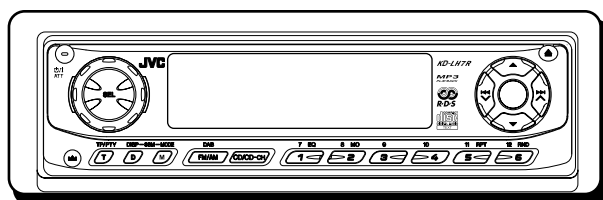


# JVC

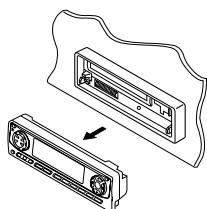
## SERVICE MANUAL

### CD RECEIVER

## KD-LH7R



**MP3**  
PLAYBACK



**CD-RW**  
PLAYBACK




#### Area Suffix


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

### 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.

# 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.

## 1.1. Grounding to prevent damage by static electricity

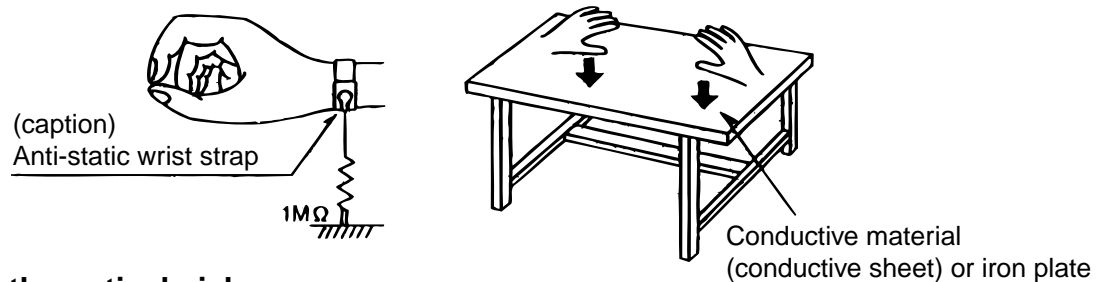
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as DVD players. Be careful to use proper grounding in the area where repairs are being performed.

### 1.1.1. Ground the workbench

1. 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.

### 1.1.2. Ground yourself

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

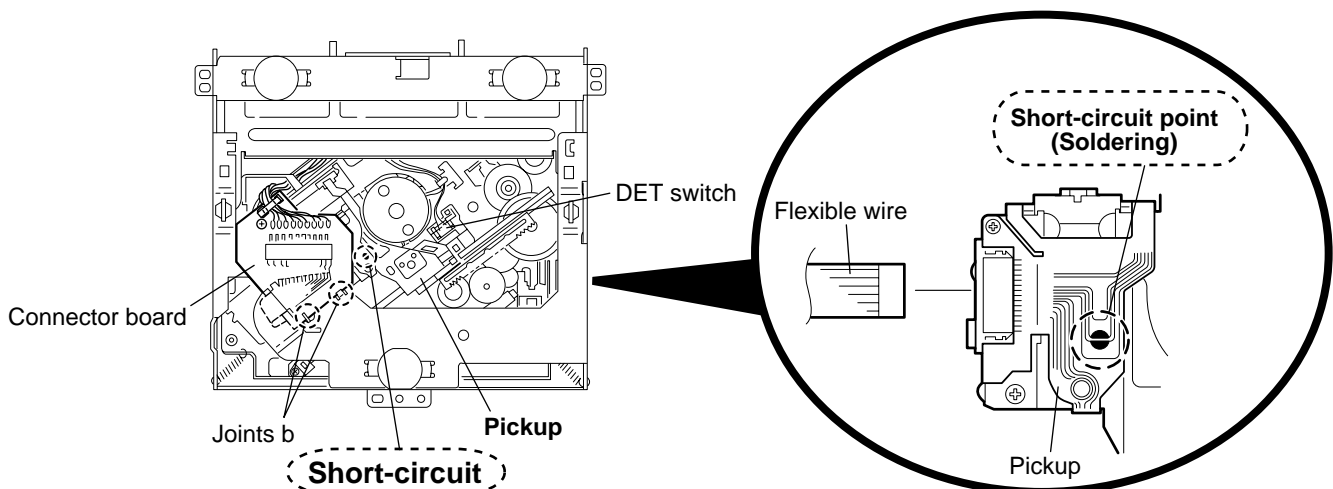


### 1.1.3. Handling the optical pickup

1. 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.)
2. 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.

## 1.2. 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



# Important for laser products

## 1.CLASS 1 LASER PRODUCT

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

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

**4.CAUTION :** The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated.

It is dangerous to defeat the safety switches.

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

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



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

**WARNING :** Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen.

**VARO :** Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

**ADVARSEL :** Usynlig laserstrålning ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

**ADVARSEL :** Usynlig laserstrålning ved åbning,når sikkerhedsbryteren er avslott. unngå utsettelse for stråling.

## REPRODUCTION AND POSITION OF LABELS

### WARNING LABEL

CLASS 1  
LASER PRODUCT

DANGER : Invisible laser radiation when open and interlock or defeated.  
AVOID DIRECT EXPOSURE TO BEAM (e)

ADVARSEL :Usynlig laserstrålning ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (f)

WARNING : Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen. (s)

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (d)



# Disassembly method

## ■ Removing the front panel unit

(See Fig.1)

1. Press the release switch and remove the front panel unit in the direction of the arrow.

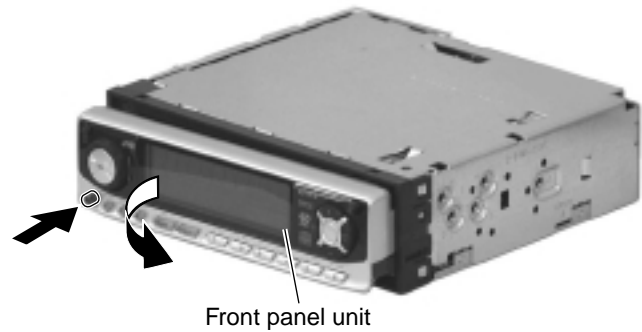


Fig.1

## ■ Removing the front chassis

(See Fig.2 ~ 4)

1. Remove the two screws **A** attaching the front chassis.
2. Remove the two screws **B** on each side of the body.
3. Release the two joints **a** and the two joints **b** on the sides. Release the two joints **c** at the bottom and remove the front chassis toward the front.

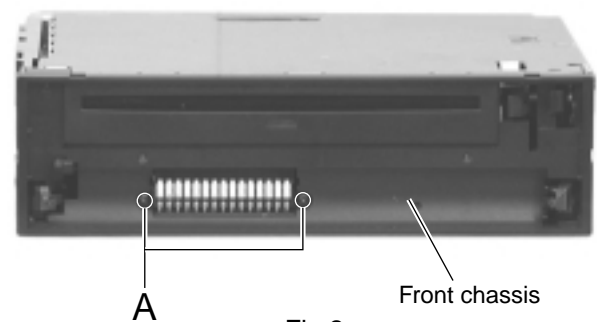


Fig.2

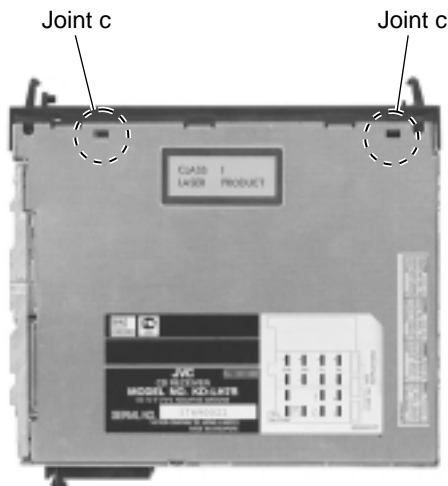


Fig.4

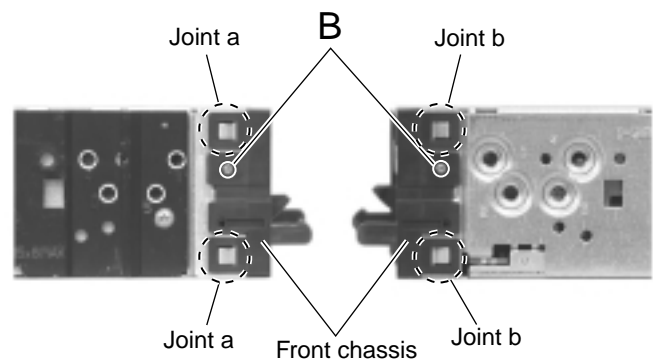


Fig. 3

## ■ Removing the heat sink (See Fig.5)

1. Remove the four screws **C** attaching the heat sink on the left side of the body, and remove the heat sink.

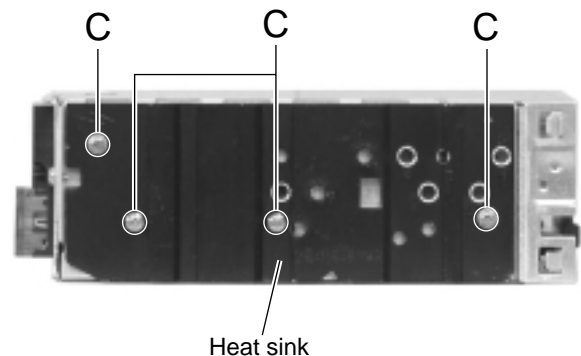


Fig. 5

## ■ Removing the bottom cover (See Fig.6)

- Prior to performing the following procedure, remove the front chassis and the heat sink.

1. Turn the body upside down.
2. Insert a screwdriver to the two joints **d** and two joints **e** on both sides of the body and the joint **f** on the back of the body, then detach the bottom cover from the body.

**CAUTION:** When disengaging the joint **f** using a screwdriver, do not damage or break the board.

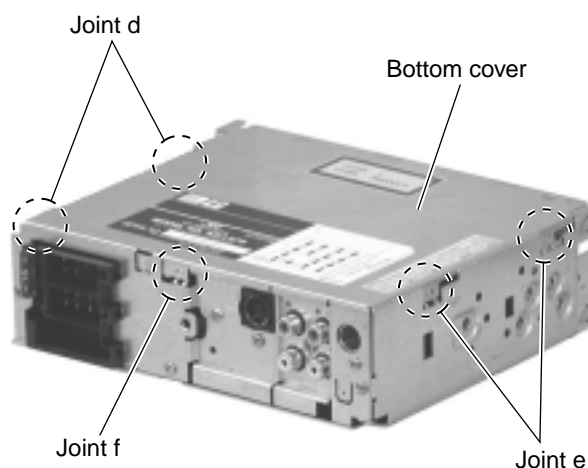


Fig. 6

## ■ Removing the rear panel (See Fig.7 )

- Prior to performing the following procedure, remove the front chassis, the heat sink and bottom cover.

1. Remove the six screws **D** attaching the rear panel and one screw **E** attaching the pine jack on the back of the body.

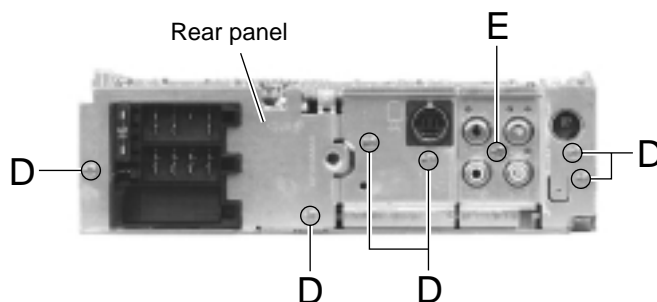


Fig. 7

## ■ Removing the main amplifier board assembly (See Fig.8)

- Prior to performing the following procedure, remove the front chassis, the heat sink, bottom cover and the rear panel.

1. Remove the two screws **F** attaching the main amplifier board assembly on the top cover.
2. Disconnect connector CN101 on the main amplifier board assembly from the cassette mechanism assembly.

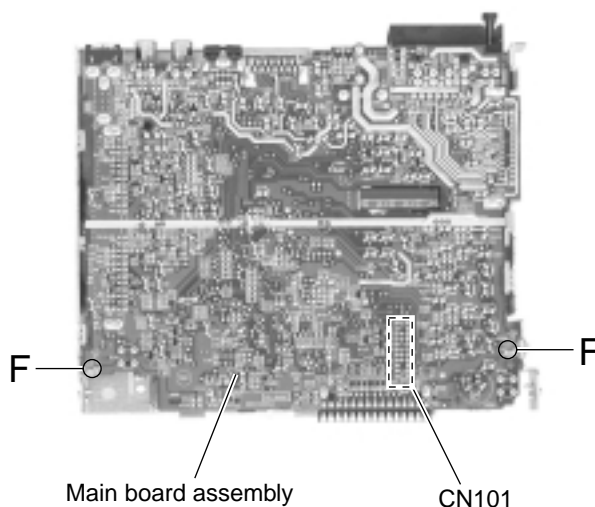


Fig. 8

## ■ Removing the MP3 board

(See Fig.9)

- Prior to performing the following procedure, remove the top cover.
1. Disconnect the wire from connector CN601 on the MP3 board.
  2. Remove the five screws **G** and the MP3 board, releasing the joint **g** and **h**.

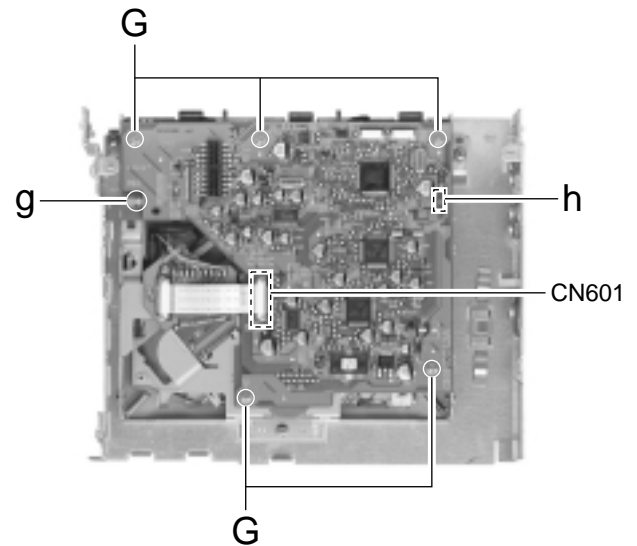


Fig.9

## ■ Removing the CD mechanism assembly

(See Fig.10)

- Prior to performing the following procedure, remove the front chassis, the heat sink, bottom cover and the main amplifier board assembly.
1. Remove the three screws **H** attaching the cassette mechanism assembly from the top cover.

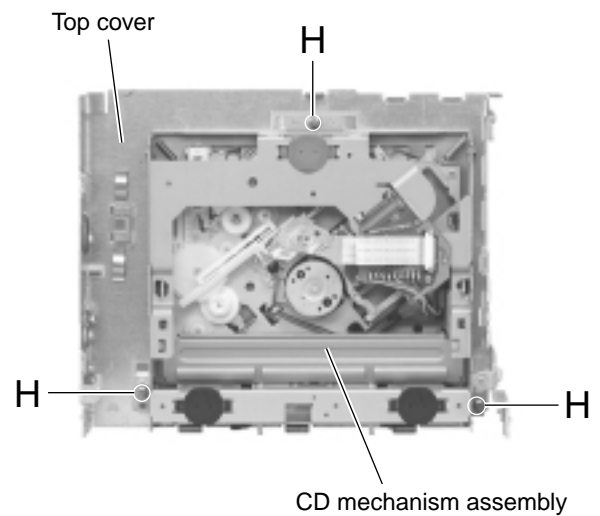


Fig. 10

## ■ Removing the (LCD & key) control switch board (See Fig.11 ~ 13)

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

1. Remove the four screws **I** attaching the rear cover on the back of the front panel assembly.
2. Unjoint the nine joints **i** with the front panel and the rear cover.
3. Remove the control switch board on the back of the front panel.



Fig. 11

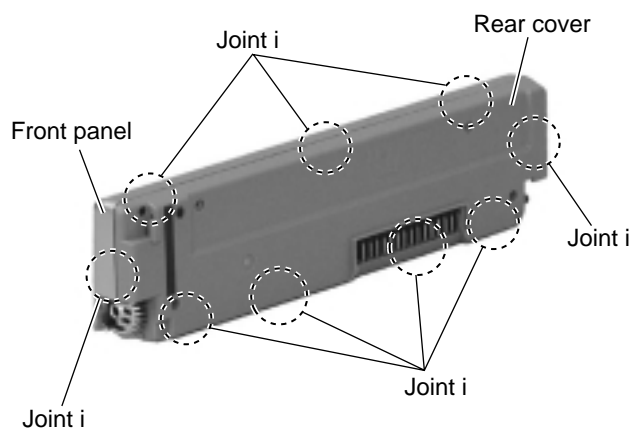


Fig. 12

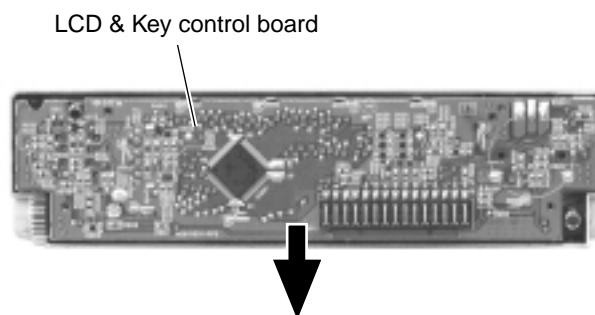


Fig. 13



## < CD mechanism section >

### ■ Removing the top cover

(See Fig.1 and 2)

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

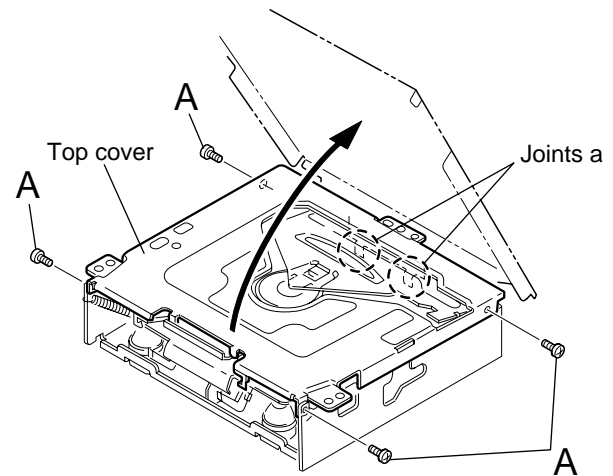


Fig.1

### ■ Removing the connector board

(See Fig.3 to 5)

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

1. Remove the screw **B** fixing the connector board.
2. Solder the short-circuit point on the connector board.

Disconnect the flexible wire from the pickup.

3. Move the connector board in the direction of the arrow to release the two joints **b**.
4. Unsolder the wire on the connector board if necessary.

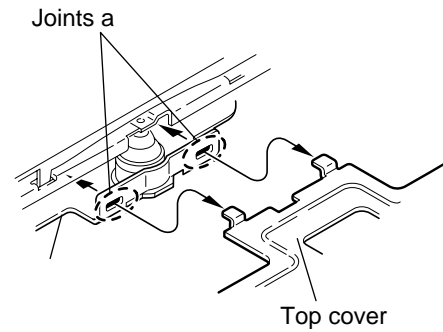


Fig.2

**CAUTION:** Unsolder the short-circuit point after reassembling.

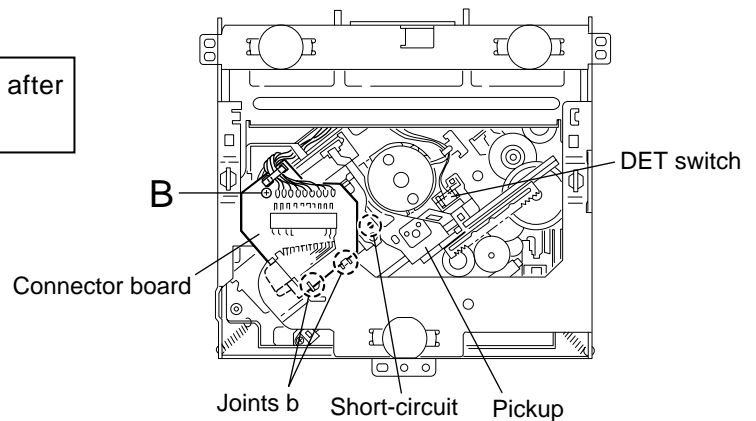


Fig.3

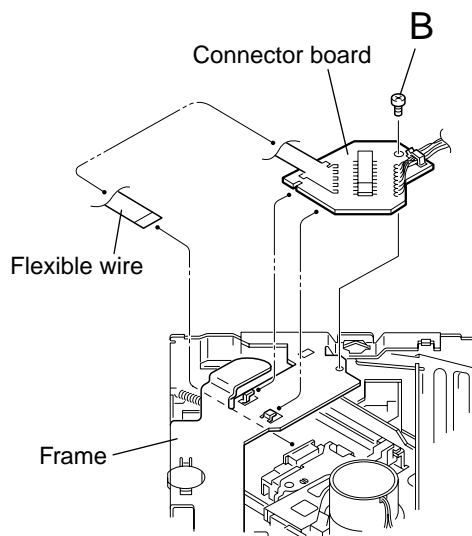


Fig.5

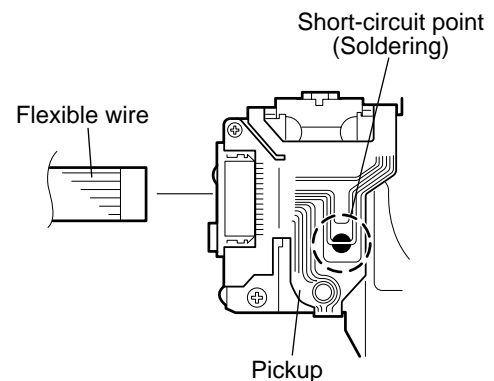


Fig.4

## ■ Removing the DET switch

(See Fig.3 and 6)

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

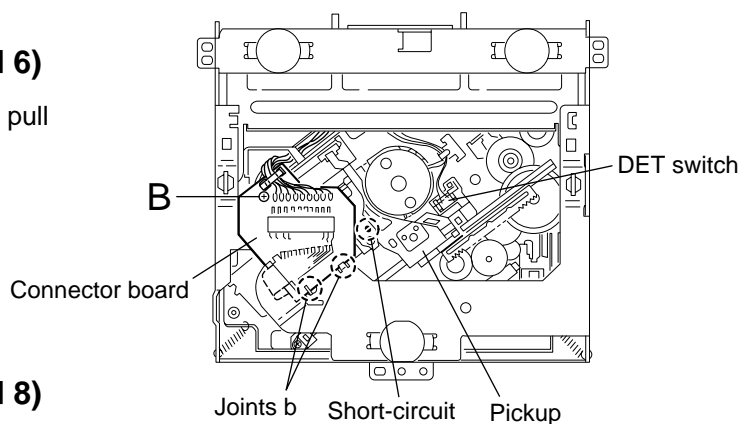


Fig.3

## ■ Removing the chassis unit

(See Fig.7 and 8)

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

**CAUTION:** When reassembling, make sure that the three shafts on the underside of the chassis unit are inserted to the dampers certainly.

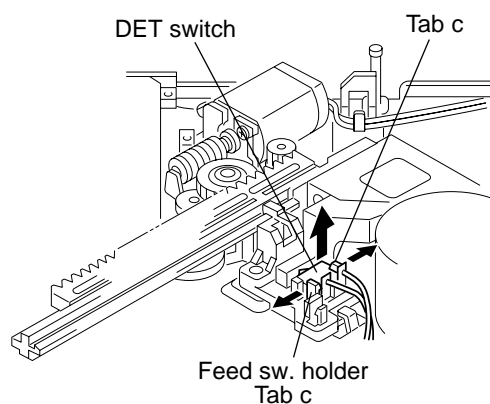


Fig.6

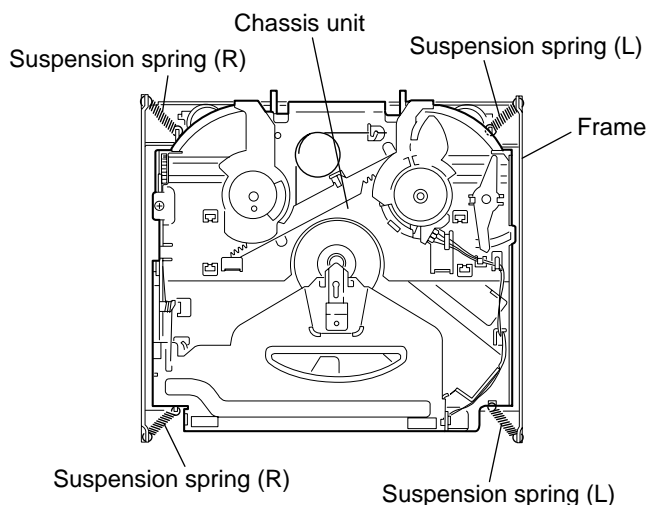


Fig.7

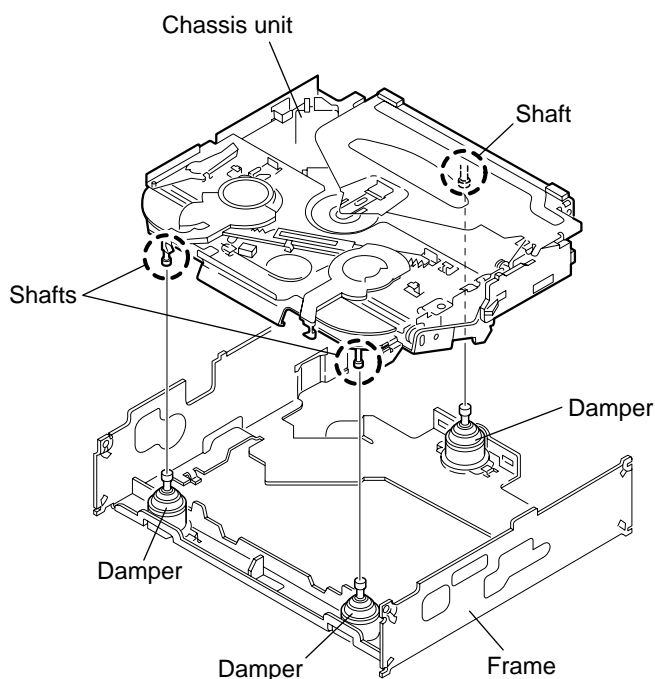


Fig.8

## ■ Removing the clamper assembly (See Fig.9 and 10)

- Prior to performing the following procedure, remove the top cover.

1. Remove the clamper arm spring.
2. Move the clamper assembly in the direction of the arrow to release the two joints **d**.

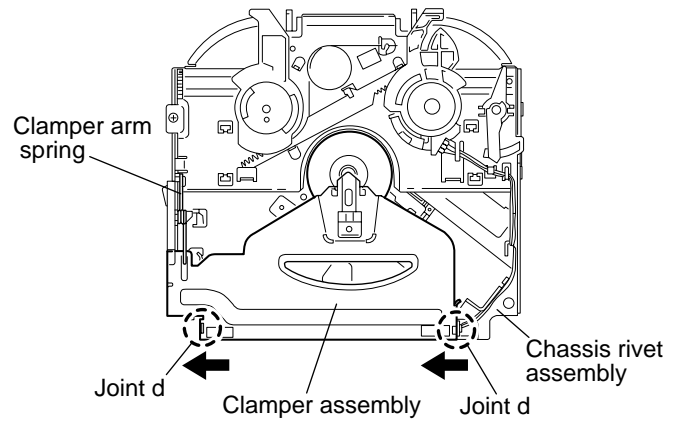


Fig.9

## ■ Removing the loading / feed motor assembly (See Fig.11 and 12)

- Prior to performing the following procedure, remove the top cover, the connector board and the 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.11.

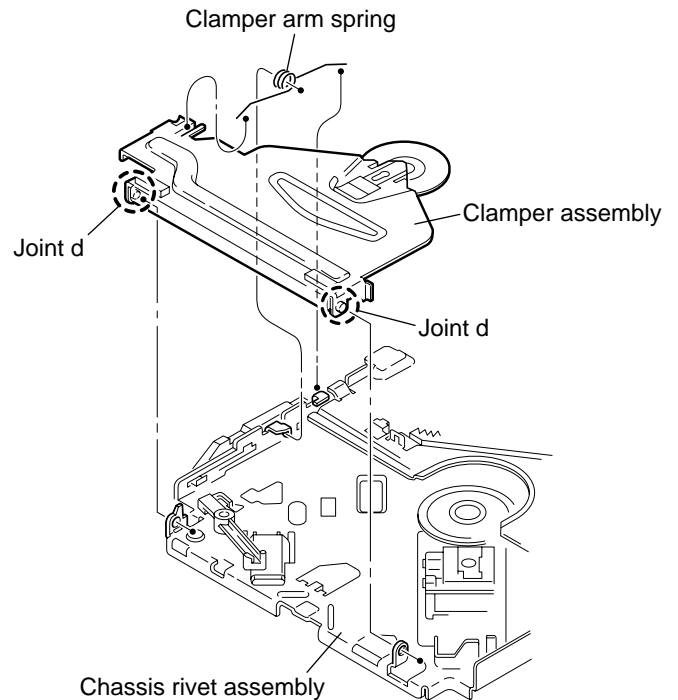


Fig.10

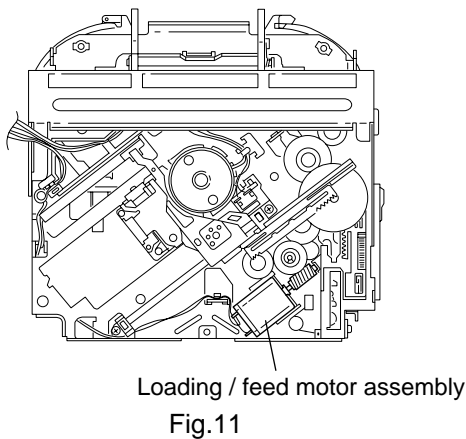


Fig.11

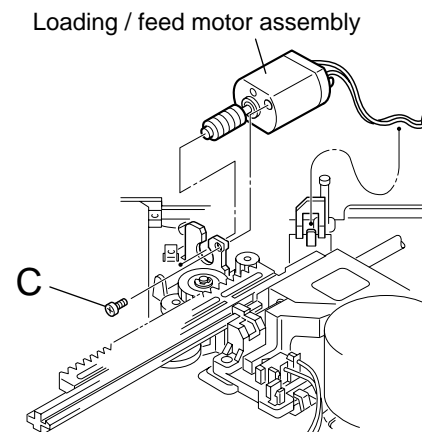


Fig.12

## ■ Removing the pickup unit

(See Fig.13 to 17)

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

1. Remove the screw **D** and pull out the pu. shaft holder from the shaft.
2. Remove the screw **E** attaching the feed sw. holder.
3. Move the part **e** of the pickup unit upward with the 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 shaft from the pickup unit.
5. Remove the screw **F** attaching the feed rack to the pickup unit.

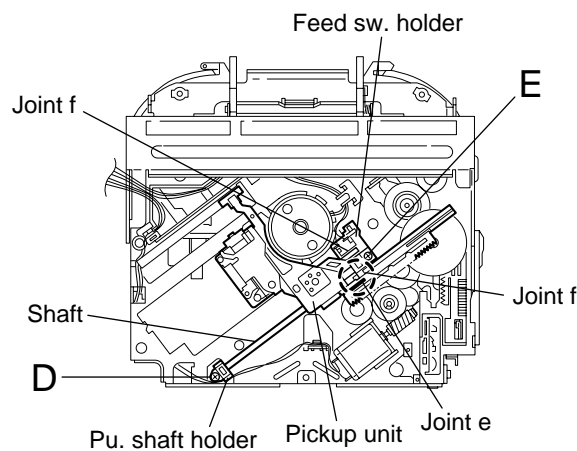


Fig.13

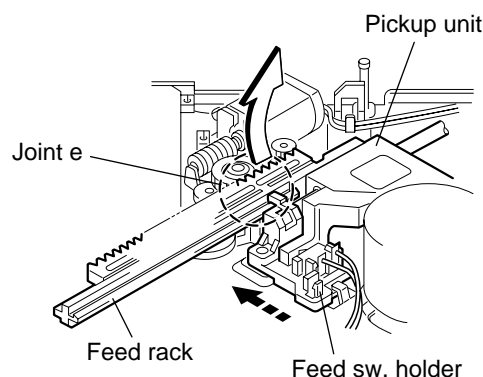


Fig.14

## ■ Reattaching the pickup unit

(See Fig.13 to 16)

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

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

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

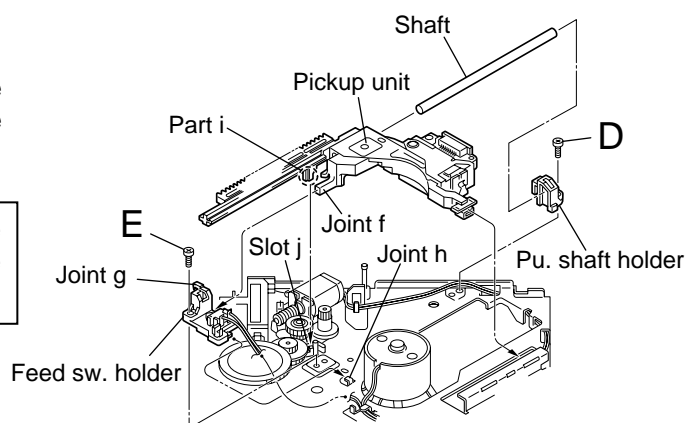


Fig.15

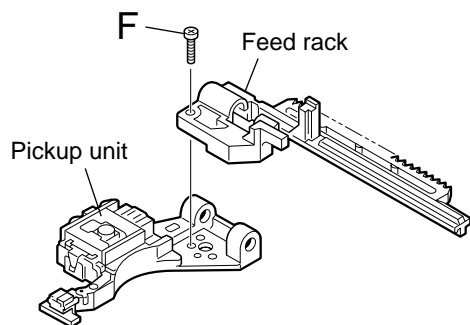


Fig.16

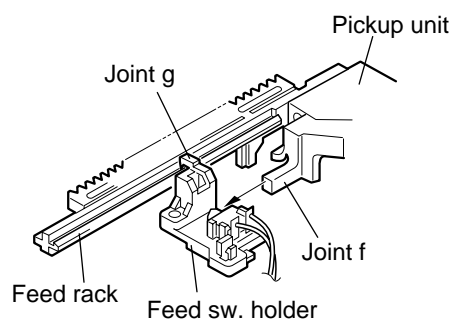


Fig.17

## ■ Removing the trigger arm

(See Fig.18 and 19)

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

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

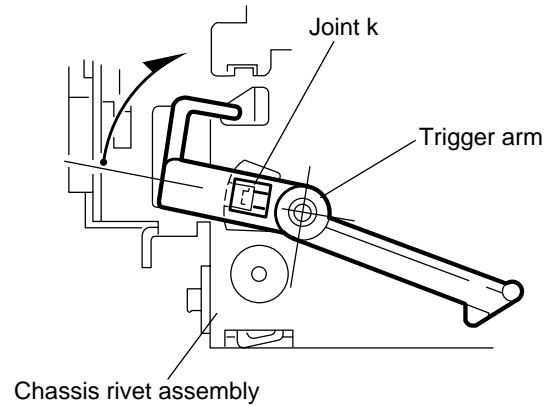


Fig.18

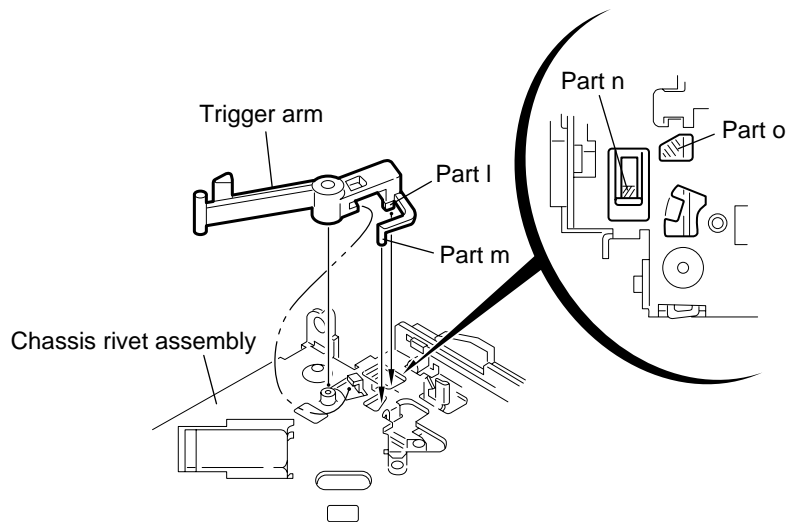


Fig.19

## ■ Removing the top plate assembly

(See Fig.20)

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

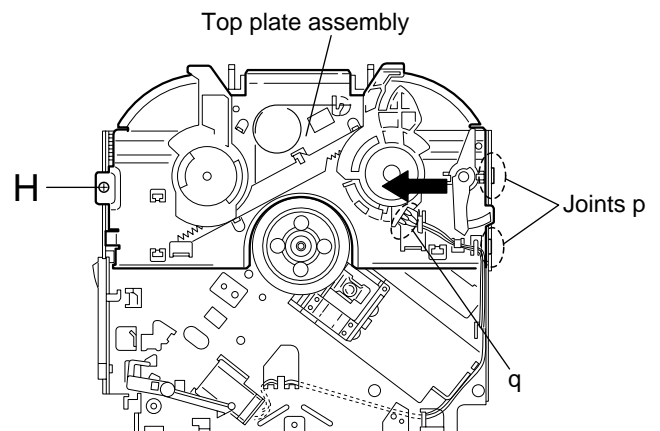


Fig.20

### ■ Removing the select arm (L) / select lock arm (See Fig.21 and 22)

- Prior to performing the following procedure, remove the top plate assembly.
1. Bring up the select arm (L) to release from the link plate (joint r) and turn in the direction of the arrow to release the joint s.
  2. Unsolder the wire of the select arm (L) marked **q** if necessary.
  3. Turn the select lock arm in the direction of the arrow to release the two joints **t**.

The select lock arm spring comes off the select lock arm at the same time.

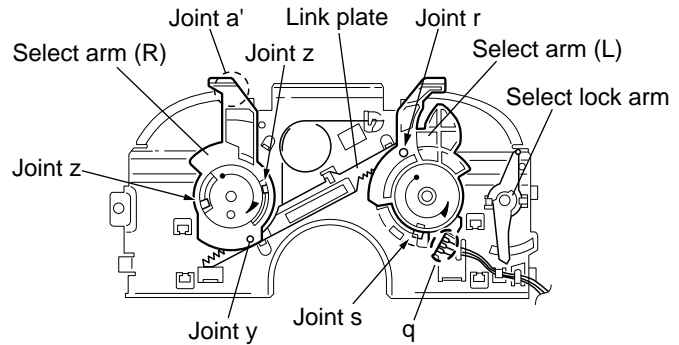


Fig.21

### ■ Reassembling the select arm (L) / select lock arm (See Fig.23 to 25)

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 **u** on the top plate.
2. Set the other longer end of the select lock arm spring to the boss **v** on the underside of the select lock arm, and join the select lock arm to the slots (joint **t**). Turn the select lock arm as shown in the figure.
3. Reattach the select arm (L) while setting the part **r** to the first peak of the link plate gear, and join the joint **s**.

CAUTION: When reattaching the select arm (L), check if the points **w** and **x** are correctly fitted and if each part operates properly.

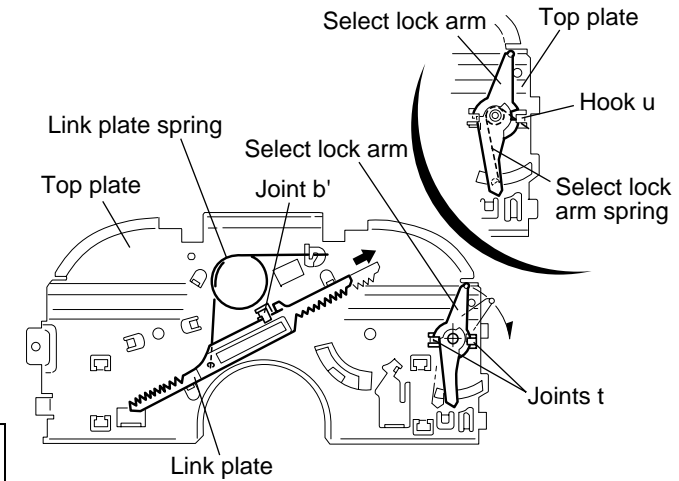


Fig.22

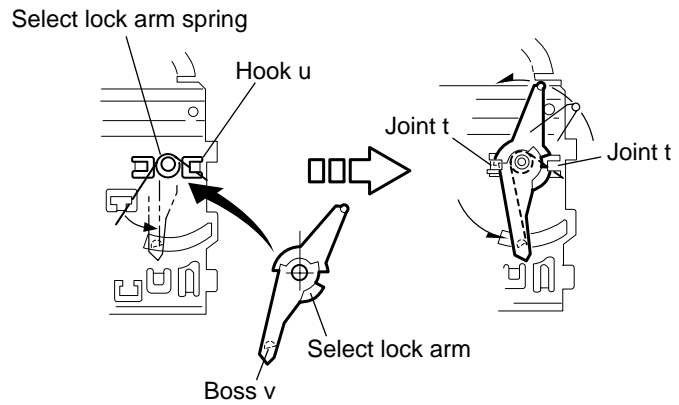


Fig.23

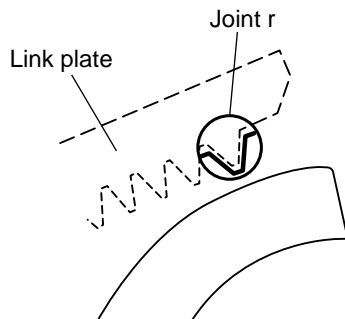


Fig.24

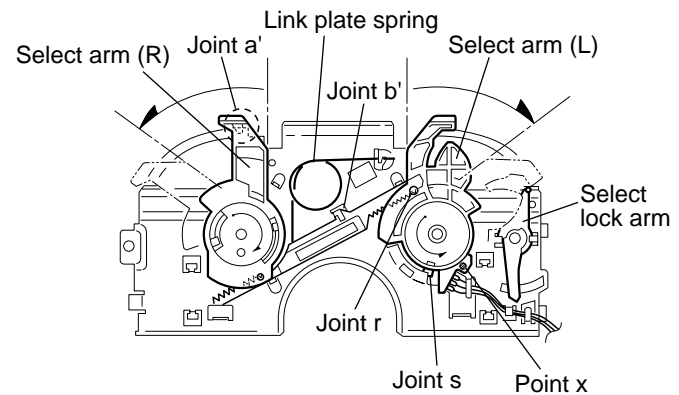


Fig.25

## ■ Removing the select arm (R) / link plate (See Fig.21 and 22)

- 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 **y**) and turn as shown in the figure to release the two joints **z** and joint **a'**.
  2. Move the link plate in the direction of the arrow to release the joint **b'**. Remove the link plate spring at the same time.

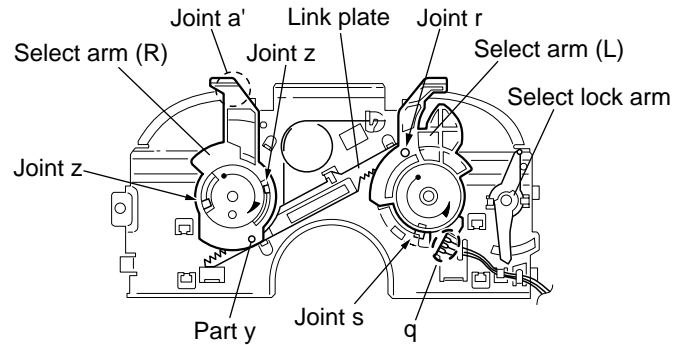


Fig.21

REFERENCE: Before removing the link plate, remove the select arm (L).

## ■ Reattaching the Select arm (R) / link plate (See Fig.25 and 26)

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 **b'**.
3. Reattach the part **y** of the select arm (R) to the first peak of the link plate while joining the two joints **z** with the slots. Then turn the select arm (R) as shown in the figure. The top plate is joined to the joint **a'**.

CAUTION: When reattaching the select arm (R), check if the part **c'** is correctly fitted and if each part operates properly.

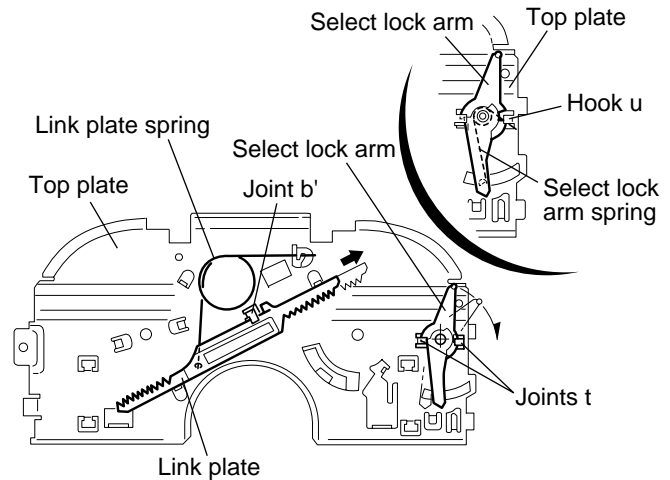


Fig.22

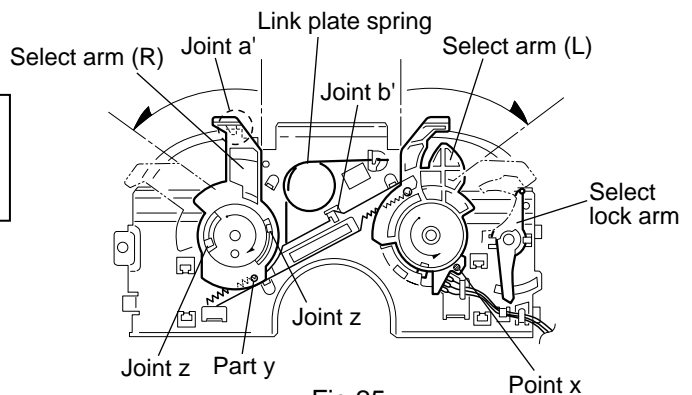


Fig.25

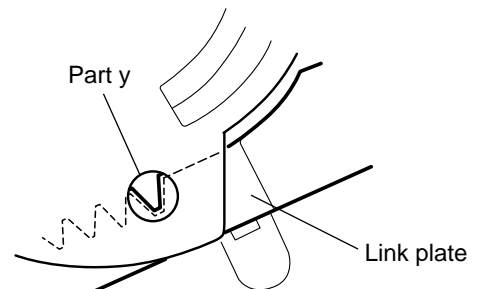


Fig.26

## ■ Removing the loading roller assembly (See Fig.27 to 29)

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

1. Push inward the loading roller assembly on the gear side and detach it upward from the slot of the joint **d'** of the lock arm rivet assembly.

Detach the loading roller assembly from the slot of the joint **e'** 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 washer from the shaft of the loading roller assembly.

2. Remove the screw **I** attaching the lock arm rivet assembly.

3. Push the shaft at the joint **f'** of the lock arm rivet assembly inward to release the lock arm rivet assembly from the slot of the slide plate. Extend the lock arm rivet assembly outward and release the joint **g'** from the boss of the chassis rivet assembly. The roller guide springs on both sides come off.

**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 **h'** of the roller guide spring (L) inside of the roller guide (Refer to Fig.30).

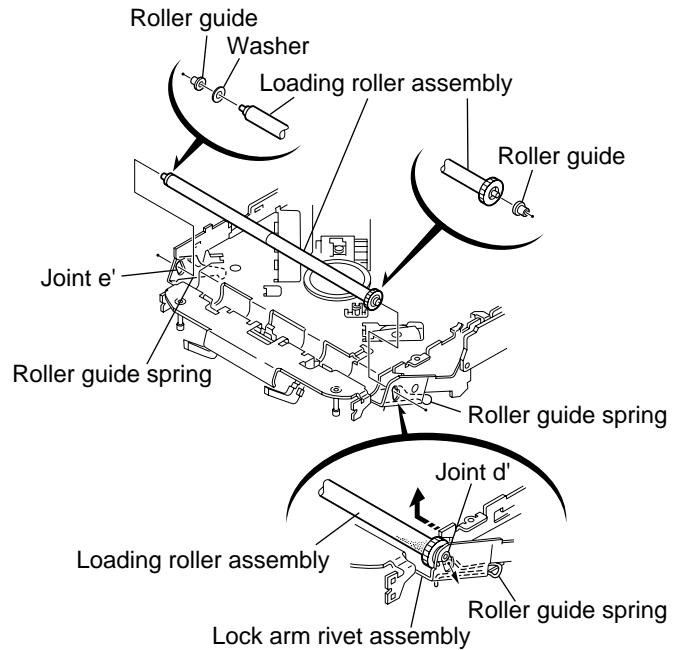


Fig.27

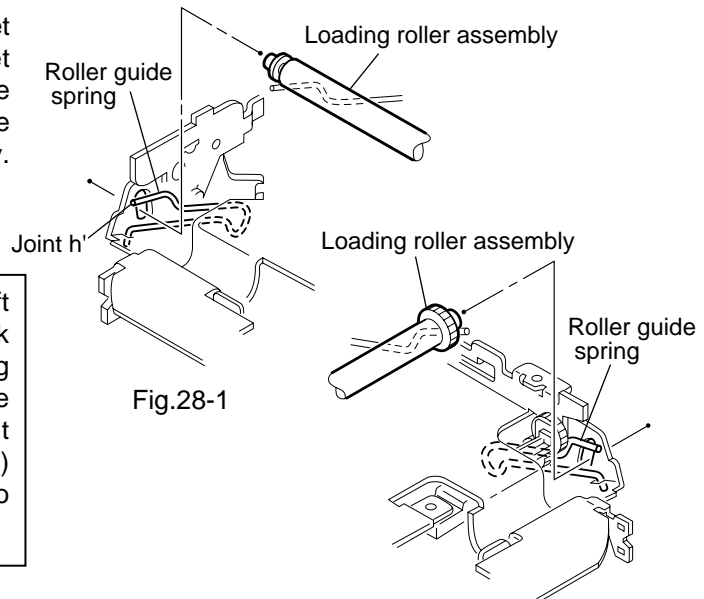


Fig.28-2

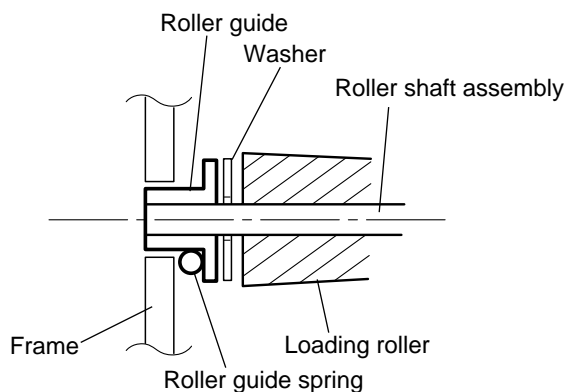


Fig.30

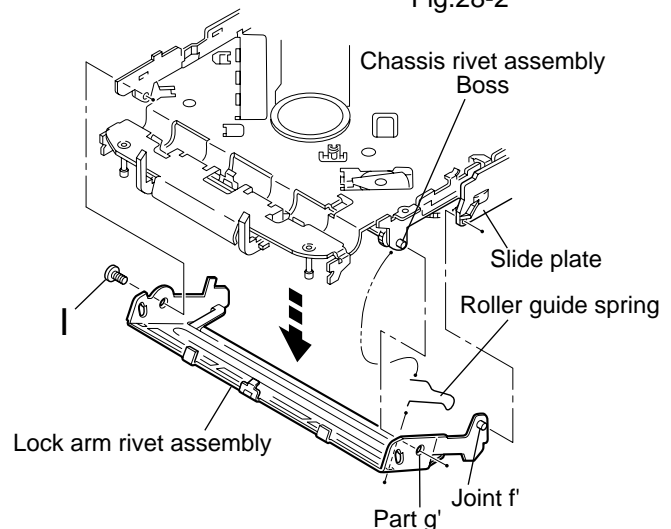


Fig.29



## ■ Removing the loading gear (5), (6) and (7) (See Fig.31 and 32)

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

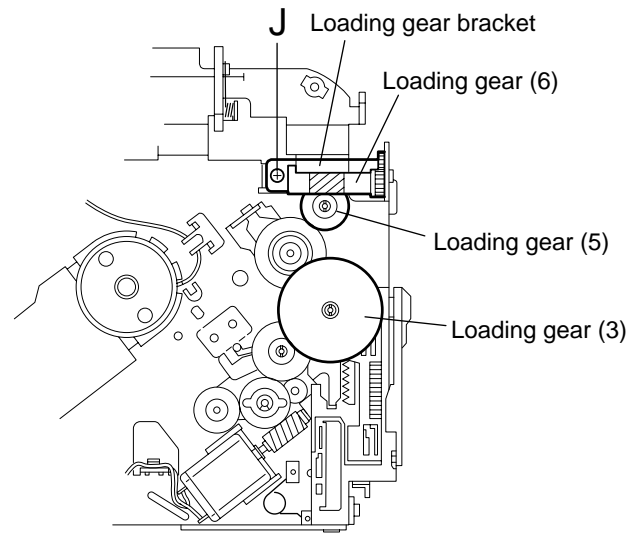


Fig.31

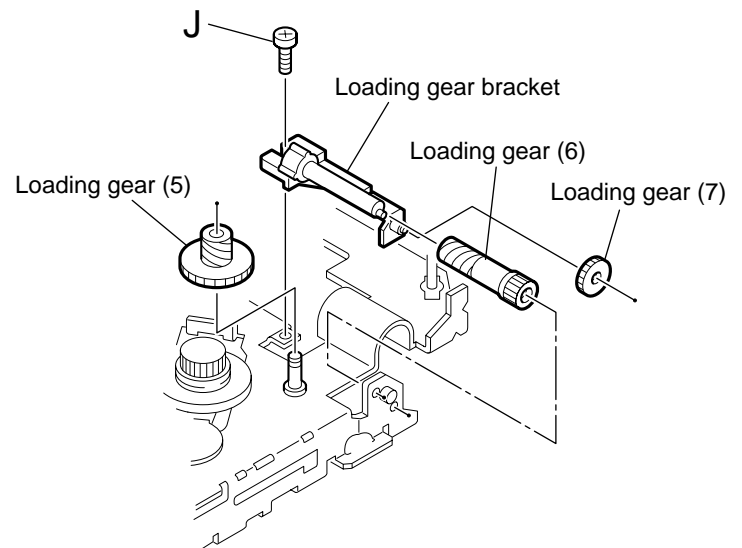


Fig.32

## ■ Removing the gears (See Fig.33 to 36)

- Prior to performing the following procedure, remove the top cover, the chassis unit, the top plate assembly and the pickup unit.

1. Pull out the feed gear.
2. Move the loading plate assembly in the direction of the arrow to release the slide plate from the two slots j' of the chassis rivet assembly.
3. Detach the loading plate assembly upward from the chassis rivet assembly while releasing the joint k'. Remove the slide hook and the 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-washer and the washer attaching the changer gear (2).
6. The changer gear (2), the changer gear spring and the adjusting washer come off.
7. Remove the loading gear (1).
8. Move the hang plate rivet assembly in the direction of the arrow to release from the three shafts of the chassis rivet assembly upward.
9. Detach the loading gear plate rivet assembly from the shaft of the chassis rivet assembly upward while releasing the joint l'.
10. Pull out the loading gear (4).

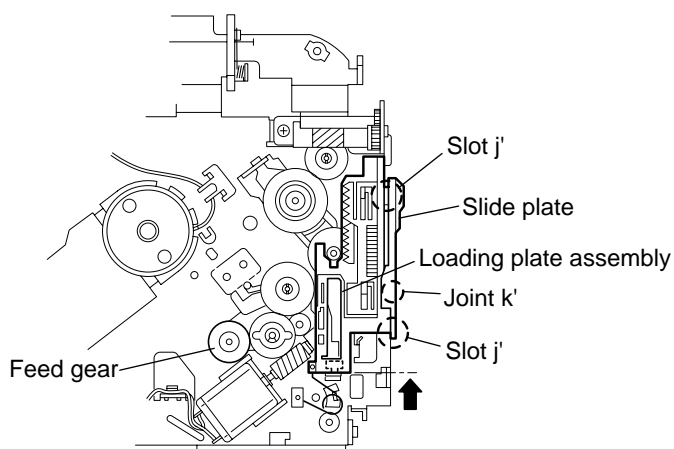


Fig.33

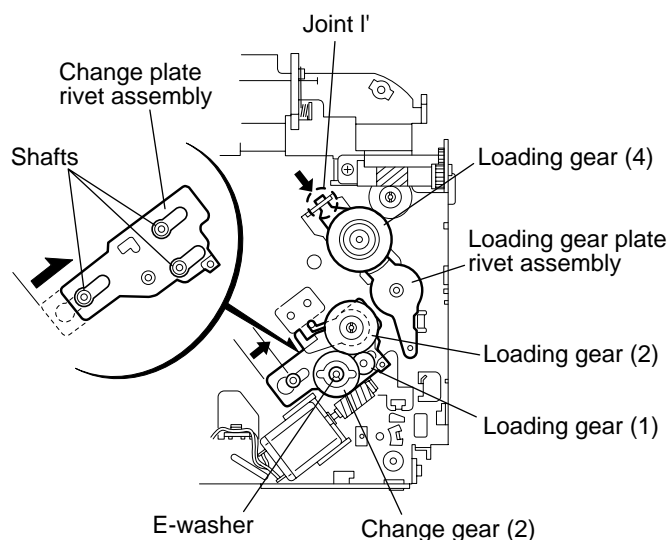


Fig.34

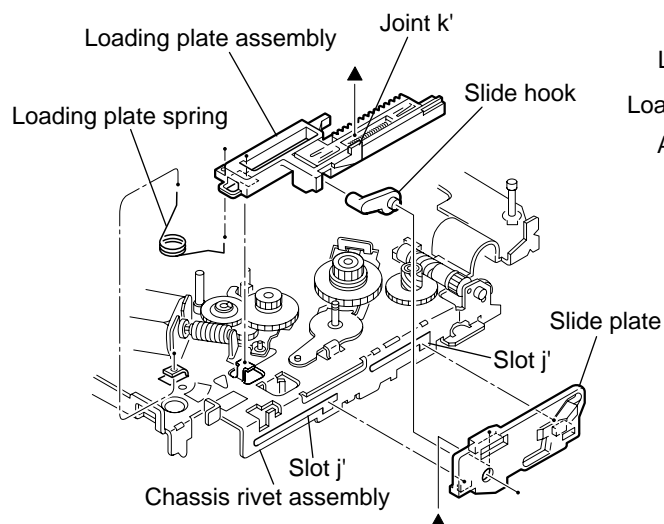


Fig.35

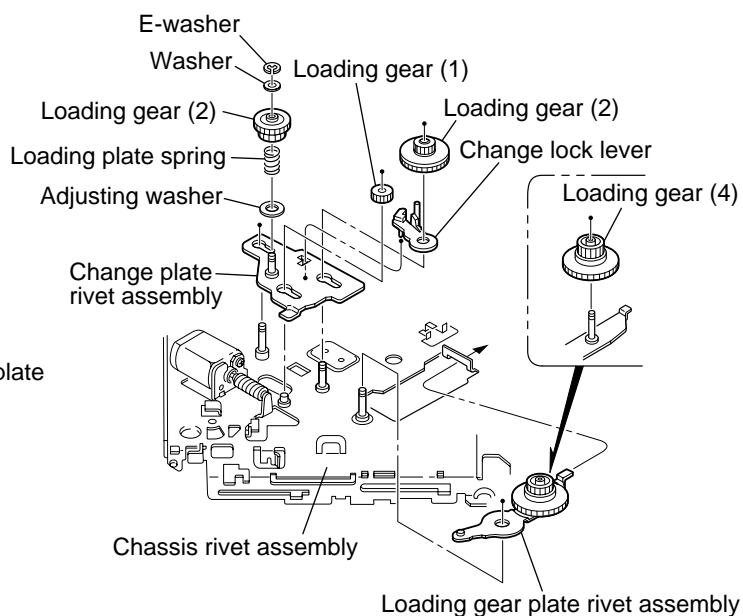


Fig.36

## ■ Removing the turn table / spindle motor (See Fig.37 and 38)

- Prior to performing the following procedure, remove the top cover, the connector assembly and the chassis / clamper assembly.
1. Remove the two screws **K** 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.

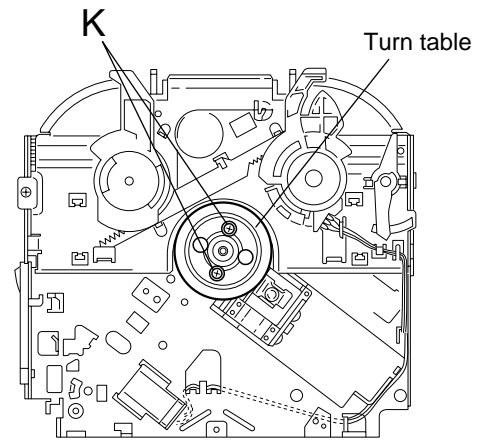


Fig.37

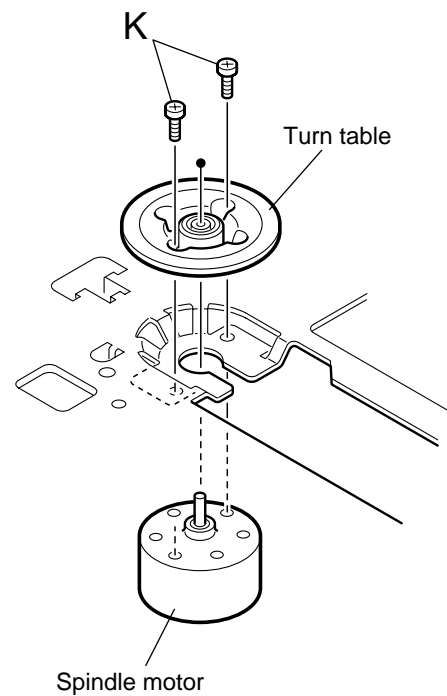


Fig.38

## Adjustment method

### ■ Test instruments required for adjustment

1. Digital oscilloscope (100MHz)
2. AM Standard signal generator
3. FM Standard signal generator
4. Stereo modulator
5. Electric voltmeter
6. Digital tester
7. Tracking offset meter
8. Test Disc JVC :CTS-1000
9. Extension cable for check  
EXTSH002-22P × 1

### ■ Standard volume position

Balance and Bass & Treble volume : Indication "0"

Loudness : OFF

BBE : OFF

### ■ Frequency Band

FM 87.5MHz ~ 108.0MHz

MW 522kHz ~ 1620 kHz

LW 144kHz ~ 279kHz

### ■ 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.

### ■ Standard measuring conditions

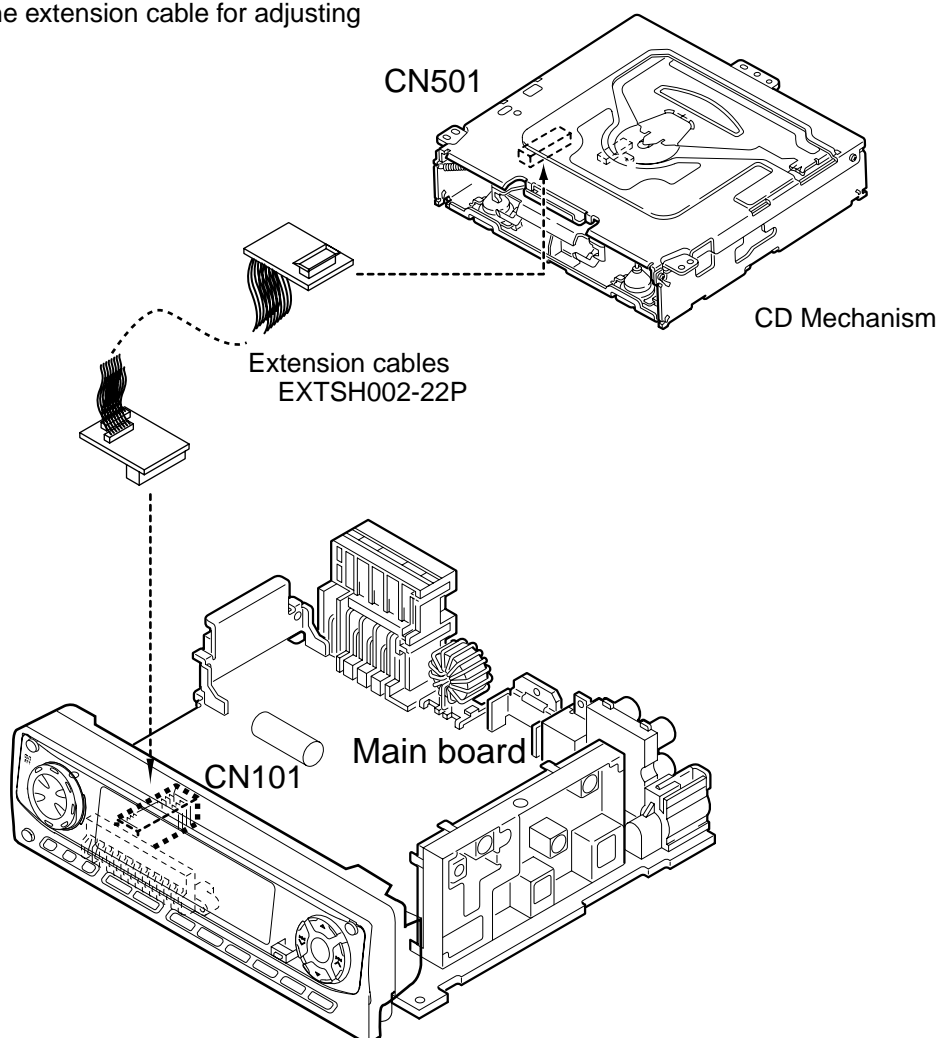
Power supply voltage : DC14.4V(11V~16V allowance)

Load impedance : 4  $\Omega$  (4 $\Omega$  to 8 $\Omega$  allowance)

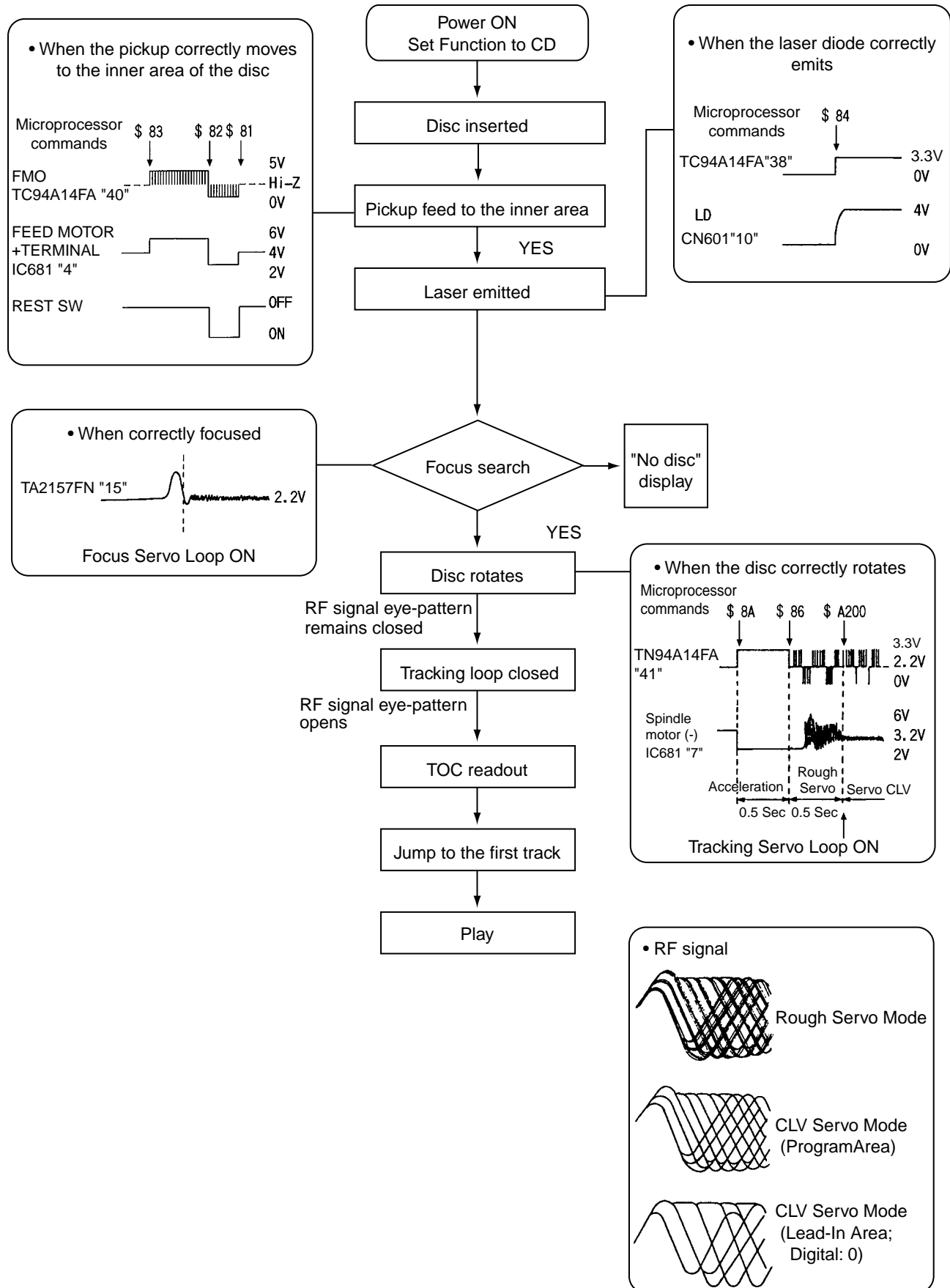
Line-out Level / Impedance:

2.0V / 20 k  $\Omega$  load

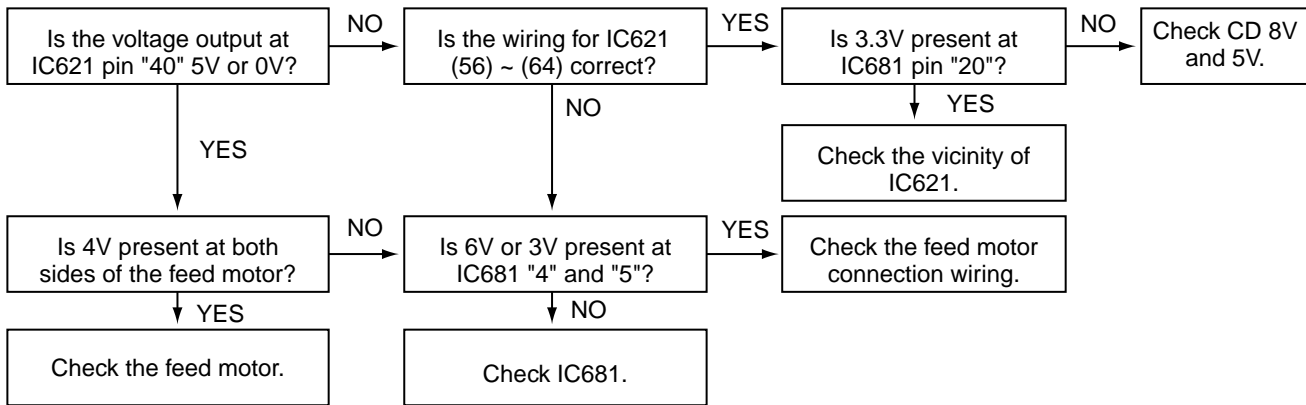
### ■ How to connect the extension cable for adjusting



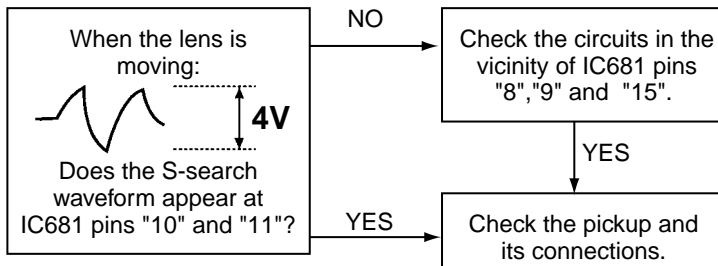
# Flow of functional operation until TOC read



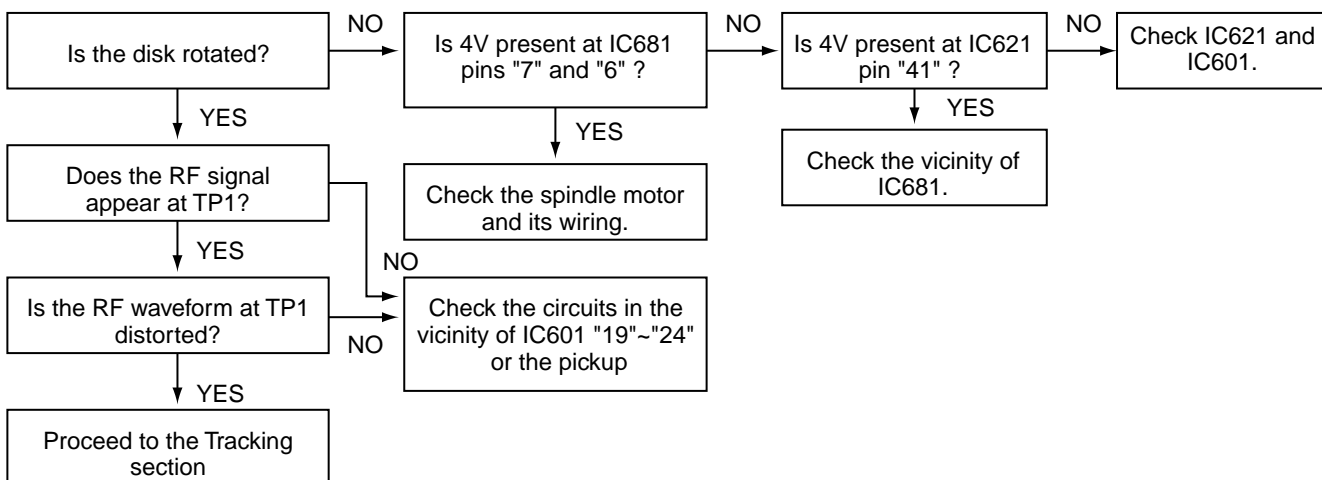
## ■ Feed Section



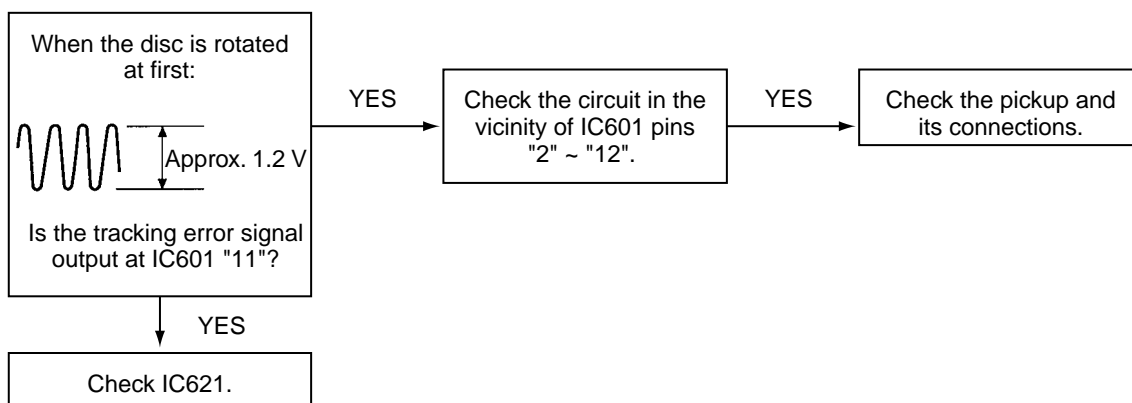
## ■ Focus Section



## ■ Spindle Section

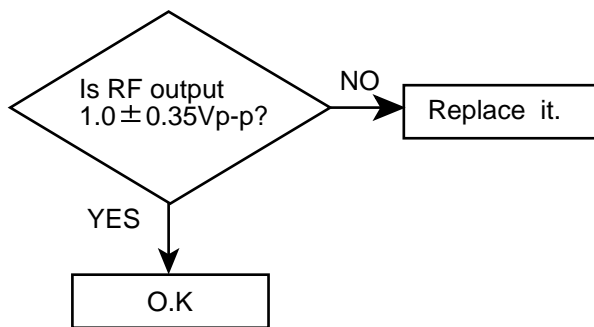


## ■ Tracking Section



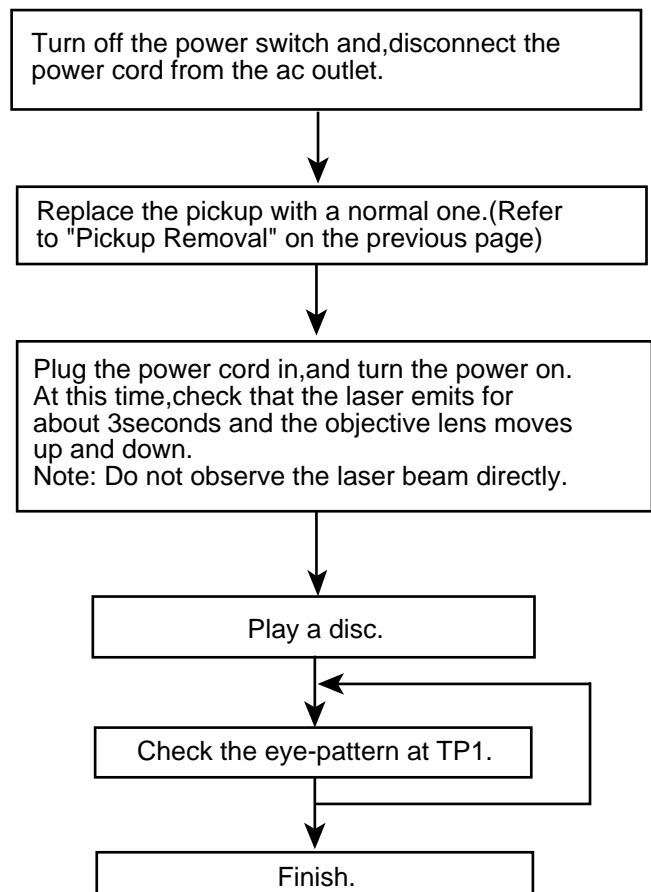
## Maintenance of laser pickup

- (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.

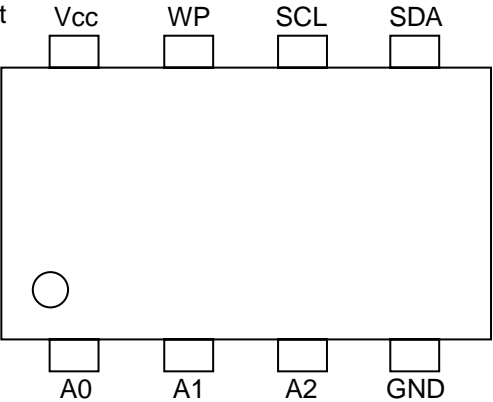
## Replacement of laser pickup



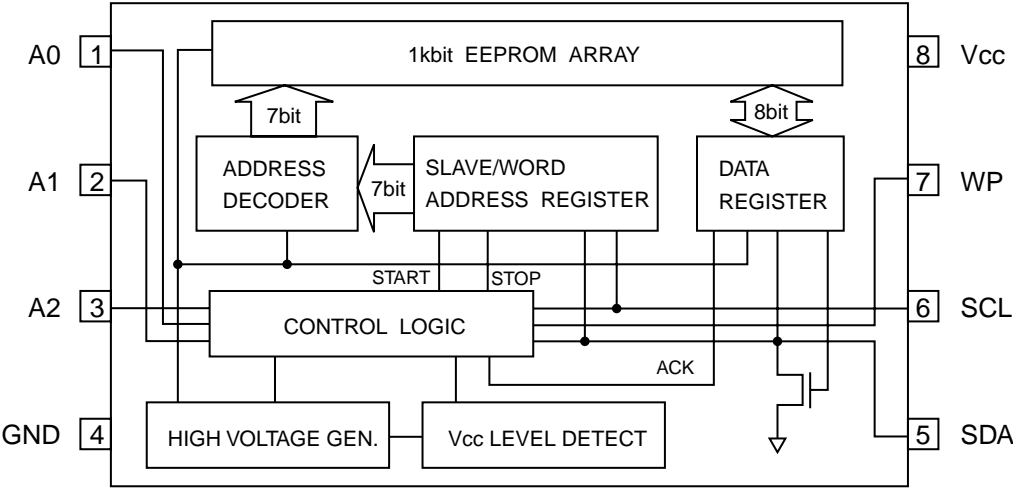
# Description of major ICs

## ■ BR24C01AFV-W-X (IC502) : EEPROM

1.Pin layout



2.Block diagram



3.Pin function

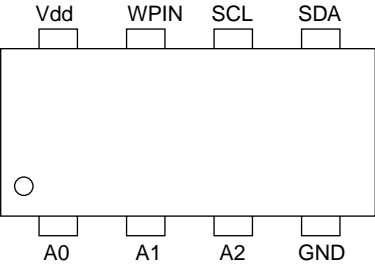
Pin name	I/O	Function
Vcc	-	Power supply
GND	-	Ground (0v)
A0,A1,A2	IN	Slave address set
SCL	IN	Serial clock input
SDA	IN / OUT	Slave and word address, serial data input, serial data output *1
WP	IN	Write protect input

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



■ BR24C32F-X (IC771) : EEPROM

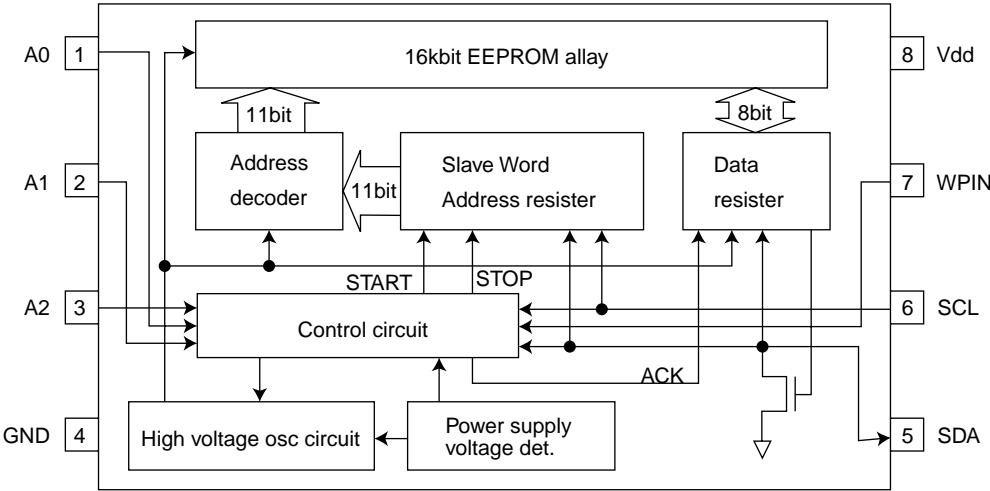
1. Pin layout



2. Pin function

Symbol	I/O	Function
Vdd	-	Power supply.
GND	-	GND
A0,A1,A2	I	No use connect to GND.
SCL	I	Serial clock input.
SDA	I/O	Serial data I/O of slave and word address.
WPIN	I	Write protect terminal.

3. Block diagram



# **■ UPD784216AGC163 (IC701): SYSTEM CPU**

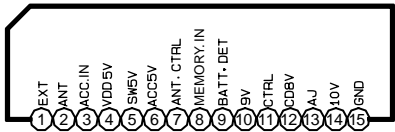
UPD784216AGC163(1/2)

Pin No.	Symbol	I/O	Function
1	SW2	I	Signal input of mechanism switch 2 detection
2	SW3	I	Signal input of mechanism switch 3 detection
3	SW4	I	Signal input of mechanism switch 4 detection
4	REST	I	Rest switch detection signal input
5	LM0	O	Loading side motor control signal output
6	LM1	O	Eject side motor control signal output
7	NC	O	Non connect
8	NC	O	Non connect
9	VDD		5V connection
10	X2		
11	X1		
12	VSS		GND connection
13	XT2		
14	XT1		
15	RESET	I	Reset detection terminal
16	SW1	I	Mechanism switch detection signal input
17	BUS-INT	I	J-BUS signal interrupt input
18	PS2	I	POWER SAVE2. BACK UP and synchronization Becomes stop mode because of the input of H.
19	CRUISE	I	Pulse signal input for cruise
20	RDS-SCK	I	RDS clock input
21	RDS DA	I	RDS data input
22	REMOCON	I	Remote control signal input
23	AVDD		5V connection
24	AVREF0		5V connection
25	VOL1	I	Rotation volume pulse signal input Pulse which actually becomes judgment of change
26	VOL2	I	Rotation volume pulse signal input
27	KEY0	I	Key input 0
28	KEY1	I	Key input 1
29	KEY2	I	Key input 2
30	LEVEL	I	Level meter input
31	SQ	I	S.QUALITY level input
32	SM	I	S.METER level input
33	AVSS		GND connection
34	NC	O	Non connect
35	NC	O	Non connect
36	AVREF		5V connection
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 switch output. At output : H, At input : L
41	LCD-DA	O	Data output to LCD driver
42	LCD-SCK	O	Clock output to LCD driver
43	LCD-CE	O	Chipenable to LCD driver
44	BUZZER	OI	Buzzer output
45	E2PROM-DI	O	Communication data input of 12C
46	E2PROM-DO	O	Communication data output of 12C
47	E2PROM-CLK	I	Communication data clock output 12C
48	OPEN	O	Opening detection input
49	NC	O	Non connect
50	NC	O	Non connect

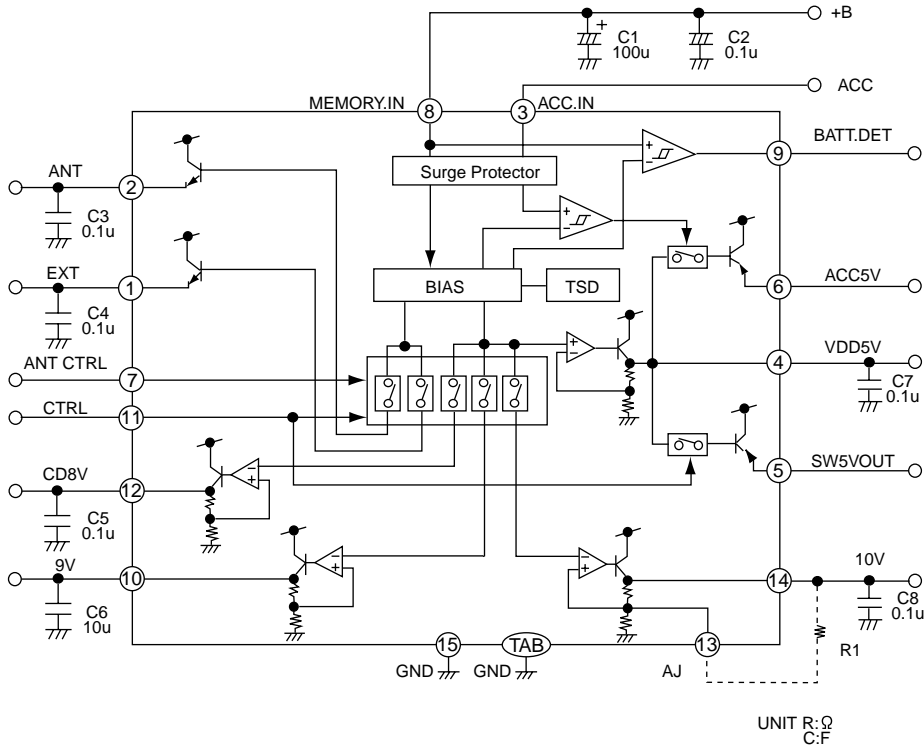
Pin No.	Symbol	I/O	Function
51	NC	O	Non connect
52	NC	O	Non connect
53	SD/ST	I	Station detector and stereo signal input. It is H and there is a bureau.It is L and a stereo.
54	NC	O	Non connect
55	MONO	O	Monaural ON/OFF switch output. At the time of the MONO ON :H.
56	NC	I	Non connect
57	NC	I	Non connect
58	NC	I	Non connect
59	NC	I	Non connect
60	NC	I	Non connect
61	DETACH	I	Detach signal input. It is L of 200ms or more and an operation mode. H:POWER SAVE
62	AFCK	O	AF check output. AF check:L
63	SEEK/STP	O	Auto seek stop switch output. At SEEK:H. At STOP:L
64	NC	O	Non connect
65	FM/AM	O	FM,AM switch output
66	PLL-CE	O	CE output for IC control for PLL
67	PLL-DO	O	Data output for IC control for PLL
68	PLL-CLK	O	Clock output for IC control PLL
69	PLL-DI	I	Data output for IC control for PLL
70	TEL-MUTE	I	Telephone mute detection input. It is L or H and MUTE(ACTIVE depends on the PSM setting)
71	NC	O	Non connect (ex:AMP-KILL output)
72	VSS		GND connection
73	DIM-IN	I	Dimmer detection input. At L:dimmer ON.
74	PS1	I	POWER SAVE 1. ACC and synchronization POWER SAVE : L. At operation:H
75	POWER	O	POWER ON/OFF switch output. At POWER ON:H
76	CD-ON	O	The CD power supply control signal output. At CD :H
77	MUTE	O	Mute output. At mute ON:L
78	NC	O	Non connect
79	NC	O	Non connect
80	NC	O	Non connect
81	VDD		5V connection
82	NC	O	Non connect
83	VOL-DA	O	Data output by which IC for electronic volume is controlled
84	VOL-CLK	O	Clock output by which IC for electronic volume is controlled
85	DIM-OUT	O	Dimmer control output. L:DIMMER ON (ex:BBE)
86	NC	O	Non connect
87	NC	O	Non connect
88	NC	O	Non connect
89	NC	O	Non connect
90	STAGE	I	H:For 991R / L:For 911R
91	BUCK	O	Clock output for data communication with CDLSI
92	CCE	O	CE output for data communication with CDLSI
93	RST	O	CDLSI reset signal output
94	TEST		connects GND with 10k $\Omega$ pull down (For flash switch)
95	BUS0	I/O	Data communication input output port 0 with CDLSI
96	BUS1	I/O	Data communication input output port 1 with CDLSI
97	BUS2	I/O	Data communication input output port 2 with CDLSI
98	BUS3	I/O	Data communication input output port 3 with CDLSI
99	DISCSEL	O	Pull-down fixation
100	J/E	I	Pull-up fixation

■ HA13164A(IC901):Regulator

1.Terminal layout



2.Block diagram

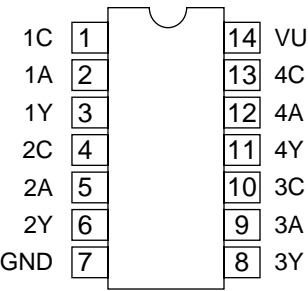


3.Pin function

Pin No.	Symbol	Function
1	EXT	Output voltage is VCC-1 V when M or H level applied to CTRL pin.
2	OUT	Output voltage is VCC-1 V when M or H level to CTRL pin and H level to ANT-CTRL.
3	ACC.IN	Connected to ACC.
4	VDD5V	Regular 5.7V.
5	SW5V	Output voltage is 5V when M or H level applied to CTRL pin.
6	ACC5V	Output for ACC detector.
7	ANT.CTRL	L:ANT output OFF , H:ANT output ON
8	MEMORY.IN	Connected to VCC.
9	BATT.DET	Low battery detect.
10	9V	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	CD8V	Output voltage is 8V when H level applied to CTRL pin.
13	AJ	Adjustment pin for ILM output voltage.
14	10V	Output voltage is 10V when M or H level applied to CTRL pin.
15	GND	Connected to GND.

■ HD74HC126FP-X (IC801) : Buffer

1.Terminal layout

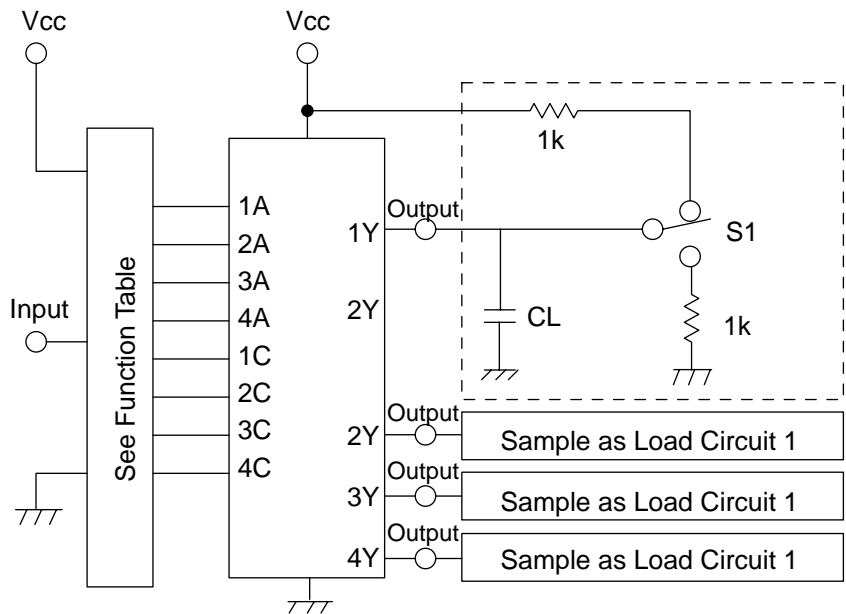


3.Pin function

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

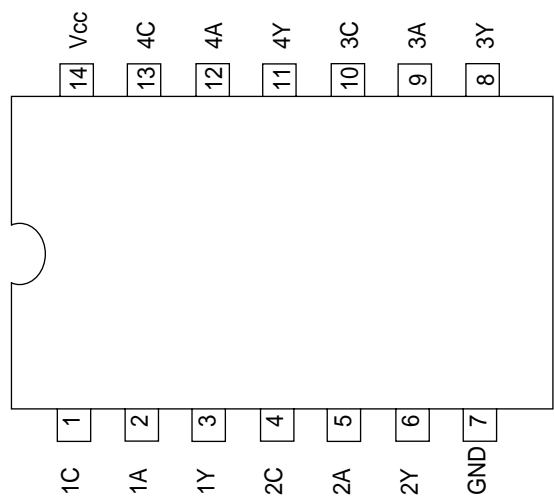
2.Block diagram



Note) CL includes probe and jig capacitance

■ HD74HCT126T-X : (IC503) Buffer

1.Terminal layout

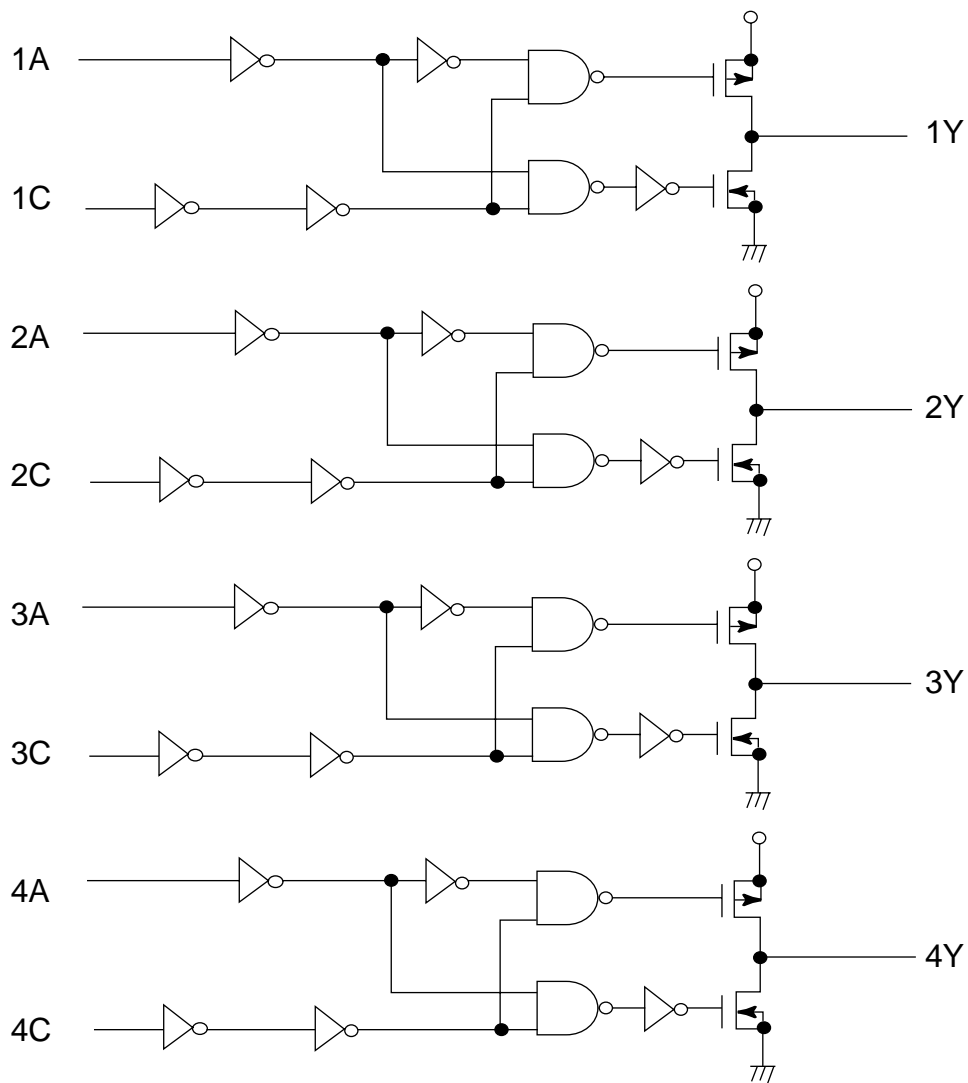


3.Pin function

INPUT		OUTPUT
C	A	Y
L	X	Z
H	L	H
H	H	L

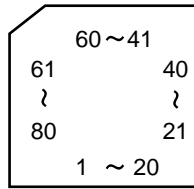
H : High level  
L : Low level  
X : Irrelevant  
Z : Off (Hhigh-impedance)state of a 3-stage output

2.Block diagram

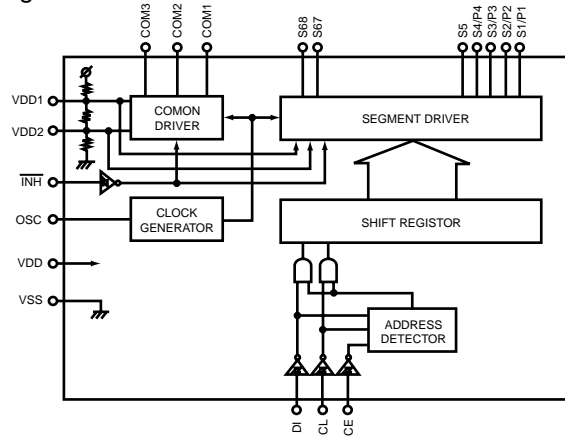


## ■ LC75873NW(IC601):LCD Driver

### 1.Pin layout



### 2.Block diagram

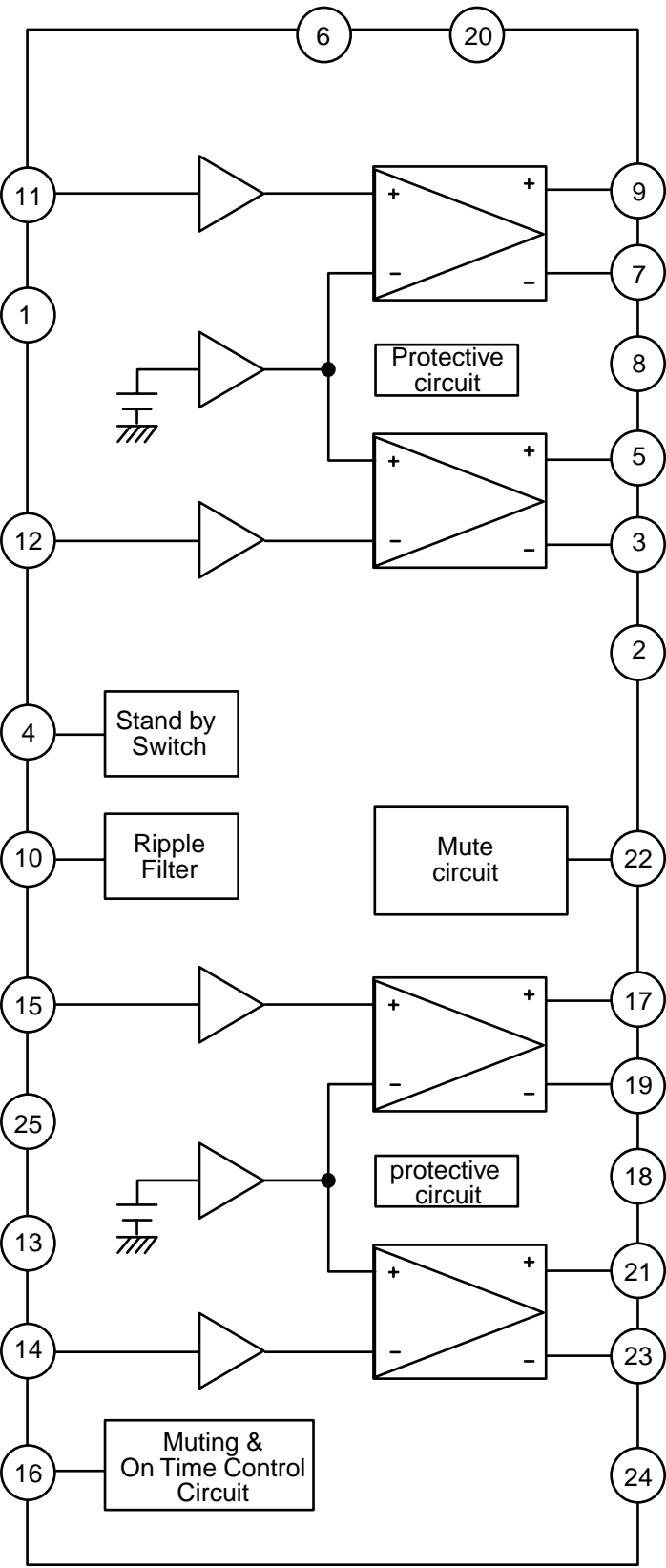


### 3.Pin function

Pin No.	Pin name	I/O	Description
79	DIMMER	O	Dimmer function control output H:Dimmer off L:Dimmer on
80 1,2,3 to 66	S1/P1 TO S4/P4 S5 to S68	O	Segment outouts for displaying the display data transferred by serial data input. The S1/P1 to S4/P4 pins can be used as general-purpose output ports under serial data control.
67 68 69	COM1 COM2 COM3	O	Common driver outputs. The frame frequency $f_0$ is given by : $f_0 = (FOSC/384)Hz$ .
74	OSC	I/O	Oscillator connection An oscillator circuit is formed by connecting an external resistor and capacitor to this pin.
76 77 78	CE CL DI	I	Serial data transfer inputs. Connected to the controller. CE:Chip enable CL:Synchronization clock DI:Transfer data
75	$\overline{INH}$	I	Display off control input • $\overline{INH} = "L"(VSS)$ ... Display forced off S1/P1 to S4/P4 = "L" (These pins are forcibly set to the segment output port function and held at the low level.) S5 to S68 = "L" COM1 to COM3 "L" • $\overline{INH} = "H"(HDD)$ ... Display on However, serial data transfer is possible when the display is forced off by this pin.
71	VDD1	I	Used for applying the LCD drive 2/3 bias voltage externally. Must be connected to VDD2 when a 1/2 bias drive scheme is used.
72	VDD2	I	Used for applying the LCD drive 1/3 bias voltage externally. Must be connected to VDD1 when a 1/2 bias drive scheme is used.
70	VDD	-	Power supply connection. Provide a voltage of between 3.0 and 6.0V.
73	VSS	-	Power supply connection. Connect to ground.

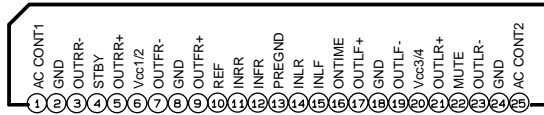
■LA47503(IC301):Power amp.

1.Terminal layout





## 2. Terminal layout



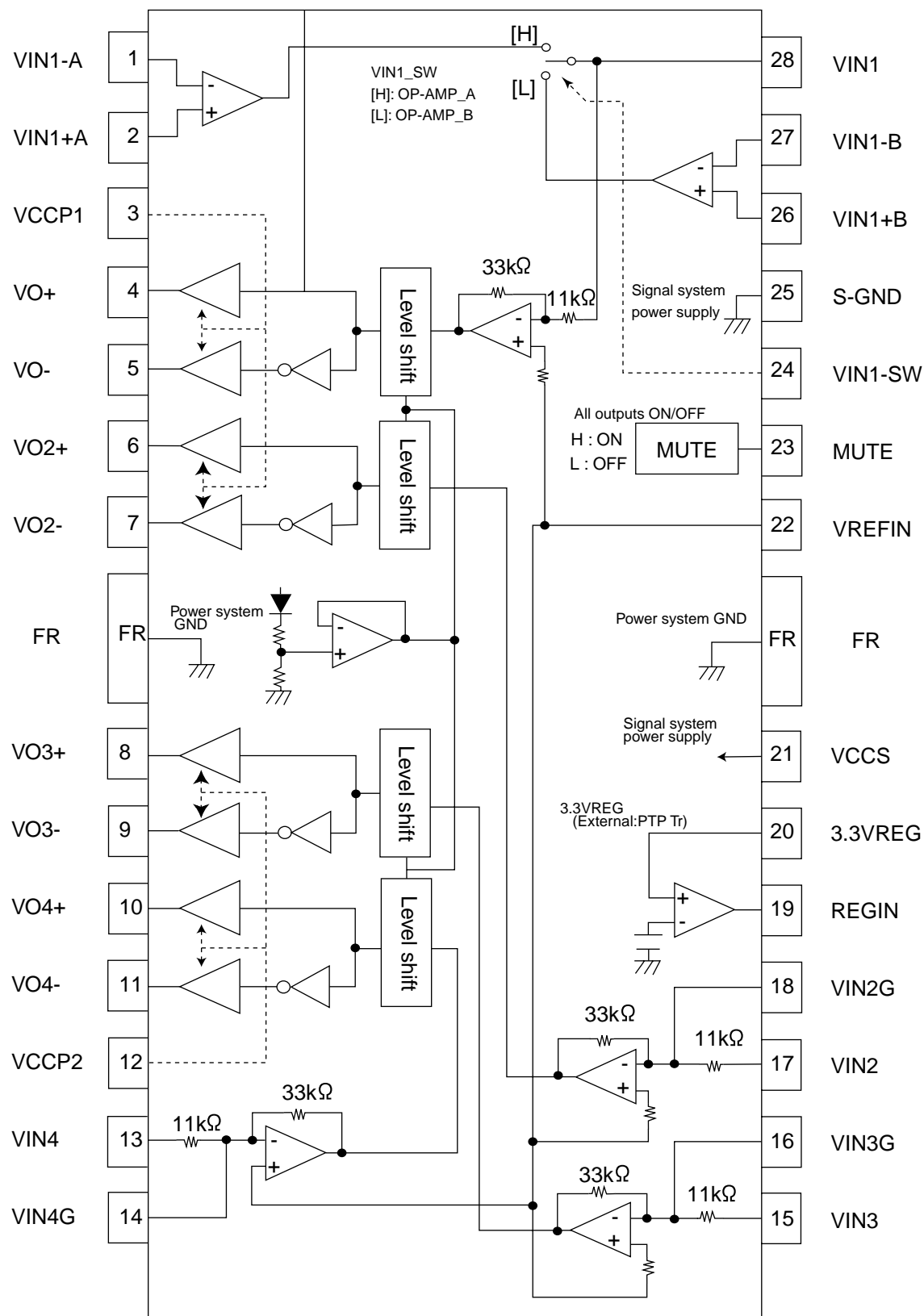
## 3. Pin function

LA47503

Pin No.	Symbol	Function
1	AC CONT1	Header of IC
2	GND	Power GND
3	OUTRR-	Output(-) for front Rch
4	STBY	Stand by input
5	OUTRR+	Output (+) for front Rch
6	Vcc1/2	Power input
7	OUTRF-	Output (-) for rear Rch
8	GND	Power GND
9	OUTRF+	Output (+) for rear Rch
10	REF	Ripple filter
11	INRF	Rear Rch input
12	INRR	Front Rch input
13	PREGND	Signal GND
14	INLR	Front Lch input
15	INLF	Rear Lch input
16	ONTIME	Power on time control
17	OUTLF+	Output (+) for rear Lch
18	GND	Power GND
19	OUTLF-	Output (-) for rear Lch
20	Vcc3/4	Power input
21	OUTLR+	Output (+) for front
22	MUTE	Muting control input
23	OUTLR-	Output (-) for front
24	GND	Power GND
25	AC CONT2	No connection

### ■ LA6579H-X (IC681) : 4-Channel bridge driver

## 1. Pin layout & Block diagram



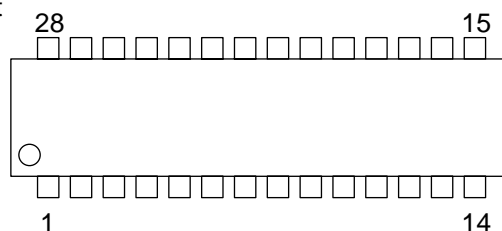
## 3.Pin function

LA6579H-X

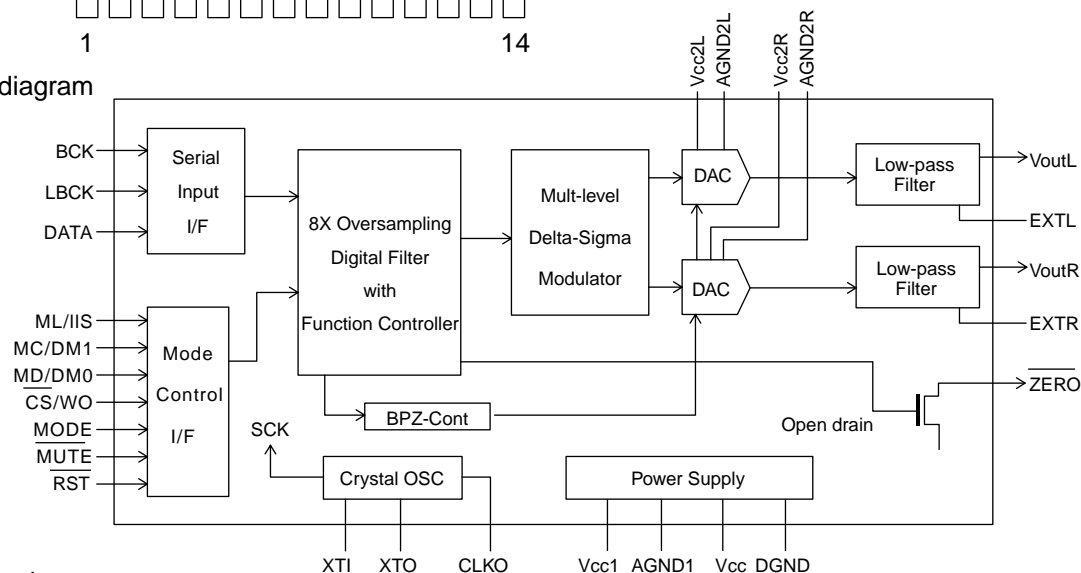
Pin No.	Symbol	Function
1	VIN1-A	CH1 input AMP_inverted input
2	VIN1+A	CH1 input AMP_non-inverted input
3	VCCP1	CH1 and CH2 power stage power supply
4	VO1+	Output pin(+)for channel 1
5	VO1-	CH1 output pin (-) for channel 1
6	VO2+	Output pin(+)for channel 2
7	VO2-	Output pin(-)for channel 2
8	VO3+	Output pin(+)for channel 3
9	VO3-	Output pin(-)for channel 3
10	VO4+	Output pin(+)for channel 4
11	VO4-	Output pin(-)for channel 4
12	VCCP2	CH3 and CH4 power stage powr supply
13	VIN4	Input pin for channel 4
14	VIN4G	Input pin for channel 4(for gain adjustment)
15	VIN3	Input pin for channel 3
16	VIN3G	Input pin for channel 3(for gain adjustment)
17	VIN2	Input pin for channel 2
18	VIN2G	Input pin for channel 2(for gain adjustment)
19	REGIN	External PNP transistor, base connection
20	3.3VREG	3.3VREG output pin, external PNP transistor,collector connection
21	VCCS	Signal system GND
22	VREFIN	Reference voltage application pin
23	MUTE	Output ON/OFF pin
24	VIN1_SW	CH1 input OP AMP_changeover pin
25	S_GND	Signal system GND
26	VIN1+B	CH1 AMP_B non-inverted input pin
27	VIN1-B	CH1 AMP_B inverted input pin
28	VIN1	CH1 input pin, input OP_AMP output pin

## ■ PCM1716E-X (IC571) : D/A converter

### 1. Pin layout



### 2. Block diagram

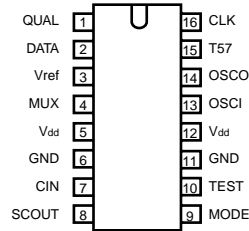


### 3. Pin function

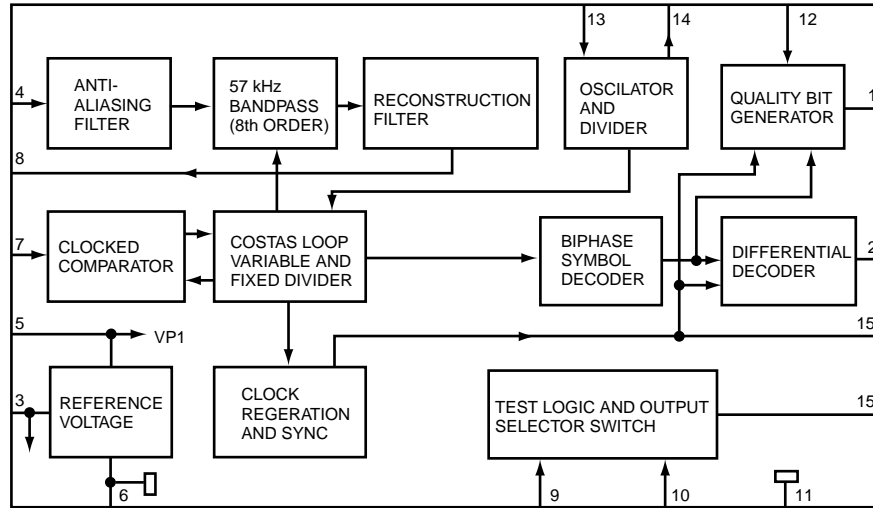
Pin No.	Symbol	I/O	Function
1	LRCK	I	LRCK clock input
2	DATA	I	Serial audio data input
3	BCK	I	Bit clock input for serial audio data
4	CLKO	O	Buffered output of system clock
5	XTI	I	Oscillator input / External clock input
6	XTO	O	Oscillator output
7	DGND	-	Digital ground
8	VDD	-	Digital power +5V
9	VDD2R	-	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
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

## ■ SAA6579T-X(IC71):RDS detector

### 1.Pin layout



### 2.Block diagram

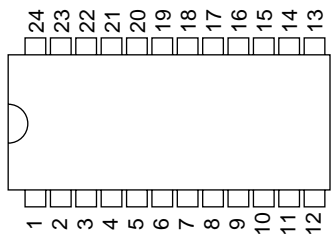


### 3.Pin function

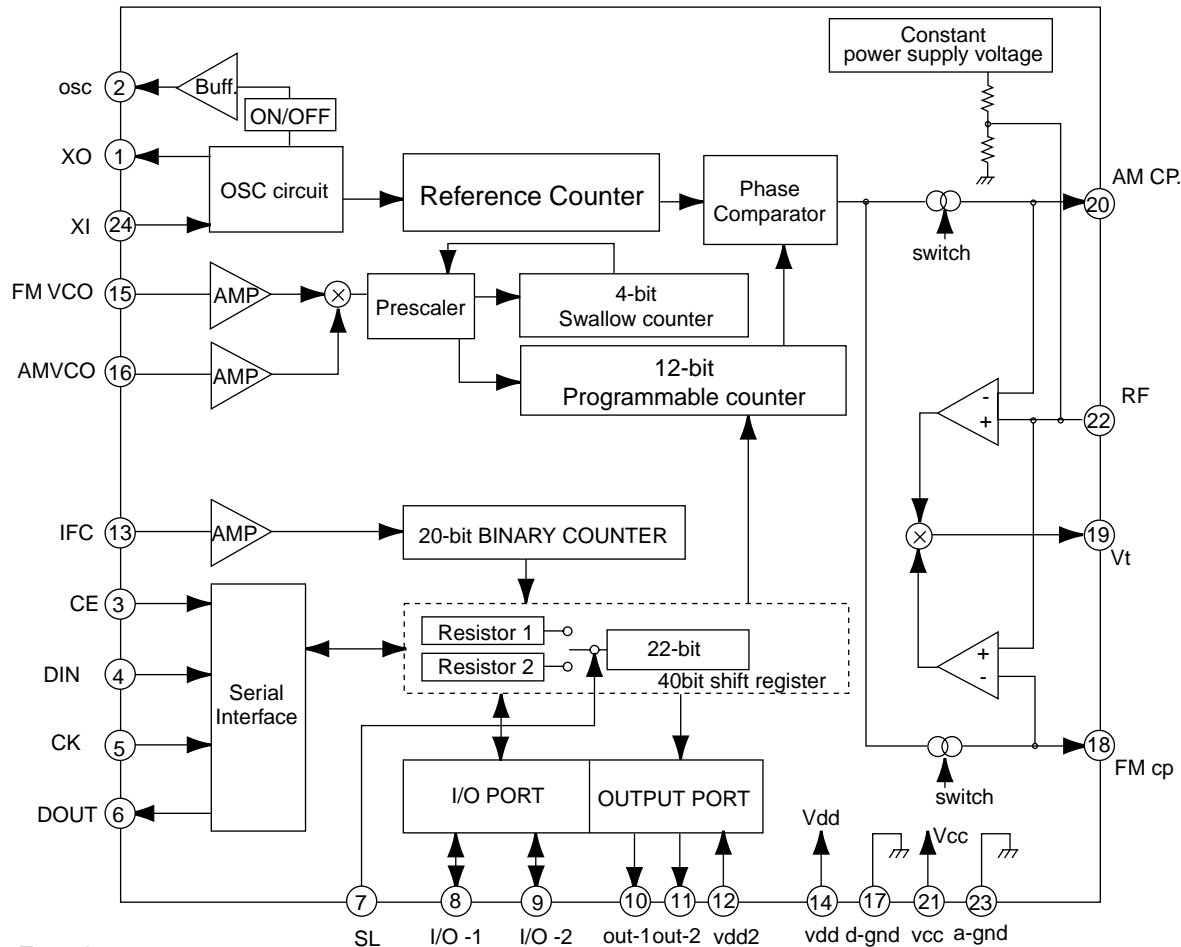
Pin No.	Symbol	Description
1	QUAL	Quality indication output
2	DATA	RDS data output
3	Vref	Reference voltage output (0.5VDDA)
4	MUX	Multiolex signal input
5	Vdd	+5V supply voltage for analog part
6	GND	Ground for analog part (0V)
7	CIN	Subcarrier input to comparator
8	SCOUT	Subcarrier output of reconstruction 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

■TB2118F-X (IC31) : PLL

1.Terminal Layout



2.Block diagram

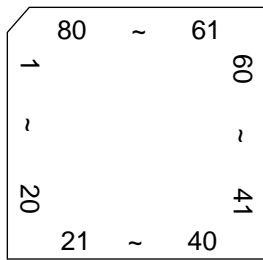


3.Pin Function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XOUT	O	Crystal oscillator pin	13	IFC	I	IF signal input
2	OSC	-	Non connect	14	VDD	-	Power pins for digital block
3	CE	I	Chip enable input	15	FMIN	I	FM band local signal input
4	DI	I	Serial data input	16	AMIN	I	AM band local signal input
5	CK	I	Clock input	17	DGND	-	Connect to GND (for digital circuit)
6	DOUT	O	Serial data output	18	FMCP	O	Charge pump output for FM
7	SR	O	Register control pin	19	Vt	-	Tuning voltage biased to 2.5V.
8	I/O1	I/O	I/O ports	20	AMCP	O	Charge pump output for AM
9	I/O2	I/O	I/O ports	21	VCC	-	Power pins for analog block
10	OUT1	-	Non connect	22	RF	I	Ripple filter connecting pin
11	OUT2	-	Non connect	23	AGND	-	Connect to GND (for analog circuit)
12	VDD2	-	Single power supply for REF. frequency block	24	XIN	I	Crystal oscillator pin

## ■ UPD784225GK-623 (IC501) : CPU

### 1.Pin layout



### 2.Pin function

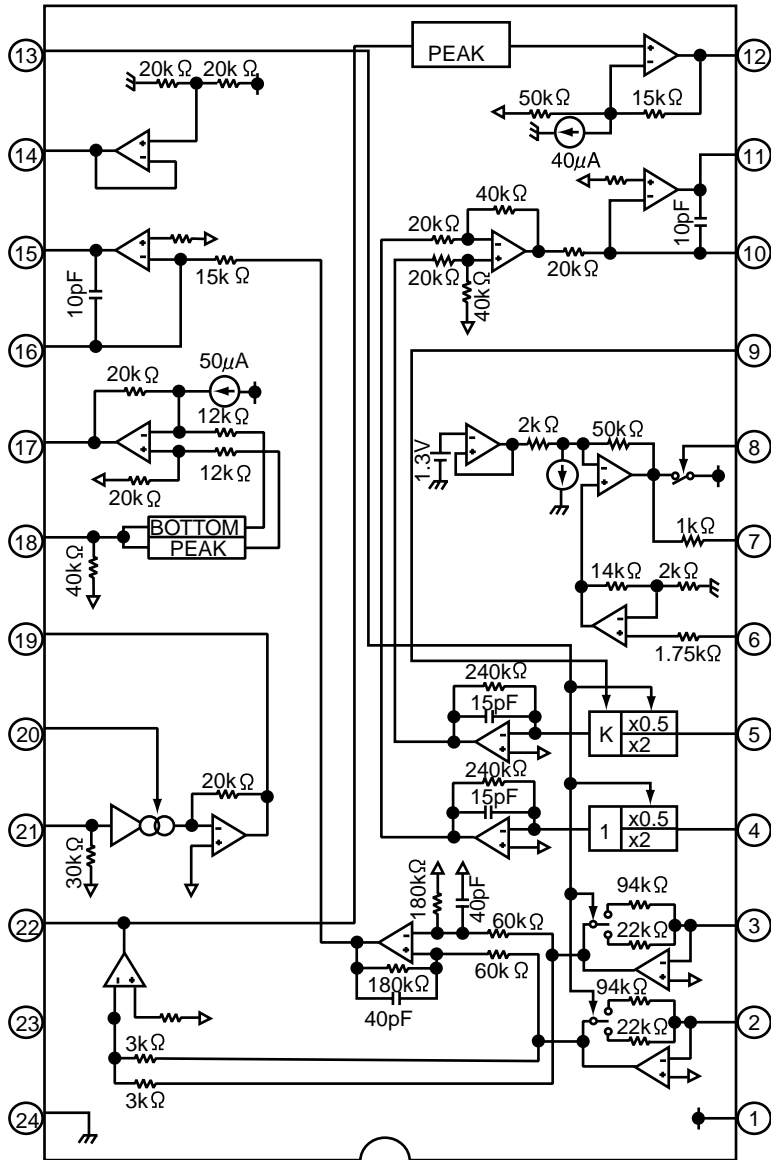
Pin no.	Symbol	I/O	Function	Pin no.	Symbol	I/O	Function
1	TEMP	I	Connect to TEMP detector	41	NC	-	Non use
2	GND	-	Connect to GND	42	NC	-	Non use
3	GND	-	Connect to GND	43	NC	-	Non use
4	AVSS	-	Connect to GND	44	DACML	O	DAC mode control latch
5	ADCONT	-	No use	45	DACMC	O	DAC mode control clock
6	NC	-	No use	46	DACMD	O	DAC mode control data
7	AVREF1	-	Analog reference voltage	47	DACCS	I	DA convertor chip select
8	EPROMDI	I	Data input terminal from EEPROM	48	NC	-	No use
9	EPROMDO	O	Data output terminal from EEPROM	49	NC	-	No use
10	EPROMCK	I/O	Clock signal I/O terminal with EEPROM	50	NC	-	No use
11	LCDCE/SO	-	No use	51	NC	-	No use
12	LCDDA/SI	-	No use	52	DISCSEL	O	Initial setting
13	LCDCK	-	No use	53	DACSEL	O	DA convertor select
14	/BUSIO	I/O	J-BUS data I/O terminal	54	NC	-	No use
15	BUSIO	I/O	J-BUS data I/O terminal	55	TEST MODE	-	Connect to GND
16	BUSSI	I	J-BUS data input	56	MP3SEL	O	MP3/CD-DA switch SW L:CD H:MP3
17	BUSO	O	J-BUS data output	57	8VDET	I	8V detection
18	BUSCK	I/O	J-BUS clock I/O	58	REST	I	Systemreset signal input
19	BUSOUT	-	No use	59	SW2	I	Detection switch of CD mechanism
20	CDON	O	The CD power supply control signal output. At CD:H	60	RESET		Reset detection terminal
21	CDREQ	I	CD request	61	SW1	I	Detection switch of CD mechanism
22	CDMUTE	O	CD Mute	62	B.DET	I	Panel switch detection
23	NC	-	No use	63	P.DET	I	Power switch detection
24	DSPRESET	O	DSP reset	64	BUSINT	I	J-BUS signal interrupt input
25	CCE	O	CE output for data communication with CDLSI	65	MP3REQ	O	MP3 request
26	BUCK	O	Clock output for data communication with CDLSI	66	NC	-	No use
27	BUS3	I/O	Data communication input output port 3 with CDLSI	67	VSS0	-	Connect to ground
28	BUS2	I/O	Data communication input output port 2 with CDLSI	68	VDD1	-	Reference voltage terminal
29	BUS1	I/O	Data communication input output port 1 with CDLSI	69	X2	-	No use
30	BUS0	I/O	Data communication input output port 0 with CDLSI	70	X1	I	Connect to X'tal osc.
31	2XPLAY	-	No use	71	VPP	I	Test terminal
32	RWSEL	I	CD RW select	72	XT2	-	Non use
33	VSS1	-	Connect to GND	73	XT1	-	Connect to ground
34	LOAD	O	Loading signal	74	VDD0	-	Connect to ground
35	LD/FE	O	LD/FE switching signal	75	AVDD	-	Reference voltage terminal
36	MP3DI	I	MP3 data input	76	IOP	I/O	Laser signal input output
37	MP3DO	O	MP3 data output	77	KEY0	I	Key control signal input 0
38	MP3CK	O	MP3 data clock	78	KEY1	I	Key control signal input 0
39	MP3RESET	O	MP3 data reset	79	KEY2	I	Key control signal input 0
40	MPSSTB	I	MP3 data standby	80	KEY3	I	Key control signal input 0

■ TA2157FN-X(IC601):RF amp

## 1. Terminal layout



## 2. Block diagram



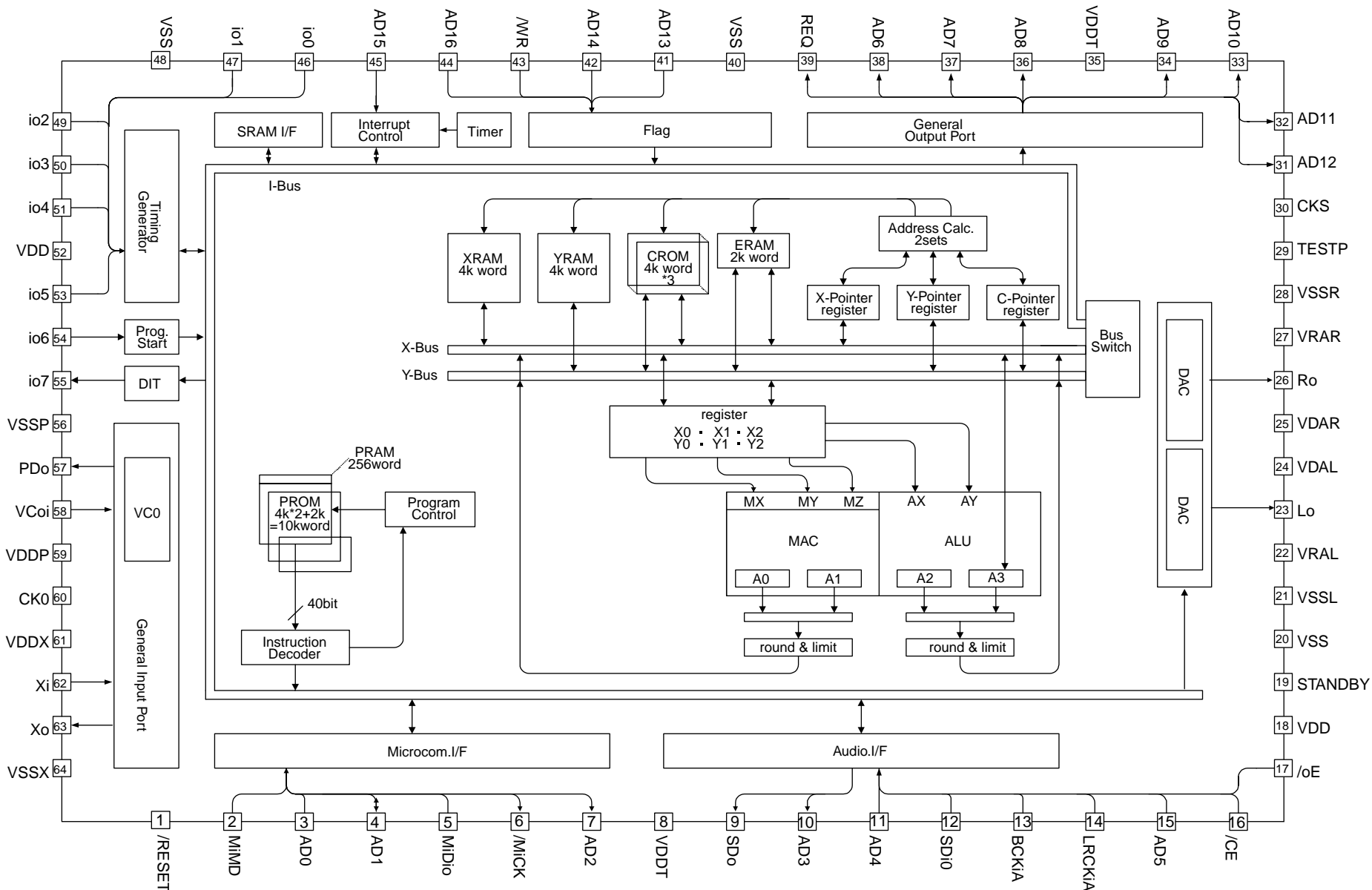
PIN VCTRLPIN	SEL (APC SW)	TEB (TE BAL)	RFGC (AGC Gian)	TEB (TE BAL)
VCC	APC ON	-50%	+12dB	Normal mode (0dB)
HiZ	APC ON	0%	+6dB	Normal mode (0dB)
GND	APC OFF (LDO=H)	+50%	0dB	CD-RW mode (+12dB)



## 3.Pin function

TA2175FN-X

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><tr><td>SEL</td><td>APC circuit</td><td>LCD</td></tr><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></table>	SEL	APC circuit	LCD	GND	OFF	Connected VCC through 1kΩ resistor	Hiz	ON	Control signal output	VCC	ON	Control signal output
SEL	APC circuit	LCD													
GND	OFF	Connected VCC through 1kΩ resistor													
Hiz	ON	Control signal output													
VCC	ON	Control signal output													
9	TEBC	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><tr><td>GVSW</td><td>Mode</td></tr><tr><td>GND</td><td>CD-RW</td></tr><tr><td>Hiz</td><td>Normal</td></tr><tr><td>VCC</td><td></td></tr></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	RFRPIN	I	Signal generation amp input pin for track count												
19	RFGO	O	RF signal amplitude adjustment amp output pin												
20	RFGC	I	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												
21	AGCIN	I	RF signal amplitude adjustment amp input pin												
22	RFO	O	RF signal generation amp output pin												
23	RFN	I	RF signal generation amp input pin												
24	GND	-	GND pin												



## 3.Pin function(1/2)

TC94A02F-005

Pin No.	Symbol	I/O	Function
1	/RESET	I	Hard reset input terminal(H:Normal operation L: Reset)
2	MiMD	I	Micon I/F mode select input terminal
3	AD0	O	External SRAM address output 0 terminal
4	AD1	O	External SRAM address output 1 terminal
5	MiDio	I/O	Micon I/F data input/output terminal
6	/MiCK	I	Micon I/F clock input terminal
7	AD2	O	External SRAM address output 2 terminal
8	VDDT	-	Digital power supply (3.3V)
9	SDo	O	Data output terminal
10	AD3	O	External SRAM address output 3 terminal
11	AD4	O	External SRAM address output 4 terminal
12	SDi0	I	Data input terminal 0
13	BCKiA	I	Bit clock input terminal A
14	LRCKiA	I	LR clock input terminal A
15	AD5	O	External SRAM address output 5 terminal
16	CE	O	External SRAM chip enable terminal
17	OE	O	External SRAM output enable terminal
18	VDD	-	Digital power supply (2.5V)
19	STANBY	I	Standby mode control terminal
20	VSS	-	Digital GND
21	VSSL	-	DAC Lch GND
22	VRAL	-	DAC Lch reference voltage terminal
23	LO	O	DAC Lch output terminal
24	VDAL	-	DAC Rch power supply terminal(2.5V)
25	VDAR	-	DAC Lch power supply terminal(2.5V)
26	RO	O	DAC Rch output terminal
27	VRAR	-	DAC Rch reference voltage terminal
28	VSSR	-	DAC Rch GND
29	TESTP	I	Test terminal
30	CKS	I	VCO select terminal
31	AD12	O	External SRAM address output 12 terminal
32	AD11	O	External SRAM address output 11 terminal
33	AD10	O	External SRAM address output 10 terminal
34	AD9	O	External SRAM address output 9 terminal
35	VDDT	-	Digital power supply terminal (3.3V)
36	AD8	O	External SRAM address output 8 terminal
37	AD7	O	External SRAM address output 7 terminal
38	AD6	O	External SRAM address output 6 terminal
39	REQ	O	Squeeze request terminal to host
40	VSS	-	Digital GND
41	AD13	O	External SRAM address output 13 terminal
42	AD14	O	External SRAM address output 14 terminal
43	WR	O	External SRAM write signal
44	AD16	O	External SRAM address output 16 terminal
45	AD15	O	External SRAM address output 15 terminal
46	io0	I/O	External SRAM data input/output 0 terminal
47	io1	I/O	External SRAM data input/output 1 terminal
48	VSS	-	Digital GND
49	io2	I/O	External SRAM data input/output 2 terminal
50	io3	I/O	External SRAM data input/output 3 terminal

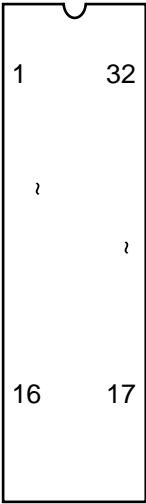
## 3.Pin function(2/2)

TC94A02F-005

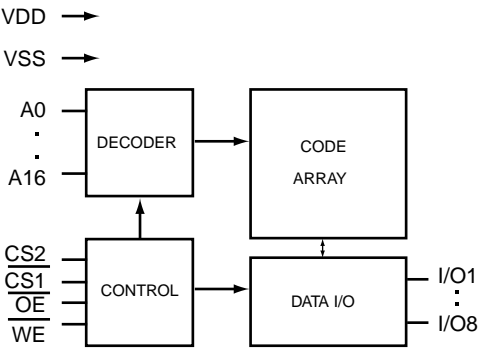
Pin No.	Symbol	I/O	Function
51	io4	I/O	External SRAM data input/output 4 terminal
52	VDD	-	Digital power supply (2.5V) terminal
53	io5	I/O	External SRAM data input/output 5 terminal
54	io6	I/O	External SRAM data input/output 6 terminal
55	io7	I/O	External SRAM data input/output 7 terminal
56	VSSP	-	VCO GND
57	Pdo	O	PLL phase error detection signal output terminal
58	Vcoi	I	VCO control voltage input terminal
59	VDDP	-	VCO power supply
60	Cko	O	16.934 MHz clock output terminal
61	VDDX	-	Power supply (2.5V) terminal for oscillator
62	Xi	I	Connection terminal for oscillator(input)
63	Xo	O	Connection terminal for oscillator(output)
64	VSSX	-	GND for oscillator

■ W24L010AJ-12-X(IC653):SRAM

1.Terminal layout



2.Block diagram

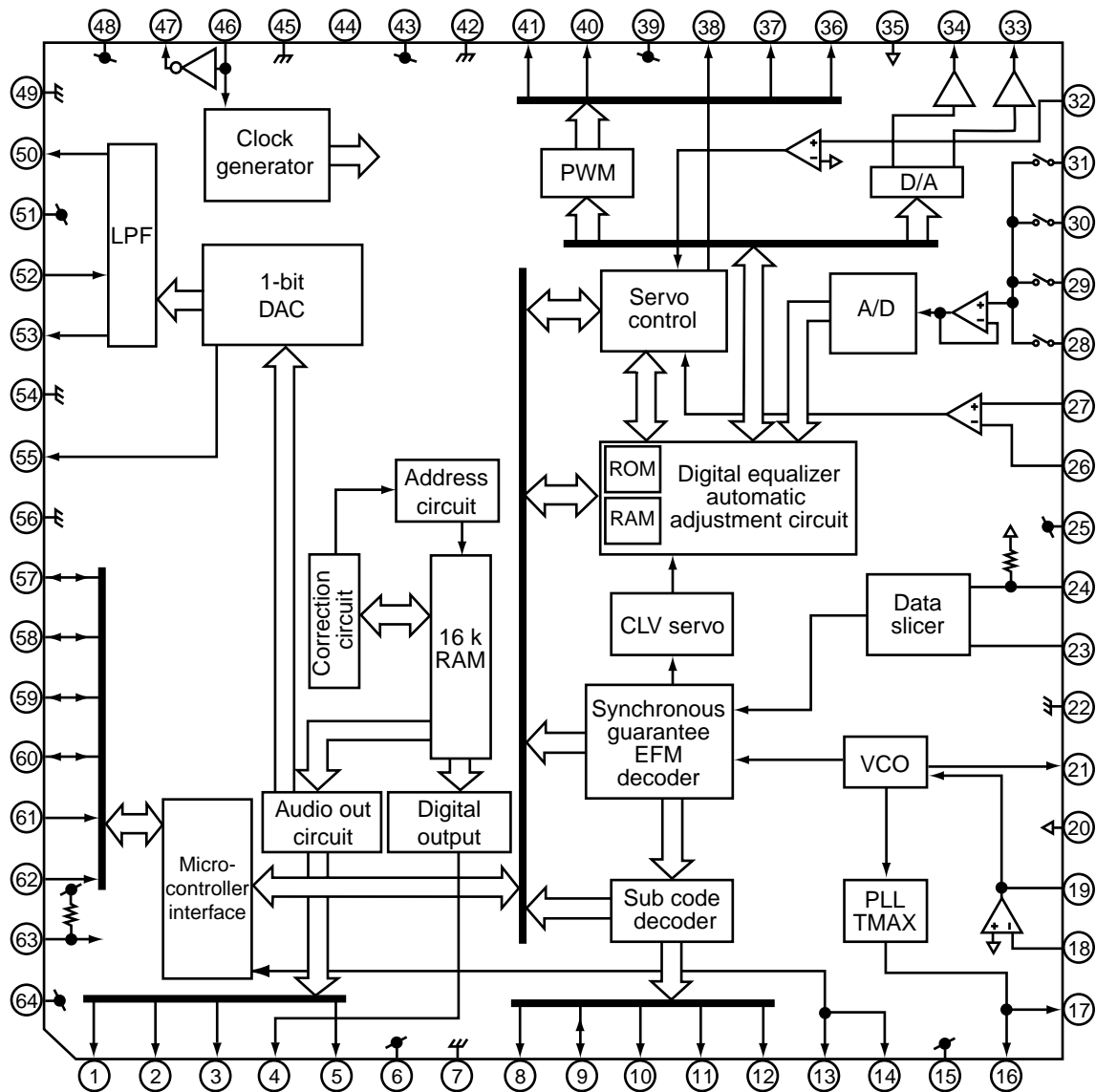


3.Pin function

Pin no.	Symbol	Function	Pin no.	Symbol	Function
1	NC		17	I/O4	Data inputs/output
2	A16	Address inputs	18	I/O5	Data inputs/outputs
3	A14	Address inputs	19	I/O6	Data inputs/outputs
4	A12	Address inputs	20	I/O7	Data input/outputs
5	A7	Address inputs	21	I/O8	Data inputs/outputs
6	A6	Address inputs	22	CS1	Chip select inputs
7	A5	Address inputs	23	A10	Address inputs/outputs
8	A4	Address inputs	24	OE	Outputs enable input
9	A3	Address inputs	25	A11	Address inputs/outputs
10	A2	Address inputs	26	A9	Address inputs/outputs
11	A1	Address inputs	27	A8	Address inputs/outputs
12	A0	Address inputs	28	A13	Address inputs/outputs
13	I/O1	Data inputs/outouts	29	WE	Write enable input
14	I/O2	Data inputs/outputs	30	CS2	Chip select inputs
15	I/O3	Data inputs/outputs	31	A15	Address inputs/outputs
16	V <sub>SS</sub>	Ground	32	V <sub>DD</sub>	Power supply

■ TC94A14FA(IC621):DSP&DAC

1.Terminal layout & block daiagram



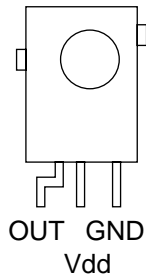
2.Pin function

Pin No	Symbol	I/O	Descroption
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	VDD3	-	Digital 3.3V power supply voltage pin.
7	VSS3	-	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.
14	UHSO		Input port at reset.
15	PVDD3	-	PLL-only 3.3V power supply voltage pin.

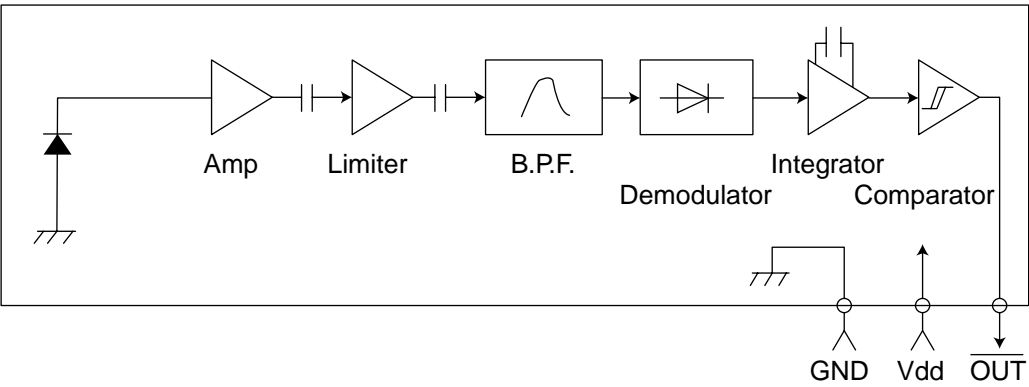
Pin No	Symbol	I/O	Description								
16	PDO	O	EFM and PLCK phase difference signal output pin.								
17	TMAX	O	TMAX detection result output pin. <table><tr><td>TMAX Detection Result</td><td>TMAX Output</td></tr><tr><td>Longer than fixed period</td><td>"PVDD3"</td></tr><tr><td>Within fixed period</td><td>"HiZ"</td></tr><tr><td>Shorter than fixed period</td><td>"AVSS3"</td></tr></table>	TMAX Detection Result	TMAX Output	Longer than fixed period	"PVDD3"	Within fixed period	"HiZ"	Shorter than fixed period	"AVSS3"
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	I/O	Microcontroller interface data I/O pins.								
58	BUS1										
59	BUS2										
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.								

■ GP1UM261X (IC602) : Receiver

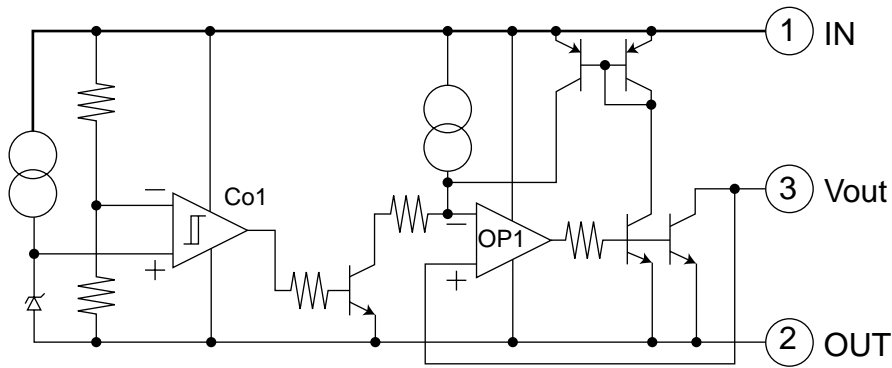
1. Pin layout



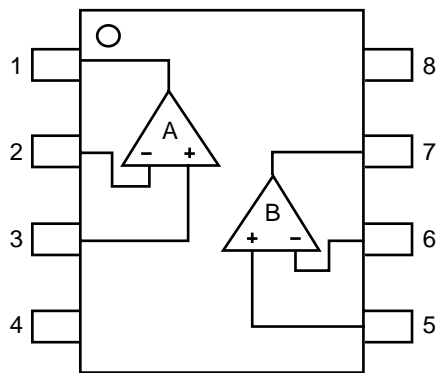
2. Block diagram



■ IC-PST600M/G/-W (IC702) : System reset



■ NJM4565V-X(IC572):CD LPF

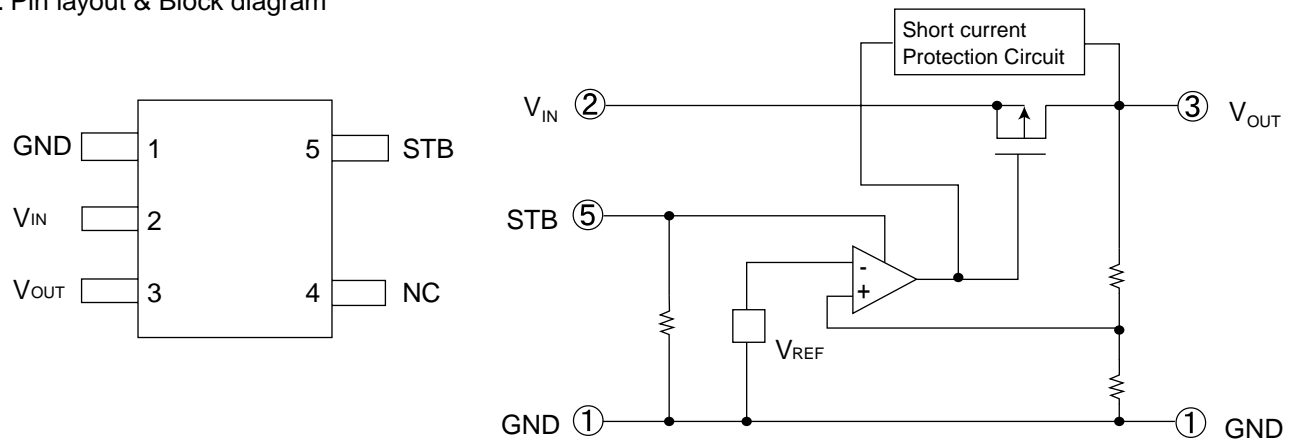


- Pin function
- 1. A OUTPUT
  - 2. A-INPUT
  - 3. A+INPUT
  - 4. V<sup>-</sup>
  - 5. B+INPUT
  - 6. B-INPUT
  - 7. B OUTPUT
  - 8. V<sup>+</sup>

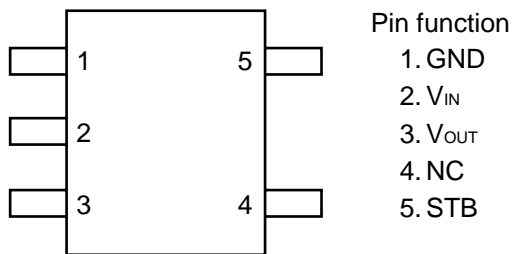


## ■ NJU7241F25-X(IC651) : Regulator

### 1. Pin layout & Block diagram

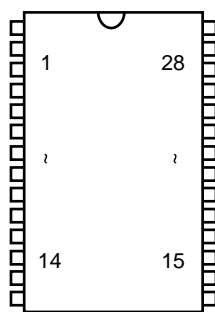


## ■ NJU7241F33-X(IC504):Regulator

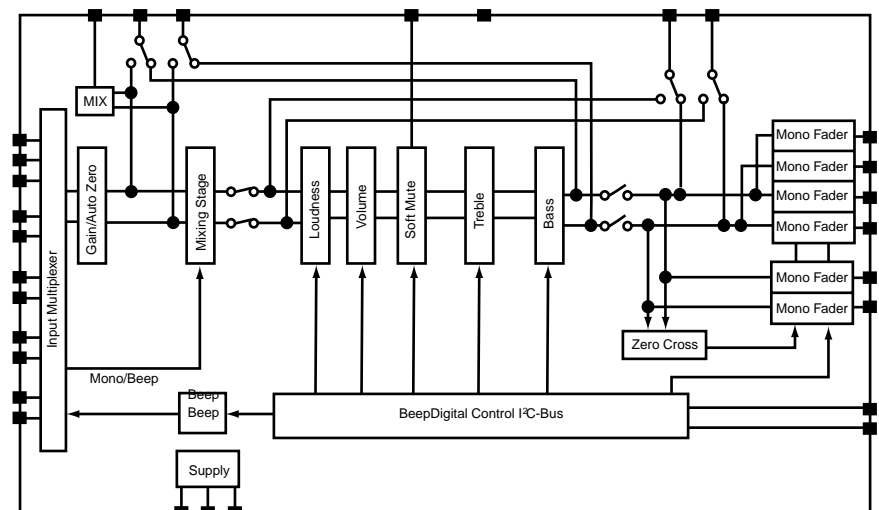


## ■ TDA7404D-X(IC161):Carradio signal processor

### 1.Terminal layout



### 2.Block diagram





**VICTOR COMPANY OF JAPAN, LIMITED**

MOBILE ELECTRONICS DIVISION

PERSONAL & MOBILE NETWORK BUSINESS UNIT. 10-1,1Chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

PARTS LIST

[ KD-LH7R ]

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

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

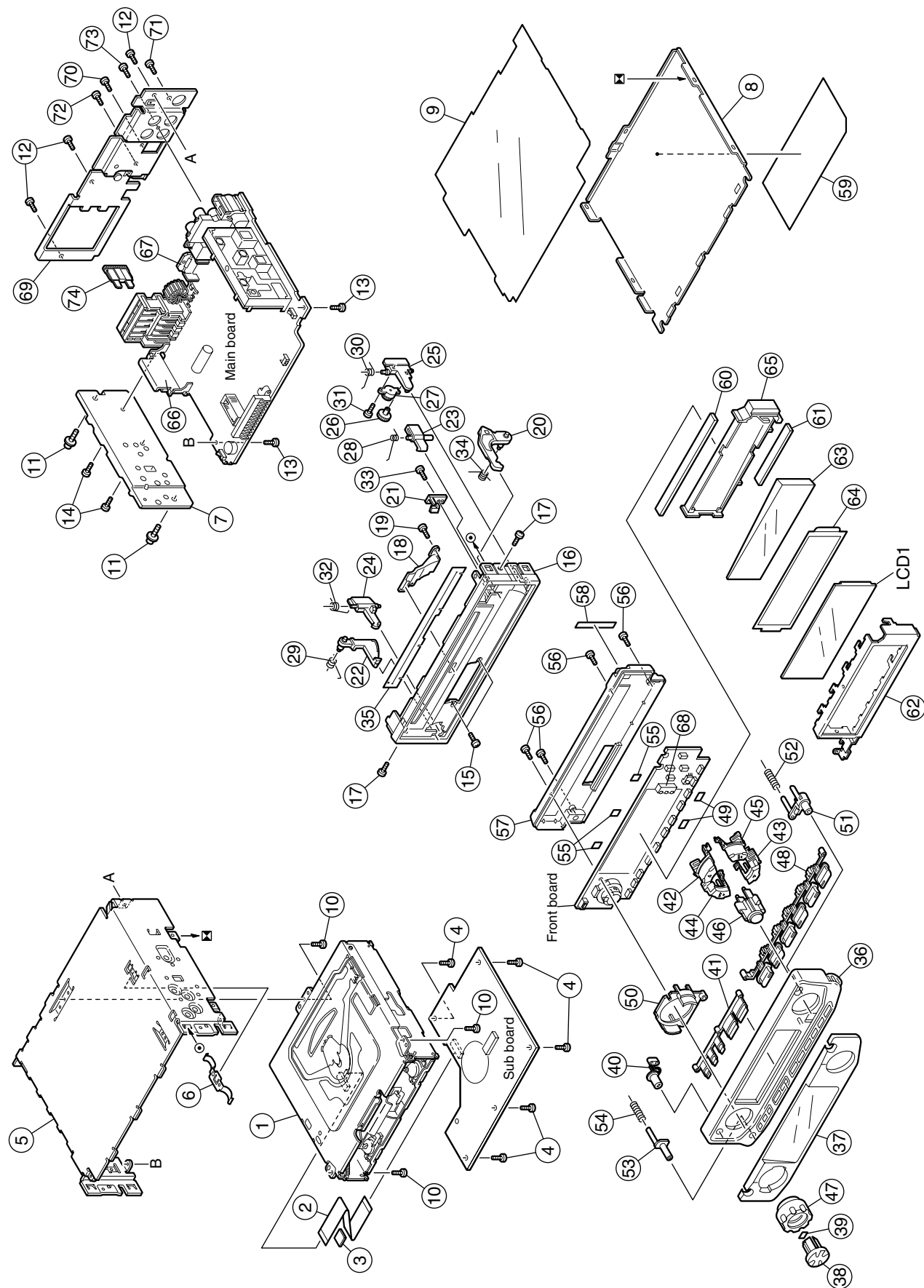
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Exploded view of general assembly and parts list

Block No. 

M	1	M	M
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## ■ Parts list (General assembly)

Block No. M1MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	-----	CD MECHA	1	TN-2001-1003	
	2	QUQ105-2207AE	FFC WIRE	1		
	3	VYSH101-009	SPACER	1		
	4	QYSDST2004Z	SCREW	5		
	5	GE10043-001A	TOP CHASSIS	1		
	6	GE40135-001A	EARTH PLATE	1		
	7	GE30568-003A	SIDE PANEL	1		
	8	GE30393-001A	BOTTOM COVER	1		
	9	FSMA3005-001	INSULATOR	1		
	10	QYSDST2604Z	SCREW	3	CHASSIS+CD MECHA	
	11	FSKZ4005-001	SCREW	2	CHASSIS+SIDE PANEL	
	12	QYSDST2604Z	SCREW	3	CHASSIS+REAR BKT	
	13	QYSDST2606Z	SCREW	2	CHASSIS+MAIN PWB	
	14	QYSDST2612Z	SCREW	2	SIDE PANEL+IC BKT	
	15	QYSDSF2006M	SCREW	2	F.CHASSIS+CONNECTOR	
	16	GE10049-003A	FRONT CHASSIS	1		
	17	QYSPSPT2020Z	MINI SCREW	2		
	18	GE30381-001A	LIGHT LENS	1		
	19	VKZ4777-001	MINI SCREW	1	L.LENS+F.CHASSIS	
	20	GE30378-001A	OPEN LEVER	1		
	21	FSKS3015-001	LOCK LEVER(O.L)	1		
	22	VKS3798-002	RELEASE LEVER	1		
	23	GE30379-001A	LOCK LEVER(TOP)	1		
	24	VKS3794-003	LOCK LEVER(L)	1		
	25	VKS3795-002	LOCK LEVER(R)	1		
	26	VKS5563-001	GEAR	1		
	27	VKZ4786-002	OIL DAMPER	1		
	28	FSKW4012-001	T.SPRING	1	LOCK LEVER(TOP)	
	29	GE40144-001A	T.SPRING	1	RELEASE LEVER	
	30	VKW5262-001	T.SPRING	1	LOCK LEVER(R)	
	31	QYSDSF2006M	SCREW	1	DAMPER+L.LEVER(R)	
	32	VKW5263-002	T.SPRING	1	LOCK LEVER(L)	
	33	VKZ4777-001	MINI SCREW	1	LOCK LEVER(O.L)	
	34	FSKW4013-002	T.SPRING	1	OPEN LEVER	
	35	GE40140-001A	BLIND	1		
	36	GE10044-006A	FRONT PANEL	1		
	37	GE30565-001A	FINDER ASSY	1		
	38	GE30539-001A	SEL BUTTON	1	LASER CUT	
	39	FSYH4036-032	SHEET	1		
	40	GE30537-001A	POWER BUTTON	1		
	41	GE20124-001A	D.FUNC BUTTON	1	TMD+SOURCE	
	42	GE30388-001A	NAV UP BUT	1		
	43	GE30541-001A	NAV DN BUT	1		
	44	GE30536-001A	NAV(L)BUT	1		
	45	GE30542-001A	NAV(R)BUT	1		
	46	GE40138-001A	NAV GUIDE	1		
	47	GE40132-001A	VOL KNOB	1		
	48	GE20129-001A	PRESET BUTTON	1		

## ■ Parts list (General assembly)

Block No. M1MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	49	FSYH4036-069	SHEET	2		
	50	GE30387-001A	RIM LENS	1		
	51	GE30538-002A	EJECT BUTTON	1		
	52	VKW3001-330	COMP.SPRING	1	EJECT BUTTON	
	53	GE30547-001A	DETACH BUTTON	1		
	54	VKW3001-330	COMP.SPRING	1	DETACH BUTTON	
	55	FSYH4036-081	SHEET	3		
	56	VKZ4777-001	MINI SCREW	4	FRONT+REAR	
	57	GE10045-001A	REAR COVER	1		
	58	FSYH4036-035	SHEET	1		
	59	GE30362-002A	NAME PLATE	1		
	60	QNZ0449-001	RUBBER CONNE	1		
	61	QNZ0450-001	RUBBER CONNE	1		
	62	GE30389-001A	LCD CASE	1		
	63	FSJK3028-001	LCD LENS	1		
	64	GE40146-001A	LIGHTING SHEET	1		
	65	FSKS3013-001	LENS CASE	1		
	66	GE40136-001A	IC BRACKET	1		
	67	GE40124-001A	REG BRACKET	1		
	68	FSKS3017-002	LED HOLDER	1		
	69	GE30382-001A	REAR BRACKET	1		
	70	QYSDST2606Z	SCREW	1	REAR BKT+REG BKT	
	71	QYSDST2606Z	SCREW	1	REAR BKT+ANT JACK	
	72	QYSDST2606Z	SCREW	1	REAR BKT+CD IN JACK	
	73	QYSDSF3006Z	SCREW	1	REAR BKT+PIN JACK	
△	74	QMFZ047-150-T	FUSE	1		
	LCD 1	QLD0215-001	LCD MODULE	1		



## ■ Parts list (CD mechanism)

Block No. MBMM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	30320101T	FRAME	1		
	2	30320102T	TOP COVER	1		
	3	30320109T	DAMPER F	2		
	4	30320110T	DAMPER R	1		
	11	303205501T	CHASSIS RIVET A	1		
	12	303205503T	CHANGE P.RVT A	1		
	13	303205301T	CLAMPER ASS'Y	1		
	14	303205304T	SPINDLE MOTOR A	1	MDN1AL3RHCS	
	15	30320502T	CLAMPER ARM	1		
	16	30320503T	CHANGE GEAR SPG	1		
	17	30320505T	CHANGE GEAR 2	1		
	18	30320506T	FEED GEAR	1		
	19	30320507T	FEED RACK	1		
	20	30320509T	CHANGE LOCK RAR	1		
	21	30320510T	FEED SW HOLDER	1		
	22	30320511T	PU SHAFT HOLDER	1		
	23	30320513T	CLAMPER SUB SPG	1		
	24	30320514T	FD SUB HOLDER	1		
	25	30320518T	TOP PLATE	1		
	26	30320519T	SELECT LOCK ARM	1		
	27	30320520T	TRIGGER ARM	1		
	28	30320521T	SLIDE HOOK	1		
	29	30320522T	PU SHAFT	1		
	30	30320525T	CLAMPER ARM SPG	1		
	31	30320526T	SELECT L ARM SP	1		
	32	30320527T	SUSPENSION SPG	2		
	33	30320529T	SELECT ARM R	1		
	34	30320530T	LINK PLATE	1		
	35	30320531T	LINK PLATE SPG	1		
	36	30320523T	CUSHION F	1		
	37	30320524T	CUSHION R	2		
	38	30320528T	SUSPENSION SPGL	2		
	61	69011614T	PICKUP OPT-725	1		
	62	64180406T	DET SW ESE22	1	ESE22MH56	
	71	303210302T	CONN PWB ASS'Y	1	MP3 CONN	
	72	30321002T	MODE SW	1	MMS000690ZMB0	
	73	30321003T	LOAD MOTOR WIRE	1		
	74	30321005T	MODE SW WIRE	1		
	75	30321009T	SL WIRE	1		
	76	30321011T	WIRE HOLDER	1		
	77	19501403T	WIRE CLAMPER	1		
	81	303211301T	ROLLER SHAFT AS	1		
	82	303211501T	L GEAR PLATE RV	1		
	83	303211302T	LOADING PLATE A	1		
	84	303211502T	LOCK ARM RV ASS	1		
	85	303211303T	L/F MOTOR ASS'Y	1	FF030PK-10180	
	86	30321101T	LOADING GEAR 1	1		
	87	30321102T	LOADING GEAR 2	1		



## ■ Parts list (CD mechanism)

Block No. MBMM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	88	30321103T	LOADING GEAR 3	1		
	89	30321104T	LOADING GEAR 4	1		
	90	30321105T	LOADING GEAR 5	1		
	91	30321106T	LOADING GEAR 6	1		
	92	30321107T	LOADING GEAR 7	1		
	93	30321111T	ROLLER GUIDE	2		
	94	30321114T	ROLLER GUIDE SP	2		
	95	30321116T	DISC STOPPER AR	1		
	96	30321117T	DISC ST ARM SPG	1		
	97	30321118T	LD GEAR BRACKET	1		
	98	30321125T	L SIDE PLATE	1		
	99	30321131T	LOAD PLATE SPG	1		
	100	30321133T	LDG ROLLER	2		
	101	18211223T	COLLAR SCREW	1		
	111	9P0420031T	SCREW M2X3	6	TAP 2X3	
	112	9P0420041T	SCREW(M2 X 4)	2	TAP 2X4	
	113	9B0320041T	SCREW(M2 X 4)	1	BIND 2X4	
	114	9C0117183T	SCREW	2	SCR M1.7X1.8	
	115	9C0120203T	SCREW	1	SCR M2X2	
	116	9C0317503T	SCREW	1	T SCR M1.5X5	
	121	9W0130170T	PW 3.5X8X0.3	1		
	122	9W0513060T	HL WASHER	1	HLW1.85X5X0.13	
	123	9W0710070T	L WASHER	1	LW3.1X6X0.1	
	124	9E0100152T	E RING	1	S 1.5	
	125	9W0113020T	PW 2.1X4X0.13	1		

■ Electrical parts list (Main board) Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	BZ841	QAN0002-001Z	BUZZER				C 304	NCS31HJ-391X	C CAPACITOR		
	C 1	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V			C 305	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 2	NCB31EK-473X	C CAPACITOR				C 306	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 3	NCB31EK-103X	C CAPACITOR				C 311	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 4	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V			C 312	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 5	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 313	NCS31HJ-391X	C CAPACITOR		
	C 6	NCB31HK-103X	C CAPACITOR				C 314	NCS31HJ-391X	C CAPACITOR		
	C 10	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V			C 315	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 31	QERF1AM-107Z	E CAPACITOR	100MF 20% 10V			C 316	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 32	NCS31HJ-470X	C CAPACITOR				C 317	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 33	QERF0JM-476Z	E CAPACITOR	47MF 20% 6.3V			C 318	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 34	NCB31EK-473X	C CAPACITOR				C 319	NCB31EK-223X	C CAPACITOR		
	C 35	NDC31HJ-100X	C CAPACITOR				C 320	NCB31EK-223X	C CAPACITOR		
	C 36	NDC31HJ-7R0X	C CAPACITOR				C 321	NCS31HJ-151X	C CAPACITOR		
	C 37	NDC31HJ-100X	C CAPACITOR				C 322	NCB21CK-104X	C CAPACITOR		
	C 38	NCB31HK-102X	C CAPACITOR				C 323	NCB21CK-104X	C CAPACITOR		
	C 39	NCB31HK-102X	C CAPACITOR				C 324	NCB21CK-104X	C CAPACITOR		
	C 40	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V			C 325	NCB21CK-104X	C CAPACITOR		
	C 41	NCB31EK-473X	C CAPACITOR				C 341	NCB31EK-473X	C CAPACITOR		
	C 42	NCB31HK-103X	C CAPACITOR				C 367	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 43	QFV61HJ-473Z	MF CAPACITOR	0.047MF 5% 50V			C 368	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 44	NCB31HK-103X	C CAPACITOR				C 387	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 45	NCB31HK-272X	C CAPACITOR				C 388	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 46	NCB31HK-103X	C CAPACITOR				C 701	NDC31HJ-220X	C CAPACITOR		
	C 47	NCB31HK-103X	C CAPACITOR				C 702	NDC31HJ-270X	C CAPACITOR		
	C 48	NCB31EK-473X	C CAPACITOR				C 703	NDC31HJ-270X	C CAPACITOR		
	C 49	NCB31HK-102X	C CAPACITOR				C 704	NDC31HJ-8R0X	C CAPACITOR		
	C 50	NCS31HJ-101X	C CAPACITOR				C 705	NCB31EK-473X	C CAPACITOR		
	C 51	NCS31HJ-331X	C CAPACITOR				C 706	NCB31EK-473X	C CAPACITOR		
	C 52	NCB31HK-103X	C CAPACITOR				C 707	NCB31EK-473X	C CAPACITOR		
	C 53	NCB31EK-472X	C CAPACITOR				C 708	NCB31EK-473X	C CAPACITOR		
	C 54	NCB31EK-104X	C CAPACITOR				C 709	NCB31HK-103X	C CAPACITOR		
	C 55	QERF1HM-474Z	E CAPACITOR	0.47MF 20% 50V			C 710	QERF0JM-476Z	E CAPACITOR	47MF 20% 6.3V	
	C 71	NCS31HJ-561X	C CAPACITOR				C 711	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 72	NCB31EK-223X	C CAPACITOR				C 716	NCB31EK-104X	C CAPACITOR		
	C 73	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V			C 717	NCB31EK-104X	C CAPACITOR		
	C 74	NDC31HJ-820X	C CAPACITOR				C 720	NCB31HK-103X	C CAPACITOR		
	C 75	NDC31HJ-470X	C CAPACITOR				C 721	NCB31HK-103X	C CAPACITOR		
	C 76	NCB31HK-103X	C CAPACITOR				C 722	NCB31HK-103X	C CAPACITOR		
	C 77	QERF0JM-476Z	E CAPACITOR	47MF 20% 6.3V			C 724	NCB31EK-104X	C CAPACITOR		
	C 81	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 725	NCS31HJ-151X	C CAPACITOR		
	C 82	NCB31HK-821X	C CAPACITOR				C 771	NCB31EK-473X	C CAPACITOR		
	C 83	NCB31EK-104X	C CAPACITOR				C 781	QERF0JM-476Z	E CAPACITOR	47MF 20% 6.3V	
	C 84	NCB31HK-153X	C CAPACITOR				C 782	NCB31EK-823X	C CAPACITOR		
	C 91	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 784	QERF1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 92	NCB31HK-821X	C CAPACITOR				C 801	NCB31EK-473X	C CAPACITOR		
	C 94	NCB31HK-153X	C CAPACITOR				C 802	NCB31HK-103X	C CAPACITOR		
	C 161	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 803	NDC31HJ-220X	C CAPACITOR		
	C 162	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 804	NDC31HJ-220X	C CAPACITOR		
	C 163	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 841	QERF1HM-104Z	E CAPACITOR	0.1MF 20% 50V	
	C 171	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 881	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 172	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 891	NCB31EK-104X	C CAPACITOR		
	C 173	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 901	QEZ0338-228	E CAPACITOR	2200MF	
	C 179	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V			C 902	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 181	QERF1CM-107Z	E CAPACITOR	100MF 20% 16V			C 903	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 182	NCB31HK-103X	C CAPACITOR				C 904	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 241	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 905	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 242	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V			C 906	NCB31HK-103X	C CAPACITOR		
	C 243	NCB31EK-473X	C CAPACITOR				C 907	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 244	NCB31HK-153X	C CAPACITOR				C 908	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 301	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V			C 909	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 302	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V			C 910	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 303	NCS31HJ-391X	C CAPACITOR				C 911	NCB31CK-104X	C CAPACITOR		

## ■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C 912	NCB31HK-103X	C CAPACITOR	100MF 20% 16V			L 901	QQR0703-001	CHOKE COIL		
	C 914	QERF1CM-107Z	E CAPACITOR				Q 1	2SD601A/R/-X	TRANSISTOR		
	C 915	NCB31CK-104X	C CAPACITOR				Q 2	2SD601A/R/-X	TRANSISTOR		
	C 961	NCS31HJ-101X	C CAPACITOR				Q 3	UN2111-X	TRANSISTOR		
	C 962	NCS31HJ-101X	C CAPACITOR				Q 4	UN2111-X	TRANSISTOR		
	C 963	NCS31HJ-101X	C CAPACITOR				Q 5	2SB709A/R/-X	TRANSISTOR		
	C 964	NCS31HJ-101X	C CAPACITOR				Q 6	2SB815/7/-X	TRANSISTOR		
	C 965	NCS31HJ-101X	C CAPACITOR				Q 7	UN2211-X	TRANSISTOR		
	C 966	NCS31HJ-101X	C CAPACITOR				Q 9	UN2111-X	TRANSISTOR		
	C 967	NCS31HJ-101X	C CAPACITOR				Q 31	UN2211-X	TRANSISTOR		
	C 968	NCS31HJ-101X	C CAPACITOR				Q 51	2SC2412K/R/-X	TRANSISTOR		
	C 971	NCB31EK-104X	C CAPACITOR				Q 52	2SC2412K/R/-X	TRANSISTOR		
	CN101	QGB2027M4-22S	CONNECTOR				Q 53	UN2211-X	TRANSISTOR		
	CN701	QNZ0007-002	CAR CONNECTOR				Q 81	2SD601A/R/-X	TRANSISTOR		
	CN901	QNZ0112-001	CAR CONNECTOR				Q 91	2SD601A/R/-X	TRANSISTOR		
	D 1	1SS133-T1	SI DIODE				Q 241	2SD601A/R/-X	TRANSISTOR		
	D 2	1SS133-T1	SI DIODE				Q 321	2SD1781K/QR/-X	TRANSISTOR		
	D 3	1SS133-T1	SI DIODE				Q 331	2SD1781K/QR/-X	TRANSISTOR		
	D 4	1SS355-X	DIODE				Q 341	2SD1781K/QR/-X	TRANSISTOR		
	D 5	1SS355-X	DIODE				Q 351	2SD1781K/QR/-X	TRANSISTOR		
	D 242	1SS133-T1	SI DIODE				Q 701	UN2211-X	TRANSISTOR		
	D 243	1SS133-T1	SI DIODE				Q 702	UN2211-X	TRANSISTOR		
	D 321	1SS355-X	DIODE				Q 703	UN2211-X	TRANSISTOR		
	D 331	1SS355-X	DIODE				Q 704	UN2211-X	TRANSISTOR		
	D 341	1SS355-X	DIODE				Q 705	UN2211-X	TRANSISTOR		
	D 351	1SS355-X	DIODE				Q 781	UN2111-X	TRANSISTOR		
	D 701	UDZS5.6B-X	ZENER DIODE				Q 782	UN2211-X	TRANSISTOR		
	D 702	UDZS5.6B-X	ZENER DIODE				Q 784	UN2111-X	TRANSISTOR		
	D 703	UDZS5.6B-X	ZENER DIODE				Q 841	UN2211-X	TRANSISTOR		
	D 704	UDZS5.6B-X	ZENER DIODE				Q 881	UN2211-X	TRANSISTOR		
	D 705	UDZS5.6B-X	ZENER DIODE				Q 891	UN2211-X	TRANSISTOR		
	D 706	UDZS5.6B-X	ZENER DIODE				Q 976	UN2211-X	TRANSISTOR		
	D 707	UDZS5.6B-X	ZENER DIODE				Q 977	2SA1037AK/RS/-X	TRANSISTOR		
	D 708	UDZS5.6B-X	ZENER DIODE				R 1	NRS181J-120X	MG RESISTOR		
	D 709	UDZS5.6B-X	ZENER DIODE				R 2	NRSA63J-473X	MG RESISTOR		
	D 710	1SS355-X	DIODE				R 3	NRSA63J-472X	MG RESISTOR		
	D 713	UDZS5.6B-X	ZENER DIODE				R 4	NRSA63J-332X	MG RESISTOR		
	D 714	SLR-56MC3F	LED				R 5	NRSA63J-473X	MG RESISTOR		
	D 721	UDZ11B-X	ZENER DIODE				R 6	NRSA63J-473X	MG RESISTOR		
	D 722	UDZ11B-X	ZENER DIODE				R 7	NRSA63J-472X	MG RESISTOR		
	D 781	1SS133-T1	SI DIODE				R 9	NRSA63J-0R0X	MG RESISTOR		
	D 782	1SS133-T1	SI DIODE				R 31	NRS181J-100X	MG RESISTOR		
	D 784	UDZ11B-X	ZENER DIODE				R 32	NRSA63J-622X	MG RESISTOR		
	D 891	1SS355-X	DIODE				R 33	NRSA63J-103X	MG RESISTOR		
	D 892	1SS355-X	DIODE				R 34	NRSA63J-222X	MG RESISTOR		
	D 901	1N5401-F64	SI DIODE				R 35	NRSA63J-222X	MG RESISTOR		
	D 902	1SS355-X	DIODE				R 36	NRSA63J-222X	MG RESISTOR		
	D 971	CRS03-W	SB DIODE				R 37	NRSA63J-222X	MG RESISTOR		
	D 972	CRS03-W	SB DIODE				R 38	NRSA63J-101X	MG RESISTOR		
	IC 31	TB2118F-X	IC				R 39	NRSA63J-0R0X	MG RESISTOR		
	IC 71	SAA6579T-X	IC				R 40	NRSA63J-393X	MG RESISTOR		
	IC161	TDA7404D-X	IC				R 41	NRSA63J-103X	MG RESISTOR		
	IC301	LA47503	IC				R 42	NRS181J-100X	MG RESISTOR		
	IC701	UPD784215AGC174	IC				R 43	NRSA63J-471X	MG RESISTOR		
	IC702	IC-PST600M/G/-W	IC				R 44	NRSA63J-221X	MG RESISTOR		
	IC771	BR24C32F-X	IC				R 51	NRSA63J-223X	MG RESISTOR		
	IC801	HD74HC126FP-X	IC				R 52	NRSA63J-473X	MG RESISTOR		
	IC901	HA13164A	IC				R 53	NRSA63J-473X	MG RESISTOR		
	J 1	QNB0100-002	ANT TERMINAL				R 54	NRSA63J-103X	MG RESISTOR		
	J 321	QNN0489-001	PIN JACK				R 55	NRSA63J-222X	MG RESISTOR		
	J 801	QNZ0095-001	CONNECTOR				R 56	NRSA63J-103X	MG RESISTOR		
	L 1	QQL244J-4R7Z	INDUCTOR				R 57	NRSA63J-153X	MG RESISTOR		
	L 701	QQL244K-4R7Z	INDUCTOR				R 58	NRSA63J-471X	MG RESISTOR		

■ Electrical parts list (Main board) Block No. 01

▲	Item	Parts number	Parts name	Remarks	Area	▲	Item	Parts number	Parts name	Remarks	Area
	R 59	NRSA63J-473X	MG RESISTOR				R 732	NRSA63J-103X	MG RESISTOR		
	R 71	NRSA63J-222X	MG RESISTOR				R 733	NRSA63J-103X	MG RESISTOR		
	R 72	NRSA63J-222X	MG RESISTOR				R 734	NRSA63J-222X	MG RESISTOR		
	R 73	NRSA63J-222X	MG RESISTOR				R 735	NRSA63J-222X	MG RESISTOR		
	R 74	NRSA02J-101X	MG RESISTOR				R 736	NRSA63J-222X	MG RESISTOR		
	R 81	NRSA63J-682X	MG RESISTOR				R 737	NRSA63J-0R0X	MG RESISTOR		
	R 82	NRSA63J-273X	MG RESISTOR				R 738	NRSA63J-472X	MG RESISTOR		
	R 83	NRSA63J-472X	MG RESISTOR				R 739	NRSA63J-472X	MG RESISTOR		
	R 91	NRSA63J-682X	MG RESISTOR				R 740	NRSA63J-472X	MG RESISTOR		
	R 92	NRSA63J-273X	MG RESISTOR				R 741	NRSA63J-103X	MG RESISTOR		
	R 93	NRSA63J-472X	MG RESISTOR				R 742	NRSA63J-103X	MG RESISTOR		
	R 161	NRSA63J-222X	MG RESISTOR				R 743	NRSA63J-103X	MG RESISTOR		
	R 162	NRSA63J-222X	MG RESISTOR				R 744	NRSA63J-103X	MG RESISTOR		
	R 163	NRSA63J-274X	MG RESISTOR				R 745	NRSA63J-103X	MG RESISTOR		
	R 164	NRSA63J-0R0X	MG RESISTOR				R 746	NRSA63J-103X	MG RESISTOR		
	R 167	NRSA63J-0R0X	MG RESISTOR				R 747	NRSA63J-472X	MG RESISTOR		
	R 168	NRSA63J-0R0X	MG RESISTOR				R 748	NRSA63J-472X	MG RESISTOR		
	R 177	NRSA63J-0R0X	MG RESISTOR				R 749	NRSA63J-472X	MG RESISTOR		
	R 178	NRSA63J-0R0X	MG RESISTOR				R 750	NRSA63J-103X	MG RESISTOR		
	R 180	NRSA63J-0R0X	MG RESISTOR				R 751	NRSA63J-103X	MG RESISTOR		
	R 182	NRSA63J-0R0X	MG RESISTOR				R 753	NRSA63J-473X	MG RESISTOR		
	R 241	NRSA63J-473X	MG RESISTOR				R 754	NRSA63J-821X	MG RESISTOR		
	R 242	NRSA63J-223X	MG RESISTOR				R 755	NRSA63J-106X	MG RESISTOR		
	R 243	NRSA63J-184X	MG RESISTOR				R 756	NRSA63J-473X	MG RESISTOR		
	R 244	NRSA63J-123X	MG RESISTOR				R 757	NRSA63J-222X	MG RESISTOR		
	R 245	NRSA63J-101X	MG RESISTOR				R 758	NRSA63J-473X	MG RESISTOR		
	R 246	NRSA63J-102X	MG RESISTOR				R 760	NRSA63J-473X	MG RESISTOR		
	R 247	NRSA63J-184X	MG RESISTOR				R 764	NRSA63J-101X	MG RESISTOR		
	R 301	NRSA63J-273X	MG RESISTOR				R 765	NRS181J-511X	MG RESISTOR		
	R 302	NRSA63J-273X	MG RESISTOR				R 771	NRSA63J-271X	MG RESISTOR		
	R 311	NRSA63J-273X	MG RESISTOR				R 772	NRSA63J-271X	MG RESISTOR		
	R 312	NRSA63J-273X	MG RESISTOR				R 780	NRSA63J-473X	MG RESISTOR		
	R 316	NRSA63J-102X	MG RESISTOR				R 781	NRSA63J-473X	MG RESISTOR		
	R 321	NRSA63J-222X	MG RESISTOR				R 783	NRSA63J-102X	MG RESISTOR		
	R 322	NRSA63J-821X	MG RESISTOR				R 784	NRSA63J-473X	MG RESISTOR		
	R 323	NRSA63J-101X	MG RESISTOR				R 787	NRSA63J-103X	MG RESISTOR		
	R 331	NRSA63J-222X	MG RESISTOR				R 801	NRSA63J-473X	MG RESISTOR		
	R 332	NRSA63J-821X	MG RESISTOR				R 802	NRSA63J-473X	MG RESISTOR		
	R 333	NRSA63J-101X	MG RESISTOR				R 803	NRSA63J-101X	MG RESISTOR		
	R 341	NRSA63J-222X	MG RESISTOR				R 804	NRSA63J-223X	MG RESISTOR		
	R 342	NRSA63J-821X	MG RESISTOR				R 805	NRSA63J-104X	MG RESISTOR		
	R 343	NRSA63J-101X	MG RESISTOR				R 806	NRSA63J-103X	MG RESISTOR		
	R 351	NRSA63J-222X	MG RESISTOR				R 807	NRSA63J-104X	MG RESISTOR		
	R 352	NRSA63J-821X	MG RESISTOR				R 808	NRSA63J-331X	MG RESISTOR		
	R 353	NRSA63J-101X	MG RESISTOR				R 809	NRSA63J-223X	MG RESISTOR		
	R 368	NRSA63J-473X	MG RESISTOR				R 810	NRSA63J-101X	MG RESISTOR		
	R 369	NRSA63J-473X	MG RESISTOR				R 841	NRSA63J-102X	MG RESISTOR		
	R 388	NRSA63J-473X	MG RESISTOR				R 881	NRSA63J-473X	MG RESISTOR		
	R 389	NRSA63J-473X	MG RESISTOR				R 882	NRSA63J-472X	MG RESISTOR		
	R 701	NRSA63J-473X	MG RESISTOR				R 891	NRSA63J-102X	MG RESISTOR		
	R 714	NRSA63J-473X	MG RESISTOR				R 892	NRSA63J-473X	MG RESISTOR		
	R 719	NRSA63J-0R0X	MG RESISTOR				R 901	QRE142J-102X	C RESISTOR	1.0K 5% 1/4W	
	R 720	NRSA63J-122X	MG RESISTOR				R 902	NRSA02J-912X	MG RESISTOR		
	R 721	NRSA63J-102X	MG RESISTOR				R 903	NRSA02J-472X	MG RESISTOR		
	R 722	NRSA63J-103X	MG RESISTOR				R 971	NRS181J-222X	MG RESISTOR		
	R 723	NRSA63J-103X	MG RESISTOR				R 972	NRS181J-222X	MG RESISTOR		
	R 724	NRSA63J-0R0X	MG RESISTOR				R 976	NRSA02J-203X	MG RESISTOR		
	R 725	NRSA63J-103X	MG RESISTOR				R 977	NRSA02J-822X	MG RESISTOR		
	R 726	NRSA63J-103X	MG RESISTOR				S 701	QSW0451-001	DETECT SWITCH	OPEN	
	R 728	NRSA63J-103X	MG RESISTOR				S 702	QSW0451-001	DETECT SWITCH	DETACH	
	R 729	NRSA63J-473X	MG RESISTOR				S 703	QSW0534-001	TACT SWITCH	RESET	
	R 730	NRSA63J-103X	MG RESISTOR				TU 1	QAU0259-002	TUNER PAC		
	R 731	NRSA63J-473X	MG RESISTOR				X 31	QAX0616-001Z	CRYSTAL		
							X 71	QAX0263-001Z	CRYSTAL		
							X 701	QAX0617-001Z	CRYSTAL		
							X 702	QAX0401-001	CRYSTAL		

## ■ Electrical parts list (Sub board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C 501	NCB31AK-474X	C CAPACITOR				C 627	NCB31HK-103X	C CAPACITOR		
	C 502	NCB31HK-103X	C CAPACITOR				C 628	NEAD0JM-476X	E CAPACITOR		
	C 503	NCB31HK-103X	C CAPACITOR				C 629	NCB31EK-333X	C CAPACITOR		
	C 504	NEAD0JM-107X	E CAPACITOR				C 630	NCB31EK-333X	C CAPACITOR		
	C 505	NDC31HJ-270X	C CAPACITOR				C 631	NCS31HJ-471X	C CAPACITOR		
	C 506	NDC31HJ-220X	C CAPACITOR				C 632	NCS31HJ-471X	C CAPACITOR		
	C 507	NCB31AK-474X	C CAPACITOR				C 633	NCB31CK-473X	C CAPACITOR		
	C 508	NCB31HK-103X	C CAPACITOR				C 634	NCB31CK-473X	C CAPACITOR		
	C 509	NCB31HK-103X	C CAPACITOR				C 635	NCB31CK-473X	C CAPACITOR		
	C 510	NCS31HJ-102X	C CAPACITOR				C 636	NCB31CK-473X	C CAPACITOR		
	C 511	NCB31CK-104X	C CAPACITOR				C 637	NCB31CK-473X	C CAPACITOR		
	C 512	NEAD0JM-107X	E CAPACITOR				C 638	NCB31HK-103X	C CAPACITOR		
	C 513	NCB31HK-103X	C CAPACITOR				C 639	NEAD0JM-476X	E CAPACITOR		
	C 551	NCB31HK-103X	C CAPACITOR				C 640	NCB31HK-103X	C CAPACITOR		
	C 571	NDC31HJ-100X	C CAPACITOR				C 641	NEAD0JM-476X	E CAPACITOR		
	C 572	NDC31HJ-100X	C CAPACITOR				C 642	NCS31HJ-101X	C CAPACITOR		
	C 573	NCB31CK-104X	C CAPACITOR				C 643	NCB31HK-103X	C CAPACITOR		
	C 574	NEAD1CM-106X	E CAPACITOR				C 644	NCB31AK-334X	C CAPACITOR		
	C 575	NEAD0JM-476X	E CAPACITOR				C 645	NEAD0JM-476X	E CAPACITOR		
	C 576	NCB31CK-104X	C CAPACITOR				C 646	NCB31HK-103X	C CAPACITOR		
	C 577	NCB31CK-104X	C CAPACITOR				C 651	NEAD0JM-476X	E CAPACITOR		
	C 578	NEAD0JM-476X	E CAPACITOR				C 652	NCB31HK-103X	C CAPACITOR		
	C 579	NEAD1CM-106X	E CAPACITOR				C 653	NEAD0JM-476X	E CAPACITOR		
	C 580	NCB31CK-104X	C CAPACITOR				C 654	NCB31CK-104X	C CAPACITOR		
	C 581	NCS31HJ-101X	C CAPACITOR				C 655	NCB31HK-103X	C CAPACITOR		
	C 582	NCS31HJ-101X	C CAPACITOR				C 656	NCB31CK-104X	C CAPACITOR		
	C 583	NCS31HJ-821X	C CAPACITOR				C 657	NCB31CK-104X	C CAPACITOR		
	C 584	NCS31HJ-821X	C CAPACITOR				C 658	NCB31CK-104X	C CAPACITOR		
	C 585	NEAD1VM-475X	E CAPACITOR				C 659	NCB31CK-104X	C CAPACITOR		
	C 586	NEAD1VM-475X	E CAPACITOR				C 660	NCS31HJ-101X	C CAPACITOR		
	C 587	NCS31HJ-121X	C CAPACITOR				C 661	NCB31HK-103X	C CAPACITOR		
	C 588	NCS31HJ-121X	C CAPACITOR				C 662	NCS31HJ-101X	C CAPACITOR		
	C 589	NEAD1VM-475X	E CAPACITOR				C 663	NCB31CK-104X	C CAPACITOR		
	C 590	NEAD1VM-475X	E CAPACITOR				C 664	NCB31EK-273X	C CAPACITOR		
	C 591	NEAD0JM-476X	E CAPACITOR				C 665	NCB31AK-334X	C CAPACITOR		
	C 592	NEAD0JM-476X	E CAPACITOR				C 666	NCS31HJ-101X	C CAPACITOR		
	C 593	NEAD1CM-476X	E CAPACITOR				C 667	NCB31HK-103X	C CAPACITOR		
	C 594	NCS31HJ-102X	C CAPACITOR				C 668	NEAD0JM-476X	E CAPACITOR		
	C 595	NCB31CK-473X	C CAPACITOR				C 669	NCB31HK-103X	C CAPACITOR		
	C 596	NCS31HJ-101X	C CAPACITOR				C 671	NEAD0JM-476X	E CAPACITOR		
	C 597	NCS31HJ-102X	C CAPACITOR				C 672	NCB31CK-104X	C CAPACITOR		
	C 598	NCS31HJ-102X	C CAPACITOR				C 673	NCS31HJ-101X	C CAPACITOR		
	C 599	QERF1AM-336Z	E CAPACITOR	33MF 20% 10V			C 682	NEAD1CM-106X	E CAPACITOR		
	C 601	NEAD0JM-476X	E CAPACITOR				C 683	NCB31CK-104X	C CAPACITOR		
	C 602	NCB31HK-103X	C CAPACITOR				C 684	NEAD1CM-476X	E CAPACITOR		
	C 603	NEAD0JM-107X	E CAPACITOR				C 685	NCB31CK-473X	C CAPACITOR		
	C 604	NCB31HK-103X	C CAPACITOR				C 686	NCB31CK-473X	C CAPACITOR		
	C 605	NCB31HK-682X	C CAPACITOR				C 687	NCB31CK-473X	C CAPACITOR		
	C 606	NEAD0JM-476X	E CAPACITOR				C 688	NCB31CK-473X	C CAPACITOR		
	C 607	NCB31HK-103X	C CAPACITOR				C 689	NEAD1CM-476X	E CAPACITOR		
	C 608	NCB31CK-104X	C CAPACITOR				C 690	NBE20JM-106X	TS E CAPACITOR		
	C 609	NCB31CK-104X	C CAPACITOR				CN501	QGB2027L1-22X	CONNECTOR		
	C 610	NDC31HJ-5R0X	C CAPACITOR				CN601	QGF0526F1-22X	FPC CONNE		
	C 611	NCS31HJ-680X	C CAPACITOR				D 501	1SS355-X	DIODE		
	C 612	NCB31HK-103X	C CAPACITOR				D 502	1SS355-X	DIODE		
	C 613	NCB31HK-103X	C CAPACITOR				D 503	1SS355-X	DIODE		
	C 614	NCB31HK-103X	C CAPACITOR				D 504	1SS355-X	DIODE		
	C 621	NCB31HK-103X	C CAPACITOR				D 505	1SS355-X	DIODE		
	C 622	NEAD0JM-476X	E CAPACITOR				D 506	CRS03-W	SB DIODE		
	C 623	NCS31HJ-470X	C CAPACITOR				D 682	1SR154-400-X	DIODE		
	C 624	NCB31HK-153X	C CAPACITOR				IC501	UPD784225GK-623	IC		
	C 625	NCB31HK-103X	C CAPACITOR				IC502	BR24C01AFV-W-X	IC		
	C 626	NCB31HK-272X	C CAPACITOR				IC503	HD74HCT126T-X	IC		

■ Electrical parts list (Sub board) Block No. 02

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	IC504	NJU7241F33-X	IC				R 542	NRSA63J-101X	MG RESISTOR		
	IC571	PCM1716E-X	IC				R 543	NRSA63J-0R0X	MG RESISTOR		
	IC572	NJM4565V-X	IC				R 544	NRSA63J-102X	MG RESISTOR		
	IC601	TA2157FN-X	IC				R 545	NRSA63J-103X	MG RESISTOR		
	IC621	TC94A14FA	IC				R 546	NRSA63J-104X	MG RESISTOR		
	IC651	NJU7241F25-X	IC				R 547	NRSA63J-472X	MG RESISTOR		
	IC652	TC94A02F-005	IC				R 548	NRSA63J-472X	MG RESISTOR		
	IC653	W24L010AJ-12-X	IC				R 549	NRSA63J-472X	MG RESISTOR		
	IC681	LA6579H-X	IC				R 550	NRSA63J-472X	MG RESISTOR		
	L 501	NQL114K-470X	INDUCTOR				R 551	NRSA63J-104X	MG RESISTOR		
	L 502	NQL114K-470X	INDUCTOR				R 552	NRSA63J-104X	MG RESISTOR		
	L 571	NQL114K-470X	INDUCTOR				R 553	NRSA63J-183X	MG RESISTOR		
	L 572	NQL114K-470X	INDUCTOR				R 554	NRSA63J-333X	MG RESISTOR		
	L 621	NQL114K-470X	INDUCTOR				R 555	NRSA63J-101X	MG RESISTOR		
	L 622	NQL114K-470X	INDUCTOR				R 556	NRSA63J-0R0X	MG RESISTOR		
	L 623	NQL114K-470X	INDUCTOR				R 557	NRSA63J-104X	MG RESISTOR		
	L 651	NQL114K-470X	INDUCTOR				R 558	NRSA63J-104X	MG RESISTOR		
	L 652	NQL114K-470X	INDUCTOR				R 559	NRSA63J-0R0X	MG RESISTOR		
	L 653	NQL114K-470X	INDUCTOR				R 560	NRSA63J-101X	MG RESISTOR		
	Q 501	UN2111-X	TRANSISTOR				R 561	NRSA63J-104X	MG RESISTOR		
	Q 502	UN2211-X	TRANSISTOR				R 562	NRSA63J-392X	MG RESISTOR		
	Q 571	UN2111-X	TRANSISTOR				R 563	NRSA63J-682X	MG RESISTOR		
	Q 572	UN2211-X	TRANSISTOR				R 567	NRSA63J-101X	MG RESISTOR		
	Q 601	2SB1132/QR/-X	TRANSISTOR				R 568	NRSA63J-102X	MG RESISTOR		
	Q 681	2SB1184/QR/-X	TRANSISTOR				R 569	NRSA63J-102X	MG RESISTOR		
	R 501	NRSA63J-822X	MG RESISTOR				R 570	NRSA63J-102X	MG RESISTOR		
	R 502	NRSA63J-271X	MG RESISTOR				R 572	NRSA63J-473X	MG RESISTOR		
	R 503	NRSA63J-103X	MG RESISTOR				R 573	NRSA63J-473X	MG RESISTOR		
	R 504	NRSA63J-271X	MG RESISTOR				R 574	NRSA63J-470X	MG RESISTOR		
	R 505	NRSA63J-102X	MG RESISTOR				R 581	NRSA63J-203X	MG RESISTOR		
	R 506	NRSA63J-102X	MG RESISTOR				R 582	NRSA63J-203X	MG RESISTOR		
	R 507	NRSA63J-101X	MG RESISTOR				R 583	NRSA63J-123X	MG RESISTOR		
	R 508	NRSA63J-101X	MG RESISTOR				R 584	NRSA63J-123X	MG RESISTOR		
	R 509	NRSA63J-101X	MG RESISTOR				R 585	NRSA63J-303X	MG RESISTOR		
	R 510	NRSA63J-101X	MG RESISTOR				R 586	NRSA63J-303X	MG RESISTOR		
	R 511	NRSA63J-101X	MG RESISTOR				R 587	NRSA63J-473X	MG RESISTOR		
	R 512	NRSA63J-101X	MG RESISTOR				R 588	NRSA63J-473X	MG RESISTOR		
	R 513	NRSA63J-101X	MG RESISTOR				R 589	NRSA63J-103X	MG RESISTOR		
	R 514	NRSA63J-102X	MG RESISTOR				R 590	NRSA63J-103X	MG RESISTOR		
	R 515	NRSA63J-101X	MG RESISTOR				R 591	NRSA63J-103X	MG RESISTOR		
	R 516	NRSA63J-101X	MG RESISTOR				R 592	NRSA63J-103X	MG RESISTOR		
	R 517	NRSA63J-101X	MG RESISTOR				R 593	NRSA63J-4R7X	MG RESISTOR		
	R 518	NRSA63J-472X	MG RESISTOR				R 601	NRSA63J-823X	MG RESISTOR		
	R 519	NRSA63J-101X	MG RESISTOR				R 602	NRSA63J-823X	MG RESISTOR		
	R 520	NRSA63J-101X	MG RESISTOR				R 603	NRSA63J-334X	MG RESISTOR		
	R 521	NRSA63J-101X	MG RESISTOR				R 604	NRSA63J-334X	MG RESISTOR		
	R 522	NRSA63J-101X	MG RESISTOR				R 605	NRSA63J-220X	MG RESISTOR		
	R 523	NRSA63J-101X	MG RESISTOR				R 606	NRSA63J-220X	MG RESISTOR		
	R 524	NRSA63J-101X	MG RESISTOR				R 607	NRSA63J-823X	MG RESISTOR		
	R 525	NRSA63J-101X	MG RESISTOR				R 608	NRSA63J-821X	MG RESISTOR		
	R 527	NRSA63J-104X	MG RESISTOR				R 609	NRSA63J-563X	MG RESISTOR		
	R 528	NRSA63J-473X	MG RESISTOR				R 610	NRSA63J-101X	MG RESISTOR		
	R 530	NRSA63J-473X	MG RESISTOR				R 611	NRSA63J-103X	MG RESISTOR		
	R 531	NRSA63J-473X	MG RESISTOR				R 612	NRSA63J-202X	MG RESISTOR		
	R 533	NRSA63J-473X	MG RESISTOR				R 613	NRSA63J-102X	MG RESISTOR		
	R 534	NRSA63J-473X	MG RESISTOR				R 614	NRSA63J-153X	MG RESISTOR		
	R 535	NRSA63J-473X	MG RESISTOR				R 615	NRSA63J-151X	MG RESISTOR		
	R 536	NRSA63J-102X	MG RESISTOR				R 616	NRSA63J-103X	MG RESISTOR		
	R 537	NRSA63J-473X	MG RESISTOR				R 621	NRSA63J-470X	MG RESISTOR		
	R 538	NRSA63J-473X	MG RESISTOR				R 622	NRSA63J-470X	MG RESISTOR		
	R 539	NRSA63J-102X	MG RESISTOR				R 623	NRSA63J-470X	MG RESISTOR		
	R 540	NRSA63J-473X	MG RESISTOR				R 624	NRSA63J-562X	MG RESISTOR		
	R 541	NRSA63J-102X	MG RESISTOR				R 625	NRSA63J-473X	MG RESISTOR		

## ■ Electrical parts list (Sub board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area
	R 626	NRSA63J-474X	MG RESISTOR		
	R 627	NRSA63J-103X	MG RESISTOR		
	R 628	NRSA63J-225X	MG RESISTOR		
	R 629	NRSA63J-103X	MG RESISTOR		
	R 630	NRSA63J-101X	MG RESISTOR		
	R 631	NRSA63J-101X	MG RESISTOR		
	R 632	NRSA63J-0R0X	MG RESISTOR		
	R 633	NRSA63J-0R0X	MG RESISTOR		
	R 634	NRSA63J-0R0X	MG RESISTOR		
	R 635	NRSA63J-101X	MG RESISTOR		
	R 636	NRSA63J-101X	MG RESISTOR		
	R 637	NRSA63J-105X	MG RESISTOR		
	R 638	NRSA63J-472X	MG RESISTOR		
	R 639	NRSA63J-472X	MG RESISTOR		
	R 640	NRSA63J-472X	MG RESISTOR		
	R 641	NRSA63J-472X	MG RESISTOR		
	R 642	NRSA63J-103X	MG RESISTOR		
	R 651	NRSA63J-104X	MG RESISTOR		
	R 652	NRSA63J-474X	MG RESISTOR		
	R 653	NRSA63J-474X	MG RESISTOR		
	R 654	NRSA63J-470X	MG RESISTOR		
	R 655	NRSA63J-0R0X	MG RESISTOR		
	R 656	NRSA63J-0R0X	MG RESISTOR		
	R 657	NRSA63J-0R0X	MG RESISTOR		
	R 658	NRSA63J-474X	MG RESISTOR		
	R 659	NRSA63J-474X	MG RESISTOR		
	R 660	NRSA63J-474X	MG RESISTOR		
	R 661	NRSA63J-474X	MG RESISTOR		
	R 662	NRSA63J-474X	MG RESISTOR		
	R 663	NRSA63J-474X	MG RESISTOR		
	R 664	NRSA63J-474X	MG RESISTOR		
	R 665	NRSA63J-474X	MG RESISTOR		
	R 666	NRSA63J-474X	MG RESISTOR		
	R 667	NRSA63J-474X	MG RESISTOR		
	R 668	NRSA63J-0R0X	MG RESISTOR		
	R 669	NRSA63J-474X	MG RESISTOR		
	R 670	NRSA63J-474X	MG RESISTOR		
	R 671	NRSA63J-474X	MG RESISTOR		
	R 672	NRSA63J-474X	MG RESISTOR		
	R 673	NRSA63J-474X	MG RESISTOR		
	R 674	NRSA63J-331X	MG RESISTOR		
	R 675	NRSA63J-331X	MG RESISTOR		
	R 677	NRSA63J-105X	MG RESISTOR		
	R 681	NRSA63J-682X	MG RESISTOR		
	R 682	NRSA63J-682X	MG RESISTOR		
	R 683	NRSA63J-472X	MG RESISTOR		
	R 684	NRSA63J-153X	MG RESISTOR		
	R 685	NRSA63J-333X	MG RESISTOR		
	R 686	NRSA63J-822X	MG RESISTOR		
	R 687	NRSA63J-0R0X	MG RESISTOR		
	R 688	NRSA63J-303X	MG RESISTOR		
	R 689	NRSA63J-223X	MG RESISTOR		
	TH501	NAD0022-103X	N THERMISTOR		
	X 501	NAX0430-001X	CRYSTAL		
	X 571	NAX0375-001X	CRYSTAL		

## ■ Electrical parts list (Front board)

Block No. 03

△	Item	Parts number	Parts name	Remarks	Area
	C 601	NBE20JM-475X	TS E CAPACITOR		
	C 602	NCB31HK-103X	C CAPACITOR		
	C 603	NCS31HJ-221X	C CAPACITOR		
	C 604	NCB31AK-224X	C CAPACITOR		
	C 605	NCB31AK-224X	C CAPACITOR		
	C 606	NCB31EK-104X	C CAPACITOR		
	CN601	QNZ0006-001	CAR CONNECTOR		
	D 601	SML-310LT/MN/-X	LED		
	D 602	SML-310VT/JK/-X	LED		
	D 603	SML-310VT/JK/-X	LED		
	D 604	SML-310VT/JK/-X	LED		
	D 605	SML-310VT/JK/-X	LED		
	D 606	SML-310VT/JK/-X	LED		
	D 607	SML-310VT/JK/-X	LED		
	D 608	SML-310VT/JK/-X	LED		
	D 609	SML-310VT/JK/-X	LED		
	D 610	CL-190UB-X-X	LED		
	D 611	CL-190UB-X-X	LED		
	D 612	SML-310VT/JK/-X	LED		
	D 613	SML-310VT/JK/-X	LED		
	D 614	SML-310VT/JK/-X	LED		
	D 615	SML-310VT/JK/-X	LED		
	D 616	SML-310VT/JK/-X	LED		
	D 617	SML-310VT/JK/-X	LED		
	D 618	SML-310VT/JK/-X	LED		
	D 619	SML-310VT/JK/-X	LED		
	D 620	SML-310VT/JK/-X	LED		
	D 621	SML-310VT/JK/-X	LED		
	D 622	SML-310VT/JK/-X	LED		
	D 623	SML-310VT/JK/-X	LED		
	D 624	SML-310VT/JK/-X	LED		
	D 625	SML-310VT/JK/-X	LED		
	D 641	NSPW310BS/BS/	LED		
	D 642	NSPW310BS/BS/	LED		
	D 643	NSPW310BS/BS/	LED		
	D 651	UDZS5.1B-X	ZENER DIODE		
	D 652	1SS355-X	DIODE		
	D 653	1SS355-X	DIODE		
	D 654	1SS355-X	DIODE		
	D 655	1SS355-X	DIODE		
	D 656	1SS355-X	DIODE		
	D 657	1SS355-X	DIODE		
	D 658	1SS355-X	DIODE		
	D 659	UDZS5.6B-X	ZENER DIODE		
	EN601	QSW0863-002	ROTARY ENCODER		
	IC601	LC75873NW	IC		
	IC602	GP1UM261XK	IR DETECT UNIT		
	Q 641	2SB815/7/-X	TRANSISTOR		
	Q 642	UN2211-X	TRANSISTOR		
	R 601	NRSA63J-821X	MG RESISTOR		
	R 602	NRSA63J-821X	MG RESISTOR		
	R 603	NRSA63J-122X	MG RESISTOR		
	R 604	NRSA63J-182X	MG RESISTOR		
	R 605	NRSA63J-272X	MG RESISTOR		
	R 606	NRSA63J-392X	MG RESISTOR		
	R 607	NRSA63J-821X	MG RESISTOR		
	R 608	NRSA63J-821X	MG RESISTOR		
	R 609	NRSA63J-122X	MG RESISTOR		
	R 610	NRSA63J-182X	MG RESISTOR		
	R 611	NRSA63J-272X	MG RESISTOR		
	R 612	NRSA63J-821X	MG RESISTOR		
	R 613	NRSA63J-821X	MG RESISTOR		
	R 614	NRSA63J-122X	MG RESISTOR		

△	Item	Parts number	Parts name	Remarks	Area
	R 620	NRS181J-821X	MG RESISTOR		
	R 621	NRSA02J-122X	MG RESISTOR		
	R 622	NRSA02J-122X	MG RESISTOR		
	R 623	NRSA02J-561X	MG RESISTOR		
	R 624	NRSA02J-561X	MG RESISTOR		
	R 625	NRSA02J-561X	MG RESISTOR		
	R 626	NRSA02J-561X	MG RESISTOR		
	R 627	NRSA02J-511X	MG RESISTOR		
	R 628	NRSA02J-511X	MG RESISTOR		
	R 629	NRSA02J-561X	MG RESISTOR		
	R 630	NRSA02J-561X	MG RESISTOR		
	R 631	NRSA02J-561X	MG RESISTOR		
	R 632	NRSA02J-561X	MG RESISTOR		
	R 633	NRSA02J-122X	MG RESISTOR		
	R 634	NRSA02J-122X	MG RESISTOR		
	R 635	NRSA02J-122X	MG RESISTOR		
	R 636	NRSA02J-122X	MG RESISTOR		
	R 637	NRSA02J-561X	MG RESISTOR		
	R 638	NRSA02J-561X	MG RESISTOR		
	R 639	NRSA02J-182X	MG RESISTOR		
	R 640	NRSA02J-182X	MG RESISTOR		
	R 641	NRS181J-431X	MG RESISTOR		
	R 642	NRS181J-431X	MG RESISTOR		
	R 643	NRS181J-431X	MG RESISTOR		
	R 644	NRS181J-471X	MG RESISTOR		
	R 645	NRSA63J-473X	MG RESISTOR		
	R 646	NRS181J-102X	MG RESISTOR		
	R 650	NRSA63J-101X	MG RESISTOR		
	R 651	NRSA63J-473X	MG RESISTOR		
	R 652	NRSA63J-473X	MG RESISTOR		
	R 653	NRS181J-102X	MG RESISTOR		
	R 654	NRSA63J-221X	MG RESISTOR		
	R 655	NRSA63J-394X	MG RESISTOR		
	R 656	NRSA63J-334X	MG RESISTOR		
	R 657	NRSA63J-103X	MG RESISTOR		
	R 658	NRSA63J-103X	MG RESISTOR		
	R 659	NRSA63J-103X	MG RESISTOR		
	R 660	NRSA63J-103X	MG RESISTOR		
	R 661	NRSA63J-470X	MG RESISTOR		
	R 662	NRSA63J-332X	MG RESISTOR		
	R 663	NRSA63J-332X	MG RESISTOR		
	R 664	NRSA63J-332X	MG RESISTOR		
	S 601	NSW0066-001X	TACT SWITCH		
	S 602	NSW0066-001X	TACT SWITCH		
	S 603	NSW0066-001X	TACT SWITCH		
	S 604	NSW0066-001X	TACT SWITCH		
	S 605	NSW0066-001X	TACT SWITCH		
	S 606	NSW0066-001X	TACT SWITCH		
	S 607	NSW0066-001X	TACT SWITCH		
	S 608	NSW0066-001X	TACT SWITCH		
	S 609	NSW0066-001X	TACT SWITCH		
	S 610	NSW0066-001X	TACT SWITCH		
	S 611	NSW0066-001X	TACT SWITCH		
	S 612	NSW0066-001X	TACT SWITCH		
	S 613	NSW0066-001X	TACT SWITCH		
	S 614	NSW0066-001X	TACT SWITCH		
	S 615	NSW0066-001X	TACT SWITCH		
	S 616	NSW0066-001X	TACT SWITCH		
	S 617	NSW0066-001X	TACT SWITCH		



**< M E M O >**

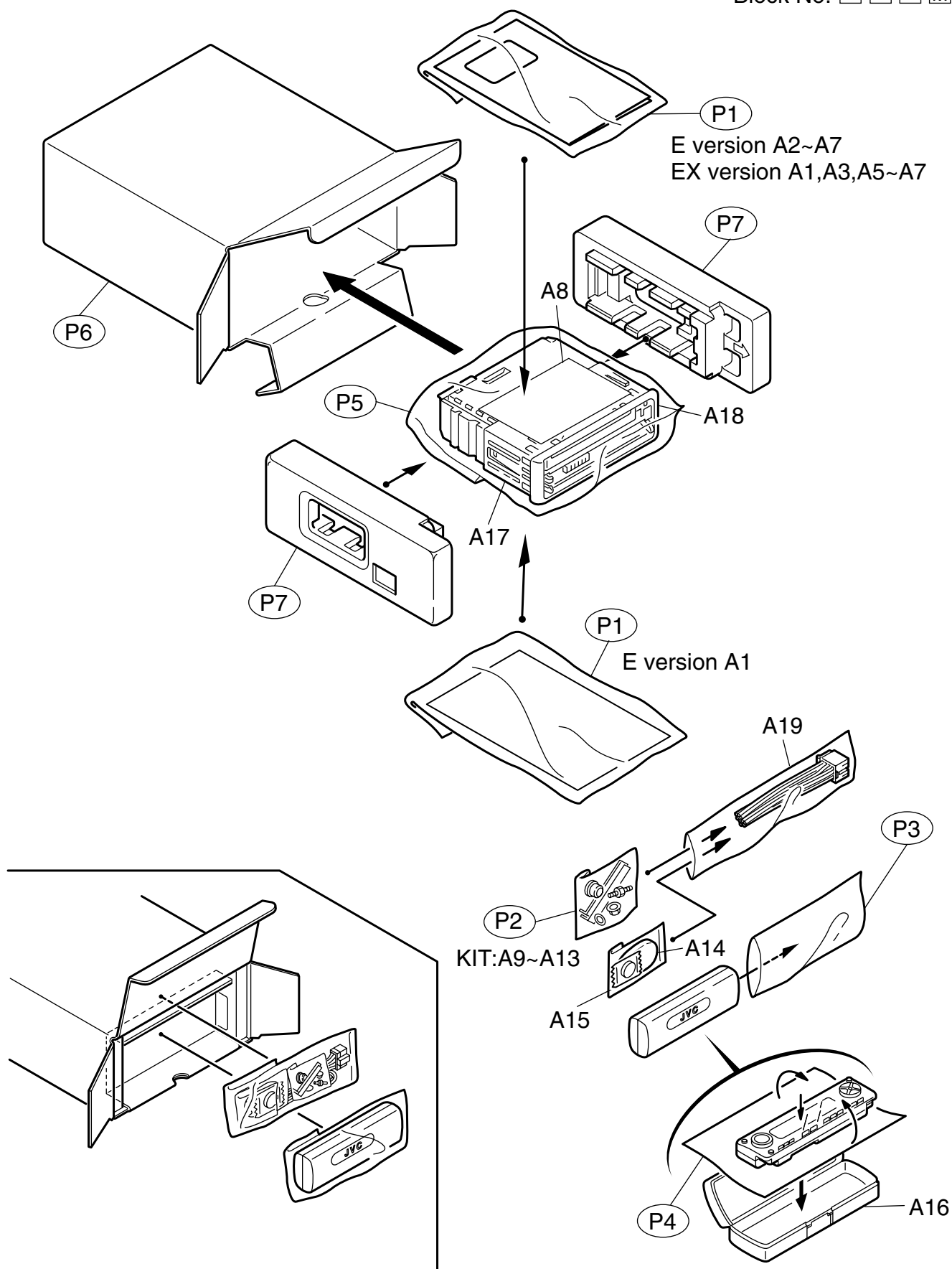
# Packing materials and accessories parts list

Block No. 

M	3	M	M
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Block No. 

M	5	M	M
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## ■ Parts list (Packing)

Block No. M3MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	FSPG4002-001	POLY BAG	1	INST. BOOK	EX
		FSPG4002-001	POLY BAG	2	INST. BOOK	E
	P 2	QPA00801205	POLY BAG	1	KIT	
	P 3	QPA01003003	POLY BAG	1	HARD CASE	
	P 4	FSYH4036-068	SHEET	1		
	P 5	QPC03004315P	POLY BAG	1	SET	
	P 6	GE30407-031A	CARTON	1		
	P 7	GE10036-001A	ESP CUSHION	2		

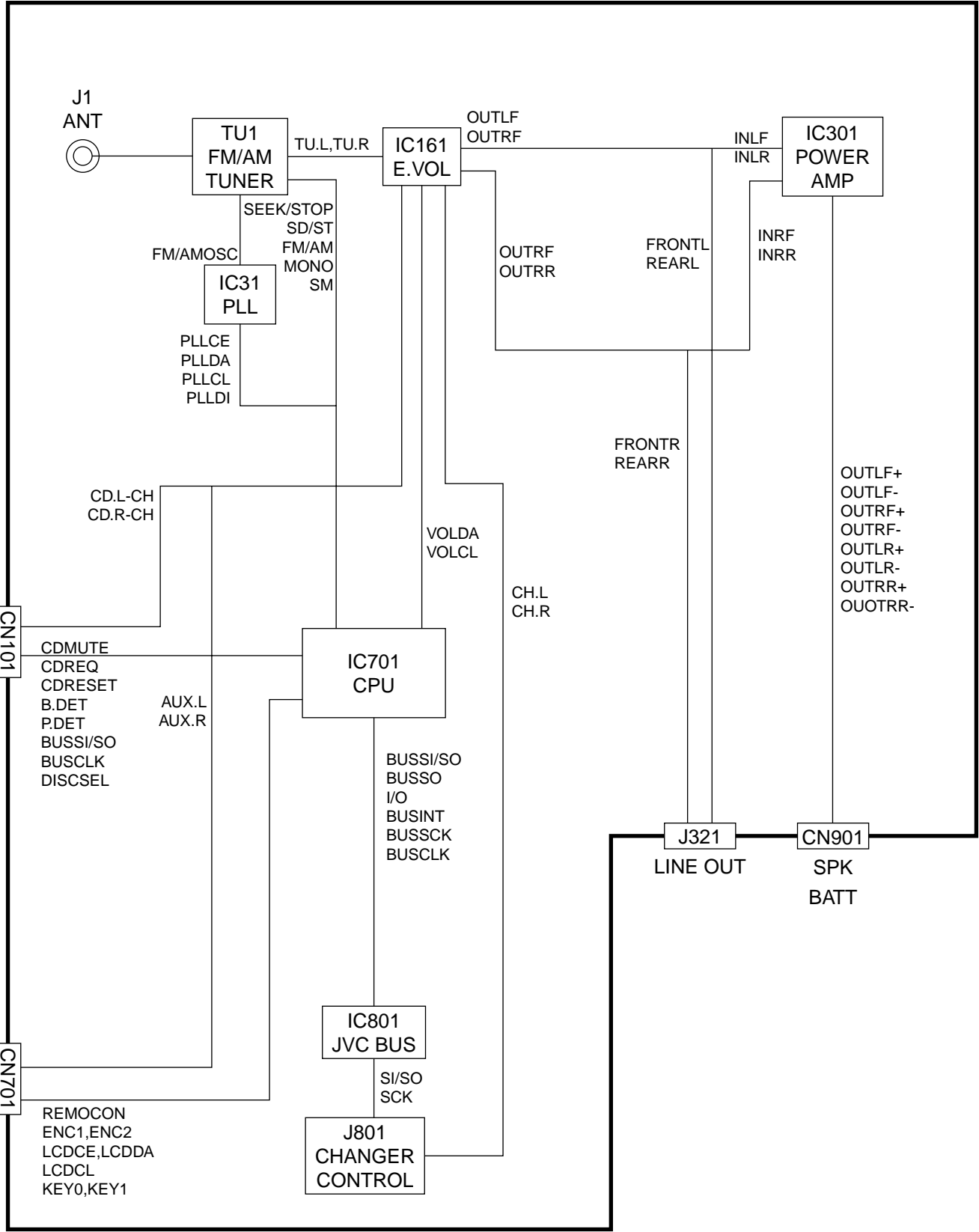
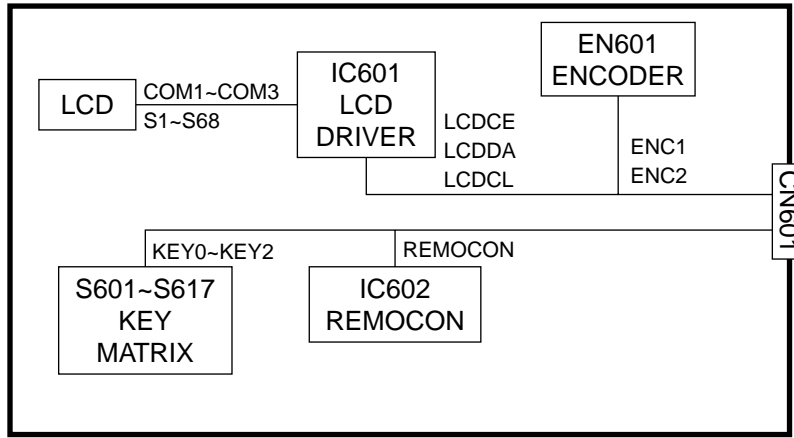
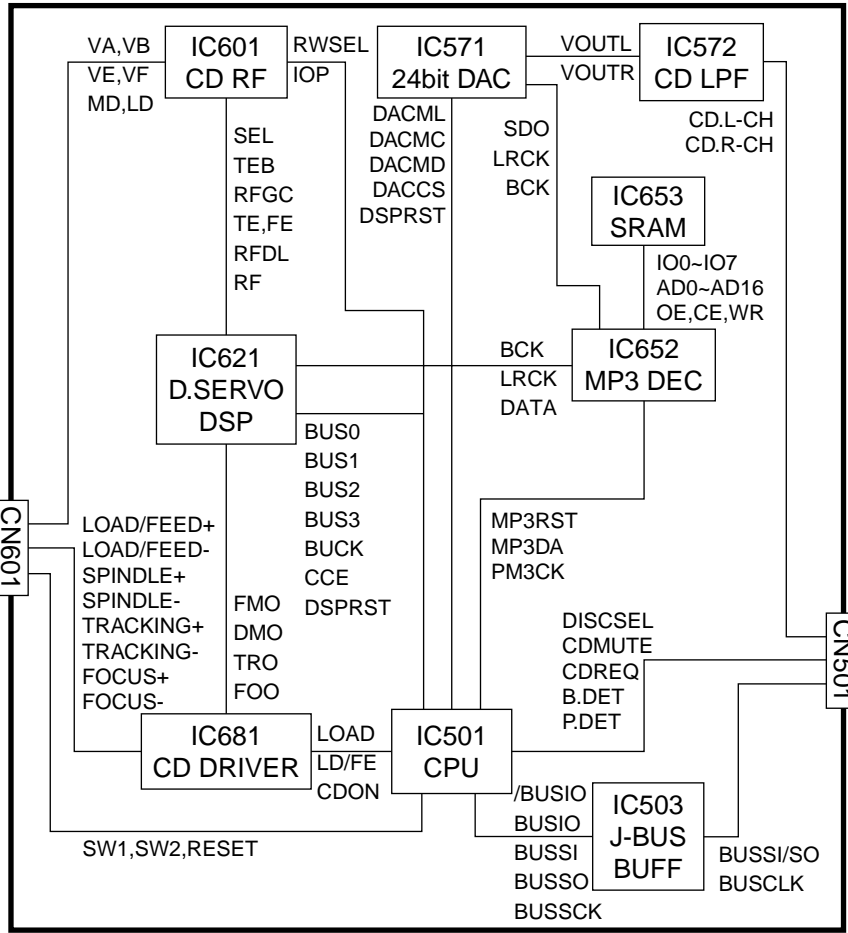
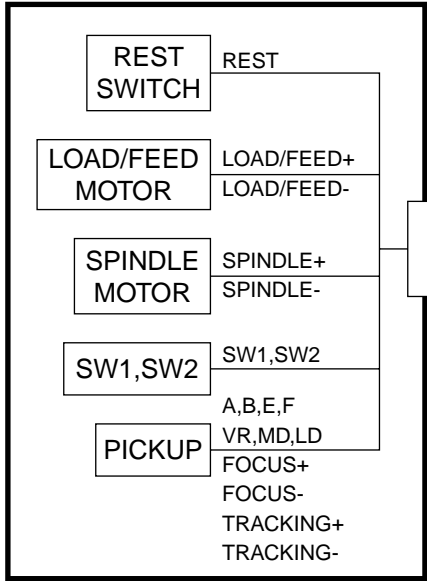
## ■ Parts list (Accessories)

Block No. M5MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	GET0075-001A	INST. BOOK	1	ENG,GER,FRE,DUT	
	A 2	GET0075-002A	INST. BOOK	1	SPA,ITA,SWE,RUS	E
	A 3	GET0075-003A	INSTALL MANUAL	1	ENG,GER,FRE,DUT	
	A 4	GET0075-004A	INSTALL MANUAL	1	SPA,ITA,SWE,RUS	E
	A 5	BT-54013-2	W.CARD	1		
	A 6	VND3046-001	SERIAL TICKET	1		
	A 7	LVT0770-002B	MP3 MANUAL	1		
	A 8	LV40978-001A	CAUTION SHEET	1		
	A 9	VKZ4027-202	PLUG NUT	1		
	A 10	VKH4871-001SS	MOUNT BOLT	1		
	A 11	VKZ4328-001	LOCK NUT	1		
	A 12	WNS5000Z	WASHER	1		
	A 13	GE40130-001A	HOOK	2		
	A 14	RM-RK50	REMOCON	1		
	A 15	-----	LI BATTERY	1		
	A 16	FSJB3001-30C	HARD CASE	1		
	A 17	GE20126-001A	MOUNTING SLEEVE	1		
	A 18	GE20127-001A	TRIM PLATE	1		
	A 19	QAM0176-001	POWER CORD	1		
	KIT	KSFX480K-SCREW1	SCREW PARTS KIT	1	A9-A13	

Block diagram

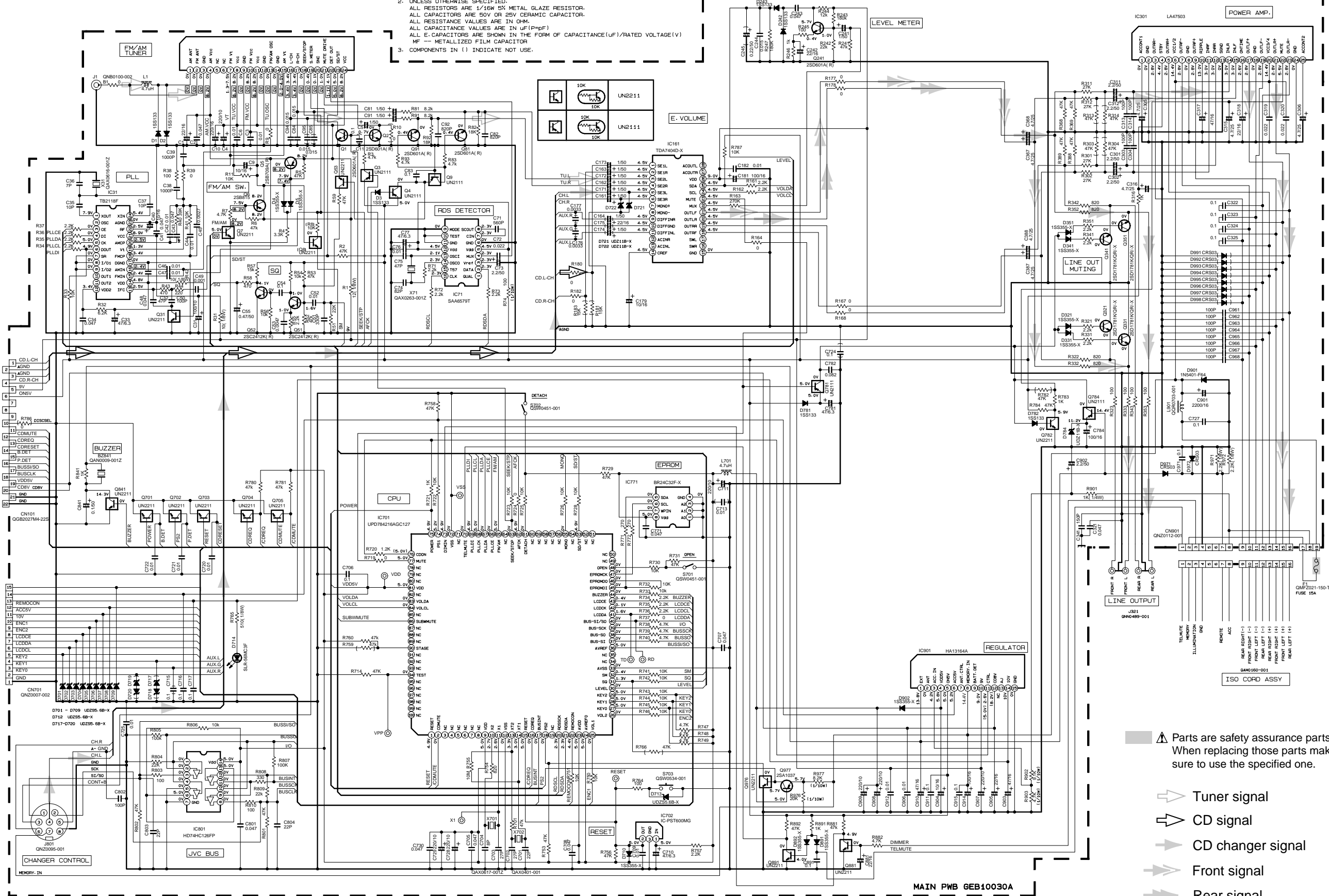
5  
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1



# Standard schematic diagrams

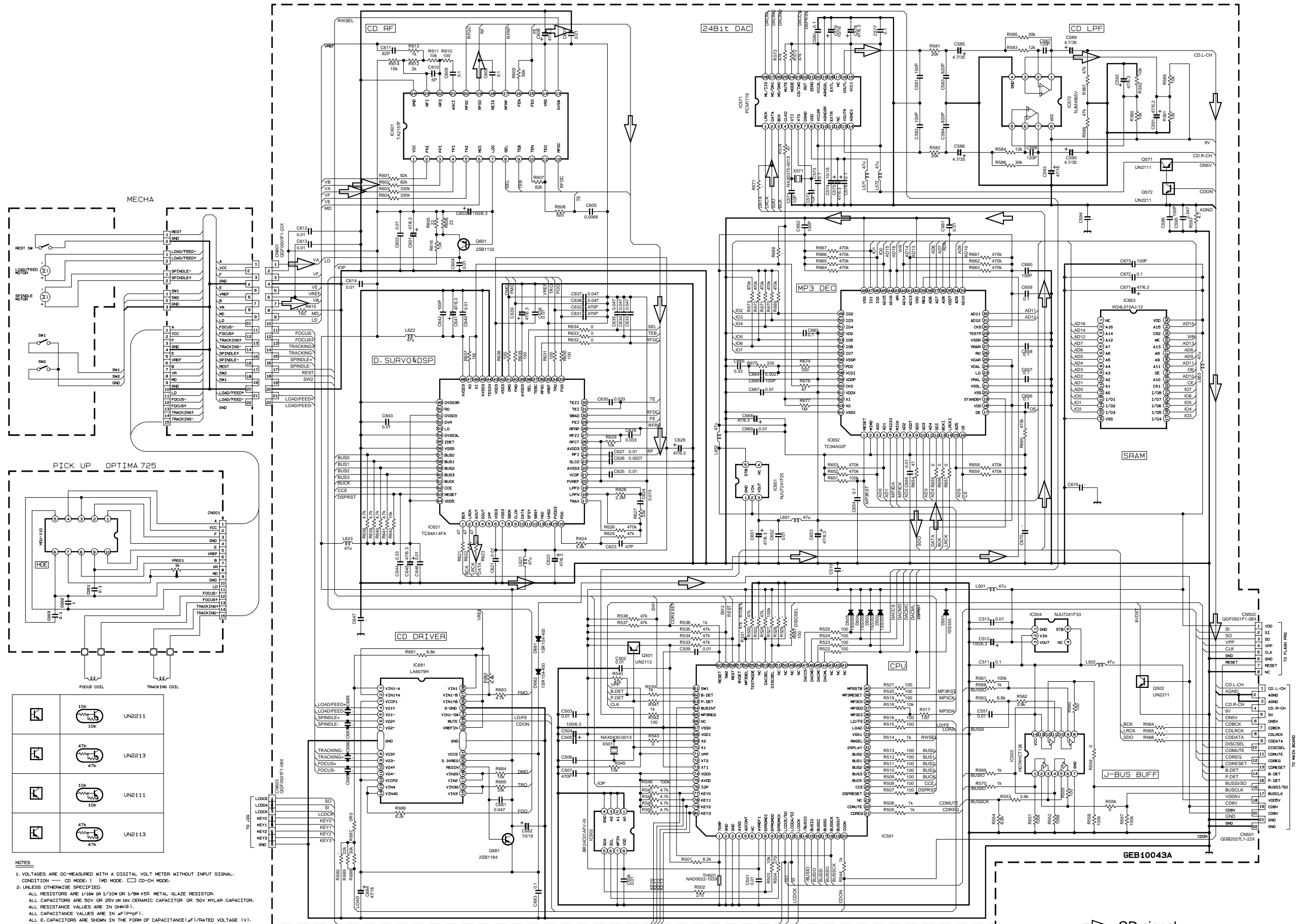
## Receiver & System control section

- NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL CONDITION—FM MODE: AM MODE: ( ) CD MODE.
  2. UNLESS OTHERWISE SPECIFIED:  
ALL RESISTORS ARE 1/16W 5% METAL GLAZE RESISTOR.  
ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR.  
ALL RESISTANCE VALUES ARE IN OHM.  
ALL CAPACITANCE VALUES ARE IN UF(P+P)  
ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(UF)/RATED VOLTAGE(V)  
MF — METALLIZED FILM CAPACITOR
  3. COMPONENTS IN ( ) INDICATE NOT USE.



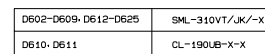
- Parts are safety assurance parts.  
When replacing those parts make  
sure to use the specified one.
- Tuner signal
  - CD signal
  - CD changer signal
  - Front signal
  - Rear signal

■ Mecha control circuit section



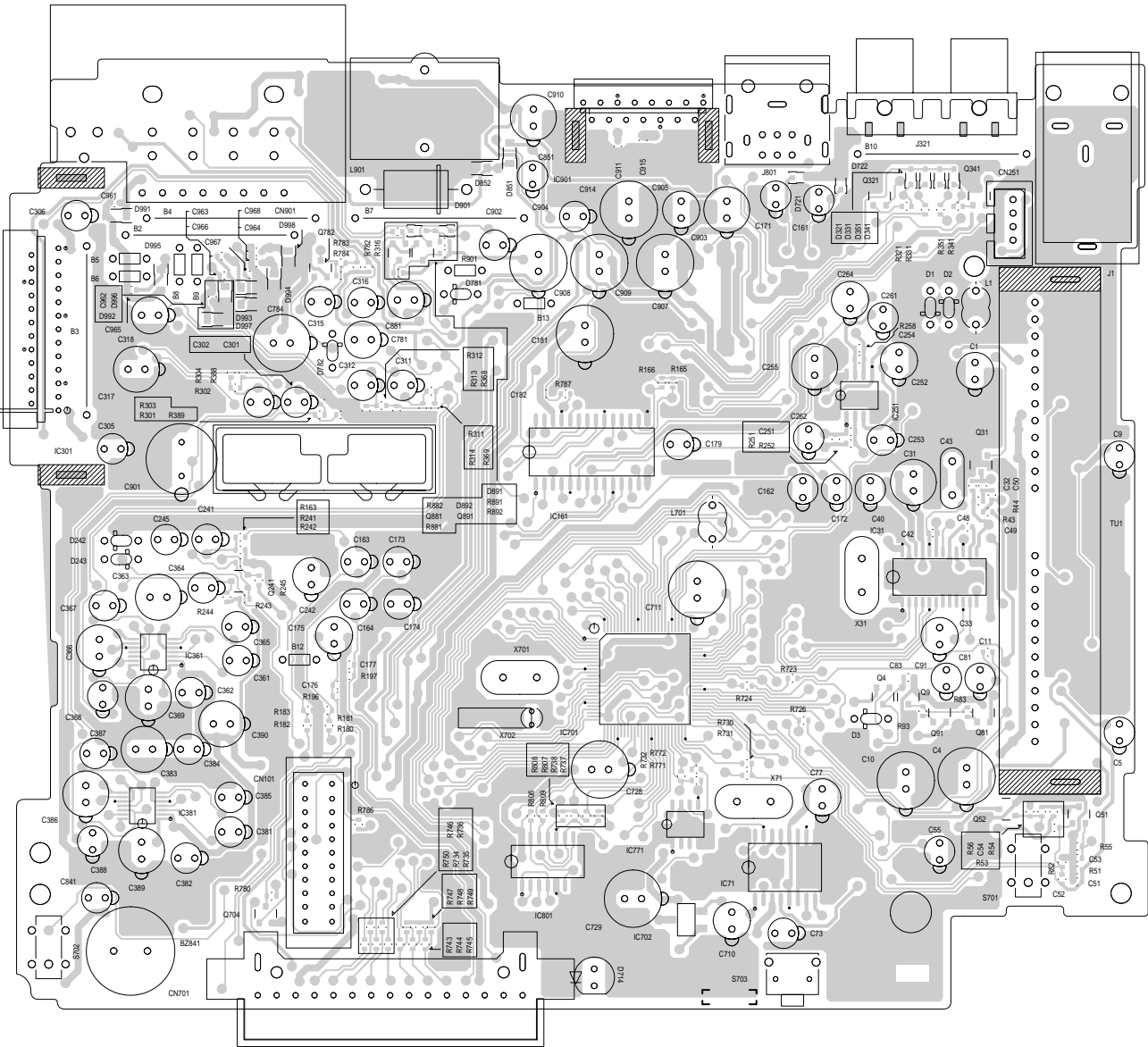
CD signal

1

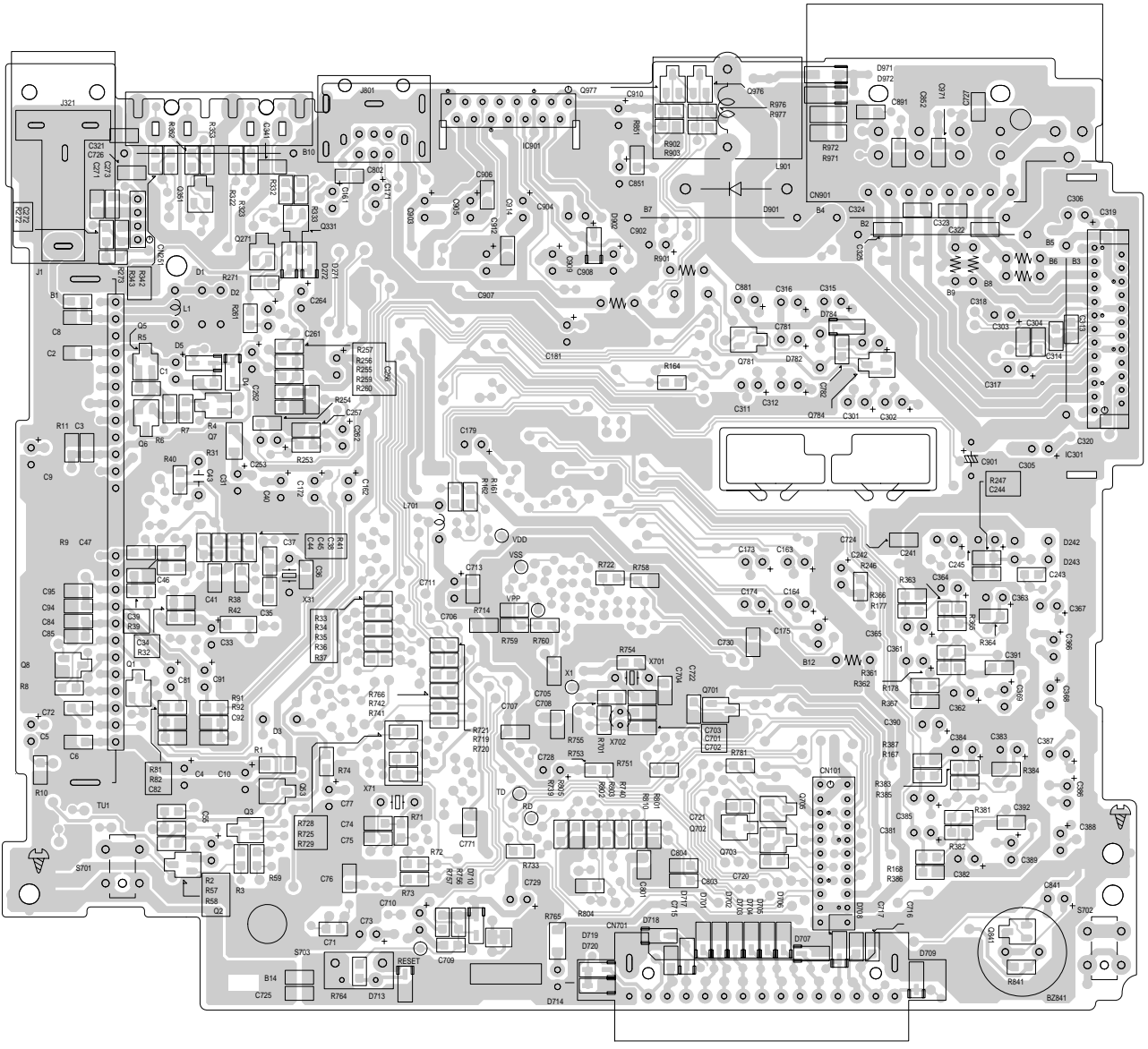


Printed circuit boards

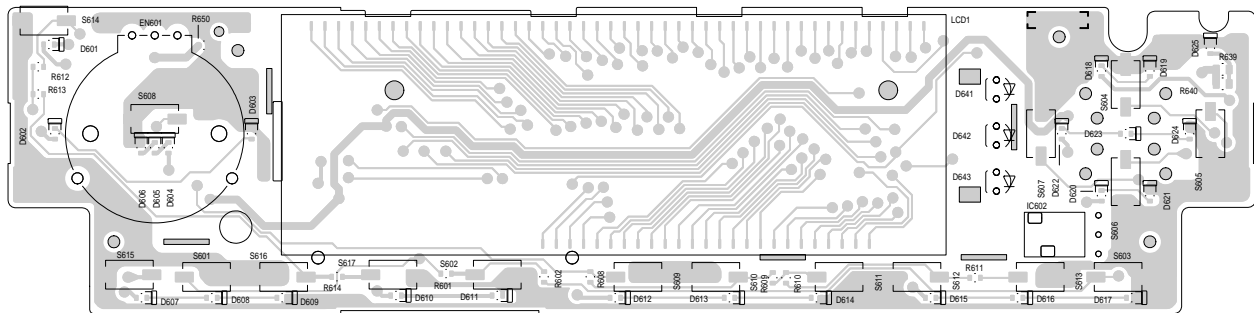
■ Main board (Forward side)



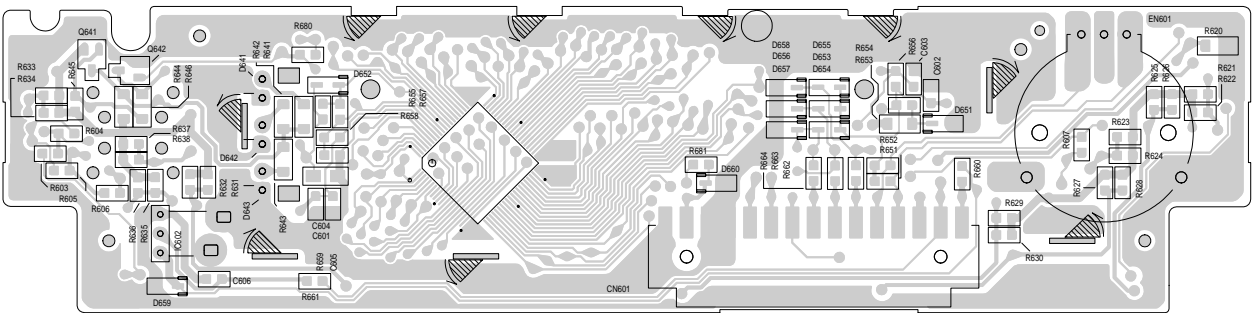
■ Main board (Reverse side)



■ Front board (Forward side)



■ Front board (Reverse side)





### ■ MP3 board (Reverse side)

