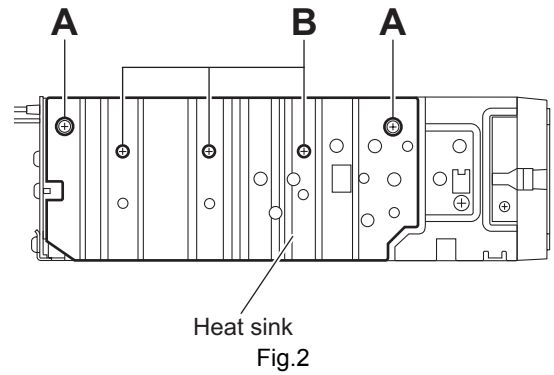


Fig.1

3.1.2 Removing the heat sink

(See Fig.2)

- (1) From the left side of the main body, remove the two screws **A** and three screws **B** attaching the heat sink.



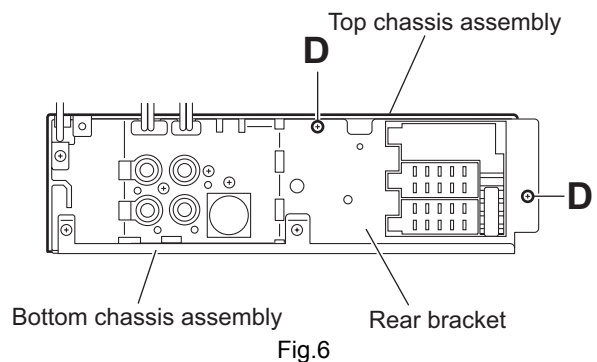
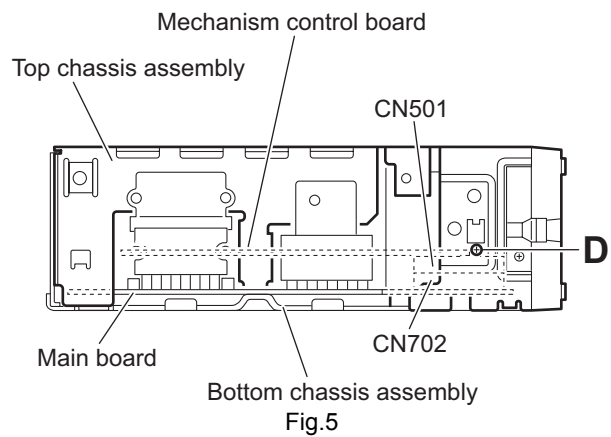
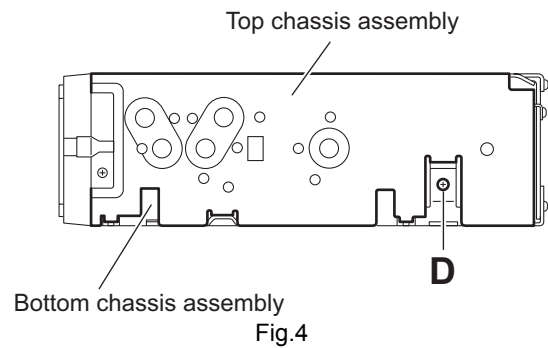
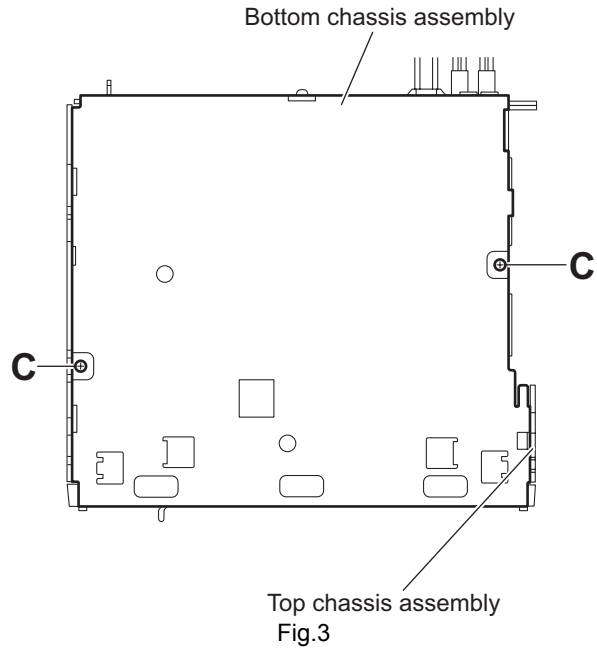
3.1.3 Removing the top chassis assembly (See Figs.3 to 6)

- Prior to performing the following procedures, remove the heat sink.

Reference:

Remove the front panel assembly as required.

- (1) From the bottom side of the main body, remove the two screws **C** attaching the top chassis assembly to the bottom chassis assembly. (See Fig.3.)
- (2) From the both and rear sides of the main body, remove the four screws **D** attaching the top chassis assembly to the bottom chassis assembly. (See Figs.4 to 6.)
- (3) Lift the top chassis assembly in the direction of the arrow, disconnect the connector **CN501** on the mechanism control board from the connector **CN702** on the main board. (See Figs.5 and 6.)
- (4) Take out the top chassis assembly from the bottom chassis assembly.



3.1.4 Removing the front chassis (See Figs.7 and 8)

- Prior to performing the following procedure, remove the front panel assembly, heat sink and top chassis assembly.
(1) From the both sides of the top chassis assembly, remove the two screws **E** attaching the front chassis.

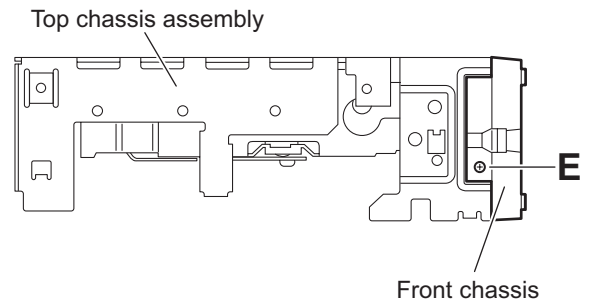


Fig.7

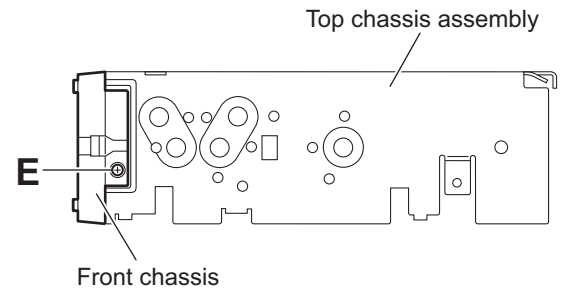


Fig.8

3.1.5 Removing the mechanism control board (See Fig.9)

- Prior to performing the following procedures, remove the front panel assembly, heat sink and top chassis assembly.
(1) Disconnect the card wire from the connector [CN601](#) on the mechanism control board.
(2) Remove the five screws **F** attaching the mechanism control board.
(3) Release the joints **a** and **b**, remove the mechanism control board.

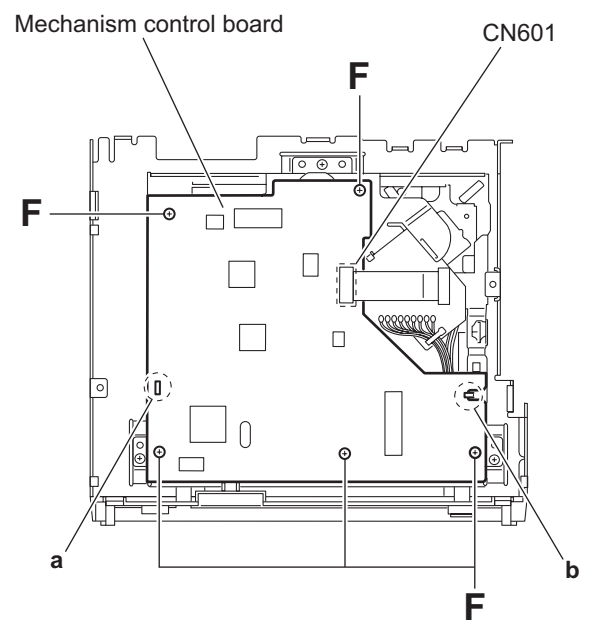


Fig.9

3.1.6 Removing the CD mechanism assembly (See Fig.10)

- Prior to performing the following procedures, remove the front panel assembly, heat sink and top chassis assembly.

Reference:

Remove the mechanism control board as required.

- (1) From the inside of the top chassis assembly, remove the three screws **G** attaching the CD mechanism assembly.
- (2) Take out the CD mechanism assembly from the top chassis.

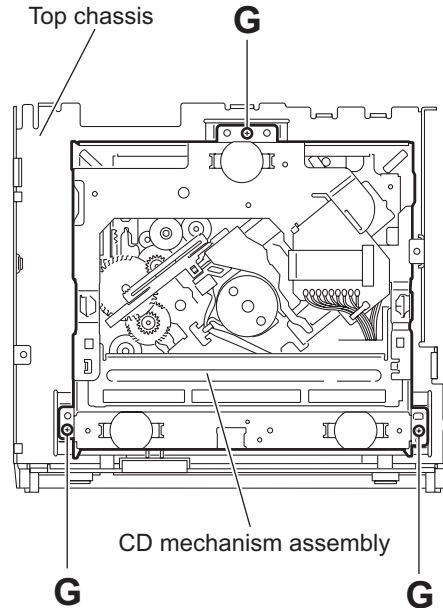


Fig.10

3.1.7 Removing the main board (See Figs.11 and 12)

- Prior to performing the following procedures, remove the front panel assembly, heat sink and top chassis assembly.

- (1) From the rear side of the bottom chassis assembly, remove the two screws **H** attaching the rear bracket to the bottom chassis assembly. (See Fig.11.)
- (2) From the top side of the bottom chassis assembly, remove the two screws **J** attaching the main board to the bottom chassis assembly. (See Fig.12.)
- (3) Release the stopper of the connector [CN701](#) on the main board in an upward direction, disconnect the card wire from the connector [CN701](#). (See Fig.12.)
- (4) Disconnect the wire from the connector of the gear bracket unit. (See Fig.12.)
- (5) Disconnect the wire from the connector [CN951](#) on the main board. (See Fig.12.)

Reference:

After connecting the wires, fix the wires with the wire holders.

- (6) Take out the main board from the bottom chassis assembly.

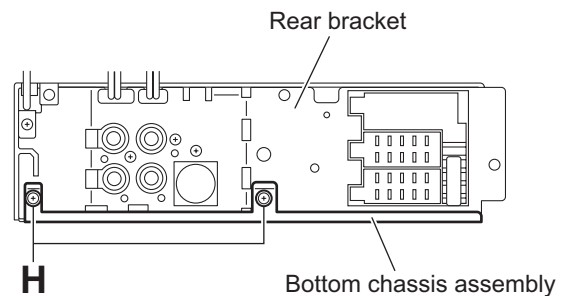


Fig.11

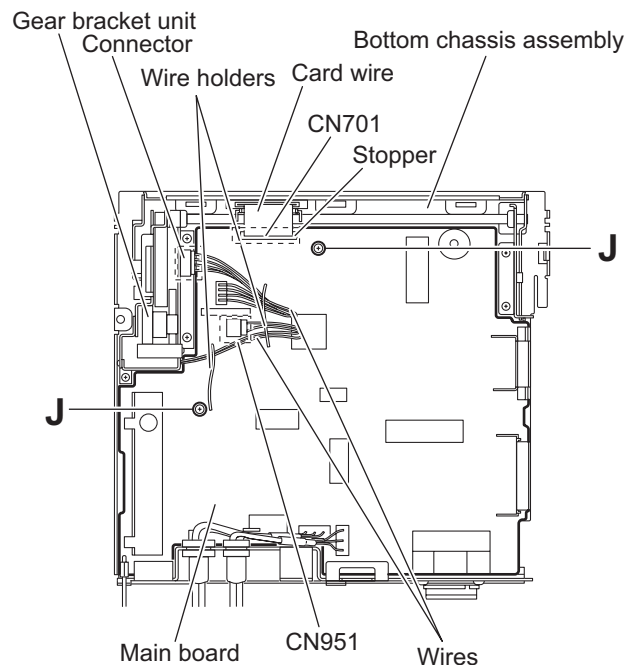


Fig.12

3.1.8 Removing the rear bracket
(See Fig.13)

- Prior to performing the following procedures, remove the front panel assembly, heat sink, top chassis assembly and main board.

- (1) From the rear side of the main board, remove the wires from the rear bracket in the direction of the arrow.
- (2) Remove the two screws **K** and screw **L** attaching the rear bracket to the main board.

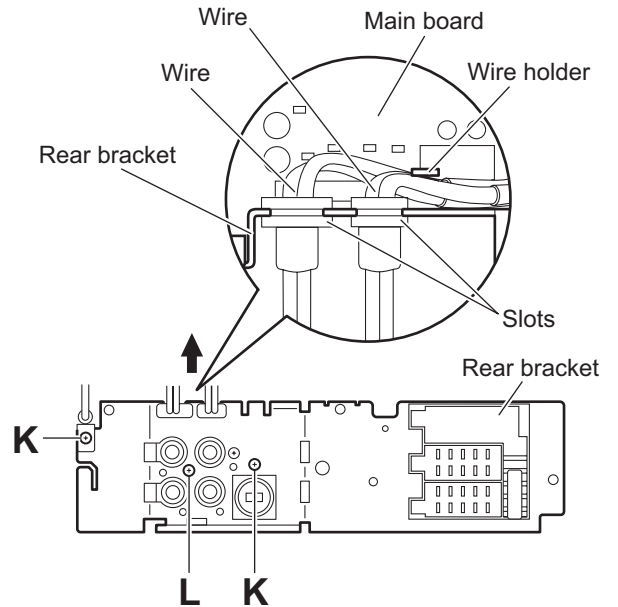


Fig.13

3.1.9 Removing the gear bracket unit
(See Fig.14.)

- Prior to performing the following procedures, remove the front panel assembly, heat sink, top chassis assembly and main board.

- (1) From the top side of the bottom chassis assembly, remove the screw **M** attaching the FPC guide to the bottom chassis.
- (2) Remove the five screws **N** attaching the gear bracket unit to the bottom chassis.

Reference:

When attaching the screws **M** and **N**, apply a locking agent them.

- (3) Take out the gear bracket unit from the bottom chassis.

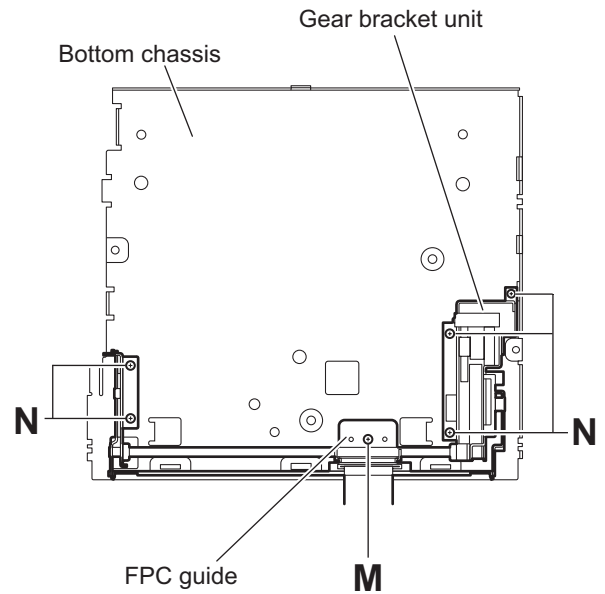


Fig.14

3.1.10 Removing the front board
(See Figs.15 to 18)

- Prior to performing the following procedures, remove the front panel assembly.
 - (1) From the rear side of the front panel assembly, remove the four screws **P** attaching the rear cover assembly to the front panel assembly. (See Fig.15.)
 - (2) Release the twelve joints **c** of the front panel assembly and remove the rear cover assembly. (See Fig.16.)
 - (3) From the left side of the front panel assembly, pull out the knob in the direction of the arrow 2 while pulling the front board in the direction of the arrow 1. (See Fig.17.)
 - (4) Take out the front board from the front panel assembly. (See Fig.18.)

Note:

When removing the rear cover assembly and front board, be careful not to lose the comp. spring. (See Fig.18.)

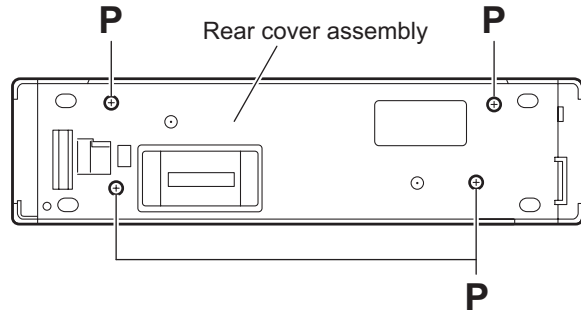


Fig.15

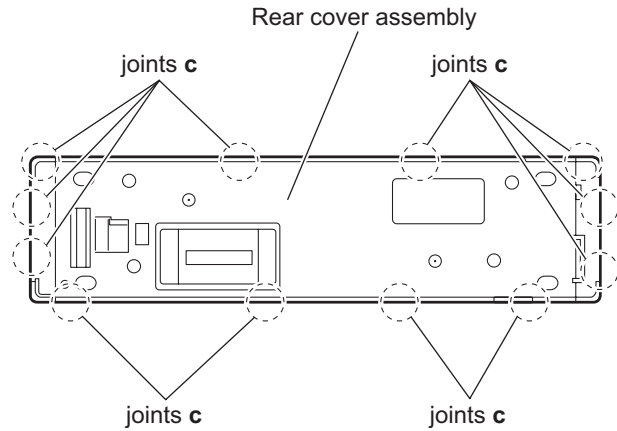


Fig.16

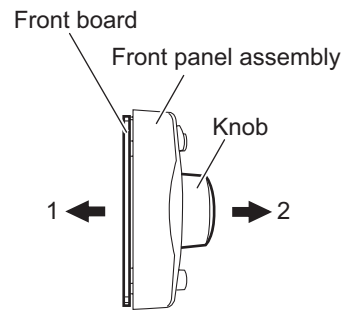


Fig.17

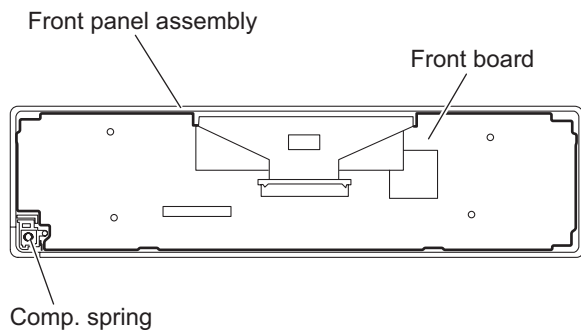


Fig.18

3.2 CD Mechanism section

3.2.1 Removing the top cover

(See Figs.1 and 2)

- (1) Remove the four screws **A** on the both side of the body.
- (2) Lift the front side of the top cover and move the top cover backward to release the two joints **a**.

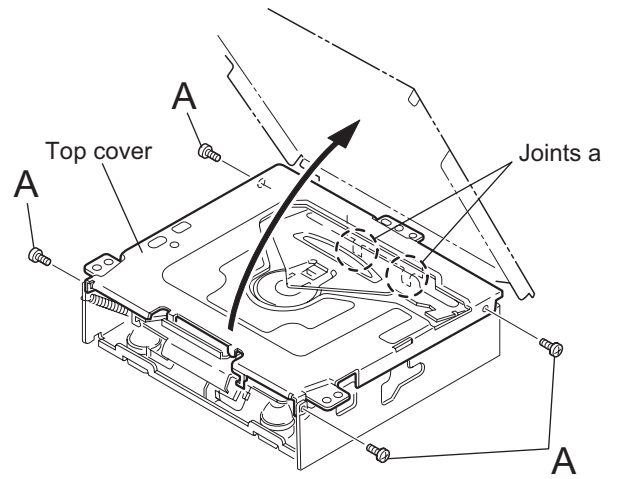


Fig.1

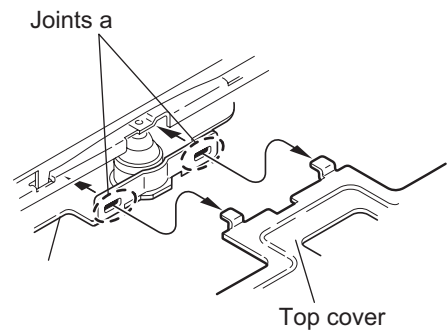


Fig.2

3.2.2 Removing the connector board (See Figs.3 to 5)

CAUTION:

Before disconnecting the flexible wire from the pickup, solder the short-circuit point on the pickup. No observance of this instruction may cause damage of the pickup.

- (1) Remove the screw **B** fixing the connector board.
- (2) Solder the short-circuit point on the pickup.
- (3) Disconnect the flexible wire from the pickup.
- (4) Move the connector board in the direction of the arrow to release the two joints **b**.
- (5) Unsolder the wires on the connector board if necessary.

CAUTION:

Unsolder the short-circuit point after reassembling.

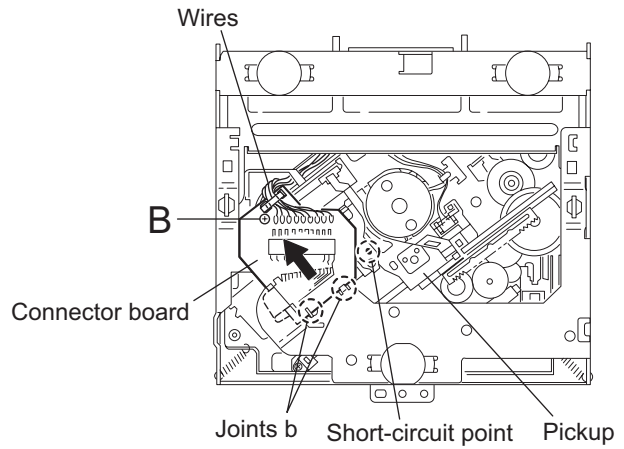


Fig.3

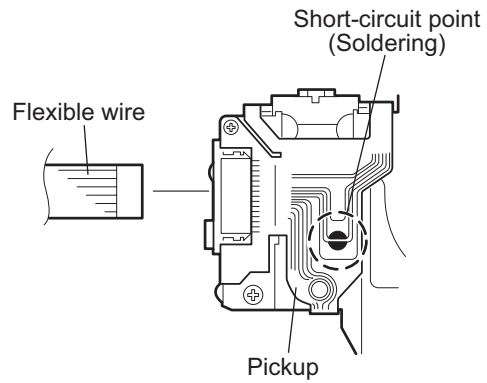


Fig.4

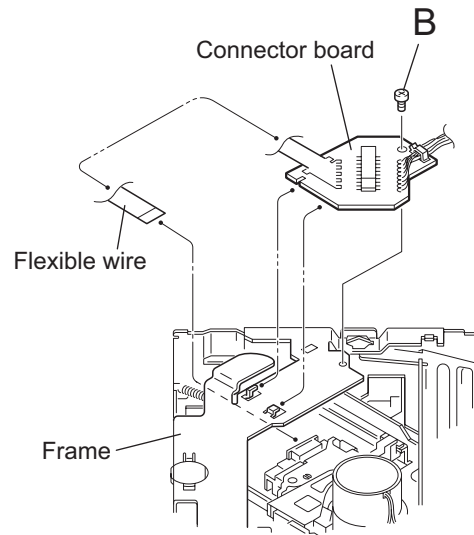


Fig.5

3.2.3 Removing the DET switch (See Figs.6 and 7)

- (1) Extend the two tabs **c** of the feed sw. holder and pull out the switch.
- (2) Unsolder the DET switch wire if necessary.

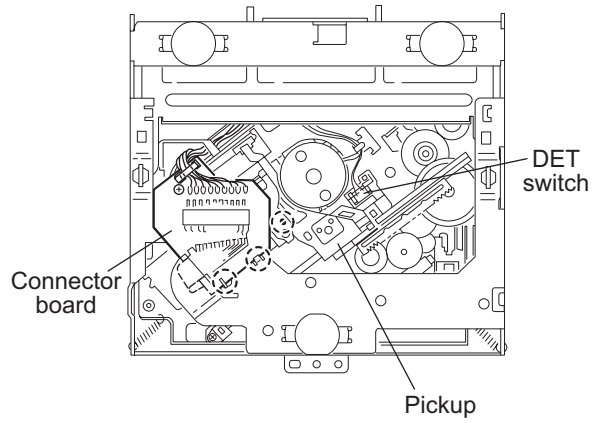


Fig.6

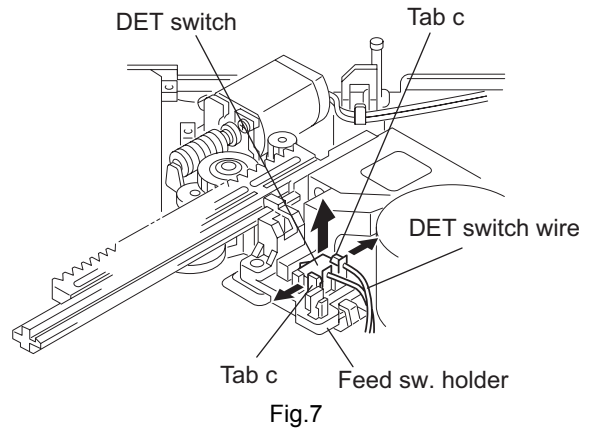


Fig.7

3.2.4 Removing the chassis unit (See Figs.8 and 9)

- Prior to performing the following procedure, remove the top cover and connector board.
(1) Remove the two suspension springs (L) and (R) attaching the chassis unit to the frame.

CAUTION:

- The shape of the suspension spring (L) and (R) are different. Handle them with care.
- When reassembling, make sure that the three shafts on the underside of the chassis unit are inserted to the dampers certainly.

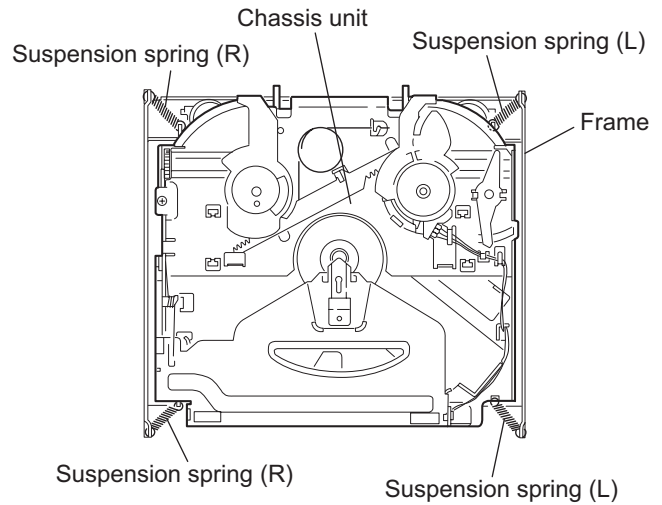


Fig.8

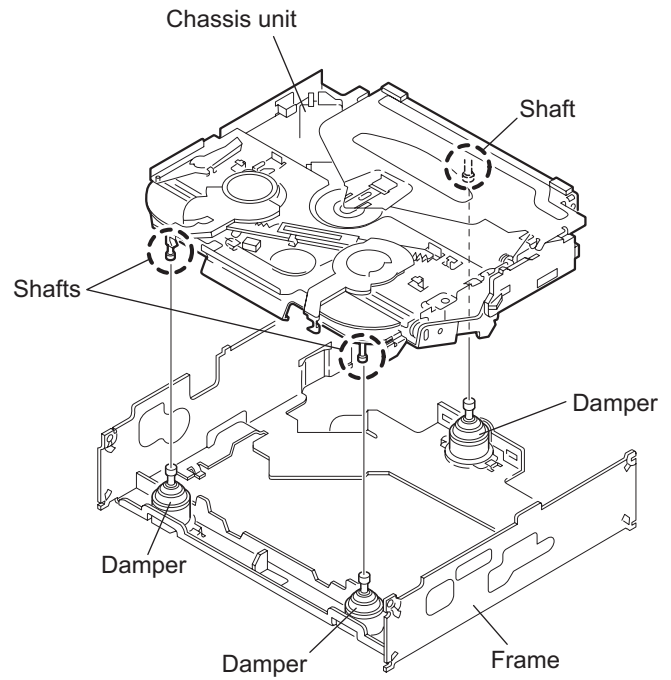


Fig.9

3.2.5 Removing the clamper assembly (See Figs.10 and 11)

- Prior to performing the following procedure, remove the top cover.
 - (1) Remove the clamper arm spring.
 - (2) Move the clamper assembly in the direction of the arrow to release the two joints d.

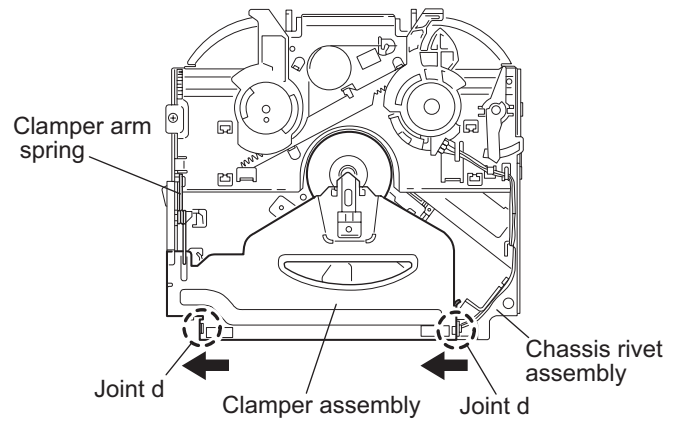


Fig.10

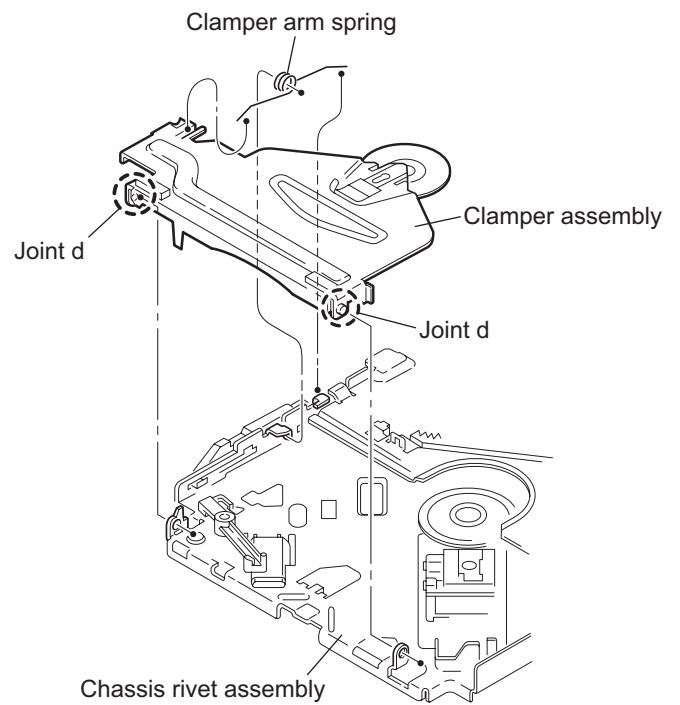


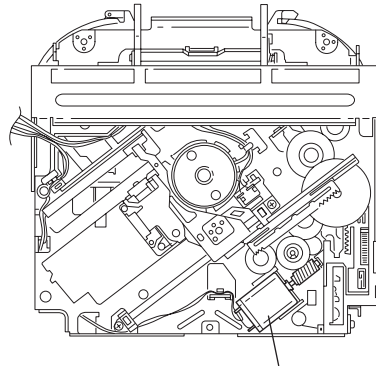
Fig.11

3.2.6 Removing the loading / feed motor assembly (See Figs.12 and 13)

- Prior to performing the following procedure, remove the top cover, connector board and chassis unit.
 - (1) Remove the screw **C** and move the loading / feed motor assembly in the direction of the arrow to remove it from the chassis rivet assembly.
 - (2) Disconnect the wire from the loading / feed motor assembly if necessary.

CAUTION:

When reassembling, connect the wire from the loading / feed motor assembly to the flame as shown in Fig.12.



Loading / feed motor assembly

Fig.12

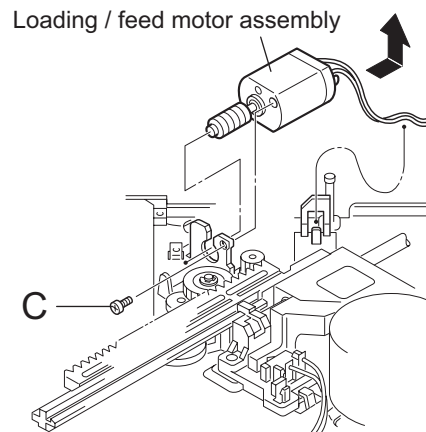


Fig.13

3.2.7 Removing the pickup unit (See Figs.14 to 18)

- Prior to performing the following procedure, remove the top cover, connector board and chassis unit.
 - (1) Remove the screw **D** and pull out the pu. shaft holder from the pu. shaft.
 - (2) Remove the screw **E** attaching the feed sw. holder.
 - (3) Move the part **e** of the pickup unit upward with the pu. shaft and the feed sw. holder, then release the joint **f** of the feed sw. holder in the direction of the arrow. The joint **g** of the pickup unit and the feed rack is released, and the feed sw. holder comes off.
 - (4) Remove the pu. shaft from the pickup unit.
 - (5) Remove the screw **F** attaching the feed rack to the pickup unit.

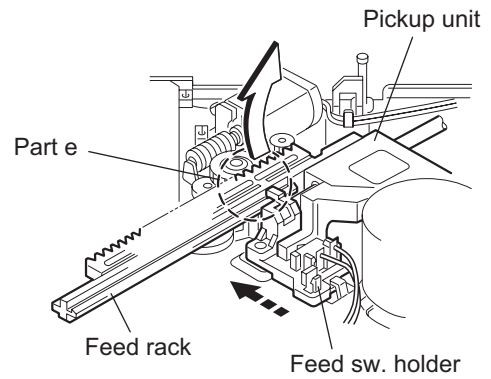


Fig.15

3.2.8 Reattaching the pickup unit (See Figs.14 to 17)

- (1) Reattach the feed rack to the pickup unit using the screw **F**.
- (2) Reattach the feed sw. holder to the feed rack while setting the joint **g** to the slot of the feed rack and setting the joint **f** of the feed rack to the switch of the feed sw. holder correctly.
- (3) As the feed sw. holder is temporarily attached to the pickup unit, set to the gear of the joint **g** and to the bending part of the chassis (joint **h**) at a time.

CAUTION:

Make sure that the part **i** on the underside of the feed rack is certainly inserted to the slot **j** of the change lock lever.

- (4) Reattach the feed sw. holder using the screw **E**.
- (5) Reattach the pu. shaft to the pickup unit. Reattach the pu. shaft holder to the pu. shaft using the screw **D**.

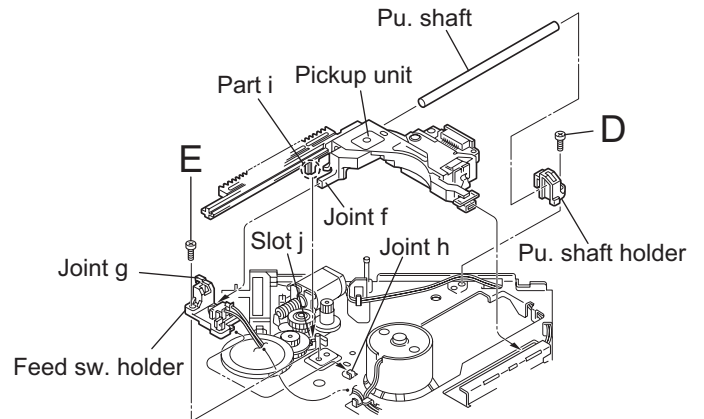


Fig.16

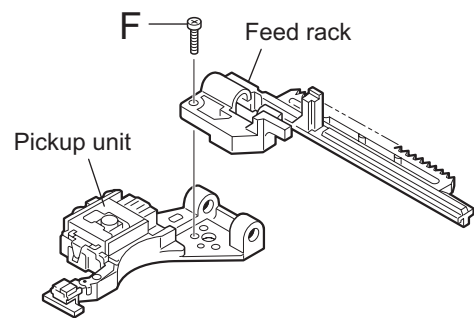


Fig.17

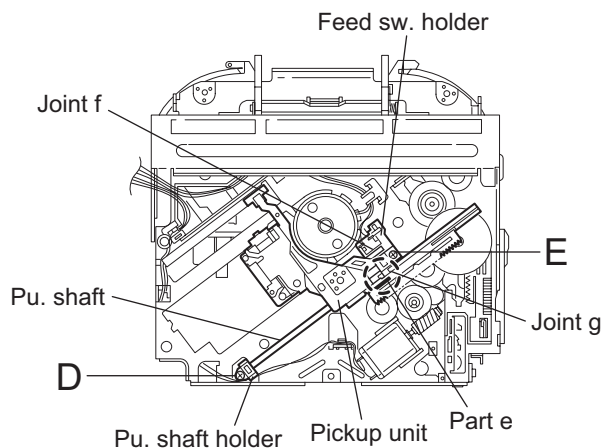


Fig.14

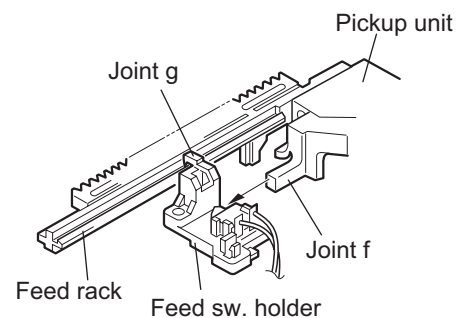


Fig.18

3.2.9 Removing the trigger arm (See Figs.19 and 20)

- Prior to performing the following procedure, remove the top cover, connector board and clamper unit.
 - (1) Turn the trigger arm in the direction of the arrow to release the joint **k** and pull out upward.

CAUTION:

When reassembling, insert the part **m** and **n** of the trigger arm into the part **p** and **q** at the slot of the chassis rivet assembly respectively and join the joint **k** at a time.

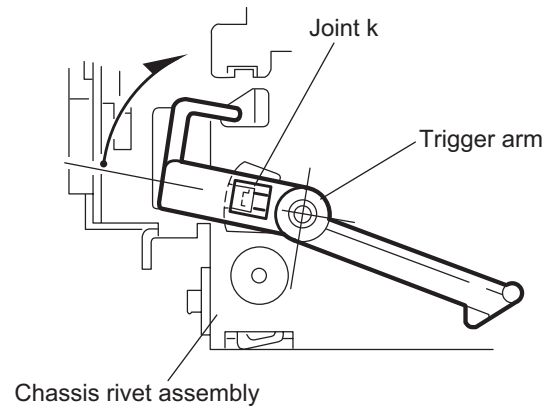


Fig.19

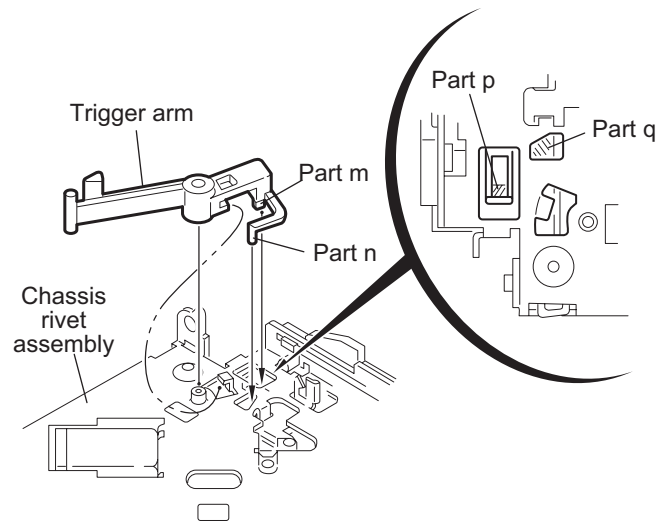


Fig.20

3.2.10 Removing the top plate assembly (See Fig.21)

- Prior to performing the following procedure, remove the top cover, connector board, chassis unit, and clamper assembly.
 - (1) Remove the screw **H**.
 - (2) Move the top plate assembly in the direction of the arrow to release the two joints **r**.
 - (3) Unsolder the wire marked **s** if necessary.

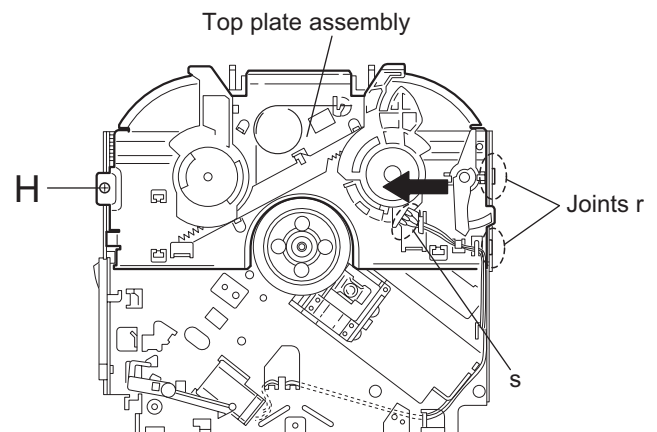


Fig.21

3.2.11 Removing the mode sw. / select lock arm (See Figs.22 and 23)

- Prior to performing the following procedure, remove the top plate assembly.
 - (1) Bring up the mode sw. to release from the link plate (joint t) and turn in the direction of the arrow to release the joint u.
 - (2) Unsolder the wire of the mode sw. marked s if necessary.
 - (3) Turn the select lock arm in the direction of the arrow to release the two joints v.
 - (4) The select lock arm spring comes off the select lock arm at the same time.

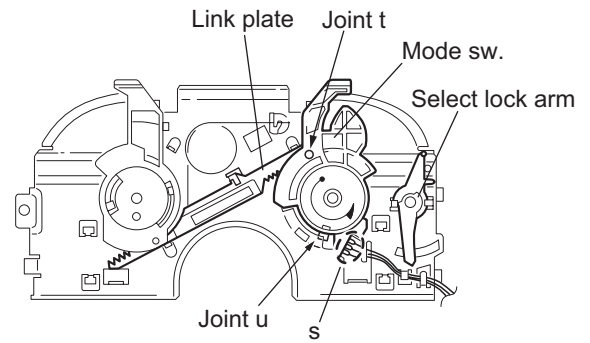


Fig.22

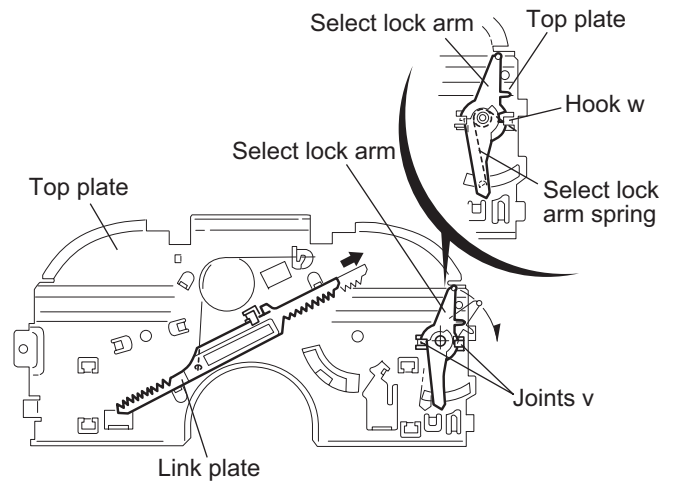


Fig.23

3.2.12 Reassembling the mode sw. / select lock arm
(See Figs.24 to 26)

REFERENCE:

Reverse the above removing procedure.

- (1) Reattach the select lock arm spring to the top plate and set the shorter end of the select lock arm spring to the hook w on the top plate.
- (2) Set the other longer end of the select lock arm spring to the boss x on the underside of the select lock arm, and join the select lock arm to the slots (joint v). Turn the select lock arm as shown in the figure.
- (3) Reattach the mode sw. while setting the part t to the first peak of the link plate gear, and join the joint u.

CAUTION:

When reattaching the mode sw., check if the points y and z are correctly fitted and if each part operates properly.

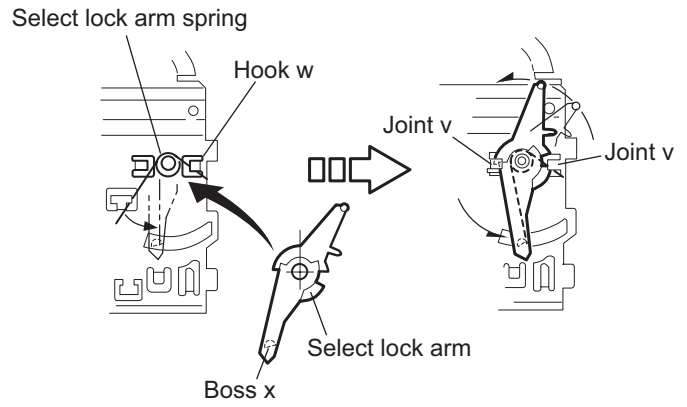


Fig.24

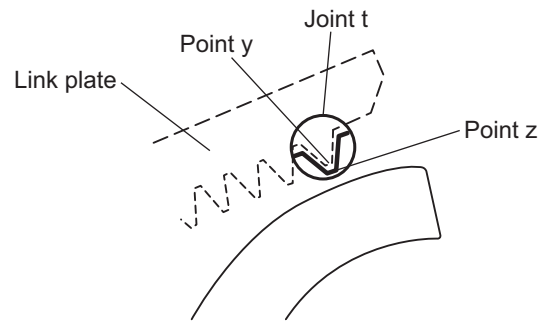


Fig.25

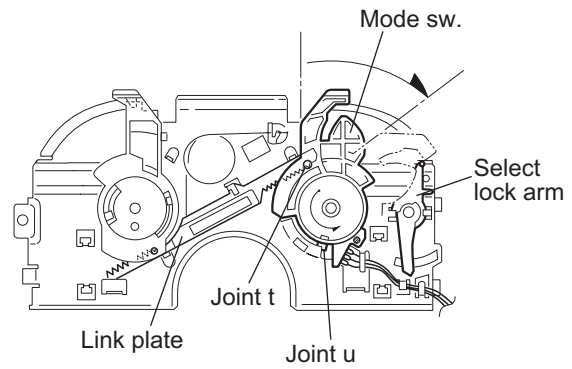


Fig.26

3.2.13 Removing the select arm R / link plate (See Figs.27 and 28)

- Prior to performing the following procedure, remove the top plate assembly.
 - (1) Bring up the select arm R to release from the link plate (joint a') and turn as shown in the figure to release the two joints b' and joint c'.
 - (2) Move the link plate in the direction of the arrow to release the joint d'. Remove the link plate spring at the same time.

REFERENCE:

Before removing the link plate, remove the mode sw..

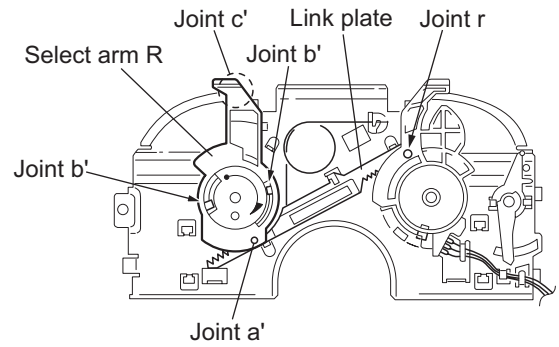


Fig.27

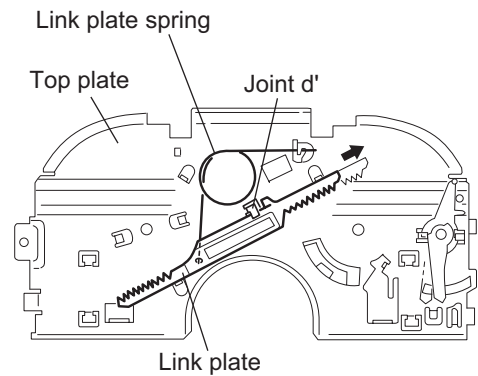


Fig.28

3.2.14 Reattaching the Select arm R / link plate (See Figs.29 and 30)

REFERENCE:

Reverse the above removing procedure.

- (1) Reattach the link plate spring.
- (2) Reattach the link plate to the link plate spring while joining them at joint d'.
- (3) Reattach the joint a' of the select arm R to the first peak of the link plate while joining the two joints b' with the slots. Then turn the select arm R as shown in the figure. The top plate is joined to the joint c'.

CAUTION:

When reattaching the select arm R, check if the points e' and f' are correctly fitted and if each part operates properly.

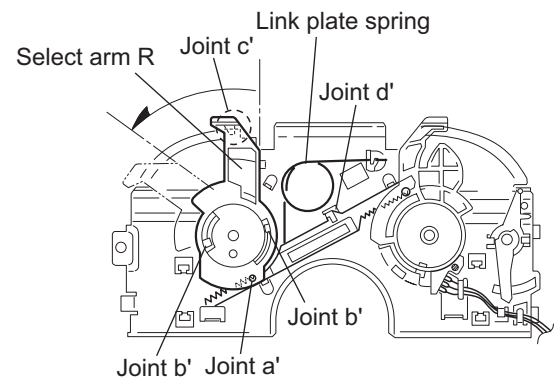


Fig.29

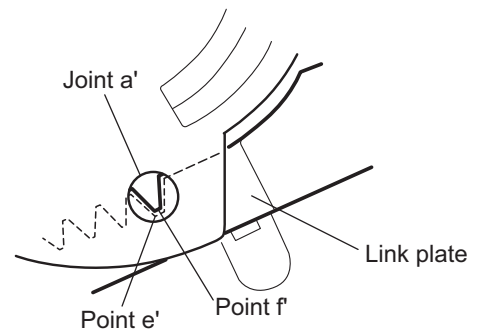


Fig.30

3.2.15 Removing the loading roller assembly (See Figs.31 to 33)

- Prior to performing the following procedure, remove the clamper assembly and top plate assembly.
 - (1) Push inward the loading roller assembly on the gear side and detach it upward from the slot of the joint **g'** of the lock arm rivet assembly.
 - (2) Detach the loading roller assembly from the slot of the joint **h'** of the lock arm rivet assembly.

The roller guide comes off the gear section of the loading roller assembly.

Remove the roller guide and the HL washer from the shaft of the loading roller assembly.

- (3) Remove the screw **J** attaching the lock arm rivet assembly.
- (4) Push the shaft at the joint **i'** of the lock arm rivet assembly inward to release the lock arm rivet assembly from the slot of the L side plate.
- (5) Extend the lock arm rivet assembly outward and release the joint **j'** from the boss of the chassis rivet assembly. The roller guide springs on both sides come off at the same time.

CAUTION:

When reassembling, reattach the left and right roller guide springs to the lock arm rivet assembly before reattaching the lock arm rivet assembly to the chassis rivet assembly. Make sure to fit the part **k'** of the roller guide spring inside of the roller guide. (Refer to Fig.34.)

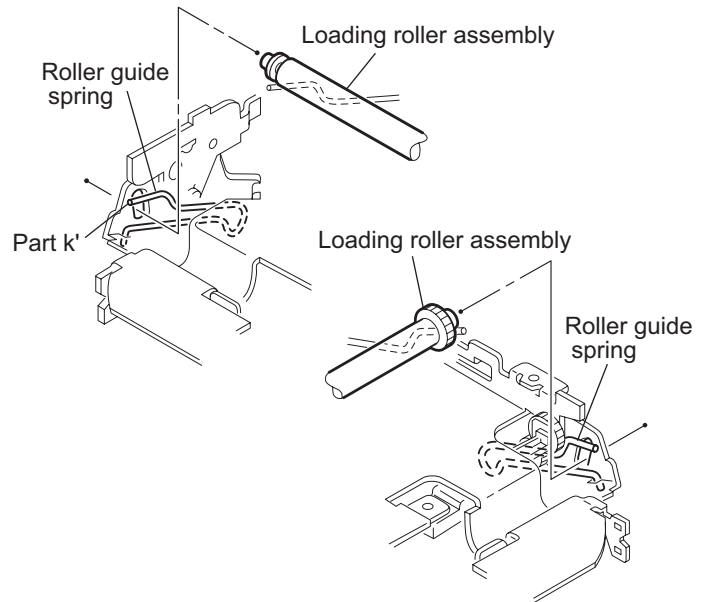


Fig.32

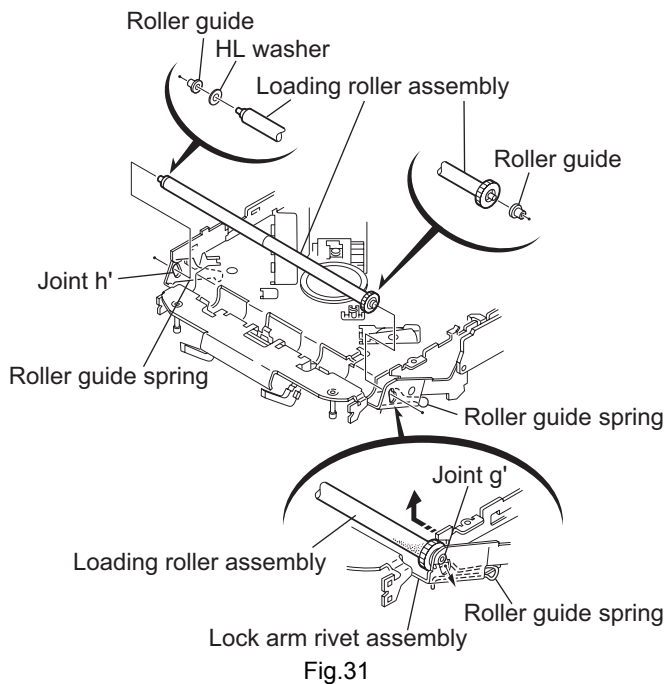


Fig.31

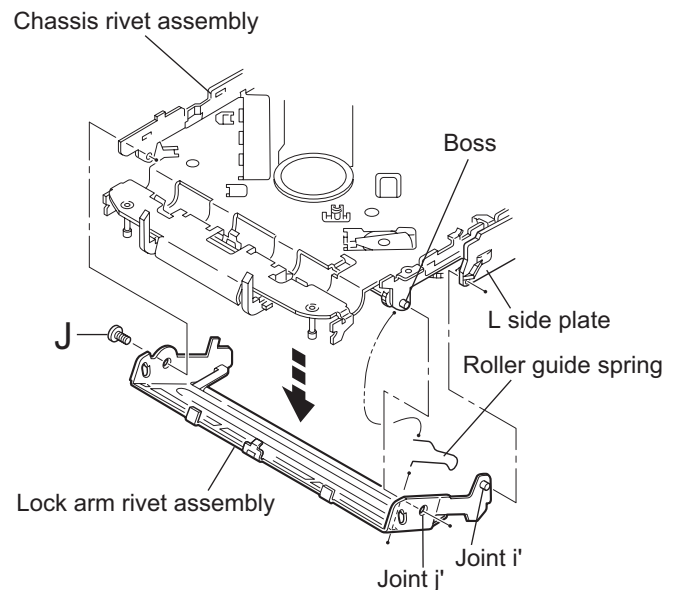


Fig.33

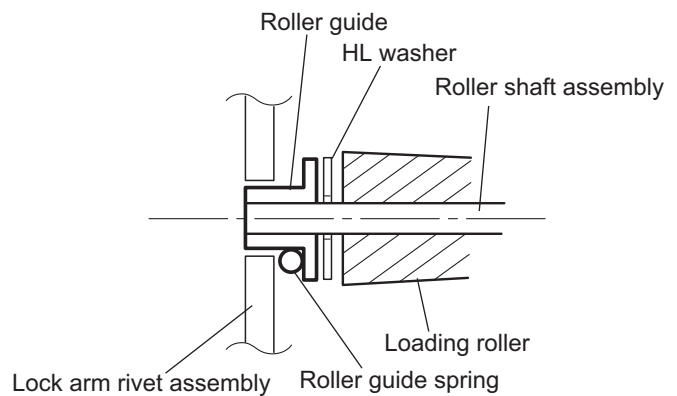


Fig.34

3.2.16 Removing the loading gear 5, 6 and 7 (See Figs.35 and 36)

- Prior to performing the following procedure, remove the top cover, chassis unit, pickup unit and top plate assembly.
 - (1) Remove the screw **K** attaching the loading gear bracket.
The loading gear 6 and 7 come off the loading gear bracket.
 - (2) Pull out the loading gear 5.

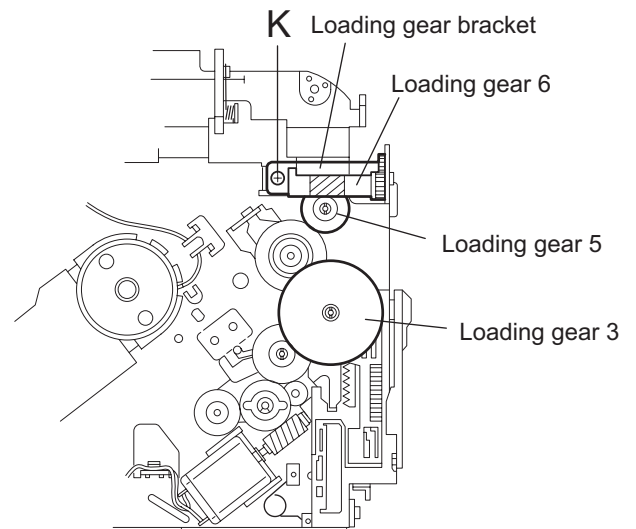


Fig.35

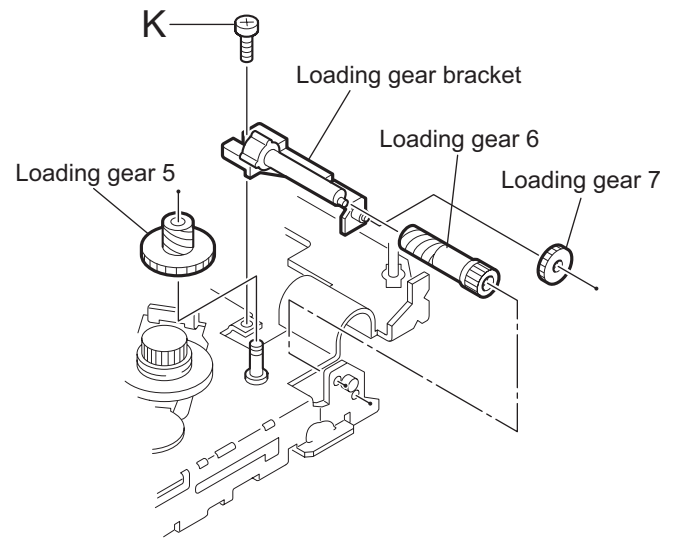


Fig.36

3.2.17 Removing the gears (See Figs.37 to 40)

- Prior to performing the following procedure, remove the top cover, chassis unit, top plate assembly and pickup unit.
- Pull out the loading gear 3. (See Fig.35.)
 - (1) Pull out the feed gear.
 - (2) Move the loading plate assembly in the direction of the arrow to release the L side plate from the two slots m' of the chassis rivet assembly. (See Fig.37.)
 - (3) Detach the loading plate assembly upward from the chassis rivet assembly while releasing the joint n'. Remove the slide hook and loading plate spring from the loading plate assembly.
 - (4) Pull out the loading gear 2 and remove the change lock lever.
 - (5) Remove the E ring and washer attaching the change gear 2.
 - (6) The change gear 2, change gear spring and adjusting washer come off.
 - (7) Remove the loading gear 1.
 - (8) Move the change plate rivet assembly in the direction of the arrow to release from the three shafts of the chassis rivet assembly upward. (See Fig.38.)
 - (9) Detach the loading gear plate rivet assembly from the shaft of the chassis rivet assembly upward while releasing the joint p'. (See Figs.38 and 40.)
 - (10) Pull out the loading gear 4.

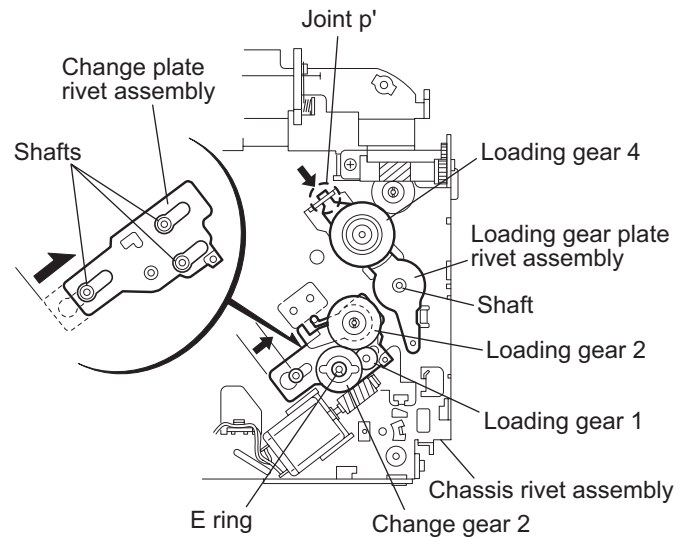
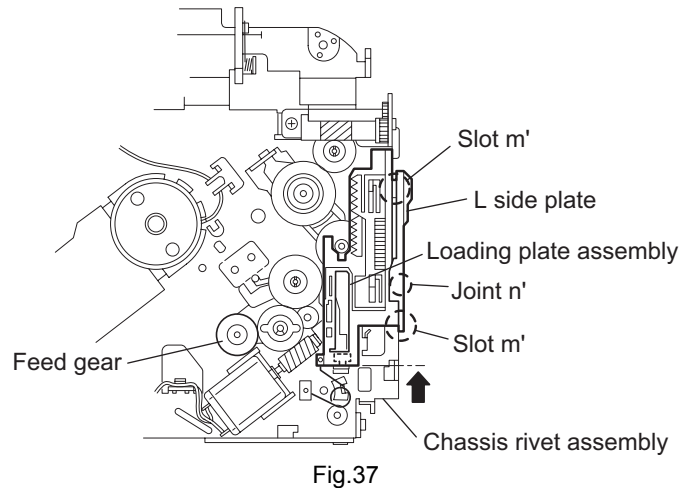


Fig.38

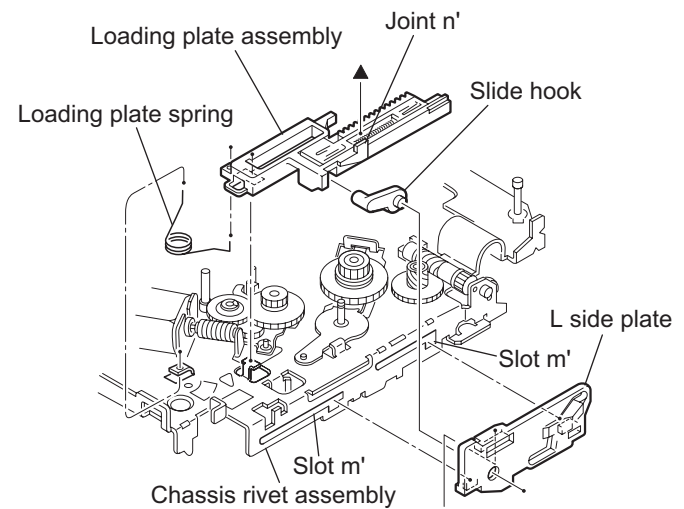


Fig.39

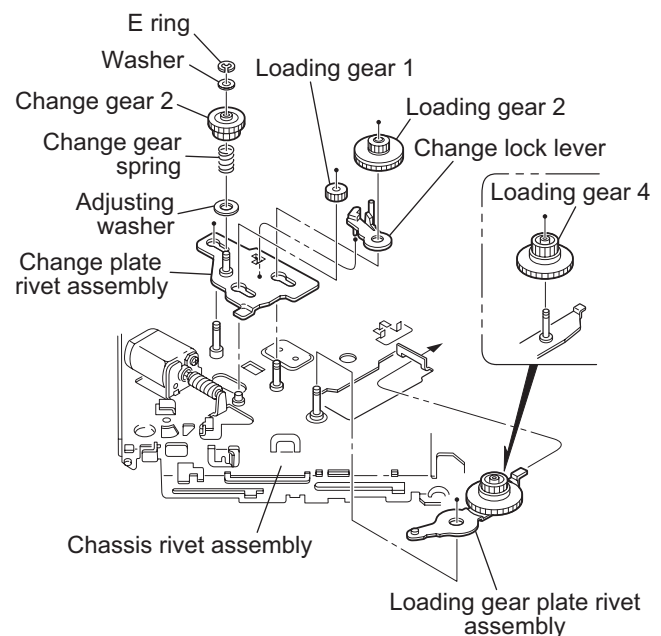
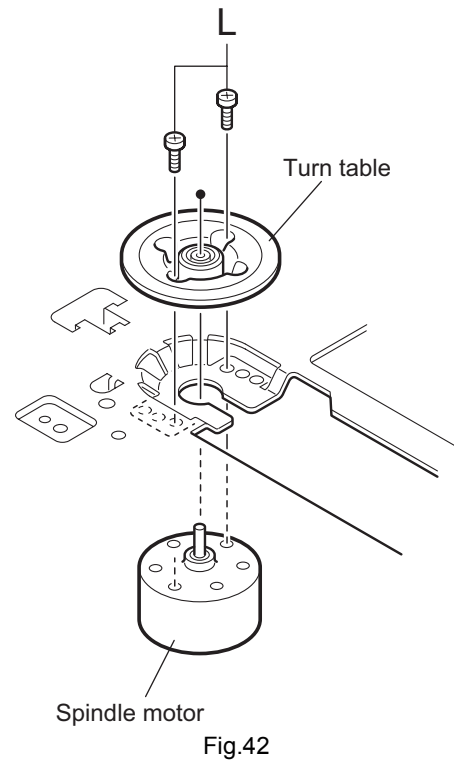
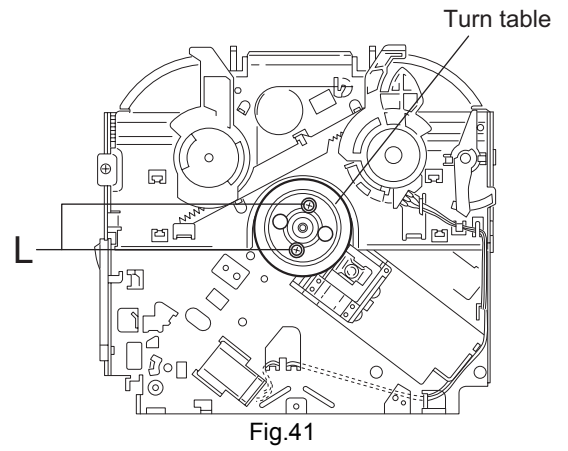


Fig.40

3.2.18 Removing the turn table / spindle motor (See Figs.41 and 42)

- Prior to performing the following procedure, remove the top cover, connector board, chassis unit and clasper assembly.
 - (1) Remove the two screws L attaching the spindle motor assembly through the slot of the turn table on top of the body.
 - (2) Unsolder the wire on the connector board if necessary.



SECTION 4 ADJUSTMENT

4.1 Adjustment method

■ Test instruments required for adjustment

- (1) Digital oscilloscope (100MHz)
- (2) Electric voltmeter
- (3) Digital tester
- (4) Tracking offset meter
- (5) Test Disc JVC :CTS-1000
- (6) Extension cable for check
EXTSH002-22P × 1

■ Standard volume position

Balance and Bass & Treble volume : Indication "0"
Loudness : OFF

■ How to connect the extension cable for adjusting

Caution:

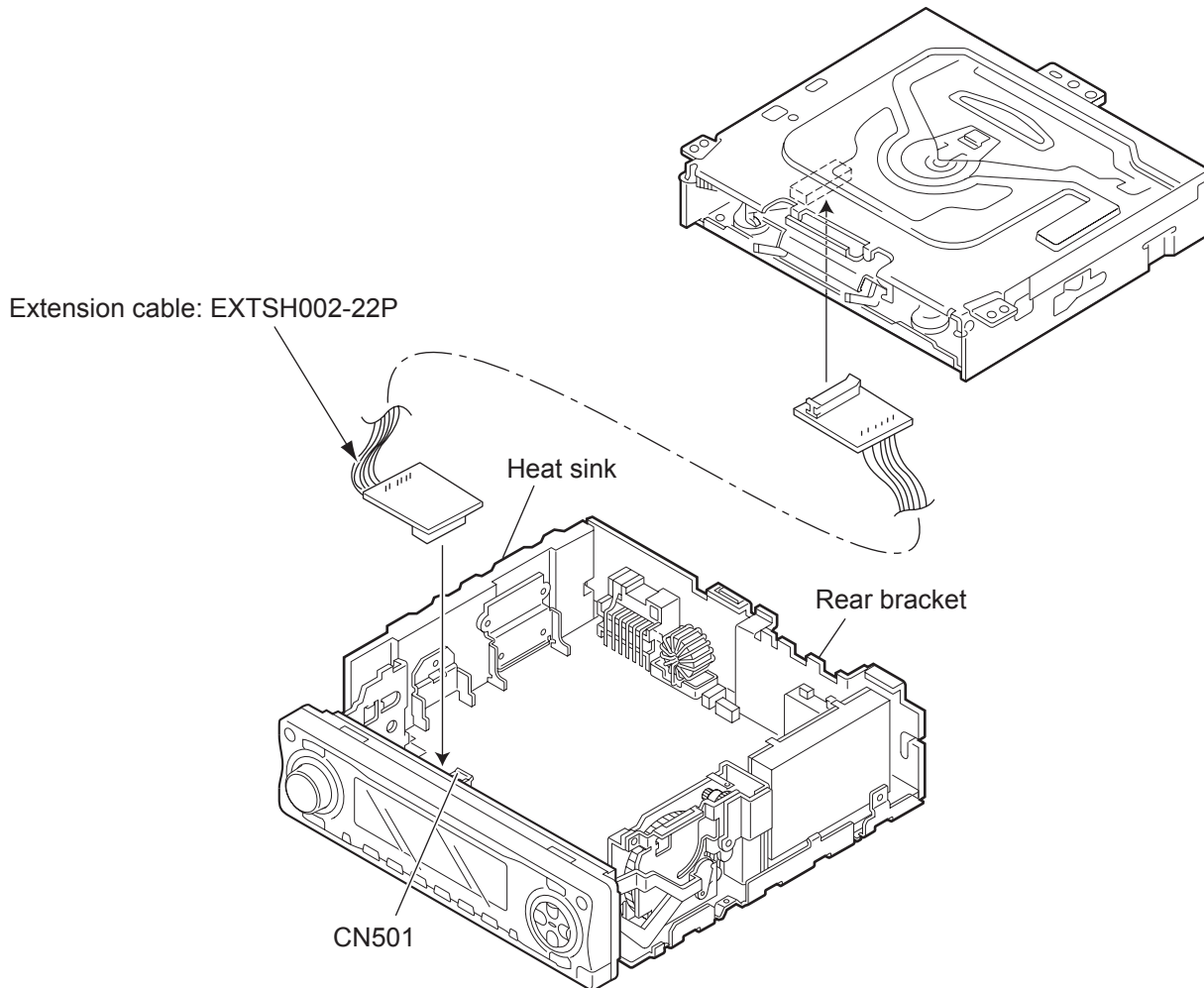
Be sure to attach the heat sink and rear bracket onto the power amplifier IC and regulator IC respectively, before supply the power. If voltage is applied without attaching these parts, the power amplifier IC and regulator IC will be destroyed by heat.

■ Standard measuring conditions

Power supply voltage	DC14.4V(10.5 to 16V)
Load impedance	20K Ω (2 Speakers connection)
Output Level	Line out 2.0V (Vol. MAX)

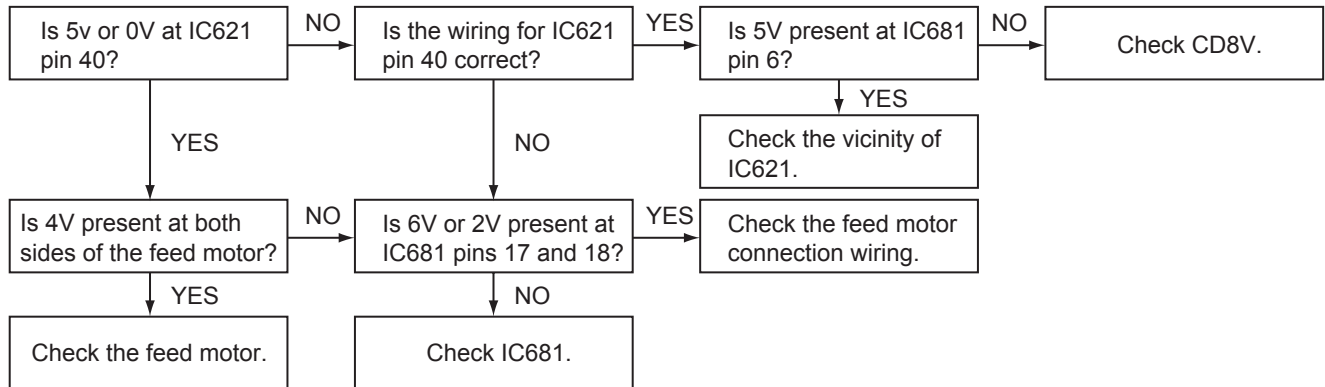
■ Dummy load

Exclusive dummy load should be used for AM, and FM. For FM dummy load, there is a loss of 6dB between SSG output and antenna input. The loss of 6dB need not be considered since direct reading of figures are applied in this working standard.

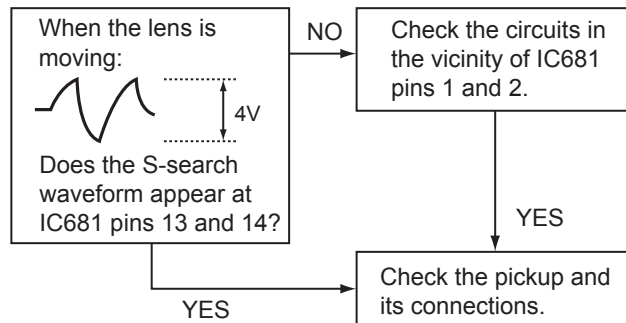


SECTION 5 TROUBLESHOOTING

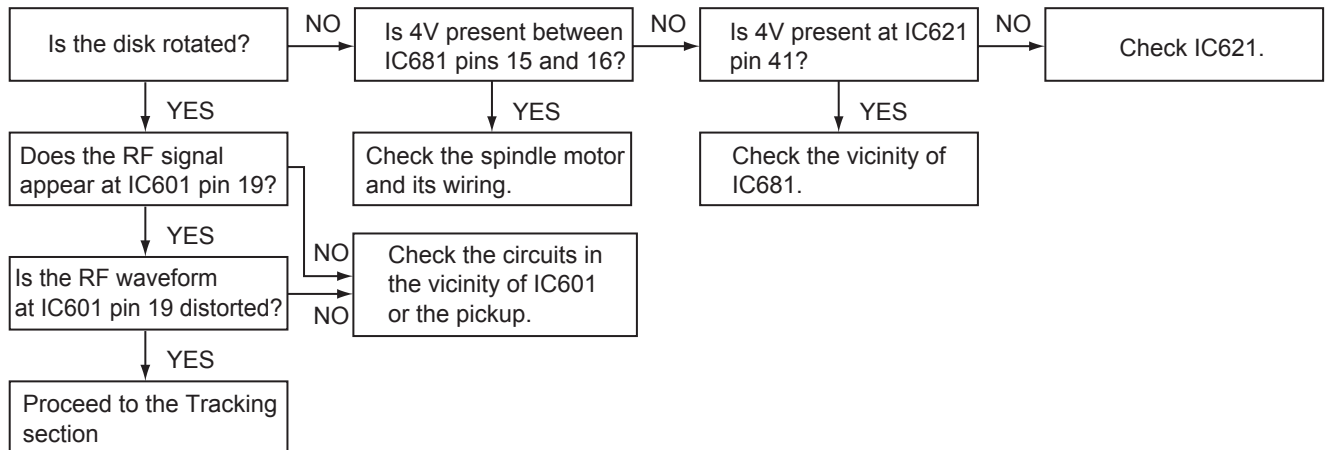
5.1 Feed section



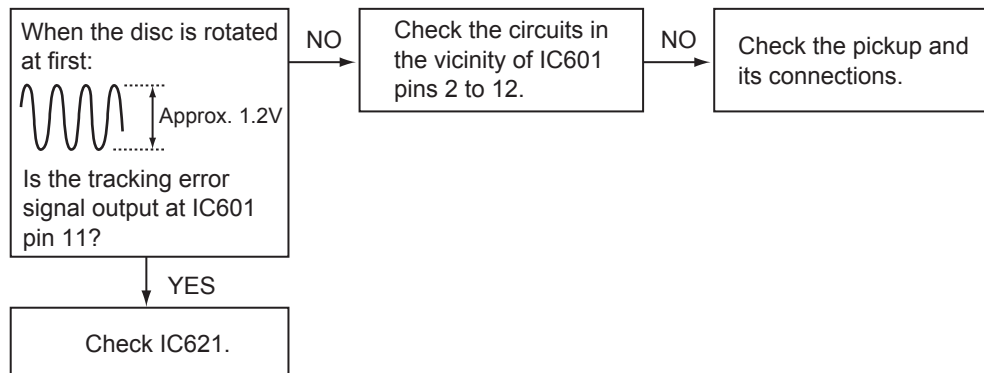
5.2 Focus section



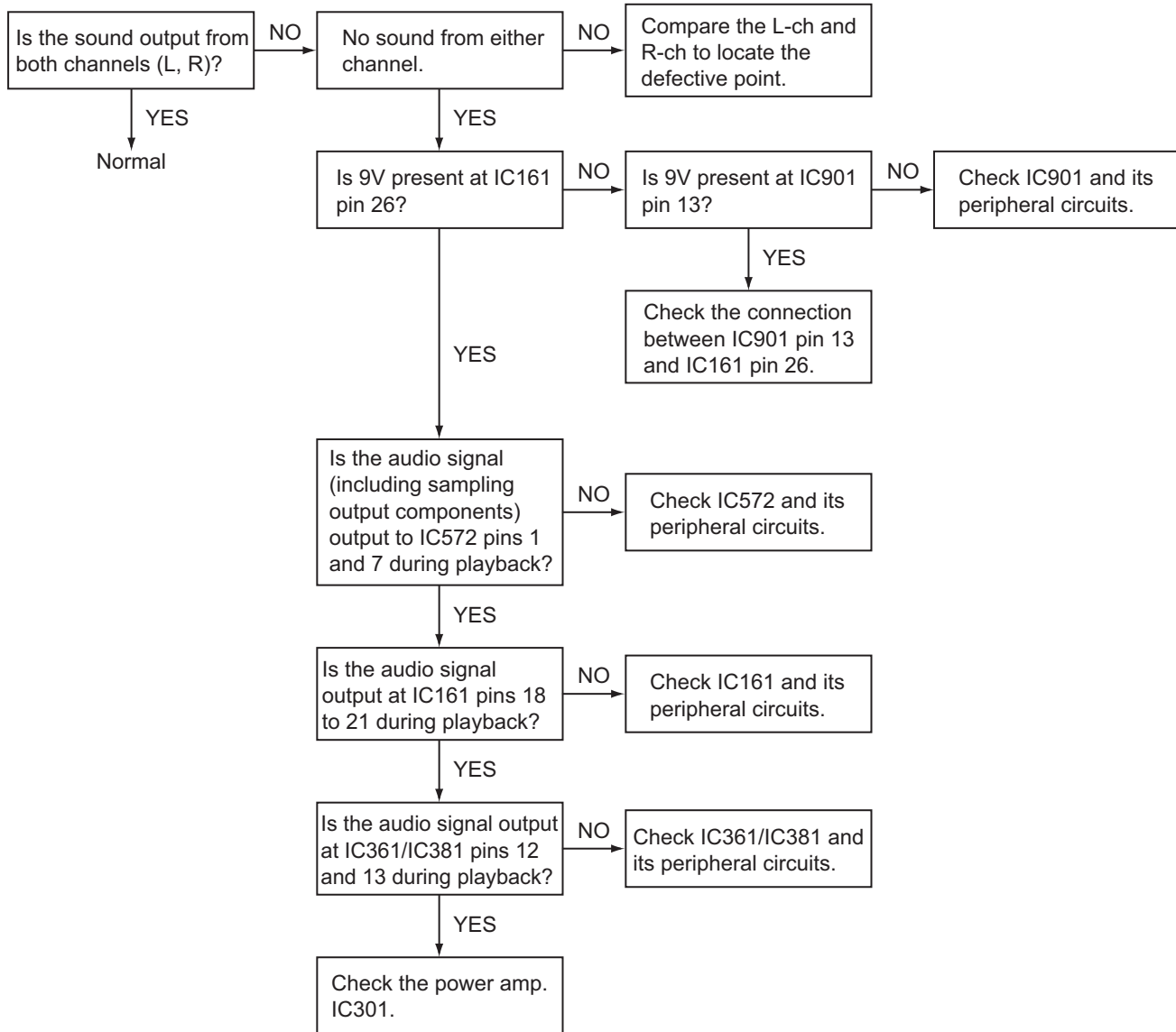
5.3 Spindle section



5.4 Tracking section

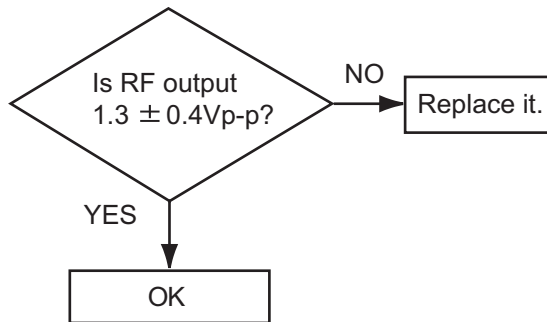


5.5 Signal processing section



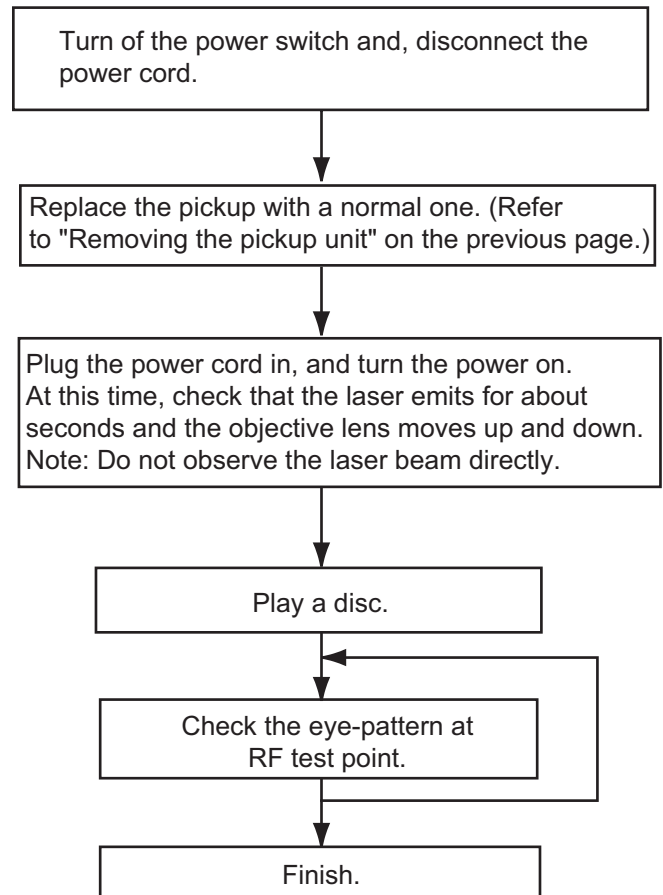
5.6 Maintenance of laser pickup

- (1) Cleaning the pick up lens
Before you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.
- (2) Life of the laser diode
When the life of the laser diode has expired, the following symptoms will appear.
 - The level of RF output (EFM output: amplitude of eye pattern) will be low.

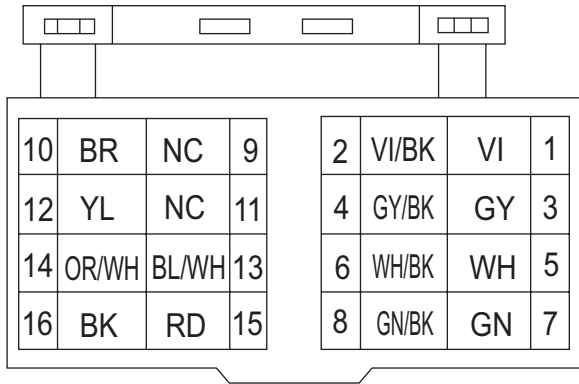


- (3) Semi-fixed resistor on the APC PC board
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.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

5.7 Replacement of laser pickup



5.8 16 PIN CORD DIAGRAM



BK	Black	GN	Green
RD	Red	VI	Violet
BL	Blue	GY	Gray
WH	White	YL	Yellow
BR	Brown	OR	Orange



RR	Rear Right	ANT	Auto Antenna
FR	Front Right	ACC	ACC Line
FL	Front Left	TEL	Telephone Muting
RL	Rear Left	GND	Ground
REMOTE	Remote out	MEMORY	Memory Backup Battery+
ILL	Illuminations Control		



JVC

VICTOR COMPANY OF JAPAN, LIMITED

AV & MULTIMEDIA COMPANY CAR ELECTRONICS CATEGORY 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

(No.MA063)



Printed in Japan
WPC

JVC

SCHEMATIC DIAGRAMS

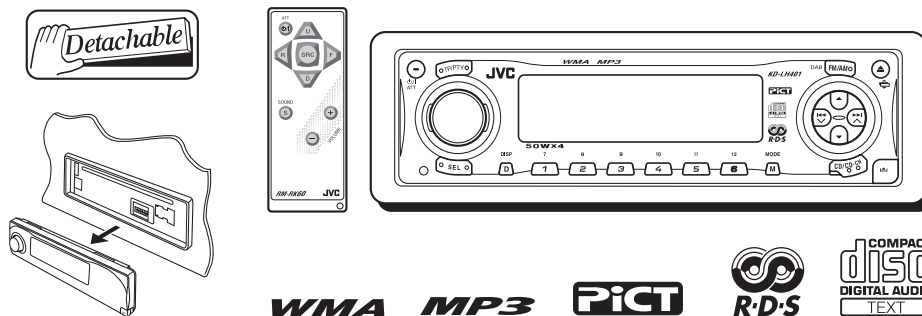
CD RECEIVER

KD-LH401

CD-ROM No.SML200404

Area suffix

E ----- Continental Europe
EX ----- Central Europe



Contents

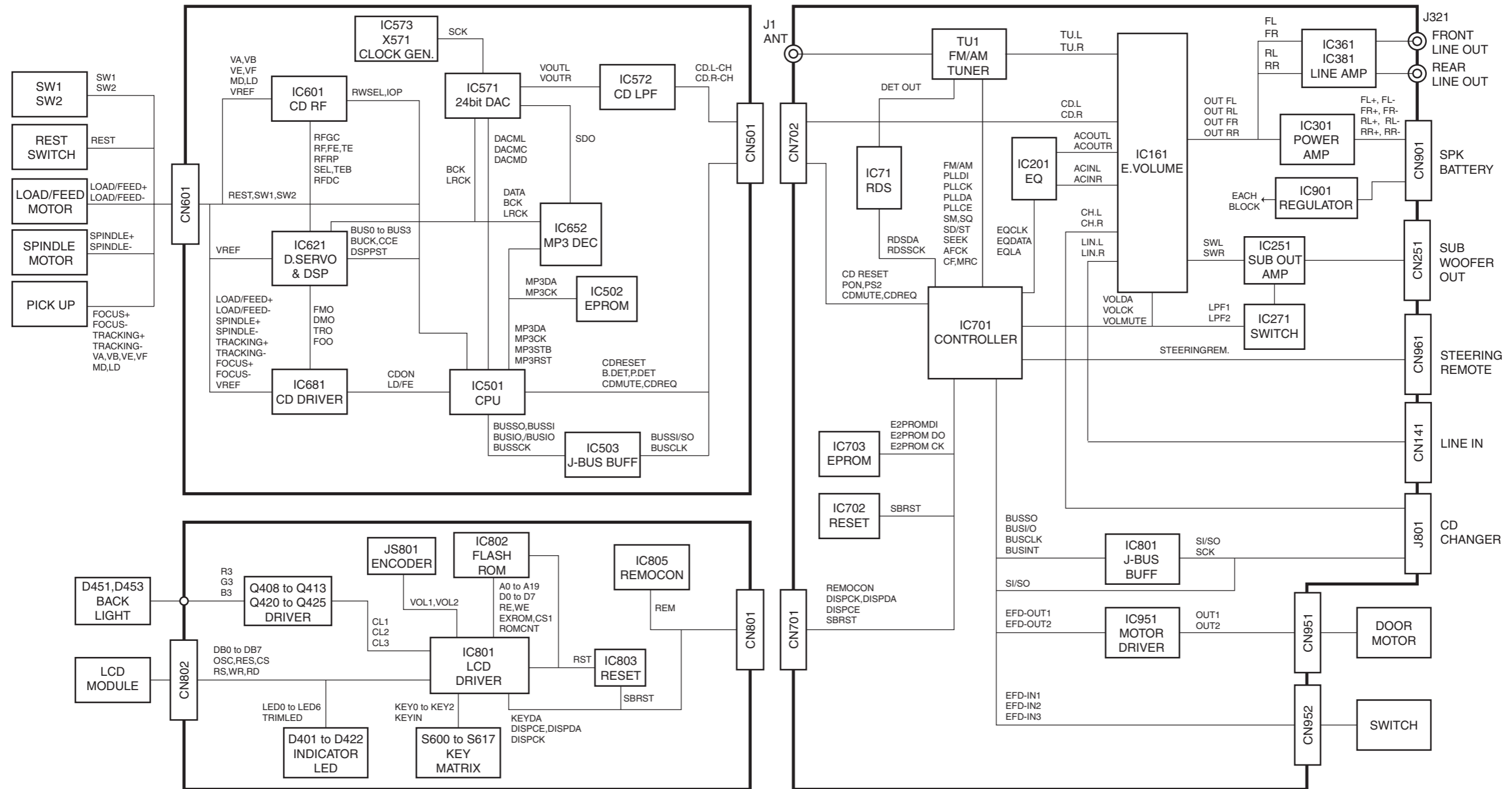
Block diagram	2-1
Standard schematic diagrams	2-2
Printed circuit boards	2-5, 6

Safety precaution

 **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 performing repair of this system.

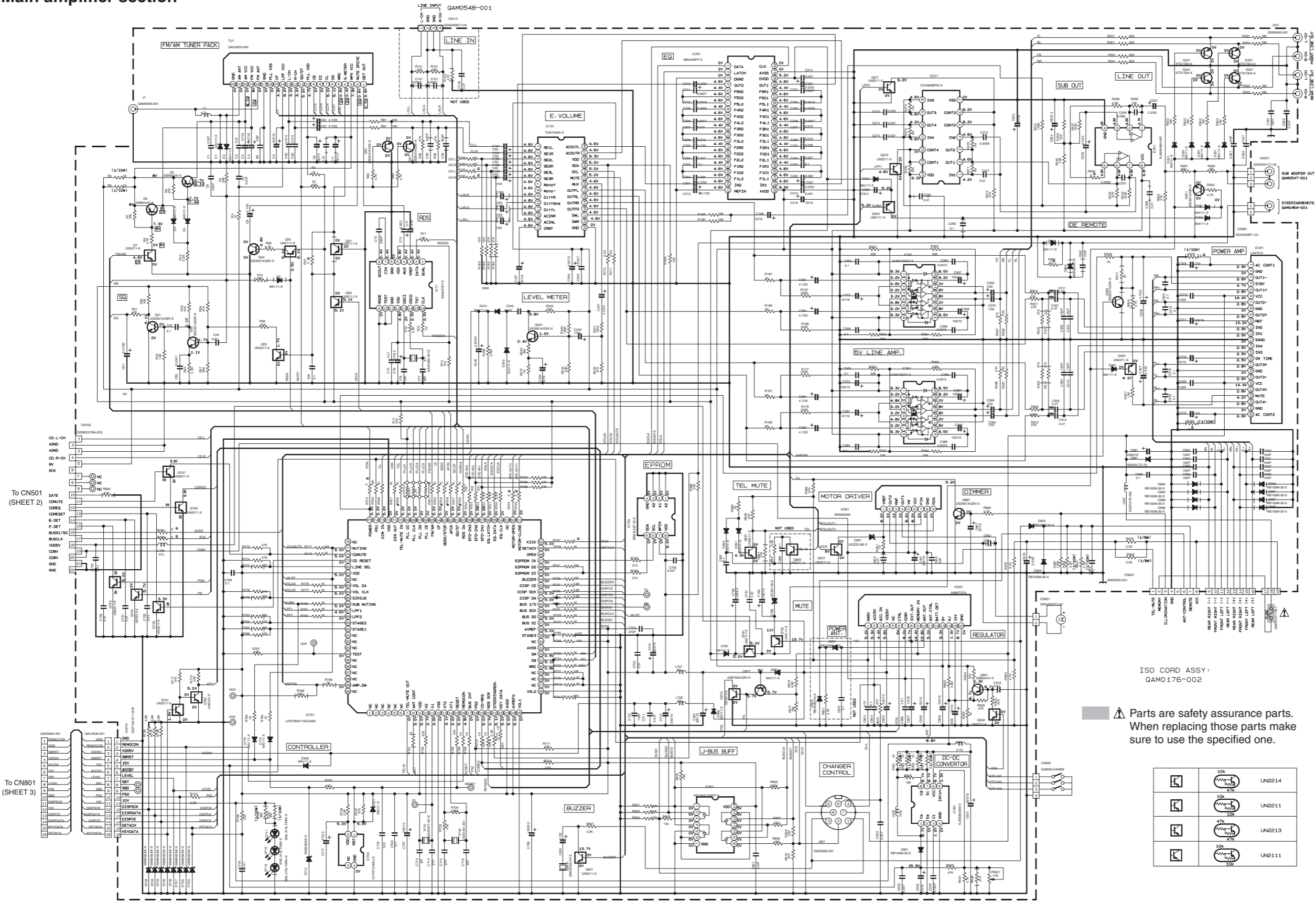
 **CAUTION** Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.

Block diagram



Standard schematic diagrams

■ Main amplifier section



To CN501 (SHEET 2)

To CN801 (SHEET 3)

ISO CORD ASSY:
QAM0176-002

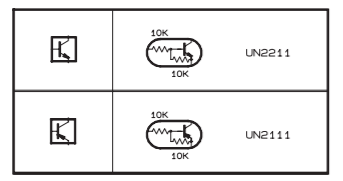
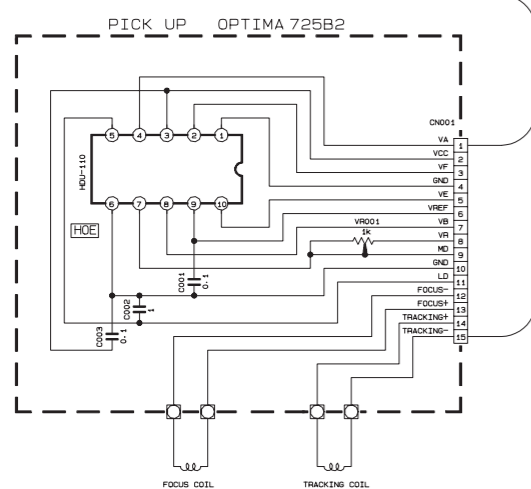
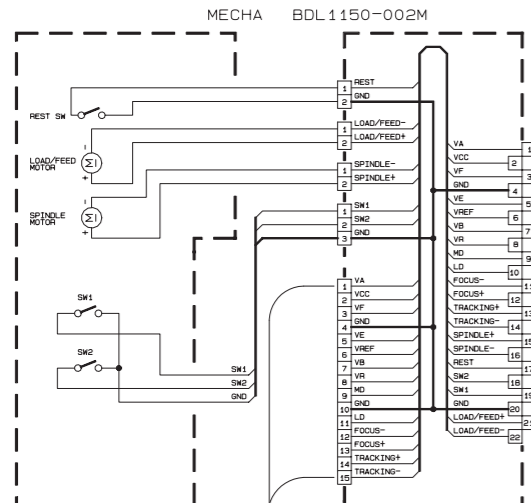
⚠ Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

	10k	UN2214
	10k	UN2211
	47k	UN2213
	10k	UN2111

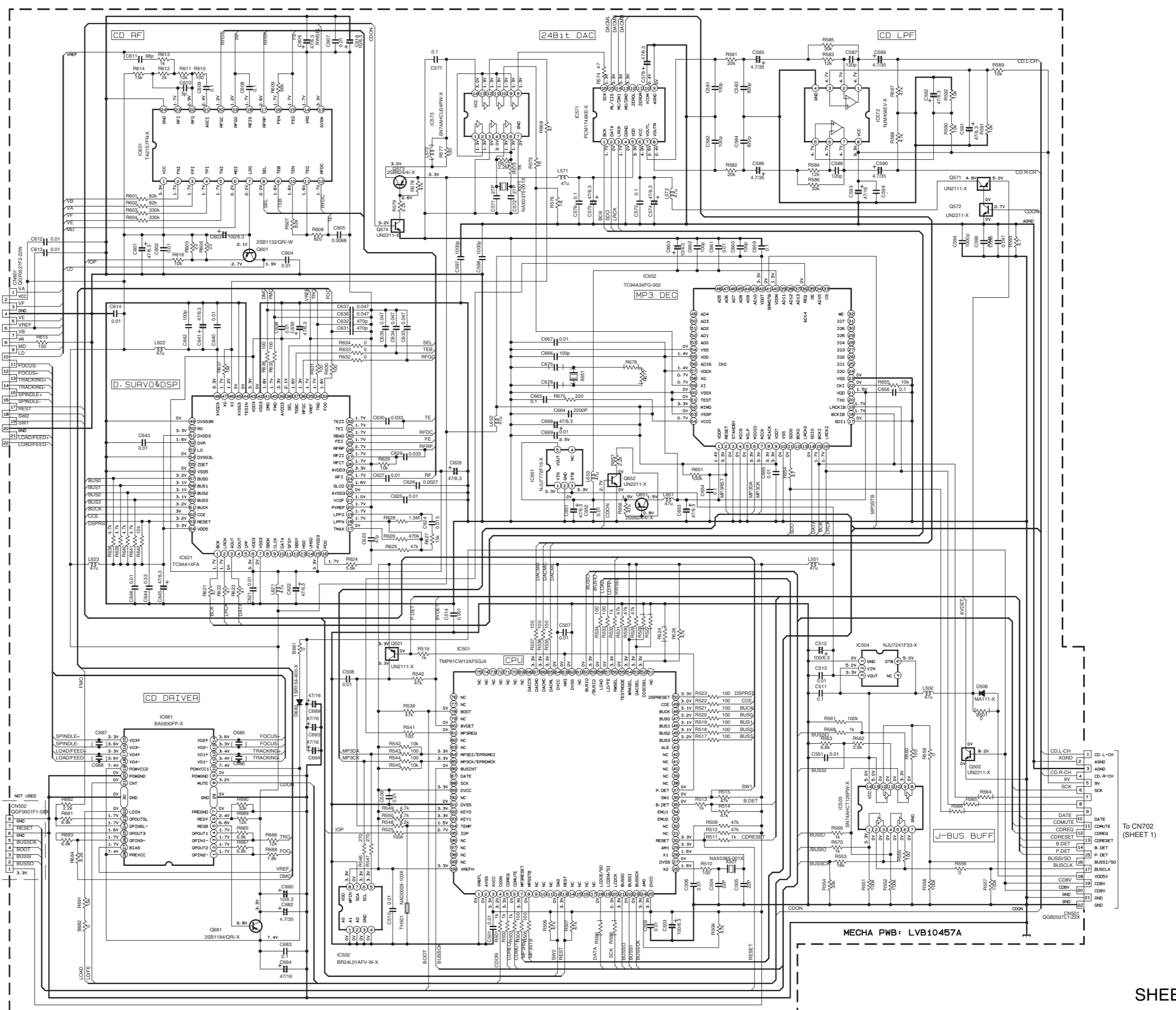
NOTES: 1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
CONDIT-1: IN HOSE □ IN HOSE 1: 100 HOSE
2. UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/8W ON METAL GLAZE RESISTOR.
ALL CAPACITORS ARE 50V OR 50V CERAMIC CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM.
ALL CAPACITANCE VALUES ARE IN μF (IF NOT SPECIFIED).
ALL CAPACITANCE VALUES ARE IN nF (IF NOT SPECIFIED).
MF = METALLIZED POLY CARBONATOR
3. COMPONENTS IN () INDICATE NOT SUPPLY.

MAIN PWB: GEB10099A

CD servo control section

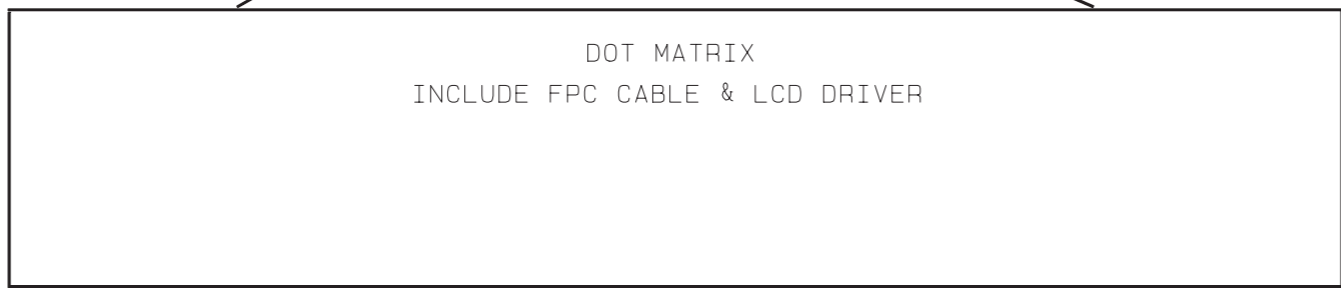
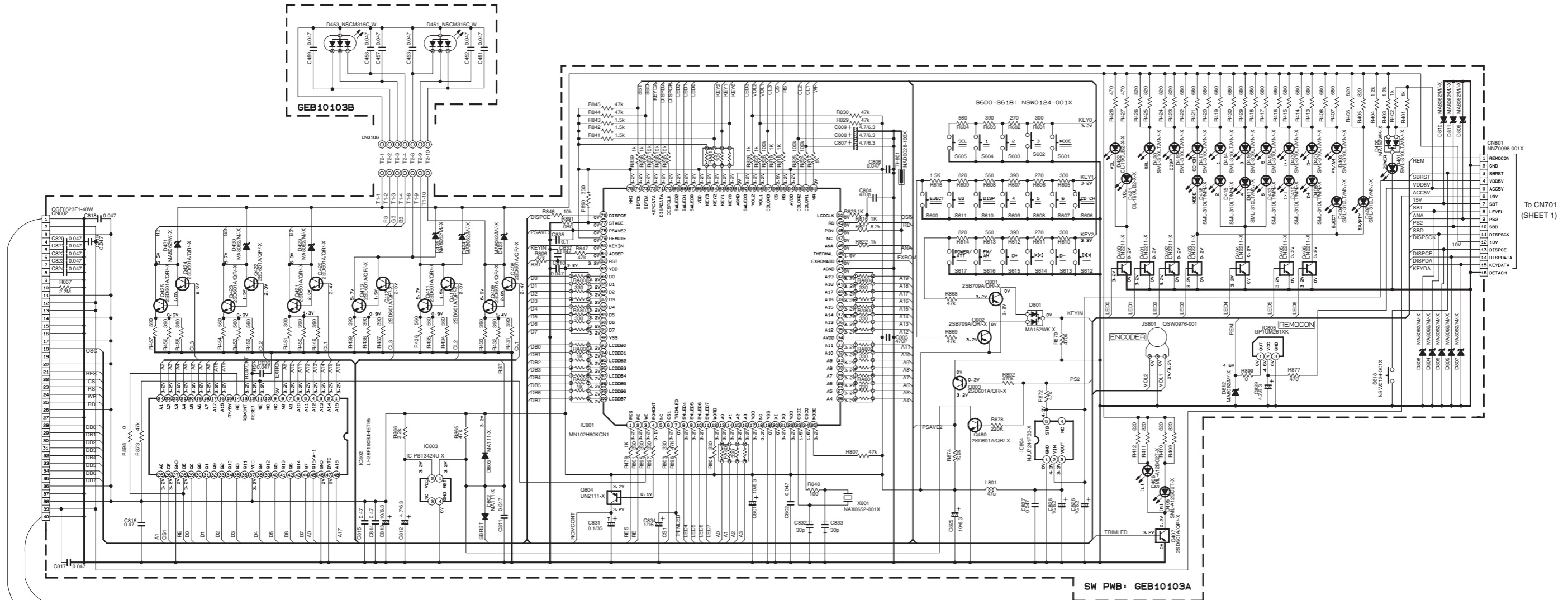


NOTES
 1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. CONDITION — CD MODE.
 2. UNLESS OTHERWISE SPECIFIED.
 ALL RESISTORS ARE 1/16W OR 1/10W OR 1/8W ±5% METAL GLAZE RESISTOR.
 ALL CAPACITORS ARE 50V OR 25V OR 16V CERAMIC CAPACITOR OR 50V NYLON CAPACITOR.
 ALL RESISTANCE VALUES ARE IN Ω(MHΩ).
 ALL CAPACITANCE VALUES ARE IN μF(PpF).
 ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE (V).
 3. COMPONENTS IN () INDICATE NOT USE.



To CN702 (SHEET 1)

■ LCD & Key control section



LCD MODULE
QLD0232-001

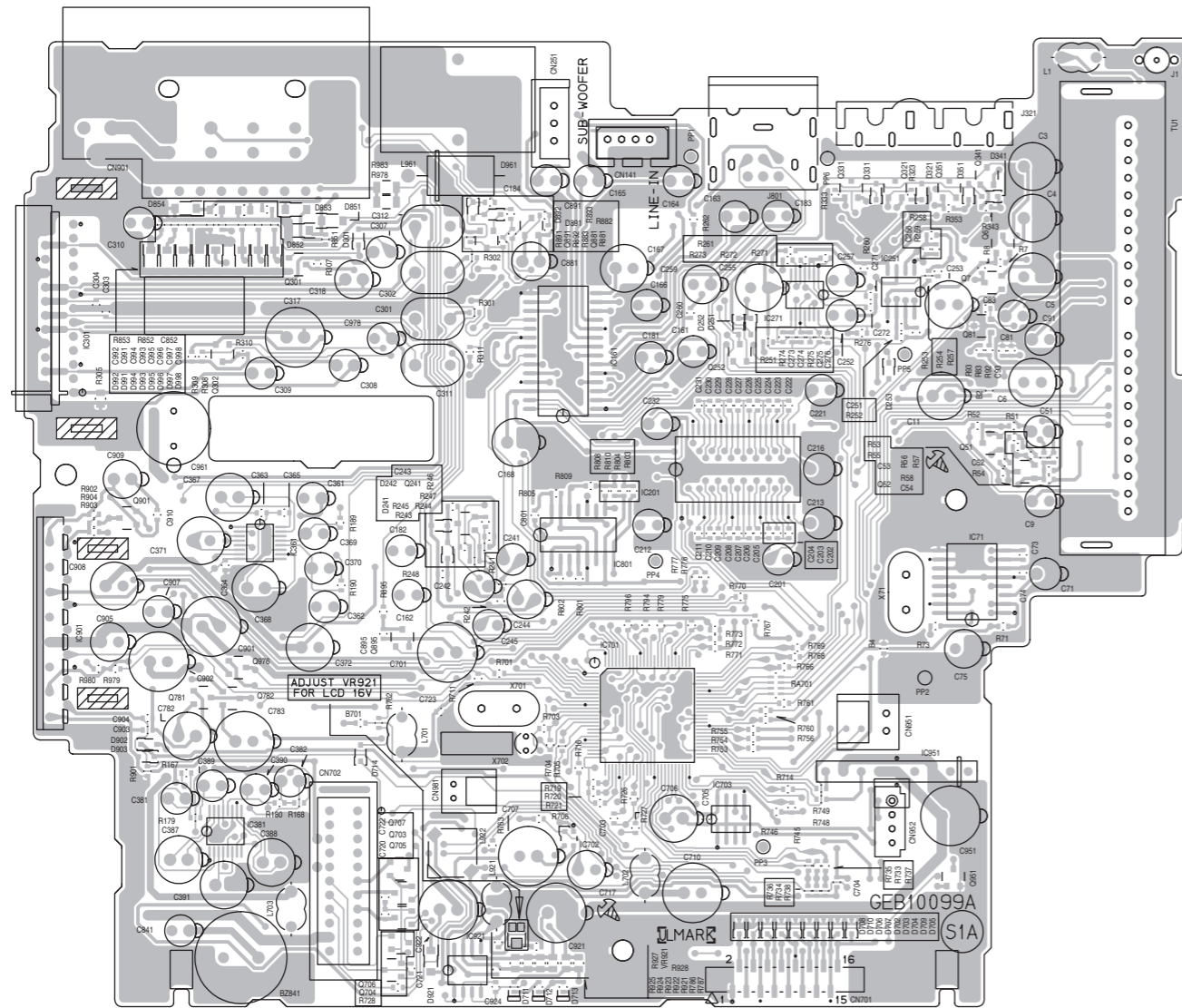
	10k		UN2211
	47k		UN2213
	10k		UN2111

- NOTES**
- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. CONDITION — CD MODE.
 - UNLESS OTHERWISE SPECIFIED:
 - ALL RESISTORS ARE 1/16W OR 1/10W OR 1/8W ±5% METAL GLAZE RESISTOR.
 - ALL CAPACITORS ARE 50V OR 25V OR 16V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
 - ALL RESISTANCE VALUES ARE IN Ω(±1%).
 - ALL CAPACITANCE VALUES ARE IN μF(±5%).
 - ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE (V).

Printed circuit boards

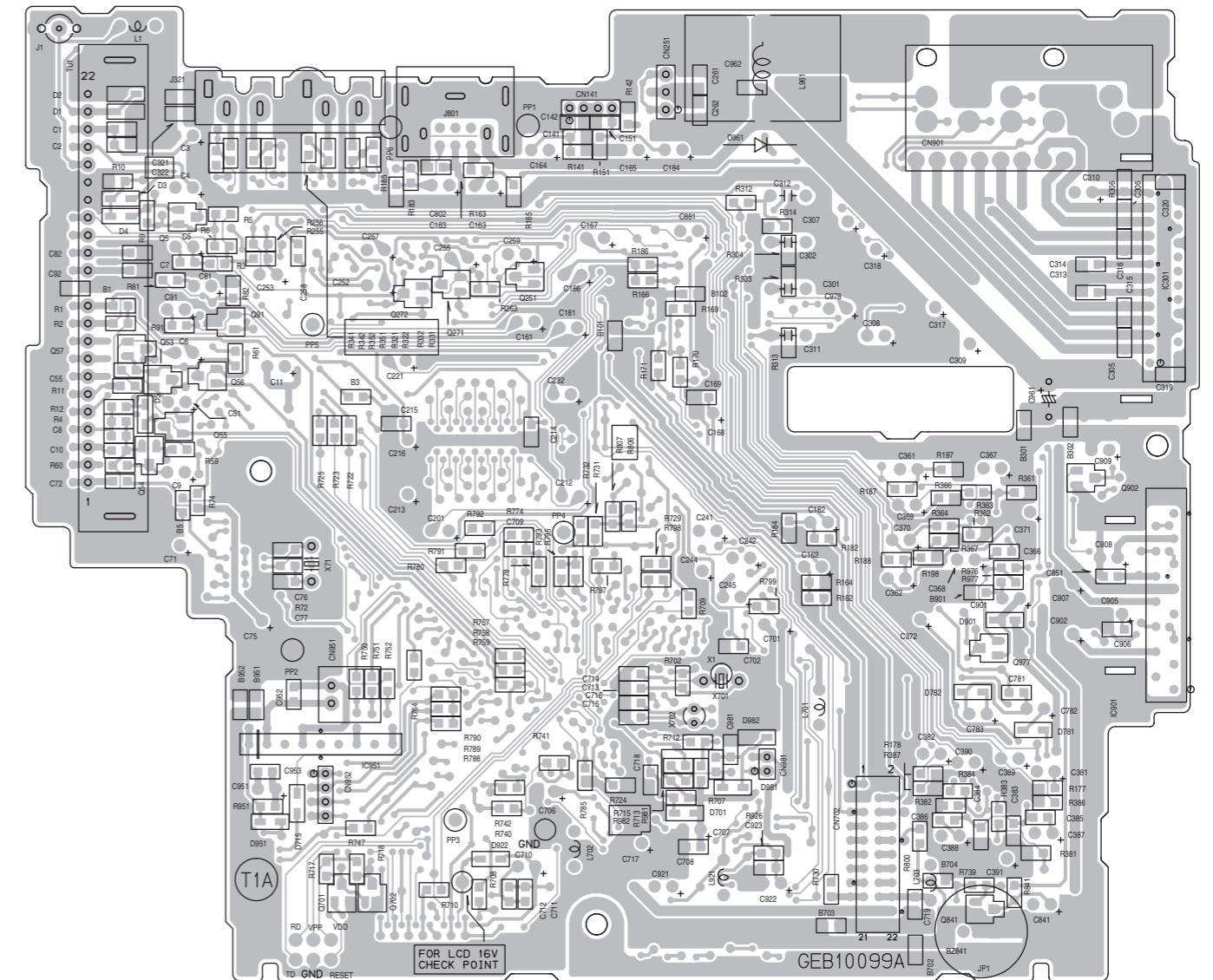
■ Main board

Forward side



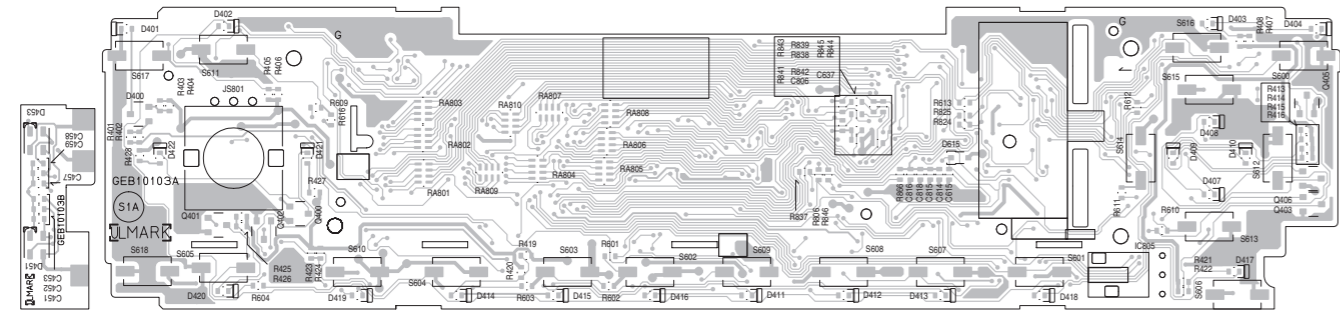
■ Main board

Reverse side



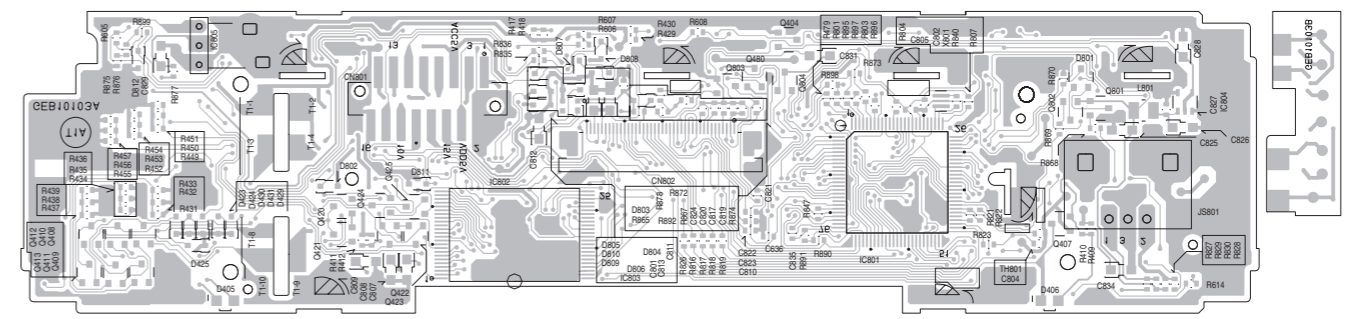
Front board

Forward side



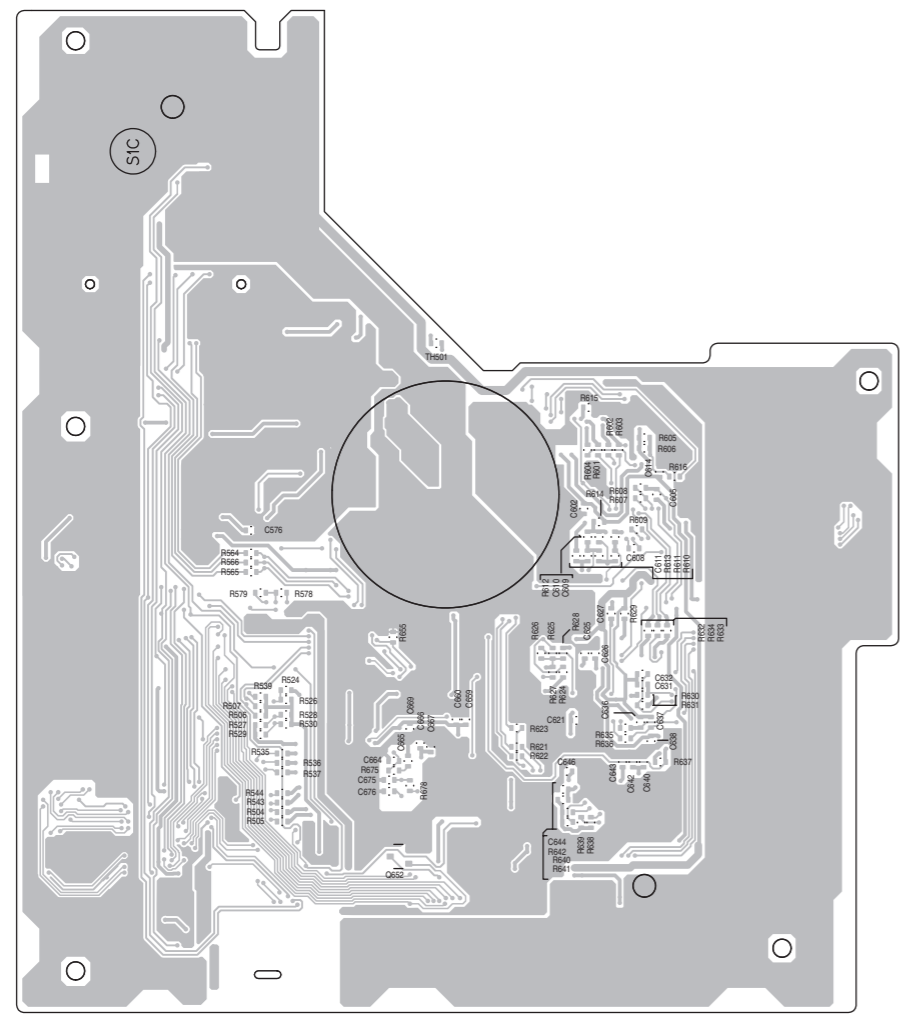
Front board

Reverse side



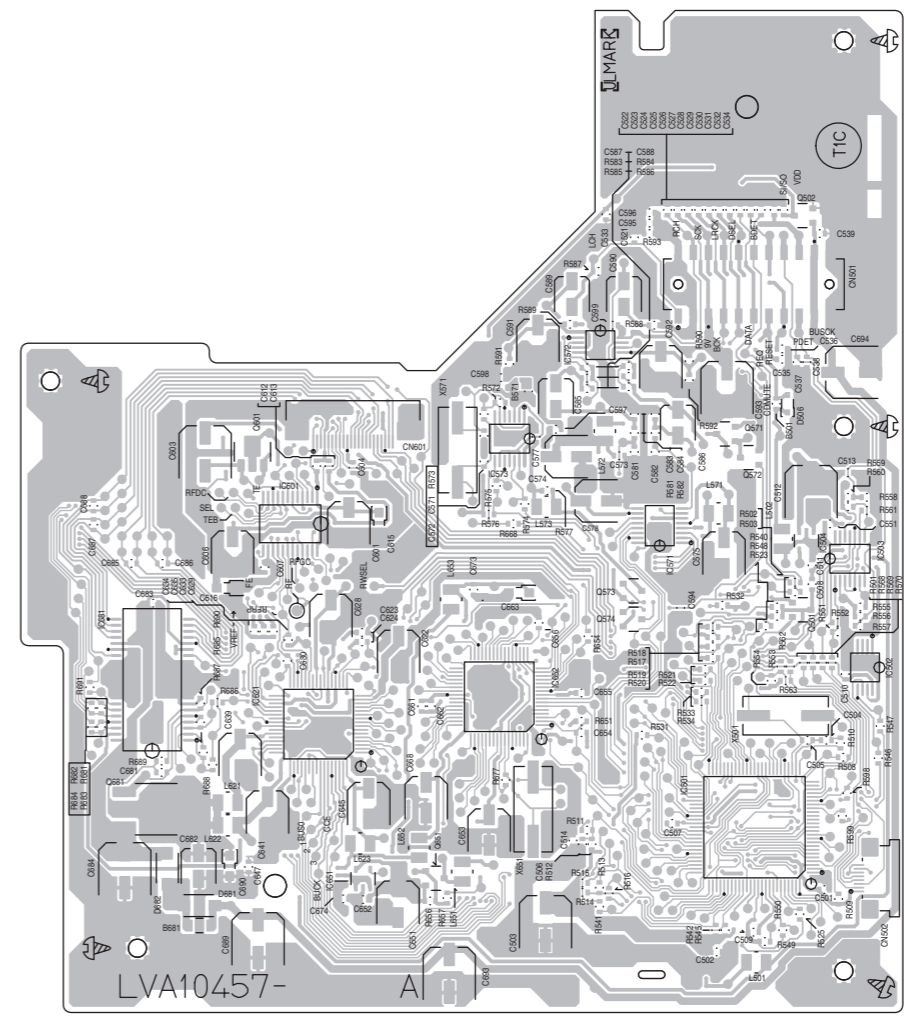
Mecha control board

Forward side



Mecha control board

Reverse side



< MEMO >

JVC

VICTOR COMPANY OF JAPAN, LIMITED

AV & MULTIMEDIA COMPANY CAR ELECTRONICS CATEGORY 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

(No.MA063SCH)



Printed in Japan
WPC

PARTS LIST

[KD-LH401]

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

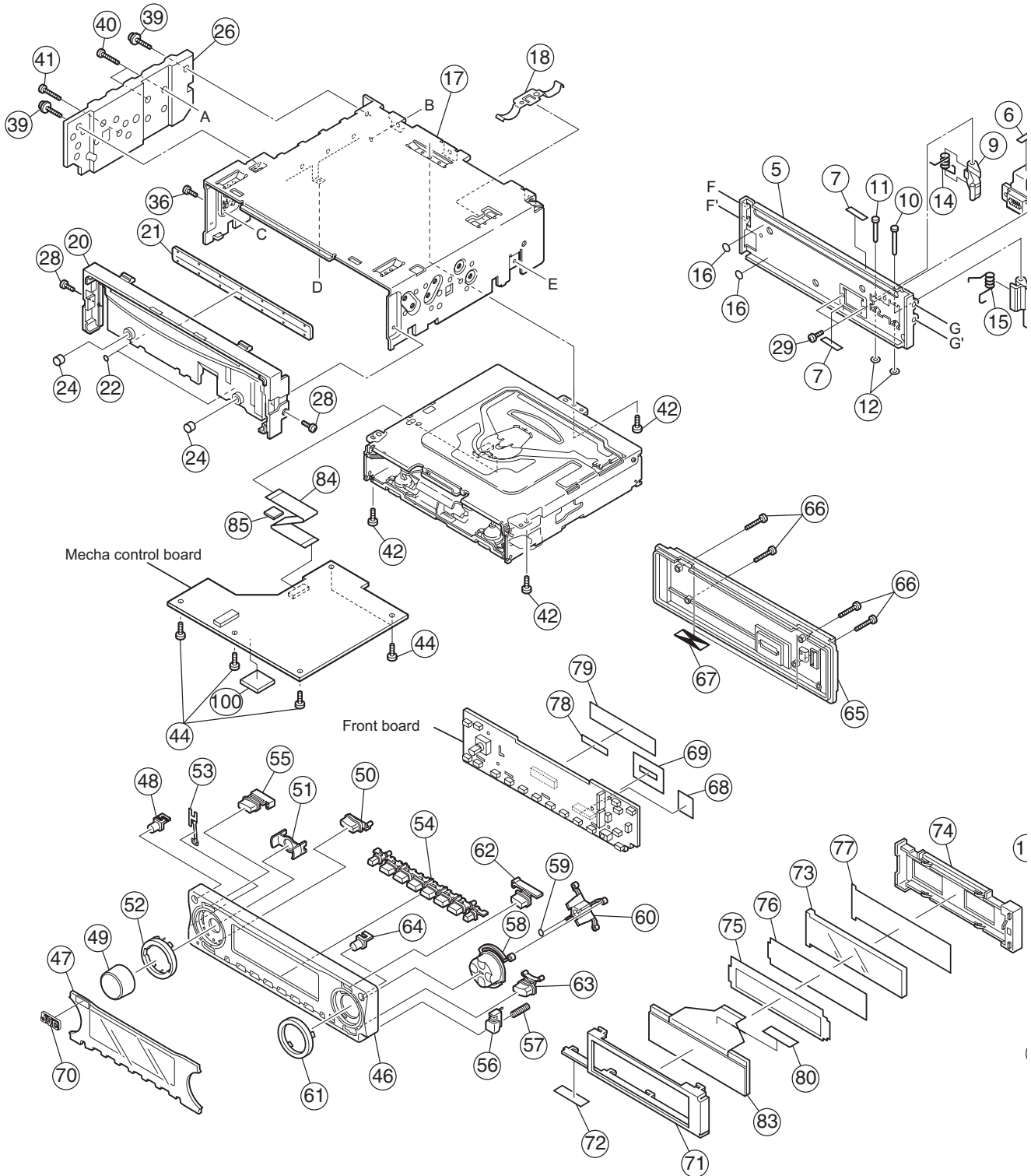
Area suffix
E ----- Continental Europe
EX ----- Central Europe

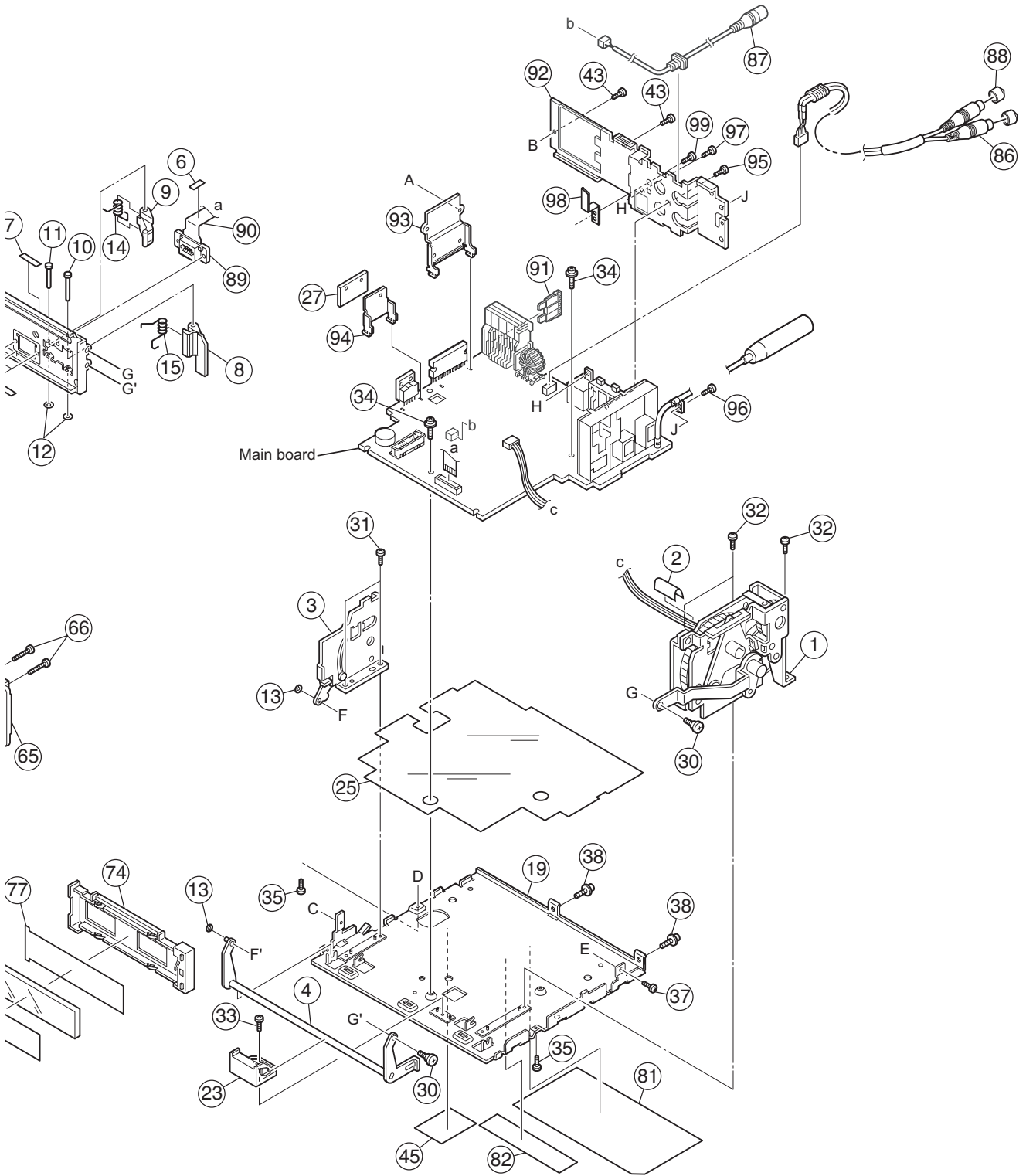
- Contents -

Exploded view of general assembly and parts list (Block No.M1)	3- 2
CD mechanism assembly and parts list (Block No.MB)	3- 5
Electrical parts list (Block No.01~03)	3- 7
Packing materials and accessories parts list (Block No.M3).....	3-16

Exploded view of general assembly and parts list

Block No. **M 1 M M**





General Assembly

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

Symbol No.	Part No.	Part Name	Description	Local
1	GE20156-001A	GEAR BKT UNIT		
2	FSYH4036-100	SHEET		
3	GE30968-001A	LEVER BKT UNIT		
4	GE30964-001A	LOWER LEVER ASS		
5	GE30975-001A	FRONT BKT ASSY		
6	FSYH4036-100	SHEET		
7	GE40218-012A	SHEET	(x2)	
8	GE30972-001A	DETACH LEVER		
9	GE30973-001A	KICK LEVER		
10	GE40192-001A	SHAFT		
11	GE40193-001A	SHAFT		
12	WDL123525	SLIT WASHER	(x2)	
13	WDL215025	WASHER	(x2)	
14	GE40194-001A	T SPRING		
15	GE40195-002A	T SPRING		
16	GE40218-009A	SHEET	(x2)	
17	GE10073-004A	TOP CHASSIS		
18	GE40135-001A	EARTH PLATE		
19	GE10074-001A	BOTTOM CHASSIS		
20	GE10075-001A	F CHASSIS		
21	GE40156-001A	BLIND		
22	GE40224-001A	MIRROR SHEET	(x2)	
23	GE30974-001A	FPC GUIDE		
24	GE40196-001A	ABSORBER	(x2)	
25	GE31204-003A	INSULATOR		
26	GE31206-002A	HEAT SINK		
27	GE40107-002A	HEAT SINK		
28	QYSPSP2003M	SCREW	2mm x 3mm(x2)	
29	QYSPSTU2040M	TAP SCREW	M2 x 4mm(x2)	
30	LV42181-002A	SPECIAL SCREW	(x2)	
31	LV40865-001A	MINI SCREW	(x2)	
32	LV40865-001A	MINI SCREW	(x3)	
33	LV40865-001A	MINI SCREW		
34	LV41200-001A	SPECIAL SCREW	(x2)	
35	QYSDST2606Z	SCREW	2.6mm x 6mm(x2)	
36	QYSDST2604Z	SCREW	2.6mm x 4mm	
37	QYSDST2604Z	SCREW	2.6mm x 4mm	
38	GE40231-001A	SCREW	(x2)	
39	FSKZ4005-002	SCREW	(x2)	
40	QYSDST2610Z	SCREW	2.6mm x 10mm(x2)	
41	QYSDST2610Z	SCREW	2.6mm x 10mm	
42	QYSDST2604Z	SCREW	2.6mm x 4mm(x3)	
43	QYSDST2604Z	SCREW	2.6mm x 4mm(x2)	
44	QYSDST2004Z	SCREW	2mm x 4mm(x5)	
45	GE40218-011A	SHEET		
46	GE10082-007A	FRONT PANEL		
47	GE31177-004A	FINDER ASSY		
48	GE30832-002A	POWER BUTTON		
49	GE30856-001A	KNOB		
50	GE30859-001A	SEL BUTTON		
51	GE30834-001A	RIM LENS		
52	GE30836-001A	RIM COVER(L)		
53	GE31200-003A	RESET BUTTON		
54	GE20152-001A	PRESET BUTTON		
55	GE31172-003A	EQ BUTTON		
56	GE31174-003A	DETACH BUTTON		
57	FSKW3002-012	COMP.SPRING		
58	GE30835-001A	NAV BUTTON		
59	FSYH4036-013	SHEET		
60	GE30937-002A	NAVI BASE		
61	GE30858-003A	RIM COVER(R)		
62	GE30860-001A	FM/AM BUTTON		
63	GE30861-002A	EQ BUTTON		
64	GE31173-001A	EJECT BUTTON		
65	GE31203-006A	R.COVER ASSY		
66	VKZ4777-001	MINI SCREW	(x4)	
67	GE40218-005A	SHEET	(x2)	
68	GE40218-008A	SHEET		
69	LV43889-001A	SW PWB SHEET		
70	GE40204-001A	JVC BADGE		
71	GE31175-001A	LCD CASE		
72	GE40218-007A	SHEET		
73	GE30984-005A	LCD LENS		
74	LV33404-001A	LIGHTING CASE		

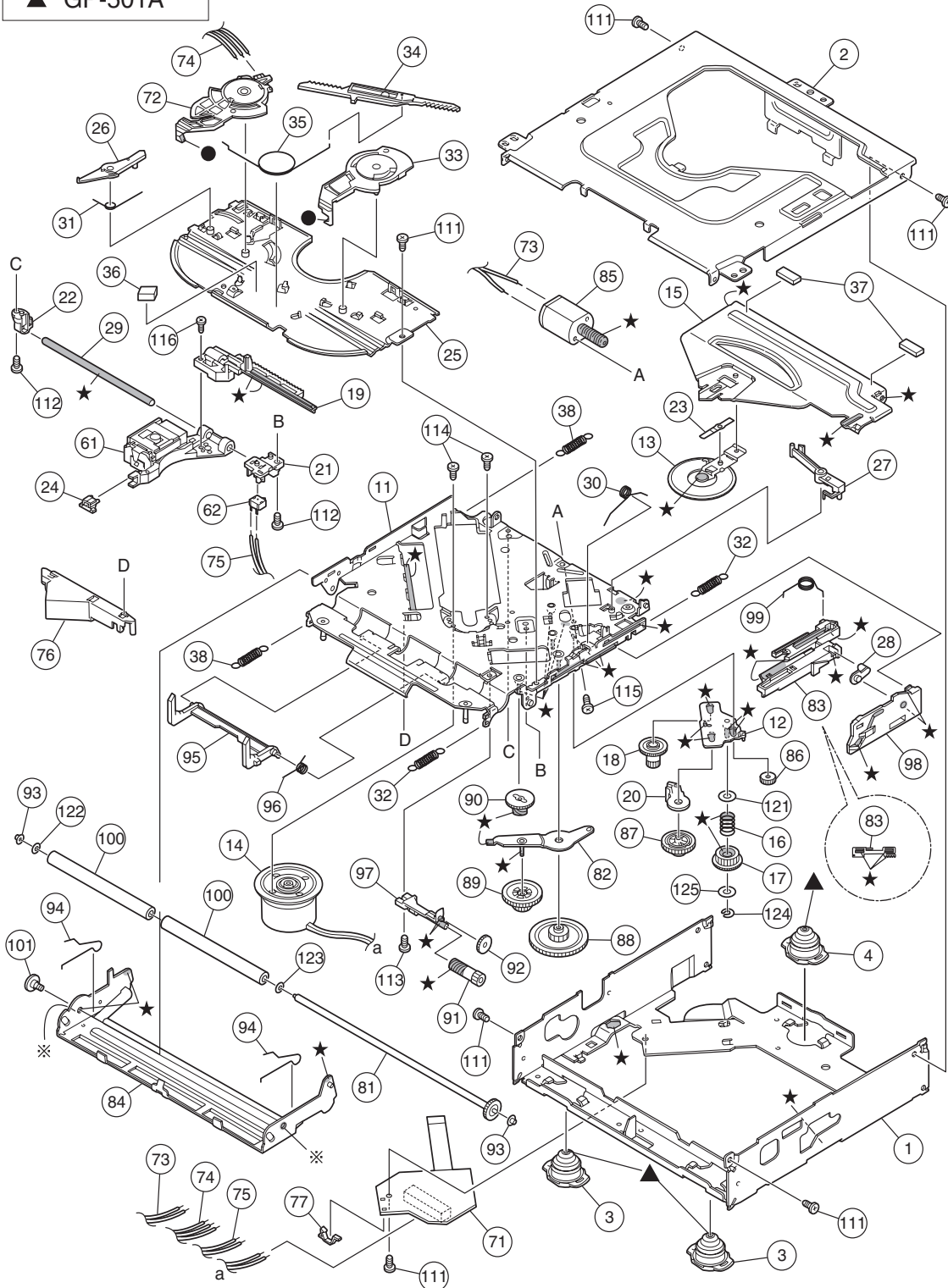
Symbol No.	Part No.	Part Name	Description	Local
75	LV42884-001A	LCD FILTER		
76	LV42995-002A	LCD FILTER		
77	LV42955-002A	LENS SHEET		
78	LV43084-001A	DOUBLE FACE		
79	LV40848-034A	SPACER(P)		
80	LV40846-036A	SPACER(F)		
81	GE31169-001A	NAME PLATE		
82	LV41843-002A	LASER CAUTION		
83	QLD0232-001	LCD MODULE		
84	QUQ105-2207AE	FFC WIRE		
85	VYSH101-009	SPACER		
86	QAM0547-001	SUBWOOFER CABEL		
87	QAM0464-002	STEERING REMOTE		
88	VYTA500-001	PIN CAP	(x2)	
89	QNZ0664-001	CAR CONNECTOR		
90	QAL0536-001	FPC		
91	QMFZ047-150-T	FUSE	15A	
92	GE31205-001A	REAR BRACKET		
93	GE40207-001A	POWER IC BKT		
94	GE40208-001A	REG IC BKT		
95	QYSDSF2606Z	SCREW	2.6mm x 6mm	
96	QYSDST2604Z	SCREW	2.6mm x 4mm	
97	QYSDST2606Z	SCREW	2.6mm x 6mm	
98	GE40214-001A	WIRE HOLDER		
99	QYSDST2604Z	SCREW	2.6mm x 4mm	
100	LV43920-001A	SPACER		

CD mechanism assembly and parts list

TN-2001-1013

Block No. **M** **B** **M** **M**

- Grease
- ★ TNG-87
 - ※ GP-501MK
 - CFD-005Z
 - ▲ GP-501A



CD mechanism

Block No. [M][B][M][M]

Symbol No.	Part No.	Part Name	Description	Local
1	30320101T	FRAME		
2	30320102T	TOP COVER		
3	30320115T	DANPER F	(x2)	
4	30320116T	DANPER R		
11	303205505T	CHASSIS RIVET		
12	303205503T	CHANGE P. RVT A		
13	303205301T	CLAMPER ASSY		
14	303205302T	SPINDLE MOTOR A		
15	30320502T	CLAMPER ARM		
16	30320503T	CHANGE GEAR SPG		
17	30320505T	CHANGE GEAR 2		
18	30320506T	FEED GEAR		
19	30320507T	FEED RACK		
20	30320509T	CHANGE LOCK RAR		
21	30320510T	FEED SW HOLDER		
22	30320511T	PU SHAFT HOLDER		
23	30320513T	CLAMPER SUB SPG		
24	30320514T	FD SUB HOLDER		
25	30320518T	TOP PLATE		
26	30320519T	SELECT LOCK ARM		
27	30320520T	TRIGGER ARM		
28	30320521T	SLIDE HOOK		
29	30320522T	PU SHAFT		
30	30320525T	CLAMPER ARM SPG		
31	30320526T	SELECT L ARM SP		
32	30320538T	SUSPENSION SP R	(x2)	
33	30320529T	SELECT ARM R		
34	30320530T	LINK PLATE		
35	30320531T	LINK PLATE SPG		
36	30320523T	CUSHION F		
37	30320524T	CUSHION R	(x2)	
38	30320539T	SUSPENSION SP L	(x2)	
61	69011614T	PICKUP OPT-725		
62	64180406T	DET SW ESE22		
71	303210302T	CONN BOARD ASSY		
72	30321002T	MODE SW		
73	30321003T	LOAD MOTOR WIRE		
74	30321005T	MODE SW WIRE		
75	30321009T	SL WIRE		
76	30321011T	WIRE HOLDER		
77	19501403T	WIRE CLUMPER		
81	303211301T	ROLLER SHAFT AS		
82	303211501T	L GEAR PLATE RV		
83	303211302T	LOADING PLATE A		
84	303211502T	LOCK ARM RV ASS		
85	303211303T	L/F MOTOR ASSY		
86	30321101T	LOADING GEAR 1		
87	30321102T	LOADING GEAR 2		
88	30321103T	LOADING GEAR 3		
89	30321104T	LOADING GEAR 4		
90	30321105T	LOADING GEAR 5		
91	30321106T	LOADING GEAR 6		
92	30321107T	LOADING GEAR 7		
93	30321111T	ROLLER GUIDE	(x2)	
94	30321114T	ROLLER GUIDE SP	(x2)	
95	30321116T	DISC STOPPER AR		
96	30321117T	DISC ST ARM SPG		
97	30321118T	LD GEAR BRACKET		
98	30321125T	L SIDE PLATE		
99	30321131T	LOAD PLATE SPG		
100	30321133T	LDG ROLLER	(x2)	
101	18211223T	COLLAR SCREW		
111	9P0420031T	SCREW	(x6)	
112	9P0420041T	TAP.SCREW	(x2)	
113	9B0320041T	SCREW		
114	9C0117183T	SCREW	(x2)	
115	9C0120203T	SCREW		
116	9C0317503T	SCREW		
121	9W0130170T	PW 3.5X8X0.3		
122	9W0513060T	HL WASHER		
123	9W0710070T	L WASHER		
124	9E0100152T	E RING		
125	9W0113020T	PW 2.1X4X0.13		

Electrical parts list

Main board

Block No. [0][1][0][0]

△ Symbol No.	Part No.	Part Name	Description	Local
IC71	SAA6579T-X	IC		
IC161	TDA7404D-X	IC		
IC201	M62449FP-X	IC		
IC251	NJM4565M-WE	IC		
IC271	CD4066BPW-X	IC		
IC301	LA47515	IC		
IC361	NJM2160AV-X	IC		
IC381	NJM2160AV-X	IC		
IC701	UPD784217AGC268	IC		
IC702	IC-PST3433U-X	IC		
IC703	BR24L32F-W-X	IC		
IC801	HD74HC126FP-X	IC		
IC901	AN80T07A	REGULATOR IC		
IC921	NJM2360AM-X	IC		
IC951	BA6956AN	IC		
Q5	2SB624/4-X	TRANSISTOR		
Q6	2SB624/4-X	TRANSISTOR		
Q7	UN2211-X	TRANSISTOR		
Q51	2SD601A/QR/-X	TRANSISTOR		
Q52	2SD601A/QR/-X	TRANSISTOR		
Q53	UN2211-X	TRANSISTOR		
Q54	2SD601A/QR/-X	TRANSISTOR		
Q55	UN2111-X	TRANSISTOR		
Q56	UN2111-X	TRANSISTOR		
Q81	2SD601A/QR/-X	TRANSISTOR		
Q91	2SD601A/QR/-X	TRANSISTOR		
Q241	2SD601A/QR/-X	TRANSISTOR		
Q251	2SD601A/QR/-X	TRANSISTOR		
Q252	UN2111-X	TRANSISTOR		
Q271	UN2211-X	TRANSISTOR		
Q272	UN2211-X	TRANSISTOR		
Q301	UN2211-X	TRANSISTOR		
Q321	KTD1304-X	TRANSISTOR		
Q331	KTD1304-X	TRANSISTOR		
Q341	KTD1304-X	TRANSISTOR		
Q351	KTD1304-X	TRANSISTOR		
Q701	UN2211-X	TRANSISTOR		
Q702	UN2214-X	TRANSISTOR		
Q703	UN2211-X	TRANSISTOR		
Q704	UN2213-X	DIGI TRANSISTOR		
Q705	UN2211-X	TRANSISTOR		
Q706	UN2211-X	TRANSISTOR		
Q707	UN2211-X	TRANSISTOR		
Q781	UN2111-X	TRANSISTOR		
Q782	UN2111-X	TRANSISTOR		
Q841	UN2211-X	TRANSISTOR		
Q881	2SD601A/QR/-X	TRANSISTOR		
Q891	UN2211-X	TRANSISTOR		
Q901	2SB624/4-X	TRANSISTOR		
Q902	UN2211-X	TRANSISTOR		
Q951	UN2211-X	TRANSISTOR		
Q976	UN2213-X	DIGI TRANSISTOR		
Q977	2SB709A/QR/-X	TRANSISTOR		
D1	MA111-X	SI DIODE		
D2	MA111-X	SI DIODE		
D3	MA111-X	SI DIODE		
D4	MA111-X	SI DIODE		
D241	MA111-X	SI DIODE		
D242	MA111-X	SI DIODE		
D252	MA111-X	SI DIODE		
D253	MA111-X	SI DIODE		
D301	MA111-X	SI DIODE		
D321	MA111-X	SI DIODE		
D331	MA111-X	SI DIODE		
D341	MA111-X	SI DIODE		
D351	MA111-X	SI DIODE		
D701	MA111-X	SI DIODE		
D702	MA8062/M/-X	Z DIODE		
D703	MA8062/M/-X	Z DIODE		
D704	MA8062/M/-X	Z DIODE		

△ Symbol No.	Part No.	Part Name	Description	Local
D705	MA8062/M/-X	Z DIODE		
D706	MA8062/M/-X	Z DIODE		
D707	MA8062/M/-X	Z DIODE		
D708	MA8062/M/-X	Z DIODE		
D709	MA8062/M/-X	Z DIODE		
D710	MA8062/M/-X	Z DIODE		
D714	MA111-X	SI DIODE		
D715	MA111-X	SI DIODE		
D781	MA111-X	SI DIODE		
D782	UDZS11B-X	Z DIODE		
D853	RB160M-30-X	SB DIODE		
D854	RB160M-30-X	SB DIODE		
D891	MA111-X	SI DIODE		
D892	MA111-X	SI DIODE		
D901	MA111-X	SI DIODE		
D902	MA111-X	SI DIODE		
D921	RB160M-30-X	SB DIODE		
D922	MA111-X	SI DIODE		
D951	UDZS3.9B-X	Z DIODE		
D961	1N5404-TU-15	DIODE		
B5	NDC31HJ-560X	C CAPACITOR	56pF 50V J	
C1	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C2	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C3	QERF1AM-476Z	E CAPACITOR	47uF 10V M	
C4	QERF1AM-476Z	E CAPACITOR	47uF 10V M	
C5	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C6	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C7	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C8	NDC31HJ-331X	C CAPACITOR	330pF 50V J	
C9	QERF1HM-104Z	E CAPACITOR	0.1uF 50V M	
C51	QERF1HM-474Z	E CAPACITOR	0.47uF 50V M	
C52	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C53	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C54	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C55	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C71	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C72	NCB31EK-223X	C CAPACITOR	0.022uF 25V K	
C73	NDC31HJ-561X	C CAPACITOR	560pF 50V J	
C74	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C75	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M	
C76	NDC31HJ-470X	C CAPACITOR	47pF 50V J	
C77	NDC31HJ-820X	C CAPACITOR	82pF 50V J	
C81	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C82	NCB31EK-153X	C CAPACITOR	0.015uF 25V K	
C91	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C92	NCB31EK-153X	C CAPACITOR	0.015uF 25V K	
C161	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C162	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C163	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C166	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C167	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C168	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C169	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C181	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C182	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C183	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C201	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C202	NCB31CK-823X	C CAPACITOR	0.082uF 16V K	
C203	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C204	NCB31EK-273X	C CAPACITOR	0.027uF 25V K	
C205	NCB31CK-393X	C CAPACITOR	0.039uF 16V K	
C206	NCB31HK-123X	C CAPACITOR	0.012uF 50V K	
C207	NCB31HK-153X	C CAPACITOR	0.015uF 50V K	
C208	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C209	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C210	NCB31HK-182X	C CAPACITOR	1800pF 50V K	
C211	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C212	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C213	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C214	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C215	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C216	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C221	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C222	NCB31CK-823X	C CAPACITOR	0.082uF 16V K	
C223	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C224	NCB31EK-273X	C CAPACITOR	0.027uF 25V K		C706	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C225	NCB31CK-393X	C CAPACITOR	0.039uF 16V K		C707	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C226	NCB31HK-123X	C CAPACITOR	0.012uF 50V K		C708	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C227	NCB31HK-153X	C CAPACITOR	0.015uF 50V K		C709	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C228	NCB31HK-472X	C CAPACITOR	4700pF 50V K		C710	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C229	NCB31HK-682X	C CAPACITOR	6800pF 50V K		C711	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C230	NCB31HK-182X	C CAPACITOR	1800pF 50V K		C712	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C231	NCB31HK-272X	C CAPACITOR	2700pF 50V K		C713	NDC31HJ-8R0X	C CAPACITOR	8pF 50V J	
C232	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M		C714	NDC31HJ-270X	C CAPACITOR	27pF 50V J	
C241	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M		C715	NDC31HJ-270X	C CAPACITOR	27pF 50V J	
C242	QERF1HM-105Z	E CAPACITOR	1uF 50V M		C716	NDC31HJ-220X	C CAPACITOR	22pF 50V J	
C243	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		C717	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M	
C244	QERF1CM-226Z	E CAPACITOR	22uF 16V M		C718	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C245	QERF1HM-224Z	E CAPACITOR	0.22uF 50V M		C719	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C251	NCB31HK-822X	C CAPACITOR	8200pF 50V K		C720	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C252	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M		C721	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C253	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		C722	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C255	QERF1CM-476Z	E CAPACITOR	47uF 16V M		C781	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	
C256	NCB31EK-823X	C CAPACITOR	0.082uF 25V K		C782	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C257	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M		C783	QERF1CM-107Z	E CAPACITOR	100uF 16V M	
C259	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M		C801	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C261	NDC31HJ-101X	C CAPACITOR	100pF 50V J		C802	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C262	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		C841	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C271	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		C852	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C272	NCB31HK-562X	C CAPACITOR	5600pF 50V K		C881	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
C273	NCB31EK-333X	C CAPACITOR	0.033uF 25V K		C891	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C274	NCB31EK-273X	C CAPACITOR	0.027uF 25V K		C901	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C275	NCB31EK-273X	C CAPACITOR	0.027uF 25V K		C902	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C301	QFV61HJ-474Z	MF CAPACITOR	0.47uF 50V J		C903	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C302	QFV61HJ-474Z	MF CAPACITOR	0.47uF 50V J		C904	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C303	NDC31HJ-101X	C CAPACITOR	100pF 50V J		C905	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
C304	NDC31HJ-101X	C CAPACITOR	100pF 50V J		C906	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C305	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		C907	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C306	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		C908	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C307	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		C909	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
C308	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		C910	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
C309	QERF1HM-105Z	E CAPACITOR	1uF 50V M		C921	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C310	QERF1HM-105Z	E CAPACITOR	1uF 50V M		C922	QERF1CM-107Z	E CAPACITOR	100uF 16V M	
C311	QFV61HJ-474Z	MF CAPACITOR	0.47uF 50V J		C923	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C312	QFV61HJ-474Z	MF CAPACITOR	0.47uF 50V J		C924	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C313	NDC31HJ-101X	C CAPACITOR	100pF 50V J		C951	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C314	NDC31HJ-101X	C CAPACITOR	100pF 50V J		C955	NDC31HJ-560X	C CAPACITOR	56pF 50V J	
C315	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		C961	QEZO675-338	E CAPACITOR	3300uF	
C316	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		C962	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C317	QERF1CM-107Z	E CAPACITOR	100uF 16V M		C978	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C318	QERF1CM-226Z	E CAPACITOR	22uF 16V M		C991	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C319	NCB31EK-223X	C CAPACITOR	0.022uF 25V K		C992	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C320	NCB31EK-223X	C CAPACITOR	0.022uF 25V K		C993	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C321	NDC31HJ-101X	C CAPACITOR	100pF 50V J		C994	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C322	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		C995	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C361	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		C996	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C362	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		C997	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C363	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		C998	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C364	NCB31CK-104X	C CAPACITOR	0.1uF 16V K						
C365	NCB31HK-152X	C CAPACITOR	1500pF 50V K		R1	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C366	NCB31HK-152X	C CAPACITOR	1500pF 50V K		R2	NRSA63J-270X	MG RESISTOR	27Ω 1/16W J	
C367	QERF1AM-107Z	E CAPACITOR	100uF 10V M		R3	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
C368	QERF1AM-107Z	E CAPACITOR	100uF 10V M		R4	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
C369	QERF1HM-105Z	E CAPACITOR	1uF 50V M		R5	NRSA02J-220X	MG RESISTOR	22Ω 1/10W J	
C370	QERF1HM-105Z	E CAPACITOR	1uF 50V M		R6	NRSA02J-220X	MG RESISTOR	22Ω 1/10W J	
C371	QERF1CM-476Z	E CAPACITOR	47uF 16V M		R7	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C372	QERF1AM-107Z	E CAPACITOR	100uF 10V M		R8	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C381	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		R9	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C382	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		R10	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
C383	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R11	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C384	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R51	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
C385	NCB31HK-152X	C CAPACITOR	1500pF 50V K		R52	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C386	NCB31HK-152X	C CAPACITOR	1500pF 50V K		R53	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C387	QERF1AM-107Z	E CAPACITOR	100uF 10V M		R54	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C388	QERF1AM-107Z	E CAPACITOR	100uF 10V M		R55	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C389	QERF1HM-105Z	E CAPACITOR	1uF 50V M		R56	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C390	QERF1HM-105Z	E CAPACITOR	1uF 50V M		R57	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
C391	QERF1CM-476Z	E CAPACITOR	47uF 16V M		R58	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C701	QERF1AM-227Z	E CAPACITOR	220uF 10V M		R59	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C702	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R61	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C703	NDC31HJ-471X	C CAPACITOR	470pF 50V J		R71	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C704	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R72	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C705	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R73	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R74	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R382	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R81	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R383	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R82	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R384	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R83	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R386	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R91	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R387	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R92	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R702	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R93	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R703	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R162	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R704	NRSA63J-106X	MG RESISTOR	10MΩ 1/16W J	
R163	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R705	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R164	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J		R706	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R166	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R707	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R167	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R708	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R168	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R709	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R169	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R710	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R170	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R711	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R171	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R712	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R177	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R713	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R178	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R714	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R182	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R715	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R183	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R716	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R184	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J		R717	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R186	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R718	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R187	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R719	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R188	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R720	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R197	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R721	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R198	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R722	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R241	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J		R723	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R242	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R725	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R243	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J		R726	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R244	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R727	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R245	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J		R728	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R246	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J		R729	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R247	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R730	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R248	NRSA63J-274X	MG RESISTOR	270kΩ 1/16W J		R731	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R251	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R732	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R252	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R733	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R253	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R734	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R254	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R735	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R255	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R736	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R256	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R737	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R257	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R738	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R258	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		R739	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R259	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		R740	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
R260	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R741	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R261	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R742	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
R262	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R745	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R263	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R746	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R271	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J		R747	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R272	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J		R748	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R273	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R749	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R274	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J		R750	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R275	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J		R751	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R276	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R752	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R301	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R753	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R302	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R754	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R307	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R755	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R308	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R756	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R311	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R757	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R312	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R758	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R321	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R759	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R322	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R760	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R323	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R761	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R331	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R762	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R332	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R763	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R333	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R764	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R341	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R766	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R342	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R767	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R343	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R768	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R351	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R769	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R352	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R770	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R353	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R771	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R361	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R772	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R362	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R773	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R363	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R774	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R364	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R776	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R366	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R777	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R367	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R778	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R381	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R780	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	

Symbol No.	Part No.	Part Name	Description	Local
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Front board

Block No. [0][2][0][0]

Symbol No.	Part No.	Part Name	Description	Local
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R788	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R789	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R790	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R791	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R792	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R794	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R796	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R797	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R801	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R802	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R803	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R804	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R805	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R806	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R807	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R808	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R809	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R810	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R841	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R852	NRSA02J-222X	MG RESISTOR	2.2kΩ 1/10W J	
R853	NRSA02J-222X	MG RESISTOR	2.2kΩ 1/10W J	
R881	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R882	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R883	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R892	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R893	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R901	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R902	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R903	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R904	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R905	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R906	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R921	NRSA02J-100X	MG RESISTOR	10Ω 1/10W J	
R922	NRSA02J-100X	MG RESISTOR	10Ω 1/10W J	
R923	NRSA02J-100X	MG RESISTOR	10Ω 1/10W J	
R924	NRSA02J-100X	MG RESISTOR	10Ω 1/10W J	
R925	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R926	NRSA63D-473X	MG RESISTOR	47kΩ 1/16W D	
R927	NRSA63D-472X	MG RESISTOR	4.7kΩ 1/16W D	
R951	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R976	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R977	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R978	NRS181J-222X	MG RESISTOR	2.2kΩ 1/8W J	
R979	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J	
R980	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R981	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R982	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R983	NRS181J-222X	MG RESISTOR	2.2kΩ 1/8W J	
RA701	NRZ0065-222X	NET RESISTOR	2.2kΩ	
VR921	NVP1505-473X	TRIM RESISTOR	47kΩ	
L1	QQL244J-4R7Z	INDUCTOR	4.7uH J	
L701	QQL244J-470Z	COIL	47uH J	
L702	QQL244J-470Z	COIL	47uH J	
L703	QQL244J-470Z	COIL	47uH J	
L921	QQL244J-4R7Z	INDUCTOR	4.7uH J	
L922	NQLZ007-151X	COIL	150uH	
L961	QQR1378-002	COIL		
BZ841	QAN0023-001Z	BUZZER		
CN251	QGA2501C1-03	CONNECTOR	W-B (1-3)	
CN701	QGF1041C1-16W	CONNECTOR	FFC/FPC (1-16)	
CN702	QGB2027M4-22S	CONNECTOR	B-B (1-22)	
CN901	QNZ0650-001	CAR CONNECTOR		
CN951	QGA2501F1-02	CONNECTOR	W-B (1-2)	
CN952	QJB005-040909	SIN ID C-B WIRE		
CN981	QGA2006F1-02	CONNECTOR	W-B (1-2)	
J1	QAM0556-001	ANT CABLE		
J321	QNN0490-001	PIN JACK		
J801	QNZ0095-001	CONNECTOR		
PP1	QZW0010-001	STYLE PIN		
PP2	QZW0010-001	STYLE PIN		
PP3	QZW0010-001	STYLE PIN		
TU1	QAU0203-002	TUNER		
X71	QAX0263-001Z	CRYSTAL	4.332MHz	
X701	QAX0617-001Z	CRYSTAL	12.500MHz	
X702	QAX0401-001	CRYSTAL	32.768KHz	

IC801	MN102H60KCN2	IC		
IC802	LH28F160BJHET95	IC		
IC803	IC-PST3424U-X	IC		
IC804	NJU7241F33-X	IC		
IC805	GP1UM261XK	IR DETECT UNIT	38kHz	
Q400	UN2211-X	TRANSISTOR		
Q401	UN2211-X	TRANSISTOR		
Q402	UN2211-X	TRANSISTOR		
Q403	UN2211-X	TRANSISTOR		
Q404	UN2211-X	TRANSISTOR		
Q405	UN2211-X	TRANSISTOR		
Q406	UN2211-X	TRANSISTOR		
Q407	2SD601A/QR-X	TRANSISTOR		
Q408	2SD601A/QR-X	TRANSISTOR		
Q409	2SD601A/QR-X	TRANSISTOR		
Q410	2SD601A/QR-X	TRANSISTOR		
Q411	2SD601A/QR-X	TRANSISTOR		
Q412	2SD601A/QR-X	TRANSISTOR		
Q413	2SD601A/QR-X	TRANSISTOR		
Q420	2SD601A/QR-X	TRANSISTOR		
Q421	2SD601A/QR-X	TRANSISTOR		
Q422	2SD601A/QR-X	TRANSISTOR		
Q423	2SD601A/QR-X	TRANSISTOR		
Q424	2SD601A/QR-X	TRANSISTOR		
Q425	2SD601A/QR-X	TRANSISTOR		
Q480	2SD601A/QR-X	TRANSISTOR		
Q801	2SB709A/QR-X	TRANSISTOR		
Q802	2SB709A/QR-X	TRANSISTOR		
Q803	2SD601A/QR-X	TRANSISTOR		
Q804	UN2111-X	TRANSISTOR		
D400	MA152WK-X	SI DIODE		
D401	SML-310LT/MN-X	LED		
D402	SML-310LT/MN-X	LED		
D403	SML-310LT/MN-X	LED		
D404	SML-310LT/MN-X	LED		
D405	SML-A12BC2T-X	BLUE LED		
D406	SML-A12BC2T-X	BLUE LED		
D407	SML-310LT/MN-X	LED		
D408	SML-310LT/MN-X	LED		
D409	SML-310LT/MN-X	LED		
D410	SML-310LT/MN-X	LED		
D411	SML-310LT/MN-X	LED		
D412	SML-310LT/MN-X	LED		
D413	SML-310LT/MN-X	LED		
D414	SML-310LT/MN-X	LED		
D415	SML-310LT/MN-X	LED		
D416	SML-310LT/MN-X	LED		
D417	SML-310LT/MN-X	LED		
D418	SML-310LT/MN-X	LED		
D419	SML-310LT/MN-X	LED		
D420	SML-310LT/MN-X	LED		
D421	CL-190UB2-X-X	LED		
D422	CL-190UB2-X-X	LED		
D423	MA8062/M/-X	Z DIODE		
D424	MA8062/M/-X	Z DIODE		
D425	MA8062/M/-X	Z DIODE		
D429	MA8062/M/-X	Z DIODE		
D430	MA8062/M/-X	Z DIODE		
D431	MA8062/M/-X	Z DIODE		
D451	NSCM315C-W	LED		
D453	NSCM315C-W	LED		
D801	MA152WK-X	SI DIODE		
D802	MA111-X	SI DIODE		
D803	MA111-X	SI DIODE		
D804	MA8062/M/-X	Z DIODE		
D805	MA8062/M/-X	Z DIODE		
D806	MA8062/M/-X	Z DIODE		
D807	MA8062/M/-X	Z DIODE		
D808	MA8062/M/-X	Z DIODE		
D809	MA8062/M/-X	Z DIODE		
D810	MA8062/M/-X	Z DIODE		
D811	MA8062/M/-X	Z DIODE		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
D812	MA8062/M-X	Z DIODE			R437	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C451	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R438	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C452	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R439	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C453	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R449	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C457	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R450	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C458	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R451	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C459	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R452	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
C636	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R453	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
C637	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R454	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
C801	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R455	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C802	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R456	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C804	NDC31HJ-471X	C CAPACITOR	470pF 50V J		R457	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C805	NDC31HJ-471X	C CAPACITOR	470pF 50V J		R479	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C806	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R601	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J	
C807	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M		R602	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
C808	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M		R603	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C809	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M		R604	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
C810	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R605	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J	
C811	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R606	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
C812	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M		R607	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C813	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R608	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
C814	NCB31AK-474X	C CAPACITOR	0.47uF 10V K		R609	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
C815	NCB31AK-474X	C CAPACITOR	0.47uF 10V K		R610	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J	
C816	NCB31AK-474X	C CAPACITOR	0.47uF 10V K		R611	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
C817	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R612	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C818	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R613	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
C819	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R614	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
C820	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R616	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
C821	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R801	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
C822	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R803	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
C823	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R804	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
C824	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R806	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C825	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R807	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C826	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R816	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C827	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R817	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C828	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R818	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C829	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M		R819	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C831	NBE21VM-104X	TA E CAPACITOR	0.1uF 35V M		R821	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
C834	NBE21CM-105X	TA E CAPACITOR	1uF 16V M		R822	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C835	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R823	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R401	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R824	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R402	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R825	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R403	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J		R826	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R404	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J		R827	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R405	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R828	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R406	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R829	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R407	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R830	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R408	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R835	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R409	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R836	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R410	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R837	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R411	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R838	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R412	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R839	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R413	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R840	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R414	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R841	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R415	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R842	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R416	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R843	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R417	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R844	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R418	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R845	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R419	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R846	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R420	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R847	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R421	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R865	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R422	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R866	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R423	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R867	NRSA63J-225X	MG RESISTOR	2.2MΩ 1/16W J	
R424	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R868	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R425	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R869	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R426	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R870	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R427	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R872	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R428	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R873	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R429	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R874	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R430	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R877	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R431	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J		R878	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
R432	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J		R891	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R433	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J		R892	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R434	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J		R895	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R435	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J		R896	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R436	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J		R897	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
					R898	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
					R899	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
RA801	NRZ0065-331X	NET RESISTOR	330Ω		C505	NDC31HJ-220X	C CAPACITOR	22pF 50V J	
RA802	NRZ0065-331X	NET RESISTOR	330Ω		C506	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
RA803	NRZ0065-331X	NET RESISTOR	330Ω		C507	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
RA804	NRZ0065-331X	NET RESISTOR	330Ω		C508	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
RA805	NRZ0065-102X	MG RESISTOR	1kΩ		C509	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
RA806	NRZ0065-102X	MG RESISTOR	1kΩ		C510	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
RA807	NRZ0065-331X	NET RESISTOR	330Ω		C511	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
RA808	NRZ0065-331X	NET RESISTOR	330Ω		C512	NEAD0JM-107X	E CAPACITOR	100uF 6.3V M	
RA809	NRZ0065-331X	NET RESISTOR	330Ω		C513	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
RA810	NRZ0065-103X	NET RESISTOR	10kΩ		C514	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	

L801	NQL114K-470X	INDUCITOR	47uH K	
CN801	NNZ0098-001X	CAR CONNECTOR		
CN802	QGF0523F1-40W	CONNECTOR	FFC/FPC (1-40)	
JS801	QSW0976-001	ROTARY ENCODER		
S600	NSW0124-001X	TACT SW		
S601	NSW0124-001X	TACT SW		
S602	NSW0124-001X	TACT SW		
S603	NSW0124-001X	TACT SW		
S604	NSW0124-001X	TACT SW		
S605	NSW0124-001X	TACT SW		
S606	NSW0124-001X	TACT SW		
S607	NSW0124-001X	TACT SW		
S608	NSW0124-001X	TACT SW		
S609	NSW0124-001X	TACT SW		
S610	NSW0124-001X	TACT SW		
S611	NSW0124-001X	TACT SW		
S612	NSW0124-001X	TACT SW		
S613	NSW0124-001X	TACT SW		
S614	NSW0124-001X	TACT SW		
S615	NSW0124-001X	TACT SW		
S616	NSW0124-001X	TACT SW		
S617	NSW0124-001X	TACT SW		
S618	NSW0124-001X	TACT SW		
TH801	NAD0028-103X	N THERMISTOR	10kΩ	
X801	NAX0652-001X	RESONATOR		

Micon control board

Block No. [0][3][0][0]

△ Symbol No.	Part No.	Part Name	Description	Local
IC501	TMP91CW12AF5GJ4	IC		
IC502	BR24L01AFV-W-X	IC		
IC503	SN74AHCT126PW-X	IC(DIGITAL)		
IC504	NJU7241F33-X	IC		
IC571	PCM1748KE-X	IC		
IC572	NJM4565V-X	IC		
IC573	SN74AHC04PW-X	IC		
IC601	TA2157FN-X	RF AMP IC		
IC621	TC94A14FA	CD LSI IC		
IC651	NJU7772F15-X	IC		
IC652	TC94A34FG-002	IC		
IC681	BA5830FP-X	IC		
Q501	UN2111-X	TRANSISTOR		
Q502	UN2211-X	TRANSISTOR		
Q571	UN2111-X	TRANSISTOR		
Q572	UN2211-X	TRANSISTOR		
Q573	2SB624/4/-X	TRANSISTOR		
Q574	UN2211-X	TRANSISTOR		
Q601	2SB1132/QR/-W	TRANSISTOR		
Q651	2SB624/4/-X	TRANSISTOR		
Q652	UN2211-X	TRANSISTOR		
Q681	2SB1184/QR/-X	TRANSISTOR		
D506	MA111-X	SI DIODE		
D682	1SR154-400-X	DIODE		
C501	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C502	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C503	NEAD0JM-107X	E CAPACITOR	100uF 6.3V M	
C504	NDC31HJ-220X	C CAPACITOR	22pF 50V J	

C505	NDC31HJ-220X	C CAPACITOR	22pF 50V J	
C506	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C507	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C508	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C509	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C510	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C511	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C512	NEAD0JM-107X	E CAPACITOR	100uF 6.3V M	
C513	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C514	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	
C551	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C571	NDC31HJ-270X	C CAPACITOR	27pF 50V J	
C572	NDC31HJ-270X	C CAPACITOR	27pF 50V J	
C573	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C574	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C575	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C576	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C577	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C578	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C581	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C582	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C583	NCS31HJ-821X	C CAPACITOR	820pF 50V J	
C584	NCS31HJ-821X	C CAPACITOR	820pF 50V J	
C585	NEAD1VM-475X	E CAPACITOR	4.7uF 35V M	
C586	NEAD1VM-475X	E CAPACITOR	4.7uF 35V M	
C587	NDC31HJ-121X	C CAPACITOR	120pF 50V J	
C588	NDC31HJ-121X	C CAPACITOR	120pF 50V J	
C589	NEAD1VM-475X	E CAPACITOR	4.7uF 35V M	
C590	NEAD1VM-475X	E CAPACITOR	4.7uF 35V M	
C591	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C592	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C593	NEAD1CM-476X	E CAPACITOR	47uF 16V M	
C594	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	
C595	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C596	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C597	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	
C598	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	
C601	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C602	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C603	NEAD0JM-107X	E CAPACITOR	100uF 6.3V M	
C604	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C605	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C606	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C607	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C608	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C609	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C610	NDC31HJ-5R0X	C CAPACITOR	5pF 50V J	
C611	NDC31HJ-680X	C CAPACITOR	68pF 50V J	
C612	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C613	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C614	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C616	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C621	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C622	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C623	NDC31HJ-470X	C CAPACITOR	47pF 50V J	
C624	NCB31HK-153X	C CAPACITOR	0.015uF 50V K	
C625	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C626	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C627	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C628	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C629	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C630	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C631	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C632	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C633	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C634	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C635	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C636	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C637	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C638	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C639	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C640	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C641	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C642	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C643	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C644	NCB31AK-334X	C CAPACITOR	0.33uF 10V K	
C645	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C646	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	

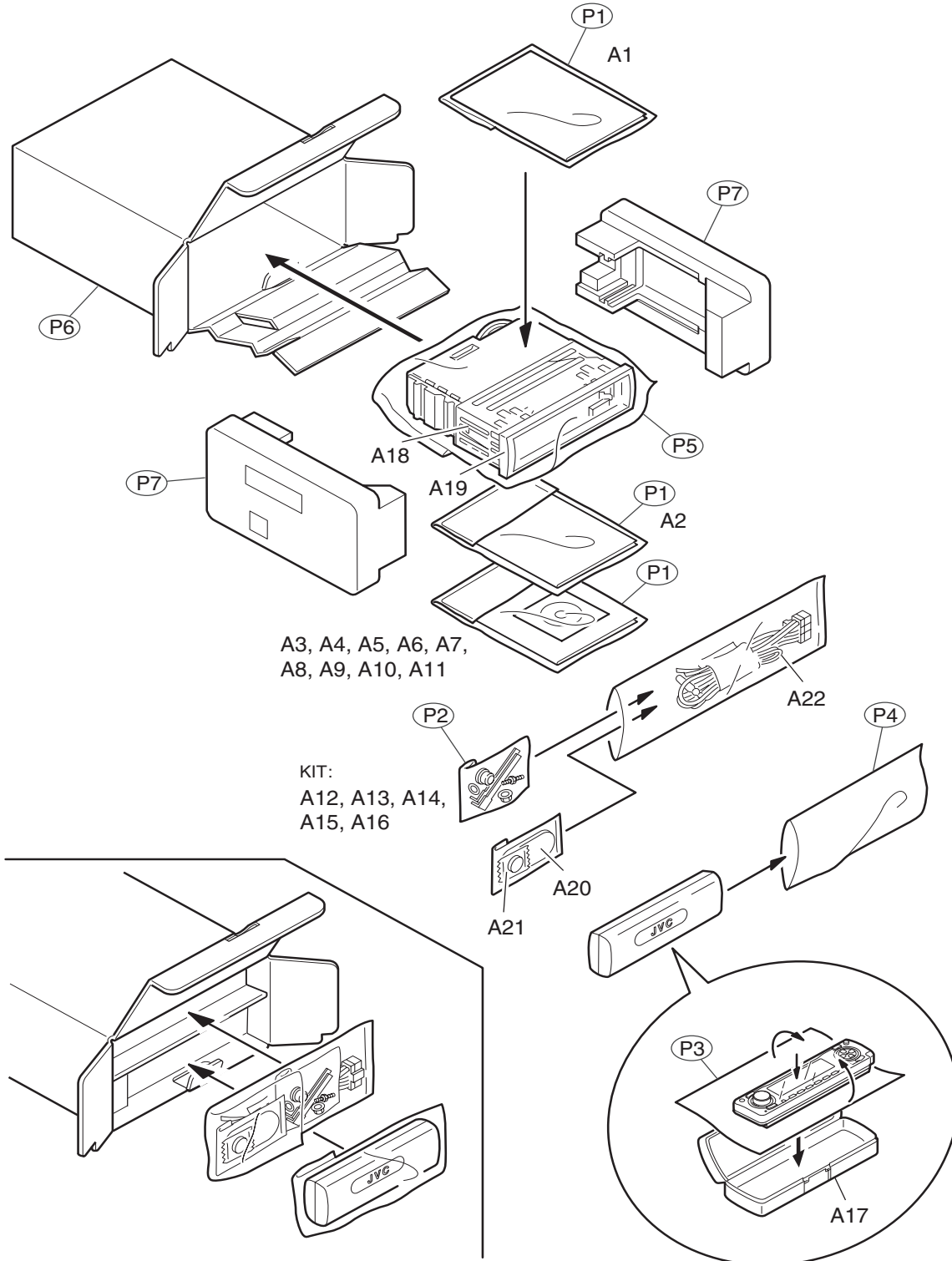
△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C651	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M		R559	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C652	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R560	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C653	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M		R561	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C654	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R562	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
C655	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R563	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
C656	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R568	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C659	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R569	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C660	NDC31HJ-101X	C CAPACITOR	100pF 50V J		R570	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C661	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R572	NRSA63J-225X	MG RESISTOR	2.2MΩ 1/16W J	
C662	NDC31HJ-101X	C CAPACITOR	100pF 50V J		R573	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C663	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R574	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
C664	NCB31HK-222X	C CAPACITOR	2200pF 50V K		R575	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C665	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R576	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C666	NDC31HJ-101X	C CAPACITOR	100pF 50V J		R577	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C667	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R578	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C668	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M		R579	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C669	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R581	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J	
C682	NEAD1VM-475X	E CAPACITOR	4.7uF 35V M		R582	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J	
C683	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R583	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
C684	NEAD1CM-476X	E CAPACITOR	47uF 16V M		R584	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
C689	NEAD1CM-476X	E CAPACITOR	47uF 16V M		R585	NRSA63J-303X	MG RESISTOR	30kΩ 1/16W J	
C690	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R586	NRSA63J-303X	MG RESISTOR	30kΩ 1/16W J	
C693	NEAD1CM-476X	E CAPACITOR	47uF 16V M		R587	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
					R588	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R501	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R589	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R502	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R590	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R503	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R591	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R504	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R592	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R505	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R593	NRSA63J-4R7X	MG RESISTOR	4.7Ω 1/16W J	
R506	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R601	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R507	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R602	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R508	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R603	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R509	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R604	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R510	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R605	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R511	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R606	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R512	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R607	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R513	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R608	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R514	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R609	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R515	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R610	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R516	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R611	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R517	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R612	NRSA63J-202X	MG RESISTOR	2kΩ 1/16W J	
R518	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R613	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R519	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R614	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R520	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R615	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
R521	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R616	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R522	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R621	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R523	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R622	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R525	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R623	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R526	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R624	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R528	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R625	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R530	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R626	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R531	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R627	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R532	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R628	NRSA63J-155X	MG RESISTOR	1.5MΩ 1/16W J	
R533	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R629	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R534	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R630	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R535	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R631	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R536	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R632	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R537	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R633	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R539	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R634	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R540	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R635	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R541	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R636	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R542	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R637	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R543	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R638	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R544	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R639	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R545	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R640	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R546	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J		R641	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R547	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J		R642	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R548	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		R651	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R549	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R654	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R550	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R655	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R551	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R656	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R552	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R657	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R553	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		R668	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R554	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R675	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R555	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R681	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R556	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R682	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R557	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R683	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R558	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R684	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	

Symbol No.	Part No.	Part Name	Description	Local
R685	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R686	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R687	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R688	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R689	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R690	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R691	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
L501	NQL114K-470X	INDUCITOR	47uH K	
L502	NQL114K-470X	INDUCITOR	47uH K	
L571	NQL114K-470X	INDUCITOR	47uH K	
L572	NQL114K-470X	INDUCITOR	47uH K	
L621	NQL114K-470X	INDUCITOR	47uH K	
L622	NQL114K-470X	INDUCITOR	47uH K	
L623	NQL114K-470X	INDUCITOR	47uH K	
L651	NQL114K-470X	INDUCITOR	47uH K	
L652	NQL114K-470X	INDUCITOR	47uH K	
L653	NQL114K-470X	INDUCITOR	47uH K	
CN501	QGB2027L1-22X	CONNECTOR	B-B (1-22)	
CN601	QGF0527F2-22W	CONNECTOR	FFC/FPC (1-22)	
TH501	NAD0028-103X	N THERMISTOR	10kΩ	
X501	NAX0385-001X	CRYSTAL	24.576MHz	
X571	NAX0375-001X	CRYSTAL	16.9344MHz	

<MEMO>

Packing materials and accessories parts list

Block No. M 3 M M



Packing and Accessories

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

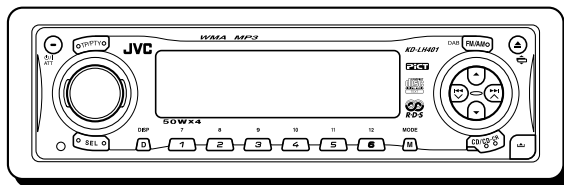
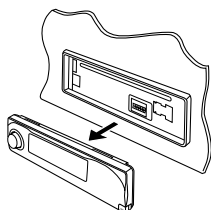
△ Symbol No.	Part No.	Part Name	Description	Local
A 1	GET0203-001A	INST BOOK	ENG GER FRE DUT	
A 2	GET0203-002A	INST BOOK	SPA ITA POL RUS	LH401 E
A 2	GET0203-003A	INST BOOK	SWE DAN FIN GRE	LH401 EX
A 3	GET0203-005A	INSTALL MANUAL		
A 4	GET0203-006A	INSTALL MANUAL		LH401 E
A 4	GET0203-007A	INSTALL MANUAL		LH401 EX
A 5	GET0165-001A	DEMO MODE SHEET		LH401 E
A 5	GET0165-002A	DEMO MODE SHEET		LH401 EX
A 6	LVT1120-002A	MP3 GUIDE		
A 7	VND3046-001	SERIAL TICKET		
A 8	BT-54013-7	WARRANTY CARD		
A 9	LVT1121-001A	IMAGE CONV.SHEE		
A 10	QAM0553-002	CD-ROM		
A 11	GET0213-001A	CAUTION SHEET		
A 12	VKZ4027-202	PLUG NUT		
A 13	VKH4871-001SS	MOUNT BOLT		
A 14	VKZ4328-001	LOCK NUT		
A 15	WNS5000Z	WASHER		
A 16	GE40130-002A	HOOK	(x2)	
A 17	FSJB3002-00C	HARD CASE		
A 18	GE20137-003A	MOUNTING SLEEVE		
A 19	GE20164-001A	TRIM PLATE		
A 20	RM-RK60	REMOCON UNIT		
A 21	-----	BATTERY		
A 22	QAM0176-002	POWER CORD		
KIT	SRW-200J	SCREW PARTS KIT	A12 to A16	
P 1	FSPG4002-001	POLY BAG	(x3)	
P 2	QPA00801205	POLY BAG	8cm x 12cm	
P 3	FSYH4036-068	SHEET		
P 4	QPA01003003	POLY BAG	10cm x 30cm	
P 5	QPC03004315P	POLY BAG	30cm x 43cm	
P 6	GE31170-002A	INNER CTN		
P 7	GE10086-003A	EPS CUSHION	(x2)	

JVC



CD RECEIVER
CD-RECEIVER
RECEPTEUR CD
CD-RECEIVER

KD-LH401



WMA

MP3

PICT



- This unit is equipped with the display demonstration. To cancel it, see page 8.
- Dieses Gerät ist mit einer Demonstrationsfunktion für das Display ausgestattet. Auf Seite 8 wird beschrieben, wie Sie diese Demonstrationsfunktion deaktivieren können.
- Cet appareil est équipé d'une fonction de démonstration des affichages. Pour l'annuler, référez-vous à la page 8.
- Dit toestel heeft een display-demonstratiefunctie. Zie bladzijde 8 voor het annuleren van deze functie.

For installation and connections, refer to the separate manual.

Für den Einbau und die Anschlüsse siehe das eigenständige Handbuch.

Pour l'installation et les raccordements, se référer au manuel séparé.

Bijzonderheden over de installatie en aansluiting van het apparaat vindt u in de desbetreffende handleiding.

INSTRUCTIONS

BEDIENUNGSANLEITUNG
MANUEL D'INSTRUCTIONS
GEBRUIKSAANWIJZING

GET0203-001A
[E/EX]

ENGLISH

DEUTSCH

FRANÇAIS


NEDERLANDS

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 OUTSIDE 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 åpen eller interlocken fejler. Undgå direkte eksponering til stråling.	VARNING: Synlig och osynlig laserstråling när den öppnas och spårren är urkopplad. Betrakta strålen.	VARO: Avattaessa ja suoja-alkitus onneturuna tai viallisena olet allina näkyväille ja näkymättömille lasersäteilylle. Vältä säteen kohdistamista suoraan itsesi. (f)
(a)	(e)	(d)	(s)

Caution:

If the temperature inside the car is below 0 °C, the movement of animation and text scroll will be halted on the display to prevent the display from being blurred.  (LOW TEMP.) indicator appears on the display. When the temperature increases, the operating temperature is resumed, and these functions will start working again.

CAUTION on Volume Setting:

Discs produce very little noise compared with other sources. If the volume level is adjusted for the tuner, for example, the speakers may be damaged by the sudden increase in the output level. Therefore, lower the volume before playing a disc and adjust it as required during playback.

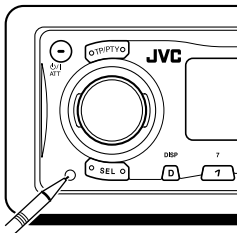
Note:

For security reasons, a numbered ID card is provided with this unit, and the same ID number is imprinted on the unit's chassis. Keep the card in a safe place, as it will help the authorities to identify your unit if stolen.

How to reset your unit

Press the reset button on the control panel using a ball-point pen or a similar tool.

This will reset the built-in microcomputer.



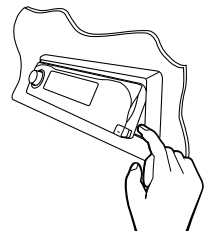
Note:

Your preset adjustments—such as preset channels or sound adjustments—will also be erased.

CAUTION:

NEVER insert your finger in between the control panel and the unit, as it may get caught or hurt.

(See page 54.)



Thank you for purchasing a JVC product. Please read all instructions carefully before operation, to ensure your complete understanding and to obtain the best possible performance from the unit.

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BEFORE USE

*For safety....

- Do not raise the volume level too much, as this will block outside sounds, making driving dangerous.
- Stop the car before performing any complicated operations.

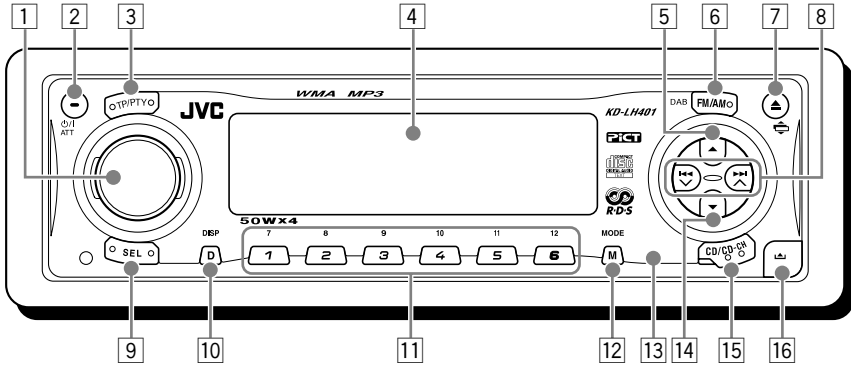
*Temperature inside the car....

If you have parked the car for a long time in hot or cold weather, wait until the temperature in the car becomes normal before operating the unit.



LOCATION OF THE BUTTONS

Control panel



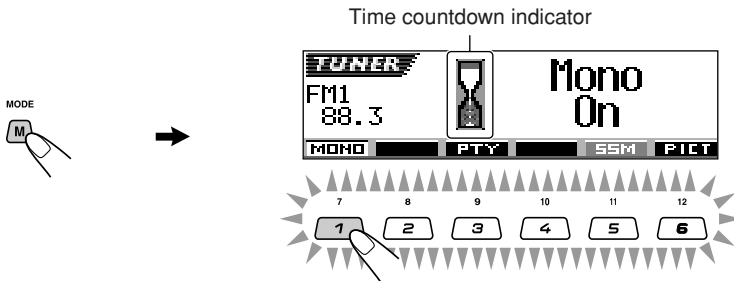
- | | |
|----------------------------------------------------|-------------------------------------|
| 1 Control dial | 8 ◀◀ ◃/▶▶ ▶ ▲ buttons |
| 2 ⏻/ATT (standby/on attenuator) button | 9 SEL (select) button |
| 3 TP/PTY (traffic programme/programme type) button | 10 D DISP (display) button |
| 4 Display window | 11 Number buttons |
| 5 ▲ (up) button | 12 M MODE button |
| 6 FM/AM DAB button | 13 Remote sensor |
| 7 ▲ (eject) button | 14 ▼ (down) button |
| ↻ (angle) button | 15 CD/CD-CH (CD changer) button |
| | 16 ⏏ (control panel release) button |

Illumination Navigation for easy operations

If you use M MODE or SEL (select), the display and some controls (such as the number buttons, ◀◀ ◃/▶▶ ▶ ▲, ▲/▼, and control dial) enter the corresponding control mode, then the controls start flashing to lead you to the next operational steps. (Illumination Navigation)

- The display shows how these buttons function during this period.

Ex.: When you press number button 1 after pressing M MODE, to operate the FM tuner.

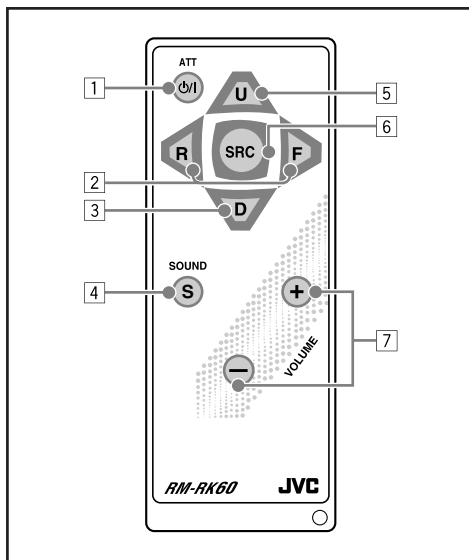


To use these controls for original functions again, wait until the controls stop flashing without using these controls.

- Pressing M MODE again also restores original functions. However, pressing SEL (select) makes the unit enters a different mode.



Remote controller

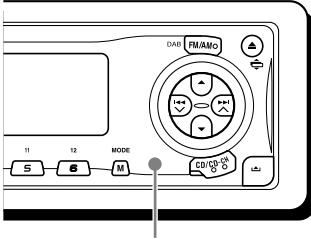


- 1 • Turns on the unit if pressed when the unit is turned off.
 - Turns off the unit if pressed and held for a few seconds.
 - Drops the volume level in a moment if pressed briefly.
 - Press again to resume the volume.
- 2 • Searches for stations while listening to the radio.
 - Selects services while listening to the DAB tuner if pressed briefly.
 - Searches for ensembles while listening to the DAB tuner if pressed for more than one second.
 - Fast-forwards or reverses the track if pressed and held while listening to a disc.
 - Skips to the beginning of the next track or goes back to the beginning of the current (or previous) tracks if pressed briefly while listening to a disc.
- 3 • Selects the preset stations (or service) while listening to the radio (or the DAB tuner). Each time you press the button, the preset station (or service) number increases, and the selected station (or service) is tuned in.
 - Skips to the first track of the previous folder while listening to an MP3 disc or a WMA disc.
 - Each time you press the button, you can move to the previous folder and start playing the first track.
 - While playing an MP3 disc on an MP3-compatible CD changer;
 - Skips to the previous disc if pressed briefly.
 - Skips to the previous folder if pressed and held.
 - Note:** While playing a CD on a CD changer, this always skips to the previous disc.
- 4 Selects the sound mode (iEQ: intelligent equalizer). Each time you press the button, the sound mode (iEQ) changes.
- 5 • Selects the band while listening to the radio (or the DAB tuner). Each time you press the button, the band changes.
 - Skips to the first track of the next folder while listening to an MP3 disc or a WMA disc.
 - Each time you press the button, you can move to the next folder and start playing the first track.
 - While playing an MP3 disc on an MP3-compatible CD changer;
 - Skips to the next disc if pressed briefly.
 - Skips to the next folder if pressed and held.
 - Note:** While playing a CD on a CD changer, this always skips to the next disc.
- 6 Selects the source. Each time you press the button, the source changes.
- 7 Functions the same as the control dial on the main unit.
 - Note:** These buttons do not function for the preferred setting mode (PSM) adjustment.

Preparing the remote controller

Before using the remote controller:

- Aim the remote controller directly at the remote sensor on the main unit. Make sure there is no obstacle in between.



Remote sensor

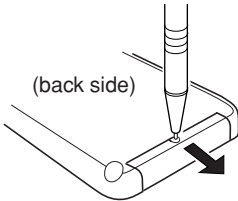
- Do not expose the remote sensor to strong light (direct sunlight or artificial lighting).

Installing the battery

When the controllable range or effectiveness of the remote controller decreases, replace the battery.

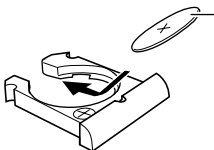
1. Remove the battery holder.

- 1) Push out the battery holder in the direction indicated by the arrow using a ball-point pen or a similar tool.
- 2) Remove the battery holder.



2. Place the battery.

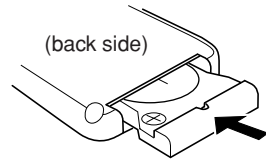
Slide the battery into the holder with the + side facing upwards so that the battery is fixed in the holder.



Lithium coin battery
(product number:
CR2025)

3. Return the battery holder.

Insert again the battery holder by pushing it until you hear a clicking sound.



WARNING:

- Store the battery in a place where children cannot reach.
If a child accidentally swallows the battery, consult a doctor immediately.
- Do not recharge, short, disassemble, or heat the battery or dispose of it in a fire.
Doing any of these things may cause the battery to give off heat, crack, or start a fire.
- Do not leave the battery with other metallic materials.
Doing this may cause the battery to give off heat, crack, or start a fire.
- When throwing away or saving the battery, wrap it in tape and insulate; otherwise, the battery may start to give off heat, crack, or start a fire.
- Do not poke the battery with tweezers or similar tools.
Doing this may cause the battery to give off heat, crack, or start a fire.

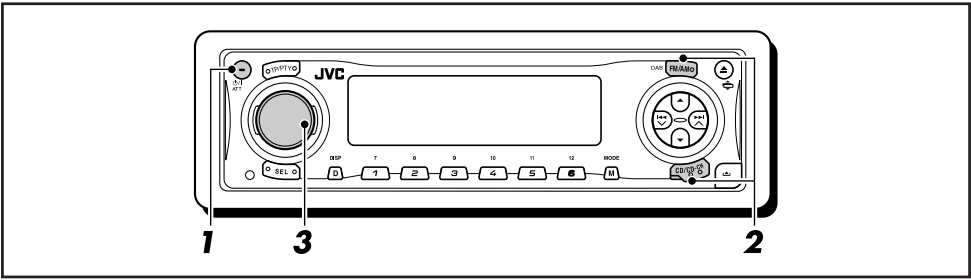
CAUTION:

DO NOT leave the remote controller in a place (such as dashboards) exposed to direct sunlight for a long time. Otherwise, it may be damaged.

KD-LH401 is equipped with the steering wheel remote control function.

If your car is equipped with the steering wheel remote controller, you can operate this receiver using the controller.

- See the Installation/Connection Manual (separate volume) for connection to utilize this function.



Turning on the power

1 Turn on the power.

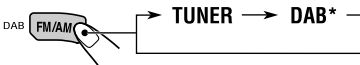


Note on One-Touch Operation:

When you select a source in step 2 below, the power automatically comes on. You do not have to press this button to turn on the power.

2 Select the source.

- To operate the FM/AM tuner, press FM/AM DAB.
- To operate the DAB tuner, press and hold FM/AM DAB.



* Without connecting the DAB tuner, you cannot select "DAB" as the source.

- To operate the CD player (CD), CD changer (CD-CH), or external component (LINE IN), press CD/CD-CH repeatedly.

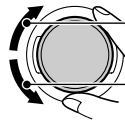


*1 Without loading the CD, you cannot select "CD" as the source.

*2 Without connecting the CD changer, you cannot select "CD-CH" as the source.

*3 To select "LINE IN" as the source, select "Line In" for the "Ext Input" setting on page 49.

3 Adjust the volume.



To increase the volume

To decrease the volume

Volume level appears.



Current sound mode (iEQ)
(see page 33)

4 Adjust the sound as you want. (See pages 32 – 35.)

Note:

While playing a source, you can select the display theme of your preference. For details, see "Selecting the display theme" on page 36.

NOTICE:

The illustrations of the display used in this manual are mainly of the initial setting when shipped from the factory. If you have changed the display patterns or some PSM items, the actual displays you see will be different.



To drop the volume in a moment

Press **⏻/I ATT** briefly while listening to any source. “ATT” starts flashing on the display, and the volume level will drop in a moment.

To resume the previous volume level, press the button briefly again.

- If you turn the control dial, you can also restore the sound.

To turn off the power

Press and hold **⏻/I ATT** for more than one second.

- If you turn off the power while listening to a disc, disc play will start from where playback has been stopped previously, next time you turn on the power.

Canceling the display demonstration

When shipped from the factory, display demonstration has been activated, and starts automatically when no operations are done for about 20 seconds.

- It is recommended to cancel the display demonstration before you use the unit for the first time.

To cancel the display demonstration, follow the procedure below:

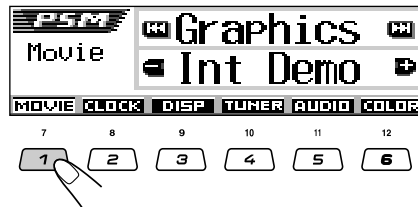
- 1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (PSM: see pages 46 and 47.)**



The next-step-operation buttons start flashing.

- 2 Press number button 1 to select “MOVIE”—Movie category of the PSM settings.**

The “Graphics” setting screen appears on the display.



- 3 Select “Off.”**



- 4 Finish the setting.**



To activate the display demonstration, repeat the same procedure and select “Int Demo” or “All Demo” in step **3**.

- For more details, see “To show the graphics on the display—Graphics” on page 48.



Setting the clock

You can also set the clock system to either 24 hours or 12 hours.

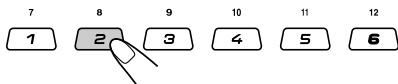
1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (PSM: see pages 46 and 47.)



The next-step-operation buttons start flashing.

2 Press number button 2 to select "CLOCK"—Clock category of the PSM settings.

The "Clock Hr" (hour) setting screen appears on the display.



3 Adjust the hour.

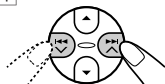


4 Set the minute.

1 Select "Clock Min" (minute).

2 Adjust the minute.

1



2

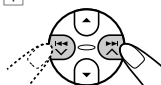


5 Set the clock system.

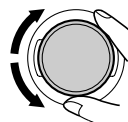
1 Select "24H/12H."

2 Select "24Hours" or "12Hours."

1



2



6 Finish the setting.



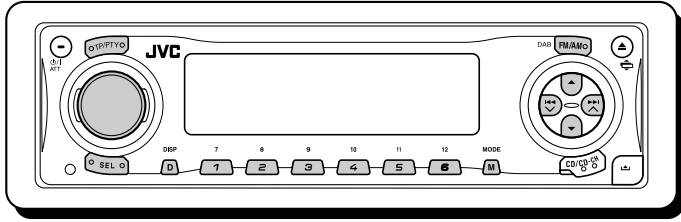
To check the clock time when the unit is turned off, press D DISP.



The power turns on and the clock time is shown for about 5 seconds, then the power turns off.



RADIO OPERATIONS



Listening to the radio

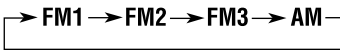
You can use either automatic searching or manual searching to tune in to a particular station.

Searching for a station automatically: Auto search

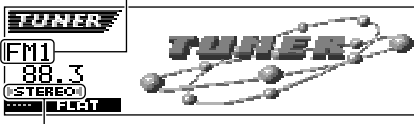
1 Select the band (FM1 – 3, AM).



Each time you press the button, the band changes as follows:



Selected band appears.

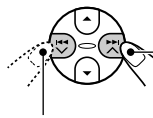


Lights up when receiving an FM stereo broadcast with sufficient signal strength.

Note:

This receiver has three FM bands (FM1, FM2, FM3). You can use any one of them to listen to an FM broadcast.

2 Start searching for a station.



To search for stations of higher frequencies

To search for stations of lower frequencies

When a station is received, searching stops.

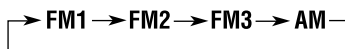
To stop searching before a station is received, press the same button you have pressed for searching.

Searching for a station manually: Manual search

1 Select the band (FM1 – 3, AM).



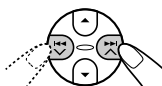
Each time you press the button, the band changes as follows:



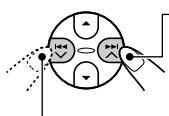
Note:

This receiver has three FM bands (FM1, FM2, FM3). You can use any one of them to listen to an FM broadcast.

2 Press and hold ►►| ^ or |◄◄ v until “Manual Search” starts flashing on the display.



3 Tune in to a station you want while “Manual Search” is flashing.



To tune in to stations of higher frequencies

To tune in to stations of lower frequencies

- If you release your finger from the button, the manual mode automatically turns off after about 5 seconds.
- If you hold down the button, the frequency keeps changing (in 50 kHz intervals for FM and 9 kHz for AM—MW/LW) until you release the button.

If the sound quality decreases and the stereo effect is lost while listening to an FM station

In some areas, adjacent stations may interfere with each other. If this interference occurs, this unit can automatically reduce this interference noise (the initial setting when shipped from the factory). However, in this case, the sound quality will be degraded and the stereo effect will also be lost.

If you do not want to degrade the sound quality and to lose the stereo effect, rather than to eliminate the interference noise, see “To change the FM tuner selectivity—IF Filter” on page 49.



When an FM stereo broadcast is hard to receive:

Set the FM reception mode to "Mono On."

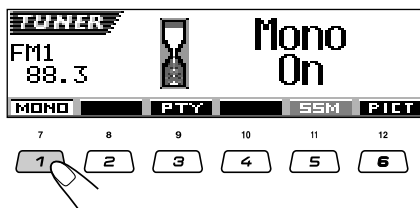
- 1 Press M MODE while listening to an FM stereo broadcast.

MODE



"Mode" appears on the display.
The next-step-operation buttons start flashing.

- 2 Press number button 1 to select "Mono On" while "Mode" is still on the display.
Each time you press the button, "Mono On" or "Mono Off" appears alternately.



After about
5 seconds

The display returns to the source indication screen.



MONO indicator appears.

The sound you hear becomes monaural but the reception will be improved.

Storing stations in memory

You can use one of the following two methods to store broadcasting stations in memory.

- Automatic preset of FM stations: SSM (Strong-station Sequential Memory)
- Manual preset of both FM and AM stations

FM station automatic preset: SSM

You can preset 6 local FM stations in each FM band (FM1, FM2, and FM3).

- 1 Select the FM band (FM1 – 3) you want to store FM stations into.



Each time you press the button, the band changes as follows:

→ FM1 → FM2 → FM3 → AM

- 2 Start automatic preset.

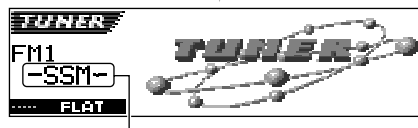
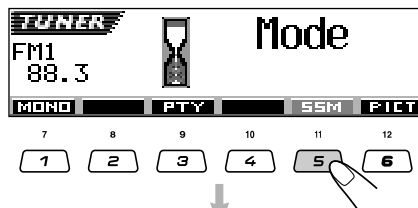
- 1 Press M MODE.

MODE



"Mode" appears on the display.
The next-step-operation buttons start flashing.

- 2 Press and hold number button 5 while "Mode" is still on the display.



"SSM" appears, then disappears when automatic preset is over.

Local FM stations with the strongest signals are searched and stored automatically in the band number you have selected (FM1, FM2, or FM3). These stations are preset in the number buttons —No.1 (lowest frequency) to No.6 (highest frequency).

When automatic preset is over, the station stored in number button 1 will be automatically tuned in.

Manual preset

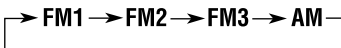
You can preset up to 6 stations in each band (FM1, FM2, FM3, and AM) manually.

Ex.: Storing FM station of 92.5 MHz into the preset number 1 of the FM1 band.

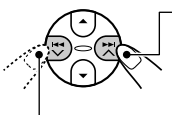
1 Select the band (FM1 – 3, AM) you want to store stations into (in this example, FM1).



Each time you press the button, the band changes as follows:



2 Tune in to a station (in this example, of 92.5 MHz).



To tune in to stations of higher frequencies

To tune in to stations of lower frequencies



3 Press and hold the number button (in this example, 1) for more than 2 seconds.



The display pattern automatically changes to the small animation display (see page 15).



After about 5 seconds

Preset number appears.



4 Repeat the above procedure to store other stations into other preset numbers.

Notes:

- A previously preset station is erased when a new station is stored in the same preset number.
- Preset stations are erased when the power supply to the memory circuit is interrupted (for example, during battery replacement). If this occurs, preset the stations again.



Tuning in to a preset station

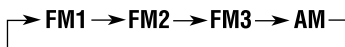
You can easily tune in to a preset station. Remember that you must store stations first. If you have not stored them yet, see “Storing stations in memory” on pages 12 and 13.

Selecting a preset station directly

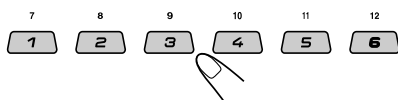
1 Select the band (FM1 – 3, AM).



Each time you press the button, the band changes as follows:



2 Select the number (1 – 6) for the preset station you want.



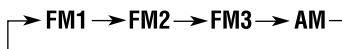
Selecting a preset station using the preset station list

If you forget what stations are stored in which preset numbers, you can check the preset station list, then select your desired station.

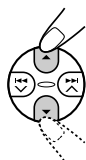
1 Select the band (FM1 – 3, AM).



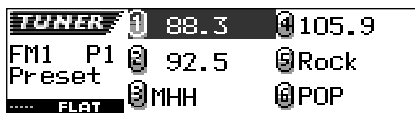
Each time you press the button, the band changes as follows:



2 Press and hold ▲ (up) or ▼ (down) until the preset station list for the current band (FM1, FM2, FM3, or AM) appears on the display.



The current station will be highlighted on the display.

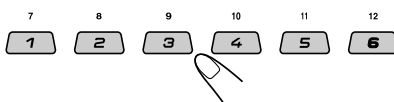


Ex.: When you select the preset station number 1 of the FM1 band

Notes:

- You can show the other FM band preset station lists (FM1, FM2, or FM3) by pressing ▲ (up) or ▼ (down).
- If a preset station is an FM RDS station with PS (programme station) signal, PS name will be shown instead of the station frequency.

3 Select the number (1 – 6) for the preset station you want.



Changing the display pattern

By pressing D DISP, you can change the information shown on the display.

Each time you press the button, the display patterns change as follows:



- When receiving an AM or non FM RDS-station

- When receiving an FM RDS-station (see the following pages)

Large animation display



Current sound mode (iEQ) (see page 33)

Appears only when selecting a preset station.

Small animation display 1



Clock time

Small animation display 2*

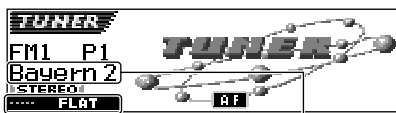


* Only for non FM RDS-station

Clock time display



Large animation display



Current sound mode (iEQ) (see page 33)

PS name

Small animation display 1



Clock time

Small animation display 2



PTY code appears.

Clock time display





RDS OPERATIONS

What you can do with RDS

RDS (Radio Data System) allows FM stations to send an additional signal along with their regular programme signals. For example, the stations send their station names, as well as information about what type of programme they broadcast, such as sports or music, etc.

Another advantage of RDS function is called "Enhanced Other Networks." By using the Enhanced Other Networks data sent from a station, you can tune in to a different station of a different network broadcasting your favorite programme or traffic announcement while listening to another programme or to another source such as CD.

By receiving the RDS data, this unit can do the following:

- Tracing the same programme automatically (Network-Tracking Reception)
- TA Standby Reception or your favorite programme
- PTY (Programme Type) search
- Programme search
- And some other functions

Tracing the same programme automatically (Network-Tracking Reception)

When driving in an area where FM reception is not good, the tuner built in this unit automatically tunes in to another RDS station, broadcasting the same programme with stronger signals. So, you can continue to listen to the same programme in its finest reception, no matter where you drive. (See the illustration on page 22.)

Two types of the RDS data are used to make Network-Tracking Reception work correctly —PI (Programme Identification) and AF (Alternative Frequency).

Without receiving these data correctly from the RDS station you are listening to, Network-Tracking Reception will not operate.

To use Network-Tracking Reception

You can select the different modes of network-tracking reception to continue listening to the same programme in its finest reception. When shipped from the factory, "AF" is selected.

- **AF:** Network-Tracking Reception is activated without Regionalization. With this setting, the unit switches to another station within the same network when the receiving signals from the current station become weak. (In this mode, the programme may differ from the one currently received.) The AF indicator lights up.
- **AF Reg:** Network-Tracking Reception is activated with Regionalization. With this setting, the unit switches to another station, within the same network, broadcasting the same programme when the receiving signals from the current station become weak. The REG indicator lights up.
- **Off*:** Network-Tracking Reception is deactivated. Neither the AF nor the REG indicator lights up.
* You can select only when "DAB AF" is set to "Off". (See page 47 for details.)



AF or REG indicator lights up.

Note:

If a DAB tuner is connected and Alternative Reception (for DAB services) is activated, Network-Tracking Reception is also activated ("AF") automatically. On the other hand, Network-Tracking Reception cannot be deactivated without deactivating Alternative Reception. (See page 69.)



1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (PSM: see pages 46 and 47.)



Using TA Standby Reception

TA Standby Reception allows the unit to switch temporarily to the Traffic Announcement (TA) from the current source (another FM station, CD, or other connected components).

- See also “Road Traffic News Standby Reception (TA Standby Reception)” on page 67.

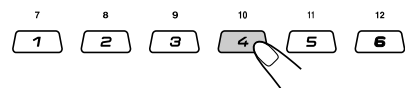


Press TP/PTY to activate TA Standby Reception.

Each time you press the button, this function is turned on and off alternately.

2 Press number button 4 to select “TUNER”—Tuner category of the PSM settings.

The “PTY Stnby” (standby) setting screen appears on the display.



TP indicator appears. (either lights up or flashes)

Note:

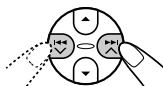
TA Standby Reception will not work if you are listening to an AM station.

■ **When the current source is FM**, the TP indicator either lights up or flashes.

- If the TP indicator lights up, TA Standby Reception is activated. If a station starts broadcasting a traffic announcement, “Traffic News” appears on the display, and this unit automatically tunes in to the station. The volume changes to the preset TA volume level (see page 21) and the traffic announcement can be heard.
- If the TP indicator flashes, TA Standby Reception is not yet activated since the station being received does not provide the signals used for TA Standby Reception. To activate TA Standby Reception, you need to tune in to another station providing these signals. Press ►► ▲ or ◀◀ ▼ to search for such a station.

When a station providing these signals is tuned in, the TP indicator stops flashing and remains lit. Now TA Standby Reception is activated.

3 Select “AF-Regn’1” (alternative frequency/regionalization reception).



4 Select the desired mode—“AF,” “AF Reg,” or “Off.”



5 Finish the setting.





- When the current source is other than FM, the TP indicator lights up. If a station starts broadcasting a traffic announcement, “Traffic News” appears on the display, and this unit automatically changes the source and tunes in to the station.

Using PTY Standby Reception

PTY Standby Reception allows the unit to switch temporarily to your favorite programme (PTY: Programme Type) from any source except AM stations.

- See also “Using PTY Standby Reception” on page 69.

To select your favorite PTY code for PTY Standby Reception

When shipped from factory, PTY Standby Reception has been set to search for “News” programmes.

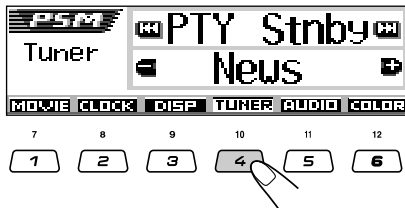
You can select your favorite programme type for PTY Standby Reception.

- 1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (PSM: see pages 46 and 47.)



- 2 Press number button 4 to select “TUNER”—Tuner category of the PSM settings.

The “PTY Stnby” (standby) setting screen appears on the display.



- 3 Select one of the twenty-nine PTY codes. (See page 22.)



Selected code name appears on the display and is stored into memory.

- 4 Finish the setting.



To set PTY Standby Reception

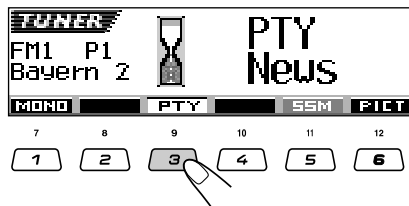
If a DAB tuner is connected, the following operations will set PTY Standby Reception for both the FM tuner and DAB tuner. (See page 69.)

- 1 Press M MODE while listening to an FM broadcast.

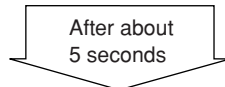


“Mode” appears on the display. The next-step-operation buttons start flashing.

- 2 Press number button 3 to activate PTY Standby Reception while “Mode” is still on the display. Each time you press the button, PTY Standby Reception turns on and off alternately.



Ex.: When the currently selected PTY code for PTY Standby Reception is “News”



The display returns to the source indication screen.



PTY indicator appears. (either lights up or flashes)



The PTY indicator either lights up or flashes.

- If the PTY indicator lights up, PTY Standby Reception is activated.

If a station starts broadcasting the selected PTY programme, this unit automatically tunes in to the station.

- If the PTY indicator flashes, PTY Standby Reception is not yet activated since the station being received does not provide the signals used for PTY Standby Reception.

To activate PTY Standby Reception, you need to tune in to another station providing these signals. Press **▶▶ ▲** or **◀◀ ▼** to search for such a station.

When a station providing these signals is tuned in, the PTY indicator stops flashing and remains lit. Now PTY Standby Reception is activated.

Note:

After turning on PTY Standby Reception, you can change the source without canceling PTY Standby Reception. If a station starts broadcasting the selected PTY programme, this unit automatically changes the source and tunes in to the station.

- If you change the source to AM, PTY Standby Reception will be temporarily canceled.
- You can only deactivate the PTY Standby Reception when the source is FM.

Searching for your favorite programme

You can search for any one of the PTY codes. In addition, you can store your 6 favorite programme types in the number buttons. When shipped from the factory, the following 6 programme types have been stored in the number buttons (1 to 6).

- See also "Searching for your favorite service" on page 69.

To store your favorite programme types, see below and page 20.

To search for your favorite programme type, see page 20.

1	2	3
Pop M	Rock M	Easy M
4	5	6
Classics	Affairs	Varied

To store your favorite programme types

- 1 Press and hold TP/PTY for more than 2 seconds while listening to an FM station.



The last selected PTY code appears.



Ex.: If you have selected "Pop M" previously

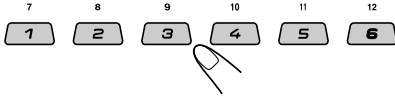
- 2 Select one of the twenty-nine PTY codes. (See page 22.)



Selected code name appears on the display.



3 Press and hold the number button for more than 2 seconds to store the PTY code selected into the preset number you want.



Selected preset number flashes for a while.

4 Press and hold TP/PTY for more than 2 seconds to exit from this mode.



To search for your favorite programme type

1 Press and hold TP/PTY for more than 2 seconds while listening to an FM station.

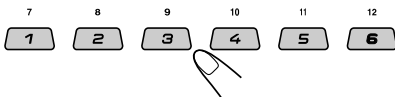


The last selected PTY code appears.



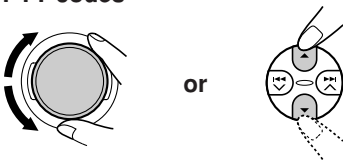
Ex.: If you have selected "Pop M" previously

2 To select one of your favorite programme type



or

To select any one of the twenty-nine PTY codes



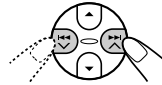
Ex.: When "Rock M" is selected

How to use the ▲ (up) or ▼ (down) button

By pressing ▲ (up) or ▼ (down) repeatedly, you can show the list of your preset PTY codes and all twenty-nine PTY codes (six PTY codes at a time). First, the list of your stored PTY codes appears, then all twenty-nine PTY codes (six PTY codes at a time) appears in sequence.

Press the number button to select your desired PTY code on the list currently shown on the display.

3 Start PTY search for your favorite programme.



- If there is a station broadcasting a programme of the same PTY code as you have selected, that station is tuned in.
- If there is no station broadcasting a programme of the same PTY code as you have selected, the station will not change.

Note:

In some areas, the PTY search will not work correctly.



Other convenient RDS functions and adjustments

Automatic selection of the station when using the number buttons

Usually when you press the number button, the preset station is tuned in.

However, when the preset station is an RDS station, something different will happen. If the signals from that preset station are not sufficient for good reception, this unit, using the AF data, tunes in to another frequency broadcasting the same programme as the original preset station is broadcasting. (Programme search)

- The unit takes some time to tune in to another station using programme search.

To activate programme search, follow the procedure below.

- See also “Changing the general settings (PSM)” on page 45.
- 1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.
 - 2 Press number button 4 to select “TUNER”—Tuner category of the PSM settings.
 - 3 Press ►►| ▲ or |◄◄ ▼ to select “P(Programme)-Search.”
 - 4 Turn the control dial clockwise to select “On.” Now programme search is activated.
 - 5 Press SEL (select) to finish the setting.

To cancel programme search, repeat the same procedure and select “Off” in step 4 by turning the control dial counterclockwise.

Setting the TA volume level

You can preset the volume level for TA Standby Reception. When a traffic programme is received, the volume level automatically changes to the preset level.

- See also “Changing the general settings (PSM)” on page 45.
- 1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.

- 2 Press number button 4 to select “TUNER”—Tuner category of the PSM settings.
- 3 Press ►►| ▲ or |◄◄ ▼ to select “TA Volume.”
- 4 Turn the control dial to set to the desired volume.
You can set it from “Volume 0” to “Volume 30” or “Volume 50” (depending on the amplifier gain control setting; see page 49).
- 5 Press SEL (select) to finish the setting.

Automatic clock adjustment

When shipped from the factory, the clock built in this unit is set to be readjusted automatically using the CT (Clock Time) data in the RDS signal.

If you do not want to use automatic clock adjustment, follow the procedure below.

- See also “Changing the general settings (PSM)” on page 45.
- 1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.
 - 2 Press number button 2 to select “CLOCK”—Clock category of the PSM settings.
 - 3 Press ►►| ▲ or |◄◄ ▼ to select “Auto Adj” (adjustment).
 - 4 Turn the control dial counterclockwise to select “Off.”
Now automatic clock adjustment is canceled.
 - 5 Press SEL (select) to finish the setting.

To reactivate clock adjustment, repeat the same procedure and select “On” in step 4 by turning the control dial clockwise.

Note:

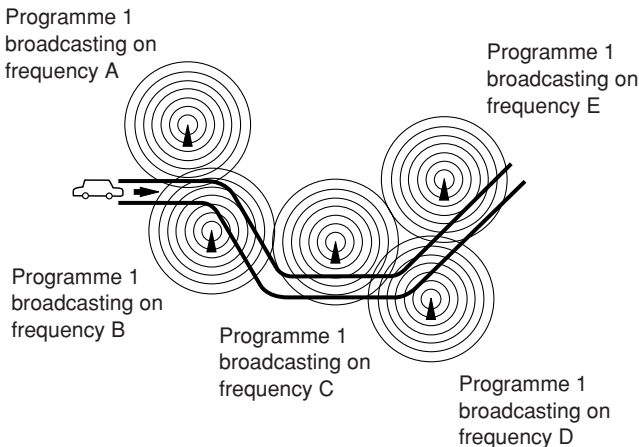
You must stay tuned to the same station for more than 2 minutes after setting “Auto Adj” to “On.” Otherwise, the clock time will not be adjusted. (This is because the unit takes up to 2 minutes to capture the CT data in the RDS signal.)

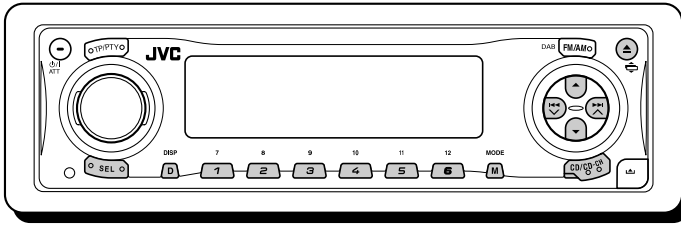


PTY codes

News:	News	Social:	Programmes on social activities
Affairs:	Topical programmes expanding on current news or affairs	Religion:	Programmes dealing with any aspect of belief or faith, or the nature of existence or ethics
Info:	Programmes which impart advice on a wide variety of topics	Phone In:	Programmes where people can express their views either by phone or in a public forum
Sport:	Sport events	Travel:	Programmes about travel destinations, package tours, and travel ideas and opportunities
Educate:	Educational programmes	Leisure:	Programmes concerned with recreational activities such as gardening, cooking, fishing, etc.
Drama:	Radio plays	Jazz:	Jazz music
Culture:	Programmes on national or regional culture	Country:	Country music
Science:	Programmes on natural science and technology	Nation M:	Current popular music from another nation or region, in that country's language
Varied:	Other programmes like comedies or ceremonies	Oldies:	Classic pop music
Pop M:	Pop music	Folk M:	Folk music
Rock M:	Rock music	Document:	Programmes dealing with factual matters, presented in an investigative style
Easy M:	Easy-listening music		
Light M:	Light music		
Classics:	Classical music		
Other M:	Other music		
Weather:	Weather information		
Finance:	Reports on commerce, trading, the Stock Market, etc.		
Children:	Entertainment programmes for children		

The same programme can be received on different frequencies.





This unit has been designed to reproduce CDs, CD-Rs (Recordable), CD-RWs (Rewritable), and CD Texts.

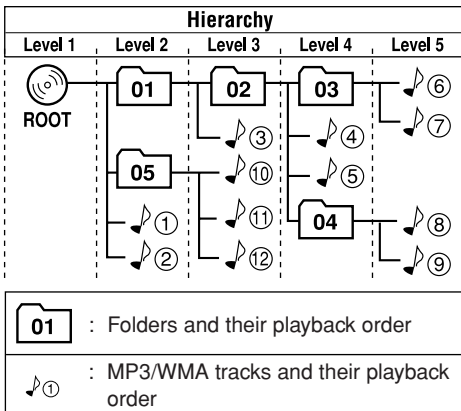
- This unit is also compatible with MP3 and WMA discs. For details about these discs, refer to “A Guide to MP3/WMA” (separate volume).

About MP3 and WMA discs

MP3 and WMA (Windows Media® Audio) “tracks” (the word “file” is not used to indicate MP3 or WMA files, “track” is used in this manual) are recorded in “folders.”

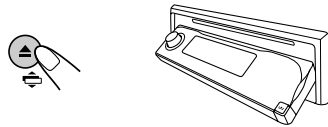
During recording, the tracks and folders can be arranged in a way similar to arranging files and folders of computer data.

“Root” is similar to the root of a tree. Every track and folder can be linked to and be accessed from the root.



Playing a disc

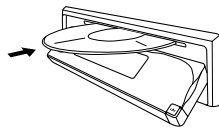
- 1 Open the control panel.



Note on One-Touch Operation:

When a disc is already in the loading slot, pressing CD/CD-CH turns on the unit and starts playback automatically.

- 2 Insert a disc into the loading slot.



The unit draws the disc, the control panel goes back to the previous position (see page 54), and playback starts automatically.

All tracks will be played repeatedly until you stop playback.

Note:

For details on playable discs and other related information, see page 74.

About mistracking:

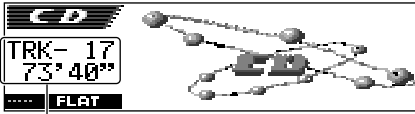
Mistracking may result from driving on extremely rough roads. This does not damage the unit and the disc, but will be annoying.

We recommend that you stop disc play while driving on such rough roads.

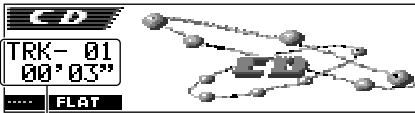
- Microsoft and Windows Media are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.



Display indications when inserting an audio CD or a CD Text:



Total track number and total playing time of the inserted CD

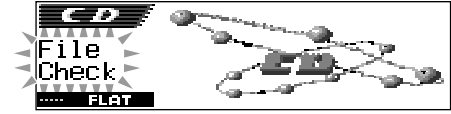


Current track and elapsed playing time

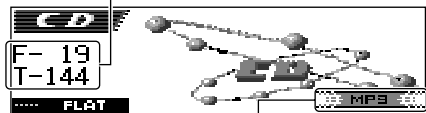
Notes:

- MP3 or WMA discs require a longer readout time. (It differs due to the complexity of the folder/track configuration.)
- The unit cannot read or play an MP3 track without the extension code `<.mp3>`, and a WMA track without the extension code `<.wma>`.

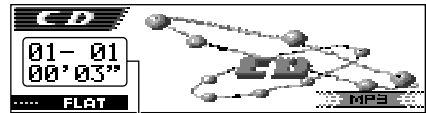
Display indications when inserting an MP3 or a WMA discs:



Total folder and track numbers



MP3 indicator*



Current folder/track and elapsed playing time

- * WMA or MP3 indicator lights up depending on the first detected track.

To stop play and eject the disc

Press **▲** (eject).

Disc play stops and the control panel moves down. The disc automatically ejects from the loading slot. The source changes to the previously selected source.

- If you change the source or turn the power off, disc play also stops (without ejecting the disc). Next time you select "CD" as the source or turn the power on, disc play starts from where playback has been stopped previously.

To return the control panel to its previous position, press **▲** (eject) again.

- If you keep the loading slot fully open for about 1 minute, (beeps sound when the "Beep" setting is turned "On"—see page 49) the control panel automatically returns to its previous position.

Be careful not to get the disc or your finger caught in between the control panel and the unit.

Notes:

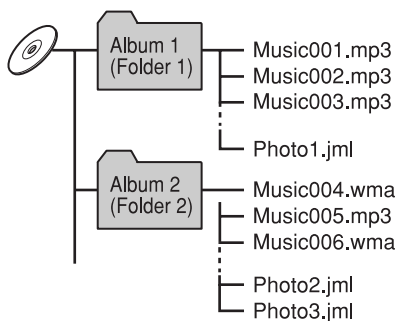
- If the ejected disc is not removed for about 15 seconds, the disc is automatically inserted again into the loading slot to protect it from dust. (Disc play will not start this time.)
- You can eject the disc even when the unit is turned off.



What is ImageLink?

When an MP3 or a WMA folder includes an image <jml> file edited by Image Converter (supplied in the CD-ROM), you can show the image on the display while the tracks in the folder are played back.

- While reading an image <jml> file, no sounds come out (“Image Link” is shown on the display during this period).



Display window



Photo1.jml

Display window



Photo2.jml

If there are more than one <jml> file in a folder, a <jml> file with younger playback order number will be shown on the display (in the above example, “Photo2.jml” will be used for Album 2).

To activate ImageLink, follow the procedure below:

- See also “Changing the general settings (PSM)” on page 45.
- 1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.
 - 2 Press number button 1 to select “MOVIE”—Movie category of the PSM settings. The “Graphics” setting screen appears on the display.
 - 3 Turn the control dial to select “ImageLink.”
 - 4 Press SEL (select) to finish the setting. ImageLink starts functioning when the next folder starts playing.

Note:

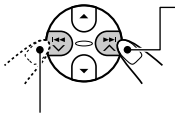
ImageLink will not work in the following cases:

- If no <jml> file is included in an MP3/WMA folder.
- If Intro Scan is activated.
- If the source is changed to any other than “CD,” or
- If you turn off then on the unit while “Image Link” is shown on the display.



Locating a track or a particular portion on a disc

To fast-forward or reverse the track



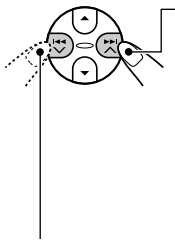
Press and hold **▶▶** **▲**, while playing a disc, to fast-forward the track.

Press and hold **◀◀** **▼**, while playing a disc, to reverse the track.

Note:

During this operation on an MP3 or a WMA disc, you can only hear intermittent sounds. (The elapsed playing time also changes intermittently on the display.)

To go to the next or previous tracks



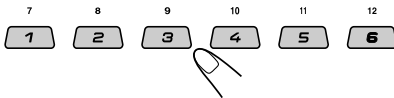
Press **▶▶** **▲** briefly, while playing a disc, to go ahead to the beginning of the next track.

Each time you press the button consecutively, the beginning of the next tracks is located and played back.

Press **◀◀** **▼** briefly, while playing a disc, to go back to the beginning of the current track. Each time you press the button consecutively, the beginning of the previous tracks is located and played back.

To go to a particular track directly (Only for CD and CD Text discs)

Press the number button corresponding to the track number to start its playback.



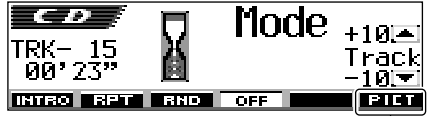
- To select a track number from 01 – 06: Press 1 (7) – 6 (12) briefly.
- To select a track number from 07 – 12: Press and hold 1 (7) – 6 (12) for more than one second.

To go to a track quickly

- 1 Press **M** MODE while playing a disc.

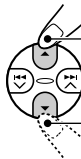


“Mode” appears on the display. The next-step-operation buttons start flashing.



See page 38 for this function.

- 2 Press **▲** (up) or **▼** (down) while “Mode” is still on the display.



To skip 10 tracks* forwards to the last track

To skip 10 tracks* backwards to the first track

* First time you press **▲** (up) or **▼** (down) button, the track skips to the nearest higher or lower track with a track number of multiple ten (ex. 10th, 20th, 30th).

Then each time you press the button, you can skip 10 tracks (see “How to go to the desired track quickly” below).

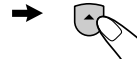
- After the last track, the first track will be selected, and vice versa.

Note:

If the current playing disc is an MP3 or a WMA disc, tracks are skipped within the same folder.

How to go to the desired track quickly

- Ex. 1: To select track number 32 while playing track number 6



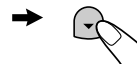
(Three times)



(Twice)

Track 6 → 10 → 20 → 30 → 31 → 32

- Ex. 2: To select track number 8 while playing track number 36



(Three times)



(Twice)

Track 36 → 30 → 20 → 10 → 9 → 8



To go to a particular folder directly (Only possible for MP3 or WMA disc)

IMPORTANT:

To directly select the folders using the number button(s), it is required that folders are assigned 2 digit numbers at the beginning of their folder names. (This can only be done during the recording of CD-Rs or CD-RWs.)

Ex.: If folder name is "01 ABC"

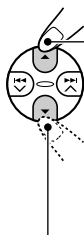
→ Press 1 to go to Folder 01 ABC.

If folder name is "1 ABC," pressing 1 does not work.

If folder name is "12 ABC"

→ Press and hold 6 (12) to go to Folder 12 ABC.

To skip to the next or previous folder (Only possible for MP3 or WMA disc)



Press ▲ (up) while playing a disc to skip to the next folder.

Each time you press the button consecutively, the next folder is located and the first track in the folder starts playing.

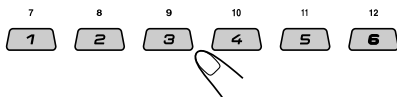
Press ▼ (down) while playing a disc to skip back to the previous folder.

Each time you press the button consecutively, the previous folder is located and the first track in the folder starts playing.

Note:

If the folder does not contain any MP3 or WMA tracks, it is skipped.

Press the number button corresponding to the folder number to start playing the first track in the selected folder.



- To select a folder number from 01 – 06:
Press 1 (7) – 6 (12) briefly.
- To select a folder number from 07 – 12:
Press and hold 1 (7) – 6 (12) for more than one second.

Notes:

- If "No Music" appears on the display after you have selected a folder, it means that the folder does not contain any MP3 or WMA tracks.
- You cannot directly select a folder with a number greater than 12.

To select a particular track in a folder, press
▶▶| ▲ or |◀◀ ▼ after selecting the folder.



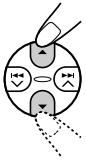
Selecting a folder and a track using the name lists

The following operations are only possible when playing an MP3 or a WMA disc.

You can show the folder name and track name lists on the display while playing a disc. Then, select a folder or a track you want to start playback with.

Selecting a folder and start playback

- 1 Press and hold ▲ (up) or ▼ (down) so that the folder name list of the inserted disc appears on the display.



The current playing folder will be highlighted on the display.

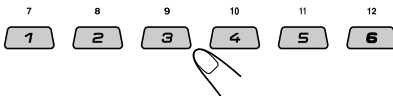
Current folder number



Notes:

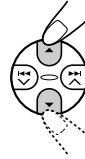
- The display can show only six names at a time. You can show the other names on the next lists by pressing ▲ (up) or ▼ (down).
- If you press ►► ▲ or ◀◀ ▼, the track name list of the current playing folder appears. Each time you press the button, the folder name list and track name list appear alternately.
- Only folders with MP3 or WMA tracks will be listed.

- 2 Select the number (1 – 6) for the folder you want to play.



Selecting a track and start playback

- 1 Press and hold ▲ (up) or ▼ (down) so that the folder name list of the inserted disc appears on the display.

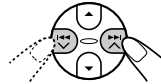


The current playing folder will be highlighted on the display.

Current folder number

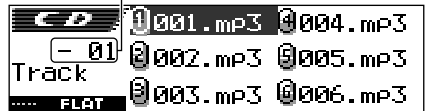


- 2 Press ►► ▲ or ◀◀ ▼ to show the track name list of the current folder.



The current playing track will be highlighted on the display.

Current track number

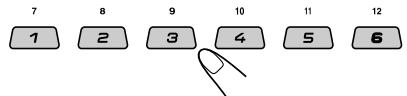


Each time you press the button, the folder name list and track name list appear alternately.

Note:

The display can show only six names at a time. You can show the other names on the next lists by pressing ▲ (up) or ▼ (down).

- 3 Select the number (1 – 6) for the track you want to play.





Selecting the playback modes

To play back tracks at random (Random Play)

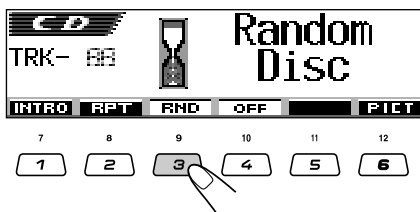
You can play back all tracks on the disc (or a folder for MP3 and WMA discs) at random.

- 1 Press M MODE while playing a CD.



"Mode" appears on the display. The next-step-operation buttons start flashing.

- 2 Press number button 3 repeatedly while "Mode" is still on the display.

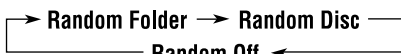


Each time you press the button, random play mode changes as follows:

For audio CD and CD Text discs:

Random Disc ↔ Random Off

For MP3 and WMA discs:



Mode	Active indicator	Plays at random
Random Folder*	RND (folder random) indicator lights up.	All tracks of the current folder, then tracks of the next folder and so on.
Random Disc	RND (disc random) indicator lights up.	All tracks on the disc.

* "Random Folder" can be used for MP3 and WMA discs only.

To cancel random play, select "Random Off" by pressing number button 3 repeatedly or press number button 4 in step 2.

To play back tracks repeatedly (Repeat Play)

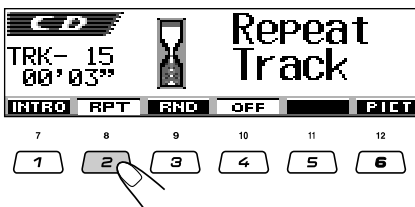
You can play back the current track (or a folder for MP3 and WMA discs) repeatedly.

- 1 Press M MODE while playing a CD.



"Mode" appears on the display. The next-step-operation buttons start flashing.

- 2 Press number button 2 repeatedly while "Mode" is still on the display.



Each time you press the button, repeat play mode changes as follows:

For audio CD and CD Text discs:

Repeat Track ↔ Repeat Off

For MP3 and WMA discs:



Mode	Active indicator	Plays repeatedly
Repeat Track	RPT (track repeat) indicator lights up.	The current (or specified) track.
Repeat Folder*	RFT (folder repeat) indicator lights up.	All tracks of the current (or specified) folder of the disc.

* "Repeat Folder" can be used for MP3 and WMA discs only.

To cancel repeat play, select "Repeat Off" by pressing number button 2 repeatedly or press number button 4 in step 2.



To play back only intros (Intro Scan)

You can play back the first 15 seconds of each track sequentially.

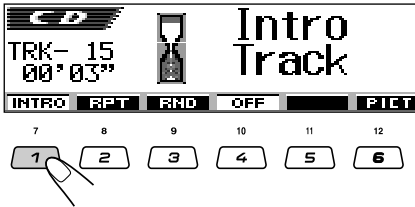
- 1 Press M MODE while playing a CD.

MODE



"Mode" appears on the display.
The next-step-operation buttons start flashing.

- 2 Press number button 1 repeatedly while "Mode" is still on the display.



Each time you press the button, intro scan mode changes as follows:

For audio CD and CD Text discs:

Intro Track ↔ Intro Off

For MP3 and WMA discs:



Mode	Active indicator	Plays the beginnings (15 seconds) of
Intro Track	INT (track intro) indicator lights up.	All tracks on the disc.
Intro Folder*	INT (folder intro) indicator lights up.	The first track of every folder of the disc.

* "Intro Folder" can be used for MP3 and WMA discs only.

To cancel intro scan, select "Intro Off" by pressing number button 1 repeatedly or press number button 4 in step 2.

Prohibiting disc ejection

You can prohibit disc ejection and can lock a disc in the loading slot.

While pressing SEL (select), press and hold ▲ (eject) for more than 2 seconds.



"No Eject" flashes on the display for about 5 seconds, and the disc is locked and cannot be ejected.



If you press ▲ (eject) again, the control panel moves down but the disc is not ejected. "No Eject" flashes on the display.

To cancel the prohibition and unlock the disc

While pressing SEL (select), press and hold ▲ (eject) again for more than 2 seconds.

"Eject OK" flashes on the display for about 5 seconds, and the disc is unlocked.





Changing the display pattern

By pressing D DISP, you can change the information shown on the display.



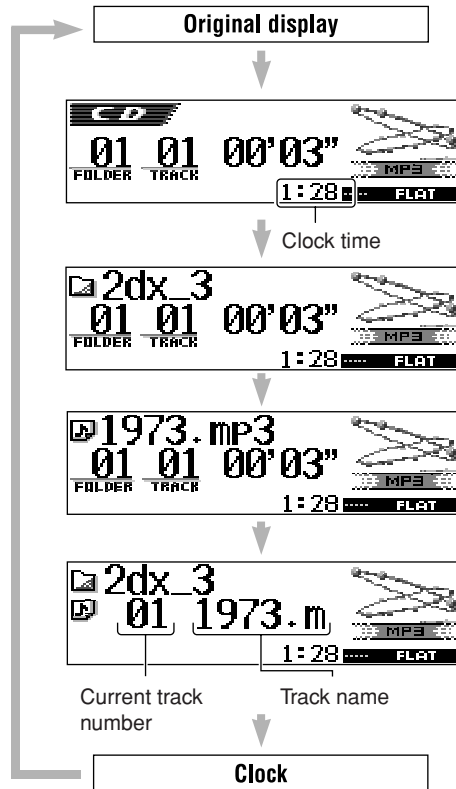
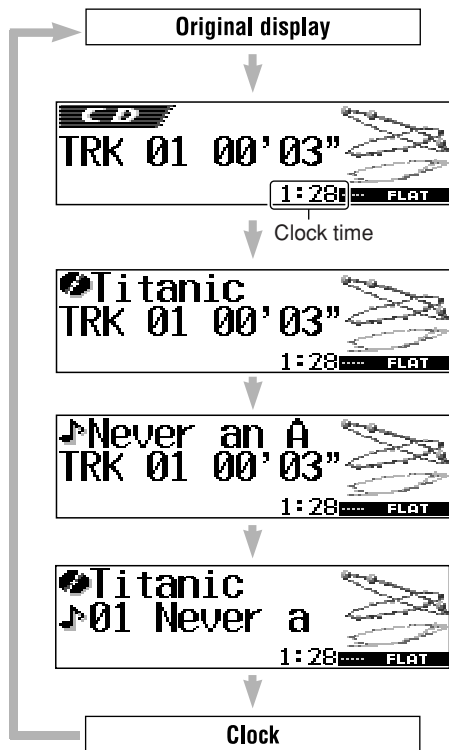
If the information cannot be shown at a time, it will scroll on the display. See also “To select the scroll mode for disc information and the DAB text—Scroll” on page 48.

Some characters or symbols will not be shown (will be blanked or substituted) on the display.

Each time you press the button, the display patterns change as follows:

While playing an audio CD or a CD Text disc:

While playing an MP3 or a WMA disc when “Tag” is set to “Off”:



Notes:

- When the disc title/performer is shown, the (disc) indicator lights up. When the track title is shown, the (track) indicator lights up.
- If no name is assigned to the audio CD, “NO NAME” will appear. To assign a name to an audio CD, see page 53.
- If no disc title/performer or no track title is recorded for the CD Text, “NO NAME” will appear.

Notes:

- When the folder name is shown, the (folder) indicator lights up. When the track name is shown, the (track) indicator lights up.
- If “Tag” is set to “On” (see pages 48 and 49), ID3 tag information will appear on the display if the disc has an ID3 tag.
The album name/performer with (disc) indicator appear on the display instead of the folder name; while track title with (track) indicator appear instead of the track name.



SOUND ADJUSTMENTS

Adjusting the sound

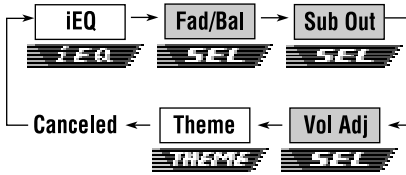
You can set the speaker output balance, subwoofer output level, and input level of each source.

- There is a time limit in doing the following procedure. If the setting is canceled before you finish, start from step 1 again.

1 Select the item you want to adjust.



The next-step-operation buttons start flashing. Each time you press the button, the adjustable items change as follows:

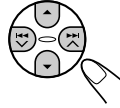


- For iEQ (sound mode) settings, see pages 33 – 35.
- For THEME (display theme) settings, see page 36.

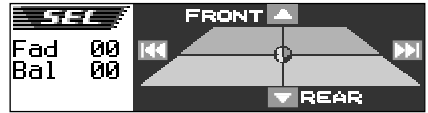
Indication	To do:	Range
Fad	Adjust the front and rear speaker balance.	R06 (Rear only) F06 (Front only)
Bal	Adjust the left and right speaker balance.	L06 (Left only) R06 (Right only)
Sub Out	Adjust the subwoofer output level and cutoff frequency level.	00 (min.) 12 (max.) Low/Mid/High
Vol Adj	Adjust and store the input level of each source.	-12 (min.) +12 (max.)

2 Make adjustments.

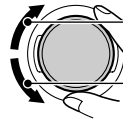
- **To adjust fader and balance—Fad, Bal:**
You can make these two adjustments at the same time.
- If you are using a two-speaker system, set the fader level to “00.”



- Press ▲ (up) or ▼ (down) to adjust the fader.
- Press ►► ▲ or ◀◀ ▼ to adjust the balance.



- **To adjust subwoofer output—Sub Out:**
This takes effect only when a subwoofer is connected.



To increase the level

To decrease the level



You can also set an appropriate cutoff frequency level according to the subwoofer connected.

- Press ►► ▲ or ◀◀ ▼ to select “Low,” “Mid,” or “High.”
- Low: Frequencies higher than 50 Hz are cut off to the subwoofer.
- Mid: Frequencies higher than 80 Hz are cut off to the subwoofer.
- High: Frequencies higher than 115 Hz are cut off to the subwoofer.



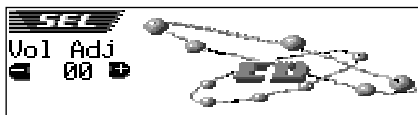
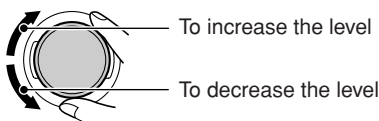
- **To adjust the input level of each source**
—Vol Adj:

You can separately store this setting for each source except FM. Before making an adjustment, select an appropriate source for which you want to make an adjustment.

Once you have adjusted it, it is memorized, and you will not need to adjust the volume level each time you change the source.

Adjust the input level to match it to the FM sound level.

- You cannot make an adjustment if the source is FM. "FIX" will appear.



Selecting preset sound modes (iEQ: intelligent equalizer)

You can select a preset sound mode (iEQ: intelligent equalizer) suitable to the music genre.

- There is a time limit in doing the following procedure. If the setting is canceled before you finish, start from step 1 again.

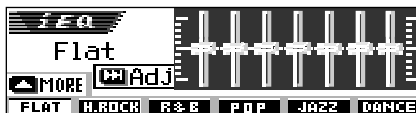
Available sound modes:

- FLAT (No sound mode is applied)
- H.ROCK (Hard Rock)
- R & B (Rhythm and Blues)
- POP (Popular music)
- JAZZ (Jazz music)
- DANCE (Dance music)
- Country (Country music)
- REGGAE (Reggae)
- CLASSIC (Classical music)
- USER 1, USER 2, USER 3

1 Press SEL (select) once.

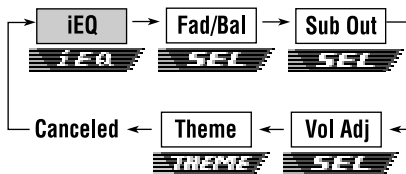


The last selected sound mode is called up. The next-step-operation buttons start flashing.



Ex.: If you have selected "Flat" previously

Each time you press the button, the adjustable items change as follows:



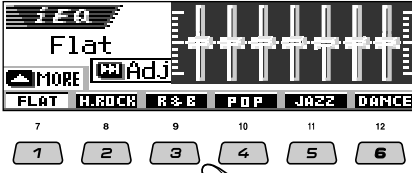
- For SEL (basic sound) settings, see pages 32 – 33.
- For THEME (display theme) settings, see page 36.

CONTINUED ON THE NEXT PAGE

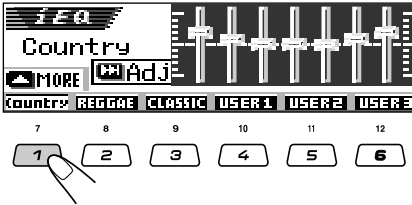


2 Press the number button to select the sound mode you want.

- This unit has two sound mode selection screens. To move to the other screen, press ▲ (up) or ▼ (down).



Press ▲ (up) or ▼ (down).



To cancel the sound mode, select “FLAT” in step 2.

Notes:

- You can adjust the preset sound modes temporarily. However, your temporary adjustments will be reset when you select another sound mode.
- For details about the preset settings of each sound mode, see table below.

To exit from the sound mode selection screen, press SEL (select) repeatedly or wait for about 5 seconds.

Sound modes (preset frequency level settings)

The list below shows the preset frequency level settings for each sound mode.

Sound Mode	Preset equalizing values						
	60 Hz	150 Hz	400 Hz	1 kHz	2.4 kHz	6 kHz	12 kHz
Flat	00	00	00	00	00	00	00
Hard Rock	+03	+03	+01	00	00	+02	+01
R & B	+03	+02	+02	00	+01	+01	+03
Pop	00	+02	00	00	+01	+01	+02
Jazz	+03	+02	+01	+01	+01	+03	+02
Dance Music	+04	+02	00	-02	-01	+01	+01
Country	+02	+01	00	00	00	+01	+02
Reggae	+03	00	00	+01	+02	+02	+03
Classic	+02	+03	+01	00	00	+02	00
User 1	00	00	00	00	00	00	00
User 2	00	00	00	00	00	00	00
User 3	00	00	00	00	00	00	00



Storing your own sound modes

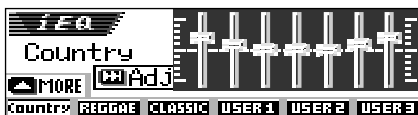
You can adjust the sound modes to your preference and store your own adjustments in memory (USER 1, USER 2, and USER 3).

- There is a time limit in doing the following procedure. If the setting is canceled before you finish, start from step 1 again.

1 Press SEL (select) once.

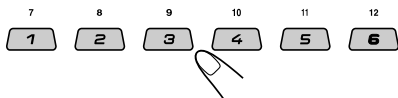


The last selected sound mode is called up. The next-step-operation buttons start flashing.



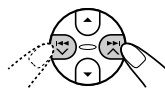
Ex.: If you have selected "Country" previously

2 Select the sound mode you want to adjust.

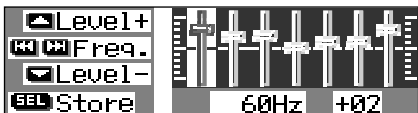


- This unit has two sound mode selection screens. To move to the other screen, press ▲ (up) or ▼ (down).

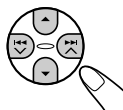
3 Enter the sound adjustment mode.



The following sound mode adjustment screen appears on the display.



4 Make adjustments as you like.

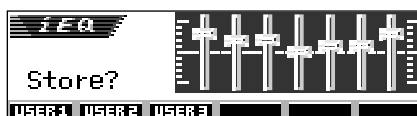


- 1) Press ►► ▲ or ◀◀ ▼ to select the frequency band—60Hz, 150Hz, 400Hz, 1kHz, 2.4kHz, 6kHz, 12kHz.
- 2) Press ▲ (up) or ▼ (down) to adjust the level of the selected band within the range of -05 to +05.
- 3) Repeat steps 1) and 2) to adjust the other frequency bands.

5 Store the adjustment you made.

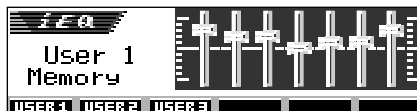
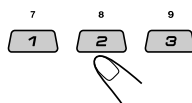


The confirmation message appears—whether you want to store the adjustment.



If you want to cancel the adjustments, press D DISP.

6 Select one of the user sound modes (USER 1, USER 2, or USER 3) you want to store into.



Ex.: When you select "User 1"



Selecting the display theme

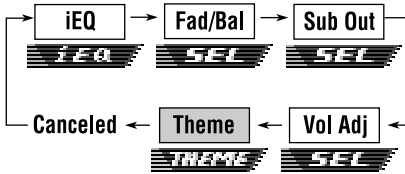
You can select the theme of the display during playback.

- There is a time limit in doing the following procedure. If the setting is canceled before you finish, start from step 1 again.

1 Select "THEME".



Each time you press the button, the adjustable items change as follows:



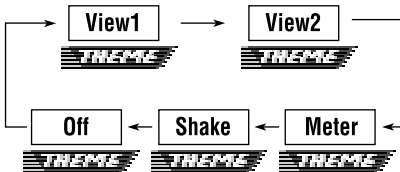
The last selected theme appears on the display.
 The next-step-operation button starts flashing.

- For SEL (basic sound) settings, see pages 32 – 33.
- For iEQ (sound mode) settings, see pages 33 – 35.

2 Select the display theme you want.



As you turn the control dial, the themes change as follows:



Note:

View 1 and View 2 have positive pattern display and negative pattern display (see right column). Either positive or negative pattern display is automatically selected depending on the "LCD Type" setting (see page 48).

View 1:

A scenery display appears.

- Positive pattern display:



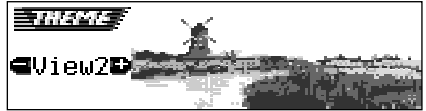
- Negative pattern display:



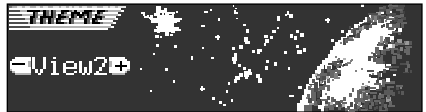
View 2:

A scenery display appears.

- Positive pattern display:



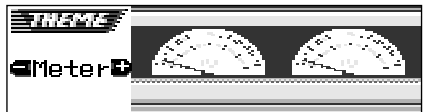
- Negative pattern display:



Meter:

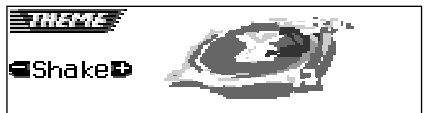
The left and right audio level meters appear.

- If the small animation display is selected, only one audio level meter can be shown.



Shake:

The speaker on the display vibrates as input audio level changes.



Off:

Cancels the display theme.

With the supplied Image Converter CD-ROM, you can edit your own favorite pictures and use them as the opening screen, ending screen, and graphic screen while playing a source.



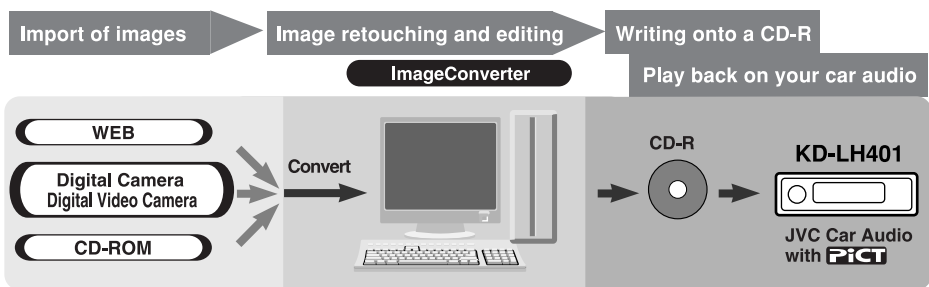
What is Image Converter?

Image Converter is a JVC's original software to produce customize images to be shown on your JVC Car Audio.

Here is a basic procedure to make a CD-R including still images (pictures) and animations (movies) using Image Converter

In this manual, we only explain how to export the files (still images and animations) into the built-in memory of this unit—step 5 below.

- For the other processes (from steps 1 to 4 below), refer to Image Converter's Operation Guide (PDF files included in the "Manual" folder of the supplied CD-ROM).



1 Install / Start the program

Install Image Converter on your PC.

2 Import the images

Import the source images from the Image Converter CD-ROM or from other equipment like a digital camera or a digital video camera.

3 Retouch and edit the images

Retouch the images like trimming or adjusting color, editing the animation effect, and adding the texts.

4 Write your images onto a CD-R

Write the animations or the still images you made with Image Converter using your CD-R writing software.

You have to write the images you made onto a CD-R to enjoy the images on your Car Audio.

- To write data onto a CD-R, refer also to the instruction of your CD-R writing software.

5 Enjoy the animations or the still images you made on your Car Audio

Export the images to your JVC Car Audio from the CD-R you made.

Downloading images and animations

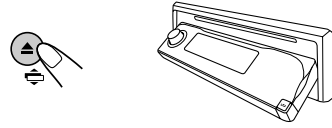
Before starting the following procedure, prepare a CD-R including still images (pictures) and animations (movies).

- The supplied Image Converter CD-ROM includes sample images and animations, so you can use this disc for your first trial.

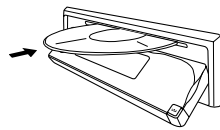
IMPORTANT:

- Still images (pictures) should have <jml>, and animations (movies) should have <jma> as their extension code in their file names.
- Downloading a file can be done only while selecting "CD" as the source; on the other hand, deleting a file can be done while selecting any source.
- Before you download or erase the files, observe the following:
 - Do not download a file while driving.
 - Do not turn off the ignition key of the car while downloading or erasing a file.*
 - Do not detach the control panel while downloading or erasing a file.*
- * If you do it, the file download and erasure will not be done correctly. In this case, perform the same procedure again.
- If you have already downloaded an animation for "Opening," "Ending," or "Movie," downloading a new animation deletes the previously stored animation.
- It takes a long time for the unit to download an animation.
 - About 6 to 7 seconds for a still image (one frame).
 - About 3 to 4 minutes for an animation of 30 frames.
 - About 10 minutes for an animation of 90 frames.
- While a station (or service for the DAB tuner) is being tuned in by one of the Standby Reception modes such as TA or PTY, you cannot download or delete a file. On the other hand, while you are downloading or deleting a file, Standby Reception mode will not work to have this unit tune in a station (or service). It only works after download or deletion is over.

1 Open the control panel.



2 Insert a CD-R with the files (images and animations you made with Image Converter) into the loading slot.



The unit draws the disc, the control panel goes back to the previous position (see page 54).

- If the disc includes playable audio files such as MP3 tracks, playback starts automatically.

3 Press M MODE after the disc is detected.



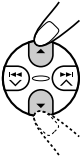
"Mode" appears on the display. The next-step-operation buttons start flashing.



4 Press number button 6 to show the download selection screen.



5 Select (highlight) one of the listed items for which you want to download a file.



- **Opening** : Opening screen
To download an animation to be shown after the unit is turned on. (You can store only one animation consisting of a maximum of 30 frames.)
- **Ending** : Ending screen
To download an animation to be shown before the unit is turned off. (You can store only one animation consisting of a maximum of 30 frames.)
- **Picture** : Graphic screen*
To download a still image to be shown if no operation is done for about 20 seconds. (You can store 90 still images—one frame each.)
- **Movie** : Graphic screen*
To download an animation to be shown if no operation is done for about 20 seconds. (You can store only one animation consisting of a maximum of 90 frames.)

* *Graphic screen will appear only if the “Graphics” setting is set to one of the following—“UserMovie,” “UserSlide,” or “UserPict.” (see page 48).*

If you want to cancel the procedure, press number button 5, the download selection screen goes off.

6 Show the name list of the folder included in the inserted CD-R.



“File Check...” appears for a while, then the folder list* appears.



The currently selected folder will be highlighted on the display.

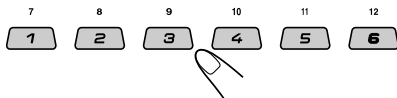
* *You can assign your own names when editing a CD-R.*

Notes:

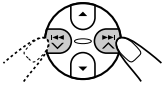
- *On this list, the folders including the target files—<jml> files for “Picture” and <jma> files for the others—are shown.*
- *The display can show only six names at a time. You can show the other names on the next lists by pressing ▲ (up) or ▼ (down).*
- *If a disc inserted does not include any <jml> and <jma> files, beeps sound and you cannot go to the next step.*

If you want to cancel the procedure, press D DISP.

7 Select (highlight) a folder in which a file you want is included.

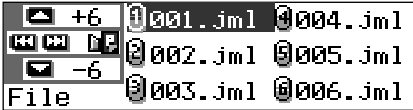


8 Show the name list of the files included in the selected folder.



Each time you press the button, the lists on the display changes as follows:

F Folder name list ↔ **F** File name list

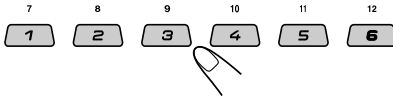


Ex.: When you have selected “Picture” in step 5

Note:

The display can show only six names at a time. You can show the other names on the next lists by pressing ▲ (up) or ▼ (down).

9 Select (highlight) a file you want to download.



The file name appears, and the unit will ask you “Download OK?”

10 If it is OK, press number button 1 to start downloading.



Downloading starts, and “Downloading...” appears on the display. If it is over, the file name list appears again.

If it is not OK, press number button 5, the file selection screen appears again. Repeat from step 8 again.

11 Repeat steps 8 to 10 if you are downloading files for “Picture” and want to store more files.

12 Finish the download procedure.



To download a file for another item listed on the download selection screen, repeat from step 3 again.

Notes:

- If you try to store the 91st image for picture screen, “Picture Full” appears and you cannot start downloading. In this case, delete unwanted files before downloading.
- If the total frame number of the downloaded animations exceeds the following number, the exceeding frames are ignored.
 - For opening and ending screens: 30 frames
 - For movie screen: 90 frames

Deleting unwanted files

- When "BACK" is shown on the display above number button 5, you can go back to the previous screen by pressing number button 5.

To delete all the stored files at a time

- 1 Press M MODE while playing any source.

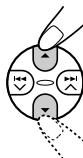


"Mode" appears on the display. The next-step-operation buttons start flashing.

- 2 Press number button 6 to show the download selection screen.



- 3 Press ▲ (up) or ▼ (down) to select (highlight) all the listed items.



- 4 Press number button 4.



The unit asks you "All File Delete OK?"

- 5 Press number button 4 again.



"Now Deleting..." appears while erasing the files. When erasure is over, the download selection screen appears again.

- 6 Press number button 5 to resume the source indication screen.



To delete the files stored for "Opening," "Ending," "Picture (all stored images at a time)," and "Movie"

- 1 Press M MODE while playing any source.

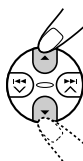


"Mode" appears on the display. The next-step-operation buttons start flashing.

- 2 Press number button 6 to show the download selection screen.



- 3 Press ▲ (up) or ▼ (down) to select (highlight) one of the listed items.



Appears when "Picture" is selected (highlighted)

- 4 To delete the file stored in "Opening," "Ending," and "Movie," press number button 3.



The file name of the previously stored animation appears, and the unit asks you "Delete OK?"

To delete all the files stored in "Picture" at a time, press number button 4.



The unit asks you "All Picture Delete OK?"

- 5** To delete the file stored in “Opening,” “Ending,” and “Movie,” press number button 3 again.



To delete all the files stored in “Picture” at a time, press number button 4 again.



“Now Deleting...” appears while erasing all the stored files. When erasure is over, the download selection screen appears again.

- 6** Press number button 5 to resume the source indication screen.



To delete the stored files for “Picture” (one by one)

- 1** Press M MODE while playing any source.

MODE

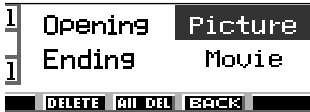
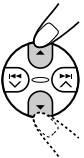


“Mode” appears on the display. The next-step-operation buttons start flashing.

- 2** Press number button 6 to show the download selection screen.



- 3** Press ▲ (up) or ▼ (down) to select (highlight) “Picture.”



- 4** Press number button 3.

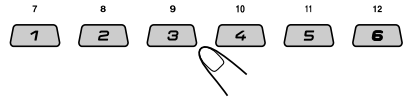


The unit shows the name list of the stored files.

Note:

The display can show only six names at a time. You can show the other names by pressing ▲ (up) or ▼ (down) repeatedly.

- 5** Press the number buttons for the file you want to delete.



Selected file name appears, and the unit asks you “Delete OK?”

- 6** Press number button 3 to start erasure.



“Now Deleting...” appears while erasing the selected file. When erasure is over, the name list of the stored file appears again.

- 7** To delete more files, repeat from steps 5 and 6.

- 8** Press D DISP to resume the source indication screen.

DISP



Activating the downloaded images and animations

Activating the animations stored for opening and ending screens

After the unit turns on or before the unit turns off, you can see preset animations on the display. These are called opening screen and ending screen. You can use your own edited animations for these opening and ending screens.

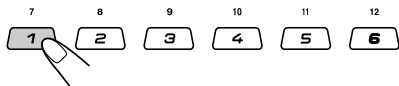
- Before performing the following procedure, make sure that “KeyIn CFM” is set to “On”; otherwise, the animations may not be shown. (See page 48.)
- If no animation is stored in “Opening” and “Ending,” “Opening” and “Ending” cannot be selected as a PSM item.

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (PSM: see pages 46 and 47.)

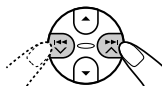


2 Press number button 1 to select “MOVIE”—Movie category of the PSM settings.

The “Graphics” setting screen appears on the display.



3 Select “Opening” (opening screen setting) or “Ending” (ending screen setting).



Ex.: When you select “Opening”

4 Select “User.”



- Default: Factory-preset animation is used.
- User: Your own edited animation is used.

5 Finish the setting.



Activating the graphic screen using either picture or movie

Using this setting, you can change the graphic displays. These graphic screens appear if no operation is done for about 20 seconds.

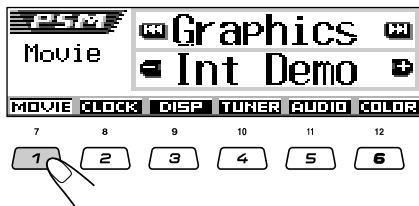
- If no image is stored in “Picture,” or no animation in “Movie,” “UserPict.,” “UserMovie” and “UserSlide” cannot be selected for the “Graphics” setting.

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (PSM: see pages 46 and 47.)

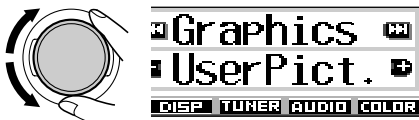


2 Press number button 1 to select “MOVIE”—Movie category of the PSM settings.

The “Graphics” setting screen appears on the display.



3 Select “UserMovie,” “UserSlide,” or “UserPict.”



Ex.: When you select “UserPict.”

- UserMovie: Your edited animation stored in “Movie” is activated as your graphic screen.
- UserSlide: Your edited still images stored in “Picture” are activated and shown in sequence as your graphic screen.
- UserPict.: One of your edited still image stored in “Picture” is activated as your graphic screen. Select one of the stored images (see the next column).

4 Finish the setting.



To cancel all graphic displays, select “Off” in step 3.

Note:

For the “Graphics” setting, you can also select “Int Demo,” “All Demo,” and “ImageLink.”

- See pages 8 and 48 for “Int Demo” and “All Demo.”
- See pages 25 and 48 for “ImageLink.”

Selecting a still image for graphic display—User Picture

You cannot select “UserPict.” as a PSM item in the following cases:

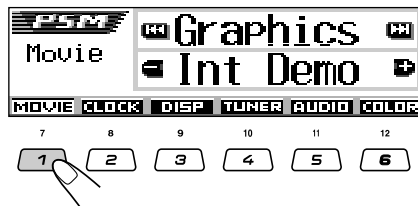
- If no image is stored in “Picture,” or
- “UserPict.” is not selected for the “Graphics” setting (see the left column).

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (PSM: see pages 46 and 47.)

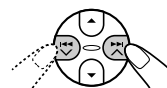


2 Press number button 1 to select “MOVIE”—Movie category of the PSM settings.

The “Graphics” setting screen appears on the display.



3 Select “UserPict.”



File name of the current selected image also appears.



4 Select a file you want.



5 Finish the setting.





Changing the general settings (PSM)

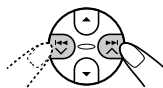
You can change the items listed on the table on pages 46 and 47 by using the PSM (Preferred Setting Mode) control.

- The PSM items are grouped into six categories—MOVIE, CLOCK, DISP (display), TUNER, AUDIO, and COLOR.

Basic Procedure

Ex.: To change “Contrast”

- Select the PSM item you want to adjust.



- By pressing $\blacktriangleright\blacktriangleright$ \blacktriangle or $\blacktriangleleft\blacktriangleleft$ \blacktriangledown repeatedly, you can also move to another category.

- Adjust the PSM item selected.



- Repeat steps 2 to 4 to adjust the other PSM items if necessary.

- Finish the setting.



- Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (See pages 46 and 47.)



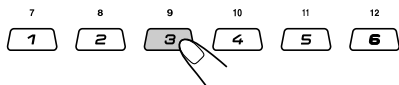
The next-step-operation buttons start flashing.



Ex.: If you have selected “Graphics” previously

- Press number button (in this example, 3) to select one of the PSM categories.

The first-listed item in the selected category appears.





Preferred Setting Mode (PSM) items

The PSM items are grouped into six categories—MOVIE, CLOCK, DISP (display), TUNER, AUDIO, and COLOR.

Indications		Selectable values/items		Factory-preset settings	See page		
MOVIE	Graphics	Movie demonstration	See page 48 for details		Int Demo	8, 25, 48	
	KeyIn CFM	Key-in confirmation	On	Off	On	48	
	Opening*¹	Opening animation	Default	User	Default	43	
	Ending*¹	Ending animation	Default	User	Default	43	
	UserPict.*²	User Picture	From the stored files		First stored	44	
CLOCK	Clock Hr	Hour adjustment	0 – 23 (1 – 12)		0 (0:00)	9	
	Clock Min	Minute adjustment	00 – 59		00 (0:00)	9	
	24H/12H	24 hours or 12 hours	12Hours	24Hours	24Hours	9	
	Auto Adj	Automatic clock adjustment	Off	On	On	21	
DISP (display)	Scroll	Scroll mode	Once ↩	↔ Off	Auto ↪	Once	48
	Dimmer	Dimmer mode	Auto ↕	↔	Off ↕	Auto	50
	From– To*³	Dimmer time setting	Any time – Any time		18 – 7	50	
	Contrast	Contrast	1 – 10		5	48	
	LCD Type	Display type	Positive ↩	↔ Auto	Negative ↪	Auto	48
	Font Type	Font type	1	2	1	48	
	Tag	Tag display	Off	On	On	48, 49	

*¹ Displayed only after a downloadable file is stored in memory.

*² Displayed only after a downloadable file is stored in memory and while selecting “UserPict.” for “Graphics.”

*³ Displayed only when “Dimmer” is set to “Time Set.”



Indications		Selectable values/items		Factory-preset settings	See page	
TUNER	PTY Stnby	PTY Standby	29 programme types (see page 22)		News	18
	AF-Regn'l	Alternate frequency/ Regionalization reception	AF ↕	↔ AF Reg ↕ Off*4	AF	16, 17
	TA Volume	Traffic announcement volume	Volume 0 – Volume 30 or 50*5		Volume 20	21
	P-Search	Programme search	Off	On	Off	20
	IF Filter	Intermediate frequency filter	Wide	Auto	Auto	49
	DAB AF*6	Alternative frequency search	Off	On	On	69
	Announce*6	Announcement standby	9 announcement types (see page 68)		Travel	68
AUDIO	Beep	Key-touch tone	Off	On	On	49
	Ext Input*7	External component	Changer	Line In	Changer	49
	Telephone	Telephone Muting	Off ↕	↔ Muting1 ↕ Muting2	Off	49
	Amp.Gain	Amplifier gain control	HighPower	LowPower	HighPower	49
COLOR	All SRC	Selected source	See page 51 for details		Every	51
	User	User color selection	Day	Night	Day	52
	R	Red	00 – 11		Day: 07/Night: 05	52
	G	Green	00 – 11		Day: 07/Night: 05	52
	B	Blue	00 – 11		Day: 07/Night: 05	52
	SlotLight	Slot lights	On	Off	On	49

*4 Displayed only when “DAB AF” is set to “Off”

*5 Depending on the amplifier gain control setting. (See page 49 for details.)

*6 Displayed only when DAB tuner is connected.

*7 Not displayed when the current source is “CD-CH” or “LINE IN.”



To show the graphics on the display —Graphics

You can change the graphics shown on the display. These graphics appear if no operation is done for about 20 seconds (except for “ImageLink”).

- Int Demo: Display demonstration (animation) and playback source indication appears alternately (see page 8).
- All Demo: Display demonstration (animation) appears (see page 8).
- UserMovie: Your edited animation appears (see pages 43 and 44).
- UserSlide: Your edited still images appears in sequence (see pages 43 and 44).
- UserPict.: One of your edited still image appears (see pages 43 and 44).
- ImageLink: To show a still image while playing back an MP3/WMA track (see page 25).
- Off: Cancels all graphic display above.

Note:

You can select “UserMovie,” “UserSlide,” and “UserPict.” only after downloading the appropriate files in memory. (See pages 43.)

To turn the source animation on the display on or off—KeyIn CFM

When changing the source, the display shows the source animation. You can turn on or off the source animation on the display.

- On: Turns on the source animation.
- Off: Cancels the source animation.

To select the scroll mode for disc information and the DAB text—Scroll

You can select the scroll mode for disc information and for the DAB radio text (DLS: Dynamic Label Segment).

- Once: While showing the disc information: scrolls the disc information only once. While showing the DAB text: scrolls the detailed DAB text.
- Auto: While showing the disc information: repeats the scroll (in 5-second intervals). While showing the DAB text: scrolls the detailed DAB text.

- Off: While showing the disc information: cancels scroll mode. While showing the DAB text: shows only headline if any.

To adjust the display contrast level —Contrast

Adjust the display contrast (1 – 10) to make the display indications clear and legible.

To select the display illumination pattern —LCD Type

You can select the display illumination patterns according to your preference.

- Auto: Positive pattern will be selected during the day time (depending on the “Dimmer” setting); on the other hand, negative pattern will be used during the night time (depending on the “Dimmer” setting).
- Positive: Positive (normal) pattern of the display.
- Negative: Negative pattern of the display.

To select the font on the display—Font Type

You can change the font types used on the display. Select either “1” or “2” according to your preference.

To turn the tag display on or off—Tag

An MP3/WMA track can contain track information called “ID3 Tag” where its album name, performer, track title, etc. are recorded.

There are two versions—ID3v1 (ID3 Tag version 1) and ID3v2 (ID3 Tag version 2). If both ID3v1 and ID3v2 are recorded on a disc, ID3v2 information will be shown.

- On: Turns on the ID3 tag display while playing MP3/WMA tracks.
 - If an MP3/WMA track does not have ID3 tags, folder name and track name appear.

**Note:**

If you change the setting from “Off” to “On” while playing an MP3/WMA track, the tag display will be activated when the next track starts playing.

- Off: Turns off the ID3 tag display while playing MP3/WMA tracks. (Only the folder name and track name can be shown.)

To change the FM tuner selectivity —IF Filter

In some areas, adjacent stations may interfere with each other. If this interference occurs, noise may be heard.

- Auto: When this type of interference occurs, this unit automatically increases the tuner selectivity so that interference noise will be reduced. (But the stereo effect will also be lost.)
- Wide: Subject to the interference from adjacent stations, but sound quality will not be degraded and the stereo effect will not be lost.

To turn the key-touch tone on or off—Beep

You can deactivate the key-touch tone if you do not want it to beep each time you press a button.

- On: Activates the key-touch tone.
- Off: Deactivates the key-touch tone.

To select the external component to use —Ext Input

You can connect the external component to the CD changer jack on the rear using the Line Input Adapter KS-U57 (not supplied).

To use the external component as the playback source through this unit, you need to select which component—CD changer or external component—to use.

- Changer: To use the CD changer.
- Line In: To use the external component other than CD changer.

Note:

For connecting the Line Input Adapter KS-U57 and the external component, refer to the Installation/Connection Manual (separate volume).

To select the telephone muting—Telephone

This mode is used when a cellular phone system is connected. Depending on the phone system used, select either “Muting1” or “Muting2,” whichever mutes the sounds from this unit.

- Muting1: Selects this if this setting can mute the sounds while using the cellular phone.
- Muting2: Selects this if this setting can mute the sounds while using the cellular phone.
- Off: Cancels the telephone muting.

To select the amplifier gain control —Amp.Gain

You can change the maximum volume level of this unit. When the maximum power of the speakers is less than 50 W, select “LowPower” to prevent them from being damaged.

- LowPower: You can adjust the volume level from “Volume 00” to “Volume 30.”

Note:

If you change the setting from “HighPower” to “LowPower” while listening at a volume level more than 30, the unit automatically changes the volume level to “Volume 30.”

- HighPower: You can adjust the volume level from “Volume 00” to “Volume 50.”

To turn the slot light on or off—SlotLight

You can turn off the slot light if you do not want the illumination each time you insert/eject the disc or when you change the control panel angle.

- On: Activates the illumination.
- Off: Deactivates the illumination.



Selecting the dimmer mode

You can dim the display at night automatically or as you set the timer.

Note:

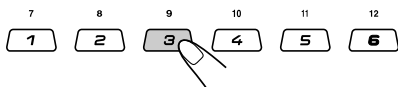
Auto Dimmer equipped for this unit may not work correctly on some vehicles, particularly on those having a control dial for dimming. In this case, select any other than "Auto."

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (See pages 46 and 47.)

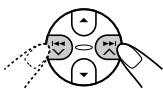


The next-step-operation buttons start flashing.

2 Press number button 3 to select "DISP"—Display category of the PSM settings.



3 Press >>> ^ or <<< v to select "Dimmer."



4 Set the dimmer mode as you like.



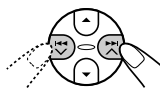
- Auto: Activates Auto Dimmer. When you turn on the car head lights, the display automatically dims.
- Off: Cancels Auto Dimmer.
- On: Always dims the display.
- Time Set: Used to set the timer for the dimmer mode.

Note:

Selecting "Auto" or "Time Set" may change the display pattern to the "Negative" or "Positive" pattern if "LCD Type" is set to "Auto."

- If you select "Time Set," go to the following steps to set the timer.
- If you select any other than "Time Set," go to step 7 to finish the setting.

5 Select "From-To" to set the timer for the dimmer mode.



6 Set the timer.

- 1 Turn the control dial to select the start time.
- 2 Press >>> ^ once.
- 3 Turn the control dial to select the end time.

7 Finish the setting.





Changing the display color

You can set the display color using the PSM control. You can select your favorite color for each source (or for all sources).

You can also create your own colors, and set them as the display color.

Setting the desired color for each source

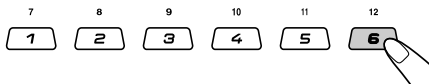
Once you have set the color for each source (or for all sources), the display illuminates in the selected color when the source is selected.

- 1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (See pages 46 and 47.)**

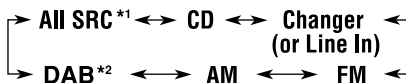
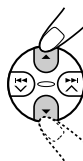


The next-step-operation buttons start flashing.

- 2 Press number button 6 to select "COLOR"—Color category of the PSM settings.**



- 3 Select the source that you want to set the display color for.**



*1 When you select "All SRC," you can use the same color for all the sources.

*2 Displayed only when DAB tuner is connected.

- 4 Select the display color.**



As you turn the control dial, the colors change as follows:

Every*1 ↗ Aqua ↗ Sky ↗ Sea ↗
Leaves ↗ Grass ↗ Apple ↗ Rose ↗
Amber ↗ Honey ↗ Violet ↗ Grape ↗
Pale ↗ User*2 ↗ (back to the beginning)

*1 When you select "Every," the color changes every 2 seconds (changing to every color listed above except "User").

*2 When you select "User," the user-edited colors—"Day" and "Night" will be applied. (See page 52.)

- 5 Repeat steps 3 and 4 to select the color for each source (except when selecting "All SRC" in step 3).**

- 6 Finish the setting.**





Creating your own color—User

You can create your own colors—“Day” and “Night,” and select them as the display color for any desired source.

- Day: Can be used as your user color during the day time*.
- Night: Can be used as your user color during the night time*.

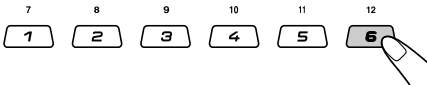
* Depends on the “Dimmer” setting. (See page 50.)

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (See pages 46 and 47.)

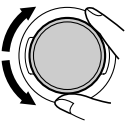


The next-step-operation buttons start flashing.

2 Press number button 6 to select “COLOR”—Color category of the PSM settings.



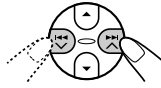
3 Select “User” as a color.



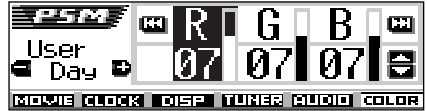
The user color will be applied to the currently selected source (the one shown on the upper portion of the display. In this example “All SRC”).

To select which source to apply your user color to, select the target source first by pressing ▲ (up) or ▼ (down), before selecting “User” in this step.

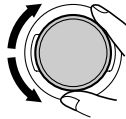
4 Select the user color adjustment screen.



One of the user color adjustment screens appears. “User Day” or “User Night” is shown on the left side of the display.

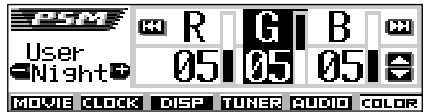


5 Select “Day” or “Night” which you want to make an adjustment for.



6 Adjust the selected user color.

1) Press ►►| ▲ or ◀◀| ▼ to select one of three primary colors—“R” (red), “G” (green), and “B” (blue).



2) Press ▲ (up) or ▼ (down) to adjust the selected primary color.

You can adjust within the range of 00 to 11.

3) Repeat steps 1) and 2) to adjust the other primary colors.

7 Repeat steps 5 and 6 to adjust the other user colors—“Day” or “Night.”

8 Finish the setting.





Assigning names to the sources

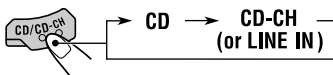
You can assign names to CDs (both in this unit and in the CD changer) and the external component (LINE IN).

After assigning a name, it will appear on the display when you select the source.

Sources	Maximum number of characters
CDs/CD-CH*	Up to 32 characters (up to 40 discs)
External component (LINE IN)	Up to 8 characters

* You cannot assign a name to a CD Text or an MP3/WMA disc.

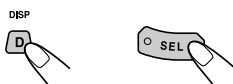
1 Select a source you want to assign a name to.



When you select a source, the power automatically comes on.

2 While pressing D DISP, press and hold SEL (select) for more than 2 seconds.

The next-step-operation buttons start flashing.

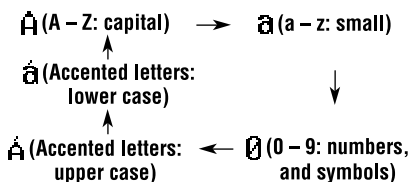


Ex.: When you select CD as the source

3 Select the character set you want while the first character position is flashing.



Each time you press the button, the character set changes as follows:

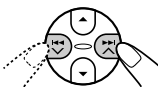


4 Select a character.



• About the available characters, see page 73.

5 Move the cursor to the next (or previous) character position.



6 Repeat steps 3 to 5 until you finish entering the name.

7 Finish the procedure while the last selected character is flashing.



To erase the entered characters

To erase all the characters at a time, press and hold D DISP for more than 1 second as described in the procedure above.

Notes:

- When you try to assign a name to the 41st disc, "Name Full" appears and you cannot enter the text entry mode. In this case, delete unwanted names before assignment.
- When the CD changer is connected, you can assign names to CDs in the CD changer. These names can also be shown on the display if you insert the CDs in this unit.



Changing the control panel angle

You can change the angle of the control panel to four positions.

1 Press and hold (angle) until the angle adjustment screen appears.



Time countdown indicator



There is a time limit in doing the following procedure. While time countdown indicator appears, do the following procedure.

2 Press (angle) repeatedly to adjust the angle to the position you want.

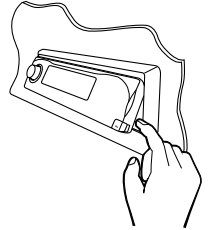


Notes:

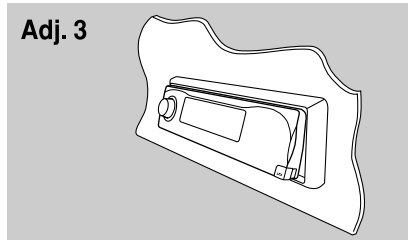
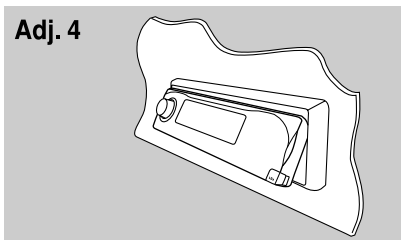
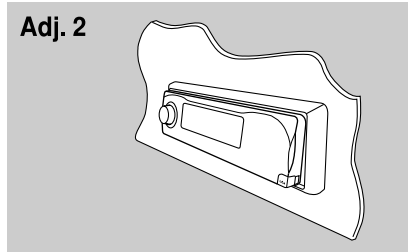
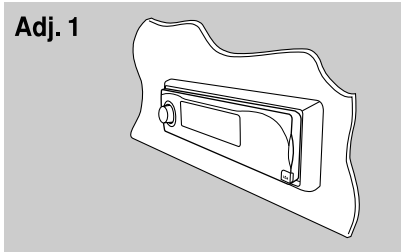
- If you turn the power off, the control panel automatically returns to the closed position. Next time you turn on the power, the control panel moves to its previous position.
- Do not press (angle) while downloading an animation or a picture; otherwise downloading will fail.
- When the unit reads a disc information, you cannot change the control panel angle.

CAUTION:

NEVER insert your finger in between the control panel and the unit, as it may get caught or hurt.



The control panel angles changes as follows:





Detaching the control panel

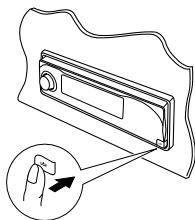
You can detach the control panel when leaving the car.

When detaching or attaching the control panel, be careful not to damage the connectors on the back of the control panel and on the panel holder.

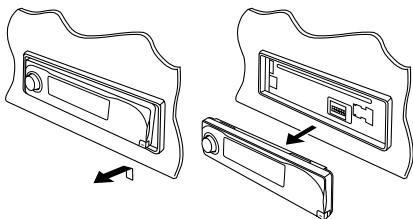
Detaching the control panel

Before detaching the control panel, be sure to turn off the power.

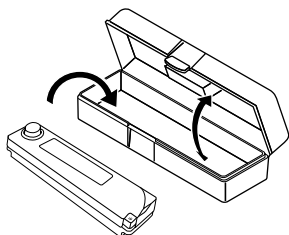
- 1 Unlock the control panel.



- 2 Lift and pull the control panel out of the unit.

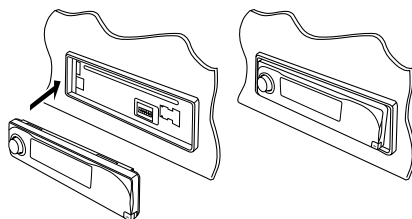


- 3 Put the detached control panel into the provided case.

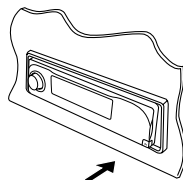


Attaching the control panel

- 1 Insert the left side of the control panel into the groove on the panel holder.



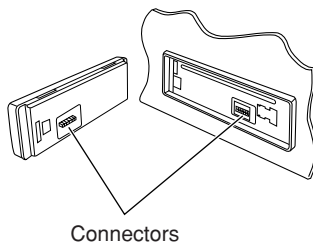
- 2 Press the right side of the control panel to fix it to the panel holder.



Note on cleaning the connectors:

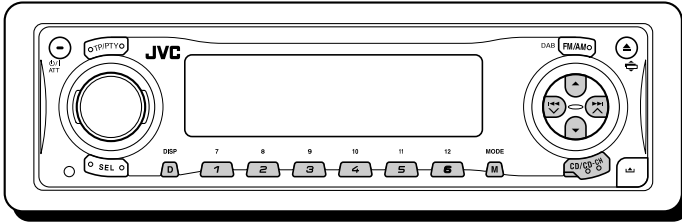
If you frequently detach the control panel, the connectors will deteriorate.

To minimize this possibility, periodically wipe the connectors with a cotton swab or cloth moistened with alcohol, being careful not to damage the connectors.





CD CHANGER OPERATIONS



We recommend that you use the JVC MP3-compatible CD changer with your unit.

By using this CD changer, you can play back your original CD-Rs (Recordable) and CD-RWs (Rewritable) recorded either in audio CD format or in MP3 format.

- You can also connect other CH-X series CD changers (except CH-X99 and CH-X100). However, they are not compatible with MP3 discs, so you cannot play back MP3 discs.
- You cannot use the KD-MK series CD changers with this unit.

Before operating your CD changer:

- Refer also to the Instructions supplied with your CD changer.
- If no discs are in the magazine of the CD changer or the discs are inserted upside down, "No Disc" will flash on the display. If this happens, remove the magazine and set the discs correctly.
- If no magazine is loaded in the CD changer, "No Magazine" flashes on the display. If this happens, insert the magazine in the CD changer.
- If "Reset 01" – "Reset 08" flashes on the display, something is wrong with the connection between this unit and the CD changer. If this happens, check the connection and make sure the cords are connected firmly. Then, press the reset button of the CD changer.

Note:

You cannot control and play any WMA disc on the CD changer.

Playing discs

Select the CD changer (CD-CH).



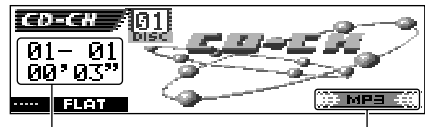
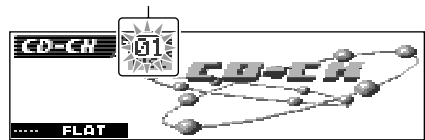
Each time you press the button, the source changes as described on page 7.

When you select a source, the power automatically comes on.

• When the current disc is an MP3 disc:

Playback starts from the first folder of the current disc once file check is completed.

Selected disc number



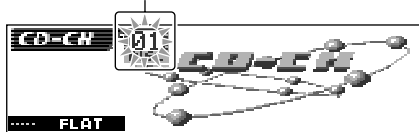
Current folder/track and
elapsed playing time

MP3 indicator

When the current disc is a CD:

Playback starts from the first track of the current disc.

Selected disc number



Current track and elapsed playing time

Notes:

- When you press CD/CD-CH, the power automatically comes on. You do not have to press **⏻/ATT** to turn on the power.
- If you change the source, CD changer play also stops. Next time you select "CD-CH" as the source, disc play starts from where playback has been stopped previously.

To change the display pattern

By pressing D DISP, you can change the information shown on the display.

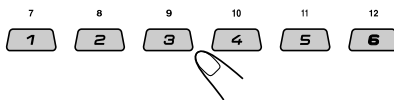


Each time you press the button, the display patterns change.

- For details, see page 31.

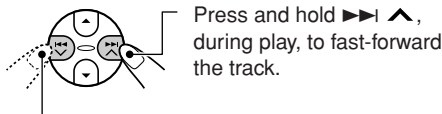
To go to a particular disc directly

Press the number button corresponding to the disc number to start its playback (while the CD changer is playing).



- To select a disc number from 01 – 06: Press 1 (7) – 6 (12) briefly.
- To select a disc number from 07 – 12: Press and hold 1 (7) – 6 (12) for more than one second.

To fast-forward or reverse the track



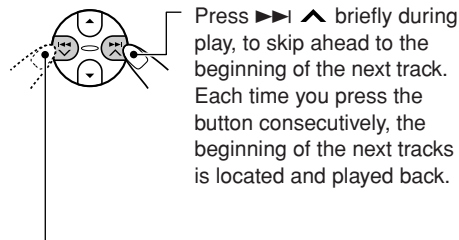
Press and hold **▶▶** **▲**, during play, to fast-forward the track.

Press and hold **◀◀** **▼**, during play, to reverse the track.

Note:

During this operation on an MP3 disc, you can only hear intermittent sounds. (The elapsed playing time also changes intermittently on the display.)

To go to the next or previous tracks



Press **▶▶** **▲** briefly during play, to skip ahead to the beginning of the next track. Each time you press the button consecutively, the beginning of the next tracks is located and played back.

Press **◀◀** **▼** briefly during play, to skip back to the beginning of the current track.

Each time you press the button consecutively, the beginning of the previous tracks is located and played back.

This operation is only possible when using JVC MP3-compatible CD changer (CH-X1500).

To go to a track quickly

1 Press M MODE while playing a disc.



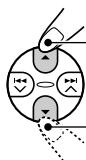
"Mode" appears on the display. The next-step-operation buttons start flashing.



See page 38 for this function.

Ex.: When the current disc is an MP3 disc

2 Press ▲ (up) or ▼ (down) while "Mode" is still on the display.



To skip 10 tracks* forwards to the last track

To skip 10 tracks* backwards to the first track

* First time you press ▲ (up) or ▼ (down) button, the track skips to the nearest higher or lower track with a track number of multiple ten (ex. 10th, 20th, 30th).

Then each time you press the button, you can skip 10 tracks (see "How to go to the desired track quickly" on the right column).

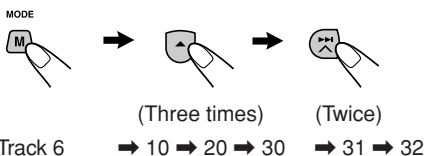
- After the last track, the first track will be selected, and vice versa.

Note:

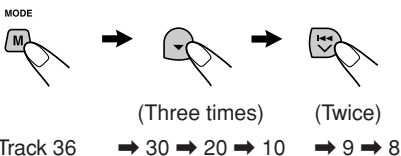
If the current playing disc is an MP3 disc, tracks are skipped within the same folder.

How to go to the desired track quickly

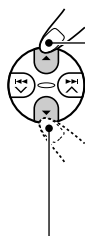
• Ex. 1: To select track number 32 while playing track number 6



• Ex. 2: To select track number 8 while playing track number 36



To skip to the next or previous folder (only for MP3 discs)



Press ▲ (up) while playing an MP3 disc, to go to the next folder. Each time you press the button consecutively, the next folder is located, and the first track in the folder starts playback.

Press ▼ (down) while playing an MP3 disc, to go to the previous folder.

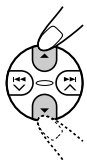
Each time you press the button consecutively, the previous folder is located, and the first track in the folder starts playback.

Selecting a disc/folder/track using the name lists

If you forget what discs are loaded in the CD changer, you can show the disc name list and select a disc in the list shown on the display.

- The display can show only six names at a time.

- 1 While playing a disc, press and hold ▲ (up) or ▼ (down) until a disc name list appears on the display.



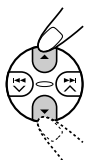
Selected disc number

Note:

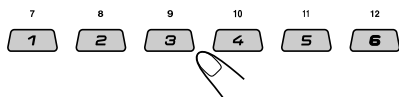
If a disc has a disc title (CD Text) or an assigned disc name, it will be shown on the display.

However, if the disc has not been played before, its disc number will appear.

- 2 Press ▲ (up) or ▼ (down) to show the other disc name list, if necessary.

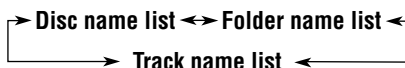


- 3 Select the number (1 – 6) for the disc you want to play.



While playing an MP3 disc, you can also show the folder name list(s) and track name list(s) on the display, then select a folder or track.

- 1 While playing an MP3 disc, press and hold ▲ (up) or ▼ (down) until a disc name list appears on the display.
- 2 Press ►► ▲ or ◀◀ ▼ to show a folder name list of the current disc or track name list of the current folder.
Each time you press the button, the lists on the display change as follows:

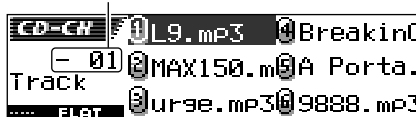


Current folder number



Ex.: When folder name list is selected

Current track number



Ex.: When track name list is selected

Note:

The display can show only six items at a time. You can show the other names on the next lists by pressing ▲ (up) or ▼ (down).

- 3 Press the number button for the disc, folder, or track you want to play.

Selecting the playback modes

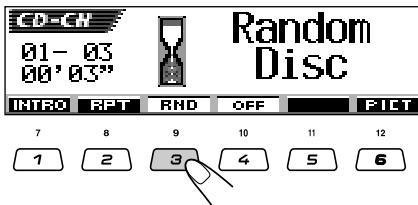
To play back tracks at random (Random Play)

1 Press M MODE during play.



“Mode” appears on the display. The next-step-operation buttons start flashing.

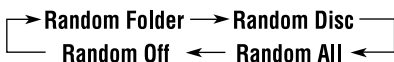
2 Press number button 3 repeatedly while “Mode” is still on the display.



Ex.: When you select “Random Disc” while playing an MP3 disc



Each time you press the button, random play mode changes as follows:

For MP3 discs:



For CDs:



Mode	Active indicator	Plays at random
Random Folder*	 RND (folder random) indicator lights up.	All tracks of the current folder, then tracks of the next folder and so on.
Random Disc	 RND (disc random) indicator lights up.	All tracks of the current (or specified) disc.
Random All	ALL RND (all random) indicator lights up.	All tracks of all discs inserted in the magazine.

* “Random Folder” is only applicable for MP3 disc.

Note:

MP3 indicator also lights up if the current playing disc is an MP3 disc.

To cancel random play, select “Random Off” by pressing number button 3 repeatedly or press number button 4 in step 2.

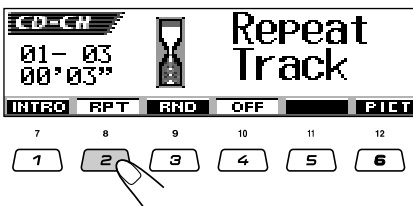
To play back tracks repeatedly (Repeat Play)

1 Press M MODE during play.



“Mode” appears on the display. The next-step-operation buttons start flashing.

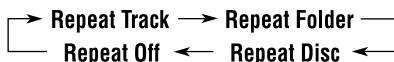
2 Press number button 2 repeatedly while “Mode” is still on the display.



Ex.: When you select “Repeat Track” while playing an MP3 disc

Each time you press the button, repeat play mode changes as follows:

For MP3 discs:



For CDs:



Mode	Active indicator	Plays repeatedly
Repeat Track	RPT (track repeat) indicator lights up.	The current (or specified) track.
Repeat Folder*	RPT (folder repeat) indicator lights up.	All tracks of the current (or specified) folder of the current disc.
Repeat Disc	RPT (disc repeat) indicator lights up.	All tracks of the current (or specified) disc.

* "Repeat Folder" is only applicable for MP3 disc.

Note:

MP3 indicator also lights up if the current playing disc is an MP3 disc.

To cancel repeat play, select "Repeat Off" by pressing number button 2 repeatedly or press number button 4 in step 2.

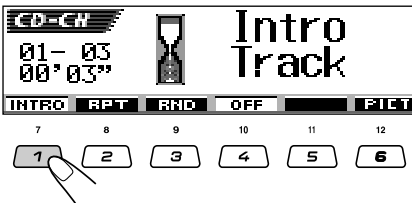
To play back only intros (Intro Scan)

1 Press M MODE during play.



"Mode" appears on the display. The next-step-operation buttons start flashing.

2 Press number button 1 repeatedly while "Mode" is still on the display.



Ex.: When you select "Intro Track" while playing an MP3 disc

Each time you press the button, intro scan mode changes as follows:

For MP3 discs:



For CDs:



Mode	Active indicator	Plays the beginnings (15 seconds) of
Intro Track	INT (track intro) indicator lights up.	All tracks of the current disc.
Intro Folder*	INT (folder intro) indicator lights up.	The first track of every folder of the current disc.
Intro Disc	INT (disc intro) indicator lights up.	The first tracks of the inserted discs.

* "Intro Folder" is only applicable for MP3 disc.

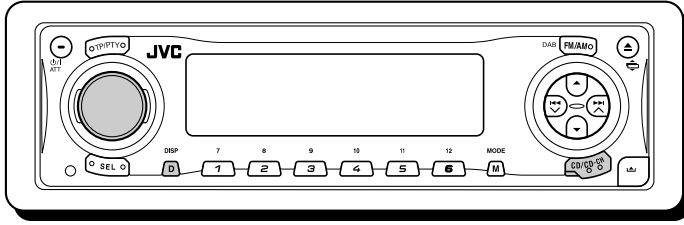
Note:

MP3 indicator also lights up if the current playing disc is an MP3 disc.

To cancel intro scan, select "Intro Off" by pressing number button 1 repeatedly or press number button 4 in step 2.



EXTERNAL COMPONENT OPERATIONS



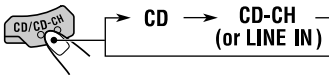
Playing an external component

You can connect the external component to the CD changer jack on the rear using the Line Input Adapter KS-U57 (not supplied).

Preparations:

- For connecting the Line Input Adapter KS-U57 and the external component, refer to the Installation/Connection Manual (separate volume).
- Before operating the external component using the following procedure, select the external input correctly. See “To select the external component to use—Ext Input” on page 49.

1 Select the external component (LINE IN).



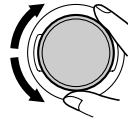
- If “LINE IN” does not appear on the display, see page 49 and select the external input (“LINE IN”).

Note on One-Touch Operation:

When you press CD/CD-CH, the power automatically comes on. You do not have to press I ATT to turn on the power.

2 Turn on the connected component and start playing the source.

3 Adjust the volume.



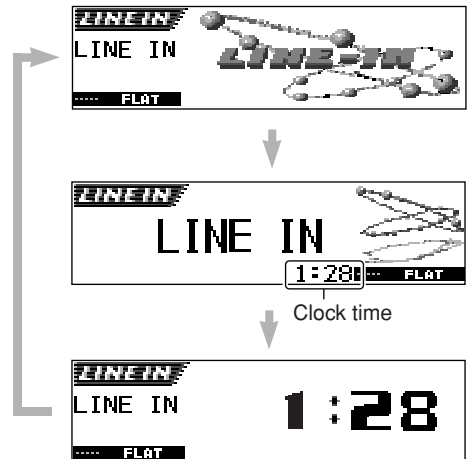
4 Adjust the sound as you want. (See pages 32 – 35.)

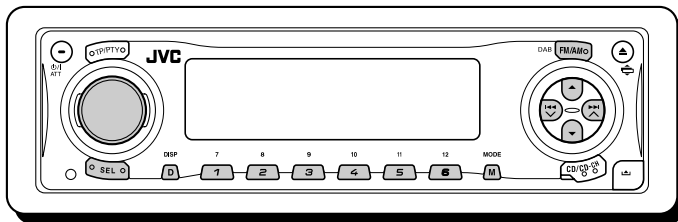
Changing the display pattern

By pressing D DISP, you can change the information shown on the display.



Each time you press the button, the display patterns change as follows:





We recommend that you use DAB (Digital Audio Broadcasting) tuner KT-DB1500 or KT-DB1000 with your unit.

If you have another DAB tuner, consult your JVC IN-CAR ENTERTAINMENT dealer.

- Refer also to the Instructions supplied for your DAB tuner.

What is DAB system?

DAB is one of the digital radio broadcasting systems available today. It can deliver CD quality sound without any annoying interference and signal distortion.

Furthermore, it can carry text, pictures, and data.

In contrast to FM broadcast, where each programme is transmitted on its own frequency, DAB combines several programmes (called “services”) to form one “ensemble.”

In addition, each “service”—called “primary service”—can also be divided into its components (called “secondary service”).

With the DAB tuner connected with this unit, you can enjoy these DAB services.

Tuning in to an ensemble and one of the services

A typical ensemble has 6 or more programmes (services) broadcast at the same time. After tuning in to an ensemble, you can select a service you want to listen to.

Before you start...

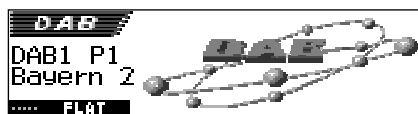
Press FM/AM DAB briefly if CD, CD changer, or external component is the current source.

1 Select the DAB tuner.



Each time you press and hold the button, the DAB tuner and the FM/AM tuner are alternately selected.

FM/AM ↔ DAB



2 Select the DAB band (DAB1, DAB2, or DAB3).



Each time you press the button, the DAB band changes as follows:

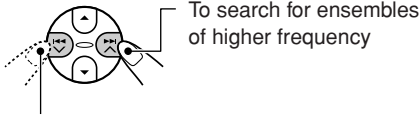


Note:

This receiver has three DAB bands (DAB1, DAB2, DAB3). You can use any of them to tune in to an ensemble.

CONTINUED ON THE NEXT PAGE

3 Start searching for an ensemble.

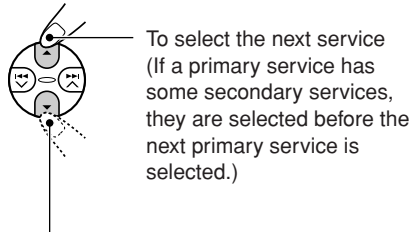


To search for ensembles of lower frequency

When an ensemble is received, searching stops.

To stop searching before an ensemble is received, press the same button you have pressed for searching.

4 Select a service (either primary or secondary) you want to listen to.



To select the previous service (either primary or secondary)

To tune in to a particular ensemble without searching

Before you start....

Press FM/AM DAB briefly if CD, CD changer, or external component is the current source.

- 1 Press and hold FM/AM DAB to select the DAB tuner as the source.
- 2 Press FM/AM DAB repeatedly to select the DAB band (DAB1, DAB2, or DAB3).
- 3 Press and hold ►► or ◀◀ for more than one second.
- 4 Press ►► or ◀◀ repeatedly until the ensemble you want is reached.
 - If you hold down the button, the frequency keeps changing until you release the button.
- 5 Press ▲ (up) or ▼ (down) to select a service (either primary or secondary) you want to listen to.

When surrounding noises interfere your listening while driving

If this happens, especially when you are listening at a low volume level, you can reinforce the sounds to improve for your listening.

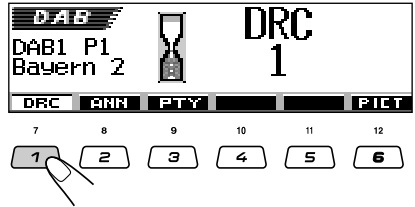
For this purpose, some service provides Dynamic Range Control signals together with their regular program signals.

- 1 Press M MODE while listening to a DAB service.



"Mode" appears on the display. The next-step-operation buttons start flashing.

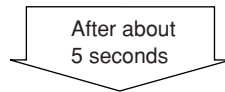
- 2 Press number button 1 repeatedly to activate the DRC function while "Mode" is still on the display.



Each time you press the button, the DRC function will be set as follows:



As the number increases, the DRC effect level also increases.



DRC indicator appears.

- The DRC indicator will be highlighted (**DRC**) only when the unit received DRC signals from the tuned service.

To cancel the DRC effect, select "DRC Off."

To restore the FM/AM tuner

Press and hold FM/AM DAB again.

Storing DAB services in memory

You can preset up to 6 DAB services in each DAB band (DAB1, DAB2, and DAB3) manually.

Before you start....

Press FM/AM DAB briefly if CD, CD changer, or external component is the current source.

1 Select the DAB tuner.



Each time you press and hold the button, the DAB tuner and the FM/AM tuner are alternately selected.

FM/AM ↔ DAB

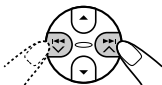
2 Select the DAB band (DAB1, DAB2, or DAB3).



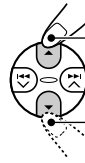
Each time you press the button, the DAB band changes as follows:

DAB1 → DAB2 → DAB3

3 Tune in to an ensemble you want.



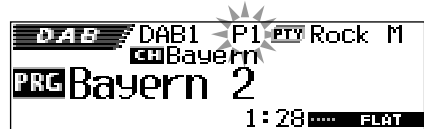
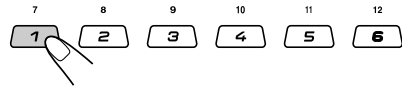
4 Select a service of the ensemble you want to listen to.



To select the next service

To select the previous service

5 Press and hold the number button (in this example, 1) you want to store the selected service into for more than 2 seconds.



The display pattern automatically changes to the non-animation display and the preset number flashes (then the previous display pattern resumes).

6 Repeat the above procedure to store other DAB services into other preset numbers.

Notes:

- You can only preset primary DAB services. If you store a secondary service, its primary service will be stored instead.
- A previously preset DAB service is erased when a new DAB service is stored in the same preset number.
- Preset DAB services are erased when the power supply to the memory circuit is interrupted (for example, during battery replacement). If this occurs, preset the DAB services again.

Tuning in to a preset DAB service

You can easily tune in to a preset DAB service. Remember that you must store services first. If you have not stored them yet, see "Storing DAB services in memory" on page 65.

Before you start....

Press FM/AM DAB briefly if CD, CD changer, or external component is the current source.

1 Select the DAB tuner.



Each time you press and hold the button, the DAB tuner and the FM/AM tuner are alternately selected.

FM/AM ↔ DAB

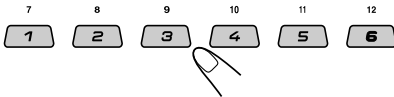
2 Select the DAB band (DAB1, DAB2, or DAB3).



Each time you press the button, the DAB band changes as follows:



3 Select the number (1 – 6) for the preset DAB service (primary) you want.



Note:

If the selected primary service has some secondary services, pressing the same number repeatedly will tune in to the secondary services.

Selecting a preset service using the preset service list

If you forget what services are stored in what preset number, you can check the preset service list, then select your desired service on the list.

1 Select the DAB tuner.



Each time you press and hold the button, the DAB tuner and the FM/AM tuner are alternately selected.

FM/AM ↔ DAB

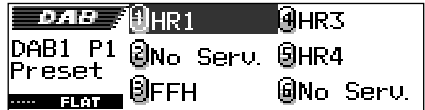
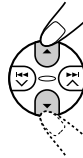
2 Select the DAB band (DAB1, DAB2 or DAB3).



Each time you press the button, the DAB band changes as follows:



3 Press and hold ▲ (up) or ▼ (down) until the preset service (primary service) list for the current band (DAB1, DAB2, or DAB3) appears on the display.

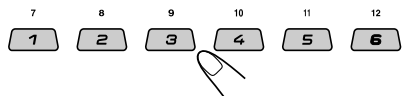


Ex.: When you select the preset service (primary service) number 1 of the DAB1 band

Note:

You can show the other DAB band preset service (primary service) lists (DAB1, DAB2, or DAB3) by pressing ▲ (up) or ▼ (down).

4 Select the number (1 – 6) for a service you want.



What you can do more with DAB

With the DAB tuner connected, you can use the following convenient functions.

- Road Traffic News Standby Reception (TA Standby Reception)
- Standby Reception of 9 types of Announcement signals
- PTY Standby Reception
- PTY search
- Tracing the same program (service) automatically while driving where the same DAB ensemble is not received

Road Traffic News Standby Reception (TA Standby Reception)

Road Traffic News Standby Reception (TA Standby Reception) allows the unit to switch temporarily to the traffic announcement from the current source (another service, FM, CD, or other connected components).

- Operations are exactly the same as explained on pages 17 and 18 for FM RDS stations. You cannot use Road Traffic News Standby Reception (TA Standby Reception) separately for the DAB tuner and for the FM tuner.

To use TA Standby Reception, see page 17.

To set the TA volume level, see page 21.

Using Announcement Standby Reception

Announcement Standby Reception allows the unit to switch temporarily to your favorite service (Announcement type).

To select your favorite announcement type for Announcement Standby Reception

When shipped from factory, Announcement Standby Reception has been set to search for “Travel” services.

You can select your favorite announcement type for Announcement Standby Reception.

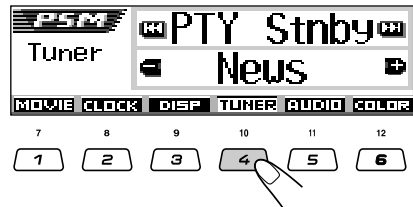
- If you do not want to change the announcement type (from “Travel” to another one), go to page 68.

- 1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (PSM: see pages 46 and 47.)

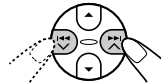


- 2 Press number button 4 to select “TUNER”—Tuner category of the PSM settings.

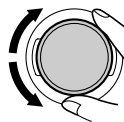
The “PTY Stnby” (standby) setting screen appears on the display.



- 3 Select “Announce” (announcement).



- 4 Select one of the 9 announcement types. (See page 68.)



Selected announcement type appears on the display and is stored into memory.

- 5 Finish the setting.



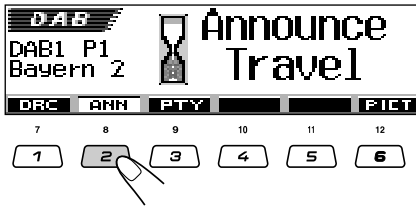
To activate Announcement Standby Reception

- 1 Press M MODE while listening to a DAB service.

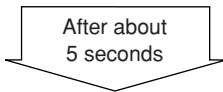


“Mode” appears on the display.
The next-step-operation buttons start flashing.

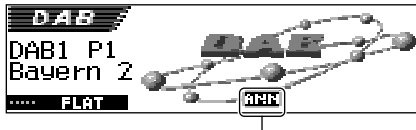
- 2 Press number button 2 repeatedly to activate Announcement Standby Reception while “Mode” is still on the display.
Each time you press the button, Announcement Standby Reception turns on and off alternately.



Ex.: When the currently selected announcement type for Announcement Standby Reception is “Travel”



The display returns to the source indication screen.



ANN indicator appears.
(either lights up or flashes)

The ANN (announcement) indicator either lights up or flashes.

- If the ANN indicator lights up, Announcement Standby Reception is activated.
If a service starts broadcasting a programme of the selected announcement type, this unit automatically tunes in to the service.

- If the ANN indicator flashes, Announcement Standby Reception is not yet activated since the service being received does not provide the signals used for Announcement Standby Reception.
To activate Announcement Standby Reception, you need to tune in to another service providing these signals. Press ►►► ▲ or ◀◀◀ ▼ to search for such a service (ensemble).
When a service providing these signals is tuned in, the ANN indicator stops flashing and remains lit. Now Announcement Standby Reception is activated.

How Announcement Standby Reception works:

If a service of the selected Announcement type starts broadcasting while the Announcement Standby Reception is activated, selected announcement type appears and the unit tunes in to the service.

Note:

After turning on Announcement Standby Reception, you can change the source without canceling Announcement Standby Reception. If a service starts broadcasting the selected announcement type, this unit automatically changes the source and tunes in to the service.

Announcement type

Travel:	Programmes about travel destinations, package tours, and travel ideas and opportunities
Warning:	Warnings about earthquakes, tsunami, etc.
News:	News
Weather:	Weather information
Event:	Information about events, concerts, etc.
Special:	Special programmes expanding on current news or affairs
Rad Inf:	Radio information
Sports:	Sport events
Finance:	Reports on commerce, trading, the Stock Market, etc.

Using PTY Standby Reception

PTY Standby Reception allows the unit to switch temporarily to your favorite programme (PTY: Programme Type) from any source except AM stations.

- Operations are exactly the same as explained on pages 18 and 19 for FM RDS stations. You cannot use PTY Standby Reception separately for the DAB tuner and for the FM tuner.
- PTY Standby Reception works for the DAB tuner only using a Dynamic PTY, but not a Static PTY.

To select your favorite PTY code for PTY Standby Reception, see page 18.

To set PTY Standby Reception, see pages 18 and 19.

- You can set PTY Standby Reception when the source is either "FM" or "DAB."

Searching for your favorite service

You can search for any one of the PTY codes (either Dynamic or Static PTY).

In addition, you can store your 6 favorite programme types in the number buttons (see pages 19 and 20).

- Operations are exactly the same as explained on pages 19 and 20 for FM RDS stations. However, you cannot store PTY codes in the number buttons separately for the DAB tuner and for the FM tuner.

To store your favorite programme (service) types, see pages 19 and 20.

To search for your favorite programme (service) type, see page 20.

- Search will be performed on the DAB tuner only.

Tracing the same programme automatically (Alternative Reception)

You can keep listening to the same programme.

- **While receiving a DAB service:**
When driving in an area where a service cannot be received, this unit automatically tunes in to another ensemble or FM RDS station, broadcasting the same programme.
- **While receiving an FM RDS station:**
When driving in an area where a DAB service is broadcasting the same programme as the FM RDS station is broadcasting, this unit automatically tunes in to the DAB service.

To use Alternative Reception

When shipped from the factory, Alternative Reception is activated.

- See also "Changing the general settings (PSM)" on page 45.
- 1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.
 - 2 Press number button 4 to select "TUNER"—Tuner category of the PSM settings.
 - 3 Press ►►| ▲ or |◄◄ ▼ to select "DAB AF" (alternative frequency).
 - 4 Turn the control dial to select the desired mode.
 - On: Traces the programme among DAB services and FM RDS stations—Alternative Reception. The AF indicator lights up on the display (see page 16).
 - Off: Alternative Reception is deactivated.
 - 5 Press SEL (select) to finish the setting.

Note:

When Alternative Reception (for DAB services) is activated, Network-Tracking Reception (for RDS stations: see page 16) is also activated automatically. On the other hand, Network-Tracking Reception cannot be deactivated without deactivating Alternative Reception.

Changing the display pattern

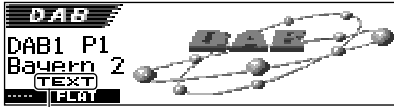
By pressing D DISP, you can change the information shown on the display.

Each time you press the button, the display patterns change as follows:

DISP



Large animation display



Text indicator*1

Ensemble label (name) display



Ensemble label
and Frequency

Clock time

Channel
number

Service label (name) display



Service label

PTY code*2

Clock time display



Dynamic Label Segment (DLS) display*4



*1 TEXT indicator: implies the current service received is providing DLS (Dynamic Label Segment—DAB radio text information).

*2 Each service can have several PTY codes. If a service have several PTY codes, they will be shown in turn.

*3 Ensemble label (primary service) indicator: The different indicator (**2nd**) will be displayed when the secondary service is selected.

*4 Dynamic Label Segment (DLS) will be displayed. See “To select the scroll mode for disc information and the DAB text—Scroll” on page 48.

TROUBLESHOOTING



What appears to be trouble is not always serious. Check the following points before calling a service center.

	Symptoms	Causes	Remedies
General	<ul style="list-style-type: none"> • Sound cannot be heard from the speakers. 	The volume level is set to the minimum level.	Adjust it to the optimum level.
		Connections are incorrect.	Check the cords and connections.
	<ul style="list-style-type: none"> • This unit does not work at all. 	The built-in microcomputer functions incorrectly due to noise, etc.	Press the reset button on the control panel. (Your preset adjustments will also be erased.) (See page 2.)
	<ul style="list-style-type: none"> • “Panel Connect Error” appears on the display. 	The control panel is not attach correctly and firmly.	Remove the control panel, wipe the connectors, then attach it again. (See page 55.)
	<ul style="list-style-type: none"> • When “Reset P00” to “Reset P44” appears on the display. 	There is something blocking the control panel movement.	Press the reset button on the control panel. (See page 2.) If the reset button does not work, check the installation. (Ex. you have used a screw which is longer than specified.)
Tuner	<ul style="list-style-type: none"> • SSM (Strong-station Sequential Memory) automatic preset does not work. 	Signals are too weak.	Store stations manually.
	<ul style="list-style-type: none"> • Static noise while listening to the radio. 	The aerial is not connected firmly.	Connect the aerial firmly.
Disc Playback	<ul style="list-style-type: none"> • Disc cannot be played back. • CD-R/CD-RW cannot be played back. • Tracks on the CD-R/CD-RW cannot be skipped. 	Disc is inserted upside down.	Insert the disc correctly.
		CD-R/CD-RW is not finalized.	<ul style="list-style-type: none"> • Insert a finalized CD-R/CD-RW. • Finalize the CD-R/CD-RW with the component which you used for recording.
	<ul style="list-style-type: none"> • Disc cannot be ejected. 	Disc is locked.	Unlock the disc. (See page 30.)
	<ul style="list-style-type: none"> • Disc cannot be recognized (“No Disc,” “Loading Error,” or “Eject Error” flashes on the display.) 	The CD player may function incorrectly.	While pressing ⏻ / ATT (standby/on attenuator), press and hold ⏏ (eject) for more than 2 seconds to eject the disc. Before re-inserting a disc, wait for several seconds.
	<ul style="list-style-type: none"> • Disc sound is sometimes interrupted. 	You are driving on rough roads.	Stop playback while driving on rough roads.
		Disc is scratched.	Change the disc.
		Connections are incorrect.	Check the cords and connections.
<ul style="list-style-type: none"> • “No Disc” flashes on the display. 	No disc in the loading slot.	Insert a disc into the loading slot.	
	Disc is inserted incorrectly.	Insert the disc correctly.	



	Symptoms	Causes	Remedies
MP3/WMA Playback	<ul style="list-style-type: none"> Disc cannot be played back. 	No MP3/WMA tracks are recorded on the disc.	Change the disc.
		MP3/WMA tracks do not have the extension code <.mp3> or <.wma> in their file names.	Add the extension code <.mp3> or <.wma> to their file names.
		MP3/WMA tracks are not recorded in the format compliant with ISO 9660 Level 1, Level 2, Romeo, or Joliet.	Change the disc. (Record MP3/WMA tracks using a compliant application.)
	<ul style="list-style-type: none"> “Not Support” appears and tracks skip. 	Tracks are not encoded in an appropriate format.	Insert a disc that contains tracks encoded in an appropriate format.
		WMA tracks are copy-protected.	This is normal. Copy-protected tracks cannot be played back.
	<ul style="list-style-type: none"> Noise is generated. 	The track played back is not an MP3/WMA track (although it has the extension code <.mp3> or <.wma>).	Skip to another track or change the disc. (Do not add the extension code <.mp3> or <.wma> to non-MP3 or WMA tracks.)
	<ul style="list-style-type: none"> A longer readout time is required. (“File Check” keeps flashing on the display). 	Readout time varies due to the complexity of the folder/track configuration.	Do not use too many hierarchies and folders.
	<ul style="list-style-type: none"> Tracks cannot be played back as you have intended them to play. 	Playback order is determined when the tracks are recorded.	Insert a disc that contains tracks encoded in an appropriate format.
	<ul style="list-style-type: none"> Elapsed playing time is not correct. 	This sometimes occurs during play. This is caused by how the tracks are recorded on the disc.	_____
	<ul style="list-style-type: none"> “No Files” flashes on the display. 	The current disc does not contain any MP3/WMA track.	Insert a disc that contains MP3/WMA tracks.
<ul style="list-style-type: none"> “No Music” appears on the display. 	The current folder does not contain any MP3/WMA tracks.	Select another folder that contains MP3/WMA tracks.	
	Only <jm1> and/or <jma> files are recorded on the disc.	Insert a disc that contains MP3 or WMA tracks.	
<ul style="list-style-type: none"> Correct characters are not displayed. (e.g. album name) 	This unit can only display alphabets (capital: A–Z, small: a–z), numbers, and a limited number of symbols, and some accented letters (see page 73).	_____	



Symptoms	Causes	Remedies	
• Download does not seem to finish.	You are trying to download an animation of many frames.	This is normal (see page 38).	Graphics
• Animation does not move.	Temperature in the car compartment is very low— (LOW TEMP.) indicator appears.	Wait until the operating temperature resumes—until (LOW TEMP.) indicator goes off.	
• “Movie” category settings in the PSM do not take effect.			
• No indication appears on the display at all.	The built-in microcomputer may function incorrectly due to noise, etc.	Press the reset button on the control panel. (Your preset adjustments will also be erased.) (See page 2.)	CD Changer
• “No Disc” flashes on the display.	No disc is in the magazine.	Insert discs into the magazine.	
	Discs are inserted upside down.	Insert discs correctly.	
• “No Magazine” flashes on the display.	No magazine is loaded in the CD changer.	Insert the magazine.	
• “Reset 08” flashes on the display.	This unit is not connected to the CD changer correctly.	Connect this unit and the CD changer correctly and press the reset button of the CD changer.	
• “Reset 01” – “Reset 07” flashes on the display.	_____	Press the reset button of the CD changer.	
• The CD changer does not work at all.	The built-in microcomputer may function incorrectly due to noise, etc.	Press the reset button on the control panel. (Your preset adjustments will also be erased.) (See page 2.)	

Available characters

In addition to the alphabets (A – Z, a – z), you can use the following characters to assign names to CDs (both in this unit and in the CD changer) and external component (LINE IN). (See page 53.)

- These characters can be also used to show other information such as disc title/performer, RDS, and DAB on the display.

Accented letters

Upper case

Á	À	Â	Ä	Å
Ā	Æ	Œ	Č	Ć
Ç	É	È	Ê	Ë
Ĝ	Í	Ì	Î	Ī
Ñ	Ó	Ô	Õ	Ö
Ō	Ø	Ř	Ŕ	Š
Ś	Ş	Ú	Û	Ū
Ü	Ý	Ž	Ž	ß
Ɔ	Ɔ	Ɔ	Ɔ	Ɔ
İ	ı	đ	space	

Lower case

á	à	â	ä	å
ā	æ	œ	č	ć
ç	é	è	ê	ë
ĝ	í	ì	î	ĭ
ñ	ó	ô	õ	ö
ō	ø	ř	ŕ	š
ś	ş	ú	û	ū
ü	ý	ž	ž	ß
Ɔ	Ɔ	Ɔ	Ɔ	Ɔ
ı	ı	đ	space	

Numbers and symbols

0	1	2	3	4
5	6	7	8	9
!	”	#	\$	%
&	'	()	*
+	,	-	.	/
:	;	<	=	>
?	@	_	`	i
¿	£	€	α	space



Handling discs

This unit has been designed to reproduce CDs, CD-Rs (Recordable), CD-RWs (Rewritable), and CD Texts.

- This unit is also compatible with MP3 and WMA discs.

How to handle discs

When removing a disc from its case, press down the center holder of the case and lift the disc out, holding it by the edges.

Center holder



- Always hold the disc by the edges. Do not touch its recording surface.

When storing a disc into its case, gently insert the disc around the center holder (with the printed surface facing up).

- Make sure to store discs into the cases after use.

To keep discs clean

A dirty disc may not be played correctly. If a disc does become dirty, wipe it with a soft cloth in a straight line from center to edge.



To play new discs

New discs may have some rough spots around the inner and outer edges. If such a disc is used, this unit may reject the disc.



To remove these rough spots, rub the edges with a pencil or ball-point pen, etc.

Moisture condensation

Moisture may condense on the lens inside the CD player in the following cases:

- After starting the heater in the car.
- If it becomes very humid inside the car.

Should this occur, the CD player may malfunction. In this case, eject the disc and leave the unit turned on for a few hours until the moisture evaporates.

When playing a CD-R or CD-RW

Before playing back CD-Rs or CD-RWs, read their instructions or cautions carefully.

- Use only “finalized” CD-Rs or CD-RWs.
- Some CD-Rs or CD-RWs may not be played back on this unit because of their disc characteristics, and for the following reasons:
 - Discs are dirty or scratched.
 - Moisture condensation on the lens inside the unit.
 - The pickup lens inside the unit is dirty.
- CD-RWs may require a longer readout time since the reflectance of CD-RWs is lower than that of regular CDs.
- CD-Rs or CD-RWs are susceptible to high temperatures or high humidity, so do not leave them inside your car.
- Do not use following CD-Rs or CD-RWs:
 - Discs with stickers, labels, or protective seal stuck to the surface.
 - Discs on which labels can be directly printed by an ink jet printer.

Using these discs under high temperatures or high humidity may cause malfunctions or damage to discs. For example,

- Stickers or labels may shrink and warp a disc.
- Stickers or labels may peel off so discs cannot be ejected.
- Print on discs may get sticky.

Read instructions or cautions about labels and printable discs carefully.

CAUTIONS:

- Do not insert 8 cm discs (single CDs) into the loading slot. (Such discs cannot be ejected.)
- Do not insert any disc of unusual shape—like a heart or flower; otherwise, it will cause a malfunction.
- Do not expose discs to direct sunlight or any heat source or place them in a place subject to high temperature and humidity. Do not leave them in a car.
- Do not use any solvent (for example, conventional record cleaner, spray, thinner, benzene, etc.) to clean discs.

Warped disc



Sticker



Sticker residue

Disc



Stick-on label

AUDIO AMPLIFIER SECTION

Maximum Power Output:

Front: 50 W per channel

Rear: 50 W per channel

Continuous Power Output (RMS):

Front: 19 W per channel into 4 Ω , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.

Rear: 19 W per channel into 4 Ω , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.

Load Impedance: 4 Ω (4 Ω to 8 Ω allowance)

Equalizer Control Range:

Frequencies: 60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 12 kHz

Level: ± 10 dB

Frequency Response: 40 Hz to 20 000 Hz

Signal-to-Noise Ratio: 70 dB

Line-Out Level/Impedance:

5.0 V/20 k Ω load (full scale)

Output Impedance: 1 k Ω

Other terminals:

SUBWOOFER

Changer control

Steering wheel remote input

TUNER SECTION

Frequency Range:

FM: 87.5 MHz to 108.0 MHz

AM: (MW) 522 kHz to 1 620 kHz

(LW) 144 kHz to 279 kHz

[FM Tuner]

Usable Sensitivity: 11.3 dBf (1.0 μ V/75 Ω)

50 dB Quieting Sensitivity: 16.3 dBf (1.8 μ V/75 Ω)

Alternate Channel Selectivity (400 kHz): 65 dB

Frequency Response: 40 Hz to 15 000 Hz

Stereo Separation: 30 dB

Capture Ratio: 1.5 dB

[MW Tuner]

Sensitivity: 20 μ V

Selectivity: 35 dB

[LW Tuner]

Sensitivity: 50 μ V

CD PLAYER SECTION

Type: Compact disc player

Signal Detection System: Non-contact optical pickup (semiconductor laser)

Number of channels: 2 channels (stereo)

Frequency Response: 5 Hz to 20 000 Hz

Dynamic Range: 96 dB

Signal-to-Noise Ratio: 98 dB

Wow and Flutter: Less than measurable limit

MP3 decoding format:

MPEG1/2 Audio Layer 3

Max. Bit Rate: 320 Kbps

WMA (Windows Media[®] Audio) decoding format:

Max. Bit Rate: 192 Kbps

GENERAL

Power Requirement:

Operating Voltage:

DC 14.4 V (11 V to 16 V allowance)

Grounding System: Negative ground

Allowable Operating Temperature: 0°C to +40°C

Dimensions (W \times H \times D):

Installation Size (approx.):

182 mm \times 52 mm \times 159 mm

Panel Size (approx.):

188 mm \times 58 mm \times 12 mm

Mass (approx.):

1.6 kg (excluding accessories)

Design and specifications are subject to change without notice.

Having TROUBLE with operation?

Please reset your unit

Refer to page of How to reset your unit

Haben Sie PROBLEME mit dem Betrieb?

Bitte setzen Sie Ihr Gerät zurück

Siehe Seite Zurücksetzen des Geräts

Vous avez des PROBLÈMES de fonctionnement?

Réinitialisez votre appareil

Référez-vous à la page intitulée Comment réinitialiser votre appareil

Hebt u PROBLEMEN met de bediening?

Stel het apparaat terug

Zie de pagina met de paragraaf Het apparaat terugstellen

JVC

VICTOR COMPANY OF JAPAN, LIMITED



EN, GE, FR, NL

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0204KKSMdTJEIN

ENGLISH

This unit is designed to operate on **12 V DC, NEGATIVE ground electrical systems**. If your vehicle does not have this system, a voltage inverter is required, which can be purchased at JVC IN-CAR ENTERTAINMENT dealers.

DEUTSCH

Dieses Gerät ist für einen Betrieb in **elektrischen Anlagen mit 12 V Gleichstrom und (-) Erdung ausgelegt**. Verfügt Ihr Fahrzeug nicht über diese Anlage, ist ein Spannungsinverter erforderlich, der bei JVC Autoradiohändler erworben werden kann.

FRANÇAIS

Cet appareil est conçu pour fonctionner sur des sources de courant continu de **12 V à masse NEGATIVE**. Si votre véhicule n'offre pas ce type d'alimentation, il vous faut un convertisseur de tension, que vous pouvez acheter chez un revendeur d'autoradios JVC.

NEDERLANDS

Dit apparaat mag worden gebruikt bij elektrische systemen die werken op **12 V gelijkstroom met negatieve aarding**. Als uw auto niet is uitgerust met een dergelijk systeem, is een spanningsomzetter vereist. Dit instrument kan worden aangeschaft bij JVC car audio dealers.

Parts list for installation and connection

The following parts are provided for this unit. After checking them, please set them correctly.

Teilleiste für den Einbau und Anschluß

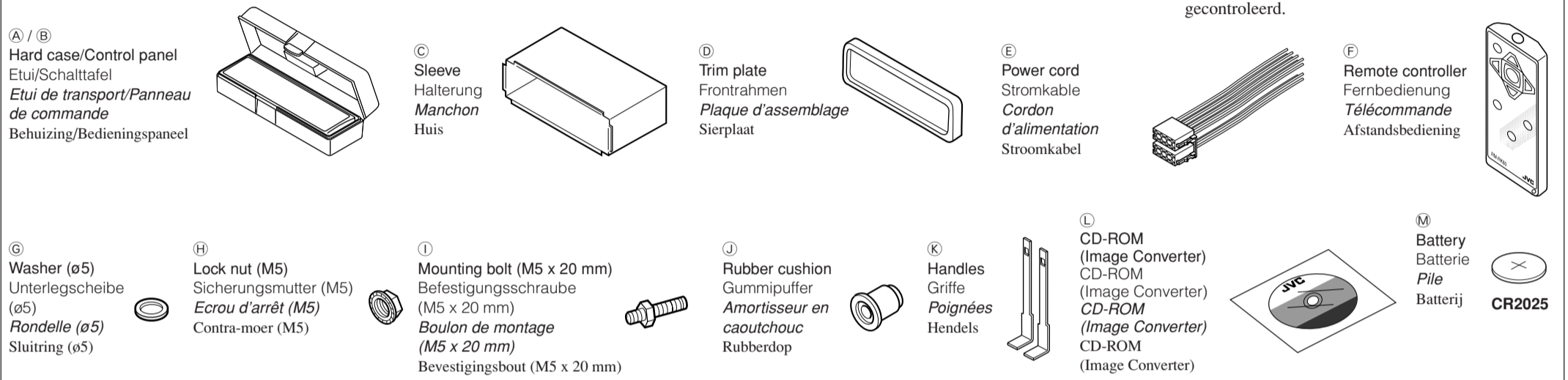
Die folgenden Teile werden zusammen mit diesem Gerät geliefert. Nach ihrer Überprüfung, die Teile richtig einsetzen.

Liste des pièces pour l'installation et raccordement

Les pièces suivantes sont fournies avec cet appareil. Après vérification, veuillez les placer correctement.

Lijst van onderdelen die u bij installatie en aansluiting nodig hebt

De volgende onderdelen worden bij het apparaat geleverd. Installeer ze op de juiste wijze, nadat u ze hebt gecontroleerd.



INSTALLATION (IN-DASH MOUNTING)

The following illustration shows a typical installation. If you have any questions or require information regarding installation kits, consult your JVC IN-CAR ENTERTAINMENT dealer or a company supplying kits.

- If you are not sure how to install this unit correctly, have it installed by a qualified technician.

EINBAU (IM ARMATURENBRETT)

Die folgende Abbildung zeigt einen typischen Einbau. Bei irgendwelchen Fragen oder wenn Sie Informationen hinsichtlich des Einbausatzes brauchen, wenden Sie sich an ihren JVC Autoradiohändler oder ein Unternehmen das diese Einbausätze vertreibt.

- Sind Sie sich über den richtigen Einbau des Geräts nicht sicher, lassen Sie es von einem qualifizierten Techniker einbauen.

INSTALLATION (MONTAGE DANS LE TABLEAU DE BORD)

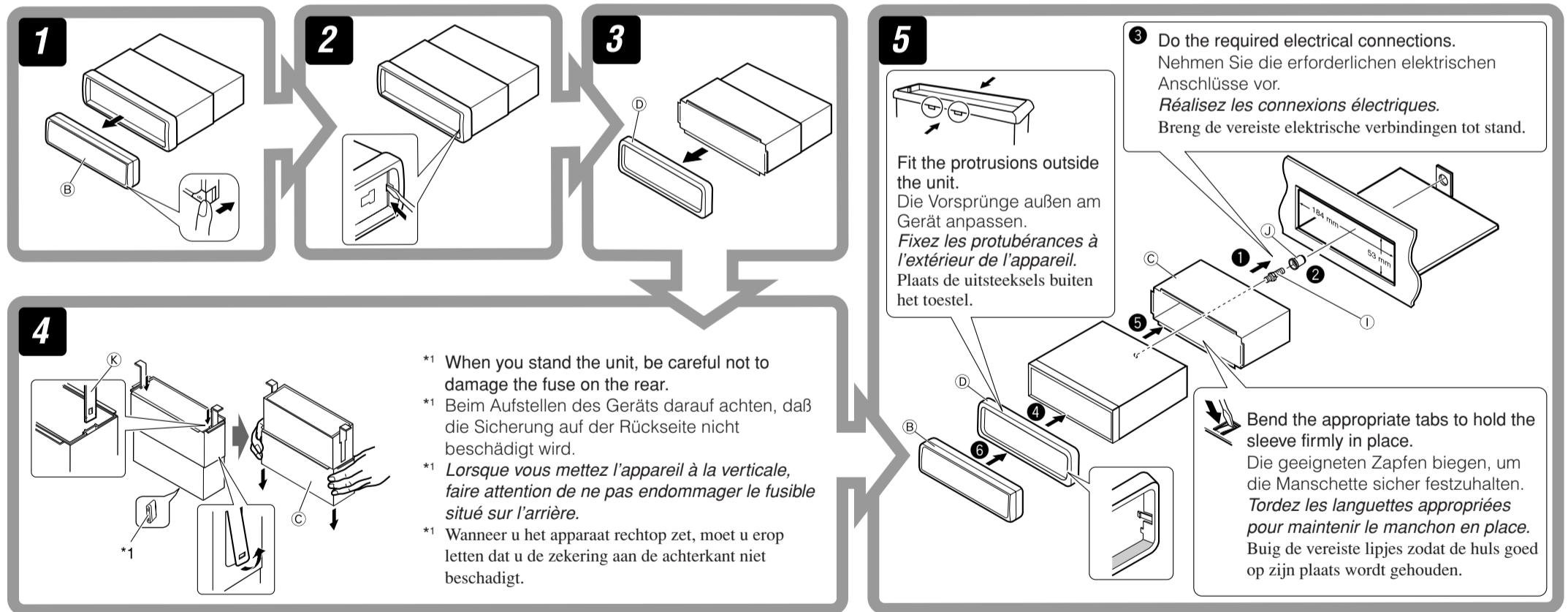
L'illustration suivante est un exemple d'installation typique. Si vous avez des questions ou avez besoin d'information sur des kits d'installation, consulter votre revendeur d'autoradios JVC ou une compagnie d'approvisionnement.

- Si l'on n'est pas sûr de pouvoir installer correctement cet appareil, le faire installer par un technicien qualifié.

INSTALLATIE (INBOUW IN HET DASHBOARD)

Op de volgende afbeelding kunt u zien hoe de installatie, normaal gesproken, in zijn werk gaat. Neem bij vragen of voor meer bijzonderheden over inbouwpakketten contact op met uw JVC car audio dealer of een dealer of een bedrijf dat inbouwpakketten levert.

- Als u niet zeker weet hoe u dit apparaat moet installeren, kunt u dit beter door een daartoe gekwalificeerde technicus laten doen.



Removing the unit

Before removing the unit, release the rear section.

Ausbau des Geräts

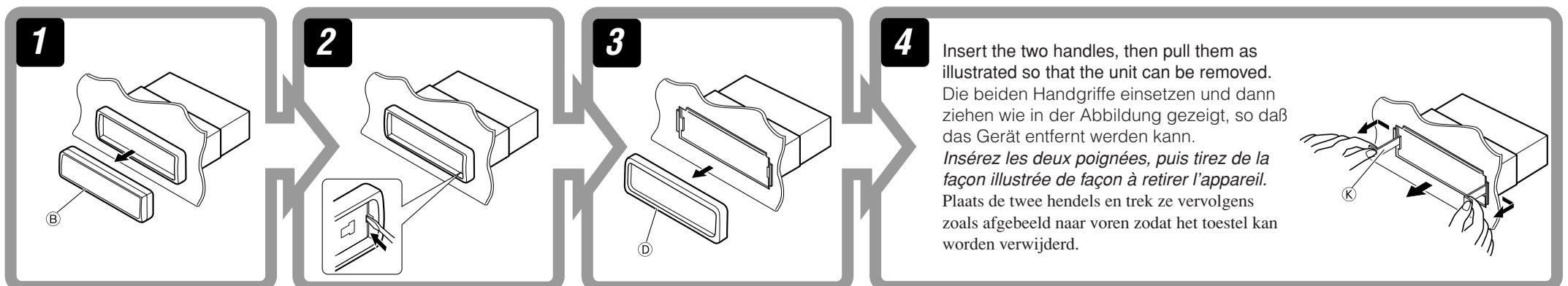
Vor dem Ausbau des Geräts den hinteren Teil freigegeben.

Retrait de l'appareil

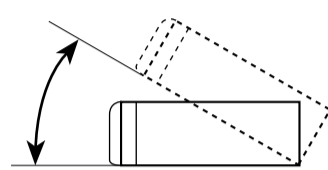
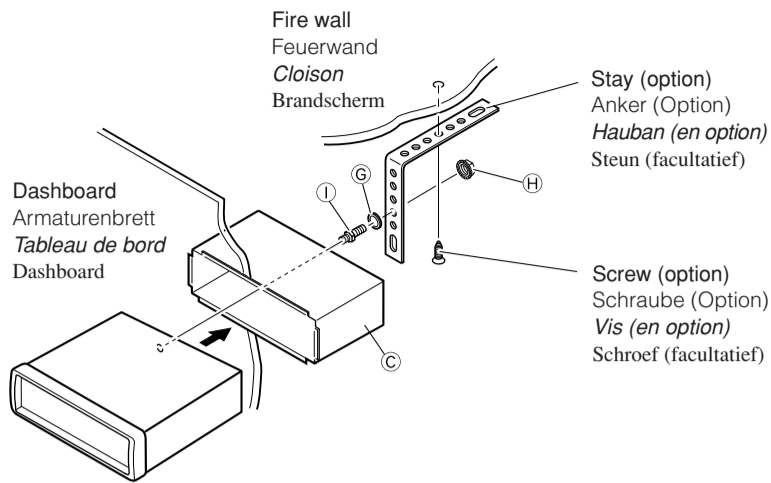
Avant de retirer l'appareil, libérer la section arrière.

Verwijderen van het apparaat

Voordat u het apparaat verwijdert, moet u het achtergedeelte losmaken.



When using the optional stay / Beim Verwenden der Anker-Option / Lors de l'utilisation du hauban en option / Wanneer u de steun gebruikt (facultatief)

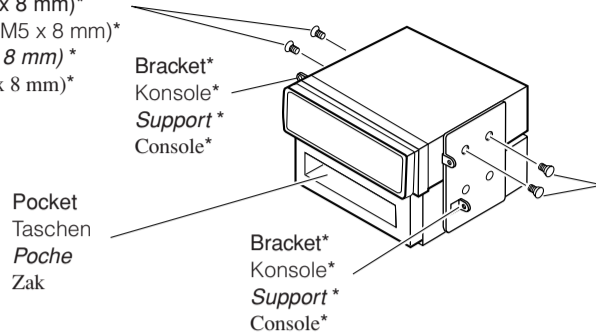


Install the unit at an angle of less than 30°. Stellen Sie das Gerät mit einem Winkel von weniger als 30° auf. Installez l'appareil avec un angle de moins de 30°. Installeer het toestel met een hoek kleiner dan 30°.

When installing the unit without using the sleeve / Beim Einbau des Geräts ohne Halterung / Lors de l'installation de l'appareil sans utiliser de manchon / Wanneer u het apparaat zonder huis installeert

In a Toyota for example, first remove the car radio and install the unit in its place. Zum Beispiel in einem Toyota zuerst das Autoradio ausbauen und dann das Gerät an seinem Platz einbauen. Par exemple dans une Toyota, retirer d'abord l'autoradio et installer l'appareil à la place. Voorbeeld: Bij een Toyota moet u eerst de autoradio verwijderen en daarna het apparaat installeren.

Flat type screws (M5 x 8 mm)*
Senkkopfschrauben (M5 x 8 mm)*
Vis à tête plate (M5 x 8 mm)*
Platkopschroeven (M5 x 8 mm)*



* Not included with this unit.
* Nicht Teil dieses Geräts.
* Non fourni avec cet appareil.
* Niet meegeleverd.

Flat type screws (M5 x 8 mm)*
Senkkopfschrauben (M5 x 8 mm)*
Vis à tête plate (M5 x 8 mm)*
Platkopschroeven (M5 x 8 mm)*

- Note** : When installing the unit on the mounting bracket, make sure to use the 8 mm-long screws. If longer screws are used, they could damage the unit.
- Hinweis** : Beim Anbringen des Gerät an der Konsole sicherstellen, daß 8 mm lange Schrauben verwendet werden. Werden längere Schrauben verwendet, können sie das Gerät beschädigen.
- Remarque** : Lors de l'installation de l'appareil sur le support de montage, s'assurer d'utiliser des vis d'une longueur de 8 mm. Si des vis plus longues sont utilisées, elles peuvent endommager l'appareil.
- Opmerking** : Wanneer u het apparaat aan de bevestigingsklem vastmaakt, moet u de 8 mm lange schroeven gebruiken. Als u langere schroeven gebruikt, kan het apparaat worden beschadigd.

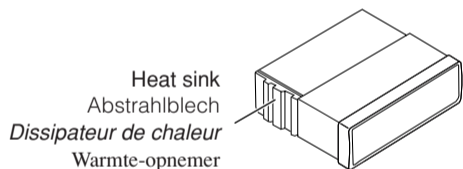
ELECTRICAL CONNECTIONS

To prevent short circuits, we recommend that you disconnect the battery's negative terminal and make all electrical connections before installing the unit.

- Be sure to ground this unit to the car's chassis again after installation.

Notes:

- Replace the fuse with one of the specified rating. If the fuse blows frequently, consult your JVC IN-CAR ENTERTAINMENT dealer.
- It is recommended to connect to the speakers with maximum power of more than 50 W (both at the rear and at the front, with an impedance of 4 Ω to 8 Ω). If the maximum power is less than 50 W, change "Amp.Gain" setting to prevent the speakers from being damaged (see page 49 of the INSTRUCTIONS).
- To prevent short-circuit, cover the terminals of the UNUSED leads with insulating tape.
- The heat sink becomes very hot after use. Be careful not to touch it when removing this unit.



ELEKTRISCHE ANSCHLÜSSE

Zur Vermeidung von Kurzschlüssen empfehlen wir, daß Sie den negativen Batterieanschluß abtrennen und alle elektrischen Anschlüsse herstellen, bevor das Gerät eingebaut wird.

- Sicherstellen, daß das Gerät nach dem Einbau a Chassis des Fahrzeugs geerdet wird.

Hinweise:

- Die Sicherung mit einer der entsprechenden Nennleistung ersetzen. Brennt die Sicherung häufig durch, wenden Sie sich an ihren JVC Autoradiohändler.
- Es wird empfohlen, Lautsprecher mit einer Maximalleistung von mehr als 50 W anzuschließen (sowohl hinten als auch vorne, mit einer Impedanz von 4 Ω bis 8 Ω). Wenn die Maximalleistung weniger als 50 W beträgt, stellen Sie „Amp.Gain“ anders ein, um Schäden an den Lautsprechern zu vermeiden (siehe Seite 49 der BEDIENUNGSANLEITUNG).
- Zur Vermeidung eines Kurzschlusses die Anschlußklemmen der NICHT VERWENDETEN Leitungen mit Isolierklebeband umwickeln.
- Das Abstrahlblech wird nach dem Gebrauch sehr heiß. Beim Ausbau des Geräts darauf achten, das Abstrahlblech nicht zu berühren.

RACCORDEMENTS ELECTRIQUES

Pour éviter tout court-circuit, nous vous recommandons de débrancher la borne négative de la batterie et d'effectuer tous les raccordements électriques avant d'installer l'appareil.

- Assurez-vous de raccorder de nouveau la mise à la masse de cet appareil au châssis de la voiture après l'installation.

Remarques:

- Remplacer le fusible par un de la valeur précisée. Si le fusible saute souvent, consulter votre revendeur d'autoradios JVC.
- Il est recommandé de connecter des enceintes avec une puissance de plus de 50 W (les enceintes arrière et les enceintes avant, avec une impédance comprise entre 4 Ω et 8 Ω). Si la puissance maximum est inférieure à 50 W, changez "Amp.Gain" pour éviter d'endommager vos enceintes (voir page 49 du MANUEL D'INSTRUCTIONS).
- Pour éviter les court-circuits, couvrir les bornes des fils qui ne sont PAS UTILISÉS avec de la bande isolante.
- Le dissipateur de chaleur devient très chaud après usage. Faire attention de ne pas le toucher en retirant cet appareil.

ELEKTRISCHE VERBINDINGEN

Om kortsluiting te voorkomen adviseren wij u om de minpool van de accu los te maken en alle elektrische verbindingen tot stand te brengen voordat u het apparaat in de auto installeert.

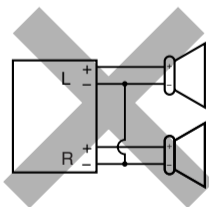
- Aard dit toestel beslist weer op het chassis van de auto na het installeren.

Opmerkingen:

- Vervang de zekering door een exemplaar met het aangegeven vermogen. Als de zekering vaak doorslaat, moet u uw JVC car audio dealer raadplegen.
- Sluit bij voorkeur luidsprekers met een hoger maximaal vermogen dan 50 W (zowel achter als voor, met een impedantie van 4 Ω t/m 8 Ω) aan. Indien het maximale vermogen lager dan 50 W is, moet u "Amp.Gain" in de andere stand stellen zodat de luidsprekers niet kunnen worden beschadigd (zie bladzijde 49 van de GEBRUIKSAANWIJZING).
- Om kortsluiting te voorkomen, moet u de aansluitklemmen van ONGEBRUIKTE gekleurde draden met isolatieband bedekken.
- De warmte-opnemer kan na gebruik erg heet worden. Raak de warmte-opnemer niet aan wanneer u dit apparaat van zijn plaats haalt.

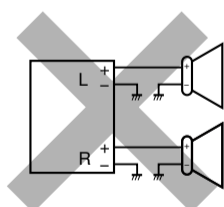
PRECAUTIONS on power supply and speaker connections:

- DO NOT connect the speaker leads of the power cord to the car battery; otherwise, the unit will be seriously damaged.
- BEFORE connecting the speaker leads of the power cord to the speakers, check the speaker wiring in your car.



VORSICHTSMASREGELN beim Anschließen der Stromversorgung und Lautsprecher:

- Die Lautsprecherleitungen des Netzkabels NICHT an der Autobatterie anschließen, da sonst das Gerät schwer beschädigt wird.
- VOR dem Anschließen der Lautsprecherleitungen des Spannungsversorgungskabels an die Lautsprecher, die Lautsprecherverdrahtung in Ihrem Auto überprüfen.

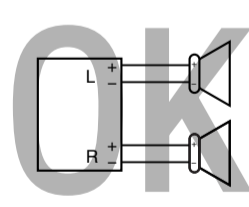


PRECAUTIONS sur l'alimentation et la connexion des enceintes:

- NE CONNECTEZ PAS les fils d'enceintes du cordon d'alimentation à la batterie; sinon, l'appareil serait sérieusement endommagé.
- AVANT de connecter les fils d'enceintes du cordon d'alimentation aux enceintes, vérifiez le câblage des enceintes de votre voiture.

VOORZORGSMAATREGELEN bij het verbinden van de stroomkabeldraad met de speakers:

- Verbind de speakerdraden van de stroomkabel NIET met de accu van de auto; als u dit wel doet, zal het apparaat ernstige schade oplopen.
- VOORDAT u de speakerdraden van de stroomkabel met de speakers verbindt, moet u de bedrading van de speakers in uw auto controleren.



TROUBLESHOOTING

- **The fuse blows.**
* Are the red and black leads connected correctly?
- **Power cannot be turned on.**
* Is the yellow lead connected?
- **No sound from the speakers.**
* Is the speaker output lead short-circuited?
- **Sound is distorted.**
* Is the speaker output lead grounded?
* Are the "-" terminals of L and R speakers grounded in common?
- **Noise interfere with sounds.**
* Is the rear ground terminal connected to the car's chassis using shorter and thicker cords?
- **Unit becomes hot.**
* Is the speaker output lead grounded?
* Are the "-" terminals of L and R speakers grounded in common?

FEHLERSUCHE

- **Die Sicherung brennt durch.**
* Sind die roten und schwarzen Leitungen richtig angeschlossen?
- **Stromversorgung kann nicht eingeschaltet werden.**
* Ist die gelbe Leitung angeschlossen?
- **Kein Ton aus den Lautsprechern.**
* Ist die LautsprecherAusgangsleitung kurzgeschlossen?
- **Ton verzerrt.**
* Ist die LautsprecherAusgangsleitung geerdet?
* Sind die (-) Anschlußklemmen der linken und rechten Lautsprecher zusammen geerdet?
- **Störgeräusche im Klang.**
* Ist die hintere Erdungsklemme mit kürzeren und dickeren Kabeln an das Fahrzeugchassis angeschlossen?
- **Gerät wird heiß.**
* Ist die LautsprecherAusgangsleitung geerdet?
* Sind die (-) Anschlußklemmen der linken und rechten Lautsprecher zusammen geerdet?

EN CAS DE DIFFICULTES

- **Le fusible saute.**
* Les fils rouge et noir sont-ils raccordés correctement?
- **L'appareil ne peut pas être mise sous tension.**
* Le fil jaune est-elle raccordée?
- **Pas de son des enceintes.**
* Le fil de sortie d'enceinte est-il court-circuité?
- **Le son est déformé.**
* Le fil de sortie d'enceinte est-il à la masse?
* Les bornes "-" des enceintes gauche et droit sont-elles mises ensemble à la masse?
- **Interférence avec les sons.**
* La prise arrière de mise à la terre est-elle connectée au châssis de la voiture avec un cordon court et épais?
- **L'appareil devient chaud.**
* Le fil de sortie d'enceinte est-il à la masse?
* Les bornes "-" des enceintes gauche et droit sont-elles mises ensemble à la masse?

PROBLEMEN OPLOSSEN

- **De zekering slaat door.**
* Zijn de rode en de zwarte draden op de juiste manier aangesloten?
- **De stroom kan niet worden ingeschakeld.**
* Is de gele draad aangesloten?
- **Er komt geen geluid uit de speakers.**
* Is de uitgaande speakerdraad kortgesloten?
- **Het geluid wordt vervormd.**
* Is de uitgaande speakerdraad geaard?
* Zijn de "-" polen van de linker- en de rechtsperspeakers gemeenschappelijk geaard?
- **Geluid wordt door ruis gestoord.**
* Is de aarde-aansluiting achter met gebruik van kortere en dikkere snoeren met het chassis van de auto verbonden?
- **Het apparaat raakt verhit.**
* Is de uitgaande speakerdraad geaard?
* Zijn de "-" polen van de linker- en de rechtsperspeakers gemeenschappelijk geaard?

A Typical Connections / Typische Anschlüsse / Raccordements typiques / Normale verbindingen

Before connecting: Check the wiring in the vehicle carefully. Incorrect connection may cause serious damage to this unit. The leads of the power cord and those of the connector from the car body may be different in color.

- 1 Connect the colored leads of the power cord in the order specified in the illustration below.
 - 2 Connect the aerial cord.
 - 3 Finally connect the wiring harness to the unit.
- Note:** If your vehicle does not have any accessory terminal, move the fuse from the fuse position 1 (initial position) to fuse position 2, and connect the red lead (A7) to the positive (+) battery terminal.
- The yellow lead (A4) is not used in this case.

Vor dem Anschließen: Die Verdrahtung im Fahrzeug sorgfältig überprüfen. Falsche Anschlüsse können ernsthafte Schäden am Gerät hervorrufen. Die Leiter des Stromkabels und die Leiter des Anschlusses im Fahrzeug können sich farblich unterscheiden.

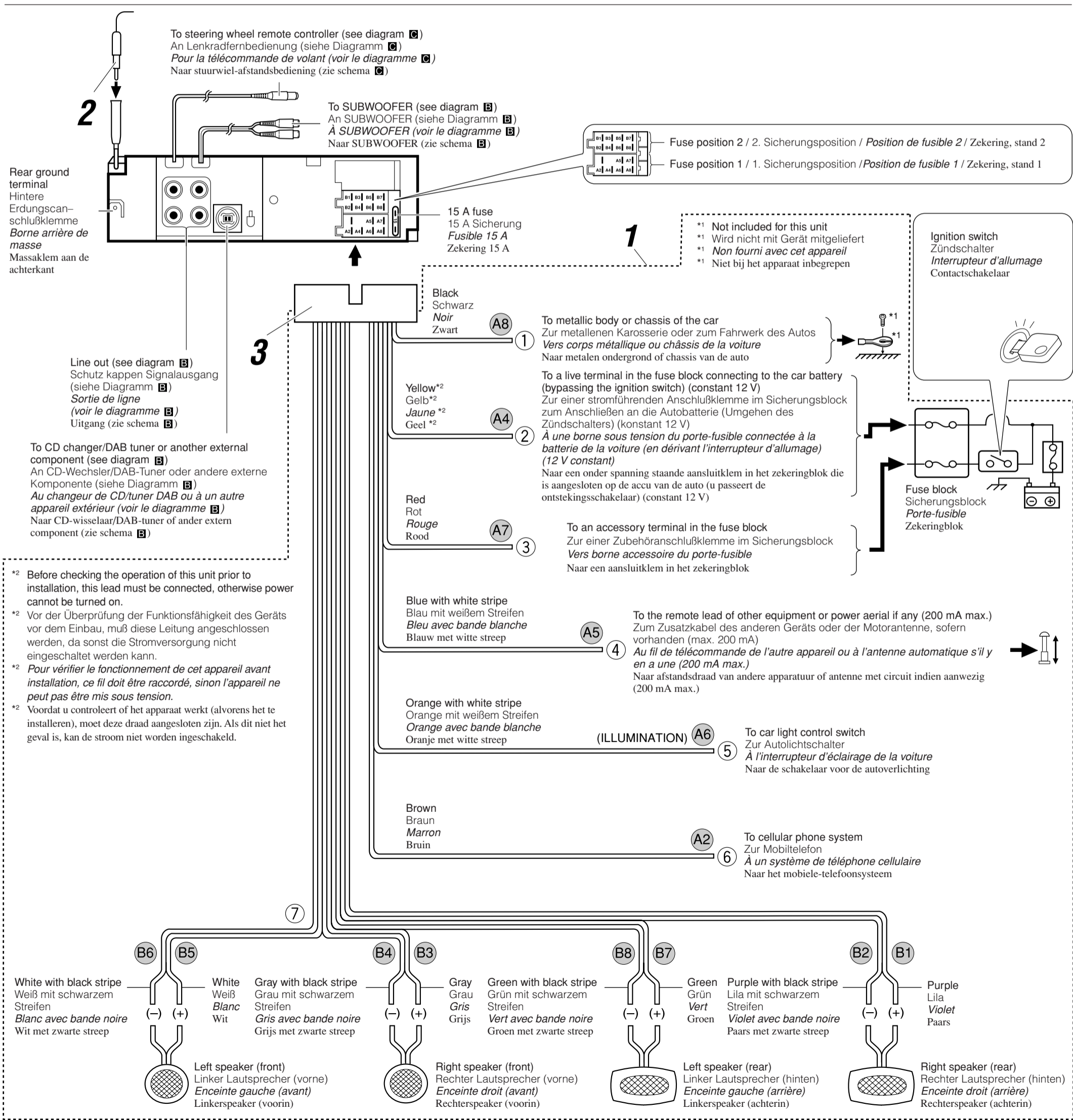
- 1 Die farbigen Adern des Stromkabels in der Reihenfolge anschließen, wie in der Abbildung unten gezeigt.
 - 2 Das Antennenkabel anschließen.
 - 3 Die Kabelbäume am Gerät anschließen.
- Hinweis:** Verfügt Ihr Fahrzeug nicht über eine Zubehöranschlussschleife, die Sicherung von der 1. Sicherungsposition (Erstposition) in die 2. Sicherungsposition versetzen, die rote Leitung (A7) an der (+) Batterieanschlussschleife anschließen.
- Die gelbe Leitung (A4) wird in diesem Fall nicht verwendet.

Avant de commencer la connexion: Vérifiez attentivement le câblage du véhicule. Une connexion incorrecte peut endommager sérieusement l'appareil. Le fil du cordon d'alimentation et ceux des connecteurs du châssis de la voiture peuvent être différents en couleur.

- 1 Connectez les fils colorés du cordon d'alimentation dans l'ordre spécifié sur l'illustration ci-dessous.
 - 2 Connectez le cordon d'antenne.
 - 3 Finalement, connectez le faisceau de fils à l'appareil.
- Remarque:** Si votre véhicule ne possède pas de borne accessoire, déplacez le fusible de la position de fusible 1 (position originale) à la position de fusible 2 et connectez le fil rouge (A7) à la borne positive (+) de la batterie.
- Le fil jaune (A4) n'est pas utilisé dans ce cas.

Alvorens de verbindingen tot stand te brengen: Moet u de bedrading in de auto zorgvuldig. Het apparaat kan door verkeerde verbindingen ernstige schade oplopen. De draden van het stroom snoer verschillen mogelijk van kleur met de aansluitingen op het chassis van de auto.

- 1 Verbind de gekleurde draden van het stroom snoer in de afbeelding hieronder aangegeven volgorde.
 - 2 Sluit de antenne aan.
 - 3 Verbind de draadbundel daarna met het apparaat.
- Opmerking:** Als uw voertuig niet beschikt over een aansluitklem, moet u de zekering verplaatsen van stand 1 (beginstand) naar stand 2 en moet u de rode draad (A7) met de pluspool (+) van de accu verbinden.
- In dit geval wordt de gele draad (A4) niet gebruikt.



B Connections Adding Other Equipment / Anschlüsse zum Hinzufügen von anderer Ausrüstung / Raccordement pour ajouter d'autres appareils / Aansluitingen voor het toevoegen van andere apparatuur

Amplifier / Verstärker / Amplificateur / Versterker

You can connect an amplifier and other equipment to upgrade your car stereo system.

- Connect the remote lead (blue with white stripe) to the remote lead of the other equipment so that it can be controlled through this unit.
 - **For amplifier only:**
 - Disconnect the speakers from this unit, connect them to the amplifier. Leave the speaker leads of this unit unused.
 - The line output level of this unit is kept high to maintain the hi-fi sounds reproduced from this unit.
- When connecting an external amplifier to this unit, turn down the gain control on the external amplifier to obtain the best performance from this unit.

Sie können einen Verstärker oder ein anderes Gerät anschließen, um Ihre Autostereoanlage zu erweitern.

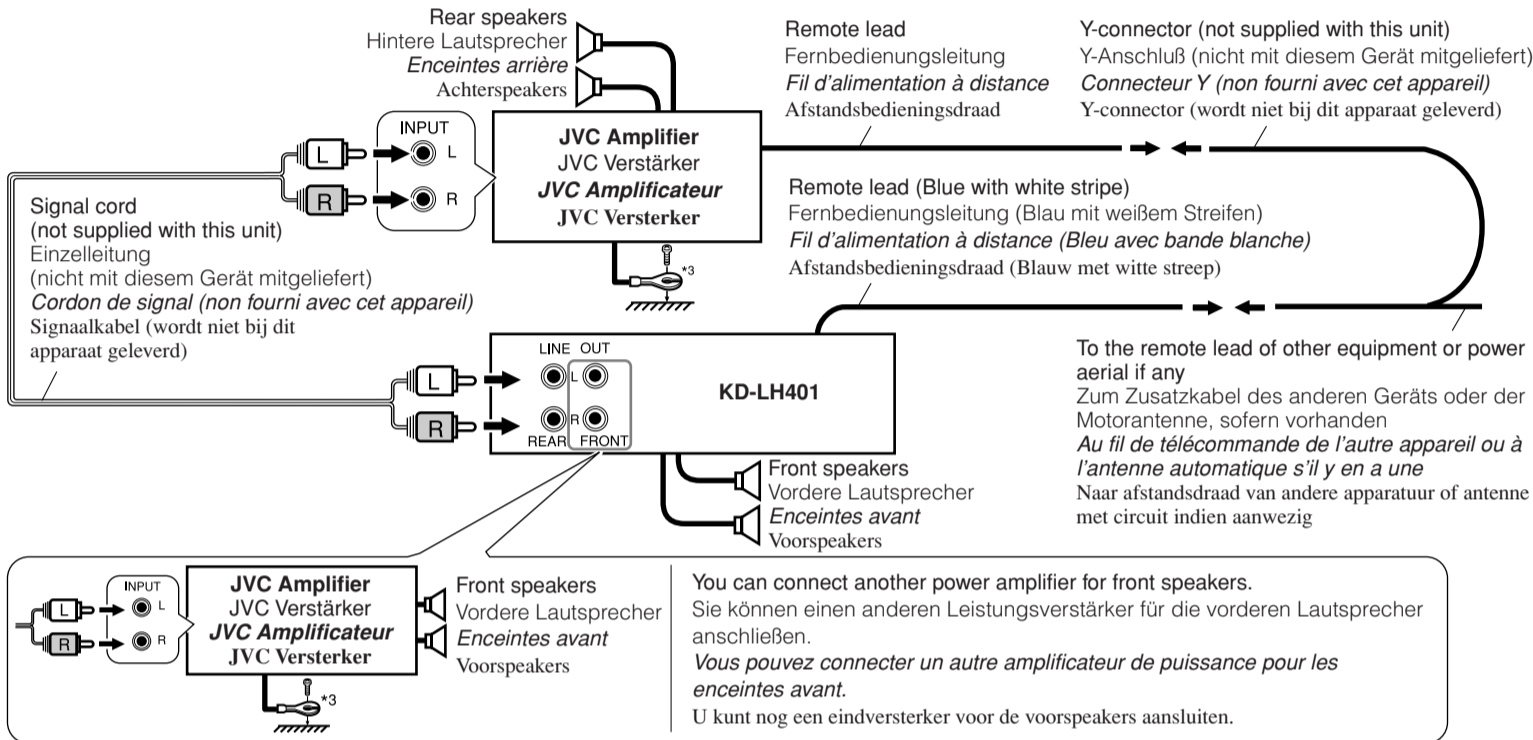
- Schließen Sie das Fernbedienungskabel (blau mit weißem Streifen) an das Fernbedienungskabel des anderen Geräts an, so daß es über dieses Gerät gesteuert werden kann.
 - **Nur für den Verstärker:**
 - Die Lautsprecher von diesem Gerät abtrennen und am Verstärker anschließen. Die Lautsprecherleitungen dieses Geräts unbenutzt lassen.
 - Der Ausgangspegel dieses Geräts wird auf einem hohen Wert gehalten, um den Hi-Fi-Klang zu unterstützen, den dieses Gerät reproduziert.
- Wenn Sie einen externen Verstärker an dieses Gerät anschließen, stellen Sie den Verstärkungsregler des externen Verstärkers herunter, um die bestmögliche Leistung dieses Geräts zu erzielen.

Vous pouvez connecter un amplificateur et autre appareil pour améliorer votre système autoradio.

- *Connectez le fil de commande à distance (bleu avec bande blanche) au fil de commande à distance de l'autre appareil de façon qu'il puisse être commandé via cet appareil.*
 - **Pour l'amplificateur seulement:**
 - *Déconnectez les enceintes de cet appareil et connectez-les à l'amplificateur. Laissez les fils d'enceintes de cet appareil inutilisés.*
 - *Le niveau de sortie de ligne de cet appareil est maintenu à un niveau élevé pour maintenir une qualité Hi-Fi pour les sons reproduits par cet appareil.*
- Lors de la connexion d'un amplificateur extérieur à cet appareil, diminuez le réglage du gain sur l'amplificateur extérieur pour obtenir les meilleures performances de cet appareil.*

Het is mogelijk om uw autostereosysteem uit te breiden met een versterker of andere apparatuur.

- Verbind de afstandsdraad (blauw met witte streep) met de afstandsdraad van het andere apparaat zodat deze op afstand vanaf deze apparaat kan worden bediend.
- **Alleen voor een versterker:**
 - Koppel de speakers van dit apparaat los en verbind ze aan de versterker. Gebruik de speakerdraden van dit apparaat niet.
 - Het uitgangsniveau van het geluid is hoog om het hi-fi-geluid van deze eenheid te behouden. Wanneer u een extern apparaat op deze eenheid aansluit, moet u erop letten dat u de versterkingsfactor van de externe versterker laag houdt, zodat deze eenheid de beste prestaties levert.



- *3 Firmly attach the ground wire to the metallic body or to the chassis of the car—to the place not coated with paint (if coated with paint, remove the paint before attaching the wire). Failure to do so may cause damage to the unit.
- *3 Verbinden Sie den Erdungsleiter mit der Karosserie oder dem Rahmen des Fahrzeugs. Die Kontaktstelle darf nicht lackiert sein (sollte die Kontaktstelle lackiert sein, entfernen Sie den Lack der Kontaktstelle, bevor Sie den Leiter befestigen). Wenn der Erdungsleiter nicht ordnungsgemäß angeschlossen wird, kann dieses Gerät beschädigt werden.
- *3 Attachez solidement le fil de mise à la masse au châssis métallique de la voiture—à un endroit qui n'est pas recouvert de peinture (s'il est recouvert de peinture, enlevez d'abord la peinture avant d'attacher le fil). L'appareil peut être endommagé si cela n'est pas fait correctement.
- *3 Bevestig de aarddraad goed met een metalen onderdeel of het chassis van de auto—bevestig op een niet-gelakt gedeelte (indien gelakt, schuur dan af alvorens de draad te bevestigen). Het toestel kan worden beschadigd indien de aarddraad niet goed is aangesloten.

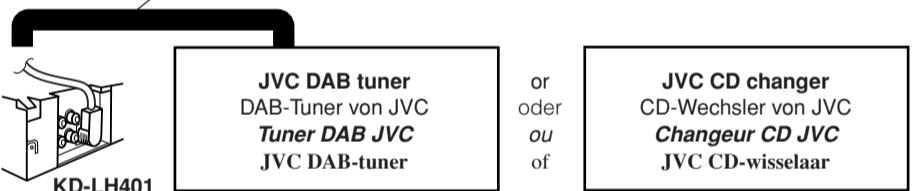
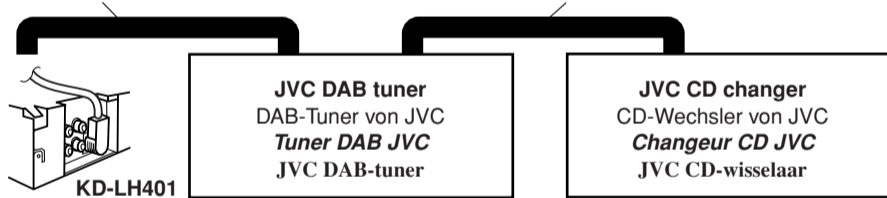
CD changer and DAB tuner / CD-Wechsler und DAB-Tuner / Changeur CD et tuner DAB / CD-wisselaar en DAB-tuner

Refer also to pages 56 and 63 of the INSTRUCTIONS.
Siehe auch Seiten 56 und 63 in der BEDIENUNGSANLEITUNG.
Référez-vous aussi à les pages 56 et 63 du MANUEL D'INSTRUCTIONS.
Zie tevens bladzijden 56 en 63 van de GEBRUIKSAANWIJZING.

Connecting cord supplied for your DAB tuner
Verbindingskabel, dat zum Lieferumfang des DAB-Tuners gehört
Cordon de connexion fourni avec votre tuner DAB
Verbindingskabel die met de DAB-tuner wordt meegeleverd

Connecting cord supplied for your CD changer
Verbindingskabel, dat zum Lieferumfang des CD-Wechsler gehört
Cordon de connexion fourni avec votre changeur CD
Verbindingskabel die met de CD-wisselaar wordt meegeleverd

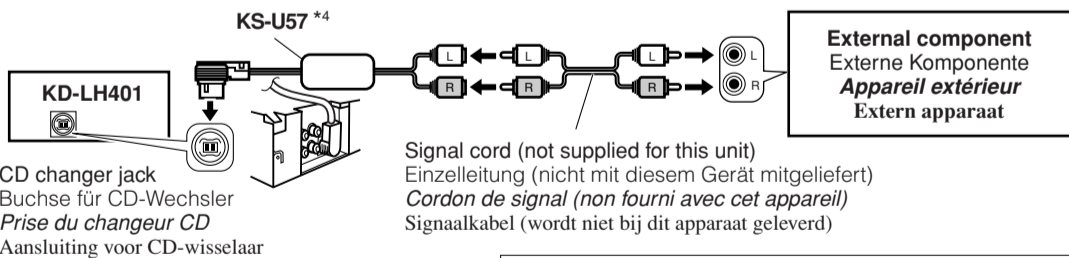
Connecting cord supplied for your DAB tuner or CD changer
Verbindingskabel, dat zum Lieferumfang des DAB-Tuners oder CD-Wechslers gehört
Cordon de connexion fourni avec votre tuner DAB ou changeur CD
Verbindingskabel die met de DAB-tuner of CD-wisselaar wordt meegeleverd



- You can connect both components in series as illustrated above.
- Es ist möglich, beide Komponenten in einer Serienschaltung entsprechend der obigen Darstellung anzuschließen.
- *Vous pouvez connecter les deux appareils en série comme montré ci-dessus.*
- Beide apparaten zijn volgens bovenstaande illustratie in serie aan te sluiten.

- CAUTION / VORSICHT / PRECAUTION / LET OPI!:**
- Before connecting the CD changer and/or the DAB tuner, make sure that the unit is turned off.
 - Bevor Sie den CD-Wechsler und/oder den DAB-Tuner anschließen, vergewissern Sie sich, daß das Gerät ausgeschaltet ist.
 - *Avant de connecter le changeur CD et/ou le tuner DAB, s'assurer que l'unité est éteinte.*
 - Zorg ervoor dat de apparaat is uitgeschakeld alvorens u de CD-wisselaar en/of DAB-tuner aansluit.

External Component / Externe Komponente / Appareil extérieur / Extern apparaat

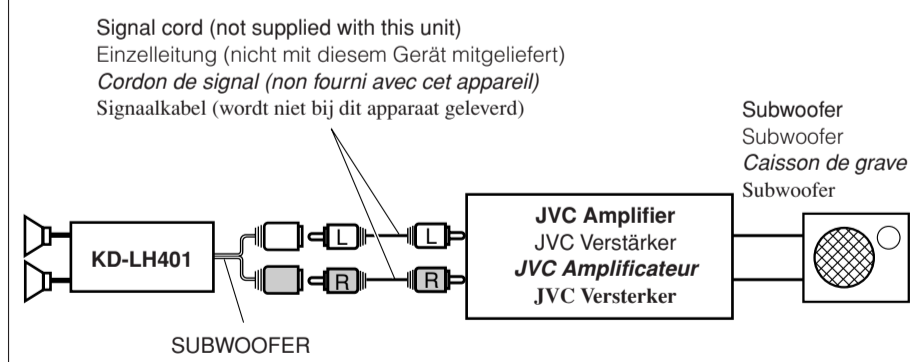


CD changer jack
Buchse für CD-Wechsler
Prise du changeur CD
Aansluiting voor CD-wisselaar

Signal cord (not supplied for this unit)
Einzelleitung (nicht mit diesem Gerät mitgeliefert)
Cordon de signal (non fourni avec cet appareil)
Signaalkabel (wordt niet bij dit apparaat geleverd)

- *4 Line Input Adapter KS-U57 (not supplied with this unit)
- *4 Line-Eingangsadapter KS-U57 (nicht mit diesem Gerät mitgeliefert)
- *4 *Adaptateur d'entrée de ligne KS-U57 (non fourni avec cet appareil)*
- *4 Line Input Adapter KS-U57 (wordt niet bij dit apparaat geleverd)

Subwoofer / Subwoofer / Caisson de grave / Subwoofer



Signal cord (not supplied with this unit)
Einzelleitung (nicht mit diesem Gerät mitgeliefert)
Cordon de signal (non fourni avec cet appareil)
Signaalkabel (wordt niet bij dit apparaat geleverd)

Subwoofer
Subwoofer
Caisson de grave
Subwoofer

JVC Amplifier
JVC Verstärker
JVC Amplificateur
JVC Versterker

SUBWOOFER

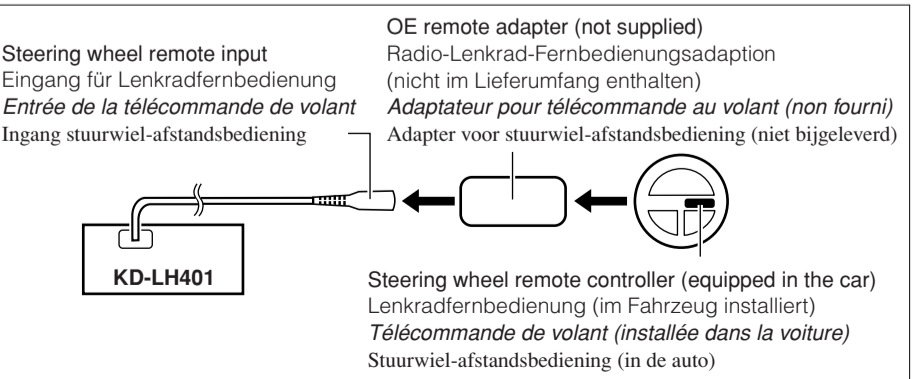
C Connecting to the steering wheel remote controller / Anschluß an die Lenkradfernbedienung / Connexion de la télécommande de volant / Verbinden met de stuurwiel-afstandsbediening

If your car is equipped with the steering wheel remote controller, you can operate this receiver using the controller. To do it, a JVC's OE remote adapter (not supplied) which matches with your car is required. Consult your JVC IN-CAR ENTERTAINMENT dealer for details.

Wenn Ihr Fahrzeug mit einer Lenkradfernbedienung ausgestattet ist, können Sie damit diesen Receiver steuern. Hierfür ist ein für Ihr Fahrzeug passender Radio-Lenkrad-Fernbedienungsadaption von JVC (nicht im Lieferumfang enthalten) erforderlich. Für weitere Einzelheiten wenden Sie sich an Ihren JVC Autoradiohändler.

Si votre voiture est munie d'une télécommande de volant, vous pouvez commander cet autoradio en utilisant la télécommande. Pour le faire, un adaptateur pour télécommande au volant JVC (non fourni) correspondant à votre voiture est nécessaire. Consultez votre revendeur d'autoradio JVC pour les détails.

Indien uw auto een stuurwiel-afstandsbediening heeft, kunt u deze receiver met die afstandsbediening bedienen. Hiervoor heeft u echter een JVC adapter (niet bijgeleverd) nodig die geschikt is voor de stuurwiel-afstandsbediening van uw auto. Raadpleeg uw JVC car audio dealer voor details.



Steering wheel remote input
Eingang für Lenkradfernbedienung
Entrée de la télécommande de volant
Ingang stuurwiel-afstandsbediening

OE remote adapter (not supplied)
Radio-Lenkrad-Fernbedienungsadaption (nicht im Lieferumfang enthalten)
Adaptateur pour télécommande au volant (non fourni)
Adapter voor stuurwiel-afstandsbediening (niet bijgeleverd)

Steering wheel remote controller (equipped in the car)
Lenkradfernbedienung (im Fahrzeug installiert)
Télécommande de volant (installée dans la voiture)
Stuurwiel-afstandsbediening (in de auto)