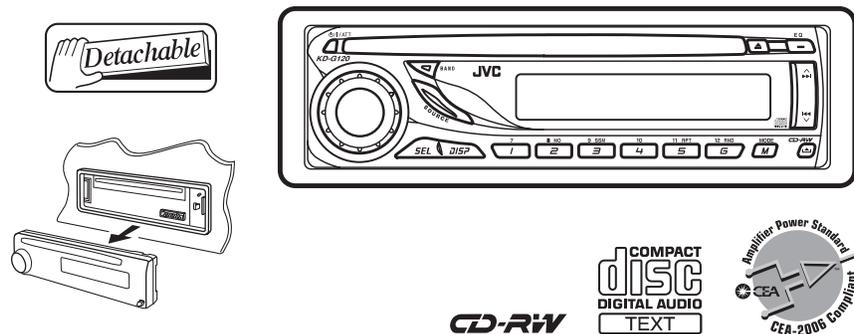


# JVC

## SERVICE MANUAL

### CD RECEIVER

## KD-G179UR



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

### TABLE OF CONTENTS

1	PRECAUTIONS .....	1-3
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# SPECIFICATION

<b>AUDIO AMPLIFIER SECTION</b>		
Power Output		17 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
Subwoofer-Out Level/Impedance		2.0 V/20 kΩ load (full scale)
<b>TUNER SECTION</b>		
Frequency Range	FM	87.5 MHz to 107.9 MHz (with channel interval set to 100 kHz or 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
<b>CD PLAYER SECTION</b>		
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
<b>GENERAL</b>		
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.)		1.2 kg (2.6 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

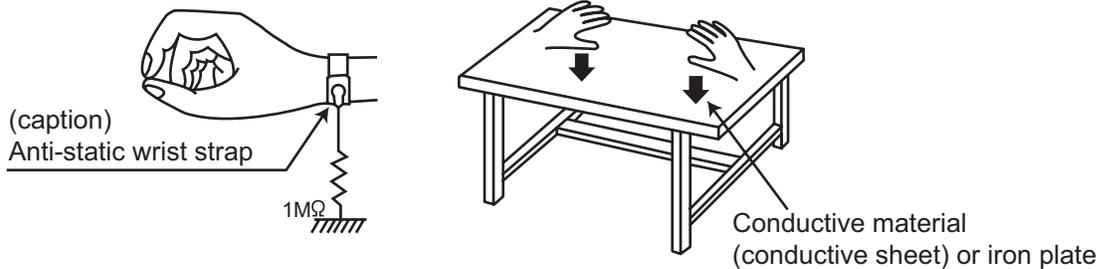
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as CD players. Be careful to use proper grounding in the area where repairs are being performed.

(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.

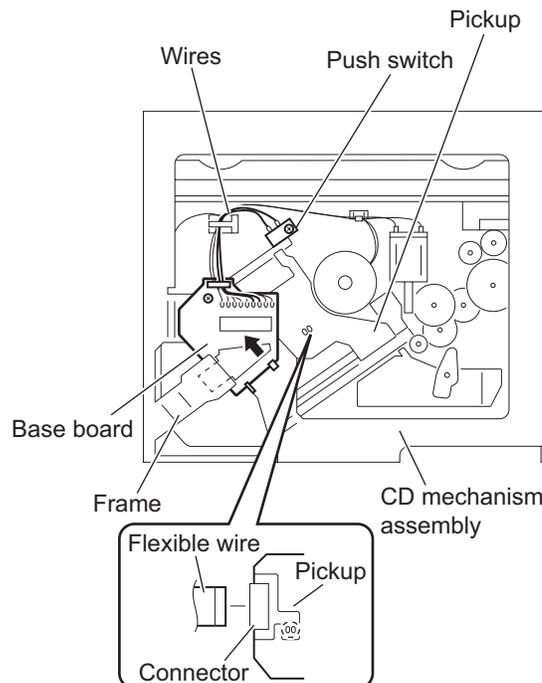
## 1.3 Handling the traverse unit (optical pickup)

- (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.



## 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**

#### **2.1 CD mechanism**

For the CD mechanism, please refer mechanism manual TN2007-1001 (No. MY003).

## 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 and remove the front panel assembly.

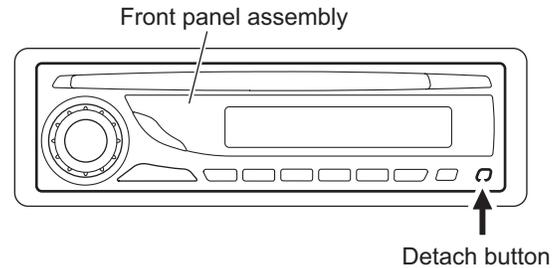


Fig.1

#### 3.1.2 Removing the bottom cover (See Fig.2)

- (1) Turn the main body up side down.
- (2) Insert a screwdriver under the joints to release the two joints **a** on the left side, two joints **b** on the right side and joint **c** on the back side of the main body, then remove the bottom cover from the main body.

**Note:**

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

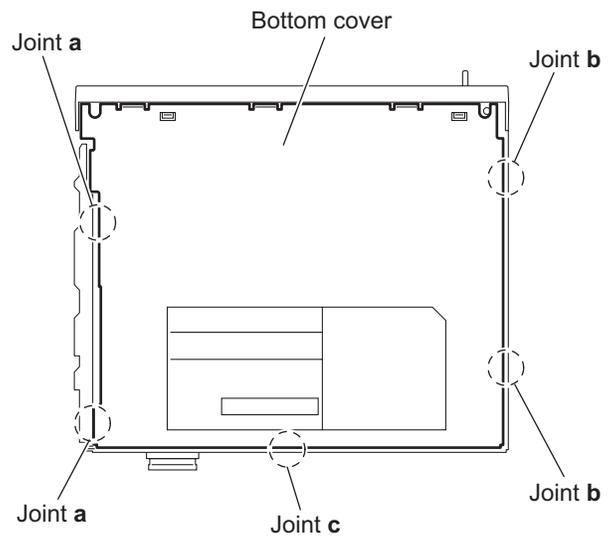


Fig.2

#### 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.

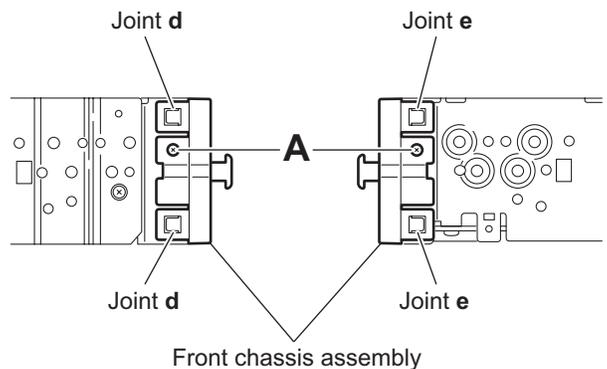


Fig.3

### 3.1.4 Removing the side panel (See Fig.4)

#### Reference:

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.

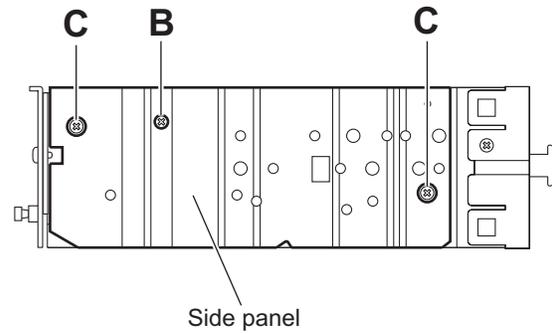


Fig.4

### 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.

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

- Remove the front panel assembly, bottom cover and side panel.

#### Reference:

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. (See Fig.6.)
- (3) Disconnect the connector [CN501](#) on the main board from the main body 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".)

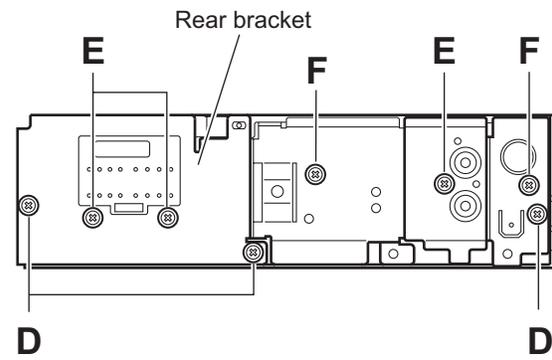


Fig.5

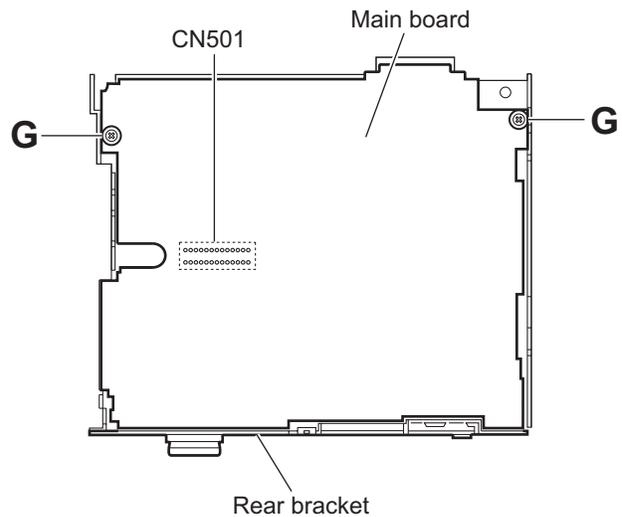


Fig.6

### 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.

#### Reference:

Remove the front chassis assembly as required.

- Remove the three screws **H** attaching the CD mechanism assembly on the top chassis.
- Take out the CD mechanism assembly.

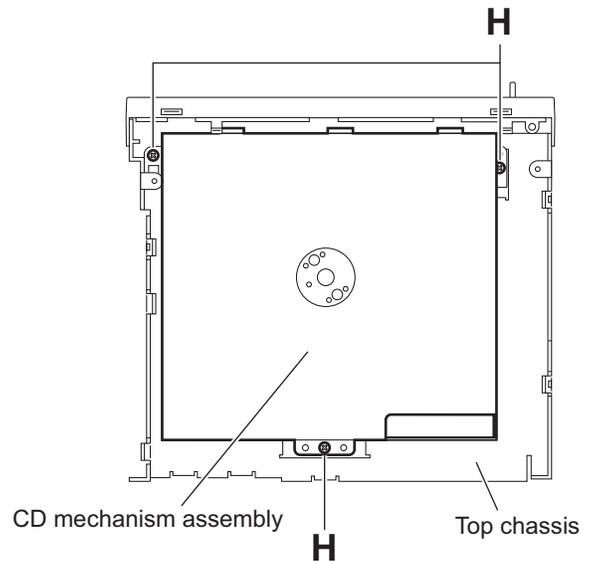


Fig.7

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

- Remove the front panel assembly.
  - Remove the four screws **J** on the back side of the front panel assembly. (See Fig.8.)
  - Release the joints **f** and remove the rear cover. (See Fig.9.)
  - Release the joint **g** and take out the switch board from the front panel assembly. (See Fig.10.)

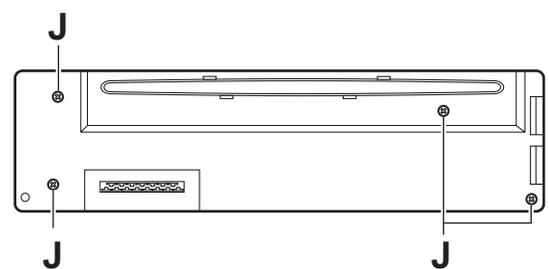


Fig.8

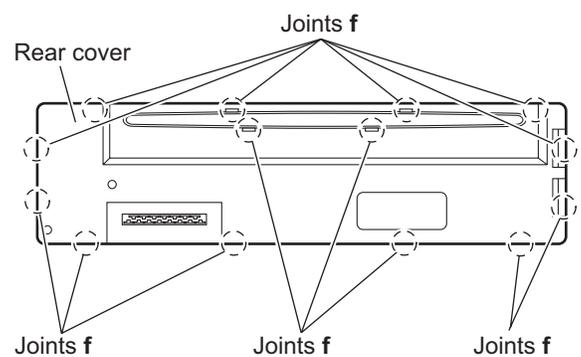


Fig.9

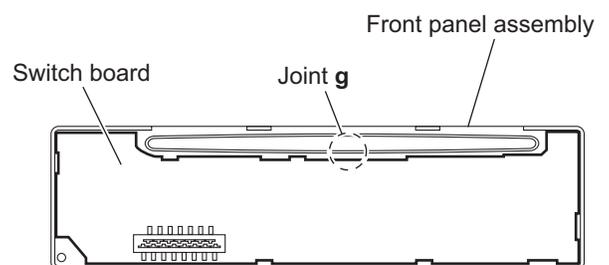


Fig.10

## 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 $\Omega$ (2 Speakers connection)
Output Level	Line out 2.0V (Vol. MAX)

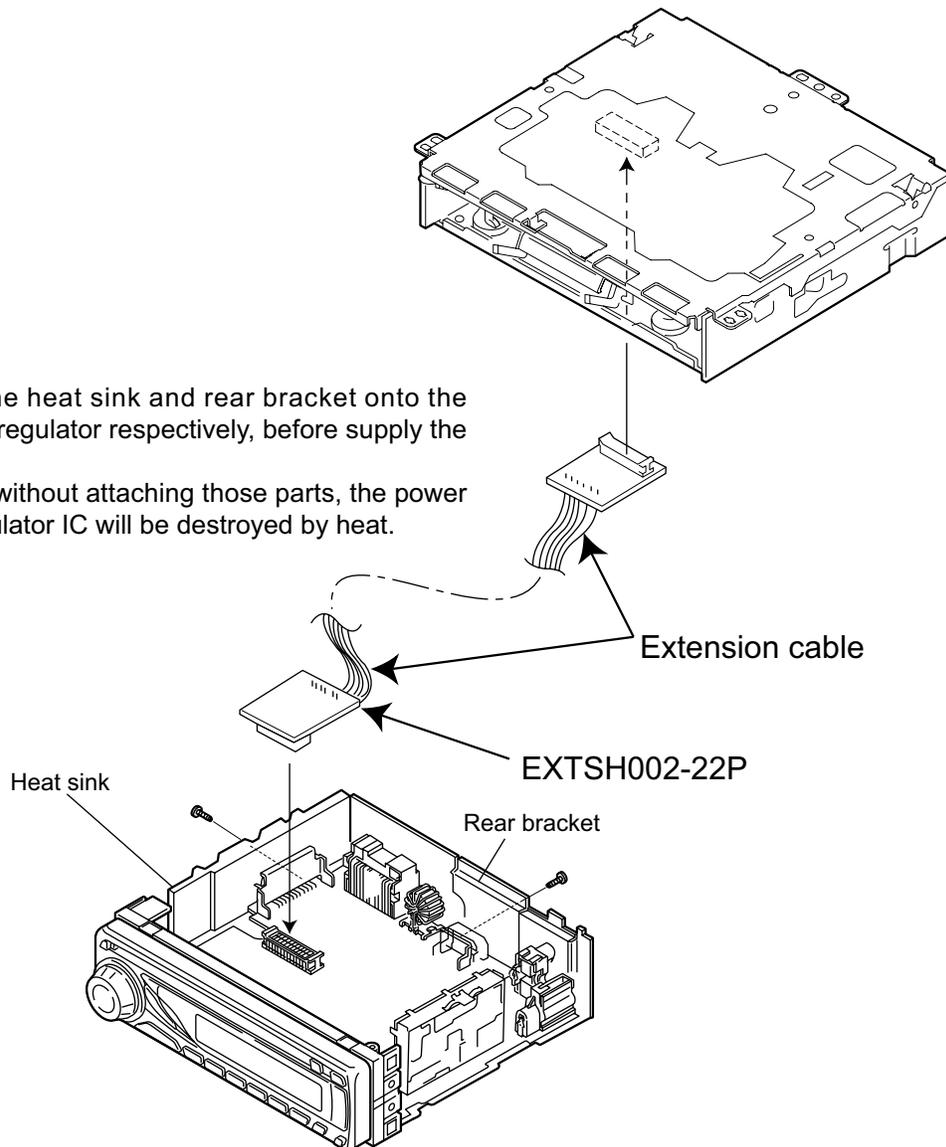
#### ■ Dummy load

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.

##### CAUTION :

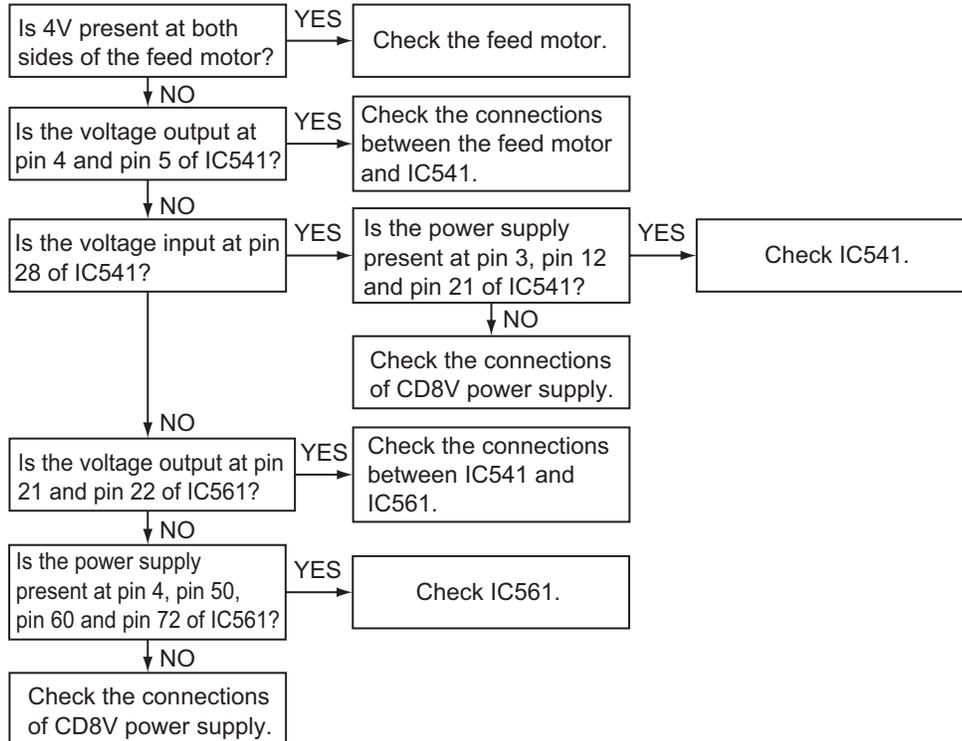
Be sure to attach the heat sink and rear bracket onto the power amplifier and regulator respectively, before supply the power.

If voltage is applied without attaching those parts, the power amplifier IC and regulator IC will be destroyed by heat.

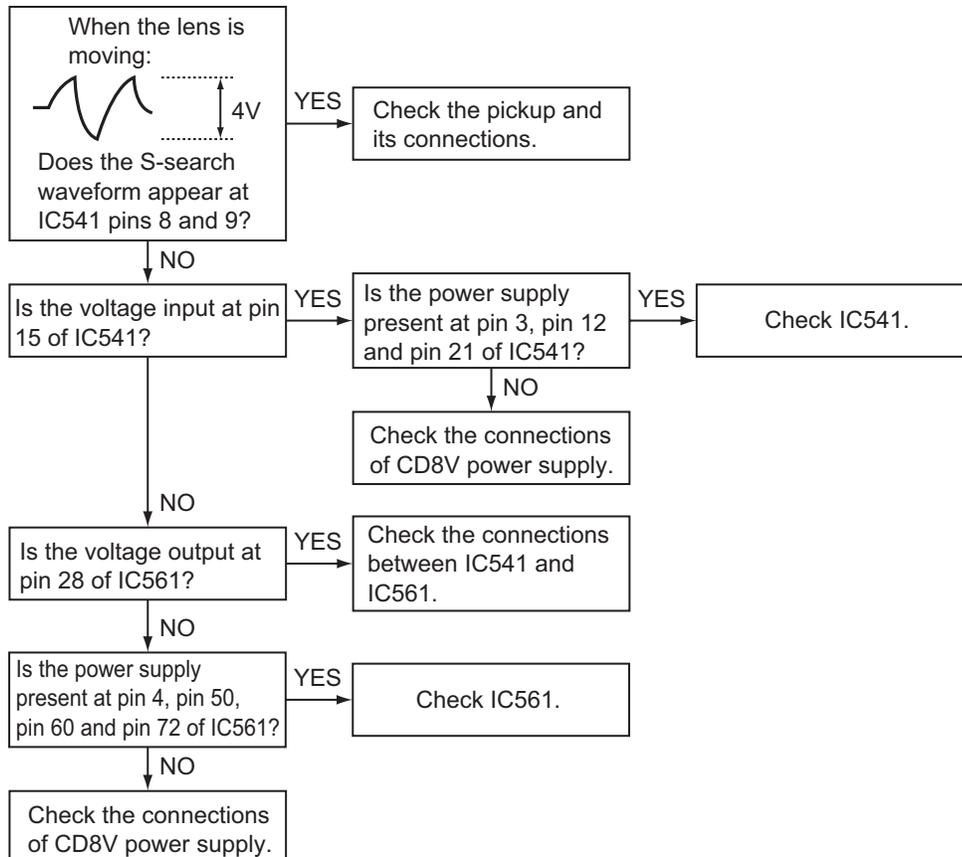


## SECTION 5 TROUBLESHOOTING

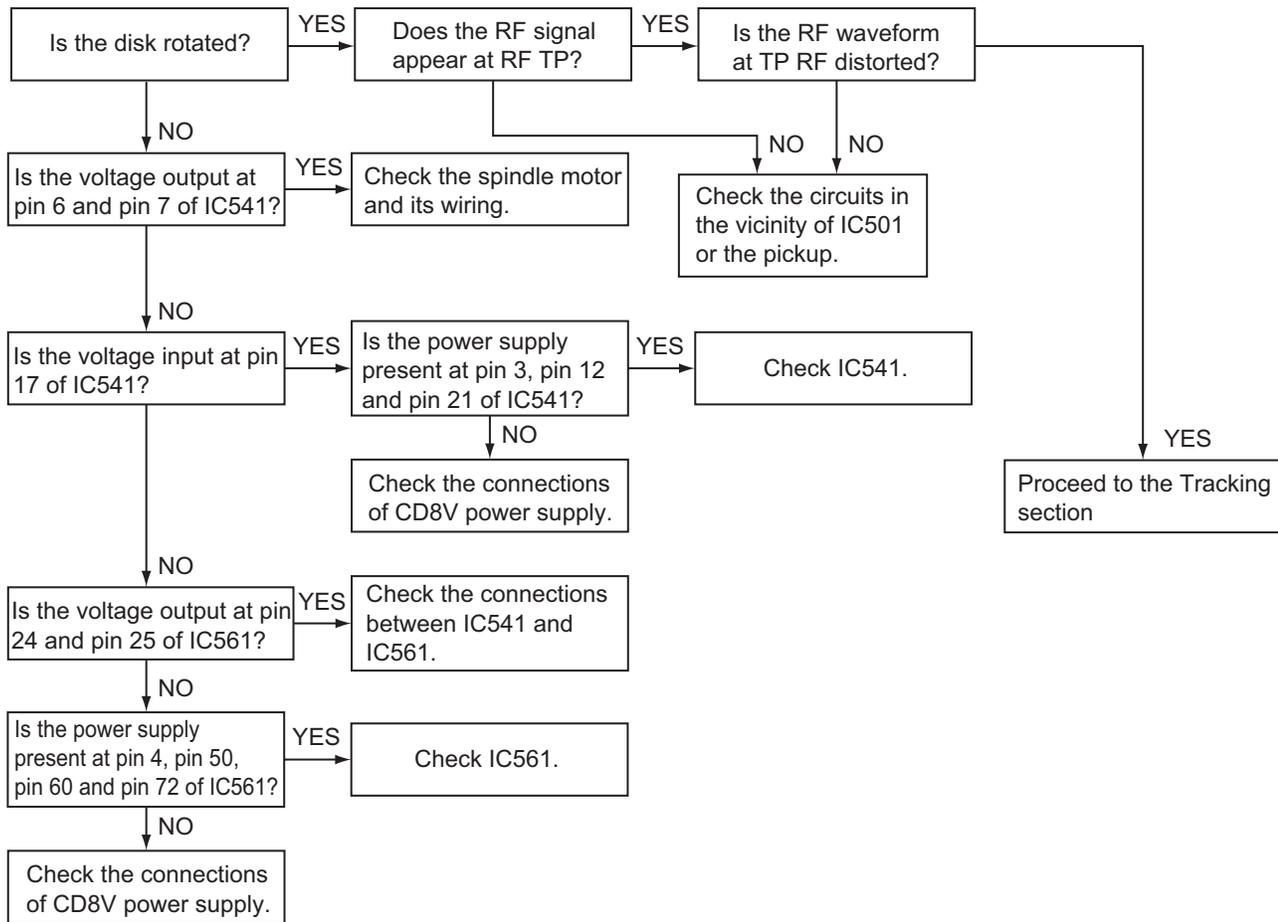
### 5.1 Feed section



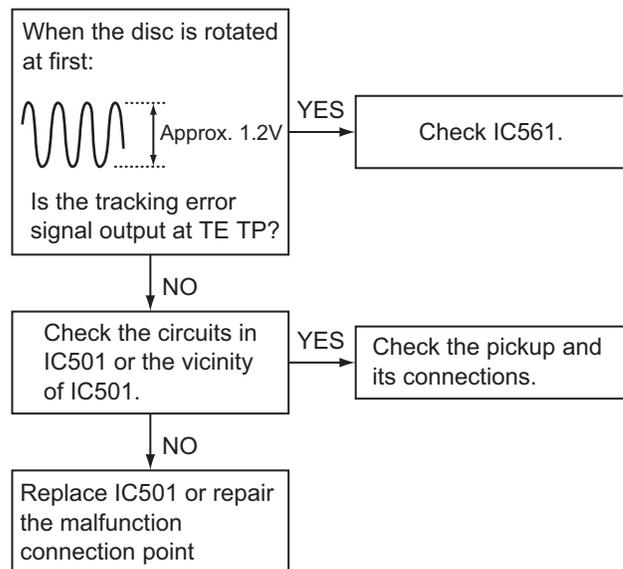
### 5.2 Focus section



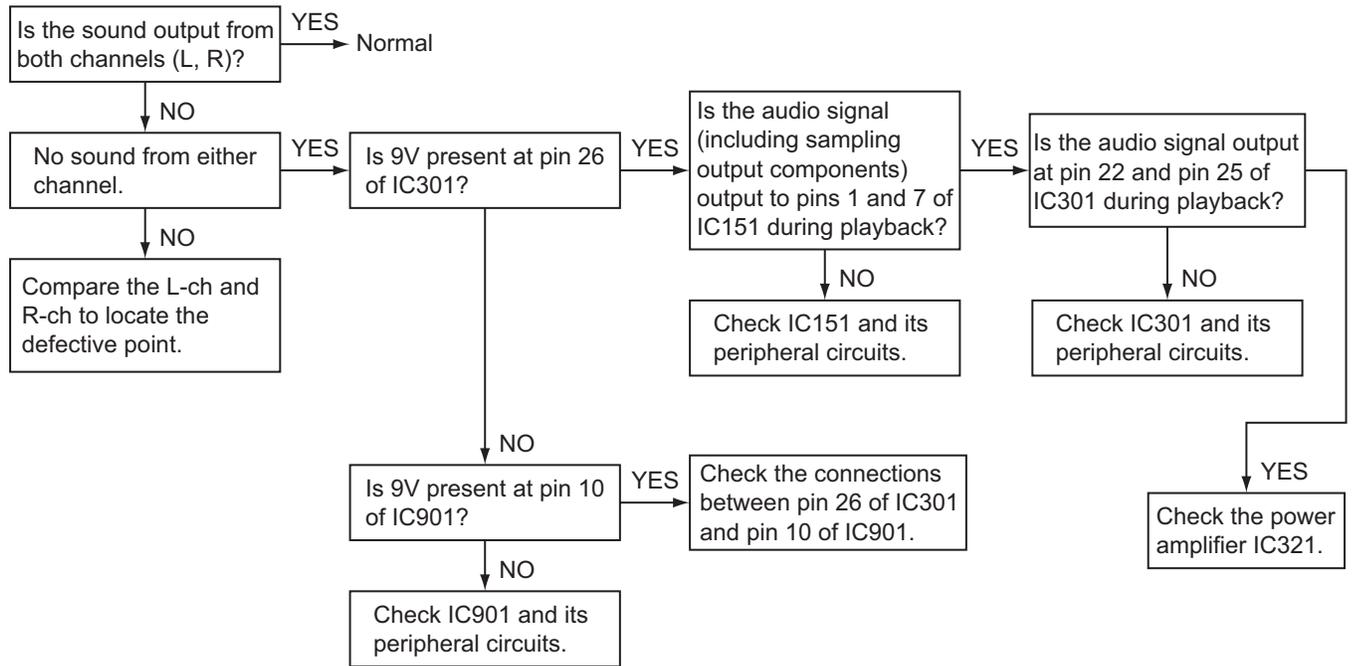
### 5.3 Spindle section



#### 5.4 Tracking section



#### 5.5 Signal processing section



## 5.6 Maintenance of laser pickup

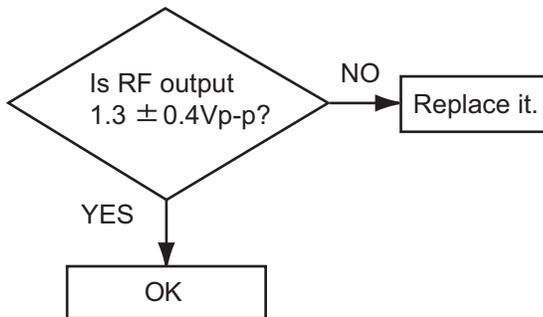
### (1) Cleaning the pick up lens

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.

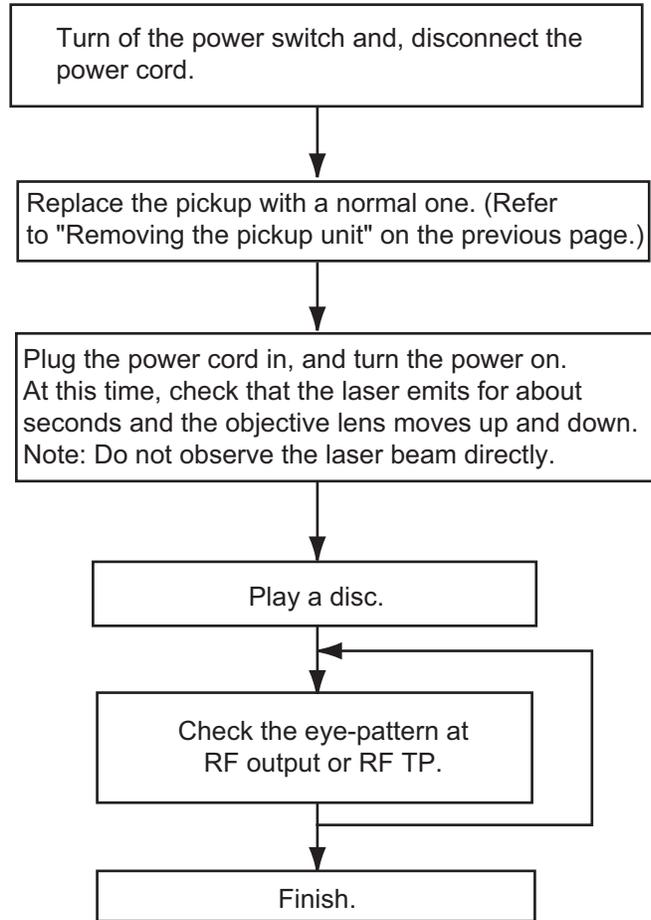


### (3) Semi-fixed resistor on the APC PC board

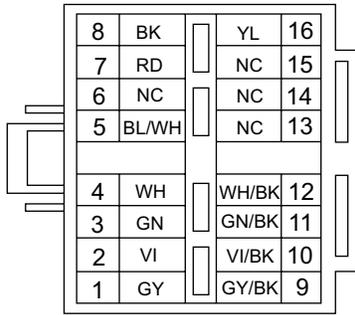
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.

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.

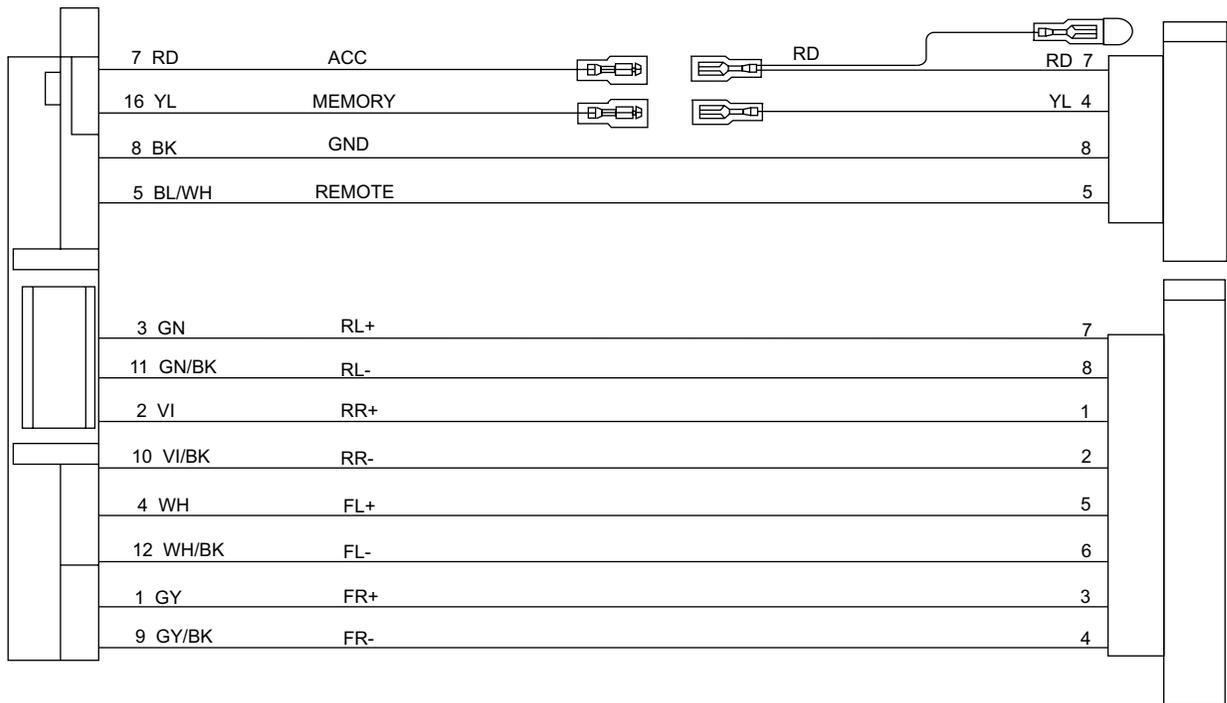
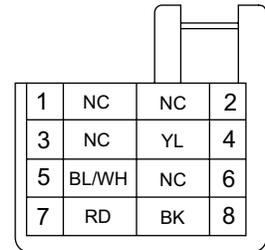
## 5.7 Replacement of laser pickup



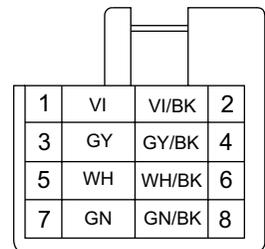
### 5.8 16 PIN CORD DIAGRAM



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  
Mobile Entertainment Business Group Mobile Entertainment Category 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

(No.MA260)

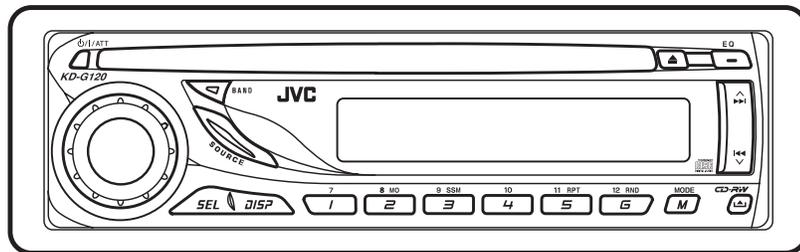
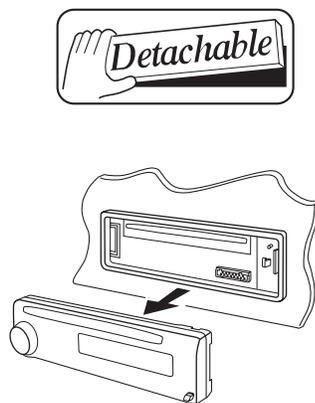
# JVC

## SCHEMATIC DIAGRAMS

### CD RECEIVER

# KD-G179UR

CD-ROM No.SML200604



**CD-RW**

**COMPACT  
disc  
DIGITAL AUDIO  
TEXT**



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

### Contents

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

## Safety precaution

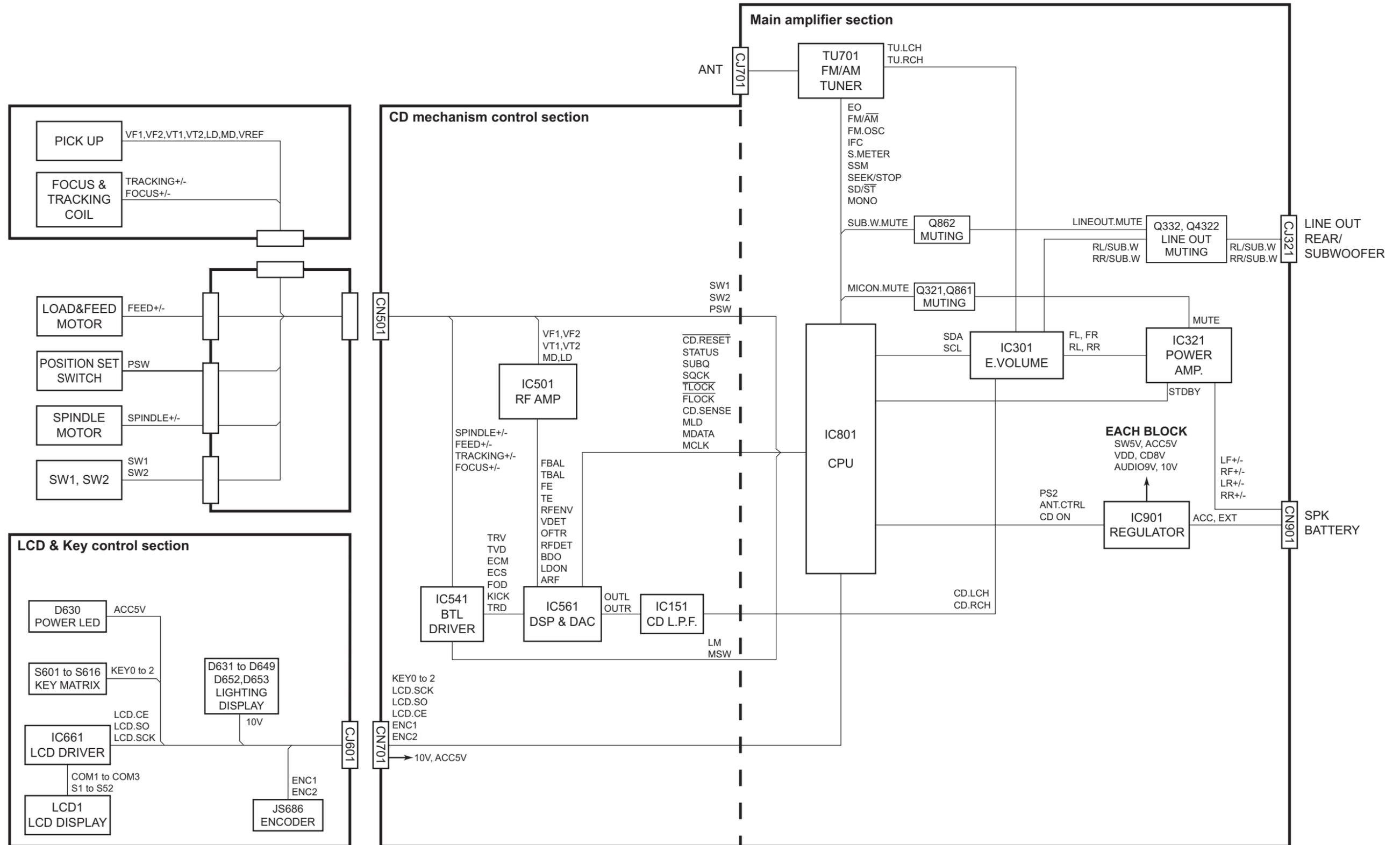


**CAUTION** Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.



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

# Block diagram

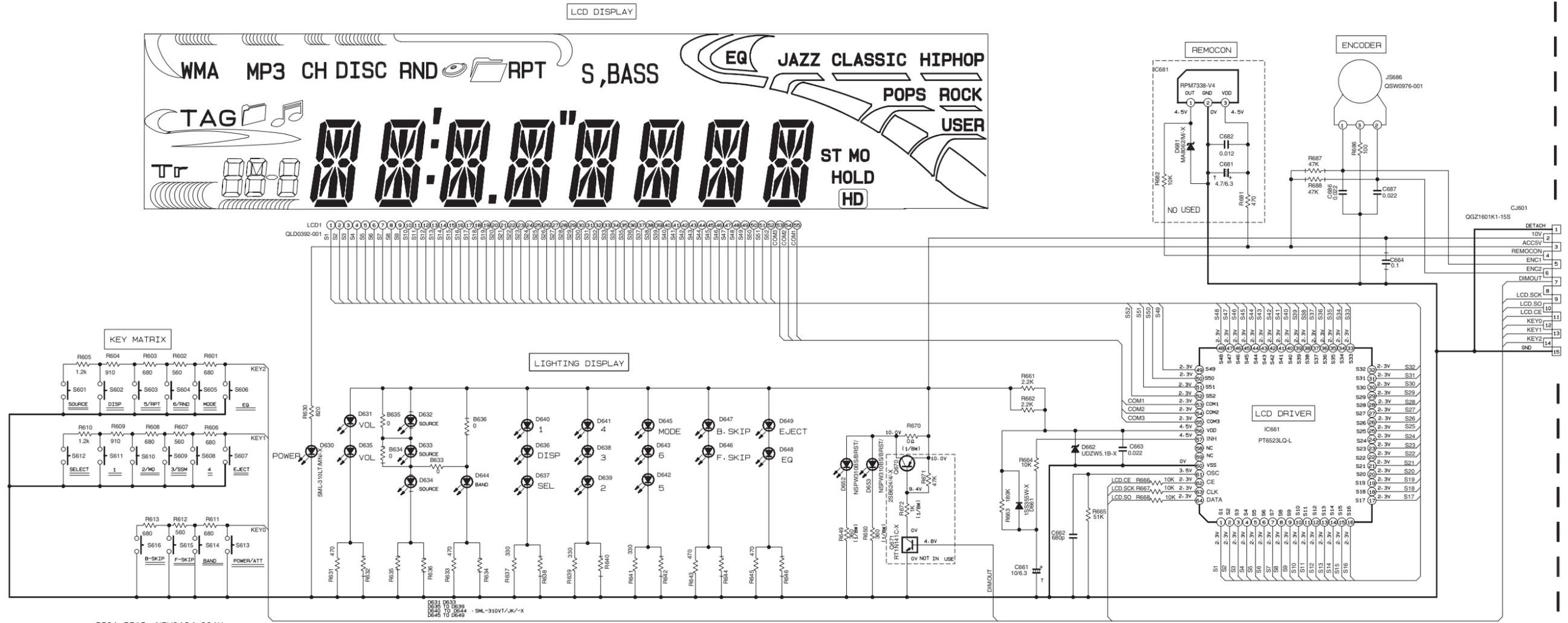






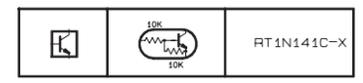
■ LCD & Key control section

SW PWB : GEB10174A



S601-S618: NSW0124-001X

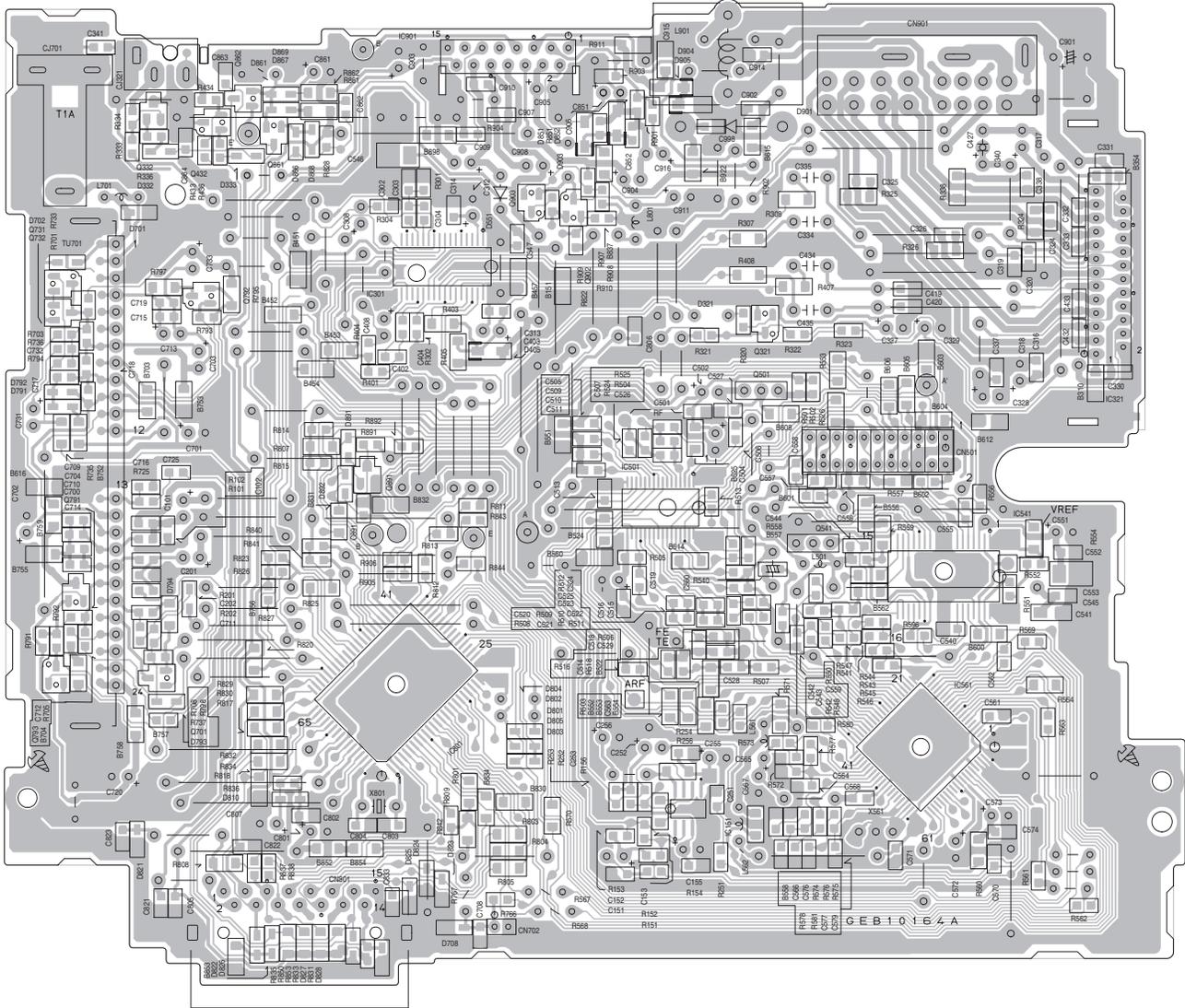
D631-D633  
D634-D639  
D640-D649 : SML-310VT/K/-X



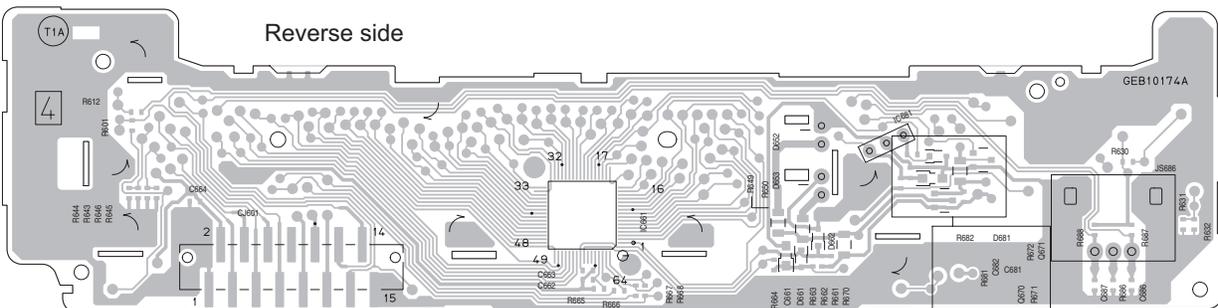
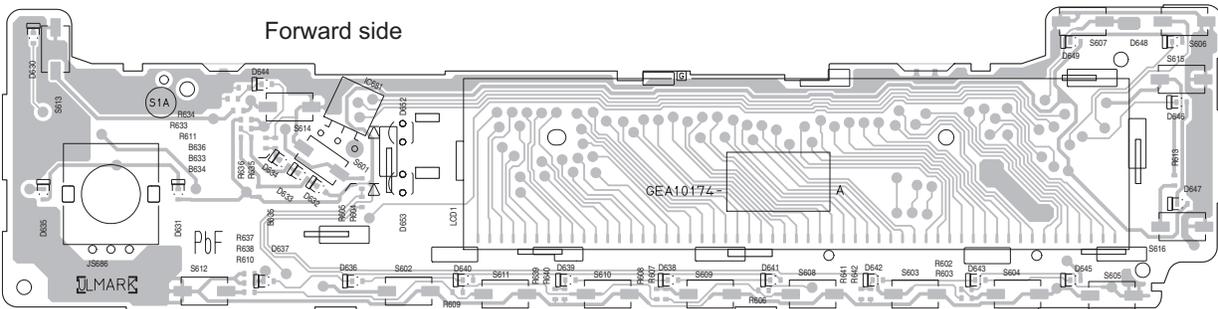
- NOTES
- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
  - UNLESS OTHERWISE SPECIFIED.  
ALL RESISTORS ARE 1/16W ±5% METAL GLAZE RESISTOR.  
ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR.  
ALL RESISTANCE VALUES ARE IN OHM.  
ALL CAPACITANCE VALUES ARE IN uF (P=pf)  
ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(uF)/RATED VOLTAGE(V)  
T --- TANTALUM CAPACITOR.
  - 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)



**JVC**

**Victor Company of Japan, Limited**

Mobile Entertainment Business Group Mobile Entertainment Category 10-1, 1chome, Ohwatari-machi, Maebashi-city, Gumma-ken, 371-8543, Japan

(No.MA260SCH)



Printed in Japan  
VPT

# PARTS LIST

KD-G179UR

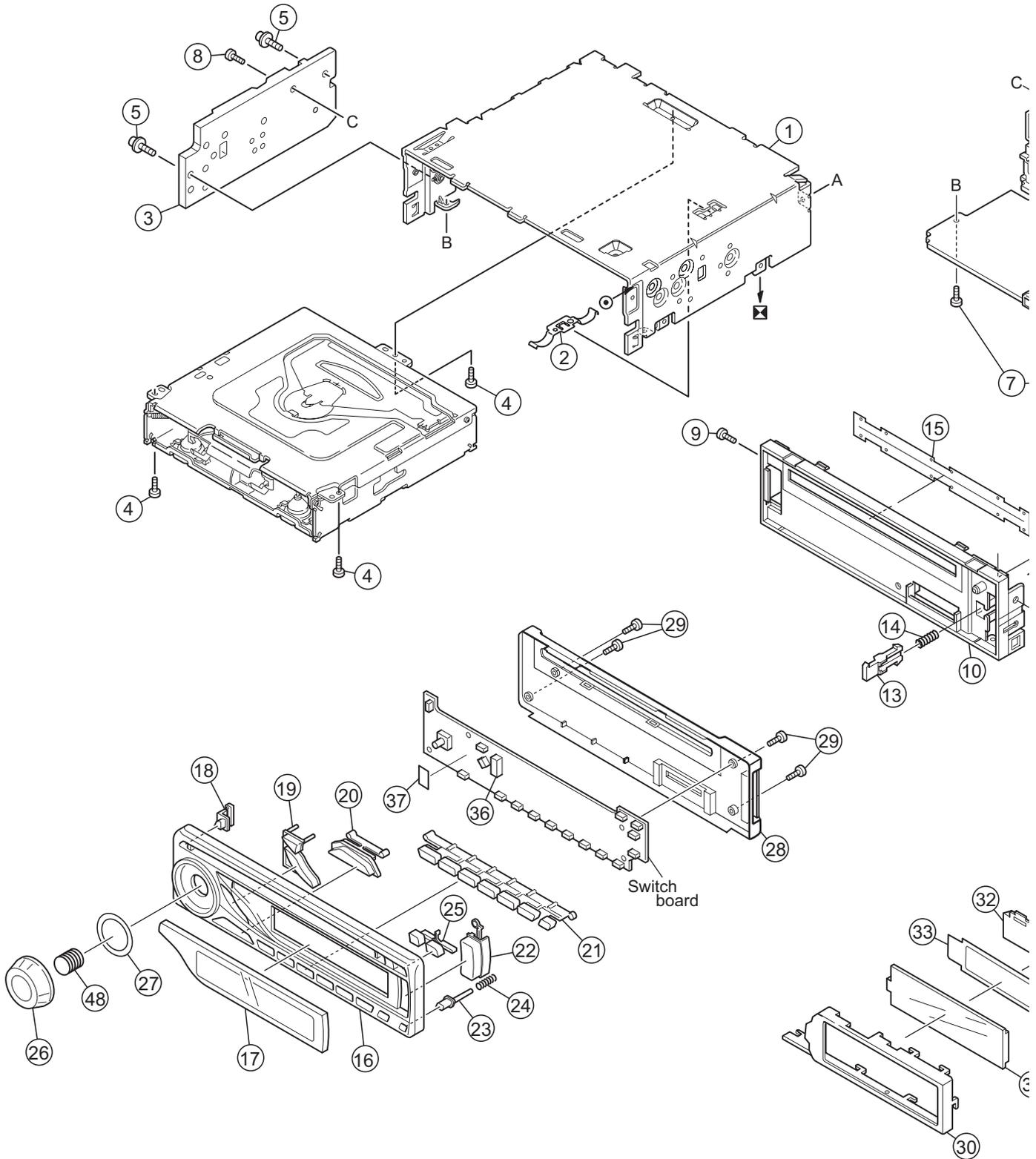
- \* All printed circuit boards and its assemblies are not available as service parts.
- \* Please refer to the mechanism manual (model TN2007-1001, No.MY003) for the CD mechanism.

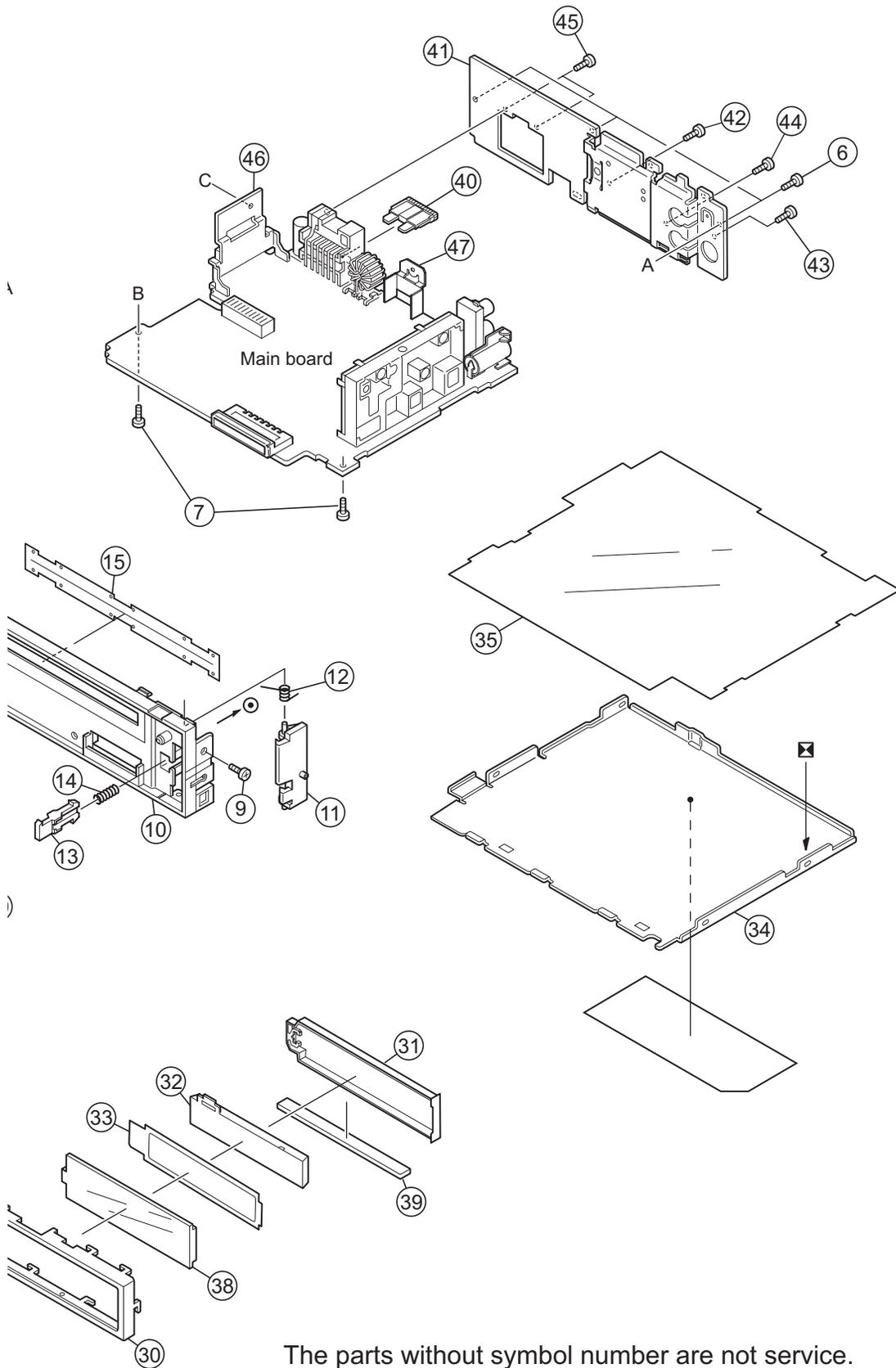
## - Contents -

Exploded view of general assembly and parts list (Block No.M1) .....	3- 2
Electrical parts list (Block No.01~02) .....	3- 5
Packing materials and accessories parts list (Block No.M3).....	3- 8

# Exploded view of general assembly and parts list

Block No. **M** **1** **M** **M**





The parts without symbol number are not service.

# General Assembly

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

△	Symbol No.	Part No.	Part Name	Description	Local
	1	GE10136-001A	TOP CHASSIS		
	2	GE40135-001A	EARTH PLATE		
	3	GE31894-001A	HEAT SINK		
	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	GE10137-001A	FRONT CHASSIS		
	11	GE31569-002A	LOCK LEVER		
	12	GE40269-001A	TORSION SPRING		
	13	GE31978-001A	RLS KNOB		
	14	GE40202-011A	COMP.SPRING		
	15	GE40294-002A	BLIND		
	16	GE10139-014A	FRONT PANEL		
	17	GE31967-016A	FINDER ASSY		
	18	GE31968-002A	POWER BUTTON		
	19	GE31969-001A	SRC BUTTON		
	20	GE31970-001A	SEL BUTTON		
	21	GE20188-001A	PRESET BUTTON		
	22	GE31971-001A	SEARCH BUTTON		
	23	GE31972-001A	DETACH BUTTON		
	24	GE40202-013A	COMP.SPRING		
	25	GE31973-001A	EJECT BUTTON		
	26	GE31974-004A	VOL KNOB		
	27	GE40323-003A	SHEET		
	28	GE10140-002A	REAR COVER		
	29	VKZ4777-010	MINI SCREW	(x4)	
	30	GE31975-001A	LCD CASE		
	31	GE31977-001A	LENS CASE		
	32	GE31976-001A	LCD LENS		
	33	GE40297-001A	LIGHTING SHEET		
	34	GE31895-001A	BOTTOM COVER		
	35	GE31984-001A	INSULATOR		
	36	GE30854-001A	LED HOLDER		
	37	GE40218-045A	SHEET		
	38	QLD0392-001	LCD MODULE		
	39	QNZ0823-001	LCD CONNECTOR		
△	40	QMFZ047-150-T	FUSE	15A	
	41	GE31571-005A	REAR BRACKET		
	42	QYSDST2606ZA	TAP SCREW	M2.6 x 6mm	
	43	QYSDST2606ZA	TAP SCREW	M2.6 x 6mm	
	44	QYSDSF2606ZA	TAP SCREW	M2.6 x 6mm	
	45	QYSDSF2606ZA	TAP SCREW	M2.6 x 6mm(x2)	
	46	GE40172-004A	IC BRACKET		
	47	GE40124-002A	REG.BRACKET		
	48	GE40127-003A	SPRING		



△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C717	NDC31HJ-221X	C CAPACITOR	220pF 50V J		R512	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C718	NCB31EK-223X	C CAPACITOR	0.022uF 25V K		R513	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C720	QEKJ1AM-227Z	E CAPACITOR	220uF 10V M		R516	NRSA63J-623X	MG RESISTOR	62kΩ 1/16W J	
C725	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R518	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
C731	QTE1H57-225Z	E CAPACITOR	2.2uF 50V		R524	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
C732	NCB31HK-102X	C CAPACITOR	1000pF 50V K		R525	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
C733	QEKJ1AM-227Z	E CAPACITOR	220uF 10V M		R526	NRS181J-120X	MG RESISTOR	12Ω 1/8W J	
C801	QEKJ0JM-227Z	E CAPACITOR	220uF 6.3V M		R541	NRSA02J-682X	MG RESISTOR	6.8kΩ 1/10W J	
C802	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R542	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
C803	NDC31HJ-220X	C CAPACITOR	22pF 50V J		R543	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C804	NDC31HJ-330X	C CAPACITOR	33pF 50V J		R544	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
C807	QEKJ1CM-106Z	E CAPACITOR	10uF 16V M		R545	NRSA63J-202X	MG RESISTOR	2kΩ 1/16W J	
C821	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R546	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
C822	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R547	NRSA63J-274X	MG RESISTOR	270kΩ 1/16W J	
C823	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R548	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
C861	QEKJ0JM-227Z	E CAPACITOR	220uF 6.3V M		R550	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
C862	NCB31EK-823X	C CAPACITOR	0.082uF 25V K		R551	NRSA63J-202X	MG RESISTOR	2kΩ 1/16W J	
C864	NCB31EK-823X	C CAPACITOR	0.082uF 25V K		R552	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
C901	QEZ0645-228	E CAPACITOR	2200uF		R553	NRS181J-0R0X	MG RESISTOR	0Ω 1/8W J	
C902	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R554	NRS181J-513X	MG RESISTOR	51kΩ 1/8W J	
C903	QEKJ1CM-226Z	E CAPACITOR	22uF 16V M		R557	NRSA02J-151X	MG RESISTOR	150Ω 1/10W J	
C904	QEKJ1CM-226Z	E CAPACITOR	22uF 16V M		R558	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W J	
C905	QEKJ1CM-226Z	E CAPACITOR	22uF 16V M		R559	NRS181J-332X	MG RESISTOR	3.3kΩ 1/8W J	
C906	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R560	NRS181J-101X	MG RESISTOR	100Ω 1/8W J	
C907	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R561	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C908	QEKJ1AM-107Z	E CAPACITOR	100uF 10V M		R562	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C909	QEKJ1AM-107Z	E CAPACITOR	100uF 10V M		R563	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C910	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R564	NRS181J-102X	MG RESISTOR	1kΩ 1/8W J	
C911	QEKJ1AM-227Z	E CAPACITOR	220uF 10V M		R567	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J	
C914	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R568	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J	
C915	NCB11CK-225X	C CAPACITOR	2.2uF 16V K		R569	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C916	QEKJ1HM-225Z	E CAPACITOR	2.2uF 50V M		R570	NRS181J-102X	MG RESISTOR	1kΩ 1/8W J	
R101	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J		R571	NRS181J-104X	MG RESISTOR	100kΩ 1/8W J	
R102	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		R573	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
R151	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		R574	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R152	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		R575	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R153	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R576	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R154	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R581	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R156	NRS181J-223X	MG RESISTOR	22kΩ 1/8W J		R596	NRSA02J-822X	MG RESISTOR	8.2kΩ 1/10W J	
R201	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J		R701	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R202	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		R703	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R251	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		R705	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R252	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		R708	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R253	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R725	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R254	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R733	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R256	NRS181J-223X	MG RESISTOR	22kΩ 1/8W J		R735	NRS181J-152X	MG RESISTOR	1.5kΩ 1/8W J	
R301	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R736	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R302	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R737	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R304	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R791	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R307	NRS181J-273X	MG RESISTOR	27kΩ 1/8W J		R792	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R308	NRS181J-273X	MG RESISTOR	27kΩ 1/8W J		R793	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R320	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R794	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R321	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R795	NRS181J-120X	MG RESISTOR	12Ω 1/8W J	
R322	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J		R797	NRS181J-100X	MG RESISTOR	10Ω 1/8W J	
R323	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R798	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R333	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R801	NRS181J-103X	MG RESISTOR	10kΩ 1/8W J	
R334	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R803	NRS181J-332X	MG RESISTOR	3.3kΩ 1/8W J	
R336	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R804	NRS181J-332X	MG RESISTOR	3.3kΩ 1/8W J	
R401	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R805	NRS181J-332X	MG RESISTOR	3.3kΩ 1/8W J	
R403	NRS181J-101X	MG RESISTOR	100Ω 1/8W J		R807	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J	
R404	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R808	NRS181J-102X	MG RESISTOR	1kΩ 1/8W J	
R407	NRS181J-273X	MG RESISTOR	27kΩ 1/8W J		R809	NRS181J-103X	MG RESISTOR	10kΩ 1/8W J	
R408	NRS181J-273X	MG RESISTOR	27kΩ 1/8W J		R811	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R433	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R812	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R434	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R813	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R436	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R814	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R501	NRSA02J-220X	MG RESISTOR	22Ω 1/10W J		R815	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R502	NRSA02J-220X	MG RESISTOR	22Ω 1/10W J		R817	NRS181J-472X	MG RESISTOR	4.7kΩ 1/8W J	
R503	NRS181J-393X	MG RESISTOR	39kΩ 1/8W J		R818	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J	
R504	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J		R820	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J	
R505	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J		R822	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R506	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J		R823	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R507	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R825	NRS181J-203X	MG RESISTOR	20kΩ 1/8W J	
R508	NRSA63J-274X	MG RESISTOR	270kΩ 1/16W J		R826	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R509	NRSA63J-363X	MG RESISTOR	36kΩ 1/16W J		R827	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R510	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J		R828	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R511	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J		R829	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J	
					R830	NRS181J-223X	MG RESISTOR	22kΩ 1/8W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R831	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		C661	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
R832	NRS181J-223X	MG RESISTOR	22kΩ 1/8W J		C662	NDC31HJ-681X	C CAPACITOR	680pF 50V J	
R833	NRS181J-472X	MG RESISTOR	4.7kΩ 1/8W J		C663	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
R834	NRS181J-223X	MG RESISTOR	22kΩ 1/8W J		C686	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
R835	NRS181J-472X	MG RESISTOR	4.7kΩ 1/8W J		C687	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
R836	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R601	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R837	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R602	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R838	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R603	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R840	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R604	NRSA63J-911X	MG RESISTOR	910Ω 1/16W J	
R841	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R605	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R843	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R606	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R844	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R607	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R850	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J		R608	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R853	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J		R609	NRSA63J-911X	MG RESISTOR	910Ω 1/16W J	
R861	NRS181J-471X	MG RESISTOR	470Ω 1/8W J		R610	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R862	NRS181J-471X	MG RESISTOR	470Ω 1/8W J		R611	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R901	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J		R612	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R902	QRE141J-102Y	C RESISTOR	1kΩ 1/4W J		R613	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R903	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R630	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R904	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R631	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R905	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R633	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R906	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R637	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R907	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J		R639	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R908	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J		R641	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R909	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R643	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R910	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R645	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R911	NRS181J-473X	MG RESISTOR	47kΩ 1/8W J		R649	NRS181J-361X	MG RESISTOR	360Ω 1/8W J	
L501	QQL801K-4R7Y	COIL	4.7uH K		R650	NRS181J-361X	MG RESISTOR	360Ω 1/8W J	
L561	QQL801K-4R7Y	COIL	4.7uH K		R661	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
L562	QQL801K-4R7Y	COIL	4.7uH K		R662	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
L701	QQL801K-4R7Y	COIL	4.7uH K		R663	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J	
L801	QQL801K-4R7Y	COIL	4.7uH K		R664	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
L901	QQR1695-001	CHOKE COIL			R665	NRSA63J-513X	MG RESISTOR	51kΩ 1/16W J	
CJ321	QNN0519-001	PIN JACK			R666	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CJ701	QNB0190-001	ANTENNA JACK			R667	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CN501	QGB2027M4-22S	CONNECTOR	B-B (1-22)		R668	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CN801	QGZ1601J1-15	CONNECTOR	(1-15)		R670	NRS181J-0R0X	MG RESISTOR	0Ω 1/8W J	
CN901	QNZ0611-001	16P CONNECTOR			R686	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
△ TU701	QAU0312-002	TUNER PACK			CJ601	QGZ1601K1-15S	CONNECTOR	(1-15)	
X561	QAX0714-001Z	C RESONATOR	16.000MHz		JS686	QSW0976-001	ROTARY ENCODER		
X801	QAX0406-001Z	CRYSTAL	4.500MHz		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		
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					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		

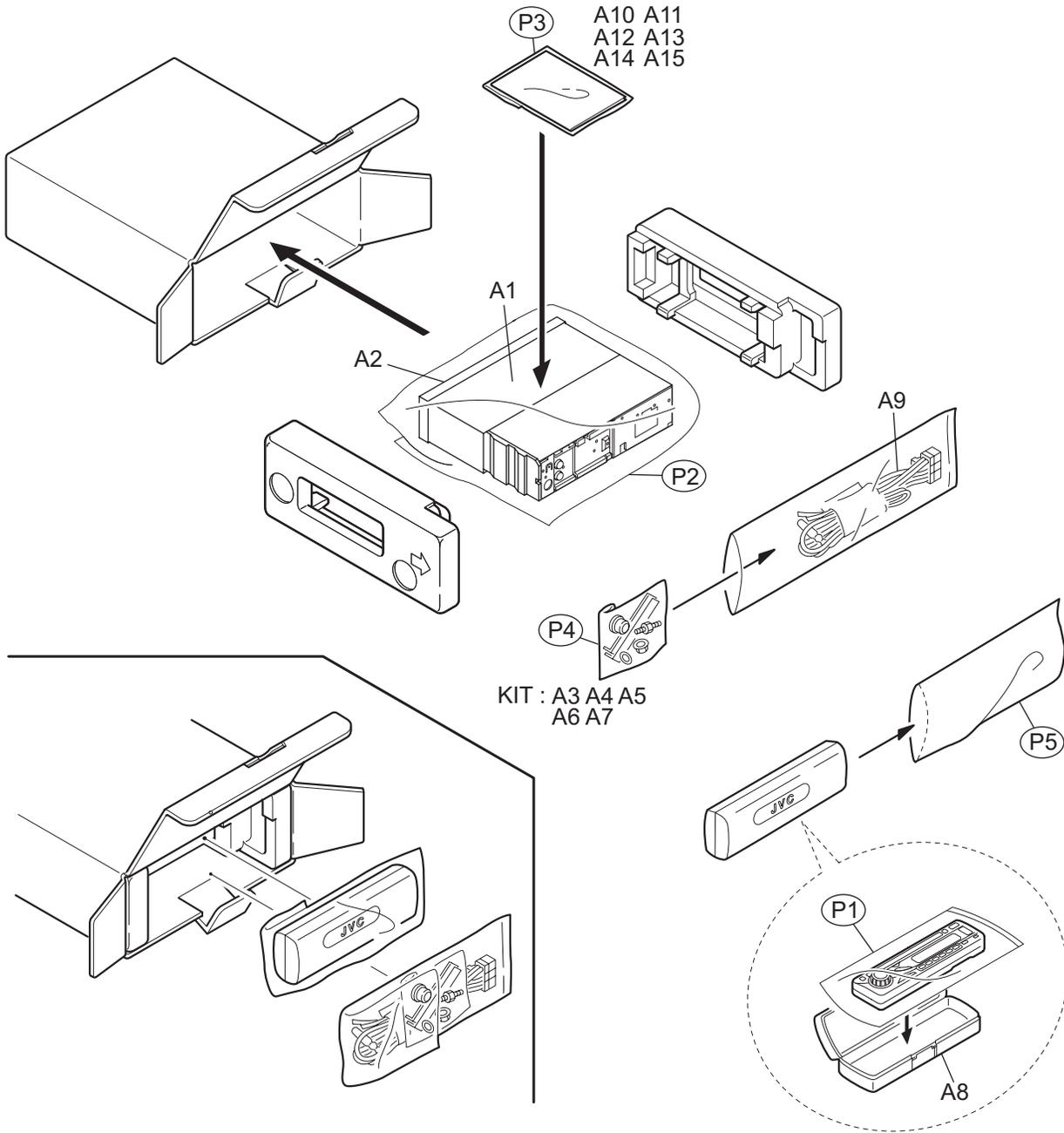
## Switch board

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

△ Symbol No.	Part No.	Part Name	Description	Local
IC661	PT6523LQ-L	LCD DRIVER		
D630	SML-310LT/MN/-X	LED		
D631	SML-310VT/JK/-X	LED		
D633	SML-310VT/JK/-X	LED		
D635	SML-310VT/JK/-X	LED		
D636	SML-310VT/JK/-X	LED		
D637	SML-310VT/JK/-X	LED		
D638	SML-310VT/JK/-X	LED		
D639	SML-310VT/JK/-X	LED		
D640	SML-310VT/JK/-X	LED		
D641	SML-310VT/JK/-X	LED		
D642	SML-310VT/JK/-X	LED		
D643	SML-310VT/JK/-X	LED		
D644	SML-310VT/JK/-X	LED		
D645	SML-310VT/JK/-X	LED		
D646	SML-310VT/JK/-X	LED		
D647	SML-310VT/JK/-X	LED		
D648	SML-310VT/JK/-X	LED		
D649	SML-310VT/JK/-X	LED		
D652	NSPW310BS/BRST/	LED		
D653	NSPW310BS/BRST/	LED		
D661	1SS355W-X	DIODE C.M		
D662	UDZW5.1B-X	SB DIODE		

# 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	GE20137-003A	MOUNTING SLEEVE		
A 2	GE20135-007A	TRIM PLATE		
A 3	VKZ4027-202	PLUG NUT		
A 4	VKH4871-003	MOUNT BOLT		
A 5	VKZ4328-003	LOCK NUT		
A 6	QYWWS53A008ZA	WASHER	0mm/5.3mm x	
A 7	GE40130-002A	HOOK	(x2)	
A 8	FSJB3002-00E	HARD CASE		
A 9	QAM0089-002	ISO CABLE		
A 10	-----	INST BOOK		
A 11	-----	INSTALL MANUAL		
A 12	-----	TROUBLE SHOOTIN		
A 13	-----	WARRANTY CARD		
A 14	-----	WARRANTY CARD		
A 15	-----	RESIST CARD		
KIT	SRW-385U	SCREW PARTS KIT	A3 A4 A5 A6 A7	
P 1	QPC01002515	SHEET		
P 2	-----	POLY BAG		
P 3	-----	POLY BAG		
P 4	-----	POLY BAG		
P 5	-----	POLY BAG		