

JVC

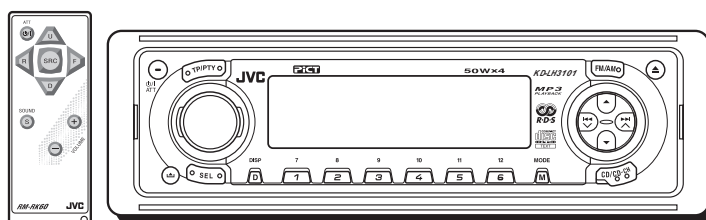
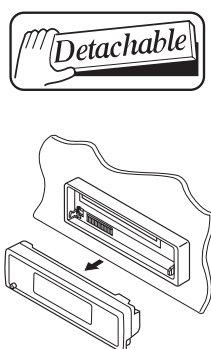
SCHEMATIC DIAGRAMS

CD RECEIVER

KD-LH3101

CD-ROM No.SML200305

Area Suffix	
E	----- Continental Europe
EX	----- Central Europe



PICT

**MP3
PLAYBACK**





**COMPACT
disc
DIGITAL AUDIO
TEXT**

Contents

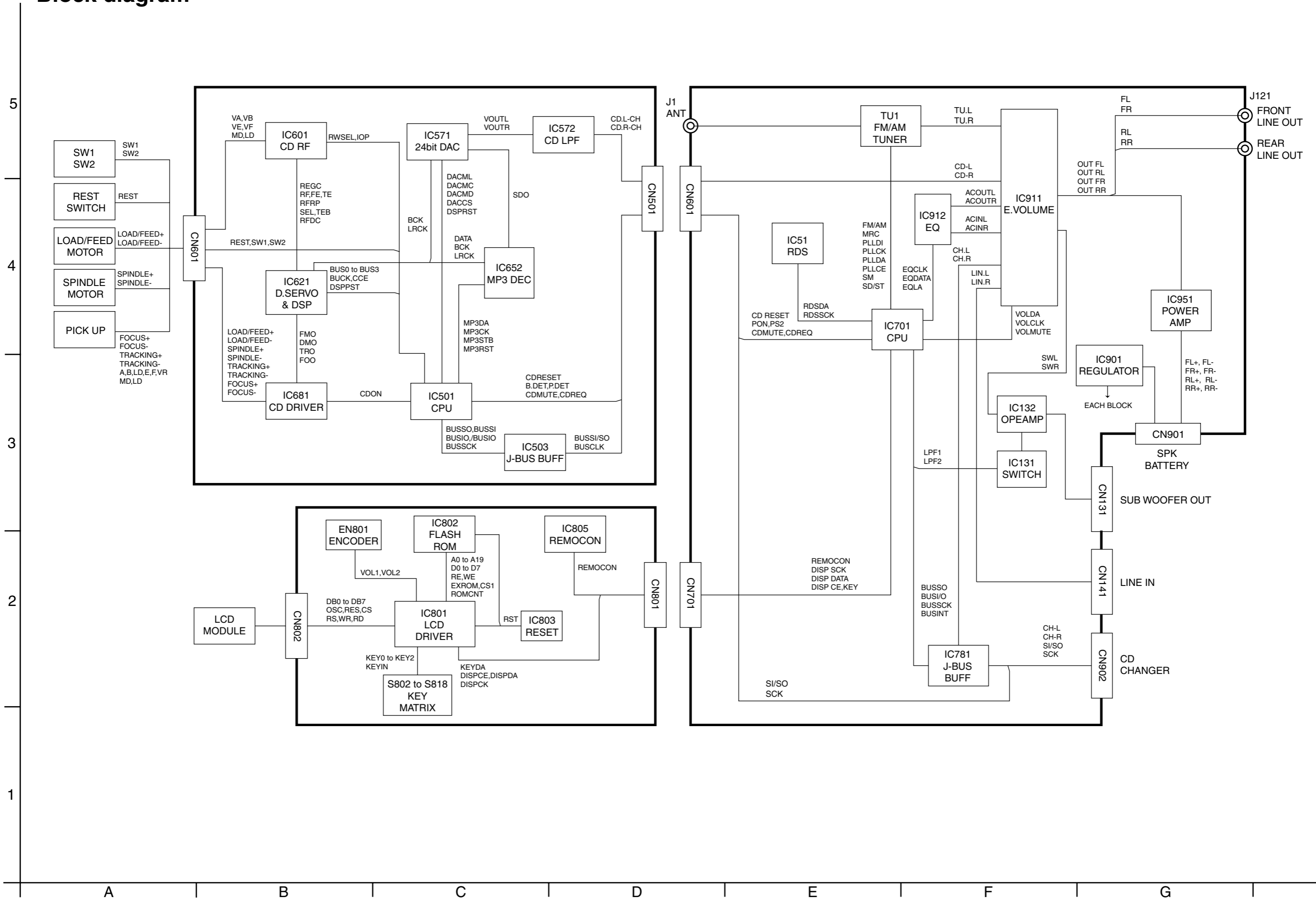
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Safety precaution

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

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

Block diagram



Standard schematic diagrams

Main amplifier section

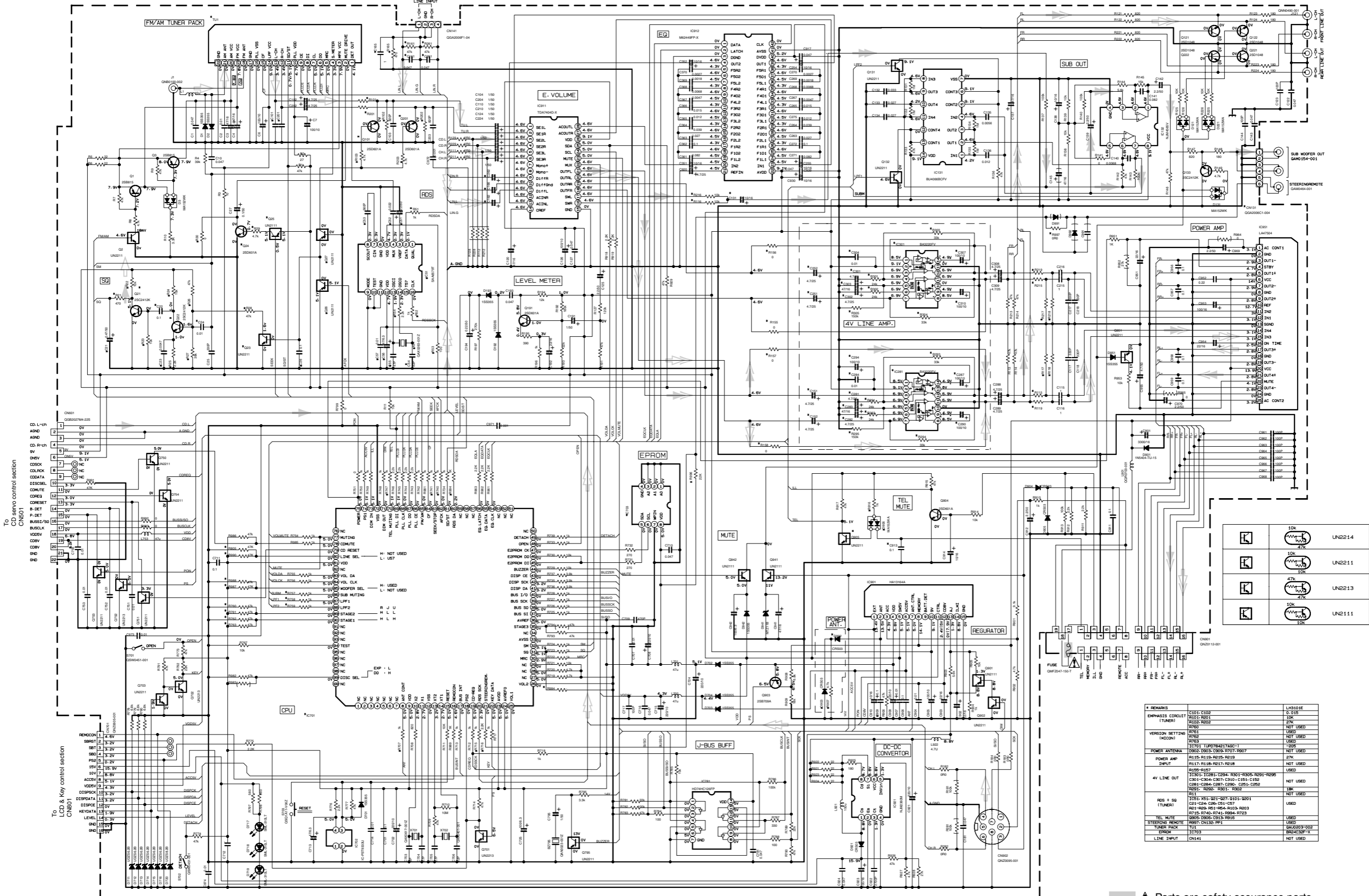
5

4

3

2

1



To CD servo control section
CN501

CD-L-CH
ASND
CD-R-CH
SV
ONV
CDCLK
CDATA
DISSEL
CDMUTE
CDREU
CDRESET
B-DET
P-DET
BUSSEL7/90
VDDV
VDDV
CDV
GND

To LCD & Key control section
CN801

REMOCON
SRPST
SR1
SR0
PWR
10V
10V
ACCV
VDDV
DISPDATA
DISPCE
KEYDATA
LEVEL
GND

	10K	UN2214
	47K	UN2211
	10K	UN2213
	47K	UN2211
	10K	UN2211

REMARKS	IC101: C102	LH3101E
EMPHASIS CIRCUIT (TUNER)	R102: R501	15K
	R102: R502	27K
	R101	NOT USED
VERSION SETTING (MICON)	R103	USED
	R104	NOT USED
	R105	NOT USED
POWER ANTENNA	T501: T502	NOT USED
	T503: T504	NOT USED
POWER AMP INPUT	R115: R116: R215: R216	27K
	R117: R118: R217: R218	NOT USED
	R119: R120	USED
4V LINE OUT	C130: C131: C132: C133: C134: C135: C136	NOT USED
	C137: C138: C139: C140: C141: C142	NOT USED
	C143: C144: C145: C146: C147: C148	15K
	C149: C150: C151: C152: C153: C154	NOT USED
RD5 + S0 (TUNER)	C155: C156: C157: C158: C159: C160	USED
	C161: C162: C163: C164: C165: C166	NOT USED
	C167: C168: C169: C170: C171: C172	USED
TEL MUTE	T101	USED
STEREO REMOTE	R907: C113: R101	USED
TUNER PACK	T101	GN2002P-002
EMPHASIS	C102	BR2423P-X
LINE INPUT	CN141	NOT USED

- Tuner signal
- Front signal
- CD-changer signal
- CD signal
- Rear signal
- AUX IN signal
- Subwoofer signal

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

MAIN PWB: GEB10076A

CD servo control section

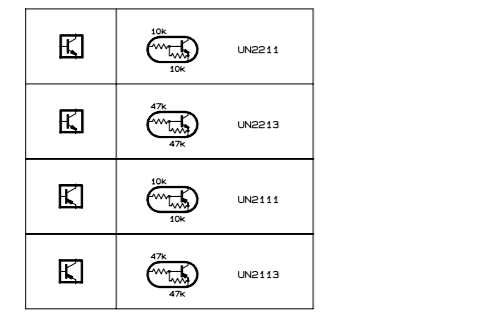
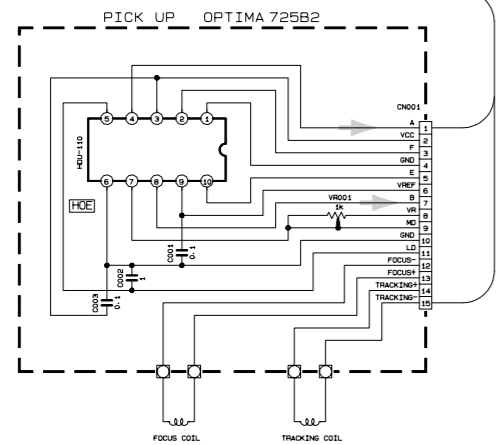
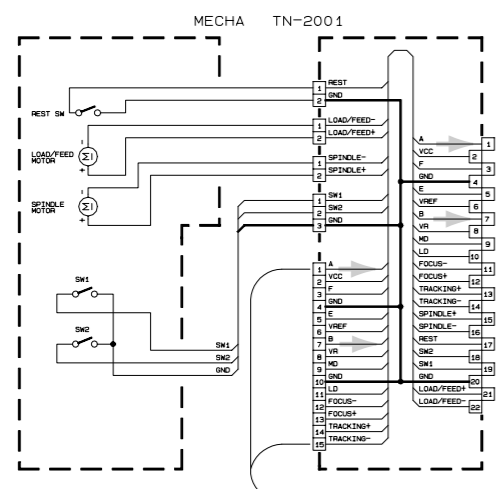
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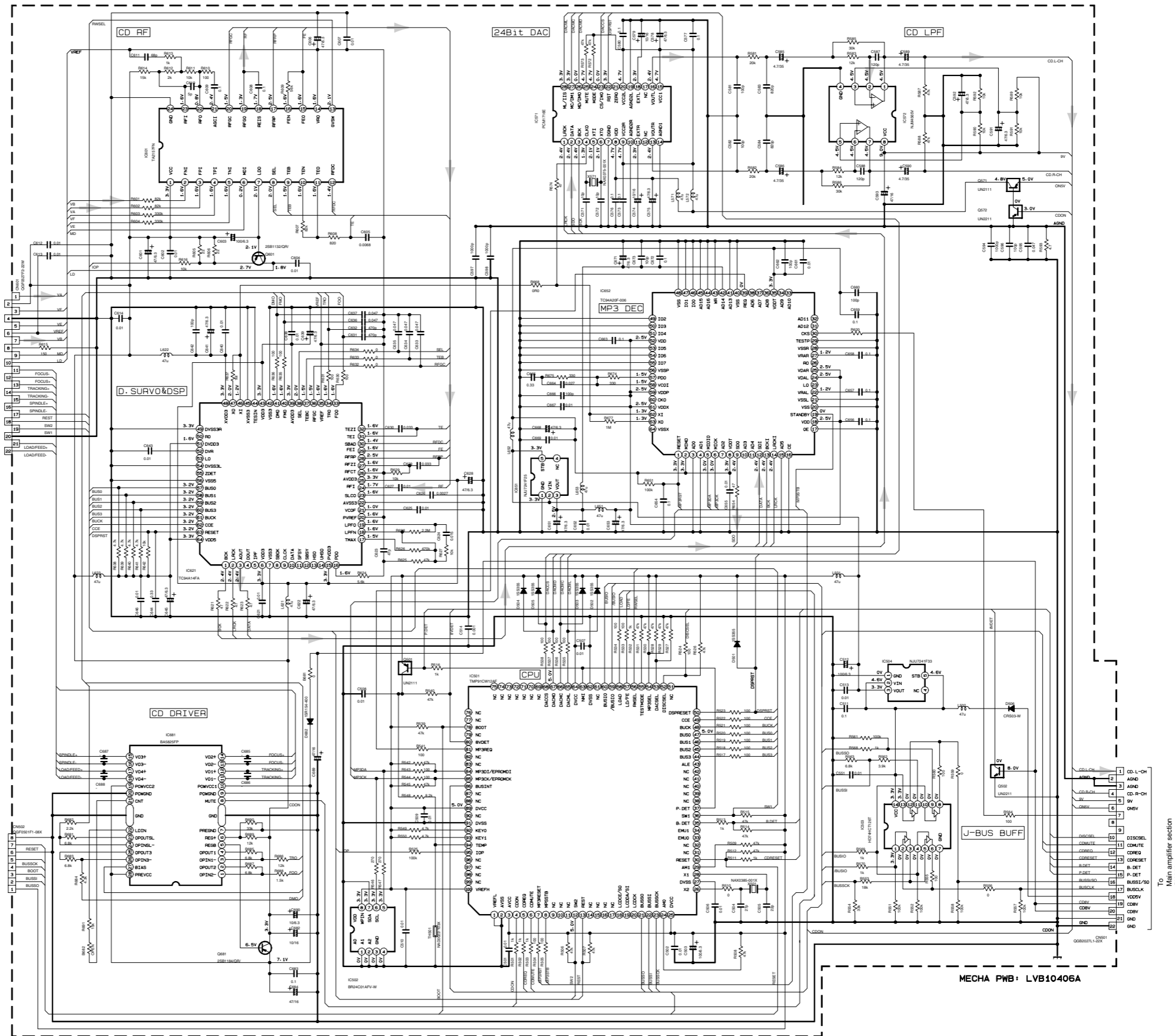
3

2

1



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



CD signal

A

B

C

D

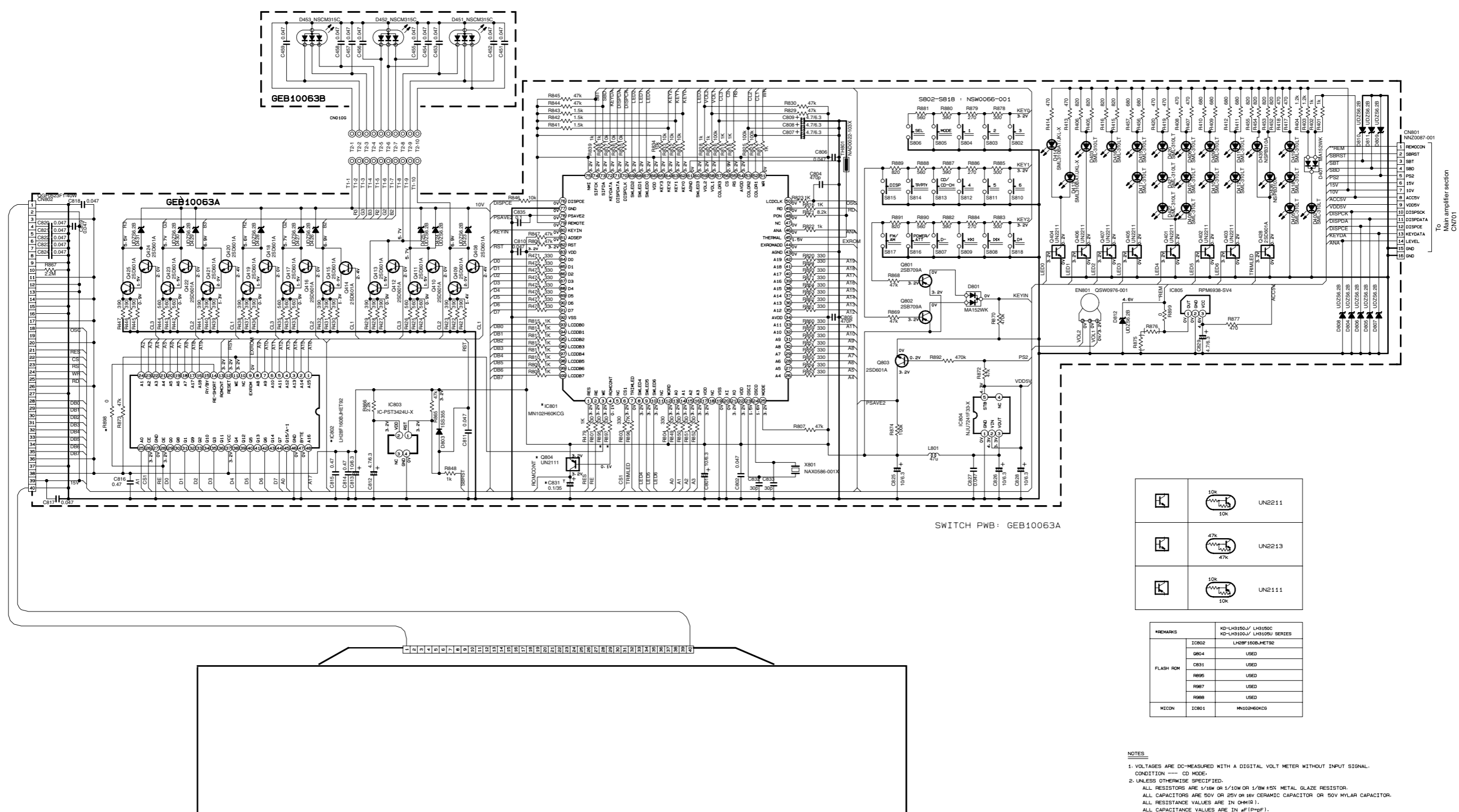
E

F

G

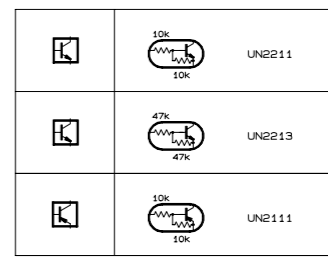
LCD & Key control section

5
4
3
2
1



LCD MODULE
QLD0232-001

SWITCH PWB: GEB10063A



REMARKS	KD-LH3100/LH3100C KD-LH3100/LH3100S SERIES
FLASH ROM	IC802 LH28F1608-MET92
	DB04 USED
	CB31 USED
	R895 USED
	R887 USED
	R898 USED
MIICON	IC801 MN102H60KCG

NOTES

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Printed circuit boards

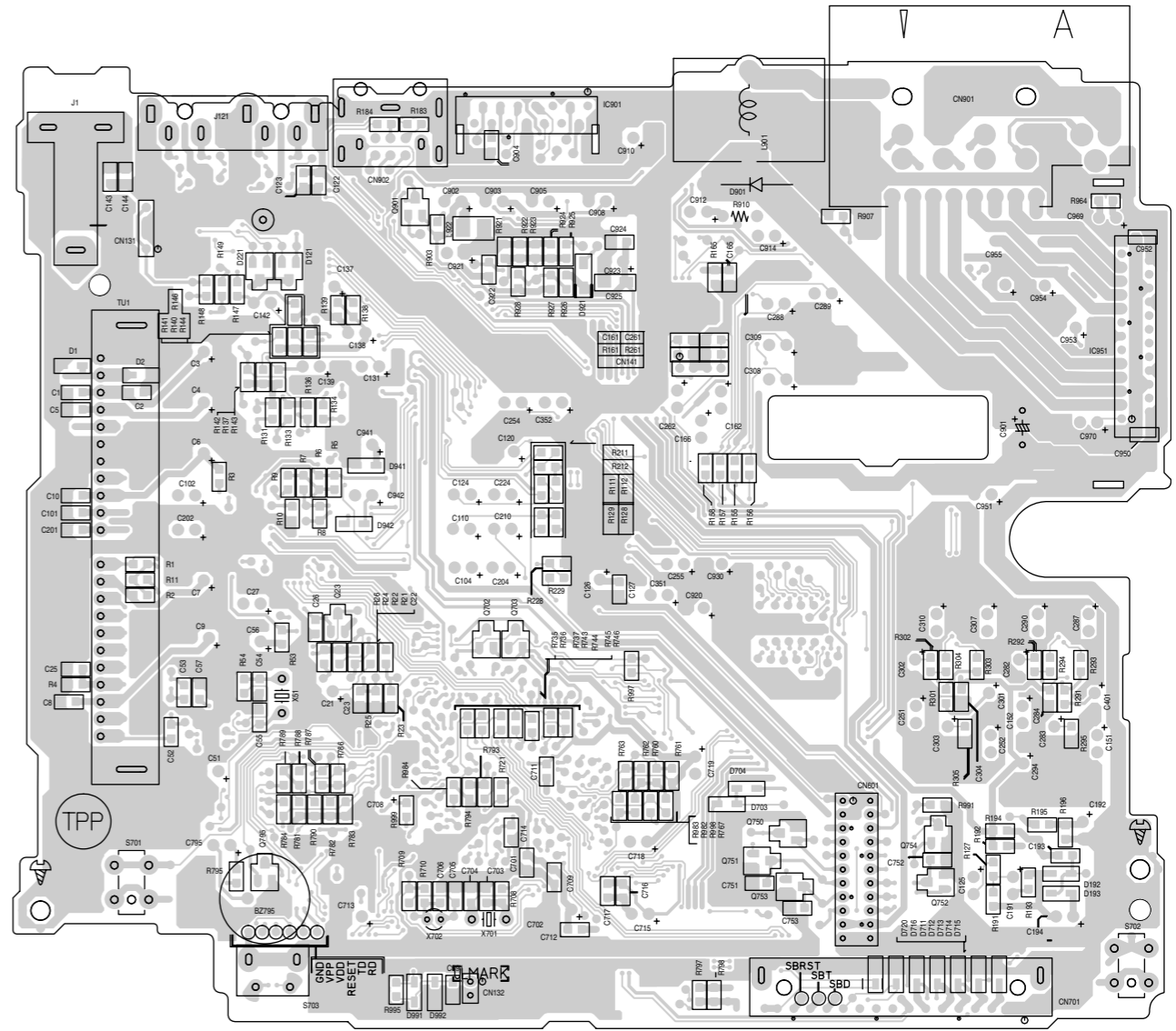
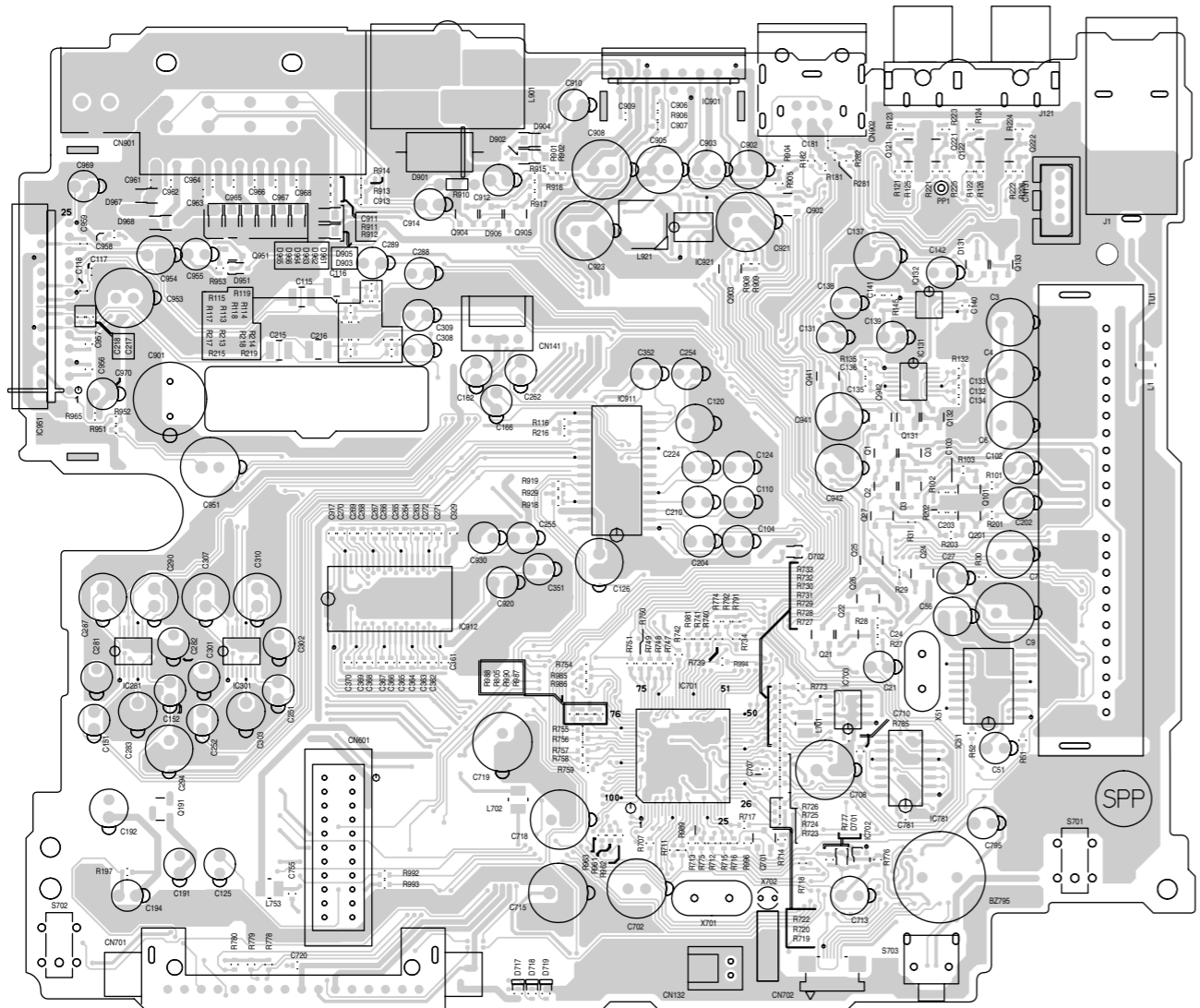
■ Main board

■ Main board

5
4
3
2
1

Forward side

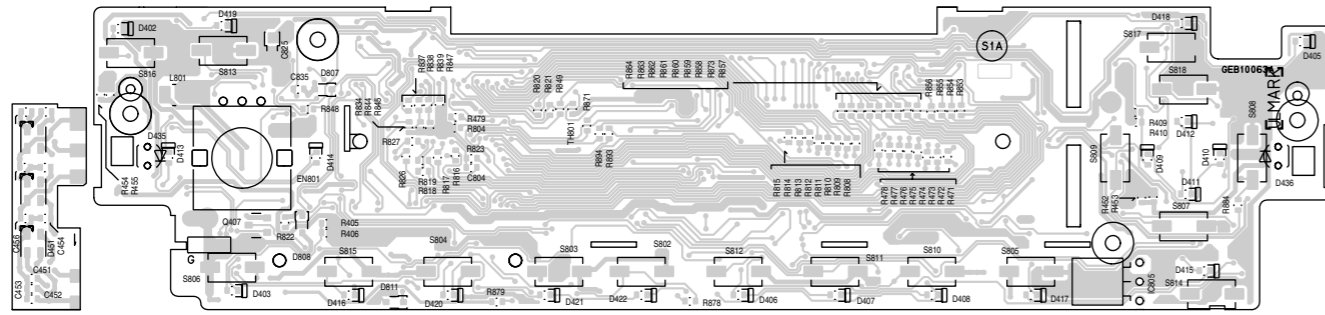
Reverse side



A B C D E F G 2-5

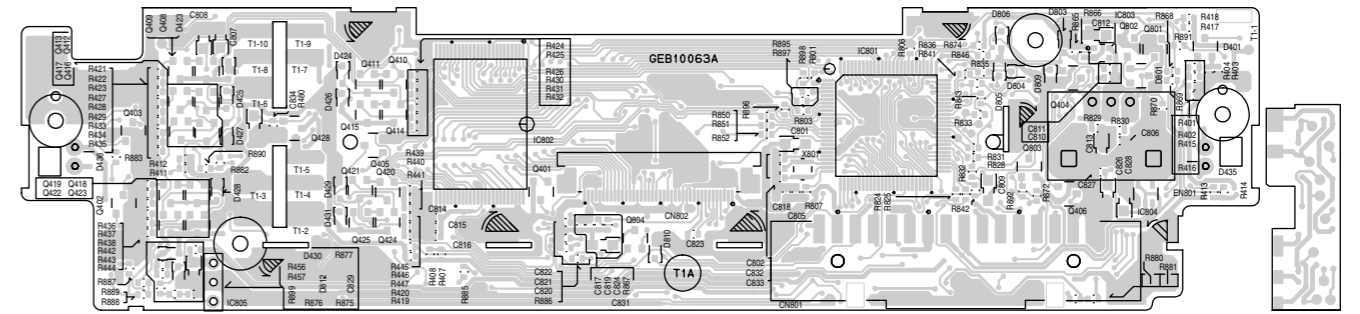
■ Front board

Forward side



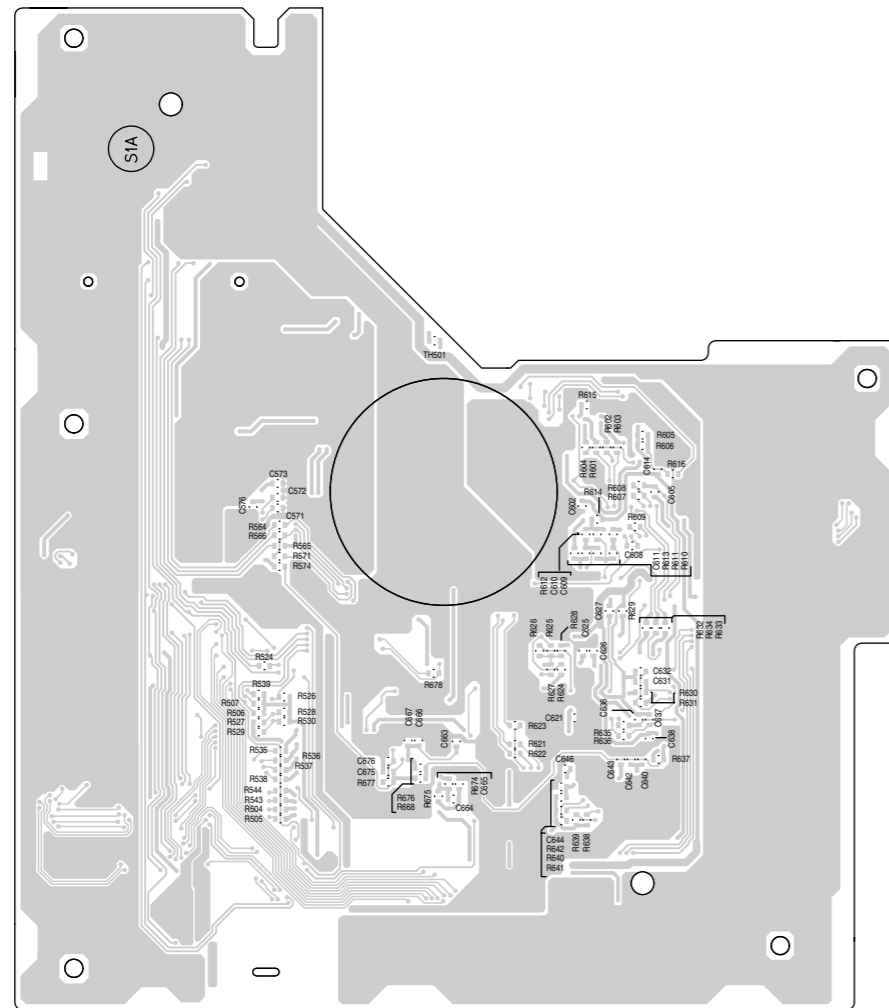
■ Front board

Reverse side



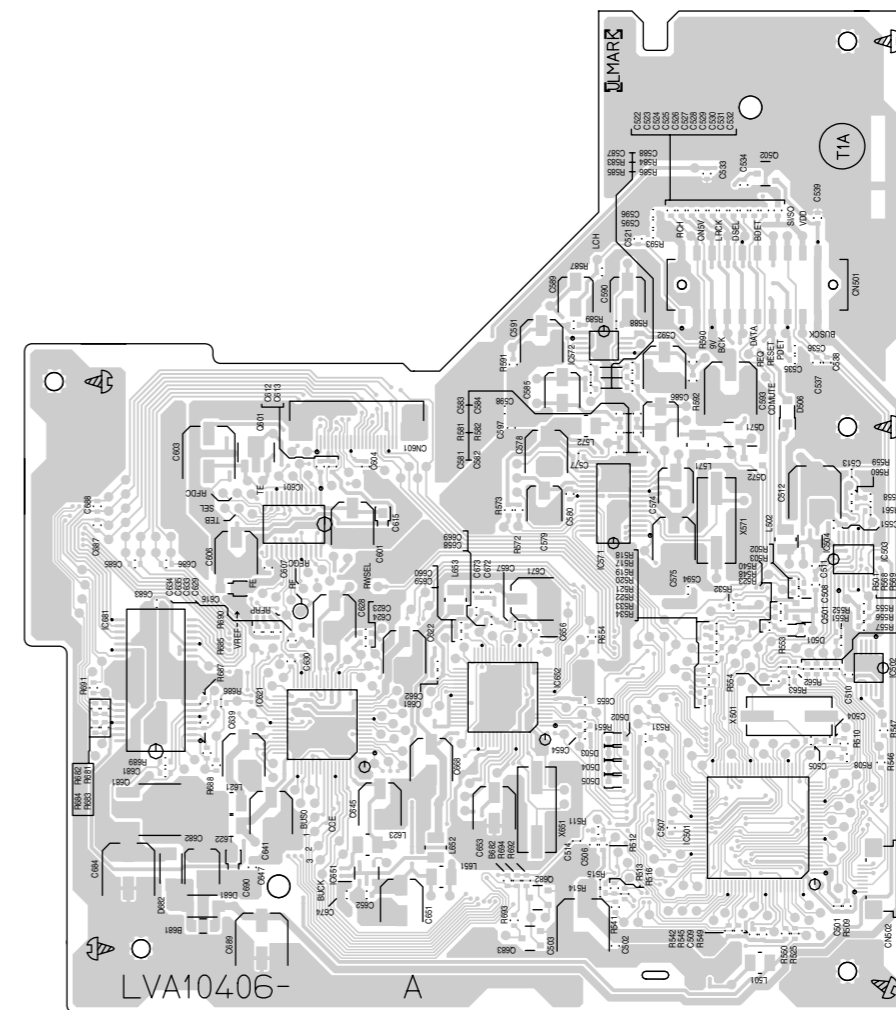
■ Mecha control board

Forward side



■ Mecha control board

Reverse side



5

4

3

2

1

A

B

C

2-6

D

E

F

G

H

< MEMO >

KD-LH3101

JVC

VICTOR COMPANY OF JAPAN, LIMITED

AV & MULTIMEDIA COMPANY 10-1, 1Chome, Ohwatari-machi, Maebashi-city, 371-8543, Japan

(No.49843SCH)



Printed in Japan
2003/05

JVC

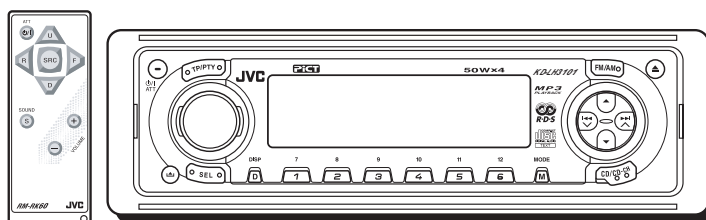
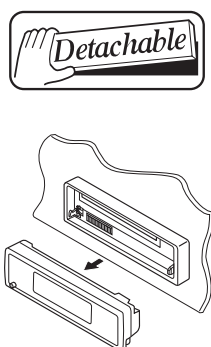
SERVICE MANUAL

CD RECEIVER

KD-LH3101

Area Suffix

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



PICT

MP3
PLAYBACK



COMPACT
disc
DIGITAL AUDIO
TEXT

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SPECIFICATION

AUDIO AMPLIFIER SECTION	Maximum Power Output	Front	50 W per channel		
		Rear	50 W per channel		
	Continuous Power Output (RMS)	Front	19 W per channel into 4 Ω , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.		
		Rear	19 W per channel into 4 Ω , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.		
	Load Impedance	4 Ω (4 Ω to 8 Ω allowance)			
	Equalizer Control Range	Frequencies	60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 12 kHz		
		Level	± 10 dB		
	Frequency Response	40 Hz to 20 000 Hz			
	Signal-to-Noise Ratio	70 dB			
	Line-Out Level/Impedance	2.0 V/20 k Ω load (full scale)			
Output Impedance	1 k Ω				
TUNER SECTION	Frequency Range	FM	87.5 MHz to 108.0 MHz		
		AM	(MW) 522 kHz to 1 620 kHz		
			(LW) 144 kHz to 279 kHz		
	[FM Tuner]	Usable Sensitivity	11.3 dBf (1.0 μ V/75 Ω)		
		50 dB Quieting Sensitivity	16.3 dBf (1.8 μ V/75 Ω)		
		Alternate Channel Selectivity (400 kHz)		65 Ω	
		Frequency Response	40 Hz to 15 000 Hz		
		Stereo Separation	30 dB		
		Capture Ratio	1.5 dB		
	[MW Tuner]	Sensitivity	20 μ V		
		Selectivity	35 dB		
[LW Tuner]	Sensitivity	50 μ V			
CD PLAYER SECTION	Type	Compact disc player			
	Signal Detection System	Non-contact optical pickup (semiconductor laser)			
	Number of channels	2 channels (stereo)			
	Frequency Response	5 Hz to 20 000 Hz			
	Dynamic Range	96 dB			
	Signal-to-Noise Ratio	98 dB			
	Wow and Flutter	Less than measurable limit			
	MP3 decoding format	MPEG1/2 Audio Layer 3			
	Max. Bit Rate	320 Kbps			
GENERAL	Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)		
	Grounding System	Negative ground			
	Allowable Operating Temperature	0°C to +40°C			
	Dimensions (W x H x D)	Installation Size (approx.)	182 mm x 52 mm x 150 mm		
	Panel Size (approx.)	188 mm x 58 mm x 12 mm			
	Mass (approx.)	1.4 kg (excluding accessories)			

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.

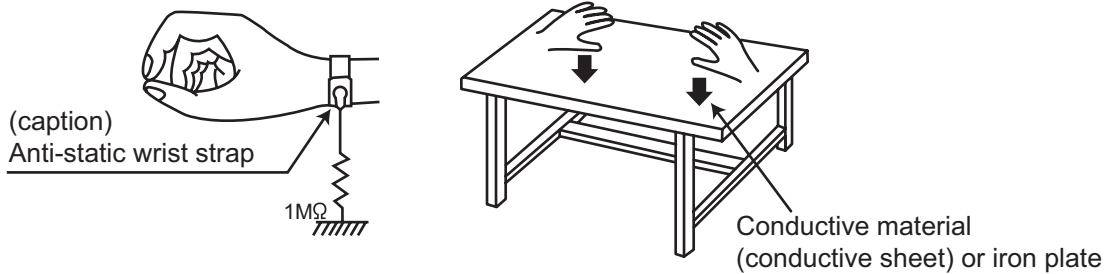
Be careful to use proper grounding in the area where repairs are being performed.

(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.

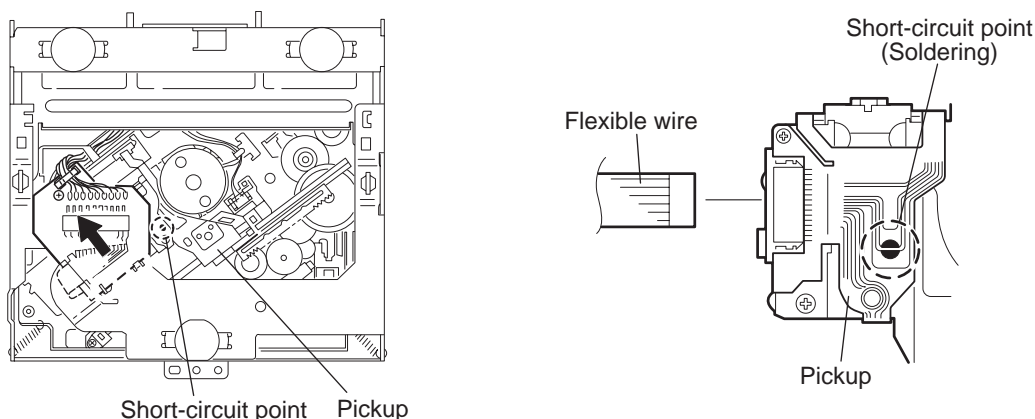
1.3 Handling the traverse unit (optical pickup)

- (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

Disassembly method

2.1 Main body

2.1.1 Removing the front panel assembly (See Fig.1)

- (1) Push the detach button in the lower left part of the front panel assembly and remove the front panel assembly.

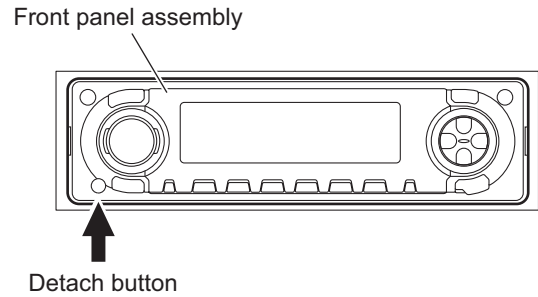


Fig.1

2.1.2 Removing the bottom cover (See Fig.2)

- Prior to performing the following procedure, remove the front panel assembly as required.

- (1) Turn over the main body and release the two joints **a**, two joints **b** and joint **c**.

CAUTION:

Do not damage the main board when releasing the joints using a screwdriver.

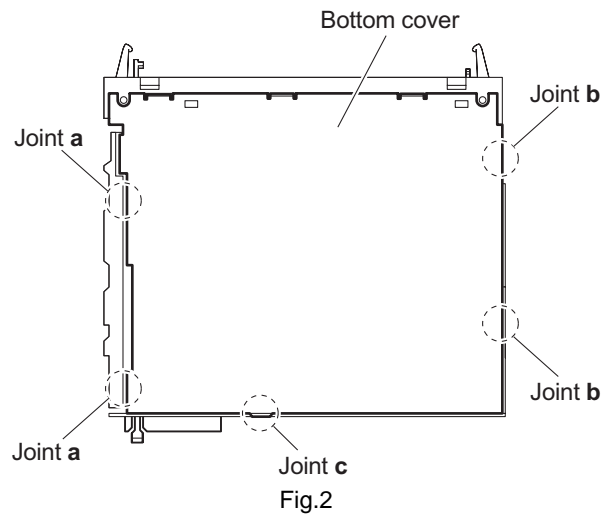
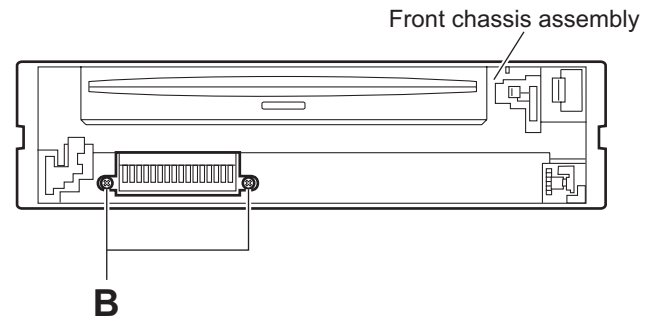
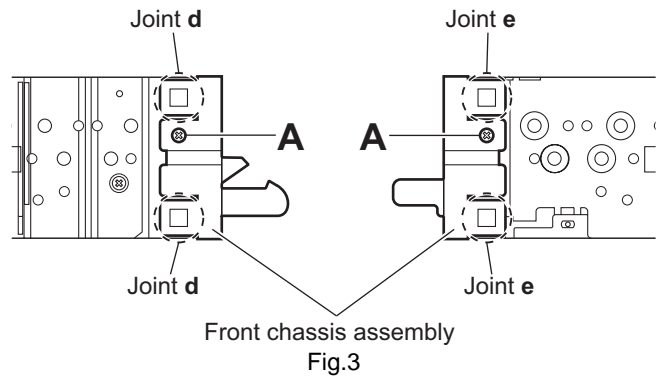


Fig.2

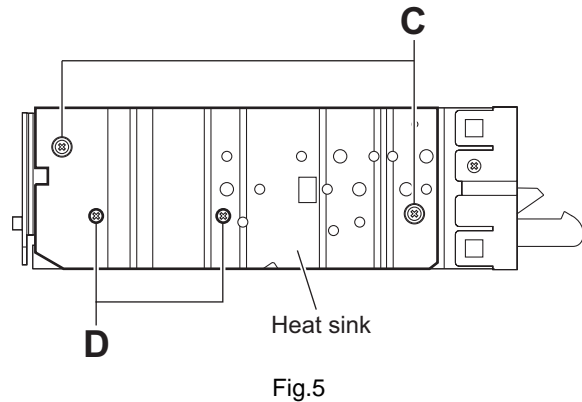
**2.1.3 Removing the front chassis assembly
(See Figs.3 and 4)**

- Prior to performing the following procedures, remove the front panel assembly and bottom cover.
 - (1) Remove the two screws **A** on the both sides of the main body. (See Fig.3.)
 - (2) Remove the two screws **B** on the front side of the main body. (See Fig.4.)
 - (3) Release the two joints **d** and two joints **e** on the both sides of the main body. (See Fig.3.)



**2.1.4 Removing the heat sink
(See Fig.5)**

- Prior to performing the following procedure, remove the front panel assembly as required.
 - (1) Remove the two screws **C** and two screws **D** on the left side of the main body.

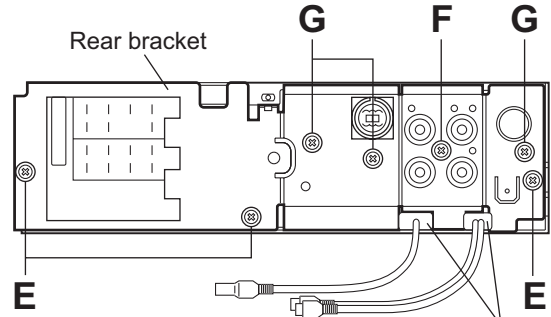


2.1.5 Removing the rear bracket (See Fig.6)

- Prior to performing the following procedures, remove the bottom cover.
 - (1) Remove the three screws **E**, screw **F** and three screws **G** on the back side of the main body.
 - (2) Remove the rear bracket.

REFERENCE:

During reassembly, before fixing the rear bracket onto the main body, insert the SUB WOOFER cable and STEERING REMOTE cable into the slots.



Insert Subwoofer and steering cables into the slots.

Fig.6

2.1.6 Removing the main board (See Fig.7)

- Prior to performing the following procedures, remove the front panel assembly, bottom cover, front chassis assembly, heat sink and rear bracket.
 - (1) Remove the two screws **H** attaching the main board.
 - (2) Disconnect the connector CN601 and remove the main board in an upward direction.

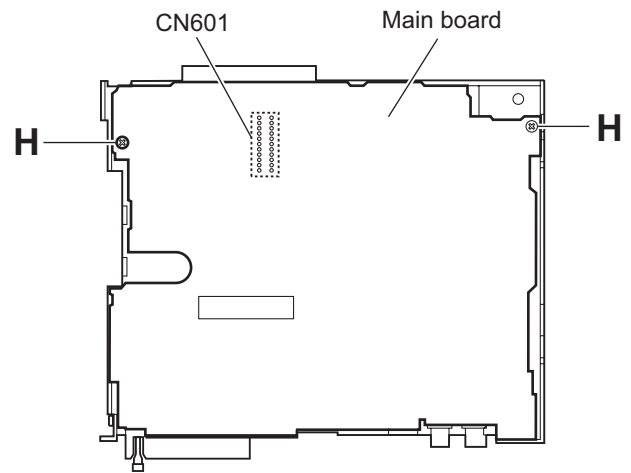


Fig.7

2.1.7 Removing the mecha control board (See Fig.8)

- Prior to performing the following procedures, remove the front panel assembly, bottom cover, front chassis assembly, heat sink, rear bracket and main board.
 - (1) Remove the five screws **J** attaching the mecha control board.
 - (2) Disconnect the card wire from the mecha connector.
 - (3) Move the mecha control board in the direction of the arrow to release it from the joint **f**.

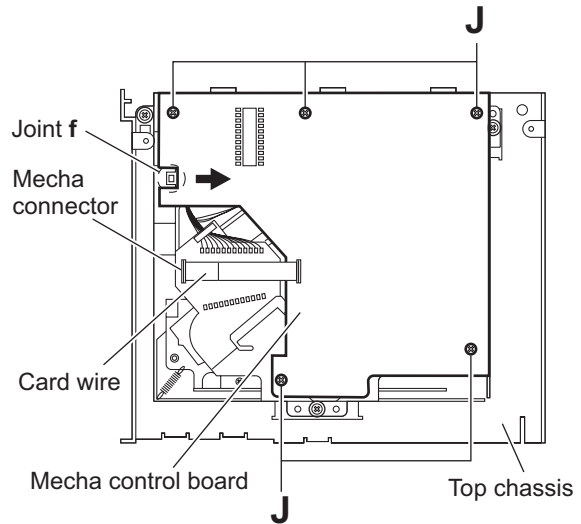


Fig.8

2.1.8 Removing the CD mechanism assembly (See Fig.9)

- Prior to performing the following procedure, remove the front panel assembly, bottom cover, front chassis assembly, heat sink, rear bracket, main board and mecha control board.
 - (1) Remove the three screws **K** attaching the CD mechanism assembly to the top chassis.

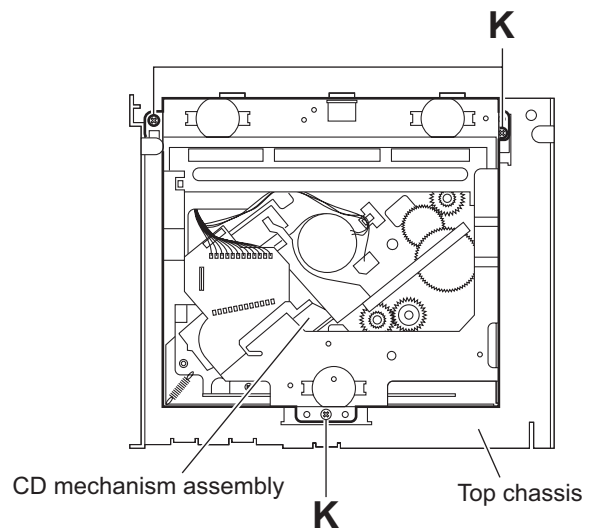


Fig.9

2.1.9 Removing the front board (See Figs.10 to 12)

- Prior to performing the following procedures, remove the front panel assembly.
 - (1) Remove the five screws **L** attaching the rear cover on the back side of the front panel assembly. (See Fig.10.)
 - (2) Release the eight joints **g**, remove the rear cover from the front panel assembly. (See Fig.11.)
 - (3) Take out the front board. (See Fig.12.)

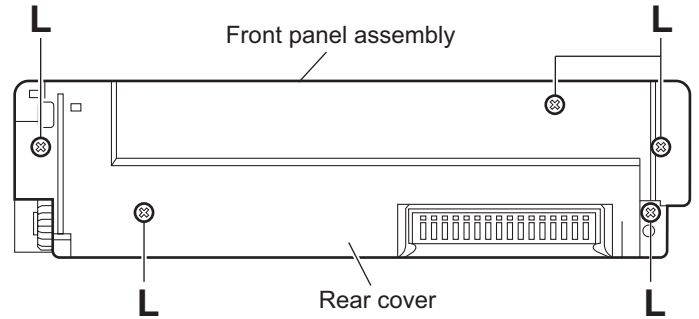


Fig.10

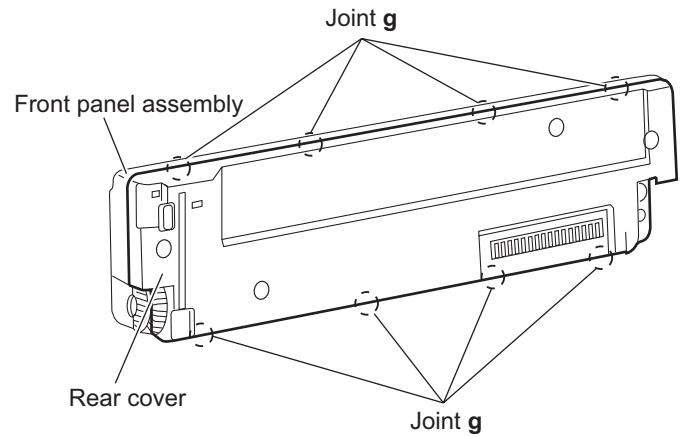


Fig.11

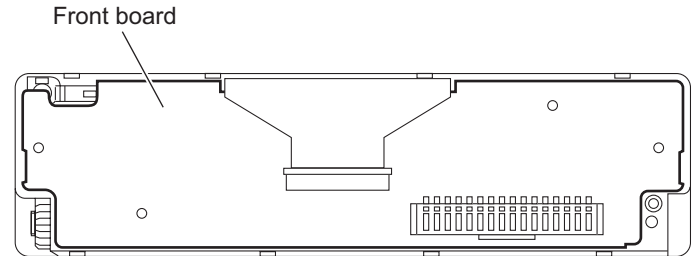


Fig.12

2.2 CD Mechanism section

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

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

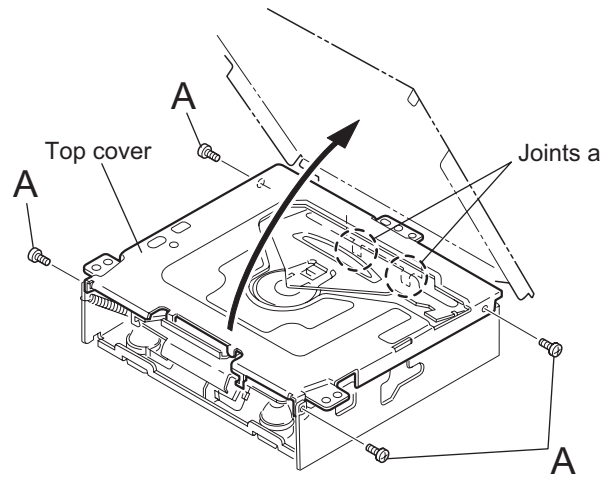


Fig.1

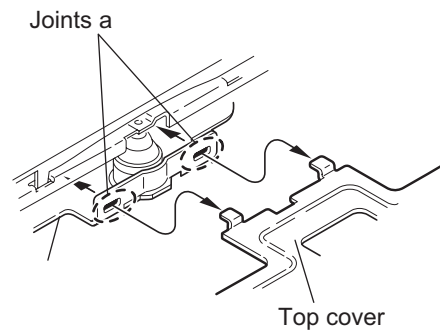


Fig.2

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

CAUTION:

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

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

CAUTION:

Unsolder the short-circuit point after reassembling.

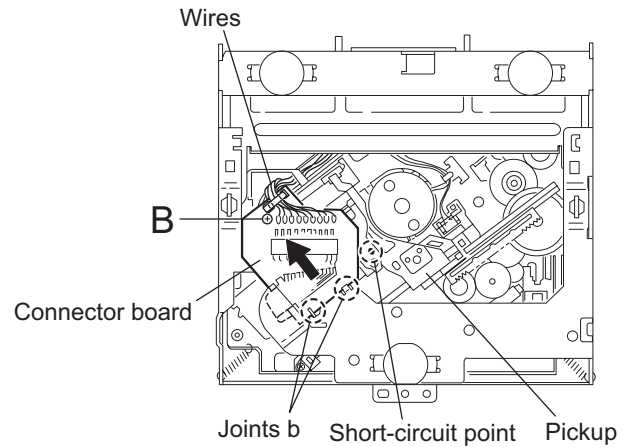


Fig.3

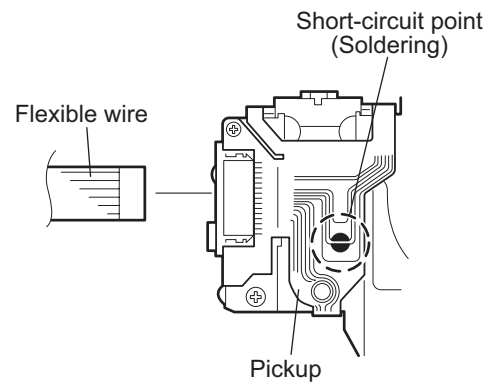


Fig.4

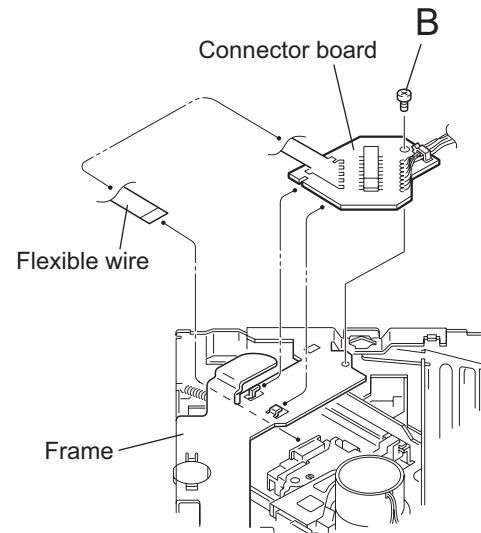


Fig.5

2.2.3 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.

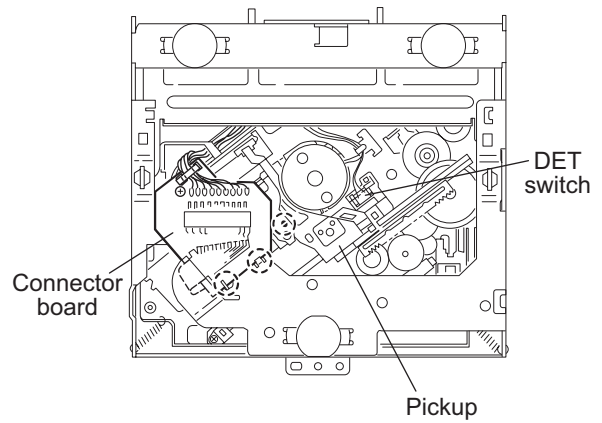


Fig.6

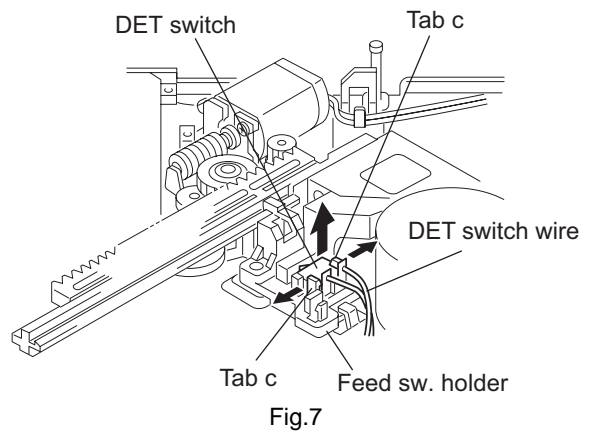


Fig.7

2.2.4 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.

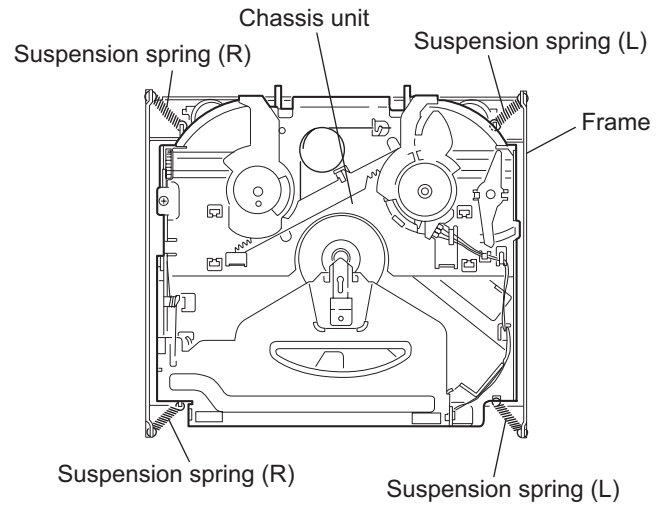


Fig.8

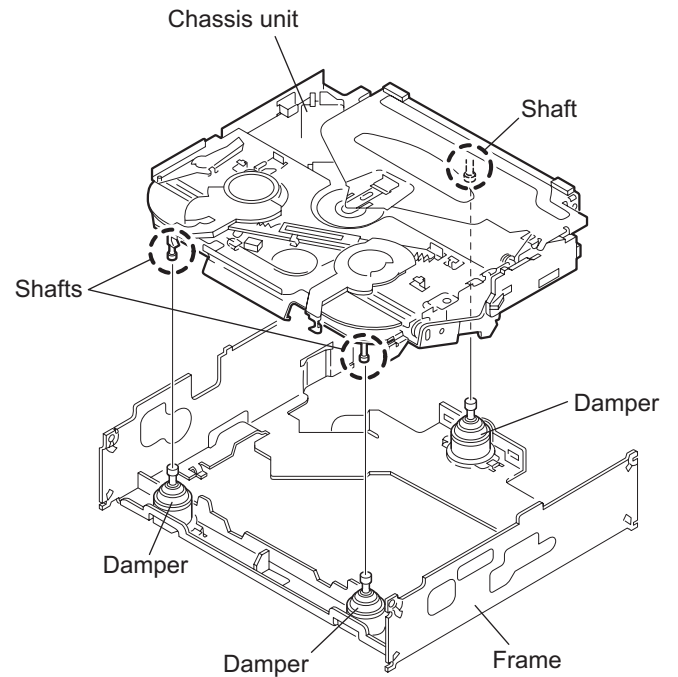
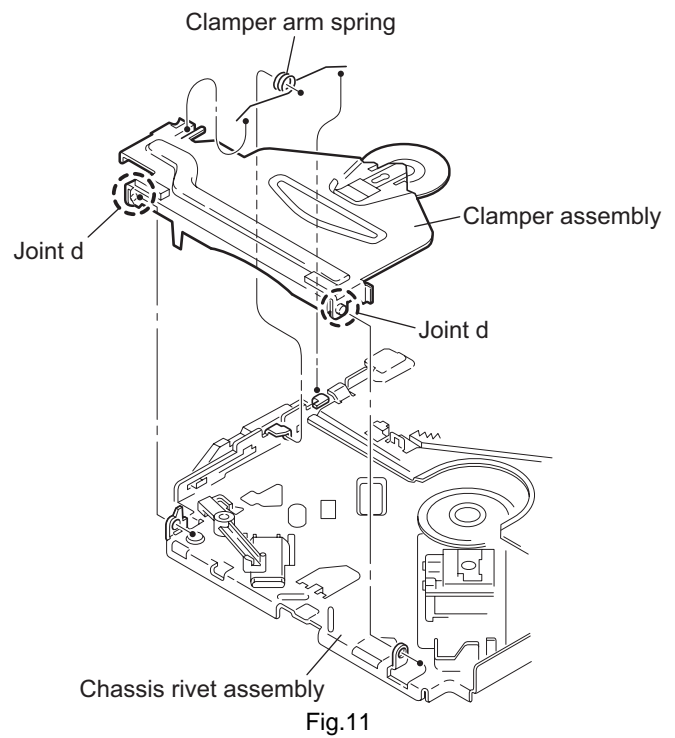
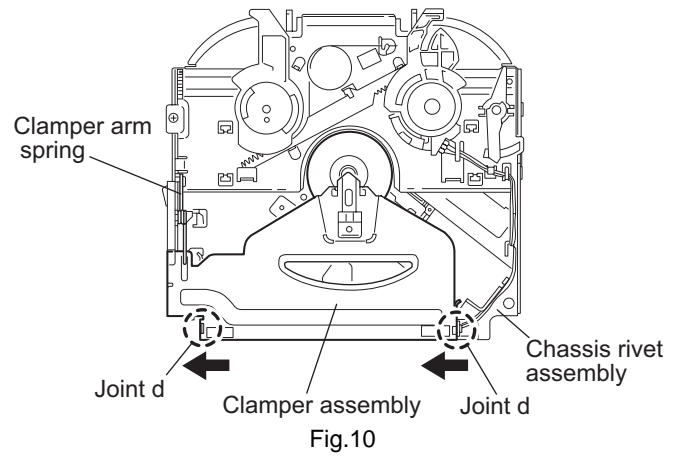


Fig.9

2.2.5 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**.

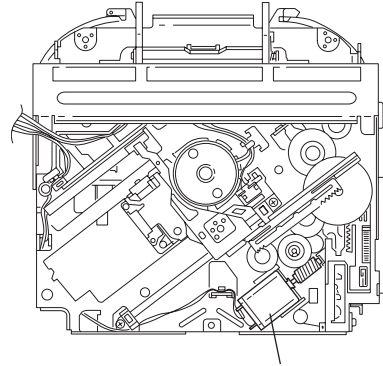


**2.2.6 Removing the loading / feed motor assembly
(See Figs.12 and 13)**

- 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

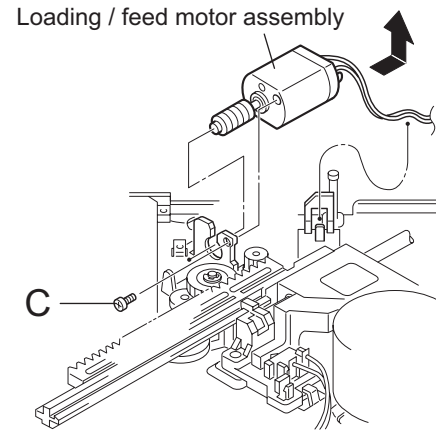


Fig.13

2.2.7 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.

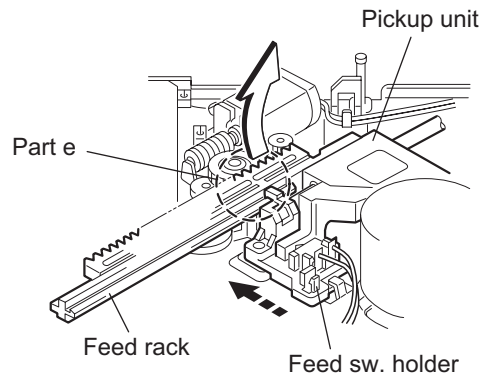


Fig.15

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

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

CAUTION:

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

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

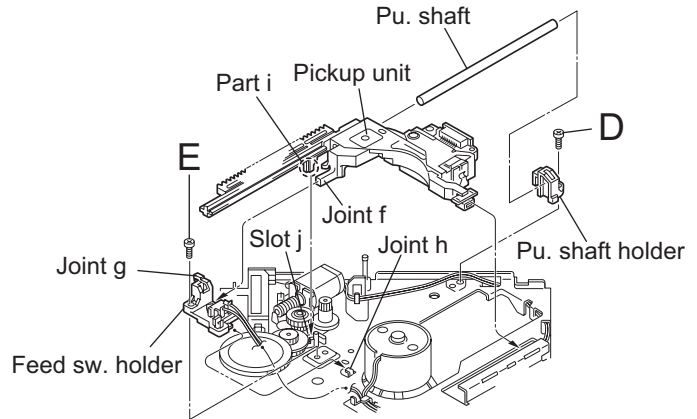


Fig.16

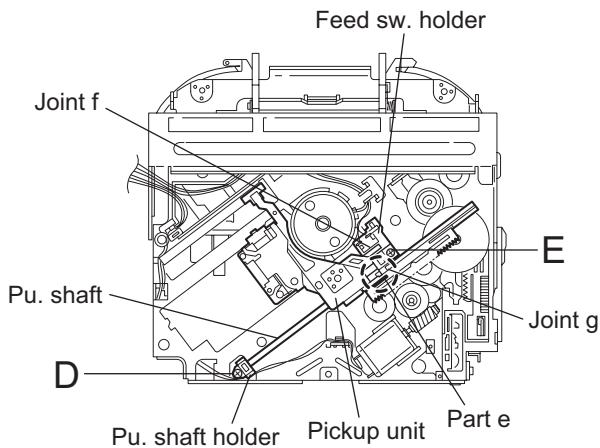


Fig.14

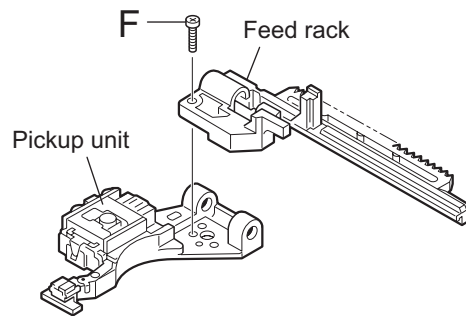


Fig.17

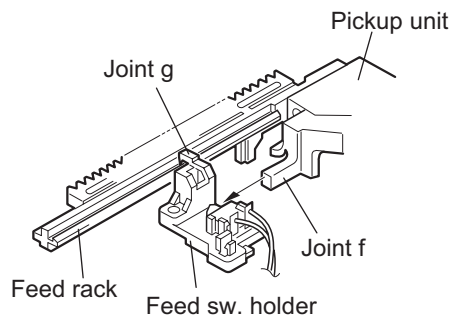


Fig.18

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

- Prior to performing the following procedure, remove the top cover, connector board and clasper 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.

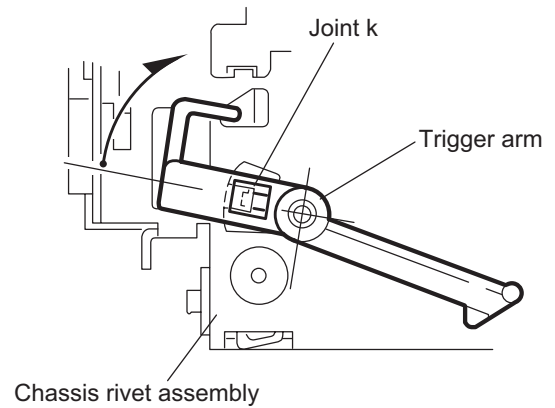


Fig.19

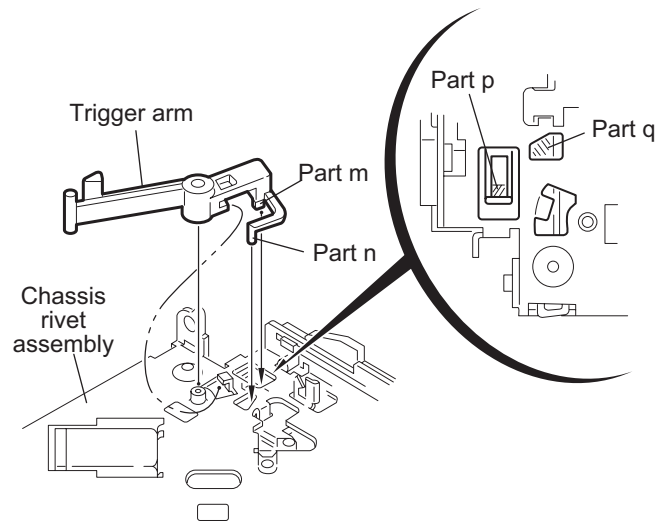


Fig.20

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

- Prior to performing the following procedure, remove the top cover, connector board, chassis unit, and clasper 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.

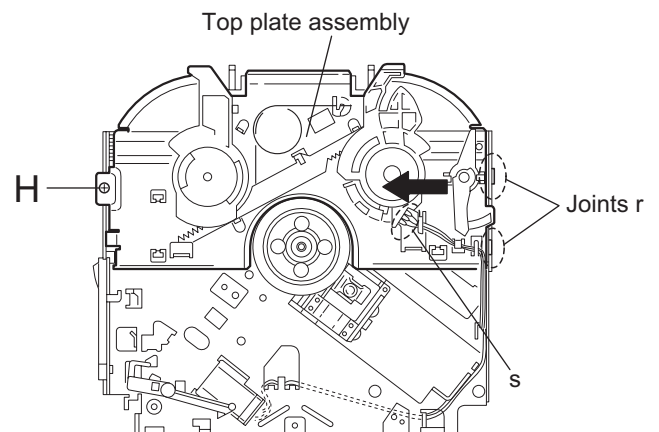


Fig.21

2.2.11 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.

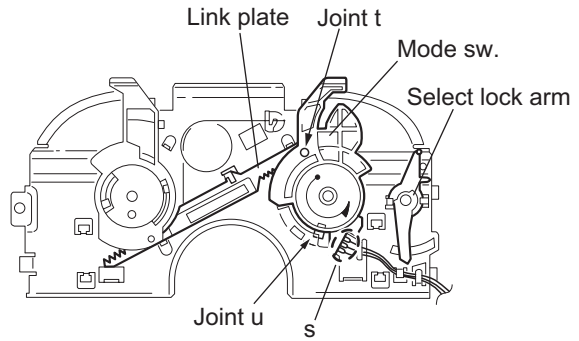


Fig.22

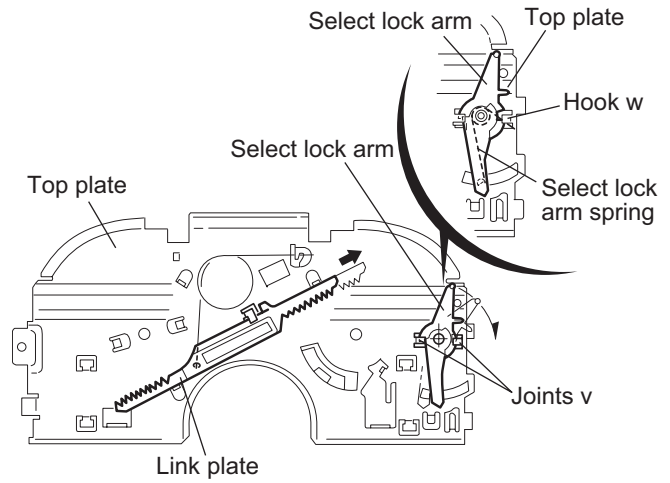


Fig.23

2.2.12 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.

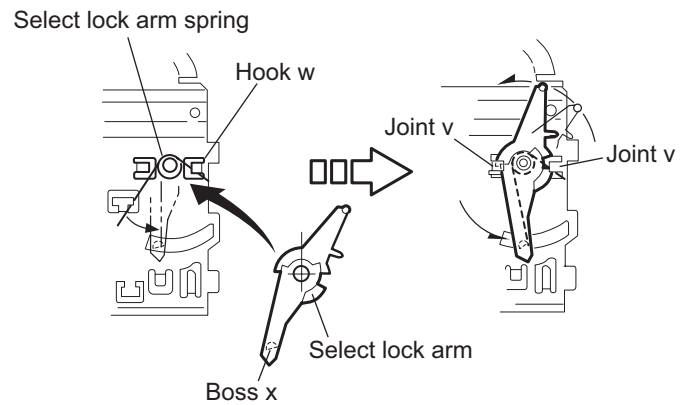


Fig.24

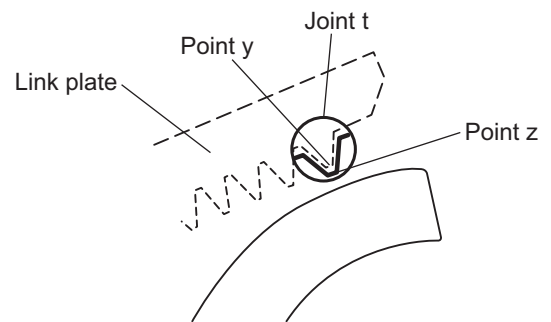


Fig.25

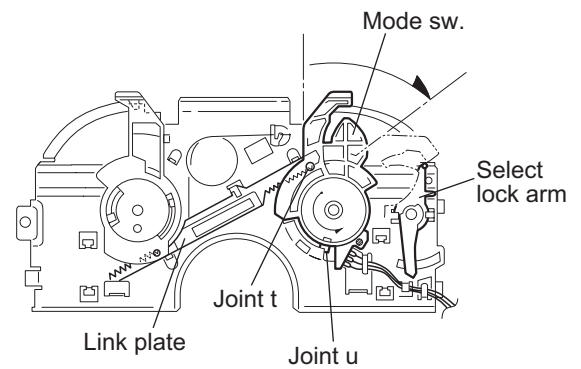


Fig.26

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

- Prior to performing the following procedure, remove the top plate assembly.

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

REFERENCE:

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

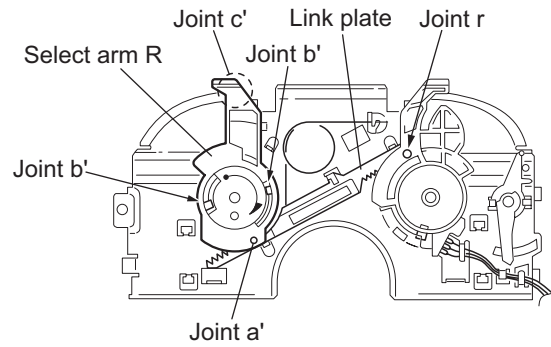


Fig.27

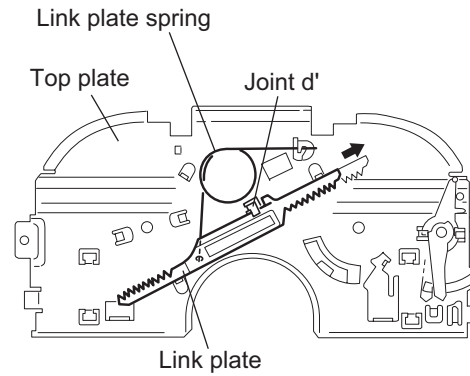


Fig.28

2.2.14 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.

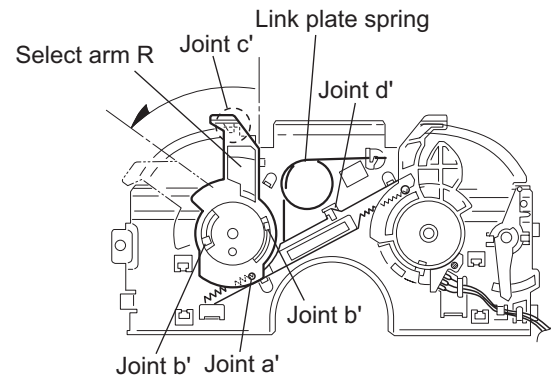


Fig.29

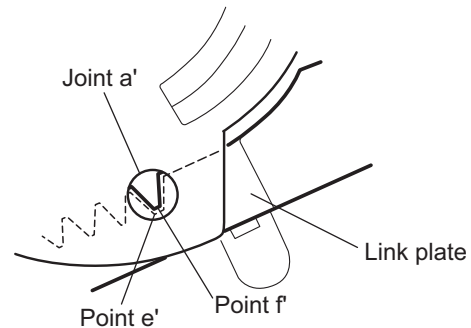


Fig.30

2.2.15 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.)

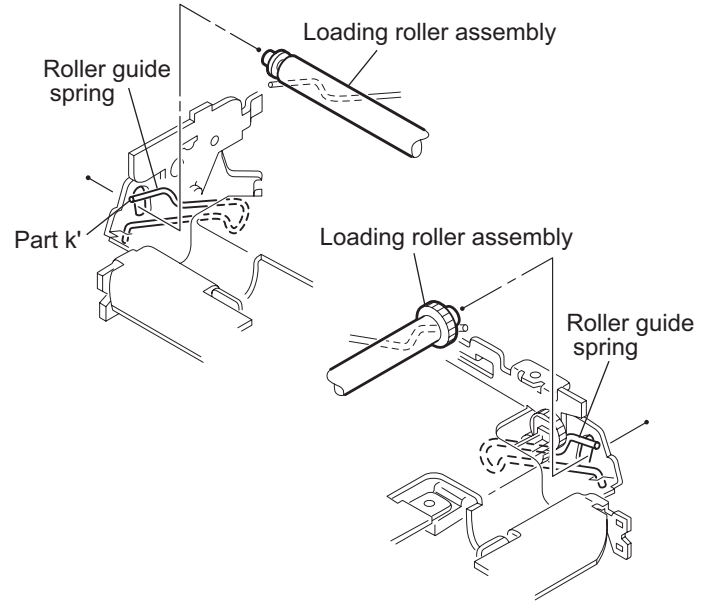


Fig.32

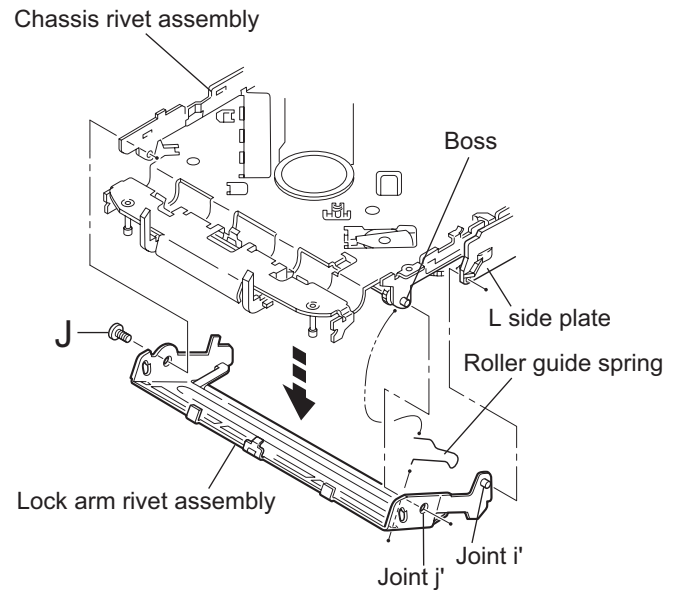


Fig.33

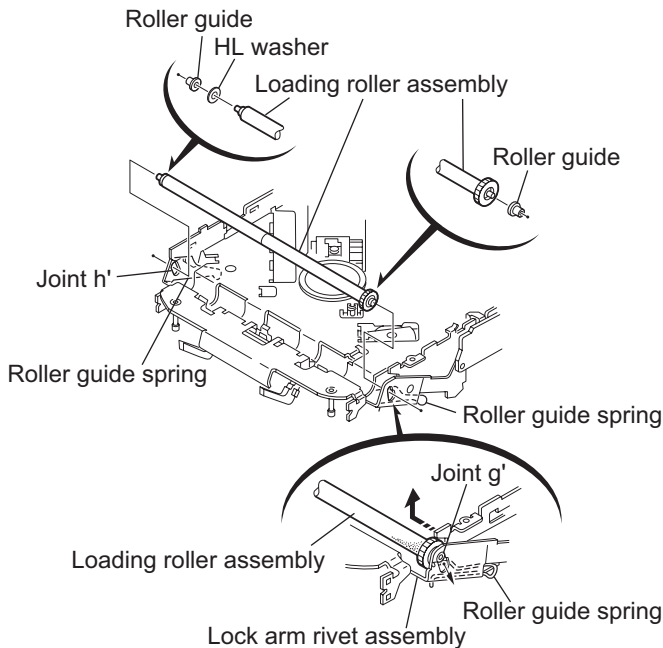


Fig.31

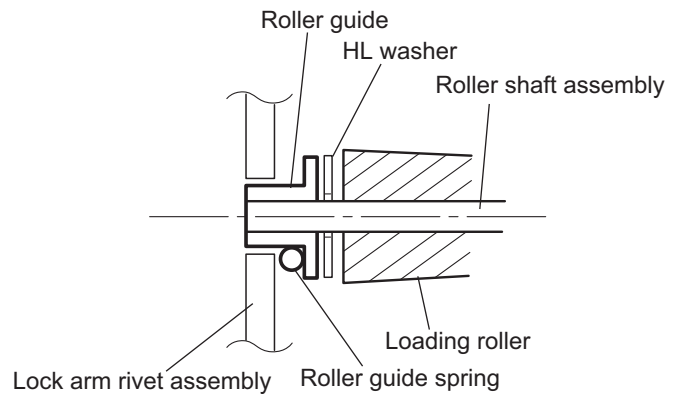


Fig.34

2.2.16 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.

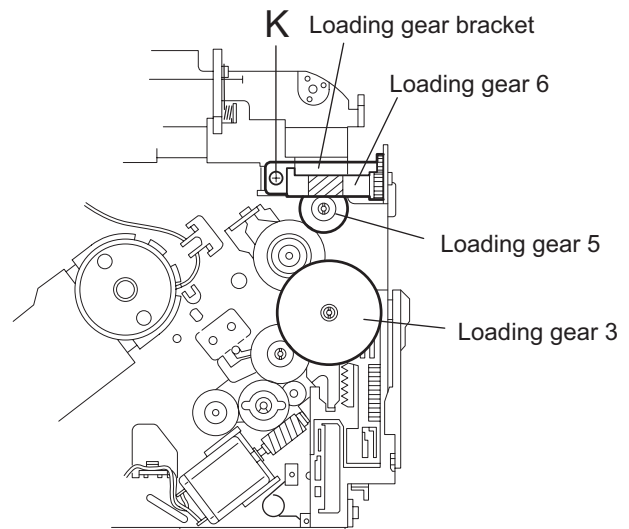


Fig.35

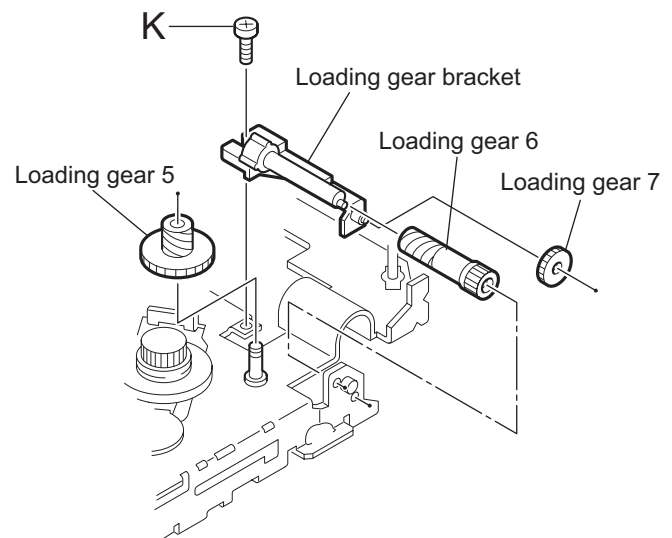


Fig.36

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

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

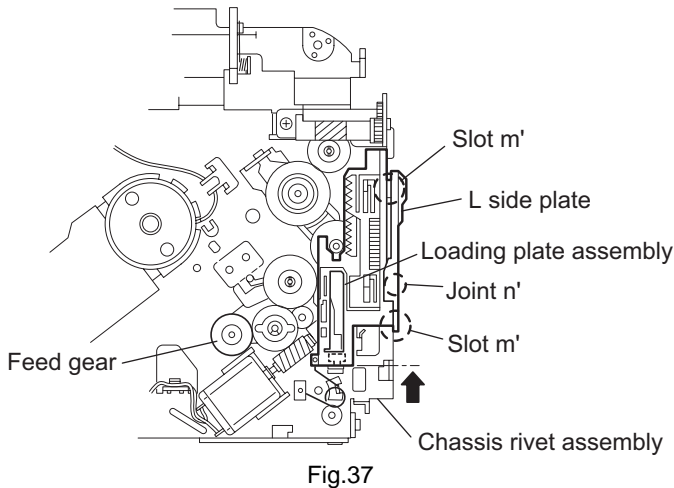


Fig.37

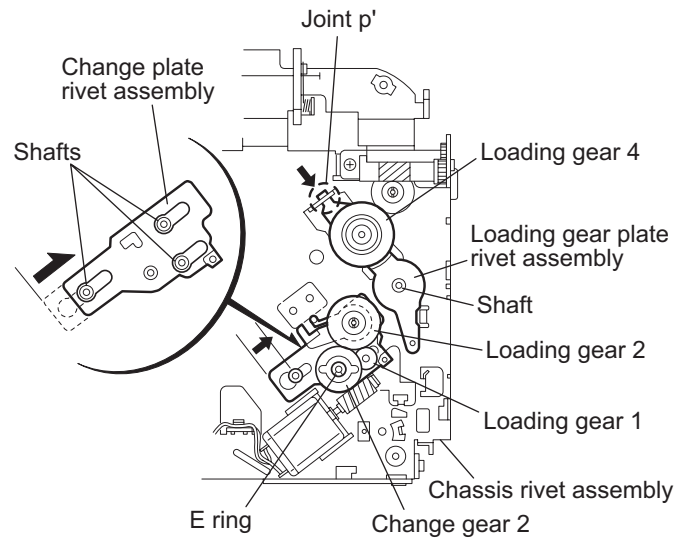


Fig.38

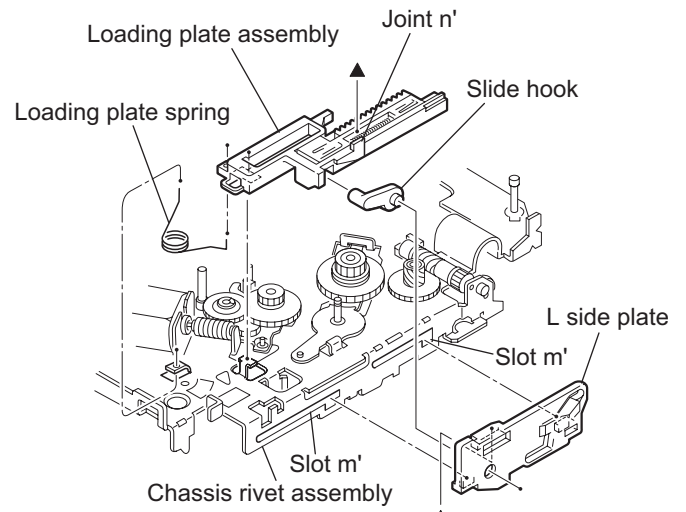


Fig.39

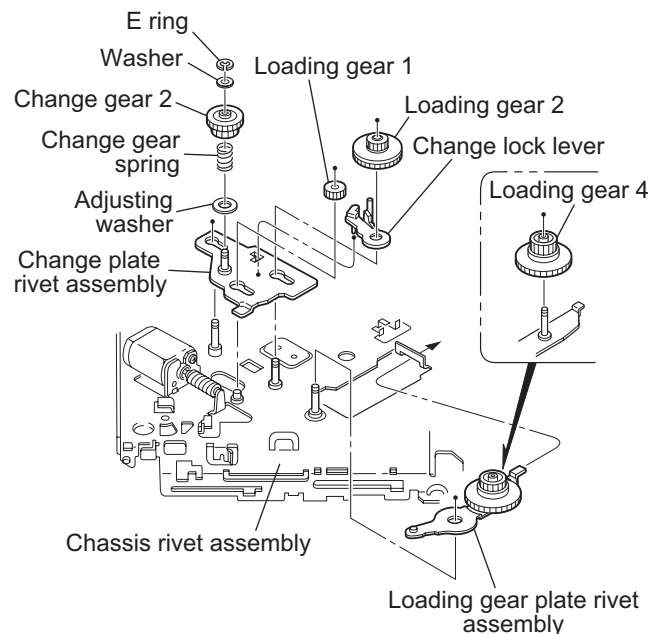
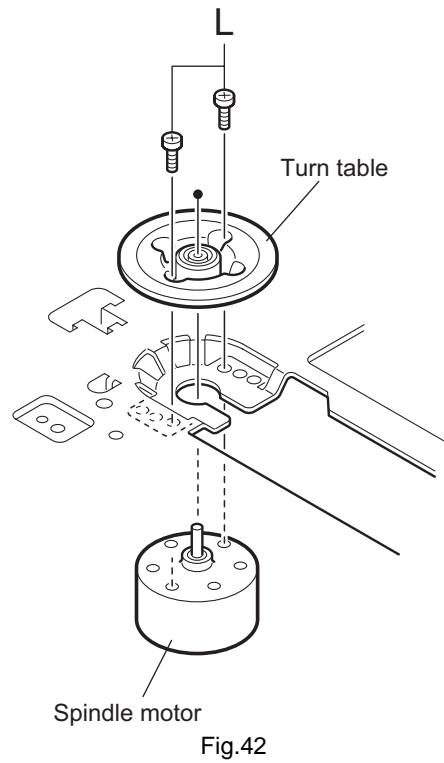
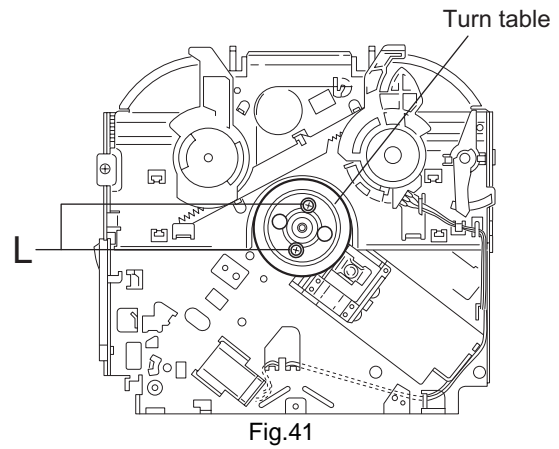


Fig.40

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

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



SECTION 3 Adjustment

3.1 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.

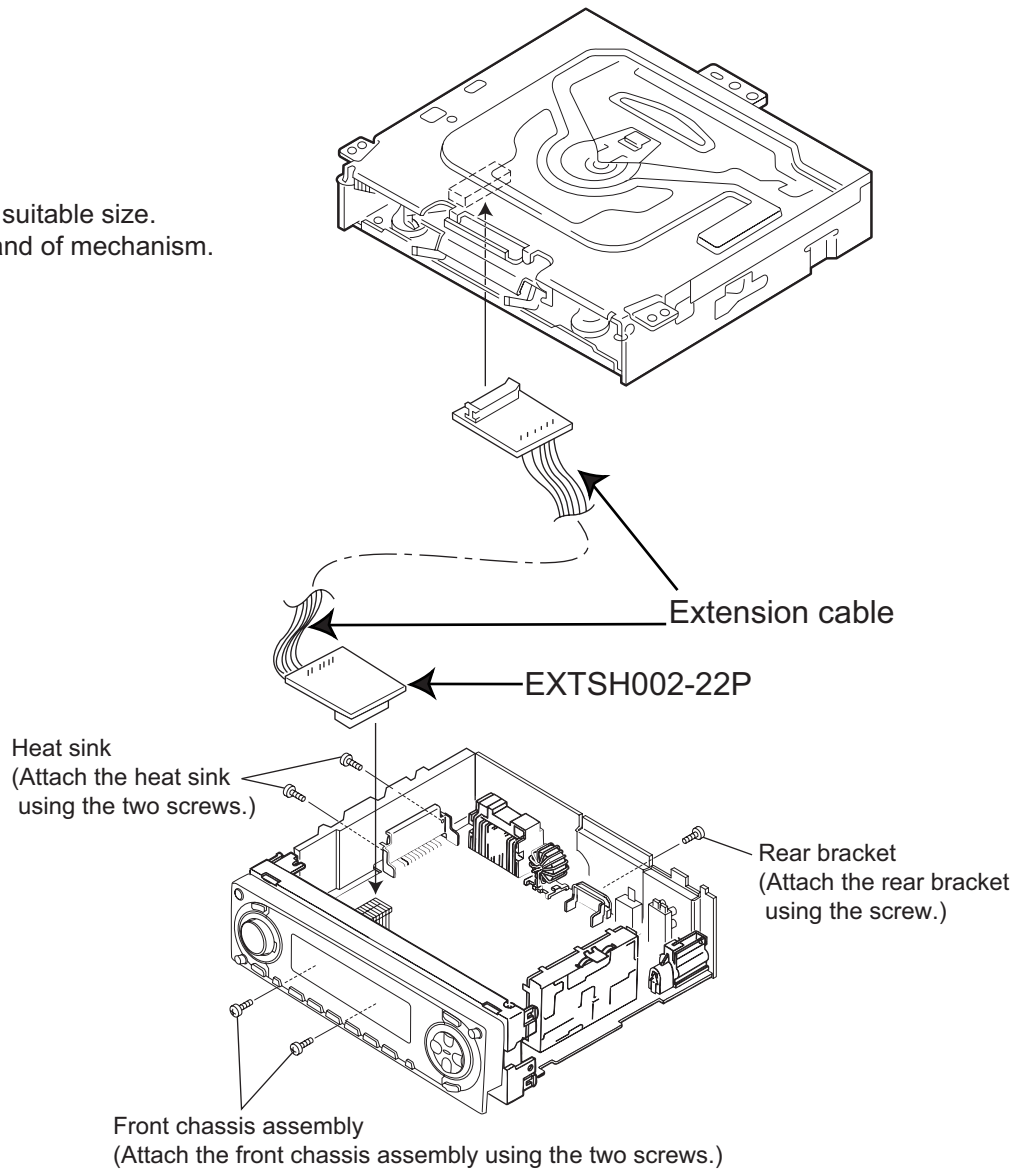
■ Standard measuring conditions

Power supply voltage	DC14.4V(11 to 16V)
Load impedance	20K Ω (2 Speakers connection)
Output Level	Line out 2.0V (Vol. MAX)

■ Dummy load

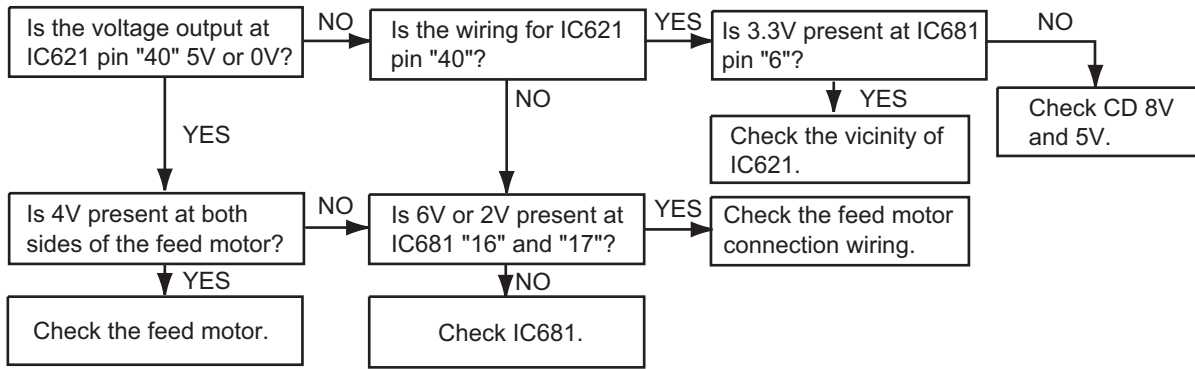
Exclusive dummy load should be used for AM, and FM. For FM dummy load, there is a loss of 6dB between SSG output and antenna input. The loss of 6dB need not be considered since direct reading of figures are applied in this working standard.

* The cardboard is cut in a suitable size.
uses for the insulation stand of mechanism.

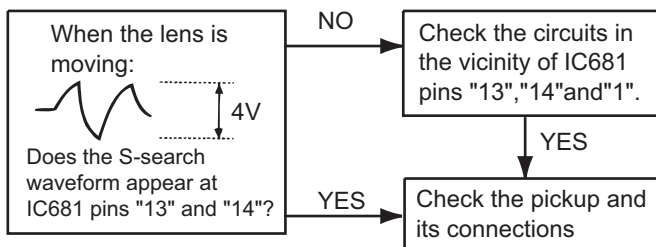


3.2 Troubleshooting

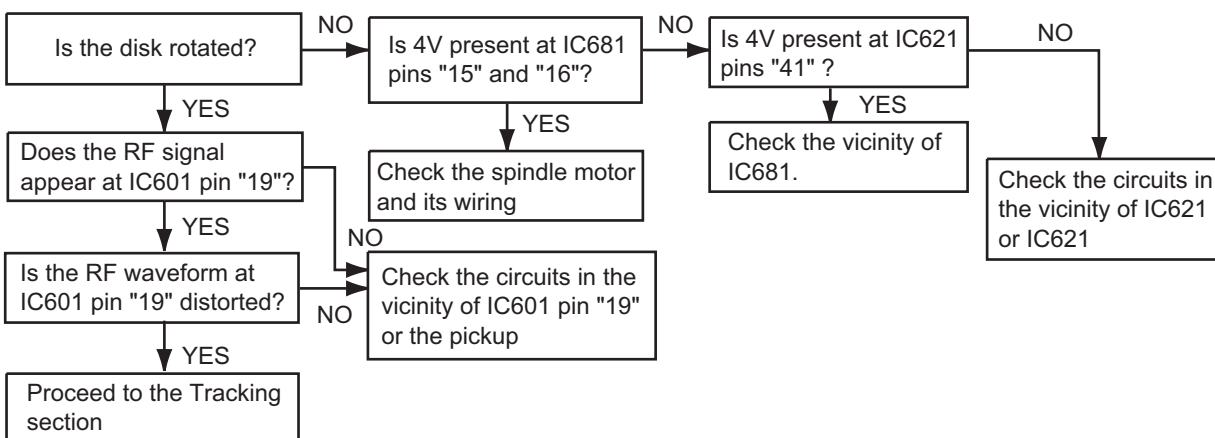
■ Feed section



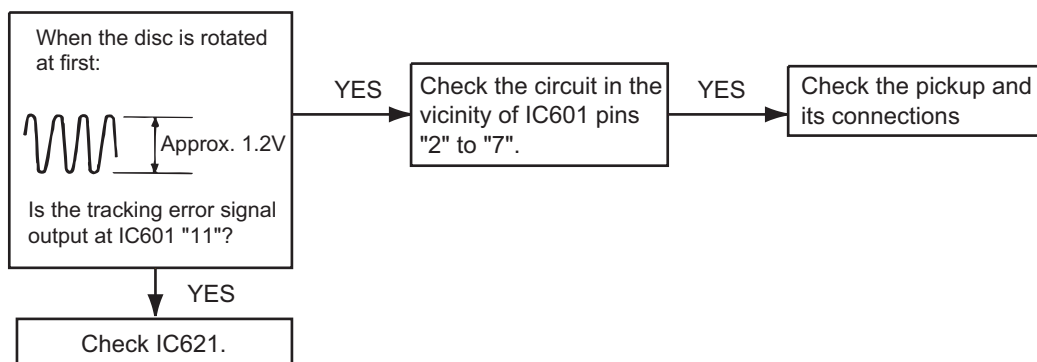
■ Focus section



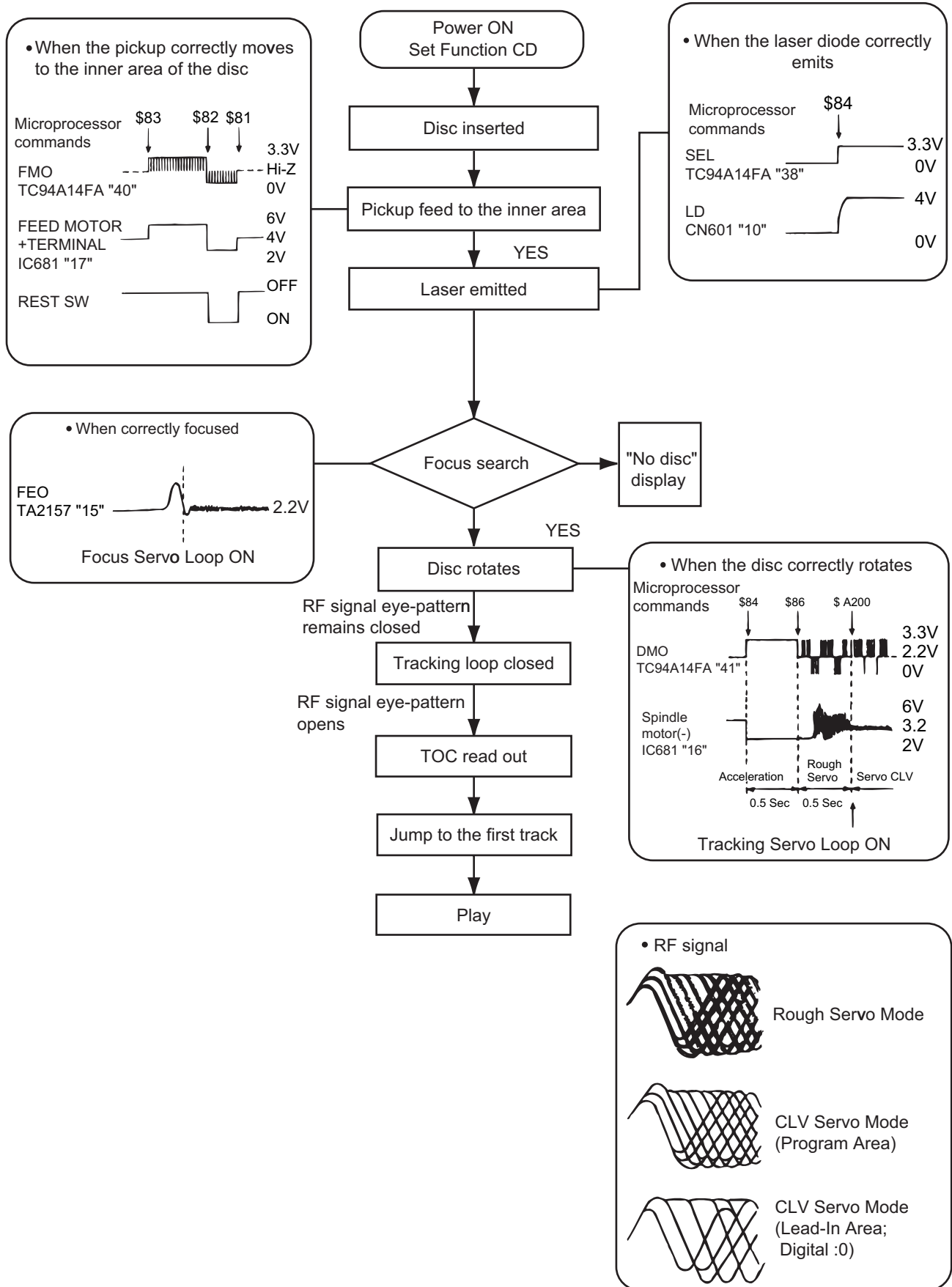
■ Spindle section



■ Tracking section



3.3 Flow of functional operation unit TOC read



3.4 Maintenance of laser pickup

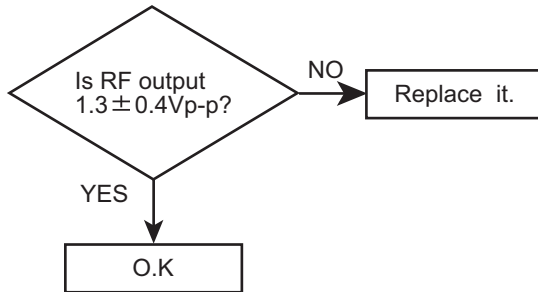
(1) Cleaning the pick up lens

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.

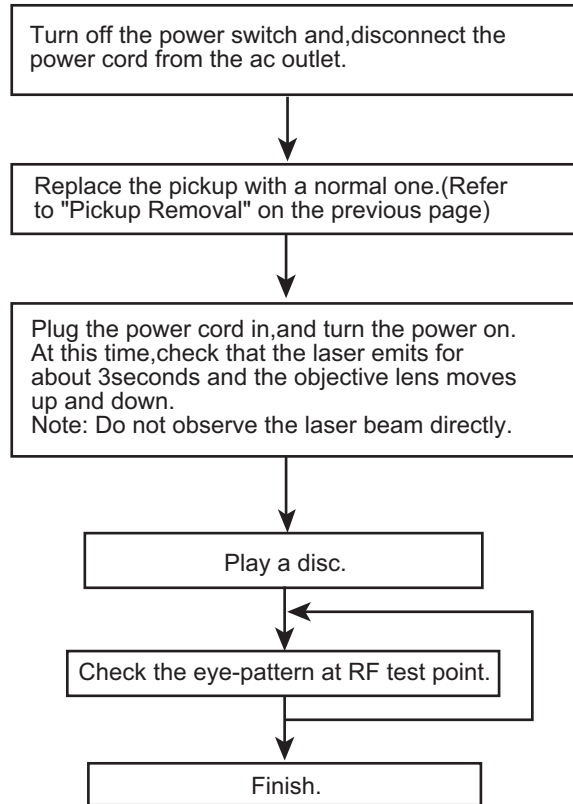


(3) Semi-fixed resistor on the APC PC board

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.

3.5 Replacement of laser pickup

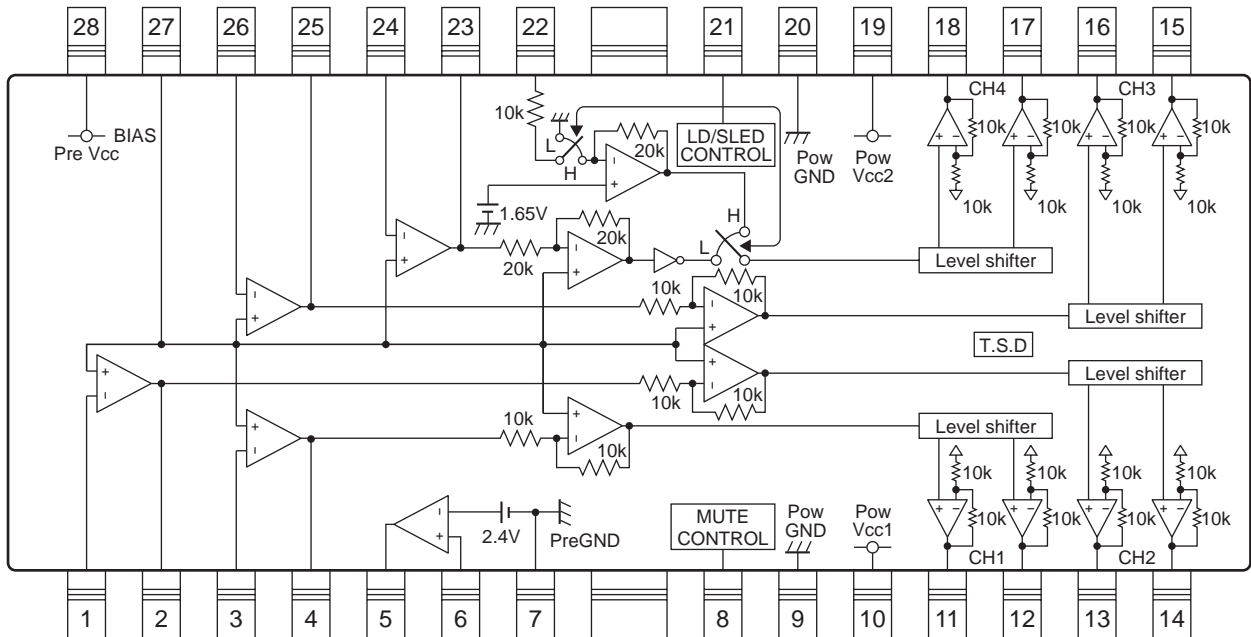


SECTION 4

Description of major ICs

4.1 BA5830FP-X (IC681) : Power driver

- Pin Layout & Block diagram



T.S.D : thermal shutdown
Unit of resistance : [Ω]

- Pin function

Pin No.	Symbol	Function
1	OPIN2(-)	CH2 Pre OP amplifier invert input
2	OPOUT2	CH2 Pre OP amplifier output
3	OPIN1(-)	CH1 Pre OP amplifier invert input
4	OPOUT1	CH1 Pre OP amplifier output
5	REG-B	Connect to external Tr Base
6	REG(+)	Regulator terminal of output feedback
7	PreGND	Pre Block and Regulator GND
8	MUTE	Mute terminal
9	PowGND	Power Block GND
10	PowVcc1	CH1, 2 Power Block Vcc
11	VO1(-)	Driver CH1 negative output
12	VO1(+)	Driver CH1 positive output
13	VO2(-)	Driver CH2 negative output
14	VO2(+)	Driver CH2 positive output

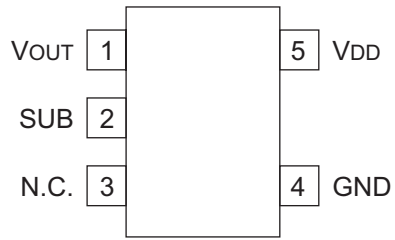
Pin No.	Symbol	Function
15	VO3(+)	Driver CH3 positive output
16	VO3(-)	Driver CH3 negative output
17	VO4(+)	Driver CH4 positive output
18	VO4(-)	Driver CH4 negative output
19	PowVcc2	CH3, 4 Power Block VCC
20	PowGND	Power Block GND
21	CNT	Control terminal
22	LDIN	Loading input
23	OPOUTSL	SLED Pre OP amplifier output
24	OPINSL(-)	SLED Pre OP amplifier invert input
25	OPOUT3	CH3 Pre OP amplifier output
26	OPIN3(-)	CH3 Pre OP amplifier invert input
27	BIAS	BIAS input
28	PreVcc	Pre-Block VCC

NOTE:

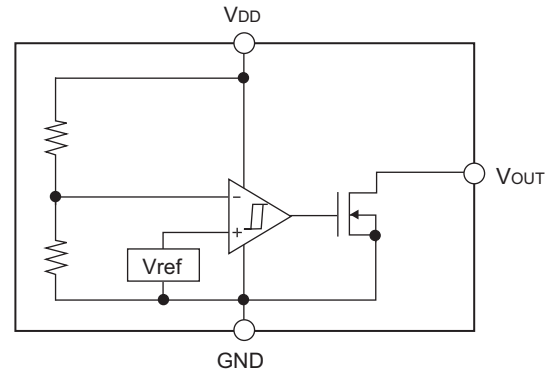
When PIN2,4,22,25 is high ("H"), the positive output pin of the driver is high ("H") and the negative output pin is low ("L").
When PIN23 is high ("H"), the positive output pin of CH4 is low ("L") and negative output pin is high ("H").

4.2 BD4824FVE-W (IC803) : Voltage detector

- Pin Layout



- Block diagram

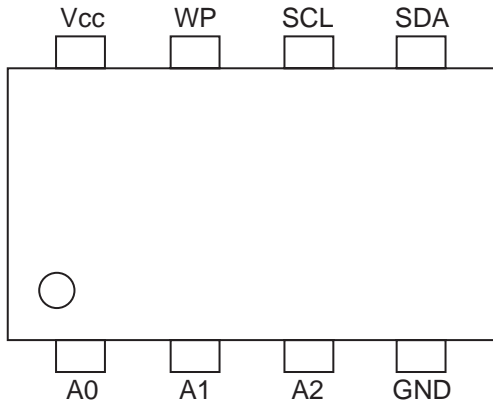


- Pin function

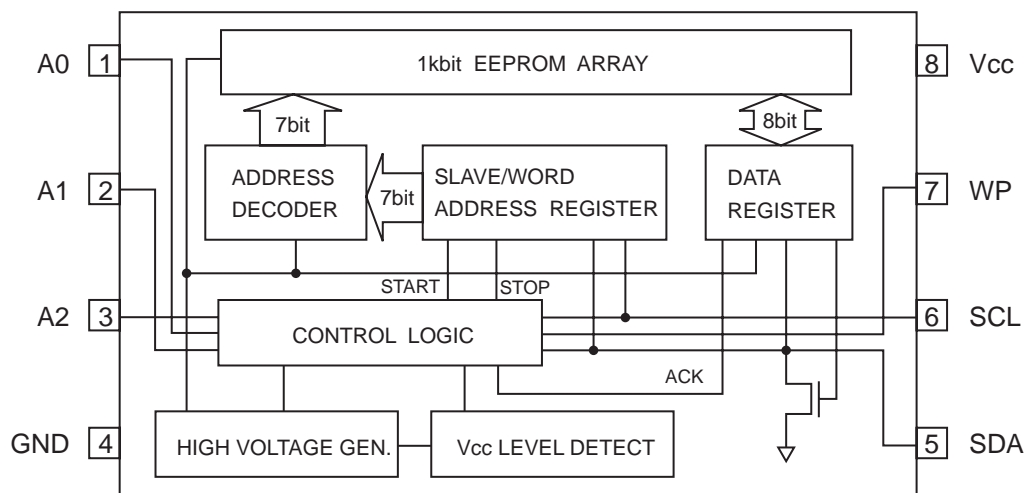
Pin No.	Symbol	Function
1	VOUT	Output
2	SUB	Substrate (Connect with GND)
3	N.C.	Non connection
4	GND	GND
5	VDD	Power supply input

4.3 BR24C01AFV-W-X (IC201) : EEPROM

- Pin layout



- Block diagram



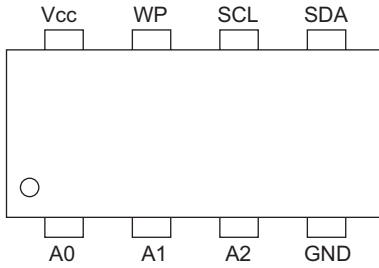
- Pin function

Pin name	I/O	Description
Vcc	-	Power supply
GND	-	Ground (0v)
A0,A1,A2	IN	Slave address set
SCL	IN	Serial clock input
SDA	IN / OUT	Slave and word address,serial data input, serial data output *1
WP	IN	Write protect input

*1 An open drain output requires a pull-up resistor.

4.4 BR24L32F-W-X (IC703) : EEPROM

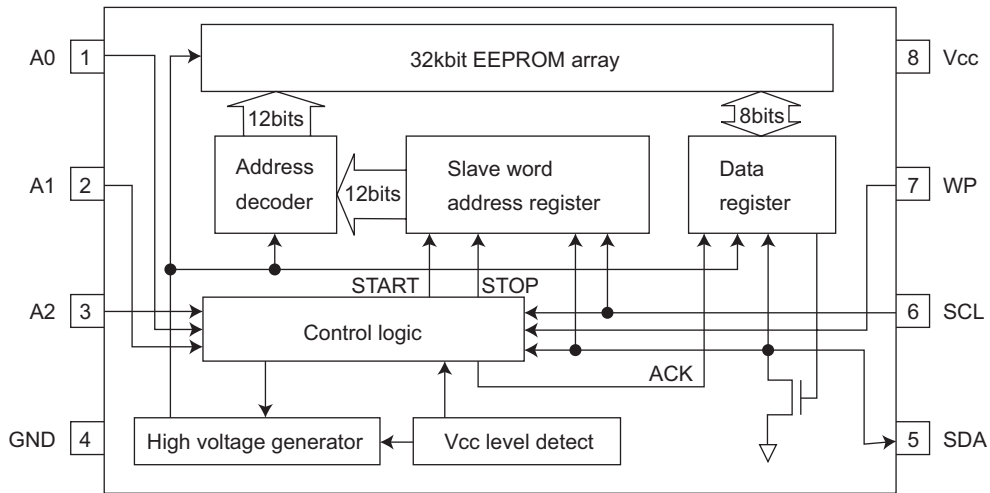
- Pin layout



- Block diagram

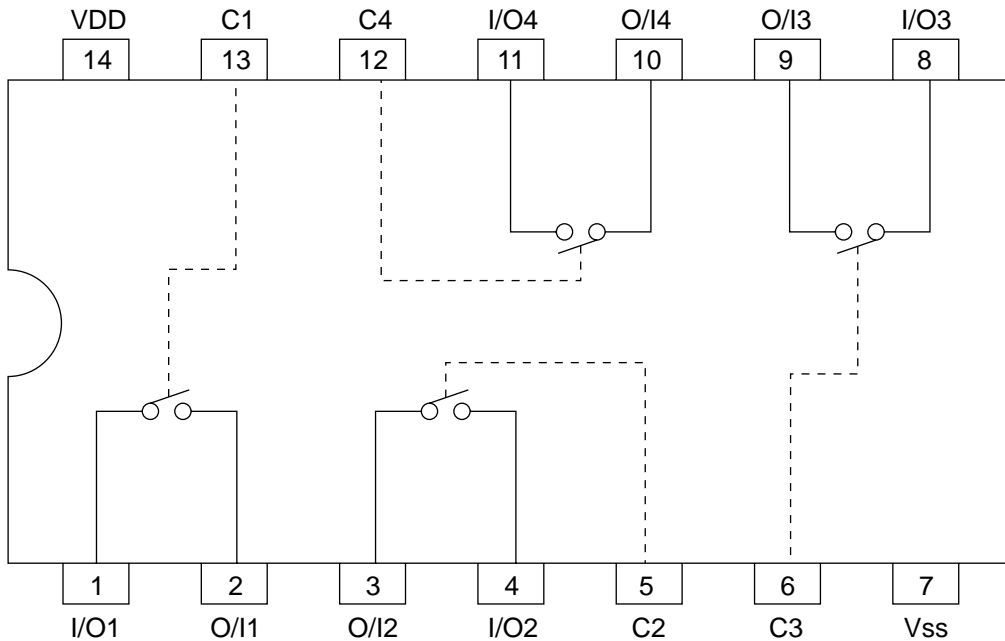
Symbol	I/O	Function
A0,A1,A2	I	Slave address set
GND	-	Ground (0V)
SDA	I/O	Slave and word address
		Serial data input, serial data output
SCL	I	Serial clock input
WP	I	Write protect input
VCC	-	Power supply

- Block diagram



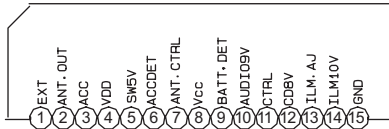
4.5 BU4066BCFV-X (IC131) : Quad analog switch

- Pin layout & Block diagram

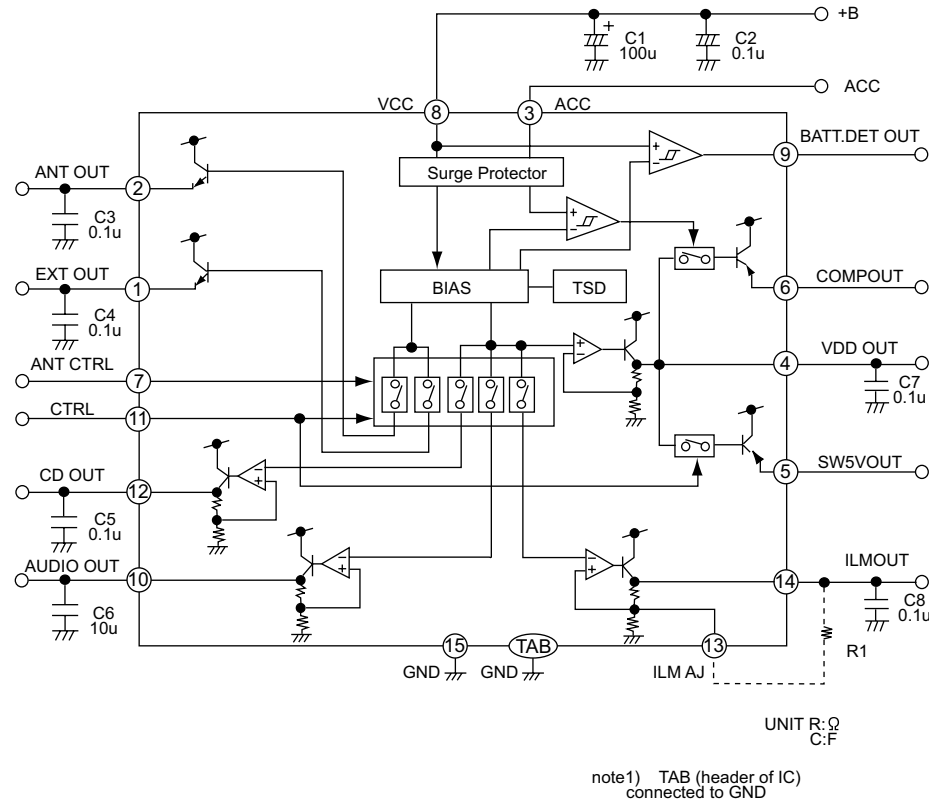


4.6 HA13164A (IC901) : Regulator

- Pin layout



- Block diagram

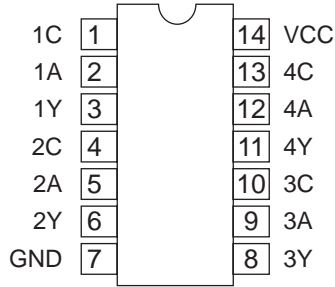


- Pin function

Pin No.	Symbol	Function
1	EXTOUT	Output voltage is VCC-1 V when M or H level applied to CTRL pin.
2	ANTOUT	Output voltage is VCC-1 V when M or H level to CTRL pin and H level to ANT-CTRL.
3	ACCIN	Connected to ACC.
4	VDDOUT	Regular 5.7V.
5	SW5VOUT	Output voltage is 5V when M or H level applied to CTRL pin.
6	COMPOUT	Output for ACC detector.
7	ANT CTRL	L:ANT output OFF, H:ANT output ON
8	VCC	Connected to VCC.
9	BATT DET	Low battery detect.
10	AUDIO OUT	Output voltage is 9V when M or H level applied to CTRL pin.
11	CTRL	L:BIAS OFF, M:BIAS ON, H:CD ON
12	CD OUT	Output voltage is 8V when H level applied to CTRL pin.
13	ILM AJ	Adjustment pin for ILM output voltage.
14	ILM OUT	Output voltage is 10V when M or H level applied to CTRL pin.
15	GND	Connected to GND.

4.7 HD74HC126FP-X (IC781) : Buffer

- Pin layout



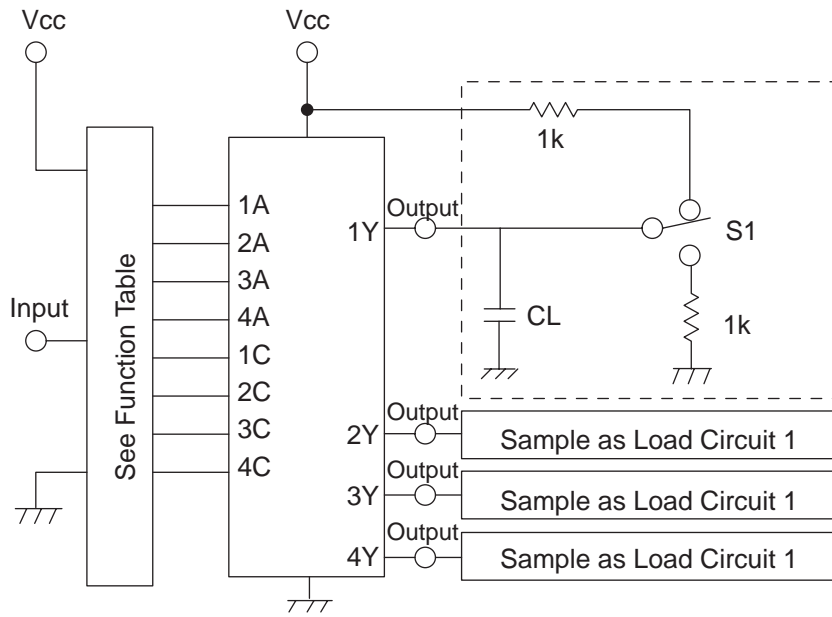
- Pin function

Input		Output
C	A	Y
L	X	Z
H	L	H
H	H	L

Note:

- H:High level
- L:Low level
- X:Irrelevant
- Z:Off(High-impedance)
- State a 3-state input

- Block diagram

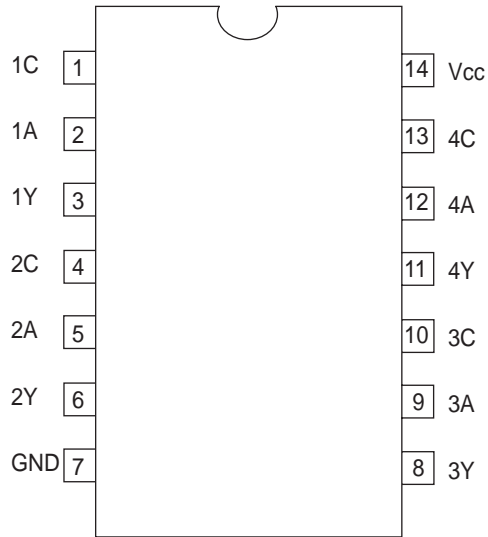


Note:

CL includes probe and jig capacitance

4.8 HD74HCT126T-X (IC503) : Buffer

- Pin layout

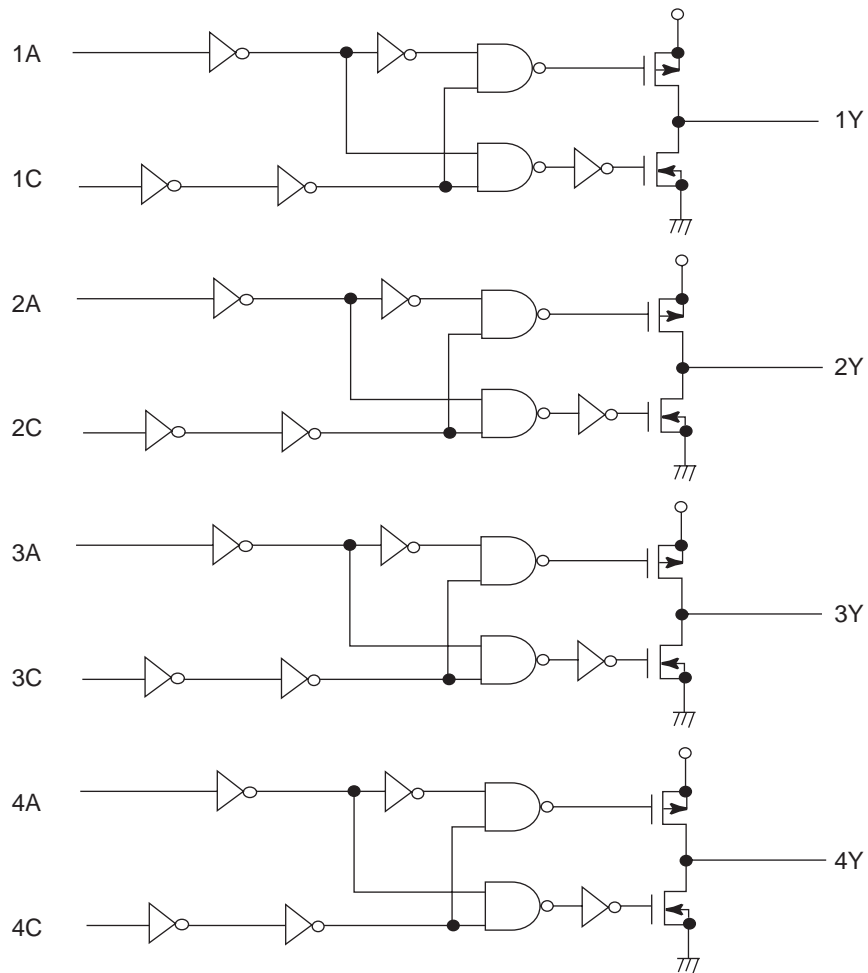


- Pin function

Input		Output
C	A	Y
L	X	Z
H	L	L
H	H	H

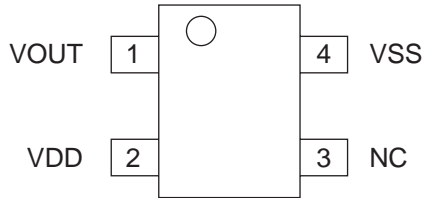
H : High level
 L : Low level
 X : Irrelevant
 Z : Off (High-impedance)state of a 3-stage output

- Block diagram

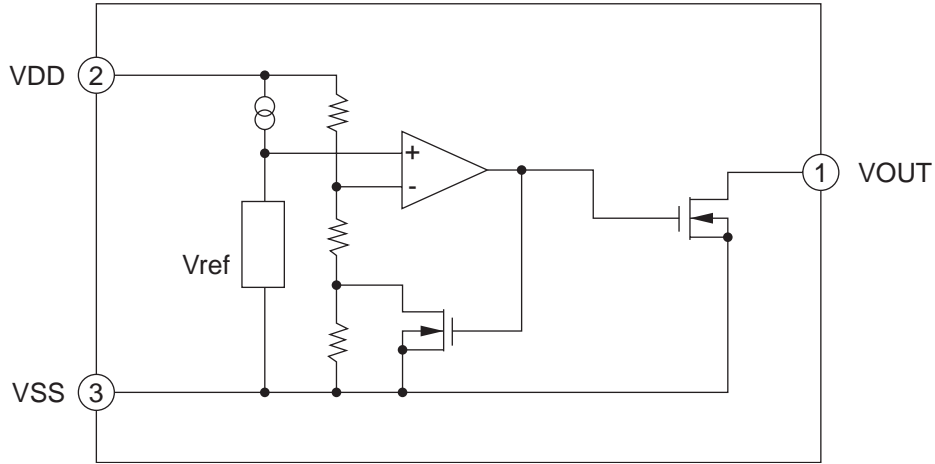


4.9 IC-PST3424U-X (IC803) : Reset

- Pin layout



- Block diagram

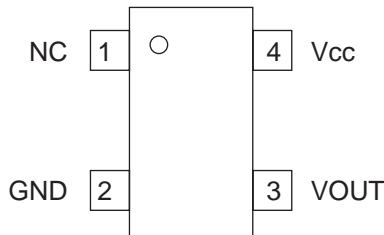


- Pin function

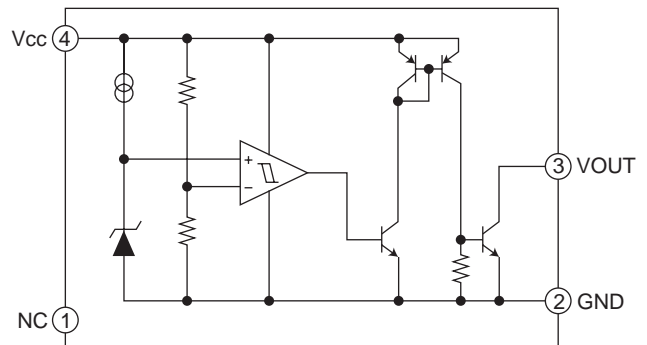
No.	Pin Name	Function
1	Vout	Reset Signal Output PIN
2	VDD	VDD PIN / Voltage Detect PIN
3	NC	Non connect
4	VSS	VSS PIN

4.10 IC-PST9333U-X (IC702) : Regulator

- Pin layout



- Block diagram

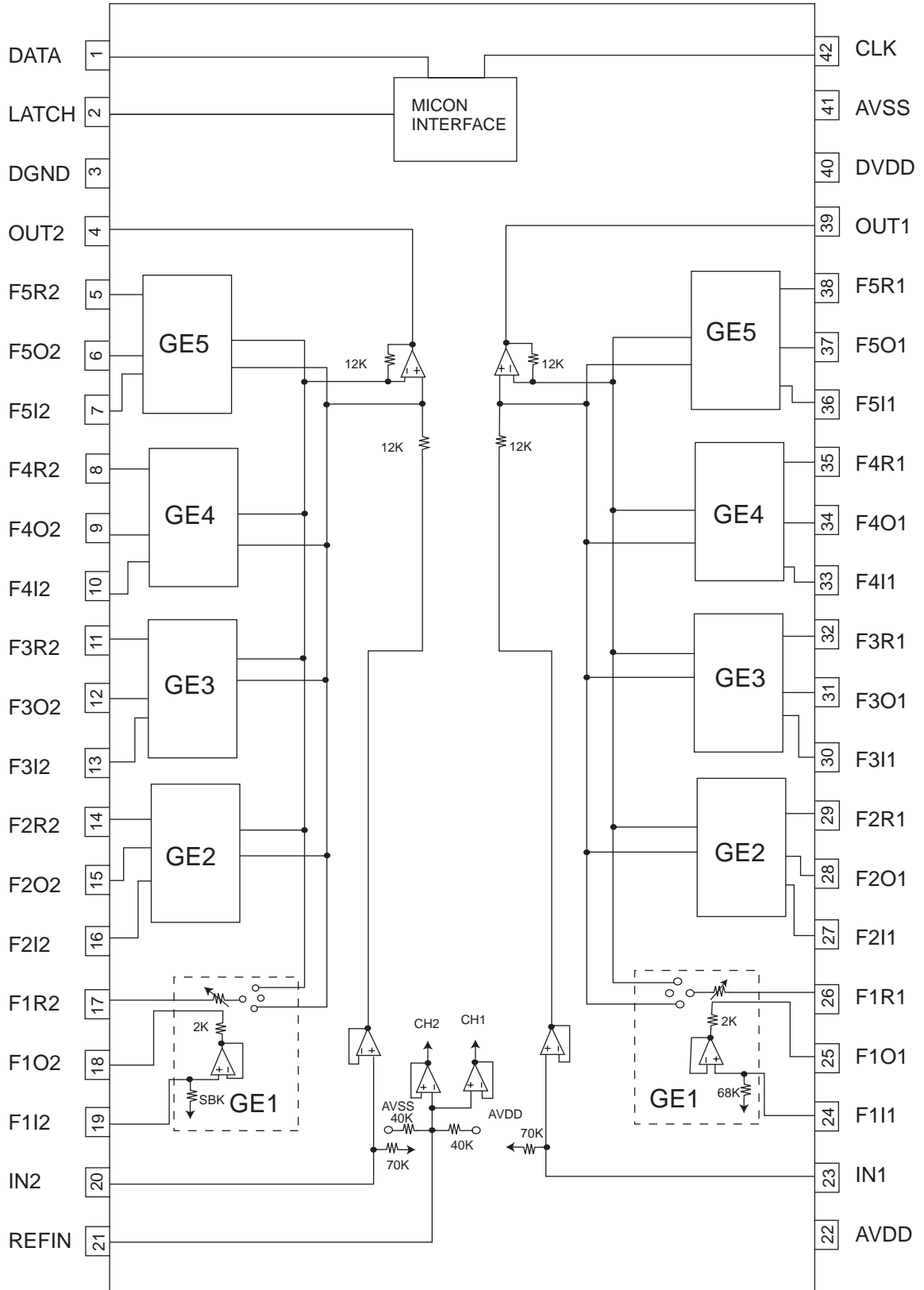


- Pin function

Pin No.	Symbol	Function
1	NC	Non connect
2	GND	GND terminal
3	VOUT	Reset signal output terminal
4	Vcc	Vcc terminal/Voltage detect terminal

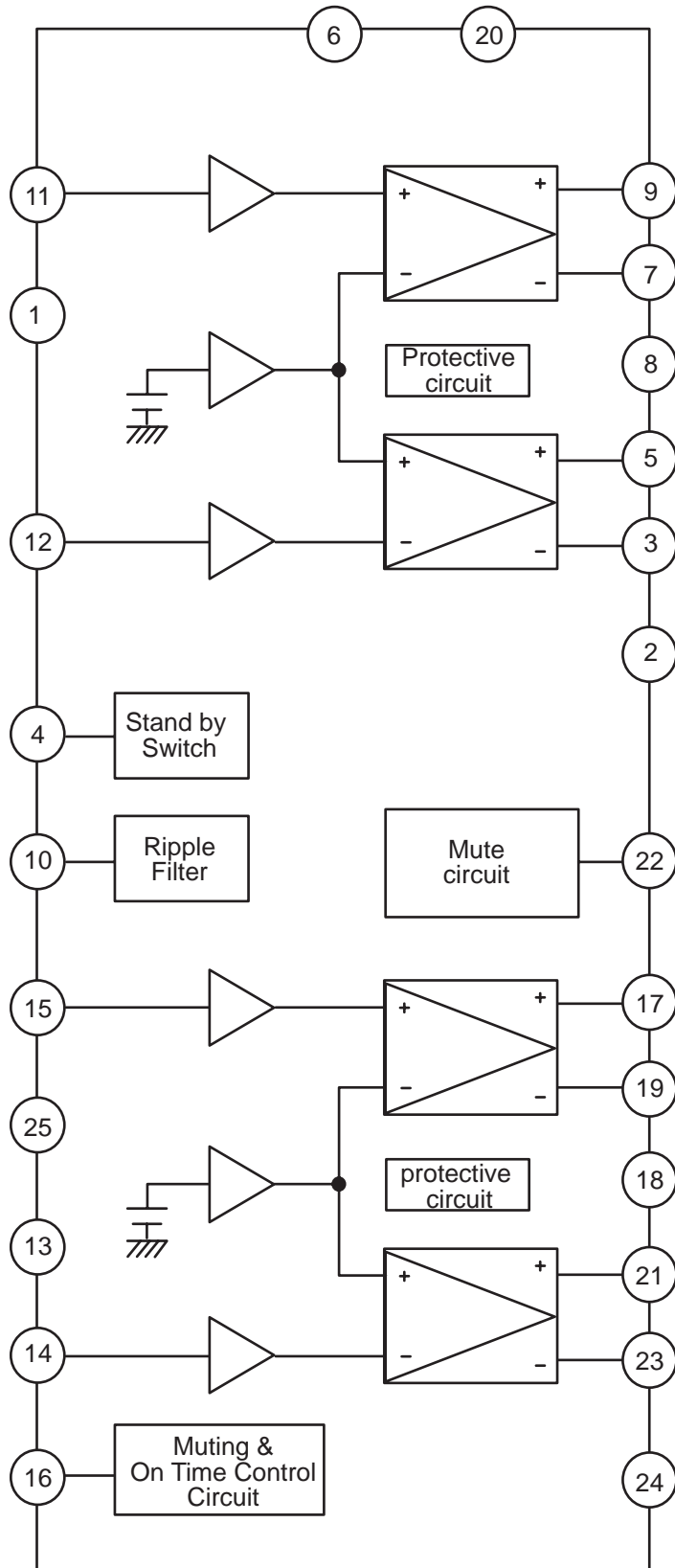
4.11 M62449FP-X (IC912) : Equalizer

- Pin layout & Block diagram

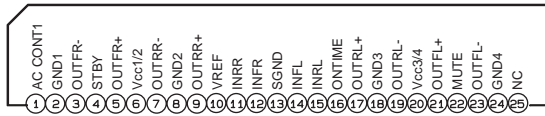


4.12 LA47505 (IC301) : Power amp.

- Block diagram



- Pin layout



- Pin function

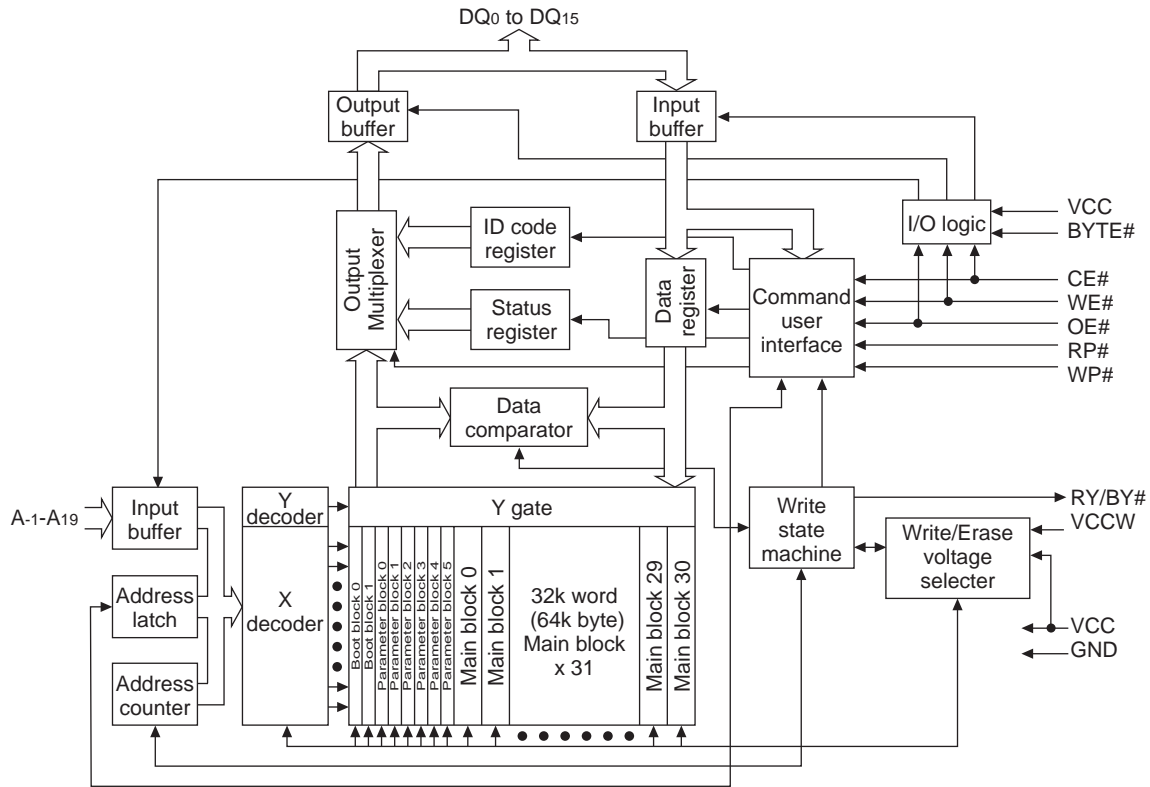
Pin No.	Symbol	Function
1	AC CONT1	Header of IC
2	GND1	Power GND
3	OUTFR-	Output(-) for front Rch
4	STBY	Stand by input
5	OUTFR+	Output (+) for front Rch
6	Vcc1/2	Power input
7	OUTRR-	Output (-) for rear Rch
8	GND2	Power GND
9	OUTRR+	Output (+) for rear Rch
10	VREF	Ripple filter
11	INRR	Rear Rch input
12	INFR	Front Rch input
13	SGND	Signal GND
14	INFL	Front Lch input
15	INRL	Rear Lch input
16	ONTIME	Power on time control
17	OUTRL+	Output (+) for rear Lch
18	GND3	Power GND
19	OUTRL-	Output (-) for rear Lch
20	Vcc3/4	Power input
21	OUTFL+	Output (+) for front
22	MUTE	Muting control input
23	OUTFL-	Output (-) for front
24	GND4	Power GND
25	NC	No connection

4.13 LH28F160BJHET92 (IC803) : 16M flash memory

- Pin Layout



- Block Diagram



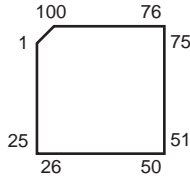
- Pin function

Pin No.	Symbol	I/O	Function
1 to 8	A15 to A8	I	Address input for memory address
9	A19	I	Address input for memory address
10	NC	-	Non connection
11	WE#	I	Write enable
12	RP#	I	Reset
13	VCCW	-	Power supply for write/erase
14	WP#	I	Write protect
15	RY/BY#	O	Ready/Busy
16,17	A18,A17	I	Address input for memory address
18 to 25	A7 to A0	I	Address input for memory address
26	CE#	I	Chip enable
27	GND	-	Ground
28	OE#	I	Output enable
29	DQ0	I/O	Data input/output
30	DQ8	I/O	Data input/output
31	DQ1	I/O	Data input/output
32	DQ9	I/O	Data input/output

Pin No.	Symbol	I/O	Function
33	DQ2	I/O	Data input/output
34	DQ10	I/O	Data input/output
35	DQ3	I/O	Data input/output
36	DQ11	I/O	Data input/output
37	VCC	-	Power supply
38	DQ4	I/O	Data input/output
39	DQ12	I/O	Data input/output
40	DQ5	I/O	Data input/output
41	DQ13	I/O	Data input/output
42	DQ6	I/O	Data input/output
43	DQ14	I/O	Data input/output
44	DQ7	I/O	Data input/output
45	DQ15	I/O	Data input/output
	A-1	I	Address input for memory address
46	GND	-	Ground
47	BYTE#	I	Byte enable
48	A16	I	Address input for memory address

4.14 MN102H60KCG (IC801) : LCD display sub CPU

- Pin Layout



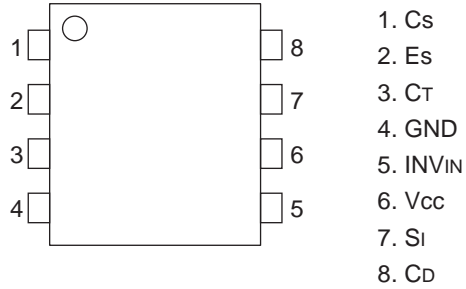
- Pin function

Pin No.	Symbol	I/O	Function
1	RES	O	LCD reset output
2	RE	O	Read enable output for extension memory
3	WE	O	Write enable output for extension memory
4	VccWCNT	O	Writing voltage control for external ROM
5	RY/BY	I	Read/Busy input for extension memory
6	CS1	O	Chip select1 output for extension memory
7	NC	O	Not use
8	SWLED4	O	SW_LED flashing output 4 for [PRESET1-6] key LED
9	SWLED5	O	SW_LED flashing output 5 for [SEEKUP]+[SEEKDOWN] key LED
10	SWLED6	O	SW_LED flashing output 6 for [DISCUP]+[DISCDOWN] key LED
11	NC	O	Not use
12	/WORD	I	Bus width setting for extension memory (H: 8-bit width)
13 to 16	A0 to A3	O	Extension memory output 0 to 3
17	VDD	-	Power supply
18	NC	O	Base clock output
19	GND	-	Ground
20	XI	I	Connect to ground
21	NC	O	Not connect
22	VDD	-	Power supply
23	OSCI	I	Crystal connecting terminal (25MHz)
24	OSCO	O	Crystal connecting terminal (25MHz)
25	MODE	I	Mode setting input, pull up (H: memory extension mode)
26 to 33	A4 to A11	O	Extension memory output 4 to 11
34	AVDD	-	Analog power supply
35 to 42	A12 to A19	O	Extension memory output 12 to 19
43	VREF-	-	Analog reference power supply, connect to ground
44	A20	O	Extension memory output 20
45	Thermal	I	Thermal fuse input
46	ANA	I	Audio level input for spectrum analyzer
47	WDOUT	O	Watch dog timer over flow output (H: over flow)
48	PON	O	Power on output
49	RD	O	LCD read strobe output
50	LCDCLK	O	LCD driver clock output (300kHz)
51	WR	O	LCD write strobe output
52,53	NC	-	Not use
54	VREF+	-	Analog reference power supply, connect to AVDD
55	RS	O	LCD regist select output
56	CS	O	LCD chip select output

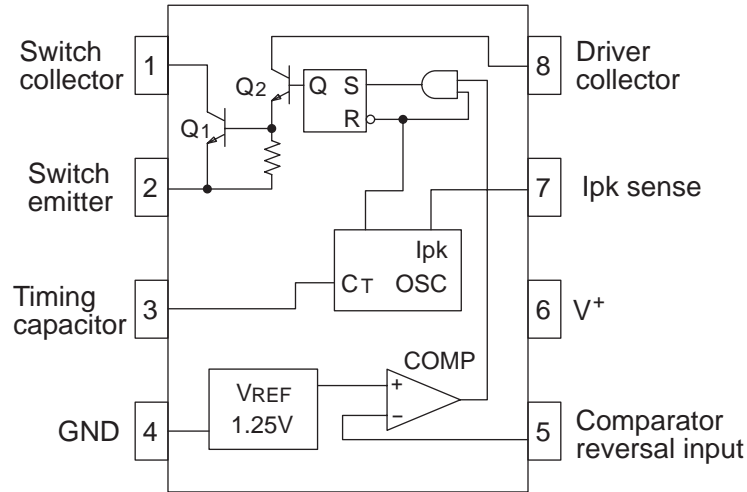
Pin No.	Symbol	I/O	Function
57	NC	O	Not use
58	VOL1	I	Rotary encoder input 1
59	VOL2	I	Rotary encoder input 2
60	NC	-	Not use
61	AGND	-	Analog ground
62 to 65	KEY0 to KEY3	I	Key 0 to 3 input AD terminal
66	VDD	-	Power supply
67	SWLED0	O	SW_LED flashing output 0 for [VOL] key LED
68	SWLED1	O	SW_LED flashing output 1 for [SEL] key LED
69	SWLED2	O	SW_LED flashing output 2 for [DISP] key LED
70	DISPCLK	I	Serial communication clock input
71	DISPDATA	I	Displaying data input (Serial)
72	KEYDATA	O	Key code data output (Serial)
73	SIFDA	I/O	On board serial writing data input/output, pull up
74	SIFCK	I	On board serial writing clock input, pull up
75	NMI	I	NMI (H fix)
76	DISPCE	I	Chip enable input for serial communication
77		-	Ground
78	PSAVE2	I	POWER SAVE2 (Memory power supply off) detecting input
79	NC	-	Not use
80	KEY_IN	I	Key interrupt input
81	ADSEP	I	Address data separate/common mode setting terminal H: separate mode
82	RESET	I	Reset input (L: reset)
83	VDD	-	Power supply terminal
84 to 91	D0 to D7	I	Extension memory input 0 to 7
92	GND	-	Ground
93 to 100	P10 to P17	I	LCD data bus input/output 0 to 7

4.15 NJM2360AM-X (IC921) : DC-DC convertor

- Pin layout

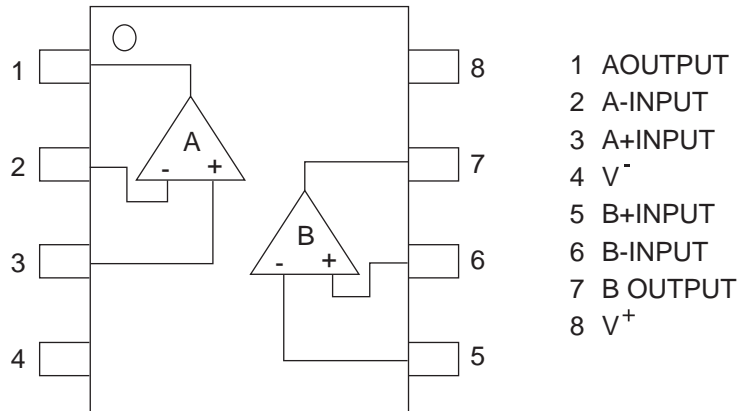


- Block diagram



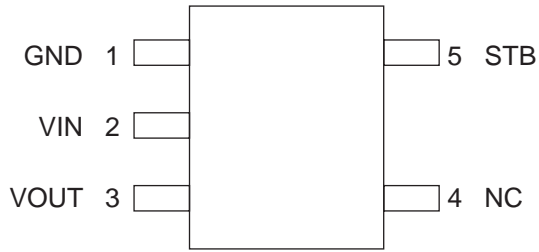
4.16 NJM4565V-X (IC132,IC572) : Dual operational amplifier

- Pin layout & Block diagram

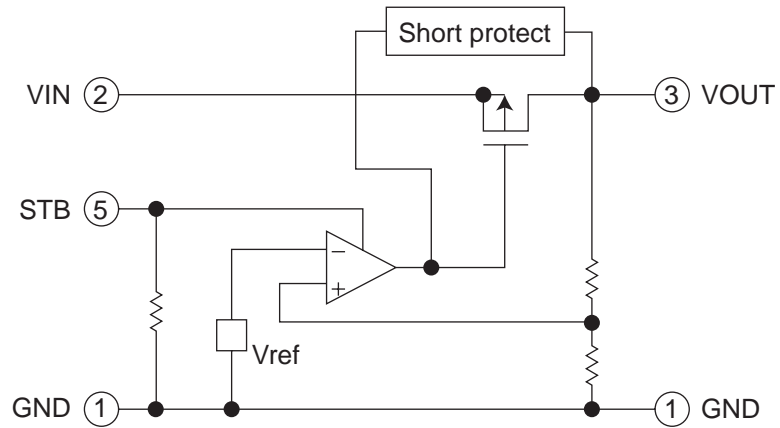


4.17 NJU7241F25-X (IC651) : Regulator

- Pin layout

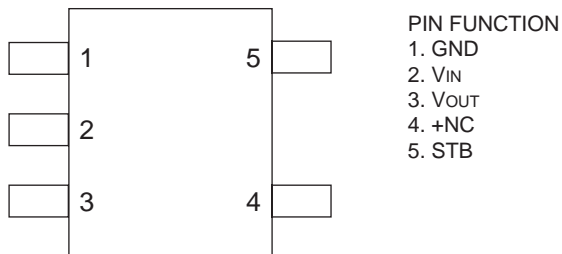


- Block diagram



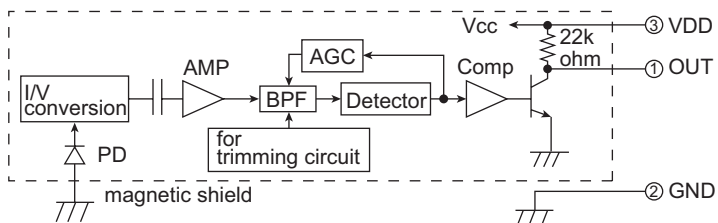
4.18 NJU7241F33-X (IC504,IC804) : Voltage regulator

- Pin layout



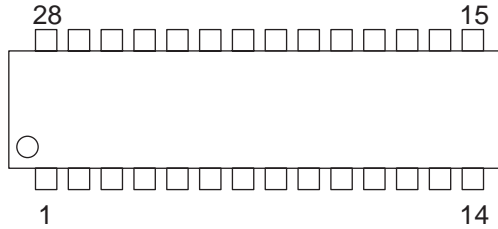
4.19 RPM6938-SV4 (IC805) : Remote control receiver

- Block diagram

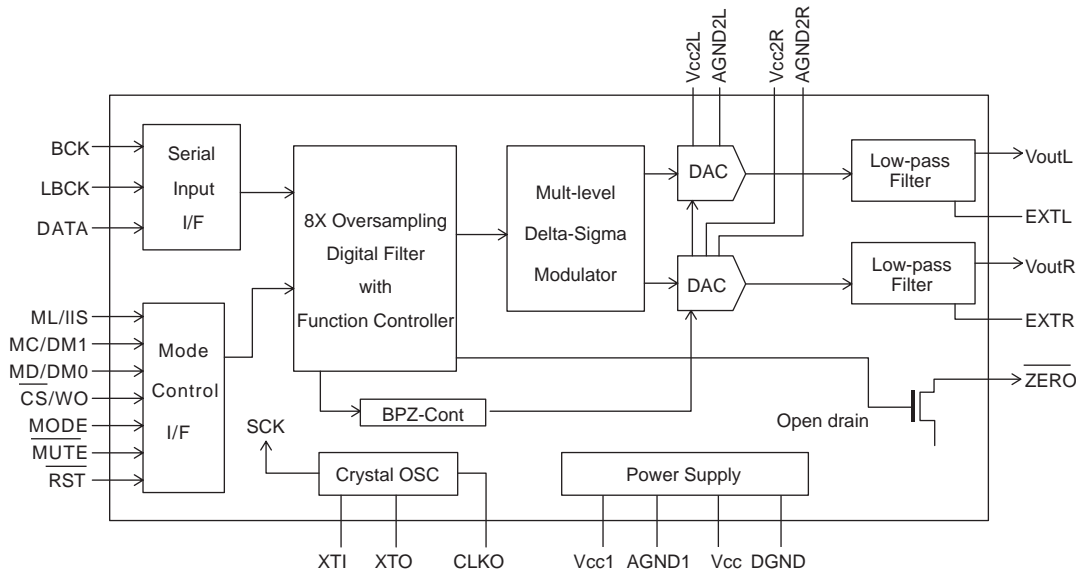


4.20 PCM1716E-X (IC571) : D/A converter

- Pin layout



- Block diagram



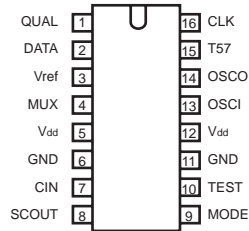
- Pin function

Pin No.	Symbol	I/O	Function
1	LRCK	I	LRCK clock input
2	DATA	I	Serial audio data input
3	BCK	I	Bit clock input for serial audio data
4	CLKO	O	Buffered output of system clock
5	XTI	I	Oscillator input / External clock input
6	XTO	O	Oscillator output
7	DGND	-	Digital ground
8	VDD	-	Digital power +5V
9	VDD2R	-	Analog power +5V
10	AGND2R	-	Analog ground
11	EXTR	O	Rch common pin of analog output amp
12	NC	-	Non connection
13	VOUTR	O	Rch analog voltage output of audio signal
14	AGND1	-	Analog ground
15	Vcc1	-	Analog power +5V

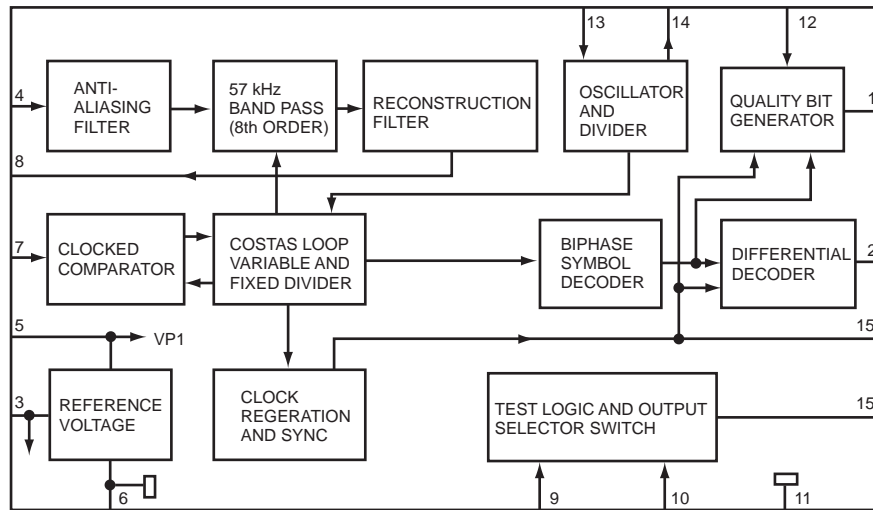
Pin No.	Symbol	I/O	Function
16	VOUTL	O	Lch analog voltage output of audio signal
17	NC	-	Non connection
18	EXTL	O	Lch common pin of analog output amp
19	AGND2L	-	Analog ground
20	Vcc2L	-	Analog power +5V
21	ZERO	O	Zero data flag
22	RST	I	Reset
23	CS/IWO	I	Chip select / Input format selection
24	MODE	I	Mode control select
25	MUTE	I	Mute control
26	MD/DM0	I	Mode control, Data / De-emphasis selection 1
27	MC/DM1	I	Mode control, BCK / De-emphasis selection 2
28	ML/IIS	I	Mode control, WDCK / Input format selection

4.21 SAA6579T-X (IC51) : RDS detector

- Pin layout



- Block diagram



- Pin function

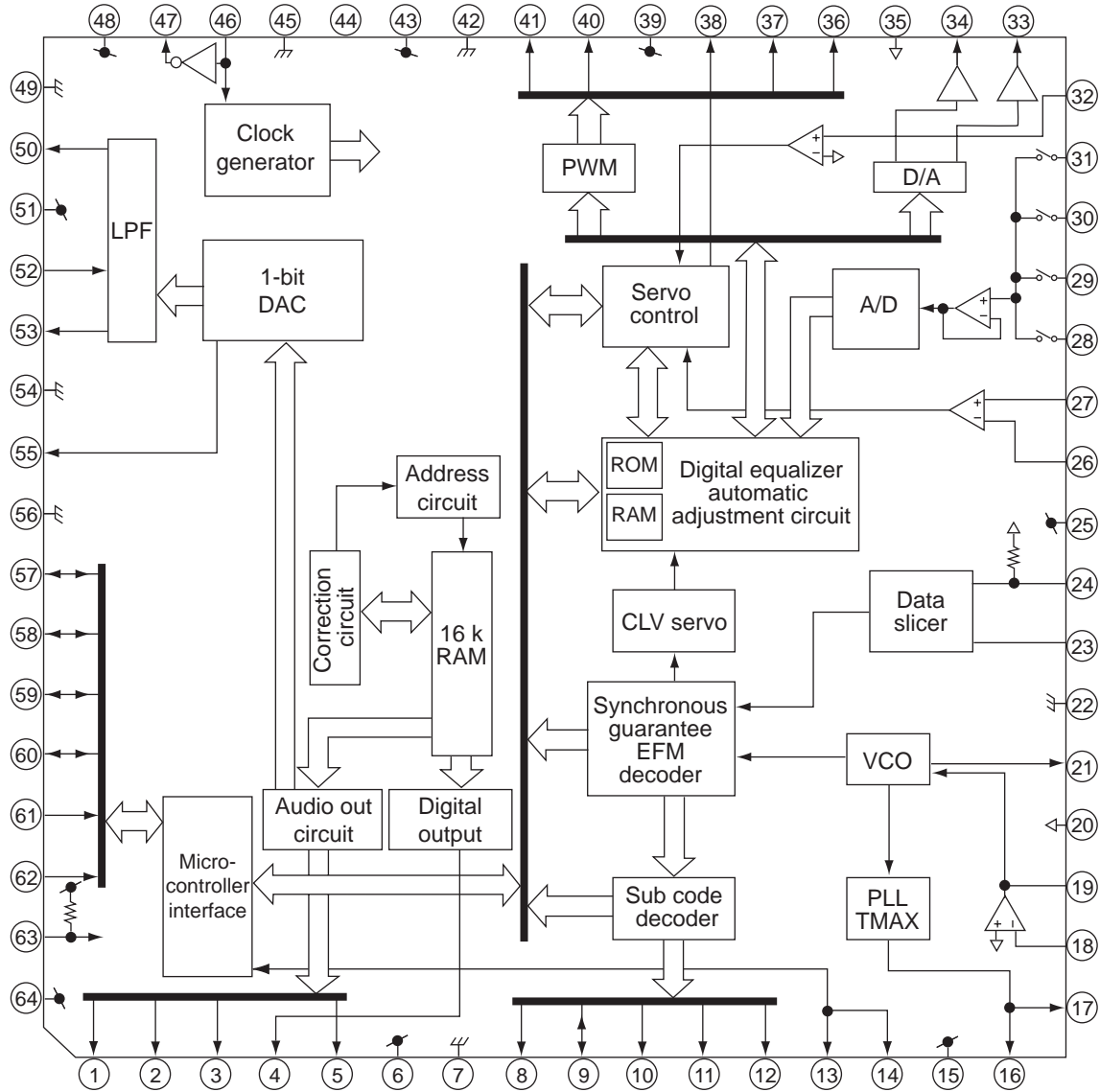
Pin No.	Symbol	Description
1	QUAL	Quality indication output
2	DATA	RDS data output
3	Vref	Reference voltage output (0.5VDDA)
4	MUX	Multiolex signal input
5	Vdd	+5V supply voltage for analog part
6	GND	Ground for analog part (0V)
7	CIN	Sub carrier input to comparator
8	SCOUT	Sub carrier output of reconstruction filter
9	MODE	Oscillator mode / test control input
10	TEST	Test enable input
11	GND	Ground for digital part (0V)
12	Vdd	+5V supply voltage for digital part
13	OSCI	Oscillator input
14	OSCO	Oscillator output
15	T57	57 kHz clock signal output
16	CLK	RDS clock output

• Pin function

Pin No.	Symbol	I/O	Function												
1	VCC	-	3.3V power supply pin												
2	FNI	I	Main-beam amp input pin												
3	FPI	I	Main-beam amp input pin												
4	TPI	I	Sub-beam amp input pin												
5	TNI	I	Sub-beam amp input pin												
6	MDI	I	Monitor photo diode amp input pin												
7	LDO	O	Laser diode amp output pin												
8	SEL	I	APC circuit ON/OFF control signal, laser diode (LDO) control signal input or bottom/peak detection frequency change pin. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>SEL</th> <th>APC circuit</th> <th>LDO</th> </tr> </thead> <tbody> <tr> <td>GND</td> <td>OFF</td> <td>Connected VCC through 1kΩ resistor</td> </tr> <tr> <td>Hiz</td> <td>ON</td> <td>Control signal output</td> </tr> <tr> <td>VCC</td> <td>ON</td> <td>Control signal output</td> </tr> </tbody> </table>	SEL	APC circuit	LDO	GND	OFF	Connected VCC through 1kΩ resistor	Hiz	ON	Control signal output	VCC	ON	Control signal output
SEL	APC circuit	LDO													
GND	OFF	Connected VCC through 1kΩ resistor													
Hiz	ON	Control signal output													
VCC	ON	Control signal output													
9	TEB	I	Tracking error balance adjustment signal input pin Adjusts TE signal balance by eliminating carrier component from PWM signal (3-state output, PWM carrier = 88.2kHz) output from TC94A14F/FA TEBC pin using RC-LPF and inputting DC. TEBC input voltage:GND~VCC												
10	TEN	I	Tracking error signal generation amp negative-phase input pin												
11	TEO	O	Tracking error signal generation amp output pin. Combining TEO signal RFRP signal with TC94A14F/FA configures tracking search system.												
12	RFDC	O	RF signal peak detection output pin												
13	GVSW	I	AGC/FE/TE amp gain change pin <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>GVSW</th> <th>Mode</th> </tr> </thead> <tbody> <tr> <td>GND</td> <td>CD-RW</td> </tr> <tr> <td>Hiz</td> <td rowspan="2">Normal</td> </tr> <tr> <td>VCC</td> </tr> </tbody> </table>	GVSW	Mode	GND	CD-RW	Hiz	Normal	VCC					
GVSW	Mode														
GND	CD-RW														
Hiz	Normal														
VCC															
14	VRO	O	Reference voltage (VRO) output pin *VRO=1/2VCC When VCC=3.3V												
15	FEO	O	Focus error signal generation amp output pin												
16	FEN	I	Focus error signal generation amp negative-phase input pin												
17	RFRP	O	Signal amp output pin for track count Combining RFRP signal and TEO signal with TC94A14F/FA configures tracking search system.												
18	REIS	I	RF signal amplitude adjustment amp output pin RF amplitude adjustment control signal input pin Adjusts RF signal amplitude by eliminating carrier component from PWM signal (3-state output, PWM carrier=88.2kHz)output fromTC94A14F/14FA *RFGC pin using RC-LPF and inputting DC. *RFGC input voltage:GND~VCC												
19	RFGO	O													
20	RFGC	I													
21	AGCIN	I	RF signal amplitude adjustment amp input pin												
22	RFO	O	RF signal generation amp output pin												
23	RFI	I	RF signal generation amp input pin												
24	GND	-	GND pin												

4.23 TC94A14FA (IC621) : DSP & DAC

• Pin layout & Block diagram



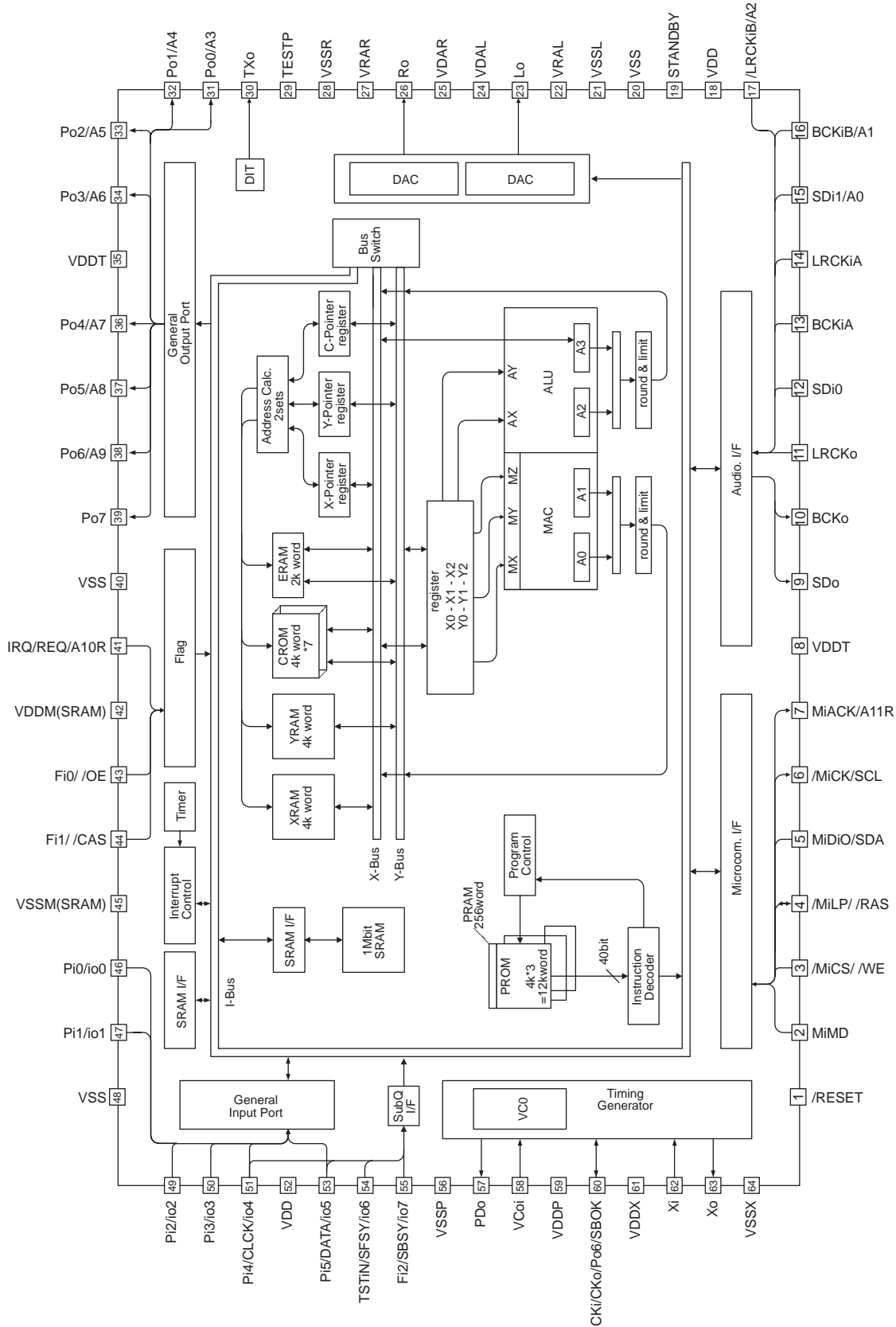
• Pin function

Pin No	Symbol	I/O	Description
1	BCK	O	Bit clock output pin. 32fs, 48fs, or 64fs selectable by command.
2	LRCK	O	L/R channel clock output pin. "L" for L channel and "H" for R channel. Output polarity can be inverted by command.
3	AOUT	O	Audio data output pin. MSB-first or LSB-first selectable by command.
4	DOUT	O	Digital data output pin. Outputs up to double-speed playback.
5	IPF	O	Correction flag output pin. When set to "H", AOUT output cannot be corrected by C2 correction processing.
6	V _{DD3}	-	Digital 3.3V power supply voltage pin.
7	V _{SS3}	-	Digital GND pin.
8	SBOK	O	Subcode Q data CRCC result output pin. "H" level when result is OK.
9	CLCK	O	Subcode P-W data read I/O pin. I/O polarity selectable by command.
10	DATA	O	Subcode P-W data output pin.
11	SFSY	O	Playback frame sync signal output pin.
12	SBSY	O	Subcode block sync signal output pin. "H" level at S1 when subcode sync is detected.
13	HSO	I/O	General-purpose input / output pins. Input port at reset.
14	UHSO		
15	PV _{DD3}	-	PLL-only 3.3V power supply voltage pin.
16	PDO	O	EFM and PLCK phase difference signal output pin.

Pin No	Symbol	I/O	Description	
17	TMAX	O	TMAX detection result output pin.	
			TMAX Detection Result	TMAX Output
			Longer than fixed period	"PVDD3"
			Within fixed period	"HiZ"
Shorter than fixed period	"AVSS3"			
18	LPFN	I	Inverted input pin for PLL LPF amp.	
19	LPFO	O	Output pin for PLL LPF amp.	
20	PVREF	-	PLL-only VREF pin.	
21	VCOF	O	VCO filter pin.	
22	AVSS3	-	Analog GND pin.	
23	SLCO	O	DAC output pin for data slice level generation.	
24	RFI	I	RF signal input pin. Zin selectable by command.	
25	AVDD3	-	Analog 3.3V power supply voltage pin.	
26	RFCT	I	RFRP signal center level input pin.	
27	RFZI	I	RFRP signal zero-cross input pin.	
28	RFRP	I	RF ripple signal input pin.	
29	FEI	I	Focus error signal input pin.	
30	SBAD	I	Sub-beam adder signal input pin.	
31	TEI	I	Tracking error input pin. Inputs when tracking servo is on.	
32	TEZI	I	Tracking error signal zero-cross input pin.	
33	FOO	O	Focus equalizer output pin.	
34	TRO	O	Tracking equalizer output pin.	
35	VREF	-	Analog reference power supply voltage pin.	
36	RFGC	O	RF amplitude adjustment control signal output pin.	
37	TEBC	O	Tracking balance control signal output pin.	
38	SEL	O	APC circuit ON/OFF signal output pin. At laser on, high impedance with UHS="L", H output with UHS="H".	
39	AVDD3	-	Analog 3.3V power supply voltage pin.	
40	FMO	O	Feed equalizer output pin.	
41	DMO	O	Disc equalizer output pin.	
42	VSS3	-	Digital GND pin.	
43	VDD3	-	Digital 3.3V power supply voltage pin.	
44	TESIN	I	Test input pin. Normally, fixed to "L".	
45	XVSS3	-	System clock oscillator GND pin.	
46	XI	I	System clock oscillator input pin.	
47	XO	O	System clock oscillator output pin.	
48	XVDD3	-	System clock oscillator 3.3V power supply voltage pin.	
49	DVSS3R	-	DA converter GND pin.	
50	RO	O	R-channel data forward output pin.	
51	DVDD3	-	DA converter 3.3V power supply pin.	
52	DVR	-	Reference voltage pin.	
53	LO	O	L-channel data forward output pin.	
54	DVSS3L	-	DA converter GND pin.	
55	ZDET	O	1 bit DA converter zero detection flag output pin.	
56	VSS5	-	Microcontroller interface GND pin.	
57	BUS0			
58	BUS1			
59	BUS2	I/O	Microcontroller interface data I/O pins.	
60	BUS3			
61	BUCK	I	Microcontroller interface clock input pin.	
62	/CCE	I	Microcontroller interface chip enable signal input pin. At "L", BUS0 to BUS3 are active.	
63	/RST	I	Reset signal input pin. At reset, "L".	
64	VDD5	-	Microcontroller interface 5V power supply pin.	

4.24 TC94A20F-008 (IC652) : Audio digital processor with DAC and SRAM

- Pin layout & Block diagram

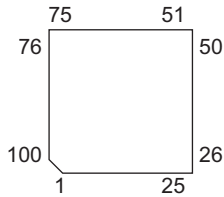


• Pin function

Pin No.	Symbol	I/O	Function
1	/RESET	I	Hard reset input (H:Operation L: Reset)
2	MiMD	I	Mode select input for MCU interface (H:IIC L:Serial)
3	/MiCS	I	Chip select input for MCU interface
	/WE	O	Write-enable for external DRAM
4	/MiLP	I	Latch pulse input for MCU interface
	/RAS	O	Low address strobe for external DRAM
5	MiDio	I/O	Data input and output for MCU interface (IIC:SDA)
6	/MiCK	I	Clock input for MCU interface (IIC:SCL)
7	MiACK	O	Acknowledge output for MCU interface
	A11R	O	Address output-11 for external DRAM
8	VDDT	-	Power supply for digital circuit (3.3V)
9	SDo	O	Data output
10	BCKo	O	Bit clock output
11	LRCKo	O	LR clock output
12	SDi0	I	Data input-0
13	BCKiA	I	Bit clock input-A
14	LRCKiA	I	LR clock input-A
15	SDi1	I	Data input-1 (Address output-5 for external SRAM)
	A0	O	Address output-1 for external DRAM
16	BCKiB	I	Bit clock input-B
	A1	O	External DRAM address output-1
17	LRCKiB	I	LR clock input-B (Enable signal output for external SRAM)
	A2	O	Address-2 for external DRAM
18	VDD	-	Power supply for digital circuit (2.5V)
19	STANBY	I	Control input for stand-by mode (H:STB,L:Normal)
20	VSS	-	Ground for digital circuit
21	VSSL	-	Ground for DAC Lch
22	VRAL	-	Reference voltage for DAC Lch
23	LO	O	DAC Lch output
24	VDAL	-	Power supply for DAC Lch (2.5V)
25	VDAR	-	Power supply for DAC Rch (2.5V)
26	RO	O	DAC Rch output
27	VRAR	-	Reference voltage for DAC Rch
28	VSSR	-	Ground for DAC Rch
29	TESTP	I	Test terminal (H:Test mode L:Normal)
30	TXO	O	SPDIF output
31	Po0	O	General output port-0
	A3	O	Address-3 for external DRAM
32	Po1	O	General output port-1
	A4	O	Address-4 for external DRAM
33	Po2	O	General output port-2
	A5	O	Address-5 for external DRAM
34	Po3	O	General output port-3
	A6	O	Address-6 for external DRAM
35	VDDT	-	Power supply for digital circuit (3.3V)
36	Po4	O	General output port-4
	A7	O	Address-7 for external DRAM
37	Po5	O	General output port-5 (Address output-7 for external SRAM)
	A8	O	Address-8 for external DRAM
38	Po6	O	General output port-6 (Address output-6 for external SRAM)
	A9	O	Address-9 for external DRAM
39	Po7	O	General output port-7
40	VSS	-	Ground for digital circuit
41	IRQ/REQ	I/O	Interruption input (BS I/F:REQ output)
	A11R	O	Address-11 for external DRAM
42	VDDM	-	Power supply for built-in 1Mbit SRAM (2.5V)
43	Fi0	I	Flag input-0
	/OE	O	Enable output for external up DRAM
44	Fi1	I	Flag input-1
	/CAS	O	Column address strobe for external DRAM
45	VSSM	-	Ground for built-in 1Mbit SRAM

4.25 TMP91CW12AF4RA3 (IC501) : CPU

- Pin layout



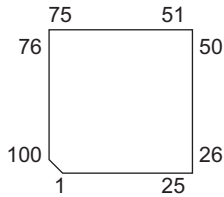
- Block diagram

Pin No	Symbol	I/O	Function
1	VREFL	-	Connect to ground
2	AVSS	-	Connect to ground
3	AVCC	-	Connect to 3.3V
4	CDON	O	CD power supply (3.3V) control
5	CDREQ	O	CD mechanism power supply request
6	CDMUTE	O	ICD mute
7	MP3RESET	O	CD MP3 reset
8	MP3STB	O	CD MP3 standby (H: Standby)
9 to 11	NC	-	Not connect
12	SW2	I	CD mechanism SW2
13	REST	I	CD mechanism rest SW
14 to 17	NC	-	Not connect
18	LCDCE/SO	O	Chip enable to LCD driver (Not connect)
19	LCDDA/SI	O	Data to LCD driver (Not connect)
20	LCDCK	O	Clock to LCD driver (Not connect)
21	BUSS0	I	JVC BUS data
22	BUSSI	O	JVC BUS data
23	BUSSCK	I/O	JVC BUS clock
24	AM0		Pull up to 3.3V
25	DVCC	-	Connect to 3.3V
26	X2		Crystal oscillator (24.576MHz)
27	DVSS	-	Connect to ground
28	X1		Crystal oscillator (24.576MHz)
29	AM1		Pull up to 3.3V
30	RESET	I	Reset
31,32	NC	-	Not connect
33	EMU0	-	Not connect
34	EMU1	-	Not connect
35	B.DET	I	Back up power supply detection (H: STOP mode)
36	SW1	I	CD mechanism SW1
37	P.DET	I	Main power off detection (H: HALT mode)
38 to 42	NC	-	Not connect
43	ALE	-	Not connect
44	BUS3	I/O	CD DSP data3
45	BUS2	I/O	CD DSP data2
46	BUS1	I/O	CD DSP data1
47	BUS0	I/O	CD DSP data0

Pin No	Symbol	I/O	Function
48	BUCK	O	Clock to CD DSP data
49	CCE	O	CD DSP chip enable
50	DSPRESET	O	CD DSP reset
51	NC		Not connect
52	DISCSEL	I	8cm DISC mode (L)
53	DACSEL	I	DAC mode (H)
54	WMASEL	I	WMA mode (H)
55	TESTMODE	I	LCD/AD key/Remocon invalidity selection (L)
56	RWSEL	O	CD-RW switching (RW:L)
57	LD/FE	O	LOADING/FEED switching (H:LD, L:FE)
58	LOAD	O	Loading (L>Loading, H:Eject)
59	/BUSIO	O	JVC BUS input/output control (Inverting output)
60	BUSIO	O	JVC BUS input/output control
61	NC	-	Not connect
62	DVSS	-	Connect to ground
63	NMI	I	Connect to P.DET
64	DVCC	-	Connect to 3.3V
65	DACML	O	DAC mode control latch
66	DACMC	O	DAC mode control BCK
67	DACMD	O	DAC mode control data
68	DACCS	O	DAC chip select
69 to 77	NC	-	Not connect
78	BOOT		
79	NC	-	Not connect
80	8VDET	I	CD mechanism power supply detection (L: 8V exist)
81	MP3REQ	I	CD MP3 request
82,83	NC	-	Not connect
84	MP3DI	I	CD MP3 data
85	MP3CK	O	Clock for CD MP3 data
86	BUSINT	I	Interrupt for JVC BUS transmission start
87,88	NC	-	Not connect
89	DVCC	-	Connect to 3.3V
90	NC	-	Not connect
91	DVSS	-	Connect to ground
92	KEY0	I	Key input0 (8-bits A/D input)
93	KEY1	I	Key input1 (8-bits A/D input)
94	TEMP	I	detecting signal for high temperature
95	IOP	I	IOP measuring signal of pick
96 to 99	NC	-	Not connect
100	VREFH	-	Connect to 3.3V

4.26 UPD784217AGC220 (IC701) : CPU

- Pin layout



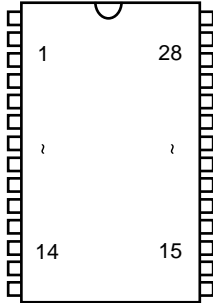
- Block diagram

Pin No	Symbol	I/O	Function
1 to 7	NC	-	Not use
8	ANT CONT	-	Antenna remote control
9	VDD	-	Power supply
10	X2	-	
11	X1	-	
12	VSS	-	Ground
13	XT2	-	
14	XT1	-	
15	RESET	I	System reset
16	REMOCON	I	Remocon input
17	BUS-INT	I	J-BUS INT
18	PS2	I	Power save2, H means STOP mode
19	CD-REQ	I	CD REQ INPUT
20	RDS-SCK	I	Not use
21	STEERING REMOCON	I	Steering remocon input
22	KEY DATA	I	KEY DATA
23	AVDD	-	A/D converter power supply
24	AVREF0	-	A/D reference voltage
25	VOL1	I	Volume encoder pulse input 1
26	VOL2	I	Volume encoder pulse input 2
27 to 29	NC	-	Not use
30	MRC	I	MRC input
31	SQ	I	Not use, pull down
32	SM	I	S.METER input
33	AVSS	-	Ground
34	NC	-	Not use
35	STAGE3	I	Feature selection, pull up
36	AVREF	-	
37	BUS-SI	I	J-BUS data input
38	BUS-SO	O	J-BUS data output
39	BUS-SCK	I/O	J-BUS clock input/output
40	BUS-I/O	O	J-BUS I/O selection output:H, input:L
41	DISP DA	O	DISPLAY DATA output
42	DISP SCK	O	DISPLAY SCK
43	DISP CE	O	DISPLAY CE
44	BUZZER	O	Buzzer output
45	E2PROM-DI	I	I2C data input
46	E2PROM-DO	O	I2C data output
47	E2PROM-CLK	O	I2C clock output

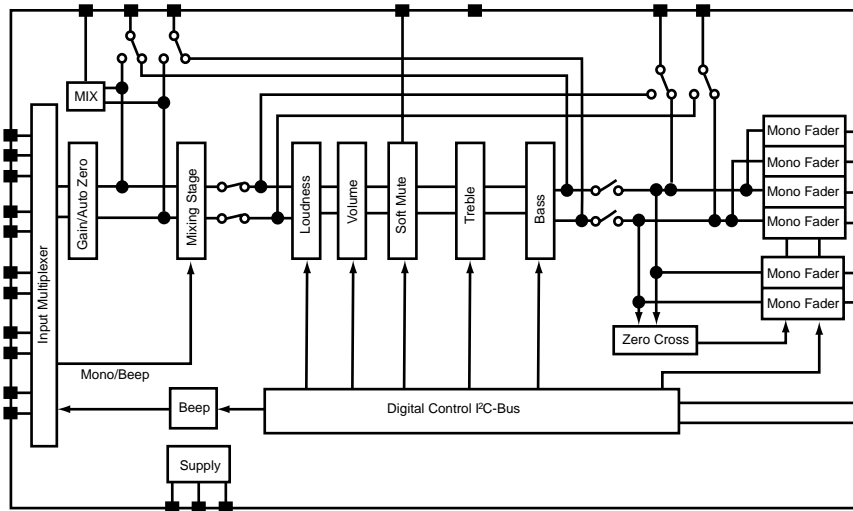
Pin No	Symbol	I/O	Function
48	OPEN	I	DOOR OPEN SW
49	DETACH	I	Detach detect input; H means detaching
50	NC	-	Not use
51 to 53	NC	-	Not use
54	EQ-CLK	O	Clock output for e-EQ IC
55	EQ-DA	O	Data output for e-EQ IC
56	EQ-LA	O	Latch output for e-EQ IC
57 to 59	NC	-	Not use
60	RDS DA	I	Not use
61	SD/ST	I	Station detector or stereo indicator input; H means a station is there, L means the program is stereo.
62	AFCK	O	Not use
63	SEEK/STOP	O	Auto seek and stop selecting output; H means seeking, L means receiving.
64	CF SEL	O	Wide & Narrow
65	FM/AM	O	FM,AM band selecting output; H=FM, L=AM
66	PLL-CE	O	CE output for PLL IC
67	PLL-DO	O	Data output for PLL IC
68	PLL-CLK	O	Clock output for PLL IC
69	PLL-DI	I	Data input from PLL IC
70	TEL-MUTING	I	Telephone muting detection input; Active level can be selected H or L in PSM
71	DIM-OUT	O	Dimmer detector output
72	VSS	-	Ground
73	DIM-IN	I	Dimmer detector input L=dimmer on
74	PS1	I	Power save1 L=ACC off
75	POWER	O	Power on/off control output H=power on
76	CD-ON	-	Not use
77	MUTING	O	Muting output L=muting on
78	CD MUTING	I	CD mute input L=mute on
79	CD RESET	O	CD reset control out H=reset on
80	LINE SEL	I	Feature selection H: line input (U57:not support), L: support
81	VDD	-	Power supply
82	NC	-	Not use
83	VOL-DA	O	Data output for e-vol IC
84	VOL-CLK	O	Clock output for e-vol IC
85	WOOFER SEL	I	Feature selection H:support L:Not support
86	SUB MUTING	O	Muting control output for subwoofer
87	LPF1	O	LPF control1
88	LPF2	O	LPF control2
89	STAGE2	I	Feature selection H: R or Do L: J or U
90	STAGE1	I	Feature selection H: R or U L: J or Do
91 to 93	NC	-	Not use
84	TEST		For rewriting flash memory
85 to 100	NC	-	Not use

4.27 TDA7404D-X (IC911) : Car radio signal processor

- Pin layout



- Block diagram





JVC

VICTOR COMPANY OF JAPAN, LIMITED

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

(No.49843)



Printed in Japan
WPC

PARTS LIST

[KD-LH3101]

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

Area suffix

E----- Continental Europe

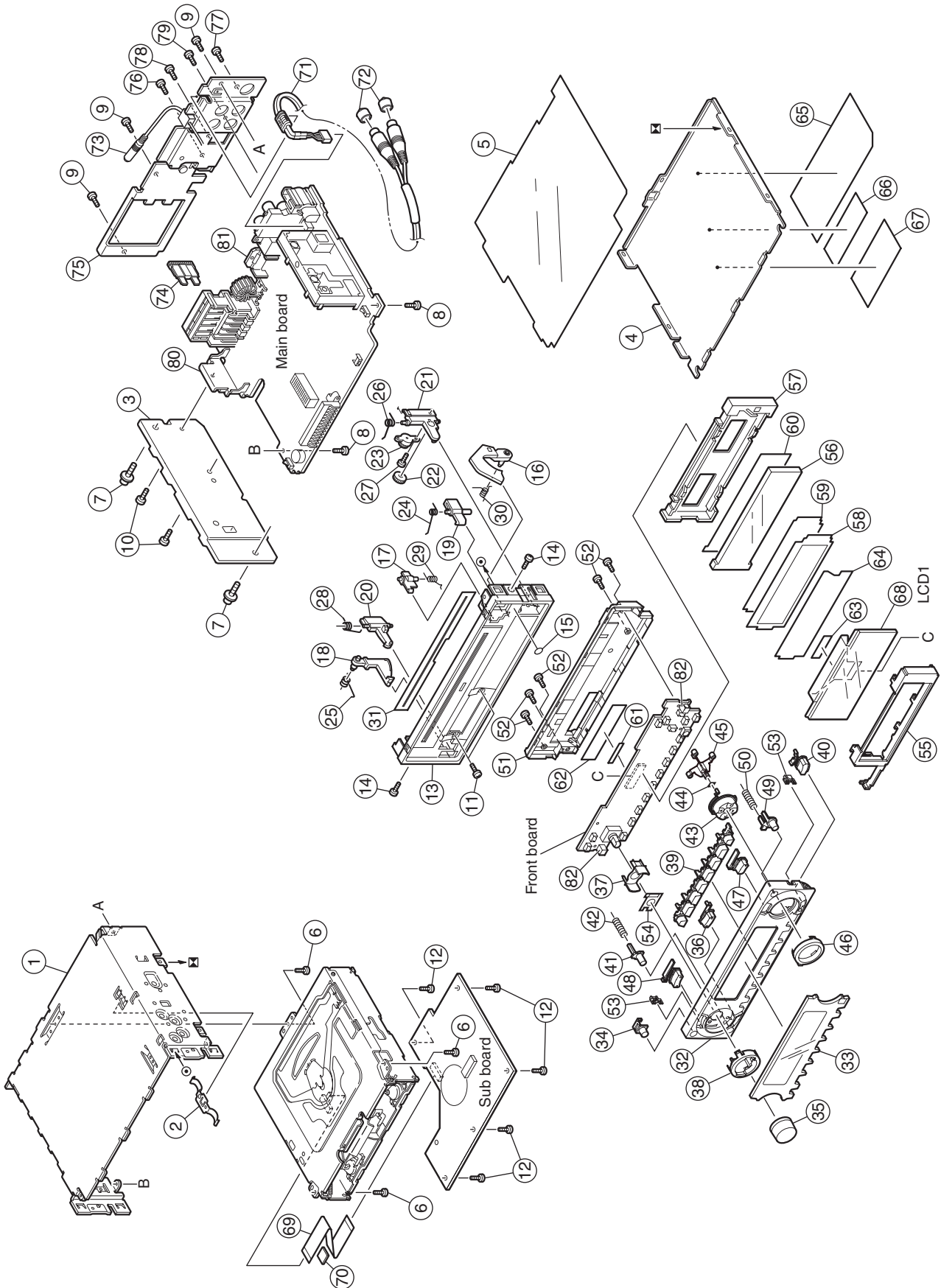
EX ----- Central Europe

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Exploded view of general assembly and parts list (Block No.M1)	3- 2
CD mechanism assembly and parts list (Block No.MB)	3- 4
Electrical parts list (Block No.01~03)	3- 6
Packing materials and accessories parts list (Block No.M3)	3-14

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	△ Symbol No.	Part No.	Part Name	Description	Local
					72	VYTA500-001	PIN CAP		(x2)
					73	QAM0464-001	STEERING REMOTE		
					△ 74	QMFZ047-150-T	FUSE		15A
					75	GE30912-005A	REAR BRACKET		
					76	QYSDST2606Z	SCREW	2.6mm x 6mm	
					77	QYSDST2606Z	SCREW	2.6mm x 6mm	
					78	QYSDST2606Z	SCREW	2.6mm x 6mm	
					79	QYSDSF2606Z	SCREW	2.6mm x 6mm	
					80	GE40136-001A	IC BRACKET		
					81	GE40124-001A	REG BRACKET		
					82	GE30857-001A	LED HOLDER		(x2)
1	GE10043-210A	TOP CHASSIS							
2	GE40135-001A	EARTH PLATE							
3	GE30568-006A	HEAT SINK		LH310					
				1E					
3	GE30938-003A	HEAT SINK		LH310					
				1EX					
4	GE30393-002A	BOTTOM COVER							
5	FSMA3005-001	INSULATOR							
6	QYSDST2604Z	SCREW	2.6mm x 4mm(x3)						
7	FSKZ4005-001	SCREW	(x2)						
8	QYSDST2606Z	SCREW	2.6mm x 6mm(x2)						
9	QYSDST2604Z	SCREW	2.6mm x 4mm(x3)						
10	QYSDST2612Z	SCREW	2.6mm x 12mm(x2)						
11	QYSDSF2006M	SCREW	2mm x 6mm(x2)						
12	QYSDST2004Z	SCREW	2mm x 4mm(x5)						
13	GE30823-002A	FRONT CHASSIS ASSY							
14	QYSDST2004M	MINI SCREW	2mm x 4mm(x2)						
15	FSYH4036-046	SHEET							
16	GE30827-001A	OPEN LEVER							
17	GE30824-002A	LOCK LEVER(O.L)							
18	GE30826-001A	RELEASE LEVER							
19	GE30829-001A	LOCK LEVER(TOP)							
20	GE30825-001A	LOCK LEVER(L)							
21	GE30828-001A	LOCK LEVER(R)							
22	GE40154-001A	GEAR							
23	QZW0108-002	OIL DAMPER							
24	FSKW4012-002	T.SPRING							
25	VKW5264-005	T.SPRING							
26	GE40155-001A	T.SPRING							
27	QYSDSF2006M	SCREW	2mm x 6mm						
28	VKW5263-002	T.SPRING							
29	GE40157-001A	T.SPRING							
30	GE40153-001A	T.SPRING							
31	GE40156-001A	BLIND							
32	GE10061-003A	FRONT PANEL							
33	GE30917-007A	FINDER ASSY							
34	GE30832-001A	POWER BUTTON							
35	GE30856-001A	KNOB							
36	GE30859-001A	SEL BUTTON							
37	GE30834-001A	RIM LENS							
38	GE30836-001A	RIM COVER(L)							
39	GE20152-001A	PRESET BUTTON							
40	GE30838-005A	CD BTN							
41	GE30934-001A	DETACH BUTTON							
42	VKW3001-330	COMP.SPRING							
43	GE30835-001A	NAV BUTTON							
44	FSYH4036-013	SHEET							
45	GE30937-002A	NAVI BASE							
46	GE30858-001A	RIM COVER(R)							
47	GE30860-001A	FM/AM BUTTON							
48	GE30861-002A	EQ BUTTON							
49	GE30914-002A	EJECT BUTTON							
50	GE30999-001A	COMP.SPRING							
51	GE10062-003A	REAR COVER							
52	VKZ4777-001	MINI SCREW	(x5)						
53	GE40158-001A	SIDE LENS	(x2)						
54	GE40174-001A	INSULATOR							
55	GE30837-001A	LCD CASE							
56	LV42850-002A	L.C.D.LENS							
57	LV33404-001A	LENS CASE							
58	LV42884-001A	LCD FILTER							
59	LV42995-001A	LCD FILTER							
60	LV42955-002A	LENS SHEET							
61	LV43084-001A	DOUBLE FACE							
62	LV40848-034A	SPACER(P)							
63	LV40846-036A	SPACER(F)							
64	LV42894-001A	BRIGHT SHEET							
65	GE30795-002A	NAME PLATE							
66	LV41843-001A	LASER CAUTION							
67	E70891-001	CLASS 1 LABEL							
68	QLD0232-001	LCD MODULE							
69	QUQ105-2207AE	FFC WIRE							
70	VYSH101-009	SPACER							
71	QAM0419-001	SUB-CABLE							

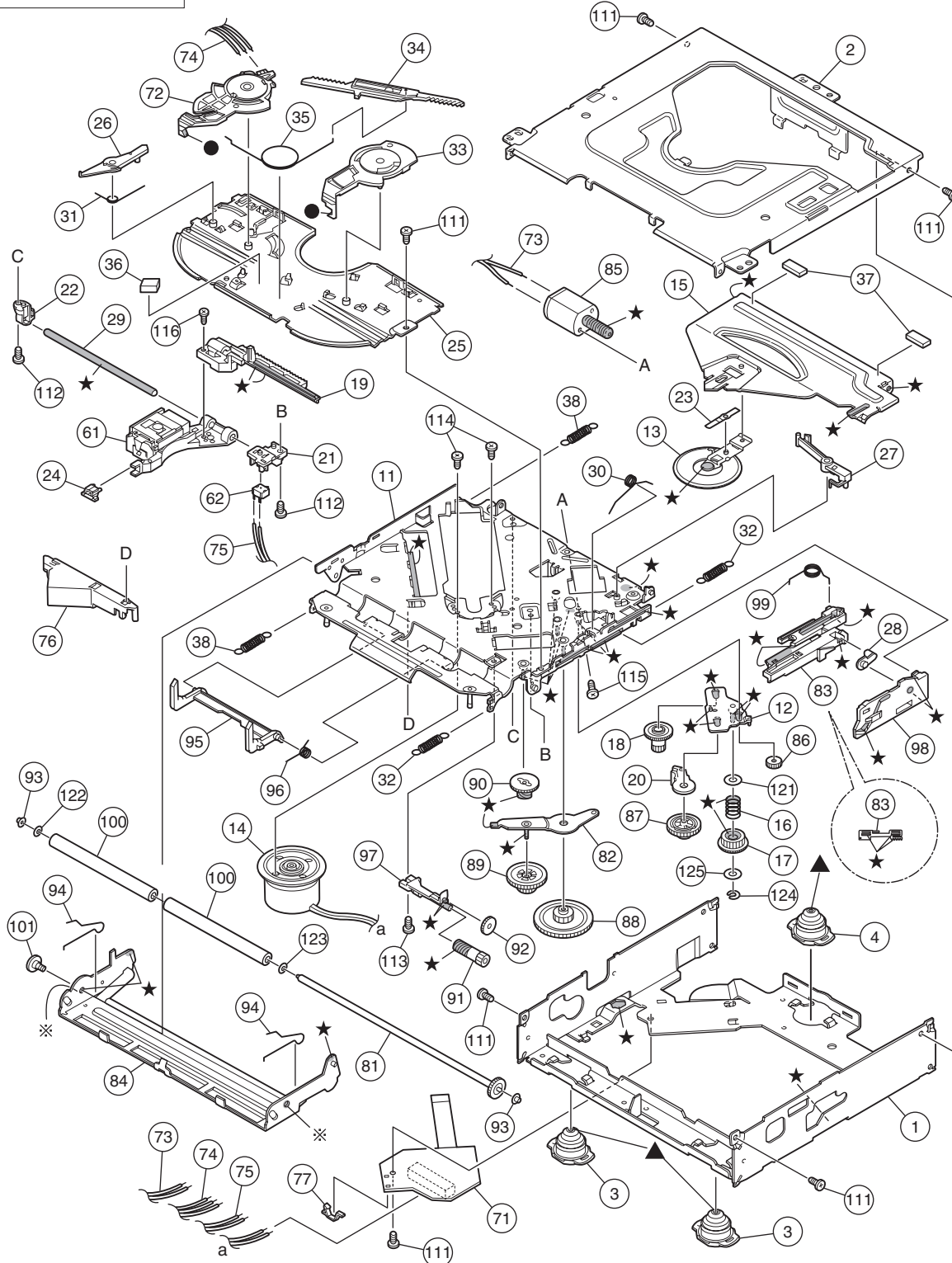
CD mechanism assembly and parts list

Block No. M B M M

TN-2001-1013

Grease

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



CD mechanism

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

△ Symbol No.	Part No.	Part Name	Description	Local
1	30320101T	FRAME		
2	30320102T	TOP COVER		
3	30320115T	DANPER F	(x2)	
4	30320116T	DANPER R		
11	303205505T	CHASSIS RIVET		
12	303205503T	CHANGE P. RVT A		
13	303205301T	CLAMPER ASSY		
14	303205304T	SPINDLE MOTOR A		
15	30320502T	CLAMPER ARM		
16	30320503T	CHANGE GEAR SPG		
17	30320505T	CHANGE GEAR 2		
18	30320506T	FEED GEAR		
19	30320507T	FEED RACK		
20	30320509T	CHANGE LOCK RAR		
21	30320510T	FEED SW HOLDER		
22	30320511T	PU SHAFT HOLDER		
23	30320513T	CLAMPER SUB SPG		
24	30320514T	FD SUB HOLDER		
25	30320518T	TOP PLATE		
26	30320519T	SELECT LOCK ARM		
27	30320520T	TRIGGER ARM		
28	30320521T	SLIDE HOOK		
29	30320522T	PU SHAFT		
30	30320525T	CLAMPER ARM SPG		
31	30320526T	SELECT L ARM SP		
32	30320538T	SUSPENSION SP R	(x2)	
33	30320529T	SELECT ARM R		
34	30320530T	LINK PLATE		
35	30320531T	LINK PLATE SPG		
36	30320523T	CUSHION F		
37	30320524T	CUSHION R	(x2)	
38	30320539T	SUSPENSION SP L	(x2)	
61	69011614T	PICKUP OPT-725		
62	64180406T	DET SW ESE22		
71	303210302T	CONN BOARD ASSY		
72	30321002T	MODE SW		
73	30321003T	LOAD MOTOR WIRE		
74	30321005T	MODE SW WIRE		
75	30321009T	SL WIRE		
76	30321011T	WIRE HOLDER		
77	19501403T	WIRE CLUMPER		
81	303211301T	ROLLER SHAFT AS		
82	303211501T	L GEAR PLATE RV		
83	303211302T	LOADING PLATE A		
84	303211502T	LOCK ARM RV ASS		
85	303211303T	L/F MOTOR ASSY		
86	30321101T	LOADING GEAR 1		
87	30321102T	LOADING GEAR 2		
88	30321103T	LOADING GEAR 3		
89	30321104T	LOADING GEAR 4		
90	30321105T	LOADING GEAR 5		
91	30321106T	LOADING GEAR 6		
92	30321107T	LOADING GEAR 7		
93	30321111T	ROLLER GUIDE	(x2)	
94	30321114T	ROLLER GUIDE SP	(x2)	
95	30321116T	DISC STOPPER AR		
96	30321117T	DISC ST ARM SPG		
97	30321118T	LD GEAR BRACKET		
98	30321125T	L SIDE PLATE		
99	30321131T	LOAD PLATE SPG		
100	30321133T	LDG ROLLER	(x2)	
101	18211223T	COLLAR SCREW		
111	9P0420031T	SCREW	(x6)	
112	9P0420041T	TAP SCREW	(x2)	
113	9B0320041T	SCREW		
114	9C0117183T	SCREW	(x2)	
115	9C0120203T	SCREW		
116	9C0317503T	SCREW		
121	9W0130170T	PW 3.5X8X0.3		
122	9W0513060T	HL WASHER		
123	9W0710070T	L WASHER		
124	9E0100152T	E RING		
125	9W0113020T	PW 2.1X4X0.13		

Electrical parts list

Main board

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

△ Symbol No.	Part No.	Part Name	Description	Local
IC51	SAA6579T-X	IC		
IC131	BU4066BCFV-X	IC		
IC132	NJM4565V-X	IC		
IC701	UPD784217AGC220	IC		
IC702	IC-PST9333U-X	IC		
IC703	BR24L32F-W-X	IC		
IC781	HD74HC126FP-X	IC		
IC901	HA13164A	IC		
IC911	TDA7404D-X	IC		
IC912	M62449FP-X	IC		
IC921	NJM2360AM-X	IC		
IC951	LA47505	IC		
Q1	2SB624/4/-X	TRANSISTOR		
Q2	UN2211-X	TRANSISTOR		
Q3	2SB624/4/-X	TRANSISTOR		
Q21	2SC2412K/RS/-X	TRANSISTOR		
Q22	2SC2412K/RS/-X	TRANSISTOR		
Q23	UN2211-X	TRANSISTOR		
Q24	2SD601A/R/-X	TRANSISTOR		
Q25	UN2111-X	TRANSISTOR		
Q26	UN2111-X	TRANSISTOR		
Q101	2SD601A/R/-X	TRANSISTOR		
Q121	2SD1781K/QR/-X	TRANSISTOR		
Q122	2SD1781K/QR/-X	TRANSISTOR		
Q131	UN2211-X	TRANSISTOR		
Q132	UN2211-X	TRANSISTOR		
Q133	2SC2412K/RS/-X	TRANSISTOR		
Q191	2SD601A/R/-X	TRANSISTOR		
Q201	2SD601A/R/-X	TRANSISTOR		
Q221	2SD1781K/QR/-X	TRANSISTOR		
Q222	2SD1781K/QR/-X	TRANSISTOR		
Q701	UN2213-X	DIGI TRANSISTOR		
Q702	UN2214-X	TRANSISTOR		
Q703	UN2211-X	TRANSISTOR		
Q750	UN2211-X	TRANSISTOR		
Q751	UN2211-X	TRANSISTOR		
Q752	UN2213-X	DIGI TRANSISTOR		
Q753	UN2211-X	TRANSISTOR		
Q754	UN2211-X	TRANSISTOR		
Q795	UN2211-X	TRANSISTOR		
Q901	UN2111-X	TRANSISTOR		
Q902	UN2211-X	TRANSISTOR		
Q903	2SB709A/QR/-X	TRANSISTOR		
Q904	2SD601A/R/-X	TRANSISTOR		
Q905	UN2211-X	TRANSISTOR		
Q941	UN2111-X	TRANSISTOR		
Q942	UN2111-X	TRANSISTOR		
Q951	UN2211-X	TRANSISTOR		
D1	1SS355-X	SI DIODE		
D2	1SS355-X	SI DIODE		
D3	MA152WK-X	SI DIODE		
D121	MA152WA-X	DIODE		
D131	MA152WK-X	SI DIODE		
D192	1SS355-X	SI DIODE		
D193	1SS355-X	SI DIODE		
D221	MA152WA-X	DIODE		
D701	1SS355-X	SI DIODE		
D702	1SS355-X	SI DIODE		
D703	1SS355-X	SI DIODE		
D704	1SS355-X	SI DIODE		
D711	UDZS6.2B-X	Z DIODE		
D712	UDZS6.2B-X	Z DIODE		
D713	UDZS6.2B-X	Z DIODE		
D714	UDZS6.2B-X	Z DIODE		
D715	UDZS6.2B-X	Z DIODE		
D716	UDZS6.2B-X	Z DIODE		
D717	SML-310LT/MN/-X	LED		
D718	SML-310LT/MN/-X	LED		
D719	SML-310LT/MN/-X	LED		
D720	UDZS6.2B-X	Z DIODE		
D901	1N5404-TU-15	DIODE		
D904	RB160M-30-X	SB DIODE		
D905	RB160M-30-X	SB DIODE		
D906	MA152WA-X	DIODE		
D921	RB160M-30-X	SB DIODE		
D941	UDZS11B-X	Z DIODE		
D942	1SS355-X	SI DIODE		
D951	1SS355-X	SI DIODE		
D992	1SS355-X	SI DIODE		
C1	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C2	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C3	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C4	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C6	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C7	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C10	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C21	QERF1HM-474Z	E CAPACITOR	0.47uF 50V M	
C22	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C23	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C24	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C25	NCS31HJ-331X	C CAPACITOR	330pF 50V J	
C26	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C27	QERF1HM-104Z	E CAPACITOR	0.1uF 50V M	
C51	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C52	NCB31EK-223X	C CAPACITOR	0.022uF 25V K	
C53	NCS31HJ-561X	C CAPACITOR	560pF 50V J	
C54	NCS31HJ-270X	C CAPACITOR	27pF 50V J	
C55	NCS31HJ-270X	C CAPACITOR	27pF 50V J	
C56	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M	
C57	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C101	NCB31EK-123X	C CAPACITOR	0.012uF 25V K	
C102	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C103	NCS31HJ-821X	C CAPACITOR	820pF 50V J	
C104	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C110	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C115	NFV81CM-105X	MF CAPACITOR	1uF 16V M	
C116	NFV81CM-105X	MF CAPACITOR	1uF 16V M	
C117	NCB31HK-331X	C CAPACITOR	330pF 50V K	
C118	NCB31HK-331X	C CAPACITOR	330pF 50V K	
C120	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C122	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C123	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C124	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C125	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C126	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C127	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C131	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C132	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C133	NCB31EK-273X	C CAPACITOR	0.027uF 25V K	
C134	NCB31EK-273X	C CAPACITOR	0.027uF 25V K	
C135	NCB31HK-562X	C CAPACITOR	5600pF 50V K	
C136	NCB31EK-123X	C CAPACITOR	0.012uF 25V K	
C137	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C138	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C139	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C140	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C141	NCB31EK-823X	C CAPACITOR	0.082uF 25V K	
C142	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C143	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C144	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C181	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C191	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C192	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
C193	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C194	QERF1HM-224Z	E CAPACITOR	0.22uF 50V M	
C201	NCB31EK-123X	C CAPACITOR	0.012uF 25V K	
C202	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C203	NCS31HJ-821X	C CAPACITOR	820pF 50V J	
C204	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C210	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C215	NFV81CM-105X	MF CAPACITOR	1uF 16V M	
C216	NFV81CM-105X	MF CAPACITOR	1uF 16V M	
C217	NCB31HK-331X	C CAPACITOR	330pF 50V K	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C218	NCB31HK-331X	C CAPACITOR	330pF 50V K		C951	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C224	QERF1HM-105Z	E CAPACITOR	1uF 50V M		C952	NCB31AK-224X	C CAPACITOR	0.22uF 10V K	
C254	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M		C953	QERF1CM-107Z	E CAPACITOR	100uF 16V M	
C255	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M		C954	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
C263	NCB31EK-273X	C CAPACITOR	0.027uF 25V K		C955	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C264	NCB31CK-393X	C CAPACITOR	0.039uF 16V K		C956	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C265	NCB31HK-123X	C CAPACITOR	0.012uF 50V K		C957	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C266	NCB31HK-153X	C CAPACITOR	0.015uF 50V K		C958	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C267	NCB31HK-472X	C CAPACITOR	4700pF 50V K		C959	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C268	NCB31HK-682X	C CAPACITOR	6800pF 50V K		C961	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C269	NCB31HK-182X	C CAPACITOR	1800pF 50V K		C962	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C270	NCB31HK-272X	C CAPACITOR	2700pF 50V K		C963	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C271	NCB31CK-823X	C CAPACITOR	0.082uF 16V K		C964	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C272	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		C965	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C288	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		C966	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C289	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		C967	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C308	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		C968	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C309	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		C969	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C351	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M		C970	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C352	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M		C971	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	
C361	NCB31CK-823X	C CAPACITOR	0.082uF 16V K		C972	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	
C362	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		C973	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C363	NCB31EK-273X	C CAPACITOR	0.027uF 25V K		C974	NCB31CK-103X	C CAPACITOR	0.01uF 16V K	
C364	NCB31CK-393X	C CAPACITOR	0.039uF 16V K		C991	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C365	NCB31HK-123X	C CAPACITOR	0.012uF 50V K						
C366	NCB31HK-153X	C CAPACITOR	0.015uF 50V K		R1	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C367	NCB31HK-472X	C CAPACITOR	4700pF 50V K		R2	NRSA63J-270X	MG RESISTOR	27Ω 1/16W J	
C368	NCB31HK-682X	C CAPACITOR	6800pF 50V K		R3	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
C369	NCB31HK-182X	C CAPACITOR	1800pF 50V K		R4	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
C370	NCB31HK-272X	C CAPACITOR	2700pF 50V K		R5	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
C701	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R6	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
C702	QERF1AM-227Z	E CAPACITOR	220uF 10V M		R7	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C703	NCS31HJ-8R0X	C CAPACITOR	8pF 50V J		R8	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C704	NCS31HJ-270X	C CAPACITOR	27pF 50V J		R9	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C705	NCS31HJ-270X	C CAPACITOR	27pF 50V J		R10	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
C706	NCS31HJ-220X	C CAPACITOR	22pF 50V J		R11	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C707	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R21	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
C708	QERF1AM-227Z	E CAPACITOR	220uF 10V M		R22	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C709	NCS31HJ-471X	C CAPACITOR	470pF 50V J		R23	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C710	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R24	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C711	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R25	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C713	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M		R26	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C714	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R27	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
C715	QERF1AM-227Z	E CAPACITOR	220uF 10V M		R28	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C716	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R29	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C717	NCS31HJ-101X	C CAPACITOR	100pF 50V J		R31	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C751	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R51	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C752	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R52	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C753	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R53	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C755	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R54	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C768	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R101	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J	
C769	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R102	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C781	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R103	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C795	QERF1HM-105Z	E CAPACITOR	1uF 50V M		R111	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C901	QEZ0625-338	E CAPACITOR	3300uF		R113	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C902	QERF1CM-226Z	E CAPACITOR	22uF 16V M		R114	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C903	QERF1CM-226Z	E CAPACITOR	22uF 16V M		R115	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C904	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R116	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C905	QERF1AM-107Z	E CAPACITOR	100uF 10V M		R119	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C906	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R121	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
C907	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R122	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
C908	QERF1AM-227Z	E CAPACITOR	220uF 10V M		R123	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
C910	QERF1CM-106Z	E CAPACITOR	10uF 16V M		R124	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
C911	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R125	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C912	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M		R126	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C913	NCB31EK-104X	C CAPACITOR	0.1uF 25V K		R127	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
C914	QEKJ1CM-226Z	E CAPACITOR	22uF 16V M		R129	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C917	NCB31CK-473X	C CAPACITOR	0.047uF 16V K		R131	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
C920	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M		R132	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
C921	QERF1AM-227Z	E CAPACITOR	220uF 10V M		R133	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C922	NCB31HK-272X	C CAPACITOR	2700pF 50V K		R134	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
C923	QERF1CM-107Z	E CAPACITOR	100uF 16V M		R135	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
C924	NCB31EK-473X	C CAPACITOR	0.047uF 25V K		R136	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C929	NCB31CK-473X	C CAPACITOR	0.047uF 16V K		R137	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C930	QERF1CM-106Z	E CAPACITOR	10uF 16V M		R138	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C941	QERF1CM-476Z	E CAPACITOR	47uF 16V M		R139	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C942	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		R140	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C945	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R141	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R142	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R748	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R143	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R749	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R144	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		R750	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R145	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		R751	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R146	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R754	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R147	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R755	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R148	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R756	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R149	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R757	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R155	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R758	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R156	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R759	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R157	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R761	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R158	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R763	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R182	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R767	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R183	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R773	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R184	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R774	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R191	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R775	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R192	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J		R776	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R193	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R777	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R194	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J		R778	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R195	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J		R779	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R196	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R780	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R197	NRSA63J-274X	MG RESISTOR	270kΩ 1/16W J		R781	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R201	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J		R782	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R202	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R783	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R203	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R784	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R211	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R785	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R213	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R786	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R214	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R787	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R215	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R788	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R216	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R789	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R219	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R790	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R221	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R791	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R222	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R792	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R223	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R793	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R224	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R795	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R225	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R797	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R226	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R798	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R229	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R799	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R282	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R805	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R708	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R901	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J	
R709	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R902	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R710	NRSA63J-106X	MG RESISTOR	10MΩ 1/16W J		R903	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R711	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R904	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R712	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R905	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R713	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R906	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R714	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R908	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R715	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R909	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R716	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R910	QRE142J-102X	C RESISTOR	1kΩ 1/4W J	
R717	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R911	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R718	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R912	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R719	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R913	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R720	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R914	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R721	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R915	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R722	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R916	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R723	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R917	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R724	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R918	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R725	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R919	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R726	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R921	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R727	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R922	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R728	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R923	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R729	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R924	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R730	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R925	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R731	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J		R926	NRSA63D-473X	MG RESISTOR	47kΩ 1/16W D	
R732	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J		R927	NRSA63D-472X	MG RESISTOR	4.7kΩ 1/16W D	
R733	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R928	NRSA63D-273X	MG RESISTOR	27kΩ 1/16W D	
R734	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R929	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R735	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J		R951	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R736	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J		R953	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R737	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J		R954	NRSA63J-4R7X	MG RESISTOR	4.7Ω 1/16W J	
R739	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R955	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R740	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R961	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R741	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R962	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R742	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R963	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R743	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R981	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R744	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R982	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R745	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R985	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R746	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R986	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R747	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R987	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R989	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		Q801	2SB709A/QR/-X	TRANSISTOR		
R992	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		Q802	2SB709A/QR/-X	TRANSISTOR		
R993	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		Q803	2SD601A/R/-X	TRANSISTOR		
R994	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		Q804	UN2111-X	TRANSISTOR		
R995	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		D401	MA152WK-X	SI DIODE		
R996	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		D402	SML-310LT/MN/-X	LED		
R997	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		D403	SML-310LT/MN/-X	LED		
R998	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		D405	SML-310LT/MN/-X	LED		
R999	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		D406	SML-310LT/MN/-X	LED		
L1	NQL114K-100X	COIL	10uH K		D407	SML-310LT/MN/-X	LED		
L701	NQL114K-470X	INDUCITOR	47uH K		D408	SML-310LT/MN/-X	LED		
L702	NQL114K-470X	INDUCITOR	47uH K		D409	SML-310LT/MN/-X	LED		
L753	NQL114K-470X	INDUCITOR	47uH K		D410	SML-310LT/MN/-X	LED		
L901	QQR1378-001	CHOKE COIL			D411	SML-310LT/MN/-X	LED		
L921	NQLZ007-151X	COIL	150uH		D412	SML-310LT/MN/-X	LED		
L922	NQL114M-4R7X	COIL	4.7uH M		D413	SML310BAT/JKL-X	LED		
BZ795	QAN0023-001Z	BUZZER			D414	SML310BAT/JKL-X	LED		
CN131	QGA2006C1-04	CONNECTOR	W-B (1-4)		D415	SML-310LT/MN/-X	LED		
CN132	QGA2006F1-02	CONNECTOR	W-B (1-2)		D416	SML-310LT/MN/-X	LED		
CN601	QGB2027M4-22S	CONNECTOR	B-B (1-22)		D417	SML-310LT/MN/-X	LED		
CN701	QNZ0605-001	CAR CONNECTOR			D418	SML-310LT/MN/-X	LED		
CN901	QNZ0112-001	CAR CONNECTOR			D419	SML-310LT/MN/-X	LED		
CN902	QNZ0095-001	CONNECTOR			D420	SML-310LT/MN/-X	LED		
J1	QNB0100-002	CAR ANT JACK			D421	SML-310LT/MN/-X	LED		
J121	QNN0490-001	PIN JACK			D422	SML-310LT/MN/-X	LED		
PP1	QZW0010-001	STYLE PIN			D423	UDZS6.2B-X	Z DIODE		
PP2	QZW0010-001	STYLE PIN			D424	UDZS6.2B-X	Z DIODE		
S701	QSW0451-001	DETECT SW			D425	UDZS6.2B-X	Z DIODE		
S702	QSW0451-001	DETECT SW			D426	UDZS6.2B-X	Z DIODE		
S703	QSQ1A11-V06Z	TACT SW I/M			D427	UDZS6.2B-X	Z DIODE		
TU1	QAU0203-002	TUNER			D428	UDZS6.2B-X	Z DIODE		
X51	QAX0761-001Z	CRYSTAL			D429	UDZS6.2B-X	Z DIODE		
X701	QAX0617-001Z	CRYSTAL	12.500MHz		D430	UDZS6.2B-X	Z DIODE		
X702	QAX0401-001	CRYSTAL	32.768KHz		D431	UDZS6.2B-X	Z DIODE		
					D435	NSPB310A/WRST/	LED		
					D436	NSPB310A/WRST/	LED		
					D451	NSCM315C-W	LED		
					D452	NSCM315C-W	LED		
					D453	NSCM315C-W	LED		
					D801	MA152WK-X	SI DIODE		
					D803	1SS355-X	SI DIODE		
					D804	UDZS6.2B-X	Z DIODE		
					D805	UDZS6.2B-X	Z DIODE		
					D806	UDZS6.2B-X	Z DIODE		
					D807	UDZS6.2B-X	Z DIODE		
					D808	UDZS6.2B-X	Z DIODE		
					D809	UDZS6.2B-X	Z DIODE		
					D810	UDZS6.2B-X	Z DIODE		
					D811	UDZS6.2B-X	Z DIODE		
					D812	UDZS6.2B-X	Z DIODE		
					C451	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C452	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C453	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C454	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C455	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C456	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C457	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C458	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C459	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C801	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
					C802	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C804	NCS31HJ-471X	C CAPACITOR	470pF 50V J	
					C805	NCS31HJ-471X	C CAPACITOR	470pF 50V J	
					C806	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C807	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
					C808	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
					C809	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
					C810	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C811	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C812	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
					C813	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
					C814	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
					C815	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
					C816	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
					C817	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
					C818	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	

Front board

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

△ Symbol No.	Part No.	Part Name	Description	Local
IC801	MN102H60KCG	IC		
IC802	LH28F160BJHET92	IC (FLASH ROM)		
IC803	IC-PST3424U-X	IC		
IC804	NJU7241F33-X	IC		
IC805	RPM6938-SV4	IC		
Q401	UN2211-X	TRANSISTOR		
Q402	UN2211-X	TRANSISTOR		
Q403	UN2211-X	TRANSISTOR		
Q404	UN2211-X	TRANSISTOR		
Q405	UN2211-X	TRANSISTOR		
Q406	UN2211-X	TRANSISTOR		
Q407	UN2211-X	TRANSISTOR		
Q408	2SD601A/R/-X	TRANSISTOR		
Q409	2SD601A/R/-X	TRANSISTOR		
Q410	2SD601A/R/-X	TRANSISTOR		
Q411	2SD601A/R/-X	TRANSISTOR		
Q412	2SD601A/R/-X	TRANSISTOR		
Q413	2SD601A/R/-X	TRANSISTOR		
Q414	2SD601A/R/-X	TRANSISTOR		
Q415	2SD601A/R/-X	TRANSISTOR		
Q416	2SD601A/R/-X	TRANSISTOR		
Q417	2SD601A/R/-X	TRANSISTOR		
Q418	2SD601A/R/-X	TRANSISTOR		
Q419	2SD601A/R/-X	TRANSISTOR		
Q420	2SD601A/R/-X	TRANSISTOR		
Q421	2SD601A/R/-X	TRANSISTOR		
Q422	2SD601A/R/-X	TRANSISTOR		
Q423	2SD601A/R/-X	TRANSISTOR		
Q424	2SD601A/R/-X	TRANSISTOR		
Q425	2SD601A/R/-X	TRANSISTOR		
Q428	2SD601A/R/-X	TRANSISTOR		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R882	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J						
R883	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J		C501	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
R884	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J		C502	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
R885	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J		C503	NEAD0JM-107X	E CAPACITOR	100uF 6.3V M	
R886	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J		C504	NDC31HJ-270X	C CAPACITOR	27pF 50V J	
R887	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J		C505	NDC31HJ-220X	C CAPACITOR	22pF 50V J	
R888	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J		C506	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
R889	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		C507	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
R890	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J		C508	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
R891	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		C509	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
R892	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J		C510	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
R893	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		C511	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R894	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		C512	NEAD0JM-107X	E CAPACITOR	100uF 6.3V M	
R895	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		C513	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
R896	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		C514	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
R897	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		C551	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
R898	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		C571	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
R899	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		C572	NDC31HJ-100X	C CAPACITOR	10pF 50V J	

L801	NQL114K-470X	INDUCITOR	47uH K	
CN801	NNZ0087-001	CAR CONNECTOR		
CN802	QGF0523F1-40W	CONNECTOR	FFC/FPC (1-40)	
EN801	QSW0976-001	ROTARY ENCODER		
S802	NSW0066-001X	TACT SW		
S803	NSW0066-001X	TACT SW		
S804	NSW0066-001X	TACT SW		
S805	NSW0066-001X	TACT SW		
S806	NSW0066-001X	TACT SW		
S807	NSW0066-001X	TACT SW		
S808	NSW0066-001X	TACT SW		
S809	NSW0066-001X	TACT SW		
S810	NSW0066-001X	TACT SW		
S811	NSW0066-001X	TACT SW		
S812	NSW0066-001X	TACT SW		
S813	NSW0066-001X	TACT SW		
S814	NSW0066-001X	TACT SW		
S815	NSW0066-001X	TACT SW		
S816	NSW0066-001X	TACT SW		
S817	NSW0066-001X	TACT SW		
S818	NSW0066-001X	TACT SW		
TH801	NAD0022-103X	N THERMISTOR	10kΩ 10mW F	
X801	NAX0586-001X	C RESONATOR	25.000MHz	

Sub board

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

△ Symbol No.	Part No.	Part Name	Description	Local
IC501	TMP91CW12AF4RA3	IC		
IC503	HD74HCT126T-X	IC		
IC504	NJU7241F33-X	IC		
IC571	PCM1716E-X	IC		
IC572	NJM4565V-X	IC		
IC601	TA2157FN-X	RF AMP IC		
IC621	TC94A14FA	CD LSI IC		
IC651	NJU7241F25-X	IC		
IC652	TC94A20F-008	IC		
IC681	BA5830FP-X	IC		
Q501	UN2111-X	TRANSISTOR		
Q502	UN2111-X	TRANSISTOR		
Q571	UN2111-X	TRANSISTOR		
Q572	UN2111-X	TRANSISTOR		
Q601	2SB1132/QR/-W	TRANSISTOR		
Q681	2SB1184/QR/-X	TRANSISTOR		
D501	1SS355-X	SI DIODE		
D502	1SS355-X	SI DIODE		
D503	1SS355-X	SI DIODE		
D504	1SS355-X	SI DIODE		
D505	1SS355-X	SI DIODE		
D506	RB160M-30-X	SB DIODE		
D682	1SR154-400-X	DIODE		

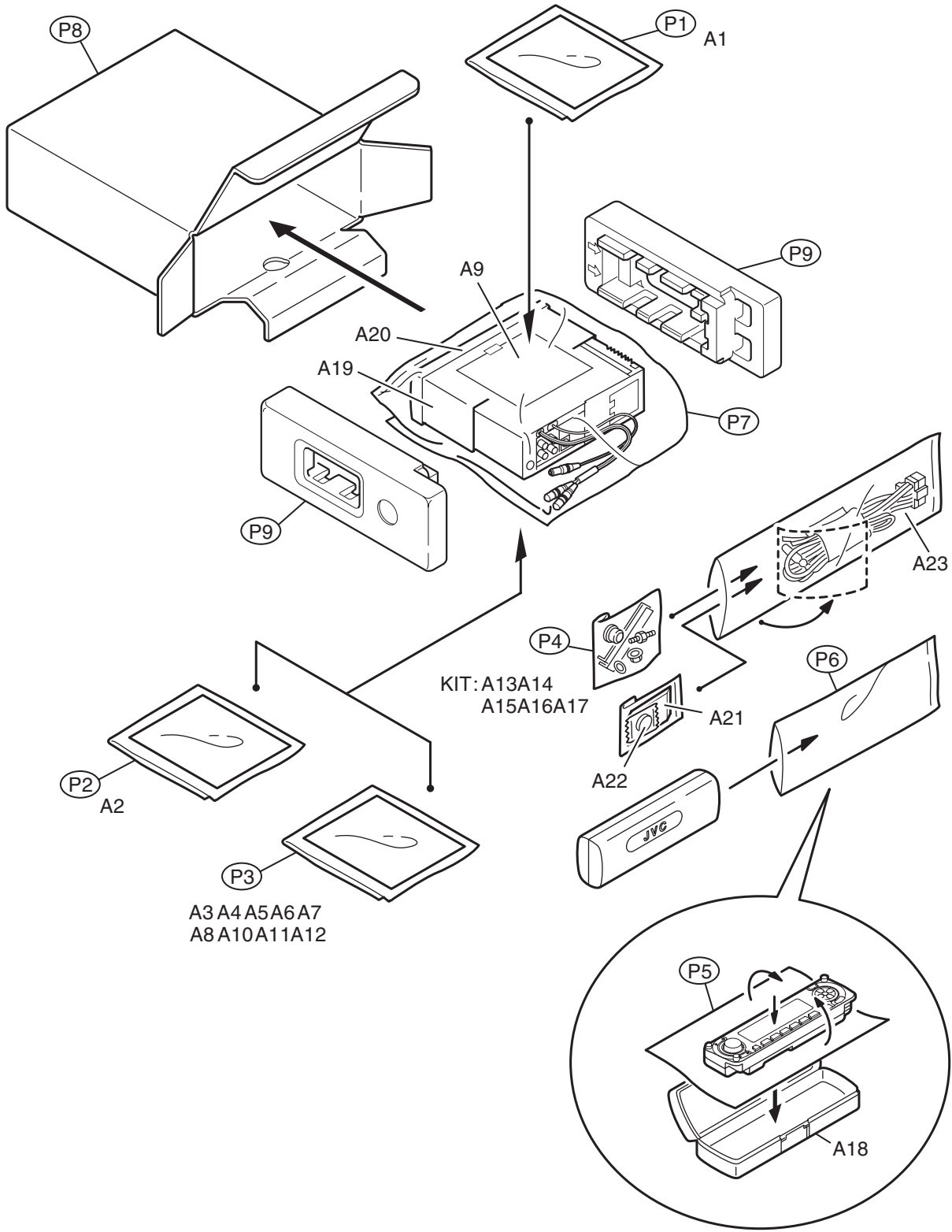
C601	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C602	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C603	NEAD0JM-107X	E CAPACITOR	100uF 6.3V M	
C604	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C605	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C606	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C607	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C608	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C609	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C610	NDC31HJ-5R0X	C CAPACITOR	5pF 50V J	
C611	NCS31HJ-680X	C CAPACITOR	68pF 50V J	
C612	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C613	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C614	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C616	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C621	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C622	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C623	NCS31HJ-470X	C CAPACITOR	47pF 50V J	
C624	NCB31HK-153X	C CAPACITOR	0.015uF 50V K	
C625	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C626	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C627	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C628	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C629	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C630	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C631	NCS31HJ-471X	C CAPACITOR	470pF 50V J	
C632	NCS31HJ-471X	C CAPACITOR	470pF 50V J	
C633	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C634	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C635	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C636	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C637	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C638	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C639	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C640	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R548	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
C641	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M		R549	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C642	NCS31HJ-101X	C CAPACITOR	100pF 50V J		R550	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C643	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R551	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C644	NCB31AK-334X	C CAPACITOR	0.33uF 10V K		R552	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C645	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M		R553	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
C646	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R554	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
C651	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M		R555	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C652	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R556	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C653	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M		R557	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C654	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R558	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C655	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R559	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C656	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R560	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C657	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R561	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C658	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R562	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
C659	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R563	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
C660	NCS31HJ-101X	C CAPACITOR	100pF 50V J		R564	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C661	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R568	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C662	NCS31HJ-101X	C CAPACITOR	100pF 50V J		R569	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C663	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R570	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C664	NCB31EK-273X	C CAPACITOR	0.027uF 25V K		R572	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C665	NCB31AK-334X	C CAPACITOR	0.33uF 10V K		R573	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C666	NCS31HJ-101X	C CAPACITOR	100pF 50V J		R574	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
C667	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R581	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J	
C668	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M		R582	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J	
C669	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R583	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
C671	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M		R584	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
C672	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R585	NRSA63J-303X	MG RESISTOR	30kΩ 1/16W J	
C673	NCS31HJ-101X	C CAPACITOR	100pF 50V J		R586	NRSA63J-303X	MG RESISTOR	30kΩ 1/16W J	
C682	NEAD1CM-106X	E CAPACITOR	10uF 16V M		R587	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C683	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R588	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C684	NEAD1CM-476X	E CAPACITOR	47uF 16V M		R589	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C689	NEAD1CM-476X	E CAPACITOR	47uF 16V M		R590	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C690	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R591	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R501	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R592	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R502	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R593	NRSA63J-4R7X	MG RESISTOR	4.7Ω 1/16W J	
R503	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R601	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R504	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R602	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R505	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R603	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R506	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R604	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R507	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R605	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R508	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R606	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R509	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R607	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R510	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R608	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R511	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R609	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R512	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R610	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R513	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R611	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R514	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R612	NRSA63J-202X	MG RESISTOR	2kΩ 1/16W J	
R515	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R613	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R516	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R614	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R517	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R615	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
R518	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R616	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R519	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R621	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R520	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R622	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R521	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R623	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R522	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R624	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R523	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R625	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R524	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R626	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R525	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R627	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R526	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R628	NRSA63J-155X	MG RESISTOR	1.5MΩ 1/16W J	
R528	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R629	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R529	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R630	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R531	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R631	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R532	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R632	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R533	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R633	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R534	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R634	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R535	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R635	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R536	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R636	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R537	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R637	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R538	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R638	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R539	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R639	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R540	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R640	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R541	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R641	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R542	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R642	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R543	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R651	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R544	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R654	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R545	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R668	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
					R674	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local
R675	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R677	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R681	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R682	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R683	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R684	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R685	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R686	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R687	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R688	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R689	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R690	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R691	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
L501	NQL114K-470X	INDUCITOR	47uH K	
L502	NQL114K-470X	INDUCITOR	47uH K	
L571	NQL114K-470X	INDUCITOR	47uH K	
L572	NQL114K-470X	INDUCITOR	47uH K	
L621	NQL114K-470X	INDUCITOR	47uH K	
L622	NQL114K-470X	INDUCITOR	47uH K	
L623	NQL114K-470X	INDUCITOR	47uH K	
L651	NQL114K-470X	INDUCITOR	47uH K	
L652	NQL114K-470X	INDUCITOR	47uH K	
L653	NQL114K-470X	INDUCITOR	47uH K	
CN501	QGB2027L1-22X	CONNECTOR	B-B (1-22)	
CN601	QGF0527F2-22W	CONNECTOR	FFC/FPC (1-22)	
X501	NAX0385-001X	CRYSTAL	24.576MHz	
X571	NAX0375-001X	CRYSTAL	16.9344MHz	

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	GET0151-001A	INST BOOK	ENG,GER,FRE,DUT	
A 2	GET0151-002A	INST BOOK	RUS SPA ITA POL	LH310 1E
A 2	GET0151-003A	INST BOOK	DAN,FIN,SWE,GRE	LH310 1EX
A 3	GET0165-001A	DEMO MODE SHEET		LH310 1E
A 3	GET0165-002A	DEMO MODE SHEET		LH310 1EX
A 4	LVT1042-004A	IMAGE CONVERTER		
A 5	LV43604-001A	IMAGE CON CAUT		
A 6	GET0151-004A	INSTALL MANUAL	ENG,GER,FRE,DUT	
A 7	GET0151-005A	INSTALL MANUAL	RUS SPA ITA POL	LH310 1E
A 7	GET0151-006A	INSTALL MANUAL	DAN,FIN,SWE,GRE	LH310 1EX
A 8	LVT1046-002A	CAUTION SHEET		
A 9	LV40978-001A	CAUTION SHEET		
A 10	BT-54013-6	WARRANTY CARD		
A 11	VND3050-002	IDENTITY CARD		
A 12	VND3046-001	SERIAL TICKET		
A 13	VKZ4027-202	PLUG NUT		
A 14	VKH4871-001SS	MOUNT BOLT		
A 15	VKZ4328-001	LOCK NUT		
A 16	WNS5000Z	WASHER		
A 17	GE40130-001A	HOOK	(x2)	
A 18	FSJB3002-00C	HARD CASE		
A 19	GE20137-003A	MOUNTING SLEEVE		
A 20	GE20150-001A	TRIM PLATE ASSY		
A 21	RM-RK60	REMOCON UNIT		
A 22	-----	BATTERY		
A 23	QAM0176-002	POWER CORD		
KIT	KSFX480K-SCREW1	SCREW PARTS KIT	A13 to A17	
P 1	FSPG4002-001	POLY BAG		
P 2	FSPG4002-001	POLY BAG		
P 3	FSPG4002-001	POLY BAG		
P 4	QPA00801205	POLY BAG	8cm x 12cm	
P 5	FSYH4036-068	SHEET		
P 6	QPA01003003	POLY BAG	10cm x 30cm	
P 7	QPC03004315P	POLY BAG	30cm x 43cm	
P 8	GE30796-001A	CARTON		
P 9	GE10076-001A	EPS CUSHION		