

JVC

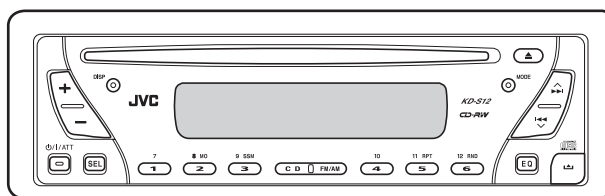
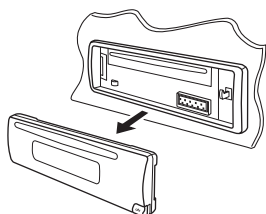
SERVICE MANUAL

CD RECEIVER

KD-S12

Area suffix

J ----- Northern America



CD-RW

COMPACT
disc
DIGITAL AUDIO



Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

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SPECIFICATION

AUDIO AMPLIFIER SECTION

Power Output	18 W RMS × 4 Channels at 4 Ω and [$<$ or $=$] 1% THD+N	
Signal to Noise Ratio	80 dBA (reference: 1 W into 4 Ω)	
Load Impedance	4 Ω (4 Ω to 8 Ω allowance)	
Tone Control Range	Bass	±10 dB at 100 Hz
	Treble	±10 dB at 10 kHz
Frequency Response	40 Hz to 20 000 Hz	
Line-Out Level/Impedance	2.0 V/20 kΩ load (full scale)	
Output Impedance	1 kΩ	

TUNER SECTION

Frequency Range	FM	87.5 MHz to 107.9 MHz (with channel interval set to 200 kHz) 87.5 MHz to 108.0 MHz (with channel interval set to 50 kHz)
	AM	530 kHz to 1 710 kHz (with channel interval set to 10 kHz) 531 kHz to 1 602 kHz (with channel interval set to 9 kHz)
FM Tuner	Usable Sensitivity	11.3 dBf (1.0 μV/75 Ω)
	50 dB Quieting Sensitivity	16.3 dBf (1.8 μV/75 Ω)
	Alternate Channel Selectivity (400 kHz)	65 dB
	Frequency Response	40 Hz to 15 000 Hz
	Stereo Separation	35 dB
	Capture Ratio	1.5 dB
AM Tuner	Sensitivity	20 μV
	Selectivity	35 dB

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	


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 (32°F to 104°F)	
Dimensions (W × H × D)	Installation Size (approx.)	182 mm × 52 mm × 150 mm (7-3/16" × 2-1/16" × 5-15/16")
	Panel Size (approx.)	188 mm × 58 mm × 11 mm (7-7/16" × 2-5/16" × 7/16")
Mass (approx.)	1.4 kg (3.1 lbs) (excluding accessories)	

Design and specifications are subject to change without notice.

SECTION 1 PRECAUTIONS

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 CD players.

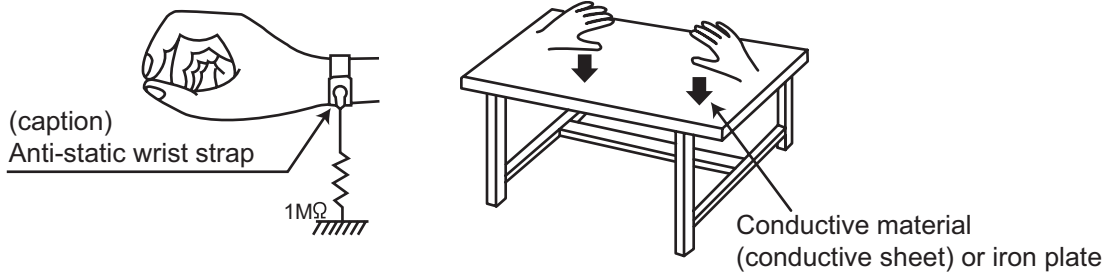
Be careful to use proper grounding in the area where repairs are being performed.

(1) Ground the workbench

Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

(2) Ground yourself

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



(3) Handling the optical pickup

- In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)
- Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

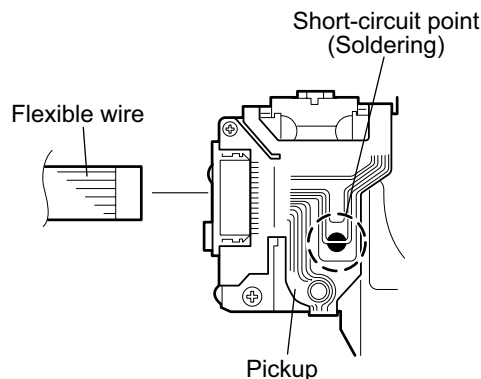
1.3 Handling the traverse unit (optical pickup)

- (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 CD pickup unit.**

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



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)

Push the detach button in the lower right part of the front panel assembly and remove the front panel assembly.

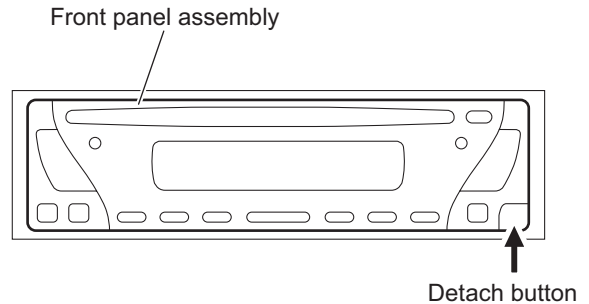


Fig.1

3.1.2 Removing the bottom cover (See Fig.2)

Remove the front panel assembly as required. From the bottom side of the main body, remove the joints (a, b, c) attaching the bottom cover.

Note:

When releasing the joints using a screwdriver, do not damage the main board.

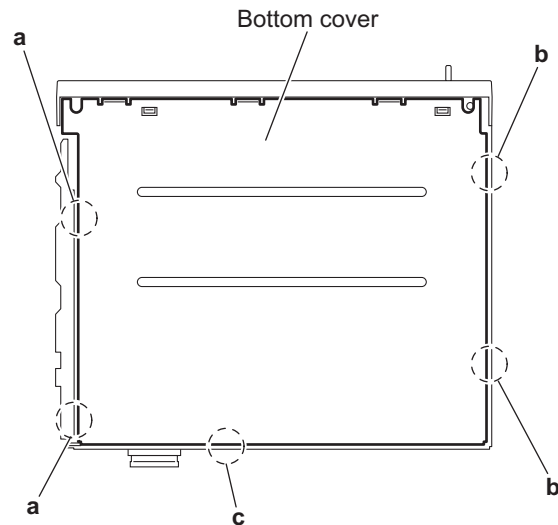


Fig.2

3.1.3 Removing the front chassis assembly (See Fig.3)

Remove the front panel assembly and bottom cover.

- (1) Remove the two screws **A** on the both sides of the main body.
- (2) Release the two joints **d** and two joints **e** on the both sides of the main body, then remove the front chassis assembly toward the front.

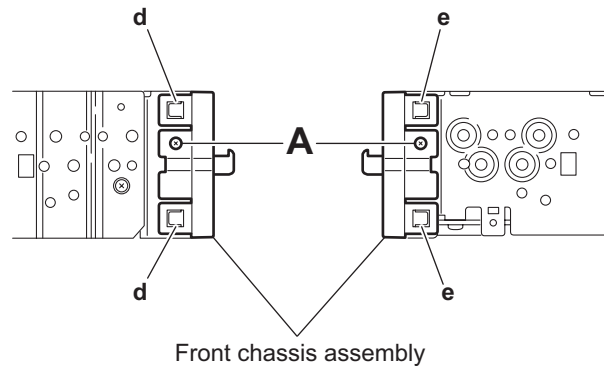


Fig.3

3.1.4 Removing the side panel
(See Fig.4)

- Remove the front panel assembly as required.
 - (1) Remove the screw **B** and two screws **C** attaching the side panel on the left side of the main body.
 - (2) Remove the side panel from the main body.

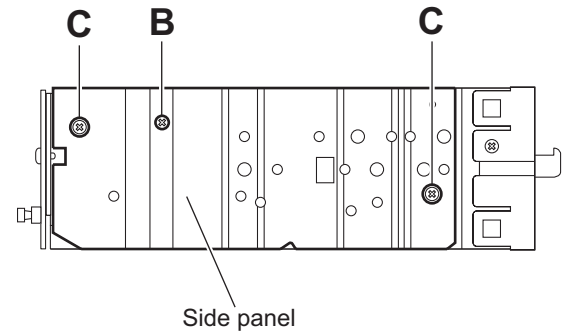


Fig.4

3.1.5 Removing the rear bracket
(See Fig.5)

- Remove the bottom cover.
 - (1) Remove the three screws **D**, three screws **E** and two screws **F** attaching the rear bracket on the back side of the main body.
 - (2) Remove the rear bracket.

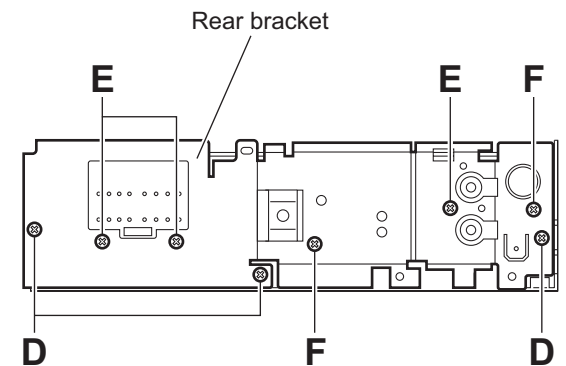


Fig.5

3.1.6 Removing the main board
(See Figs.5 and 6)

- Remove the front panel assembly, bottom cover and side panel.
- Remove the front chassis assembly as required.
 - (1) Remove the three screws **D** attaching the rear bracket on the back side of the main body. (See Fig.5.)
 - (2) Remove the two screws **G** attaching the main board on the bottom side of the main body. (See Fig.6.)
 - (3) Disconnect the connector [CN501](#) on the main board from the CD mechanism assembly and take out the main board with the rear bracket. (See Fig.6.)

Reference:

Remove the rear bracket from the main body as required. (See "3.1.5 Removing the rear bracket".)

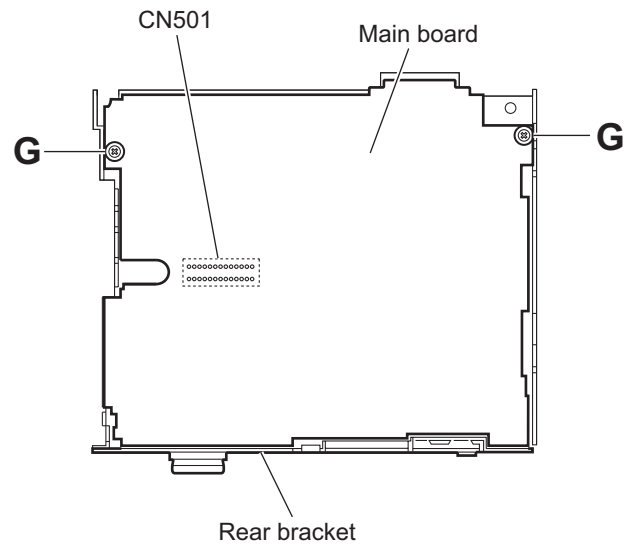


Fig.6

**3.1.7 Removing the CD mechanism assembly
(See Fig. 7)**

- Remove the front panel assembly, bottom cover, side panel, rear bracket and main board.
 - (1) Remove the three screws **H** attaching the CD mechanism assembly on the top chassis.
 - (2) Take out the CD mechanism assembly.

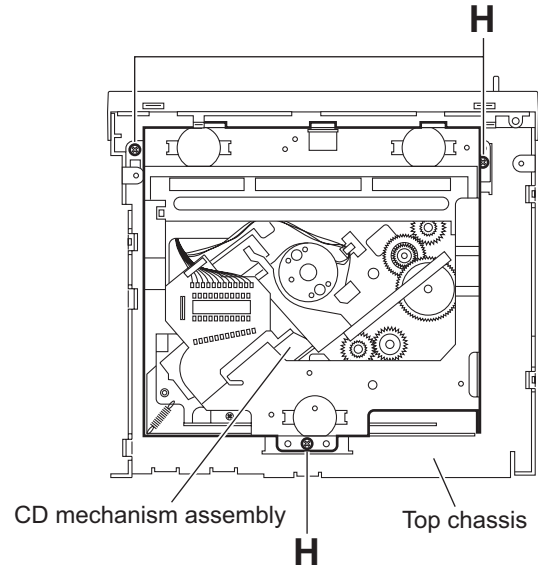


Fig.7

**3.1.8 Removing the switch board
(See Figs.8 to 10)**

- Remove the front panel assembly.
 - (1) Remove the five screws **J** attaching the rear cover on the back side of the front panel assembly. (See Fig.8.)
 - (2) Release the twelve joints **f** and remove the rear cover. (See Fig.9.)
 - (3) Release the joint **g** and remove the switch board from the front panel assembly. (See Fig.10.)

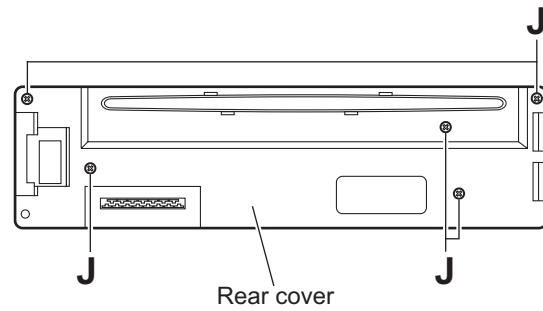


Fig.8

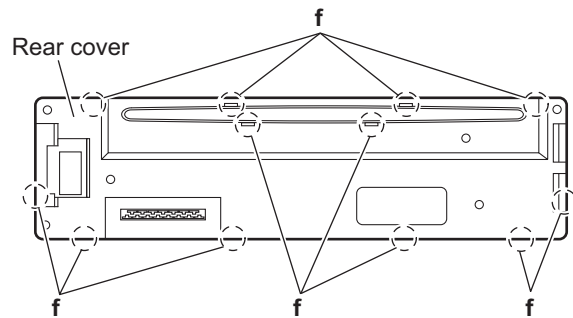


Fig.9

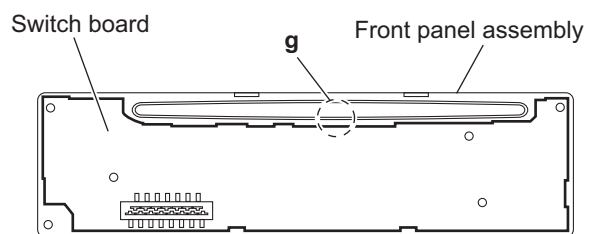
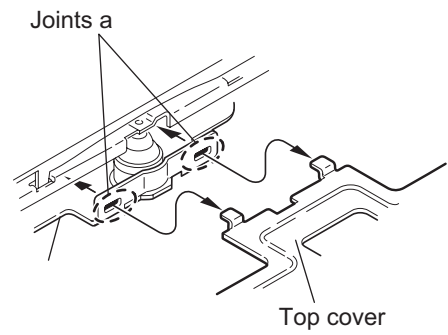
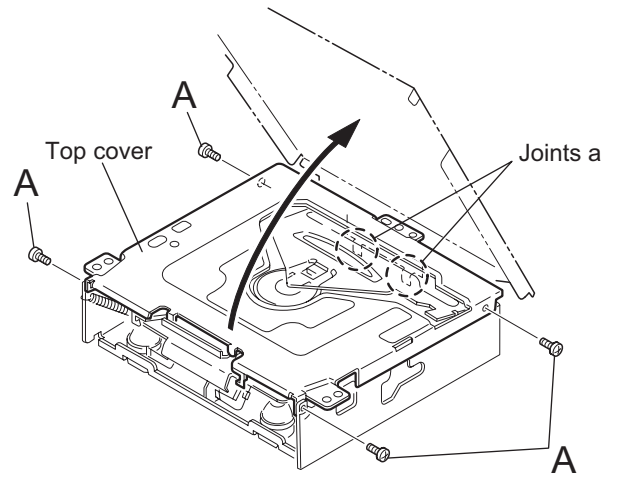


Fig.10

3.2 CD Mechanism Assembly

3.2.1 Removing the top cover (See Figs.1 and 2)

- (1) Remove the two 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**.



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

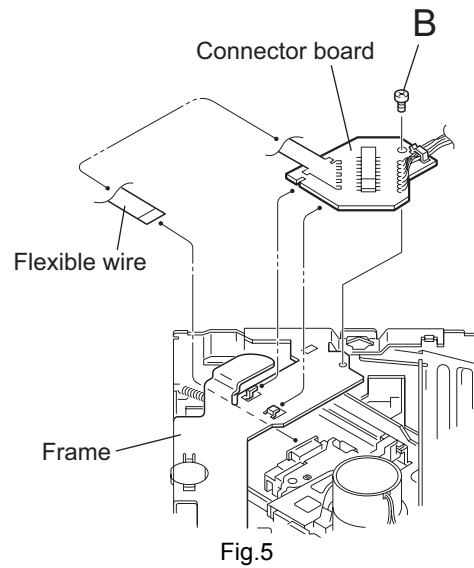
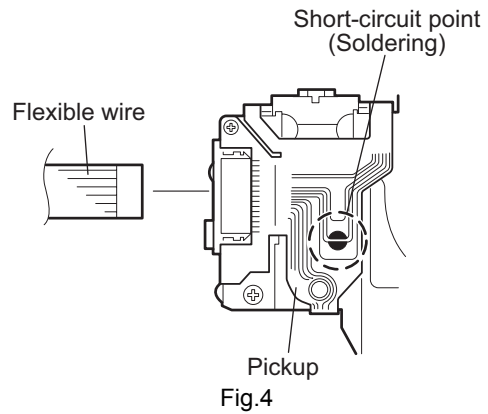
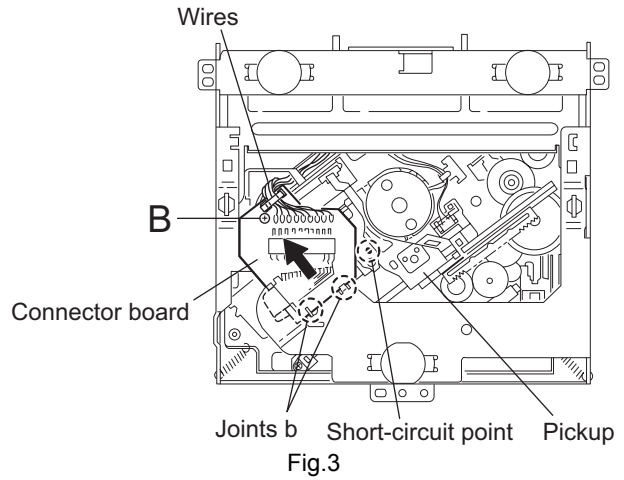
CAUTION:

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 connector board.
- (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 wire on the connector board if necessary.

CAUTION:

Unsolder the short-circuit point after reassembling.



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.

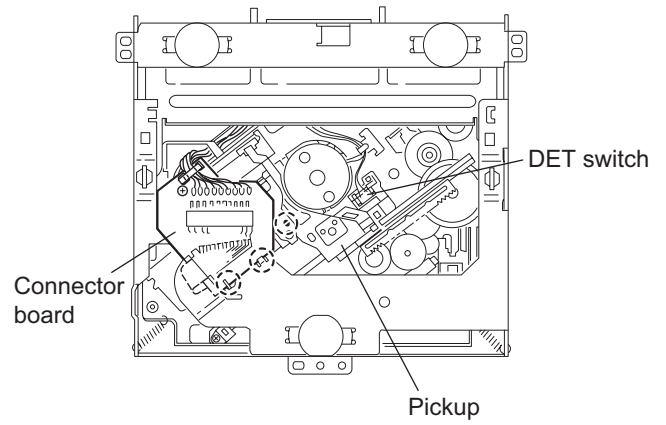


Fig.6

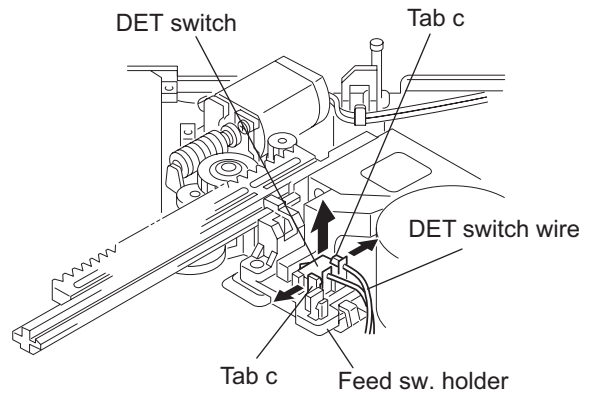


Fig.7

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.

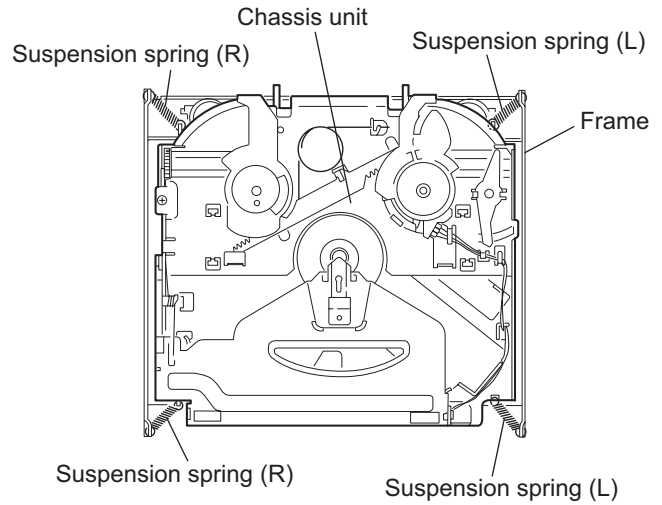


Fig.8

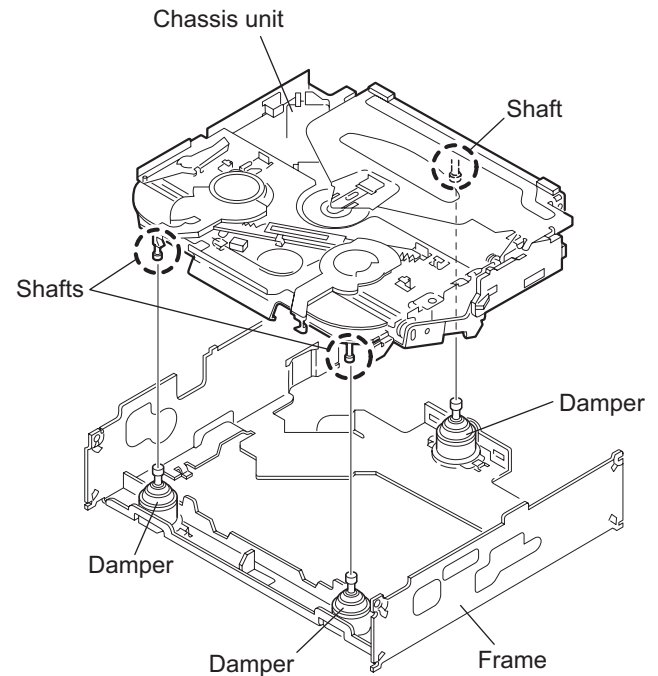
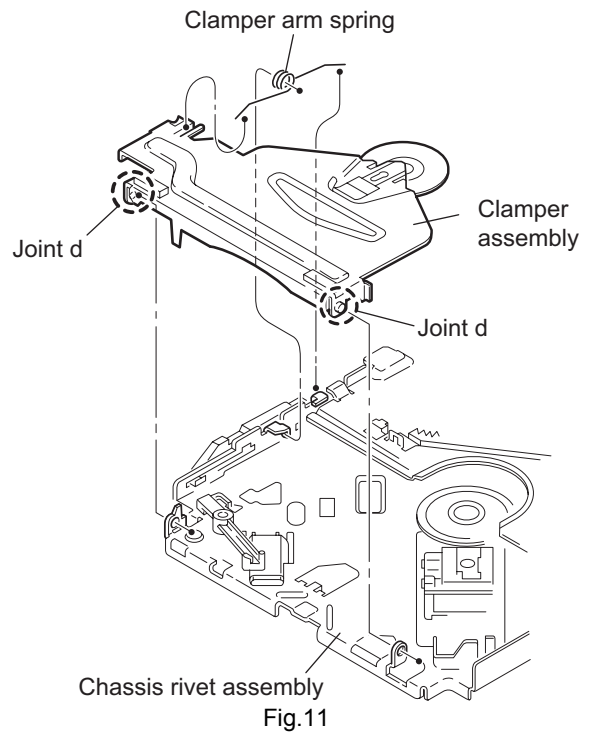
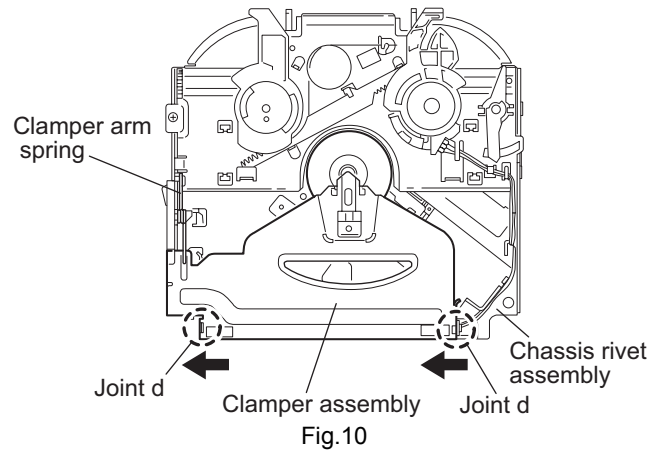


Fig.9

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.

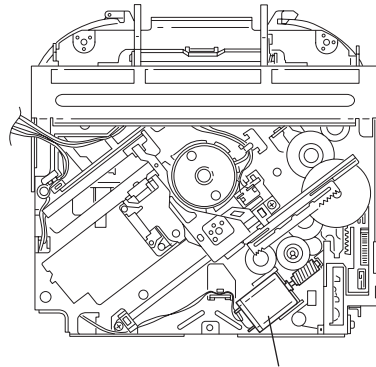


3.2.6 Removing the loading / feed motor assembly (See Figs.12 and 13)

- 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

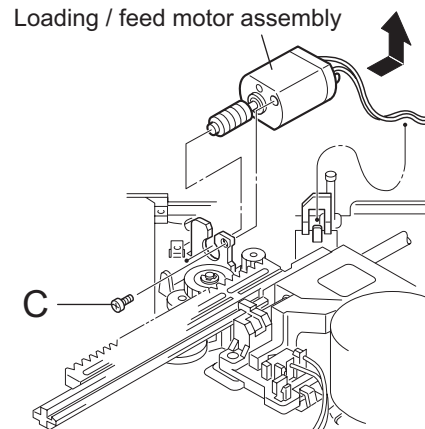


Fig.13

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.

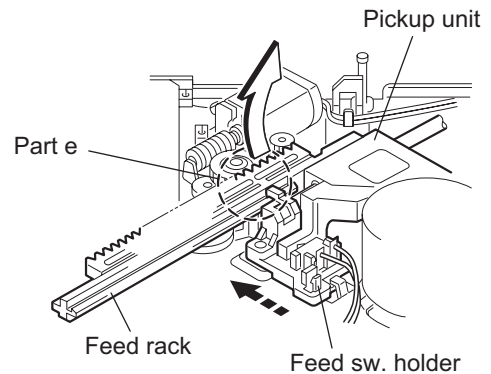


Fig.15

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 part **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**.

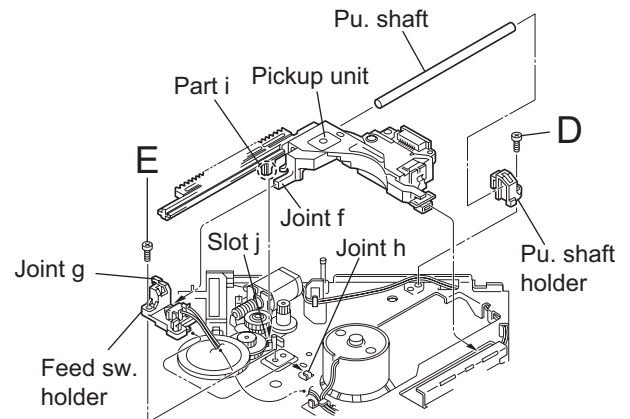


Fig.16

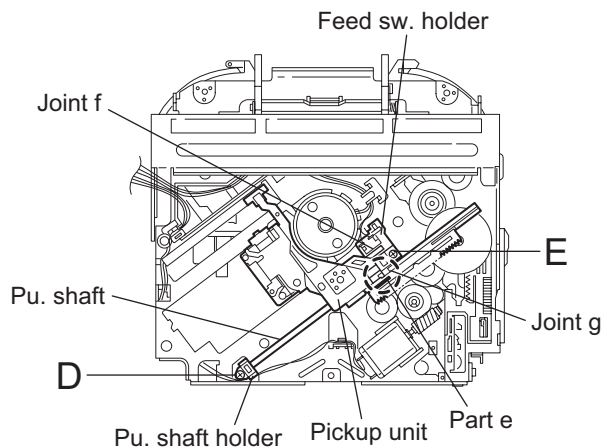


Fig.14

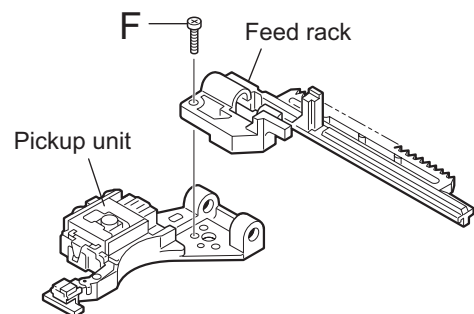


Fig.17

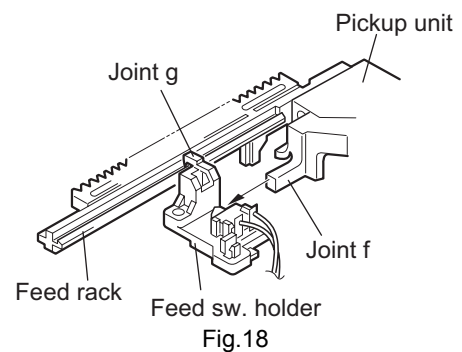


Fig.18

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 clamber 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.

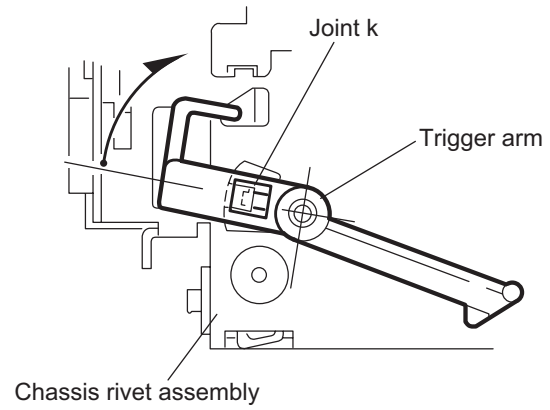


Fig.19

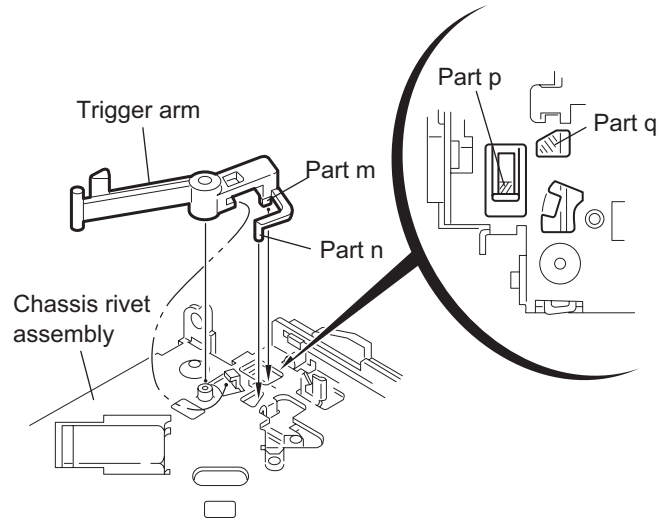


Fig.20

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 clamber 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.

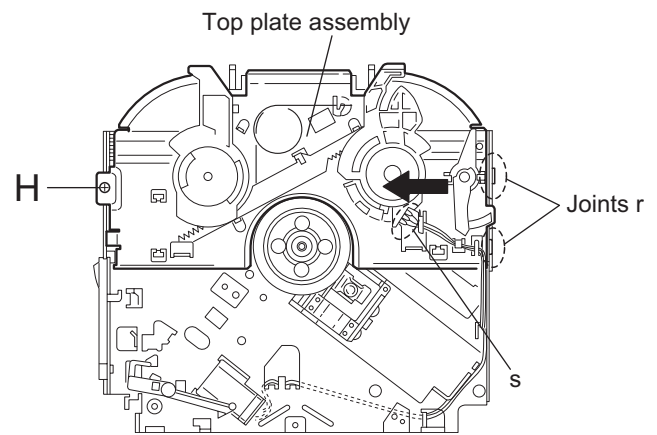


Fig.21

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.

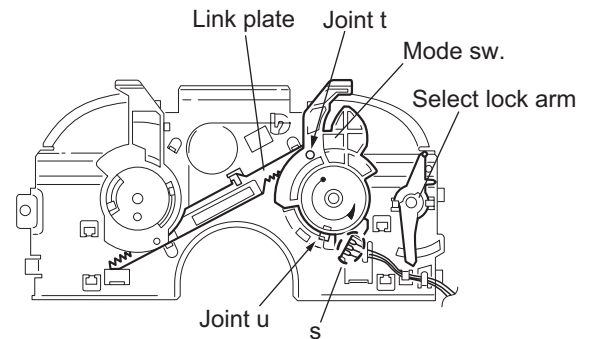


Fig.22

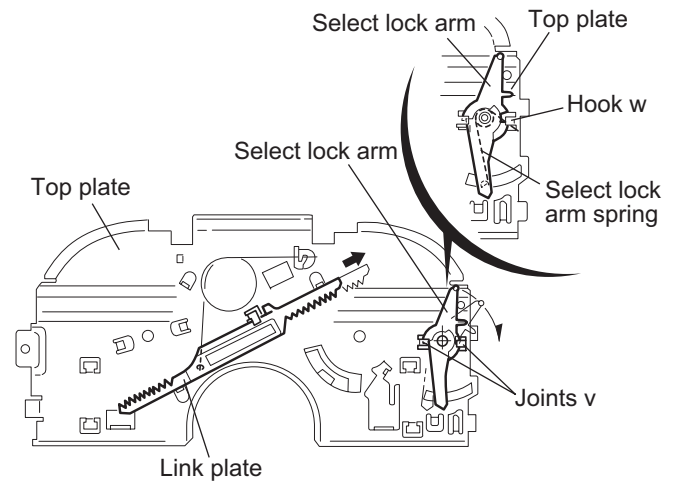


Fig.23

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.

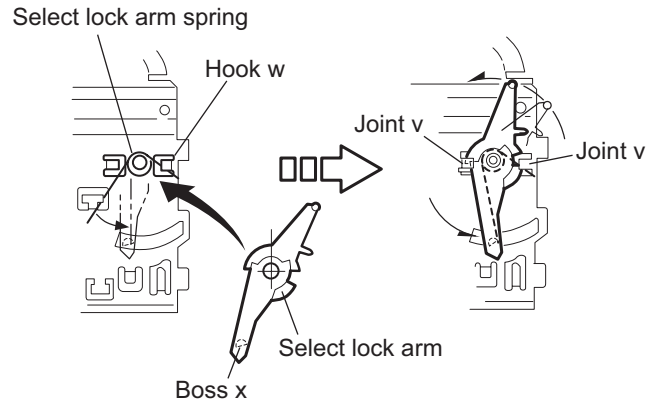


Fig.24

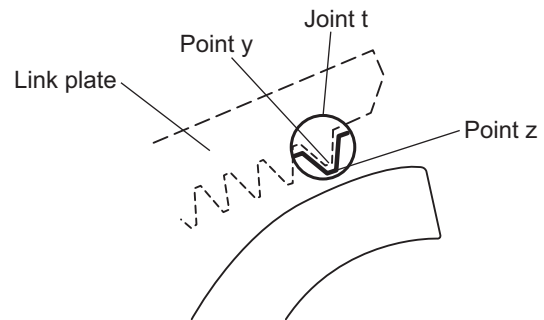


Fig.25

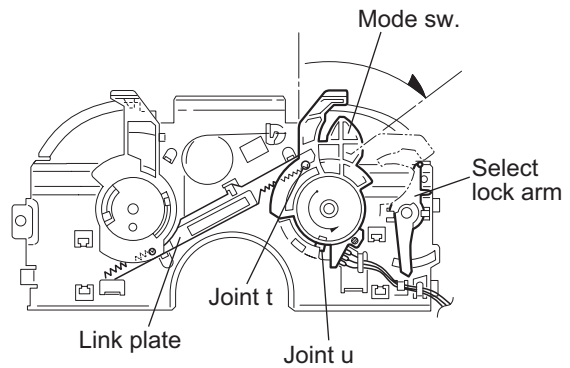


Fig.26

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..

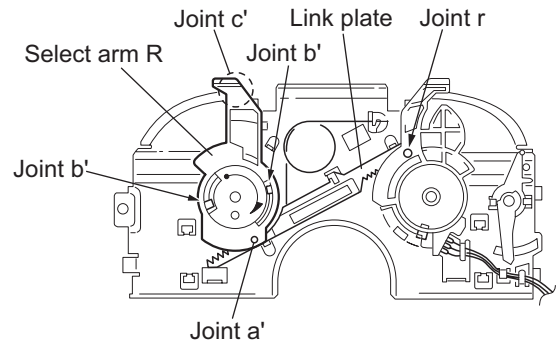
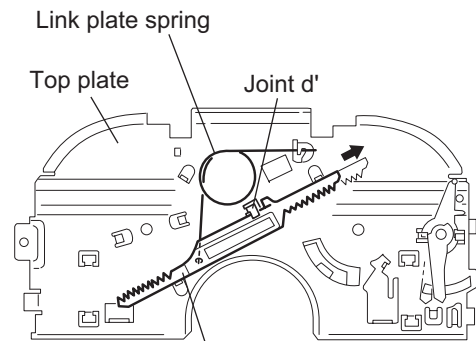


Fig.27



Link plate
 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.

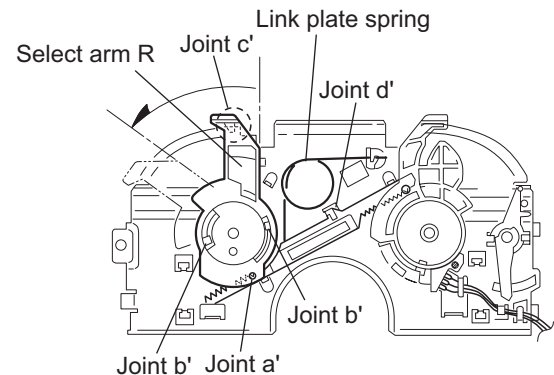


Fig.29

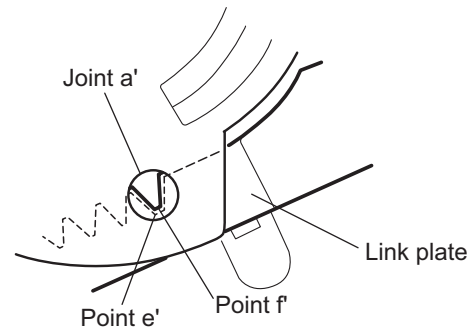


Fig.30

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.)

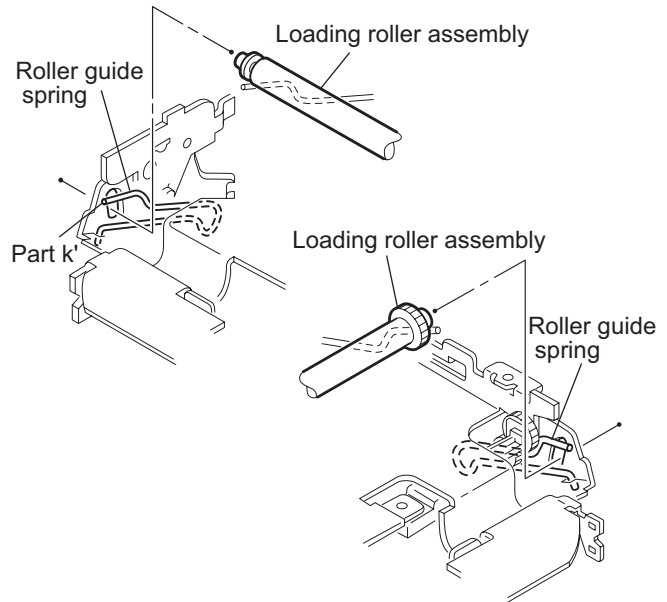


Fig.32

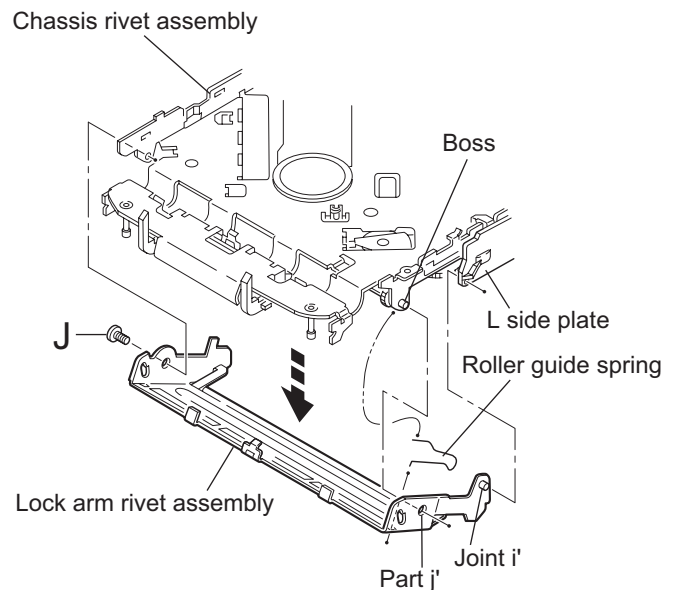


Fig.33

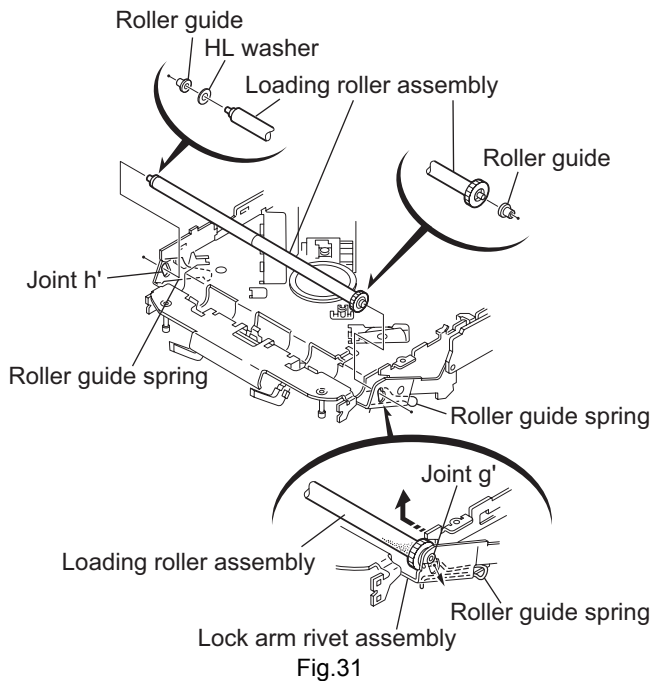


Fig.31

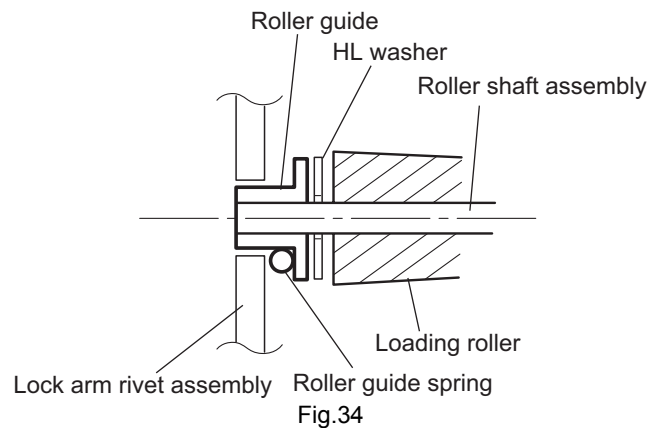


Fig.34

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.

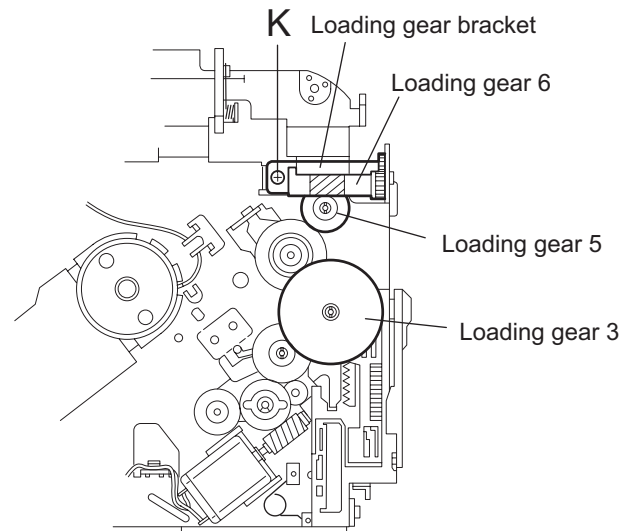


Fig.35

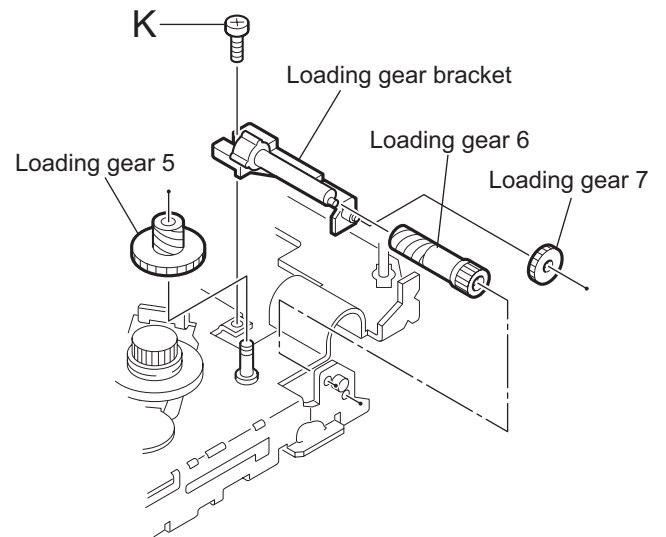
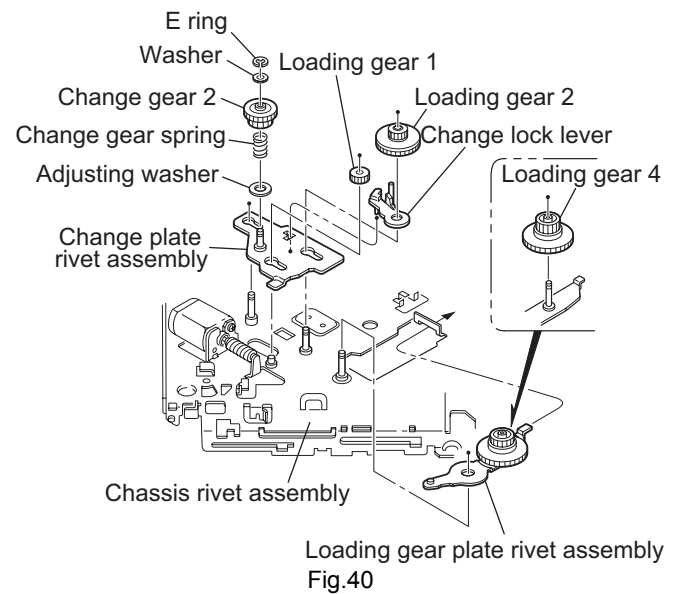
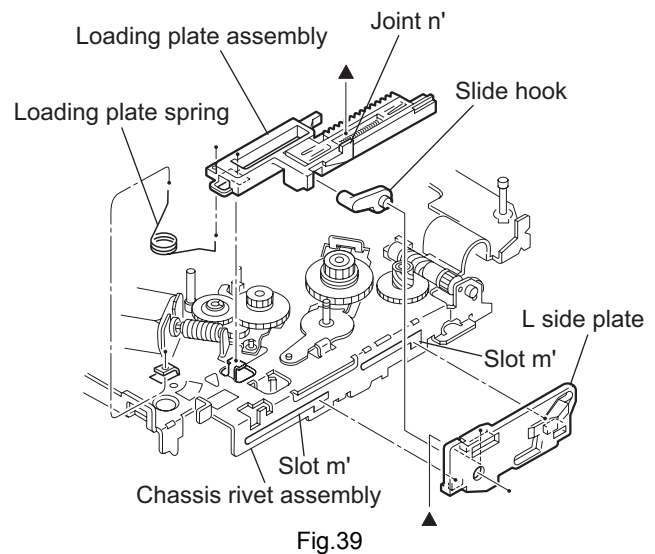
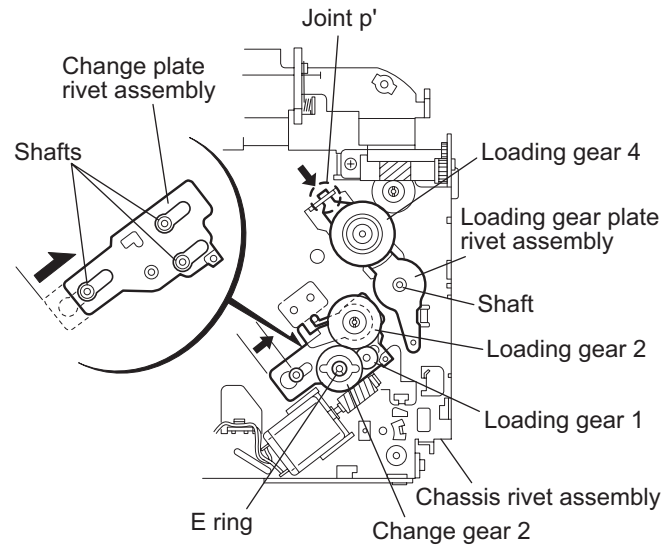
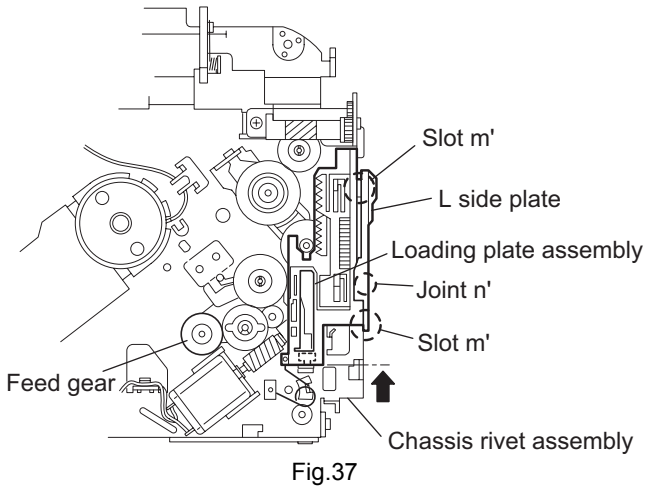


Fig.36

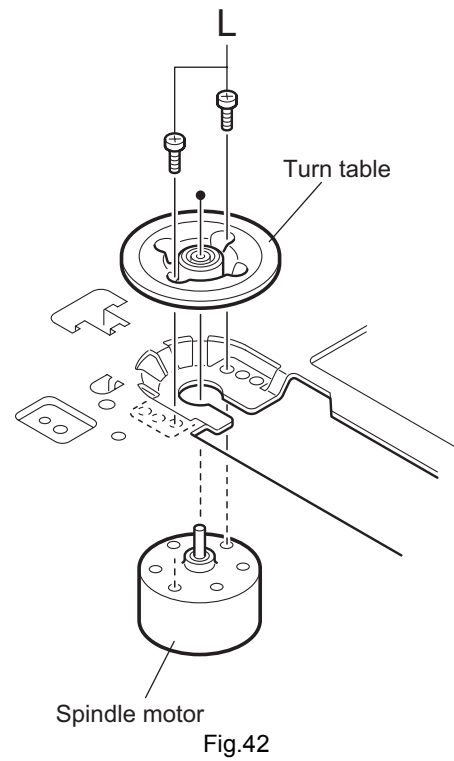
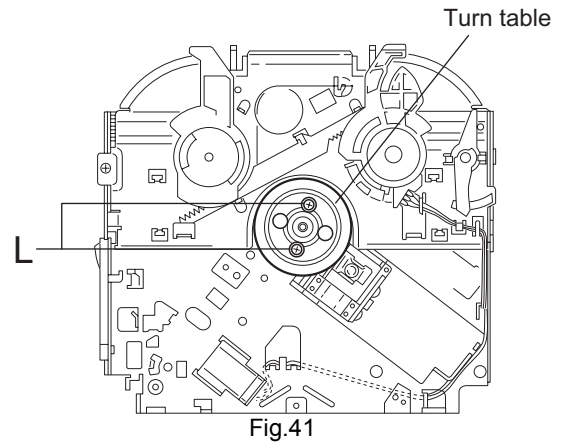
3.2.17 Removing the gears (See Figs.37 to 40)

- 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 changer gear 2.
 - (6) The changer 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.



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 clamper 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:

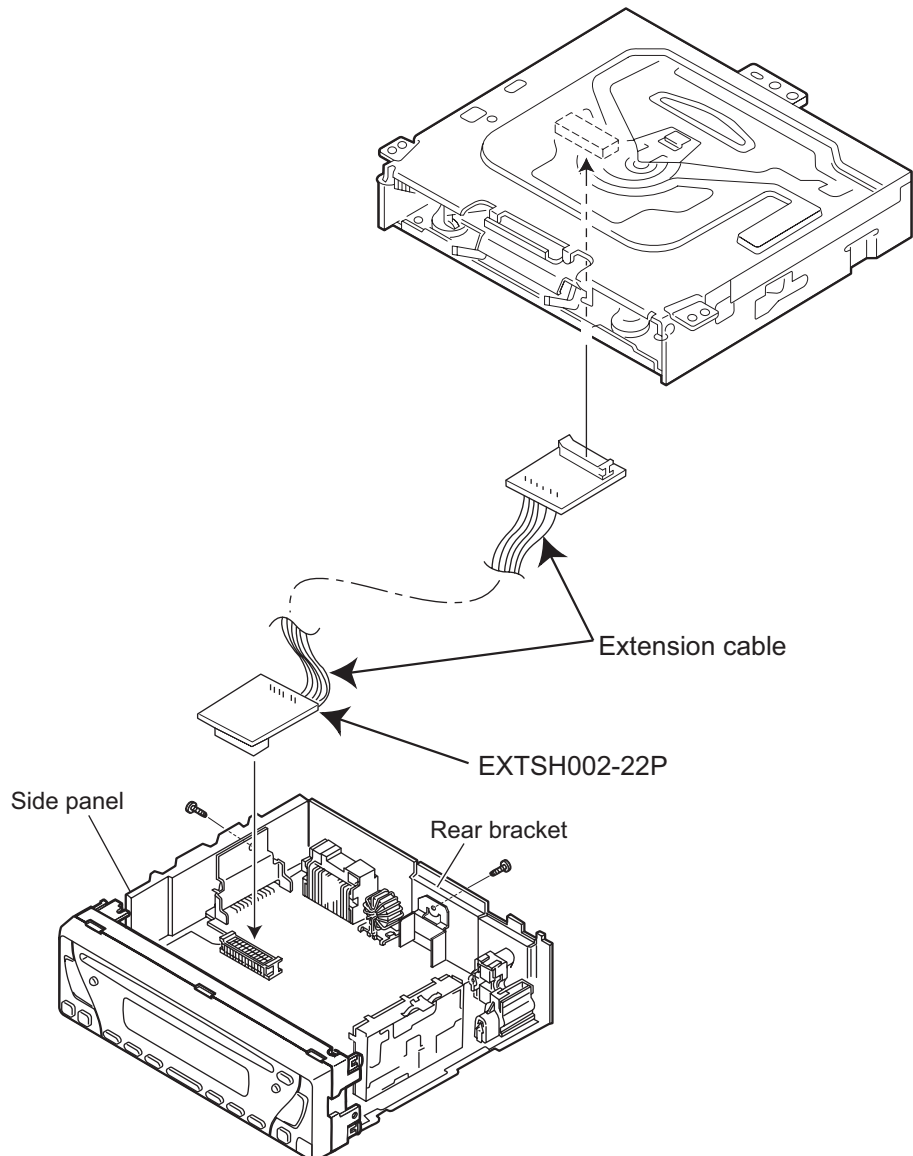
Be sure to attach the heat sink and rear bracket onto the power amplifier IC and regulator IC respectively, before supply the power. If voltage is applied without attaching these parts, the power amplifier IC and regulator IC will be destroyed by heat.

■ 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)

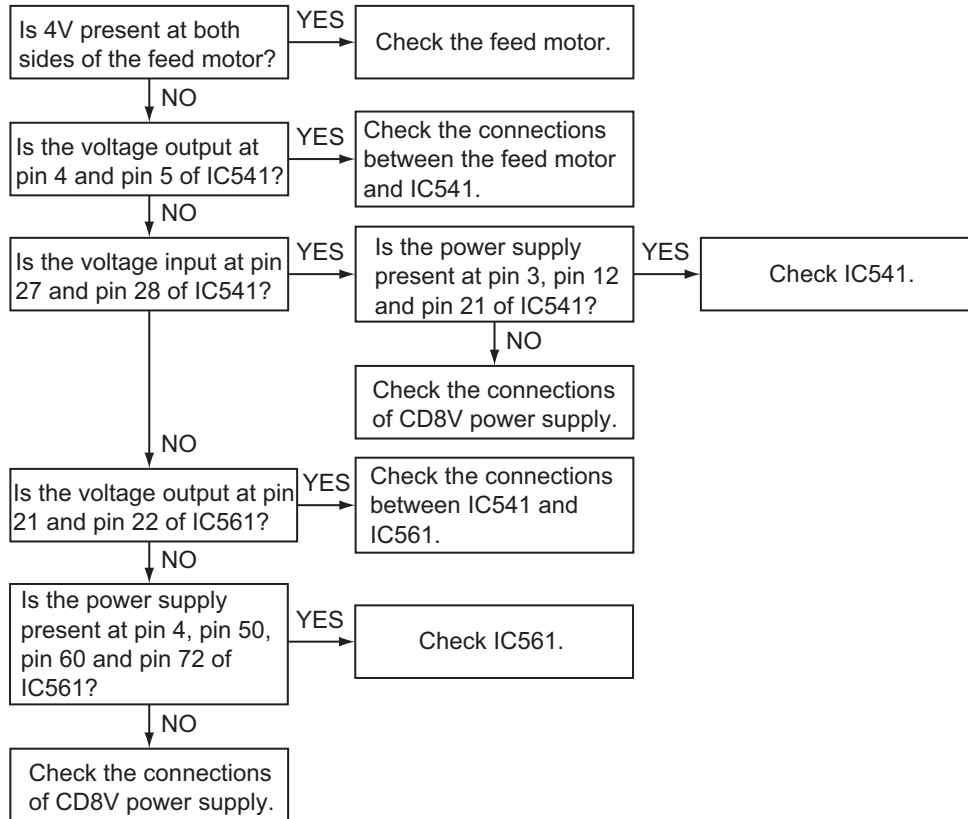
■ Dummy load

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.

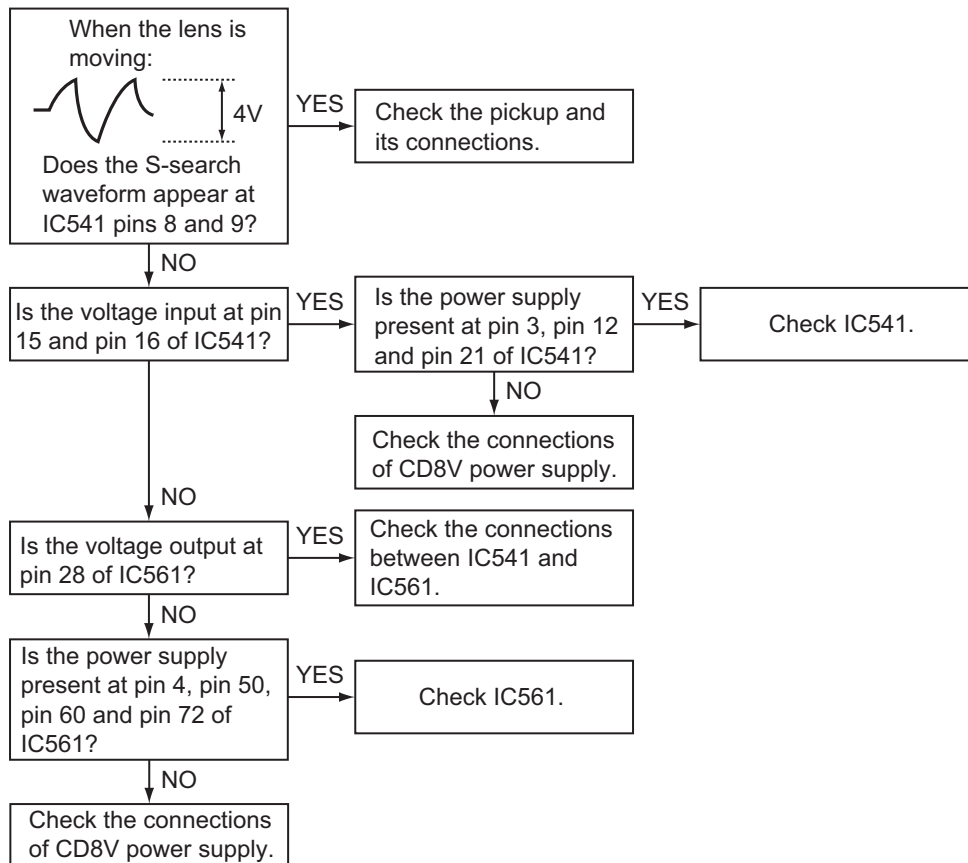


SECTION 5 TROUBLESHOOTING

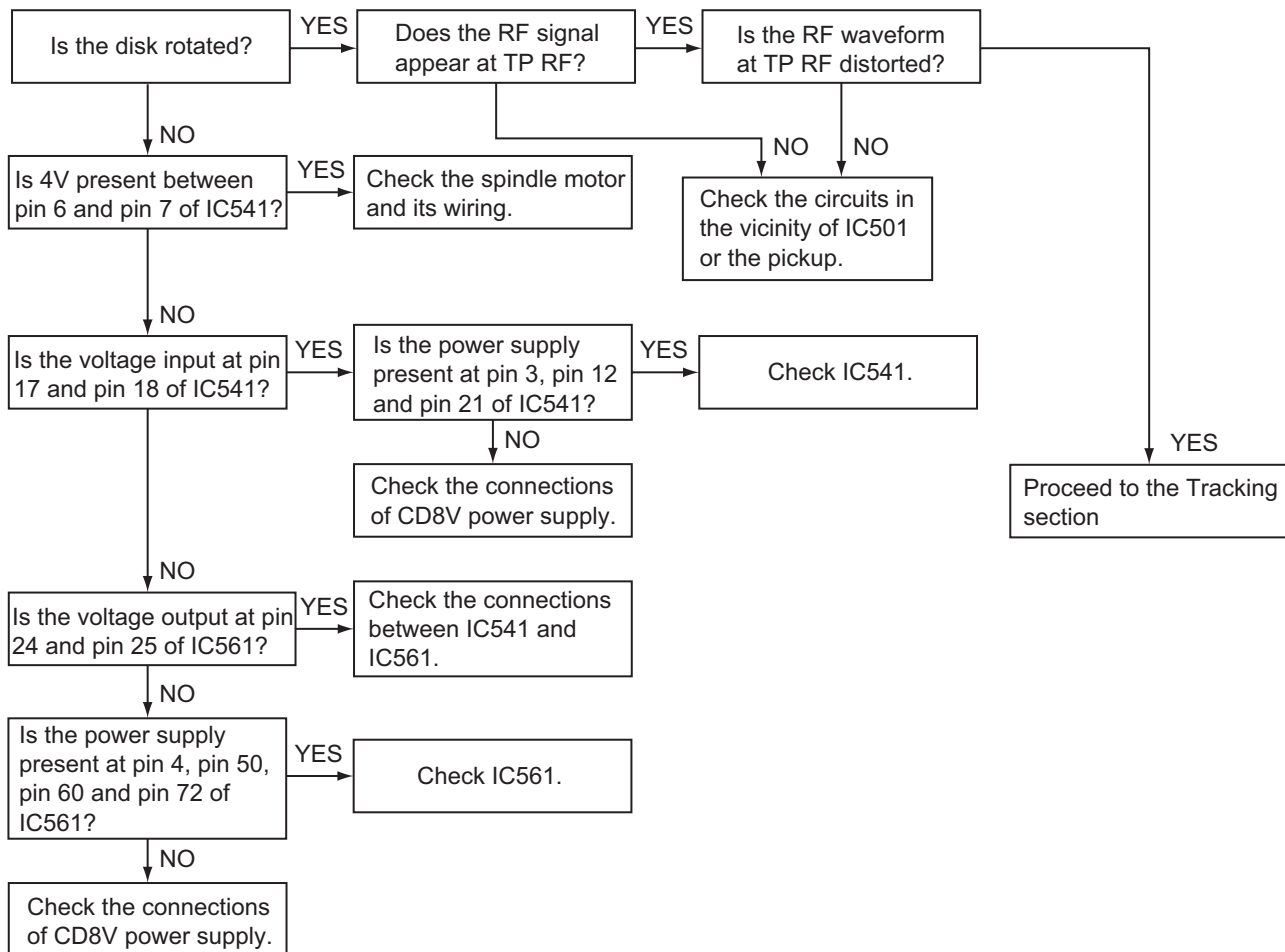
5.1 Feed section



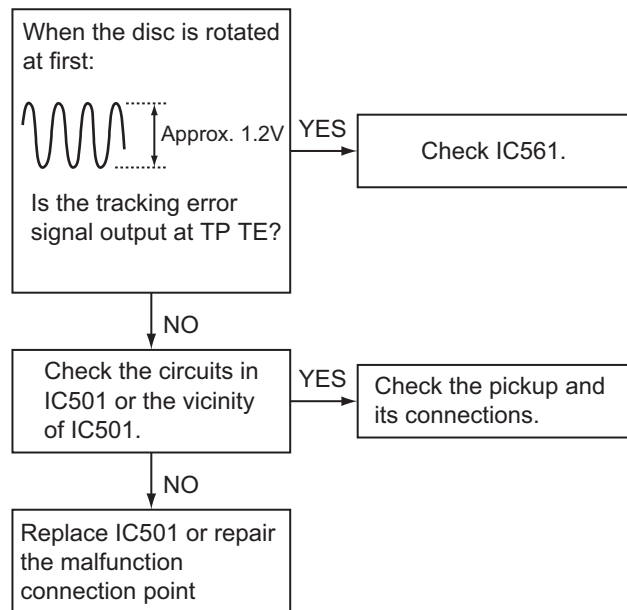
5.2 Focus section



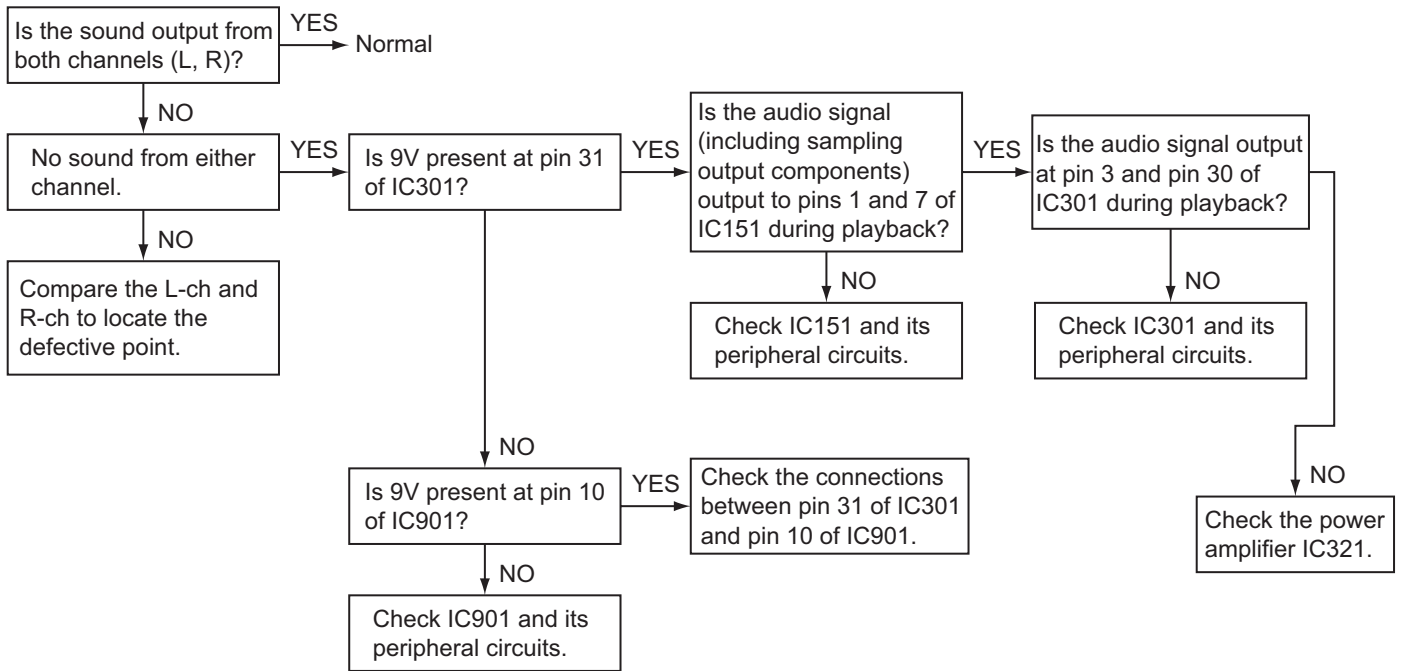
5.3 Spindle section



5.4 Tracking section



5.5 Signal processing section



5.6 Maintenance of laser pickup

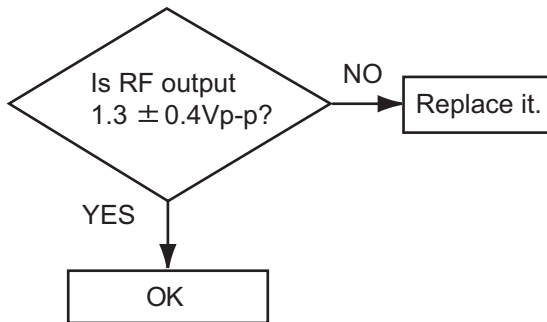
(1) Cleaning the pick up lens

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.

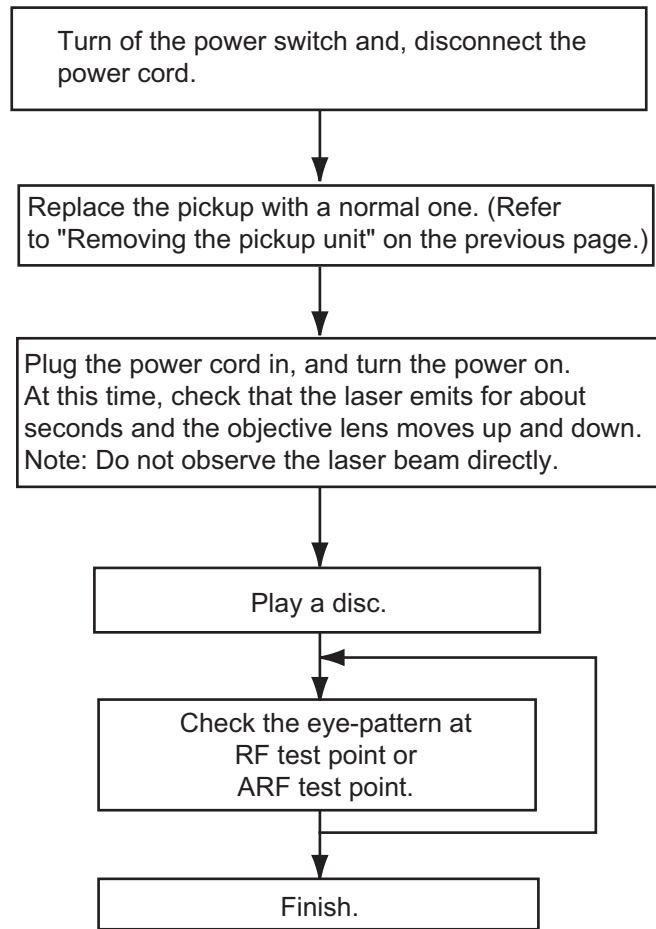


(3) Semi-fixed resistor on the APC PC board

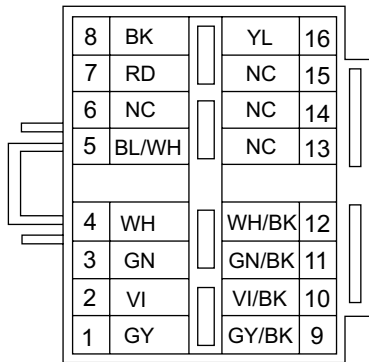
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.

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.

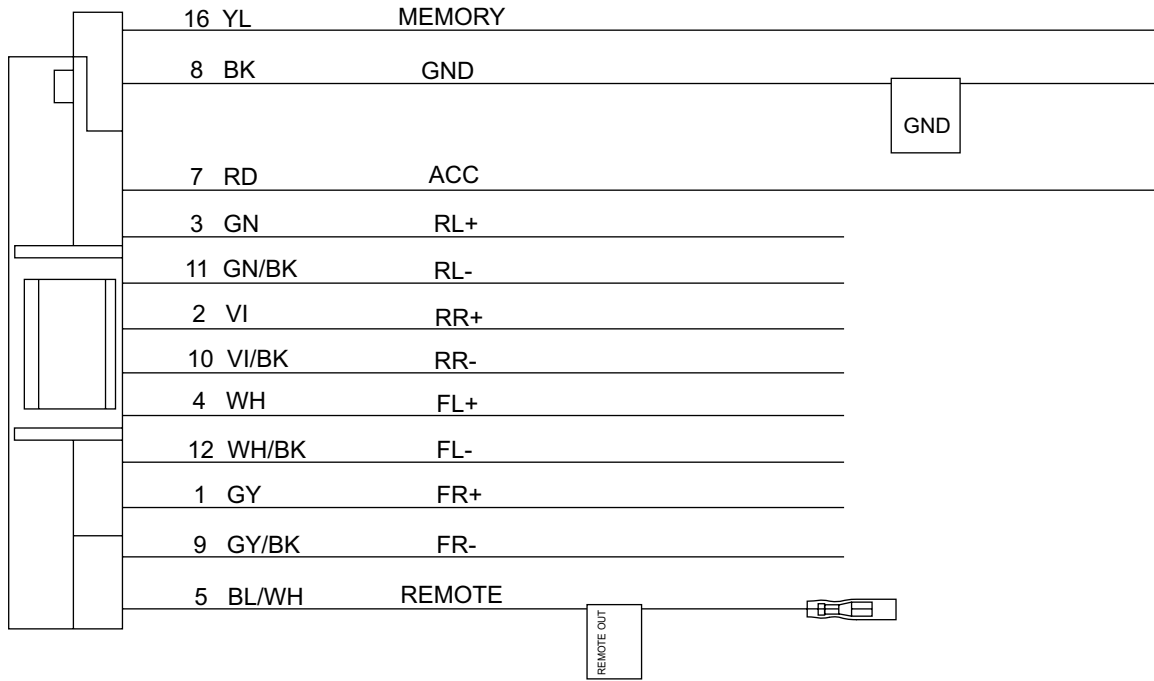
5.7 Replacement of laser pickup



5.8 16 PIN CORD DIAGRAM



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



RR	Rear Right	REMOTE	Remote out
FR	Front Right	ACC	ACC Line
FL	Front Left	MEMORY	Memory Backup Battery+
RL	Rear Left	GND	Ground



JVC

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

(No.MA216)

JVC

SCHEMATIC DIAGRAMS

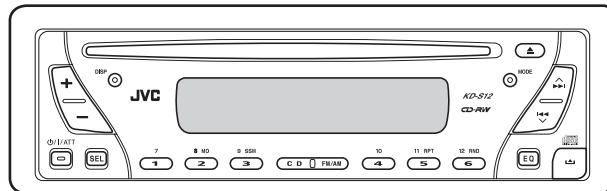
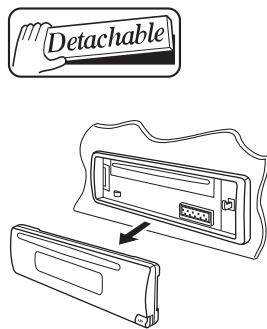
CD RECEIVER

KD-S12

CD-ROM No.SML200508

Area suffix

J ----- Northern America



CD-RW

**COMPACT
disc
DIGITAL AUDIO**




Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

Contents

Block diagram	2-1
Standard schematic diagrams	2-3
Printed circuit boards	2-9,10

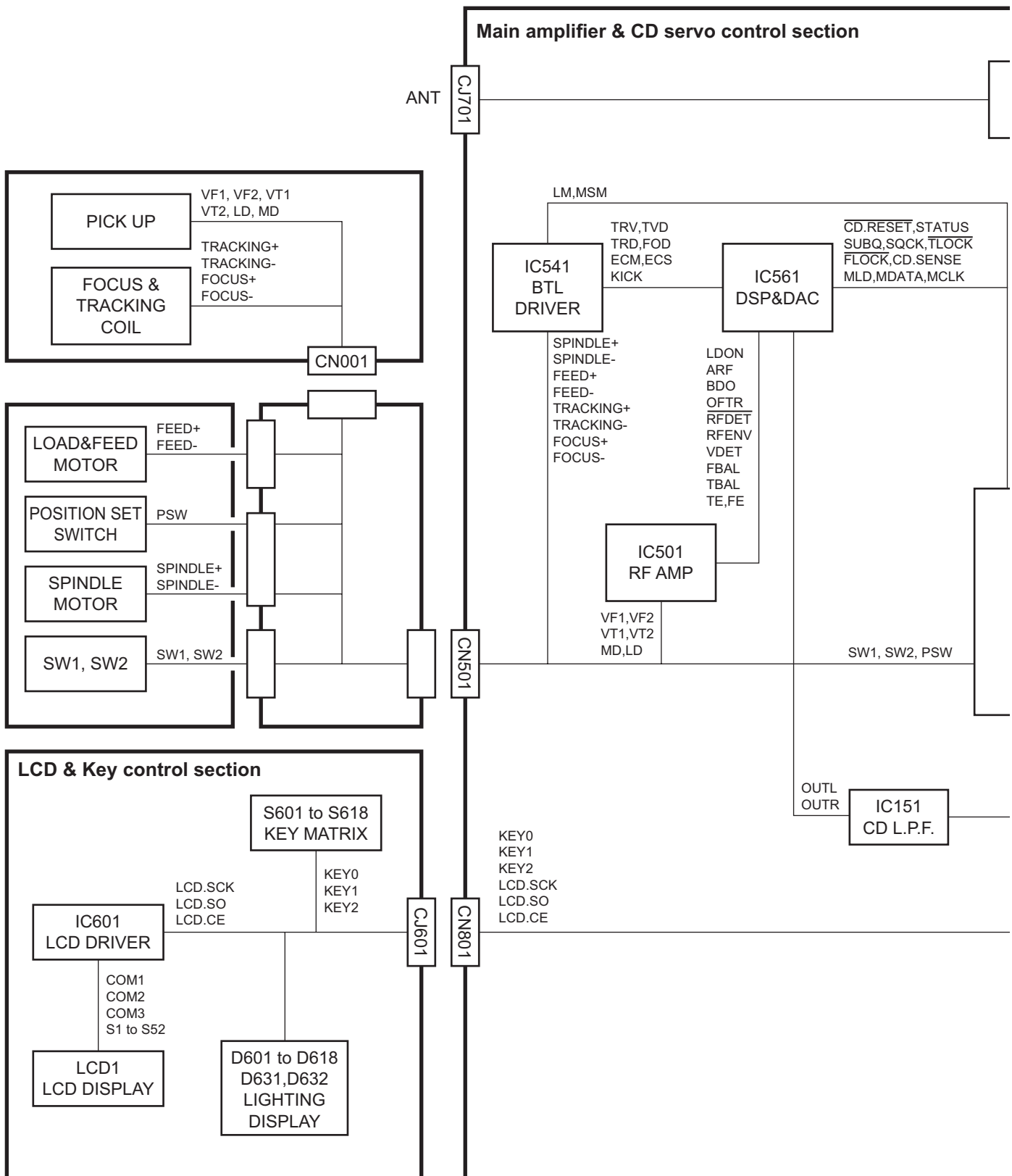
Safety precaution

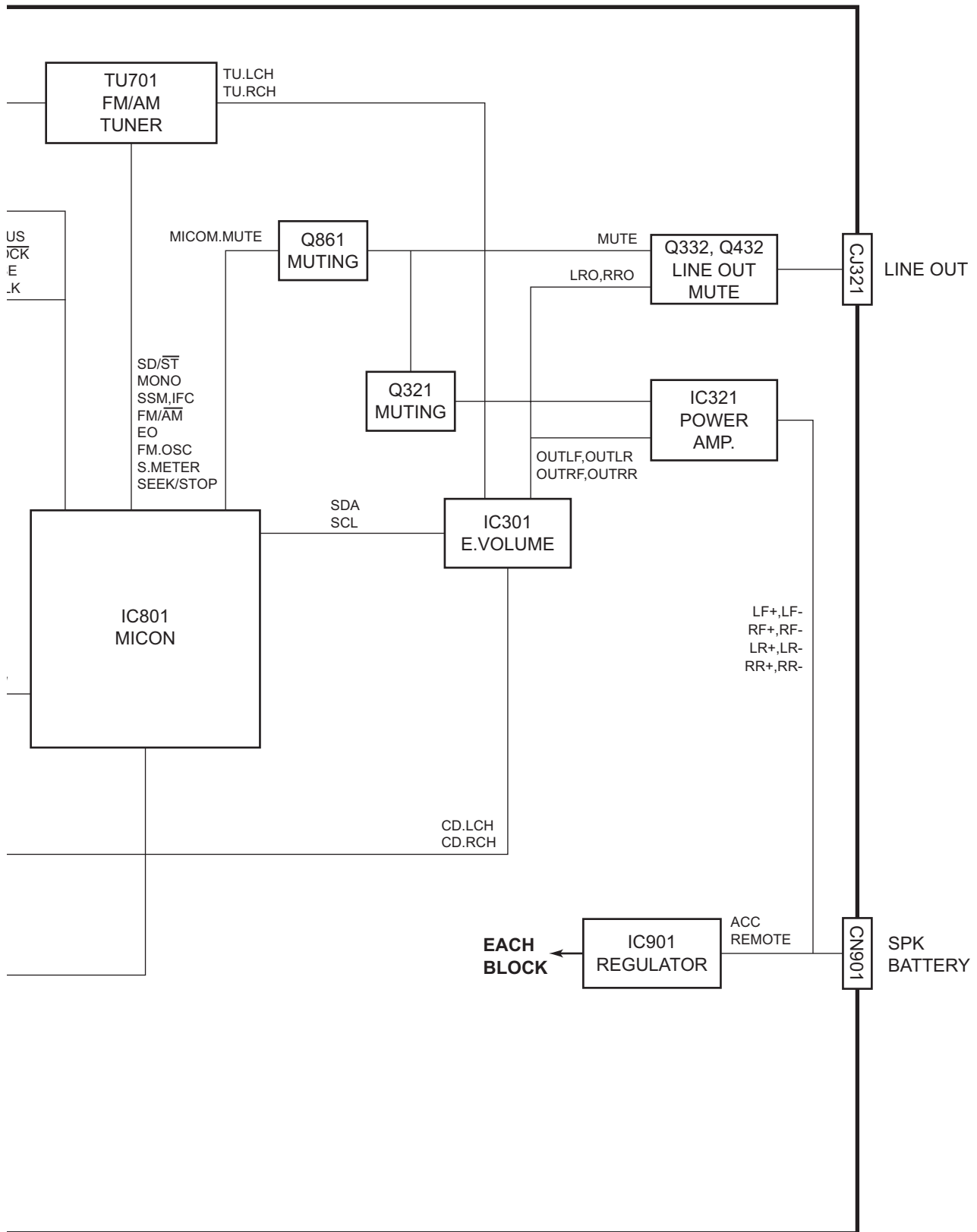
 **CAUTION** Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

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

< MEMO >

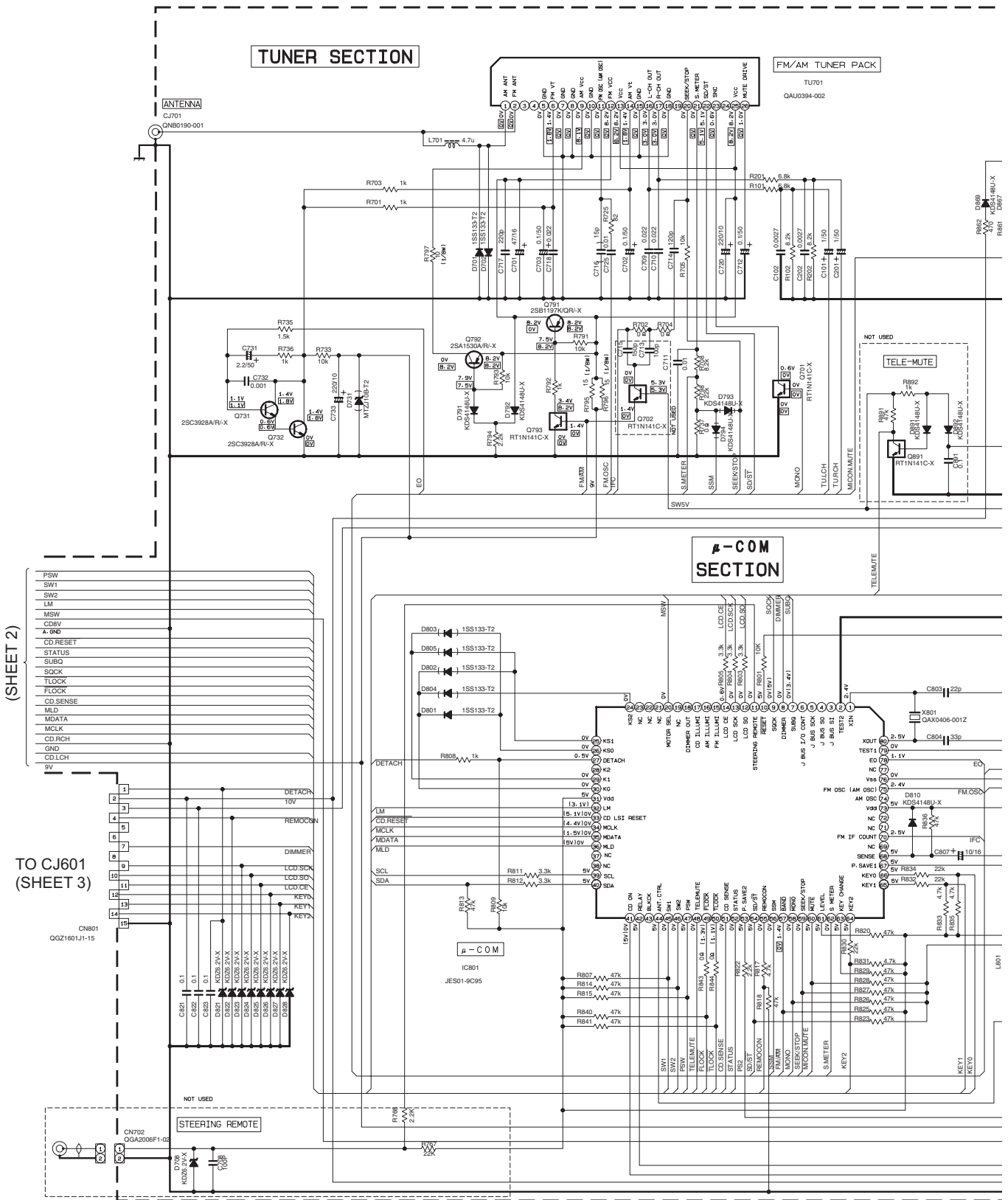
Block diagram



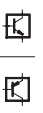


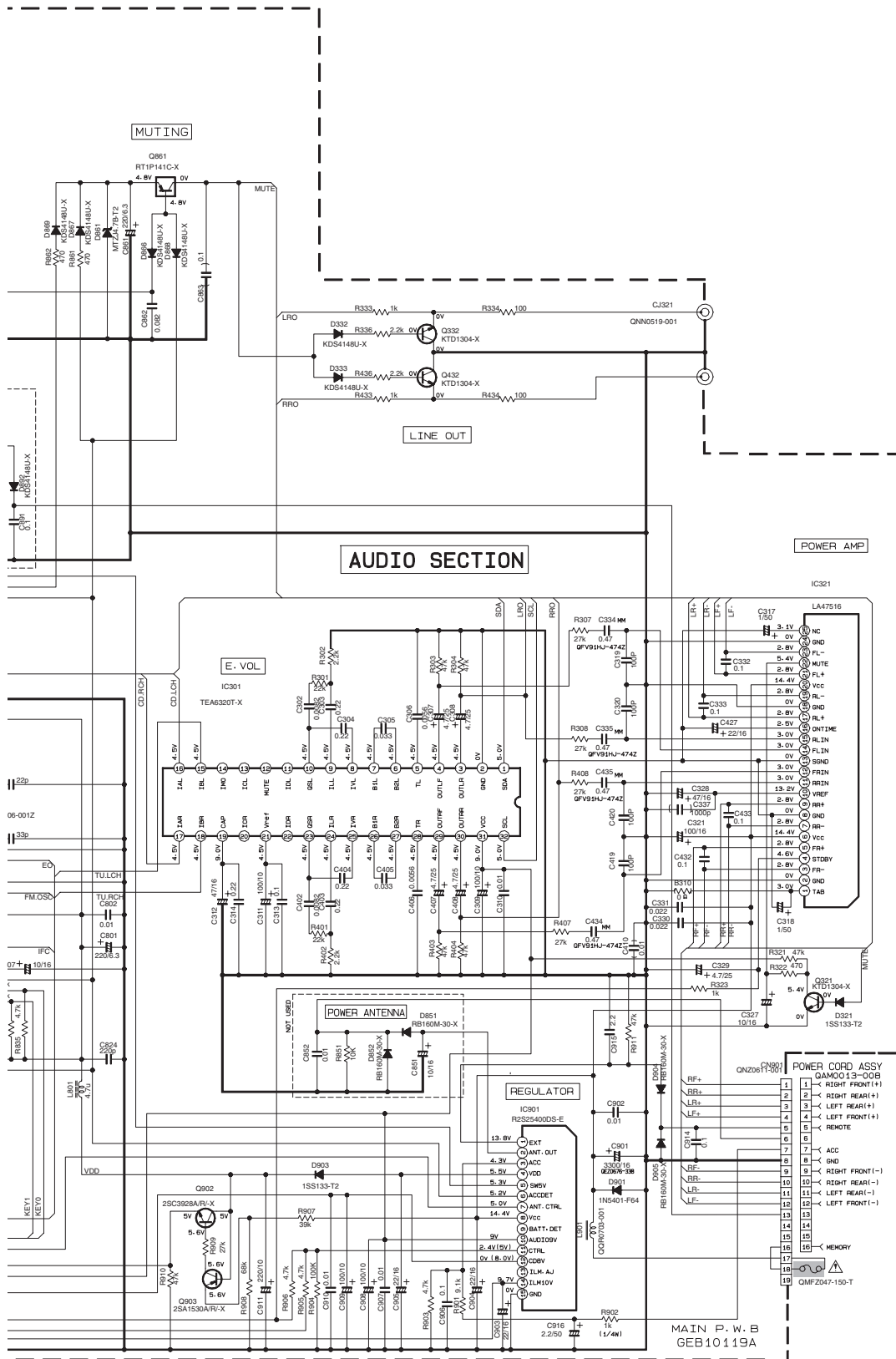
Standard schematic diagrams

■ Main amplifier section



- NOTES:
- VOLTAGE ARE DC-MEASURED WITH A DIGITAL VOLTMETER WITHOUT INPUT SIGNAL CONDITION
 — FM () AM MODE () CD MODE
 - UNLESS OTHERWISE SPECIFIED:
 ALL RESISTOR ARE 1/16W ±5% METAL GLAZE RESISTOR.
 ALL CAPACITOR ARE 50V OR 25V CERAMIC CAPACITOR.
 ALL RESISTANCE VALUES ARE 3% OHM
 ALL CAPACITANCE VALUES ARE IN (UF)(VOLTAGE)

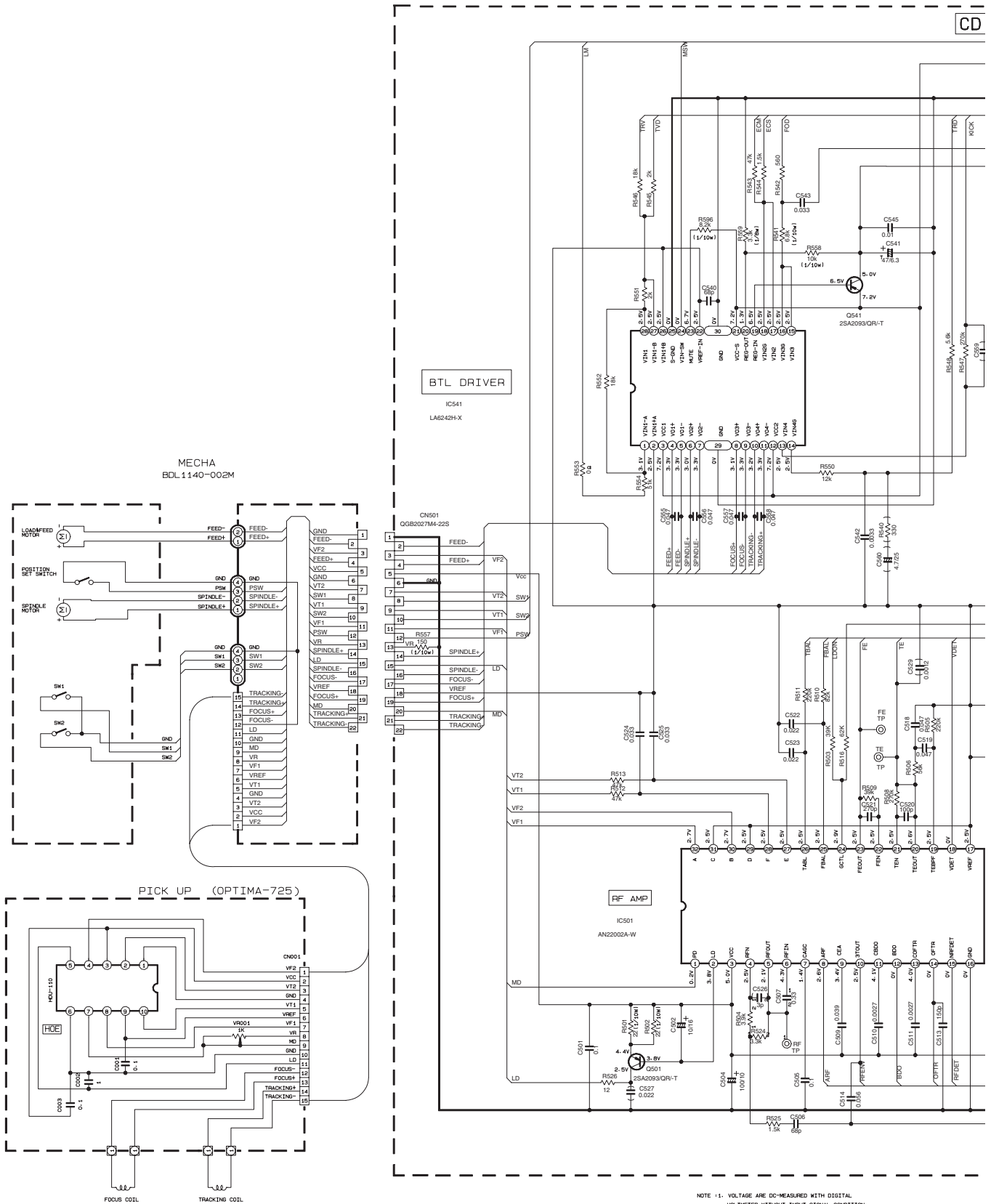




		UN2211-X
		UN2111-X

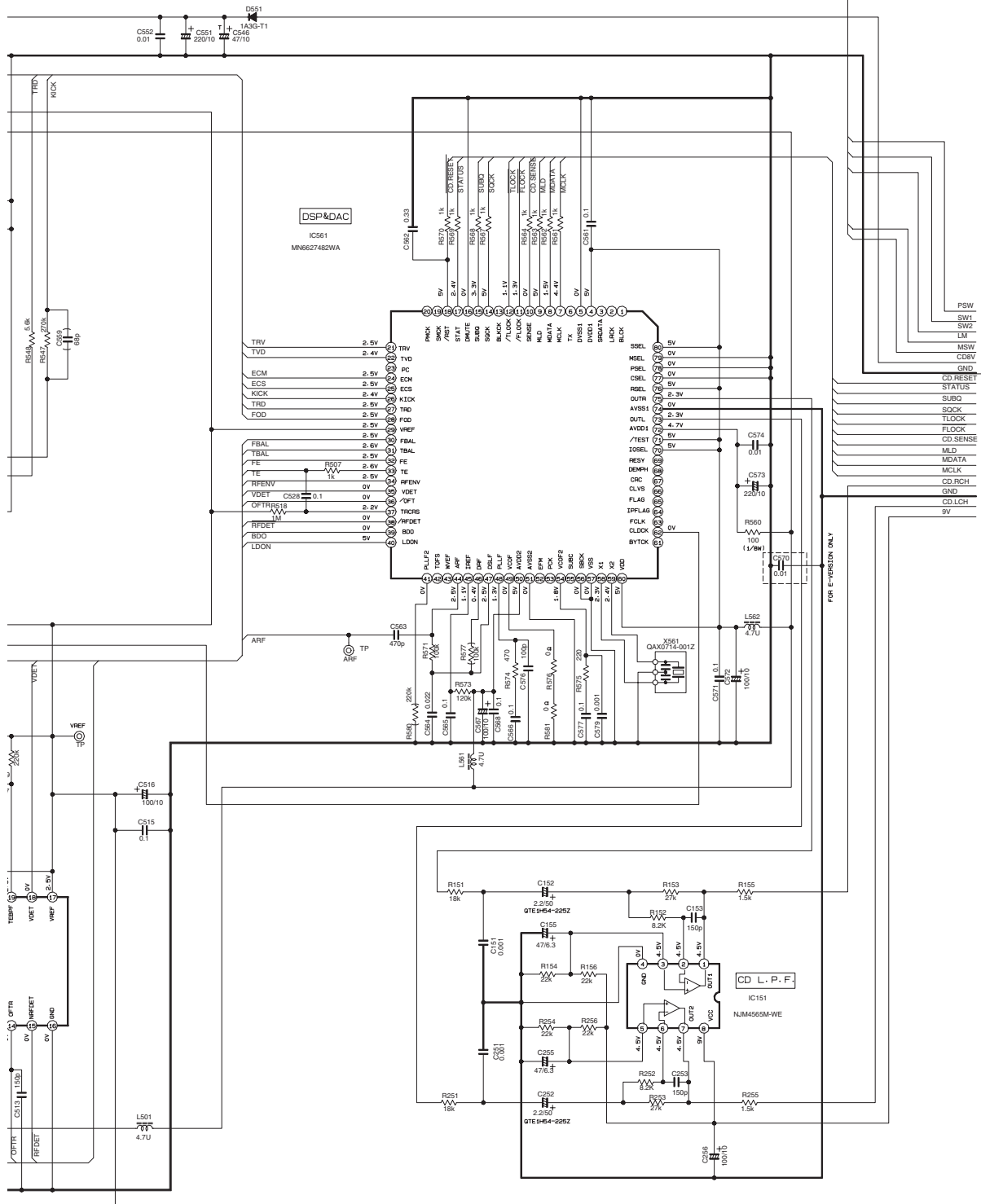
Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

CD servo control section



NOTE 1: VOLTAGE ARE DC-MEASURED WITH DIGITAL VOLTMETER WITHOUT INPUT SIGNAL CONDITION
 --- CD MODE
 2: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTORS ARE 1/4W/0.5% METAL GLAZE RESISTOR.
 ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR.
 ALL RESISTANCE VALUES ARE IN OHM.
 ALL CAPACITANCE VALUES ARE IN uF(p.p.F).
 ALL E: CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(uF) /RATED VOLTAGE(V)

CD SECTION

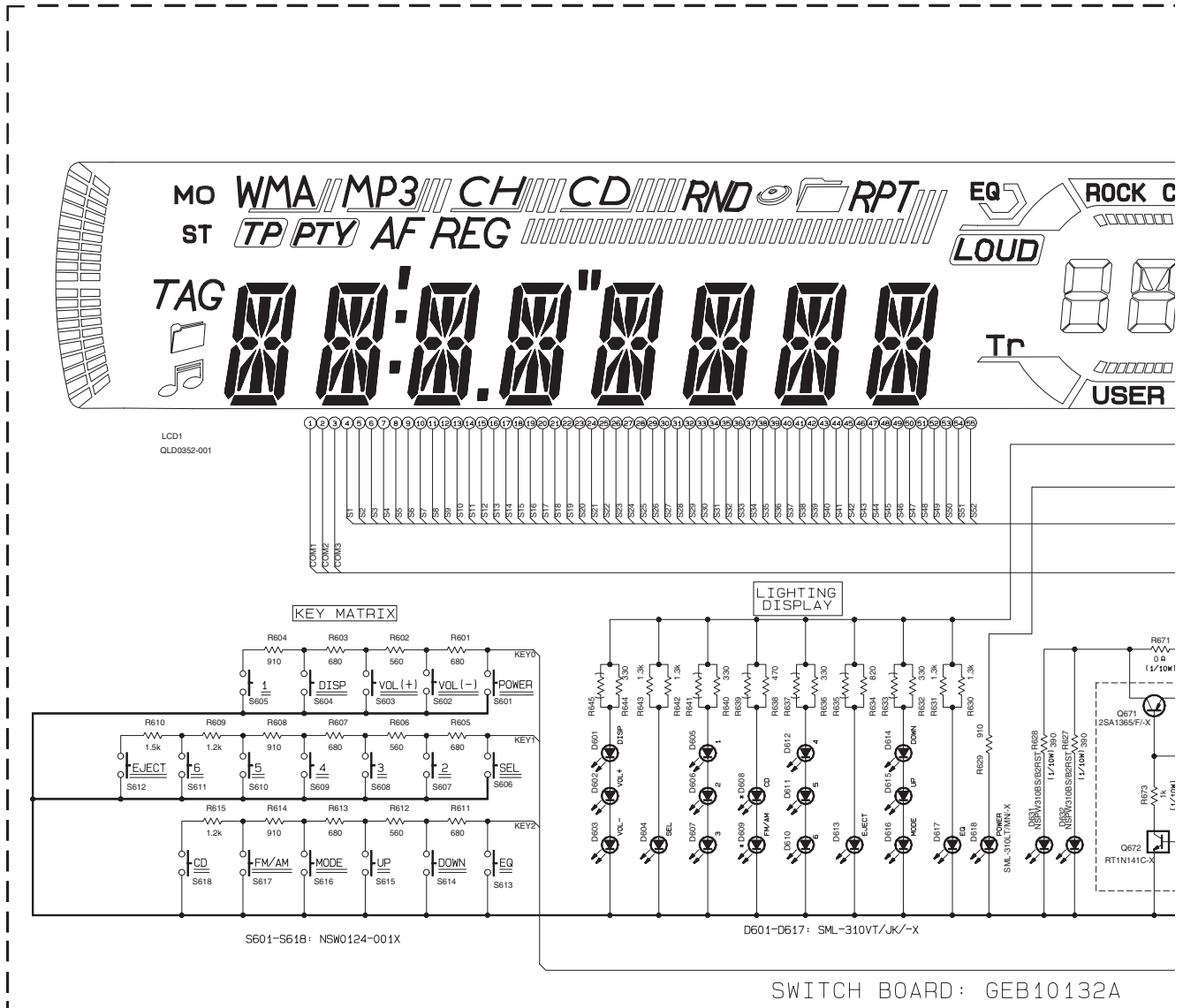


(SHEET 1)

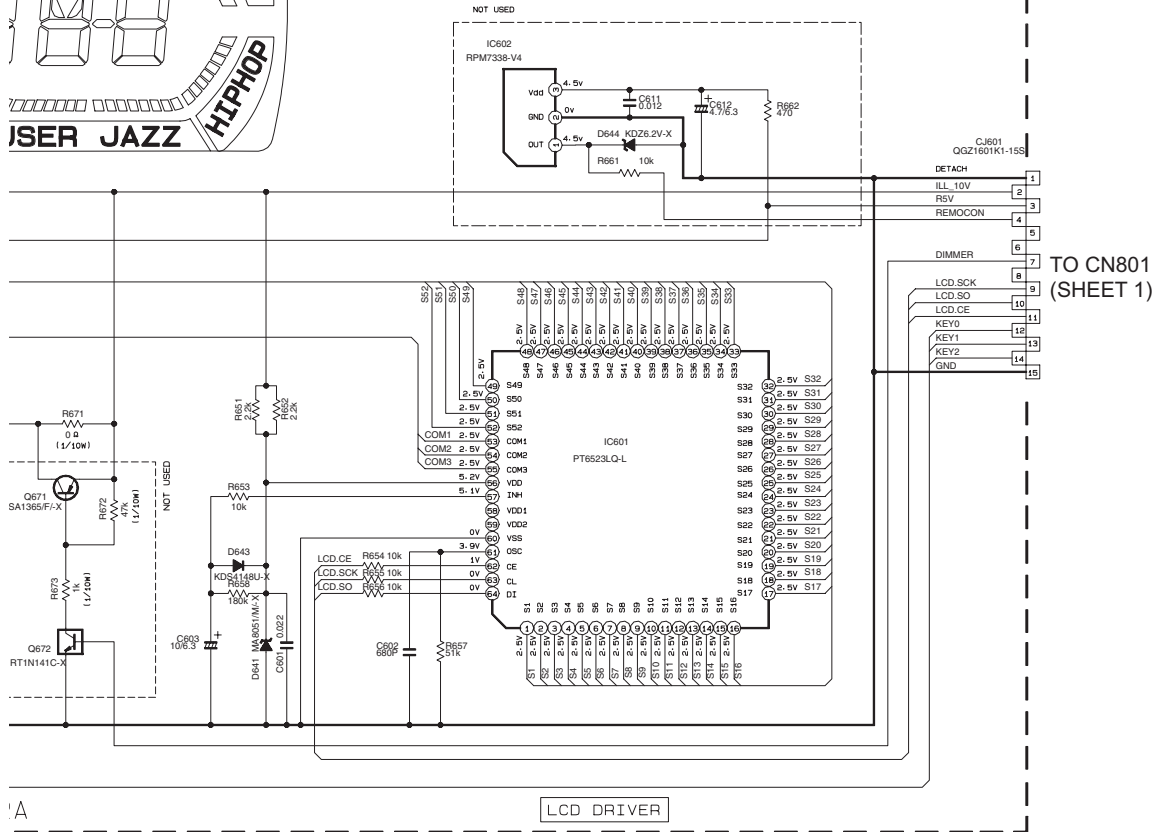
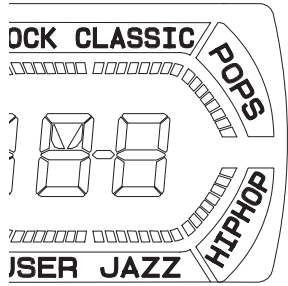
MAIN P. W. B.
GEB10119A

*RATED VOLTAGE (V)

■ LCD & Key control section



FRONT CIRCUIT



CIRCUIT BOARD SECTION

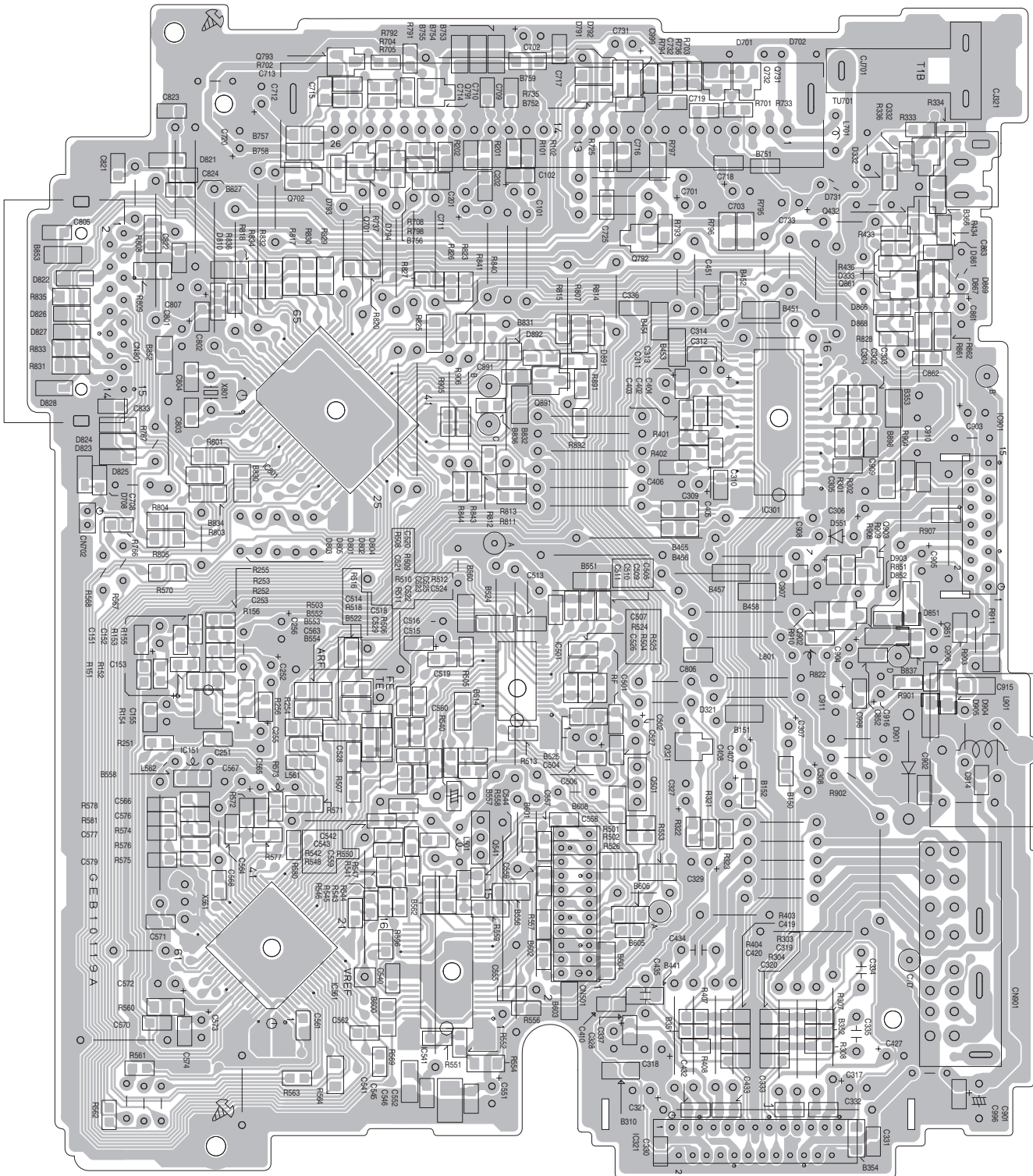
NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
2. UNLESS OTHERWISE SPECIFIED.
ALL RESISTORS ARE 1/16W METAL GLAZE RESISTORS.
ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM.
ALL CAPACITANCE VALUES ARE IN uF (P=PF)
ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(uF)/RATED VOLTAGE(V)
T --- TANTALUM CAPACITOR.
3. COMPONENTS IN () INDICATE NOT USE.

Printed circuit boards

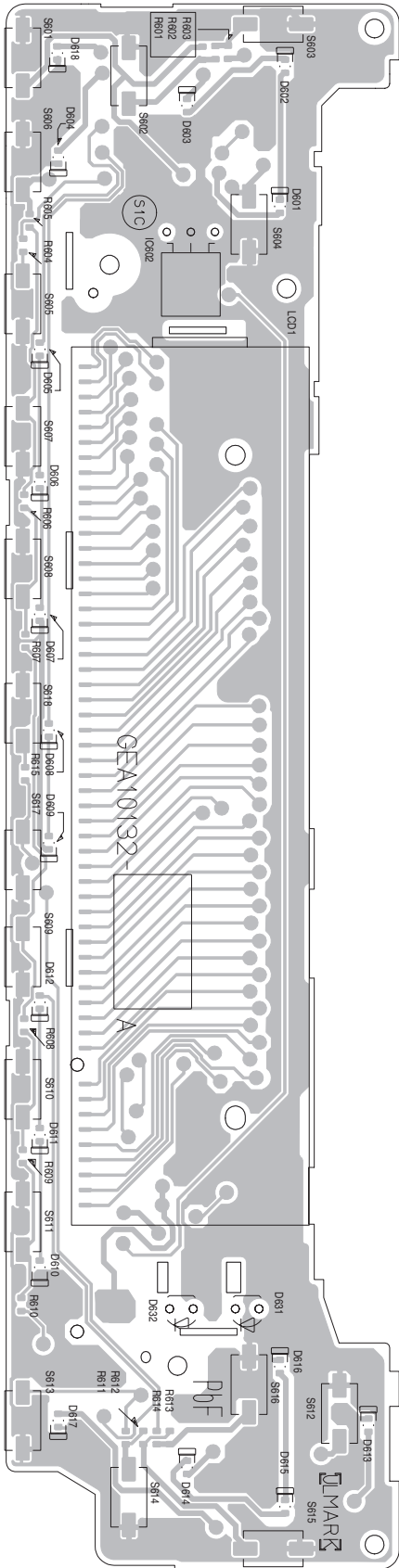
■ Main board

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

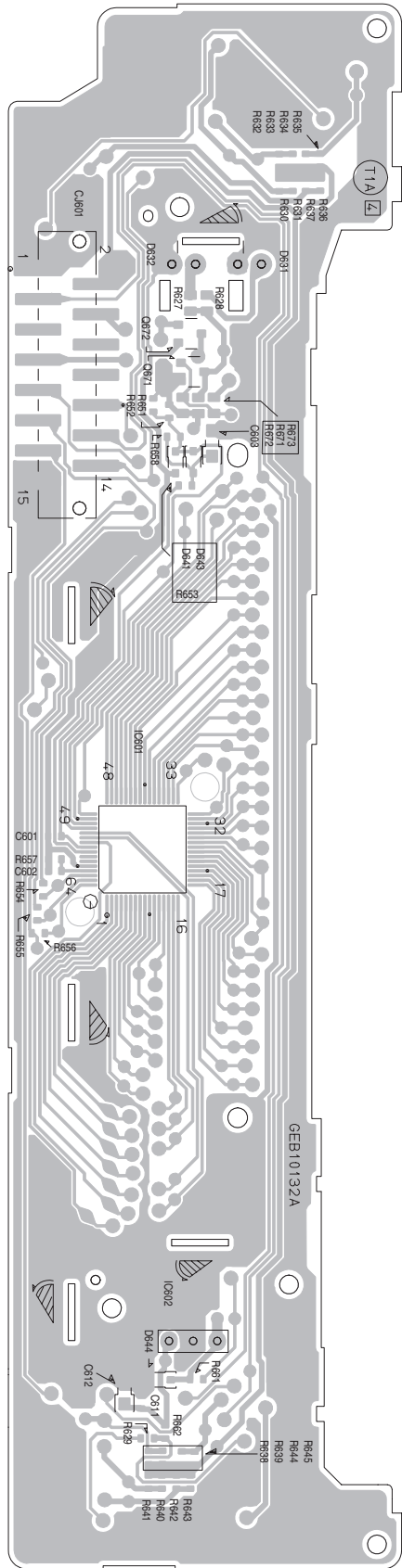


■ **Switch board** Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

Forward side



Reverse side



JVC

Victor Company of Japan, Limited

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

(No.MA216SCH)



Printed in Japan
VPT

PARTS LIST

[KD-S12]

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

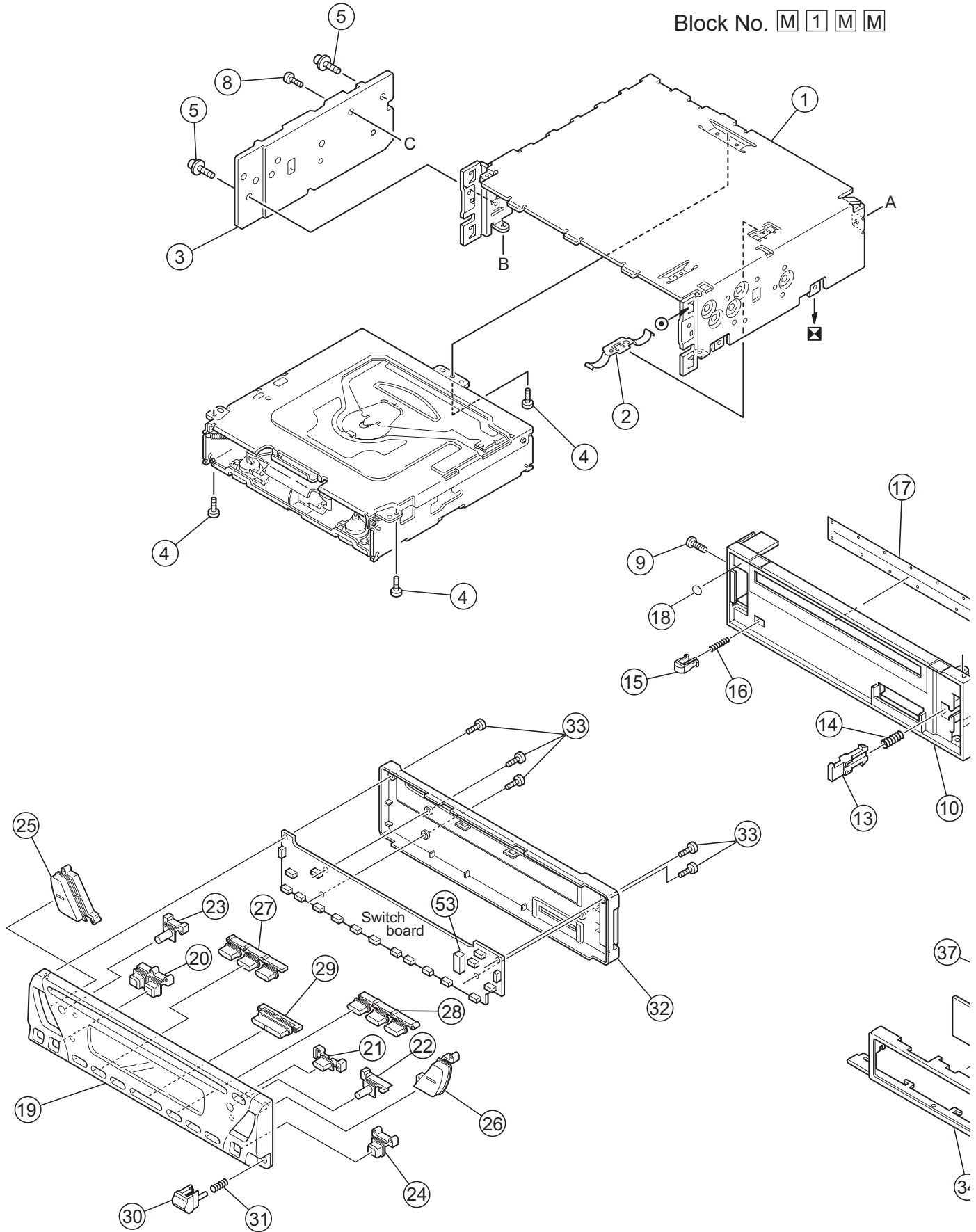
Area suffix
J ----- Northern America

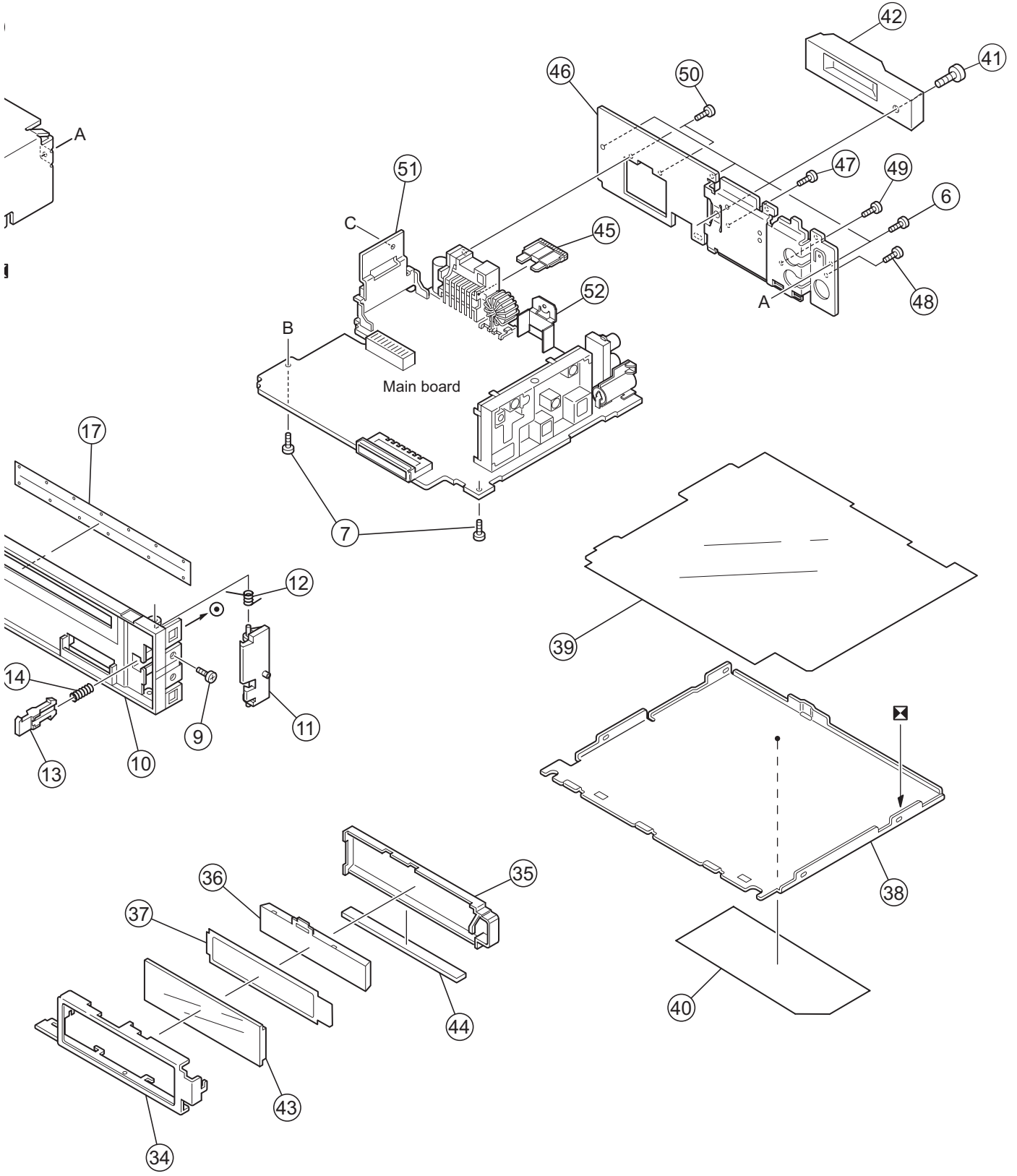
- Contents -

Exploded view of general assembly and parts list (Block No.M1) 3- 2
CD mechanism assembly and parts list (Block No.MB) 3- 6
Electrical parts list (Block No.01~02) 3- 8
Packing materials and accessories parts list (Block No.M3) 3-12

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	GE10104-001A	TOP CHASSIS		
	2	GE40135-001A	EARTH PLATE		
	3	GE30938-003A	SIDE PANEL		
	4	QYSDST2604ZA	TAP SCREW	M2.6 x 4mm(x3)	
	5	GE40235-001A	SCREW	(x2)	
	6	QYSDST2604ZA	TAP SCREW	M2.6 x 4mm(x3)	
	7	GE40235-004A	SCREW	(x2)	
	8	QYSDST2610ZA	TAP SCREW	M2.6 x 10mm	
	9	QYSDST2004ZA	TAP SCREW	M2 x 4mm(x2)	
	10	GE10103-001A	FRONT CHASSIS		
	11	GE31569-002A	LOCK LEVER		
	12	GE40269-001A	TORSION SPRING		
	13	GE31568-001A	RLS KNOB		
	14	GE40202-011A	COMP.SPRING		
	15	GE40250-001A	PANEL STOPPER		
	16	GE40202-009A	COMP.SPRING		
	17	GE40257-001A	BLIND		
	18	FSYH4036-098	SHEET		
	19	GE20176-015A	FRONT PANEL ASSY		
	20	GE31561-001A	POWER/SEL BTN		
	21	GE31572-001A	EQ BUTTON		
	22	GE31562-001A	MODE BUTTON		
	23	GE31563-001A	DISP BUTTON		
	24	GE31564-001A	EJECT BUTTON		
	25	GE31560-001A	VOL BUTTON		
	26	GE31559-001A	SEARCH BUTTON		
	27	GE31555-002A	PRESET BTN (L)		
	28	GE31556-002A	PRESET BTN (R)		
	29	GE31557-007A	D.FUNC BUTTON		
	30	GE31558-001A	DETACH BUTTON		
	31	GE40202-010A	COMP.SPRING		
	32	GE10102-002A	REAR COVER		
	33	VKZ4777-010	MINI SCREW	(x5)	
	34	GE31565-001A	LCD CASE		
	35	GE31566-001A	LENS CASE		
	36	GE31567-001A	LCD LENS		
	37	GE40248-001A	LIGHTING SHEET		
	38	GE31570-001A	BOTTOM COVER		
	39	FSMA3004-203	INSULATOR		
	40	GE31804-001A	NAME PLATE		
	41	QYSPSP5014ZA	SCREW	M5 x 14mm	
	42	GE40225-001A	CAR STEREO TAG		
	43	QLD0352-001	LCD MODULE		
	44	QNZ0442-001	LCD CONNECTOR		
△	45	QMFZ047-150-T	FUSE	15A	
	46	GE31571-005A	REAR BRACKET		
	47	QYSDST2606ZA	TAP SCREW	M2.6 x 6mm	
	48	QYSDST2606ZA	TAP SCREW	M2.6 x 6mm	
	49	QYSDSF2606ZA	TAP SCREW	M2.6 x 6mm	
	50	QYSDSF2606ZA	TAP SCREW	M2.6 x 6mm(x2)	
	51	GE40172-004A	IC BRACKET		
	52	GE40124-002A	REG BRACKET		
	53	GE30854-001A	LED HOLDER		

<MEMO>

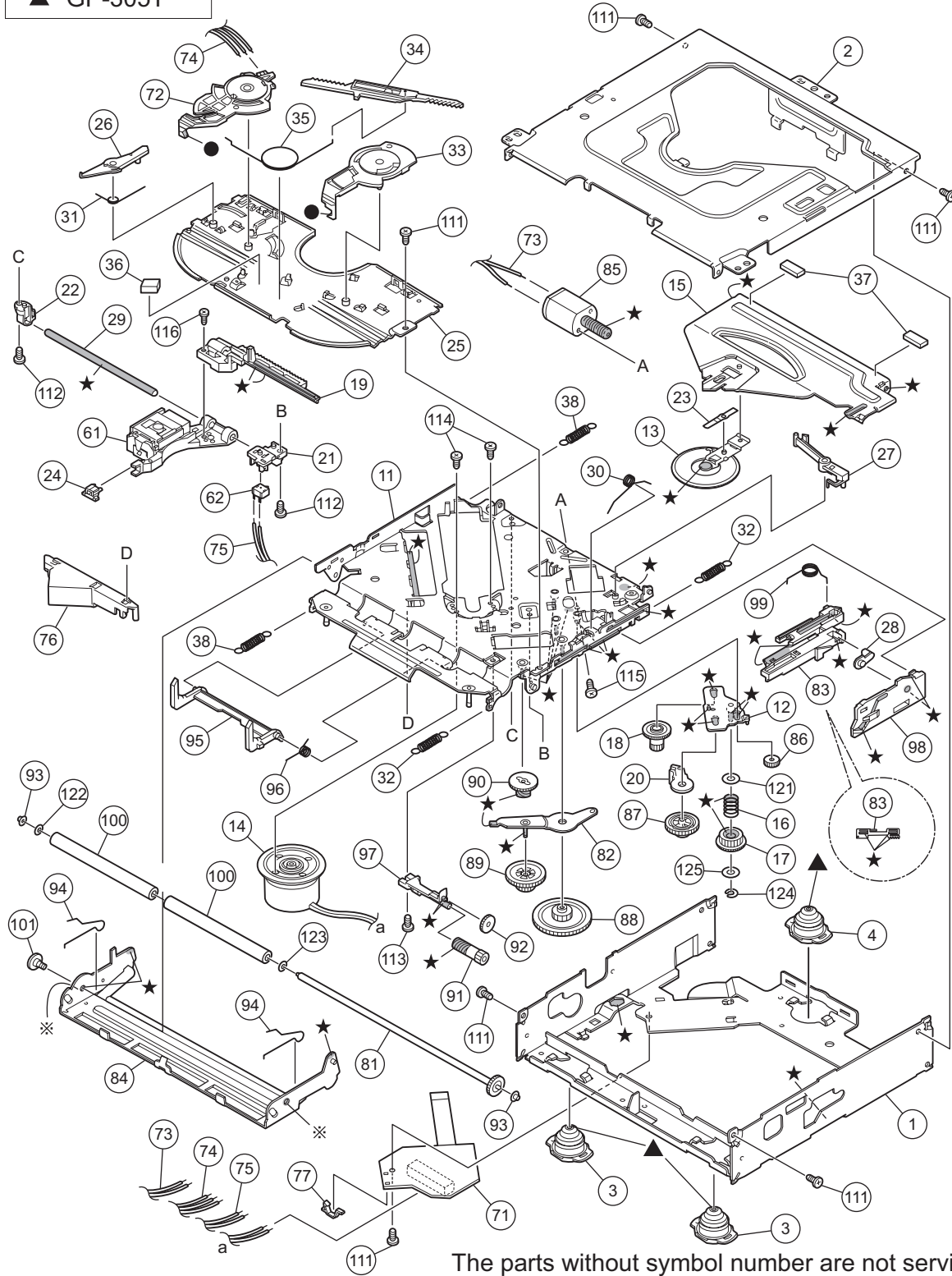
CD mechanism assembly and parts list

Grease

- ★ TNG-87
- ※ GP-501MK
- CFD-005Z
- ▲ GP-305T

TN-2001-1011

Block No. M B M M



The parts without symbol number are not service.

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		
	4	30320116T	DANPER R		
	11	303205505T	CHASSIS RIVET		
	12	303205503T	CHANGE P. RVT A		
	13	303205301T	CLAMPER ASS'Y		
	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		
	33	30320529T	SELECT ARM R		
	34	30320530T	LINK PLATE		
	35	30320531T	LINK PLATE SPG		
	36	30320523T	CUSHION F		
	37	30320524T	CUSHION R		
	38	30320539T	SUSPENSION SP L		
	61	69011614T	PICKUP OPT-725		
	62	64180406T	DET SW ESE22		
	71	303210301T	CONN PWB ASS'Y		
	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 ASS'Y		
	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	30321149T	ROLLER GUIDE		
	94	30321114T	ROLLER GUIDE SP		
	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		
	101	18211223T	COLLAR SCREW		
	111	9P0420031T	SCREW		
	112	9P0420041T	TAP.SCREW		
	113	9B0320041T	SCREW		
	114	9C0117183T	SCREW		
	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]				
△ Symbol No.	Part No.	Part Name	Description	Local
IC151	NJM4565M-WE	IC		
IC301	TEA6320T-X	IC		
IC321	LA47516	POWER IC		
IC501	AN22002A-W	IC		
IC541	LA6242H-X	IC		
IC561	MN6627482WA	IC		
IC801	JES01-9C95	IC		
IC901	R2S25400DS-E	REGULATOR IC		
Q321	KTD1304-X	TRANSISTOR		
Q332	KTD1304-X	TRANSISTOR		
Q432	KTD1304-X	TRANSISTOR		
Q501	2SA2093/QR-T	TRANSISTOR		
Q541	2SA2093/QR-T	TRANSISTOR		
Q701	RT1N141C-X	DIGI TRANSISTOR		
Q731	2SC3928A/R/-X	TRANSISTOR		
Q732	2SC3928A/R/-X	TRANSISTOR		
Q791	2SB1197K/QR/-X	TRANSISTOR		
Q792	2SA1530A/R/-X	TRANSISTOR		
Q793	RT1N141C-X	DIGI TRANSISTOR		
Q861	RT1P141C-X	DIGI TRANSISTOR		
Q902	2SC3928A/R/-X	TRANSISTOR		
Q903	2SA1530A/R/-X	TRANSISTOR		
D321	1SS133-T2	SI DIODE		
D332	KDS4148U-X	DIODE		
D333	KDS4148U-X	DIODE		
D551	1A3G-T1	SI DIODE		
D701	1SS133-T2	SI DIODE		
D702	1SS133-T2	SI DIODE		
D791	KDS4148U-X	DIODE		
D792	KDS4148U-X	DIODE		
D801	1SS133-T2	SI DIODE		
D810	KDS4148U-X	DIODE		
D821	KDZ6.2V-X	Z DIODE		
D822	KDZ6.2V-X	Z DIODE		
D823	KDZ6.2V-X	Z DIODE		
D824	KDZ6.2V-X	Z DIODE		
D825	KDZ6.2V-X	Z DIODE		
D826	KDZ6.2V-X	Z DIODE		
D827	KDZ6.2V-X	Z DIODE		
D828	KDZ6.2V-X	Z DIODE		
D861	MTZJ4.7B-T2	Z DIODE		
D866	KDS4148U-X	DIODE		
D867	KDS4148U-X	DIODE		
D868	KDS4148U-X	DIODE		
D869	KDS4148U-X	DIODE		
D901	1N5401-F64	DIODE		
D903	1SS133-T2	SI DIODE		
D904	CRS03-W	SB DIODE		
D905	CRS03-W	SB DIODE		
C101	QEJ1HM-105Z	E CAPACITOR	1uF 50V M	
C102	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C151	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C152	QTE1H54-225Z	E CAPACITOR	2.2uF 50V	
C153	NDC31HJ-151X	C CAPACITOR	150pF 50V J	
C155	QEJ1HM-105Z	E CAPACITOR	47uF 6.3V M	
C201	QEJ1HM-105Z	E CAPACITOR	1uF 50V M	
C202	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C251	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C252	QTE1H54-225Z	E CAPACITOR	2.2uF 50V	
C253	NDC31HJ-151X	C CAPACITOR	150pF 50V J	
C255	QEJ1HM-105Z	E CAPACITOR	47uF 6.3V M	
C256	QEJ1AM-107Z	E CAPACITOR	100uF 10V M	
C302	NCB31HK-822X	C CAPACITOR	8200pF 50V K	
C303	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	
C304	NCB21CK-224X	C CAPACITOR	0.22uF 16V K	
C305	NCB21HK-333X	C CAPACITOR	0.033uF 50V K	
C306	NCB31HK-562X	C CAPACITOR	5600pF 50V K	
C307	QEJ1EM-475Z	E CAPACITOR	4.7uF 25V M	
C308	QEJ1EM-475Z	E CAPACITOR	4.7uF 25V M	

△ Symbol No.	Part No.	Part Name	Description	Local
C309	QEJ1AM-107Z	E CAPACITOR	100uF 10V M	
C310	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C311	QEJ1AM-107Z	E CAPACITOR	100uF 10V M	
C312	QEJ1CM-476Z	E CAPACITOR	47uF 16V M	
C313	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C314	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	
C317	QEJ1HM-105Z	E CAPACITOR	1uF 50V M	
C318	QEJ1HM-105Z	E CAPACITOR	1uF 50V M	
C319	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C320	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C321	QEJ1CM-107Z	E CAPACITOR	100uF 16V M	
C327	QEJ1CM-106Z	E CAPACITOR	10uF 16V M	
C328	QEJ1CM-476Z	E CAPACITOR	47uF 16V M	
C329	QEJ1EM-475Z	E CAPACITOR	4.7uF 25V M	
C330	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
C331	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
C332	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C333	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C334	QFV91HJ-474Z	MF CAPACITOR	0.47uF 50V J	
C335	QFV91HJ-474Z	MF CAPACITOR	0.47uF 50V J	
C402	NCB31HK-822X	C CAPACITOR	8200pF 50V K	
C403	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	
C404	NCB21CK-224X	C CAPACITOR	0.22uF 16V K	
C405	NCB21HK-333X	C CAPACITOR	0.033uF 50V K	
C406	NCB31HK-562X	C CAPACITOR	5600pF 50V K	
C407	QEJ1EM-475Z	E CAPACITOR	4.7uF 25V M	
C408	QEJ1EM-475Z	E CAPACITOR	4.7uF 25V M	
C419	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C420	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C427	QEJ1CM-226Z	E CAPACITOR	22uF 16V M	
C432	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C433	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C434	QFV91HJ-474Z	MF CAPACITOR	0.47uF 50V J	
C435	QFV91HJ-474Z	MF CAPACITOR	0.47uF 50V J	
C501	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C502	QEJ1CM-106Z	E CAPACITOR	10uF 16V M	
C504	QEJ1AM-107Z	E CAPACITOR	100uF 10V M	
C505	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C506	NDC31HJ-680X	C CAPACITOR	68pF 50V J	
C507	NCB31AK-334X	C CAPACITOR	0.33uF 10V K	
C509	NCB31EK-393X	C CAPACITOR	0.039uF 25V K	
C510	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C511	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C513	NDC31HJ-151X	C CAPACITOR	150pF 50V J	
C514	NCB31EK-563X	C CAPACITOR	0.056uF 25V K	
C515	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C516	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C518	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C519	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C520	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C521	NDC31HJ-271X	C CAPACITOR	270pF 50V J	
C522	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
C523	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
C524	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C525	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C528	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C540	NCS31HJ-680X	C CAPACITOR	68pF 50V J	
C541	NBE20JM-476X	TA E CAPACITOR	47uF 6.3V M	
C542	NCB31EK-332X	C CAPACITOR	3300pF 25V K	
C543	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C545	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C546	NBE41AM-476X	TA E CAPACITOR	47uF 10V M	
C551	QEJ1AM-227Z	E CAPACITOR	220uF 10V M	
C552	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C555	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C556	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C557	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C558	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C561	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C562	NCB31AK-334X	C CAPACITOR	0.33uF 10V K	
C563	NCB31HK-471X	C CAPACITOR	470pF 50V K	
C564	NCB21EK-223X	C CAPACITOR	0.022uF 25V K	
C565	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C566	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C567	QEJ1AM-107Z	E CAPACITOR	100uF 10V M	
C568	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C571	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R403	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C572	QEKJ1AM-107Z	E CAPACITOR	100uF 10V M		R404	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C573	QEKJ1AM-227Z	E CAPACITOR	220uF 10V M		R407	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C574	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		R408	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C576	NDC31HJ-101X	C CAPACITOR	100pF 50V J		R433	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C577	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R434	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C579	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R436	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C701	QEKJ1CM-476Z	E CAPACITOR	47uF 16V M		R501	NRSA02J-220X	MG RESISTOR	22Ω 1/10W J	
C702	QEKJ1HM-104Z	E CAPACITOR	0.1uF 50V M		R502	NRSA02J-220X	MG RESISTOR	22Ω 1/10W J	
C703	QEKJ1HM-104Z	E CAPACITOR	0.1uF 50V M		R503	NRS181J-393X	MG RESISTOR	39kΩ 1/8W J	
C709	NCB31EK-223X	C CAPACITOR	0.022uF 25V K		R504	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
C710	NCB31EK-223X	C CAPACITOR	0.022uF 25V K		R505	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
C711	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		R506	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
C712	QEKJ1HM-104Z	E CAPACITOR	0.1uF 50V M		R507	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C714	NCS31HJ-121X	C CAPACITOR	120pF 50V J		R508	NRSA63J-274X	MG RESISTOR	270kΩ 1/16W J	
C717	NDC31HJ-221X	C CAPACITOR	220pF 50V J		R509	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
C718	NCB31EK-223X	C CAPACITOR	0.022uF 25V K		R510	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
C720	QEKJ1AM-227Z	E CAPACITOR	220uF 10V M		R511	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
C725	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		R512	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C731	QEKJ1HM-225Z	E CAPACITOR	2.2uF 50V M		R513	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C732	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R516	NRSA63J-623X	MG RESISTOR	62kΩ 1/16W J	
C733	QEKJ1AM-227Z	E CAPACITOR	220uF 10V M		R518	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
C801	QEKJ0JM-227Z	E CAPACITOR	220uF 6.3V M		R524	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
C802	NCB31EK-103X	C CAPACITOR	0.01uF 25V K		R525	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
C803	NDC31HJ-220X	C CAPACITOR	22pF 50V J		R526	NRS181J-120X	MG RESISTOR	12Ω 1/8W J	
C804	NDC31HJ-330X	C CAPACITOR	33pF 50V J		R541	NRSA02J-682X	MG RESISTOR	6.8kΩ 1/10W J	
C807	QEKJ1CM-106Z	E CAPACITOR	10uF 16V M		R542	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
C821	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R543	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C822	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R544	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
C823	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R545	NRSA63J-202X	MG RESISTOR	2kΩ 1/16W J	
C824	NCB31HK-221X	C CAPACITOR	220pF 50V K		R546	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
C861	QEKJ0JM-227Z	E CAPACITOR	220uF 6.3V M		R547	NRSA63J-274X	MG RESISTOR	270kΩ 1/16W J	
C862	NCB31EK-823X	C CAPACITOR	0.082uF 25V K		R548	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
C901	QEZ0676-338	E CAPACITOR	3300uF		R550	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
C902	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R551	NRSA63J-202X	MG RESISTOR	2kΩ 1/16W J	
C903	QEKJ1CM-226Z	E CAPACITOR	22uF 16V M		R552	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
C904	QEKJ1CM-226Z	E CAPACITOR	22uF 16V M		R553	NRS181J-0R0X	MG RESISTOR	0Ω 1/8W J	
C905	QEKJ1CM-226Z	E CAPACITOR	22uF 16V M		R554	NRS181J-513X	MG RESISTOR	51kΩ 1/8W J	
C906	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R557	NRSA02J-151X	MG RESISTOR	150Ω 1/10W J	
C907	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R558	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W J	
C908	QEKJ1AM-107Z	E CAPACITOR	100uF 10V M		R559	NRS181J-332X	MG RESISTOR	3.3kΩ 1/8W J	
C909	QEKJ1AM-107Z	E CAPACITOR	100uF 10V M		R560	NRS181J-101X	MG RESISTOR	100Ω 1/8W J	
C910	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R561	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C911	QEKJ1AM-227Z	E CAPACITOR	220uF 10V M		R562	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C914	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R563	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C915	NCB11CK-225X	C CAPACITOR	2.2uF 16V K		R564	NRS181J-102X	MG RESISTOR	1kΩ 1/8W J	
C916	QEKJ1HM-225Z	E CAPACITOR	2.2uF 50V M		R567	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J	
					R568	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J	
R101	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		R569	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R102	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		R570	NRS181J-102X	MG RESISTOR	1kΩ 1/8W J	
R151	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		R571	NRS181J-104X	MG RESISTOR	100kΩ 1/8W J	
R152	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		R573	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
R153	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R574	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R154	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R575	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R155	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R576	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R156	NRS181J-223X	MG RESISTOR	22kΩ 1/8W J		R581	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R201	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		R596	NRSA02J-822X	MG RESISTOR	8.2kΩ 1/10W J	
R202	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		R701	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R251	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		R702	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R252	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		R703	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R253	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R704	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R254	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R705	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R255	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R708	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R256	NRS181J-223X	MG RESISTOR	22kΩ 1/8W J		R725	NRSA63J-820X	MG RESISTOR	82Ω 1/16W J	
R301	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R733	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R302	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R735	NRS181J-152X	MG RESISTOR	1.5kΩ 1/8W J	
R303	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R736	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R304	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R737	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R307	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R791	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R308	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R792	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R321	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R793	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R322	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R794	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R323	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R795	NRS181J-150X	MG RESISTOR	15Ω 1/8W J	
R333	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R796	NRS181J-150X	MG RESISTOR	15Ω 1/8W J	
R334	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R797	NRS181J-100X	MG RESISTOR	10Ω 1/8W J	
R336	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R798	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R401	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R801	NRS181J-103X	MG RESISTOR	10kΩ 1/8W J	
R402	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R803	NRS181J-332X	MG RESISTOR	3.3kΩ 1/8W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R804	NRS181J-332X	MG RESISTOR	3.3kΩ 1/8W J		D607	SML-310VT/JK/-X	LED		
R805	NRS181J-332X	MG RESISTOR	3.3kΩ 1/8W J		D608	SML-310VT/JK/-X	LED		
R807	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J		D609	SML-310VT/JK/-X	LED		
R808	NRS181J-102X	MG RESISTOR	1kΩ 1/8W J		D610	SML-310VT/JK/-X	LED		
R809	NRS181J-103X	MG RESISTOR	10kΩ 1/8W J		D611	SML-310VT/JK/-X	LED		
R811	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		D612	SML-310VT/JK/-X	LED		
R812	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		D613	SML-310VT/JK/-X	LED		
R813	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		D614	SML-310VT/JK/-X	LED		
R814	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		D615	SML-310VT/JK/-X	LED		
R815	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		D616	SML-310VT/JK/-X	LED		
R817	NRS181J-472X	MG RESISTOR	4.7kΩ 1/8W J		D617	SML-310VT/JK/-X	LED		
R818	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J		D618	SML-310LT/MN/-X	LED		
R820	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J		D631	NSPW310BS/B2RST	LED		
R822	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		D632	NSPW310BS/B2RST	LED		
R823	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		D641	MA8051/M/-X	Z DIODE		
R825	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J		D643	KDS4148U-X	DIODE		
R826	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R827	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		C601	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
R828	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		C602	NCS31HJ-681X	C CAPACITOR	680pF 50V J	
R829	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J		C603	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
R830	NRS181J-223X	MG RESISTOR	22kΩ 1/8W J						
R831	NRS181J-472X	MG RESISTOR	4.7kΩ 1/8W J		R601	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R832	NRS181J-223X	MG RESISTOR	22kΩ 1/8W J		R602	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R833	NRS181J-472X	MG RESISTOR	4.7kΩ 1/8W J		R603	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R834	NRS181J-223X	MG RESISTOR	22kΩ 1/8W J		R604	NRSA63J-911X	MG RESISTOR	910Ω 1/16W J	
R835	NRS181J-472X	MG RESISTOR	4.7kΩ 1/8W J		R605	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R836	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R606	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R840	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R607	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R841	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R608	NRSA63J-911X	MG RESISTOR	910Ω 1/16W J	
R843	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R609	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R844	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R610	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R861	NRS181J-471X	MG RESISTOR	470Ω 1/8W J		R611	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R862	NRS181J-471X	MG RESISTOR	470Ω 1/8W J		R612	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R901	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J		R613	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R902	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J		R614	NRSA63J-911X	MG RESISTOR	910Ω 1/16W J	
R903	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R615	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R904	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R627	NRSA02J-391X	MG RESISTOR	390Ω 1/10W J	
R905	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R628	NRSA02J-391X	MG RESISTOR	390Ω 1/10W J	
R906	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R629	NRSA63J-911X	MG RESISTOR	910Ω 1/16W J	
R907	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J		R630	NRSA63J-132X	MG RESISTOR	1.3kΩ 1/16W J	
R908	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J		R631	NRSA63J-132X	MG RESISTOR	1.3kΩ 1/16W J	
R909	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R632	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R910	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R634	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R911	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J		R636	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
					R638	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
L501	QQL231K-4R7Y	INDUCTOR I/M	4.7uH K		R640	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
L561	QQL231K-4R7Y	INDUCTOR I/M	4.7uH K		R642	NRSA63J-132X	MG RESISTOR	1.3kΩ 1/16W J	
L562	QQL231K-4R7Y	INDUCTOR I/M	4.7uH K		R643	NRSA63J-132X	MG RESISTOR	1.3kΩ 1/16W J	
L701	QQL231K-4R7Y	INDUCTOR I/M	4.7uH K		R644	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
L801	QQL231K-4R7Y	INDUCTOR I/M	4.7uH K		R651	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
L901	QQR0703-001	CHOKE COIL			R652	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
					R653	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CJ321	QNN0519-001	PIN JACK			R654	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CJ701	QNB0190-001	CAR ANT JACK			R655	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CN501	QGB2027M4-22S	CONNECTOR	B-B (1-22)		R656	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CN801	QGZ1601J1-15	CONNECTOR	(1-15)		R657	NRSA63J-513X	MG RESISTOR	51kΩ 1/16W J	
CN901	QNZ0611-001	16P CONNECTOR			R658	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J	
TU701	QAU0394-002	TUNER PACK			R671	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
X561	QAX0714-001Z	C RESONATOR	16.000MHz						
X801	QAX0406-001Z	CRYSTAL	4.500MHz		CJ601	QGZ1601K1-15S	CONNECTOR	(1-15)	
					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		
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					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		

Switch board

Block No. [0][2]

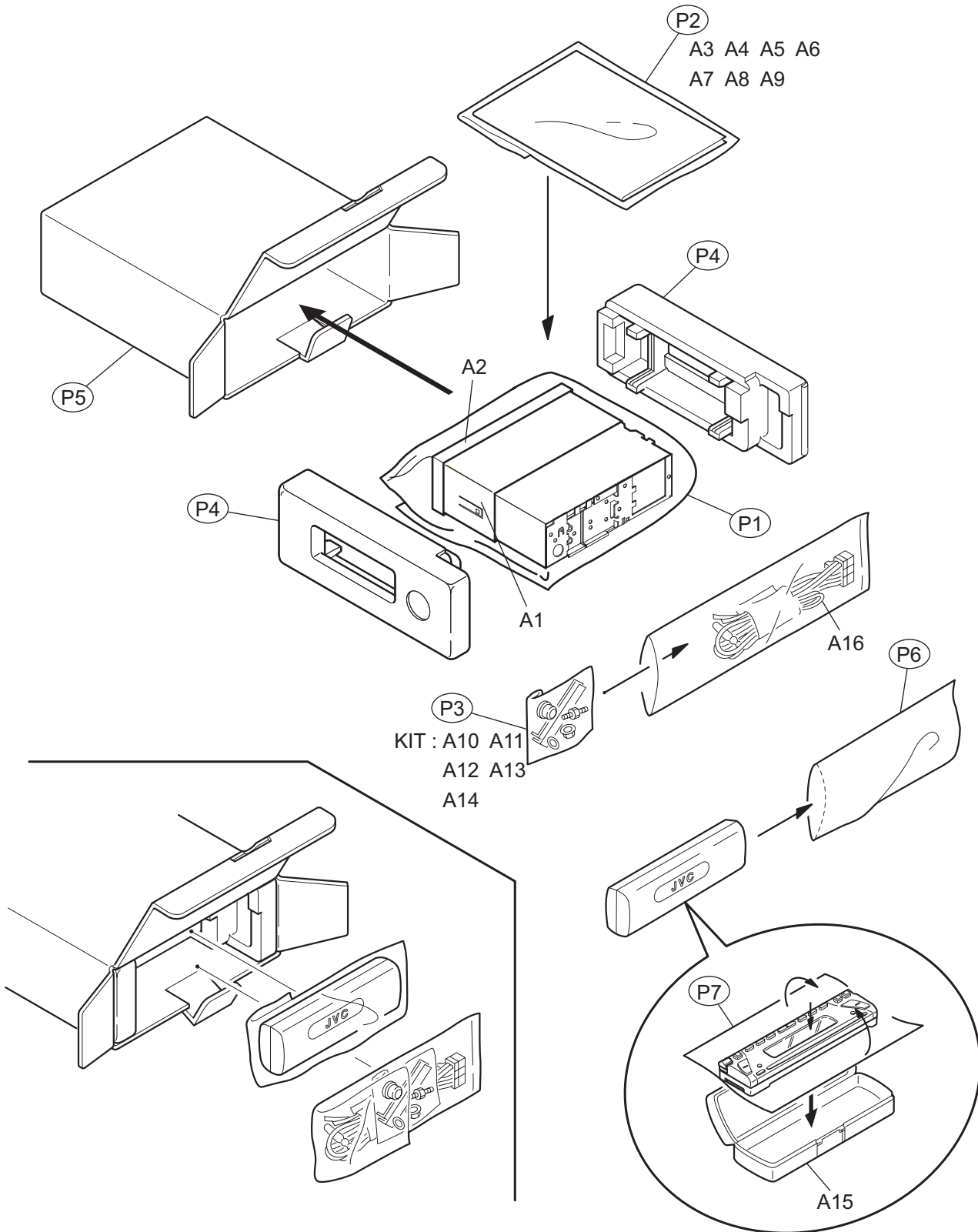
△ Symbol No.	Part No.	Part Name	Description	Local
IC601	PT6523LQ-L	LCD DRIVER		
D601	SML-310VT/JK/-X	LED		
D602	SML-310VT/JK/-X	LED		
D603	SML-310VT/JK/-X	LED		
D604	SML-310VT/JK/-X	LED		
D605	SML-310VT/JK/-X	LED		
D606	SML-310VT/JK/-X	LED		

<MEMO>

Packing materials and accessories parts list

Block No. **M** **3** **M** **M**

No additional / supplemental order of WARRANTY CARDS are available.



Packing and Accessories

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

△ Symbol No.	Part No.	Part Name	Description	Local
A 1	GE20137-003A	MOUNTING SLEEVE		
A 2	GE20135-011A	TRIM PLATE		
A 3	GET0317-001A	INSTR BOOK	ENG SPA	
A 4	GET0317-002A	INSTALL MANUAL		
A 5	GET0222-001A	TAG CAUTION SH		
A 6	LVT0717-001B	TROUBLE SHEET(C		
A 7	-----	WARRANTY CARD	BT-52006-2	
A 8	-----	WARRANTY CARD	BT-51018-4	
A 9	BT-51034-2	REGISTRATION CARD		
A 10	VKZ4027-202	PLUG NUT		
A 11	VKH4871-003	MOUNT BOLT		
A 12	VKZ4328-003	LOCK NUT		
A 13	QYWWS53A008ZA	WASHER	0mm/5.3mm x	
A 14	GE40130-002A	HOOK	(x2)	
A 15	FSJB3002-00C	HARD CASE		
A 16	QAM0013-008	16P CORD ASSY		
KIT	SRW-385U	SCREW PARTS KIT	A10 A11 A12 A13 A14	
P 1	QPC03004315P	POLY BAG	30cm x 43cm	
P 2	FSPG4002-001	POLY BAG		
P 3	QPA00801205	POLY BAG	8cm x 12cm	
P 4	GE10070-003A	EPS CUSHION		
P 5	GE31809-001A	CARTON		
P 6	QPA01003003	POLY BAG	10cm x 30cm	
P 7	FSYH4036-068	SHEET		