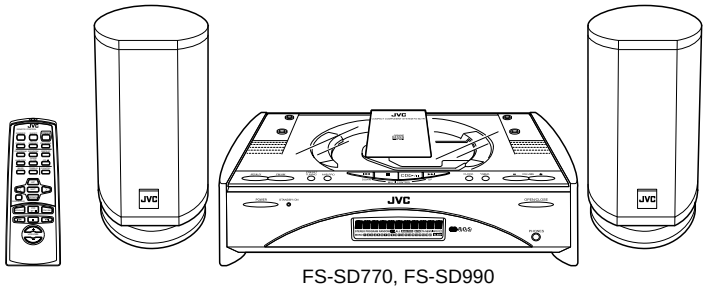
JVC

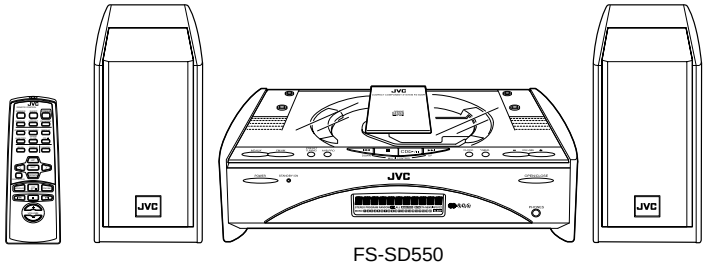
SERVICE MANUAL

COMPACT COMPONENT SYSTEM

FS-SD990 / FS-SD770
FS-SD550



FS-SD770, FS-SD990



FS-SD550

Area Suffix

J ---------- U.S.A
C ---------- Canada

The difference between FS-SD550 and FS-SD770・FS-SD990 is only the speaker systems.
The difference between FS-SD770 and FS-SD990 is cabinets of the speaker.

Contents

These models not have adjustment.

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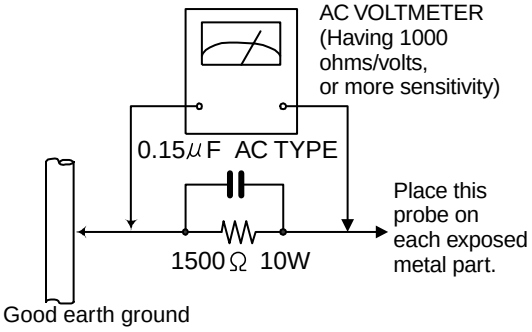
No.20947
Apr. 2001

Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer`s warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to eachexposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. voltage measured Any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

⚠ 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 preforming repair of this system.

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▮) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.
When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (Except the JC version)

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.**

VARNING : 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 laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning,når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL

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

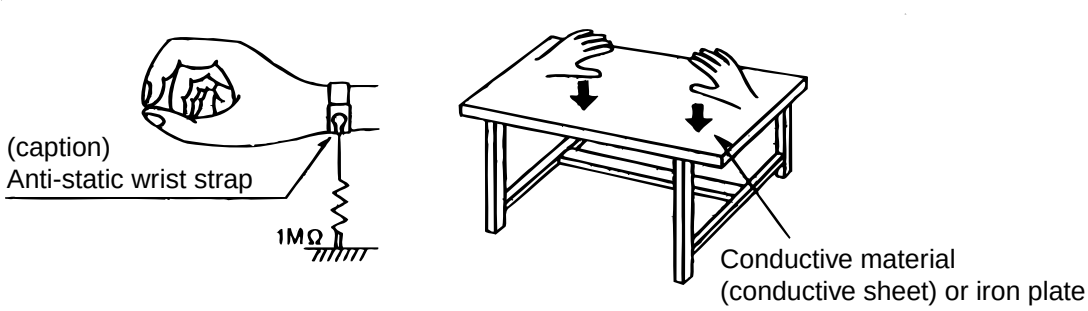
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as DVD players. Be careful to use proper grounding in the area where repairs are being performed.

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

Dismantling and assembling the traverse unit

Notice regarding replacement of optical pickup

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 to the optical pickup or connected devices.

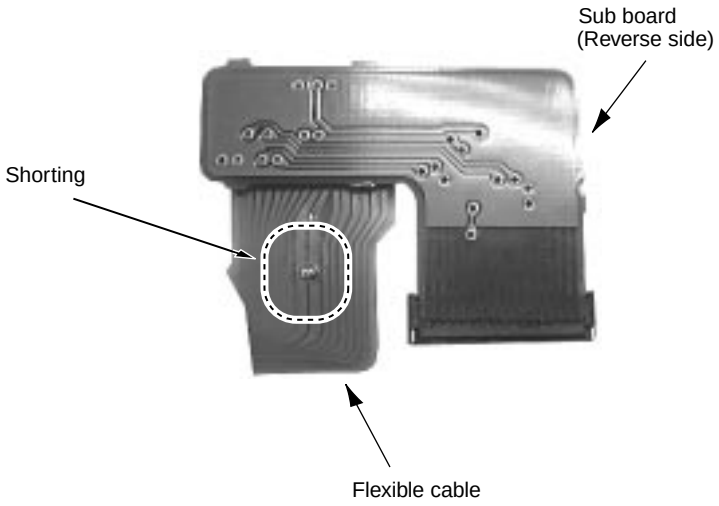
1. Do not touch the area around the laser diode and actuator.

2. Do not check the laser diode using a tester, as the diode may easily be destroyed.

3. It is recommended that you use a grounded soldering iron when shorting or removing the laser diode.
Recommended soldering iron: HAKKO ESD-compatible product

4. Solder the land on the optical pickup's flexible cable.
- Note : Short the land after shorting the terminal on the flexible cable using a clip, etc., when using an ungrounded soldering iron.
- Note : After shorting the laser diode according to the procedure above, remove the solder according to the text explanation.

KSM-900AAH



Disassembly method

<Main body>

■Removing the CD door (See Fig.1)

1. Remove the four screws **A** attaching the CD door on the upper side of the body.

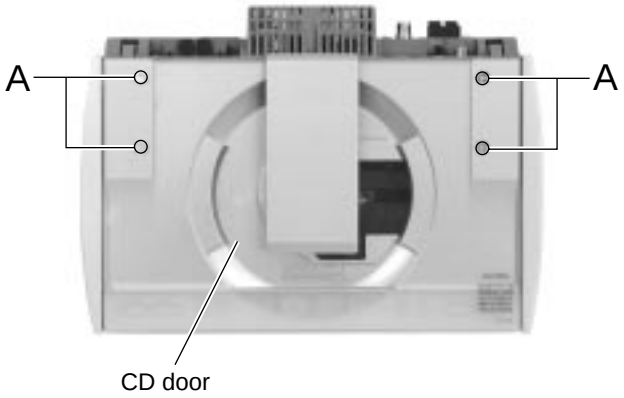


Fig.1

■Removing the rear cover (See Fig.2)

・Piror to performing the following procedure, remove the CD door.

1. Remove the ten screws **B** and the five screws **C** attaching the rear cover on the back of the body.

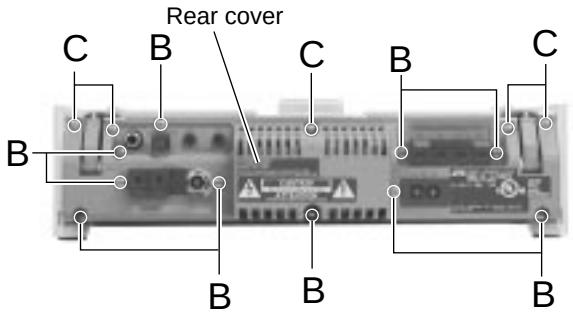


Fig.2

■Removing the right and left covers (See Fig.3)

・Prior to performing the following procedure, remove the CD door, the rear cover.

1. Remove the four screws **D** attaching the side covers on the bottom of the body.

2. Move the left cover backward and remove outward. Also remove the right cover in the same way.

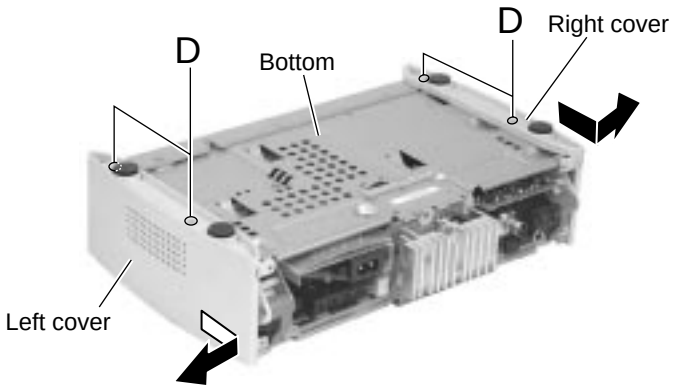


Fig.3

■Removing the front panel assembly (See Fig.4 to 6)

・Prior to performing the following procedure, remove the CD door, the rear cover and the side covers.

1. Remove the three screws **E** on the bottom of the body.

2. Release two joints **a** and two joints **b** on both sides of the body using a screwdriver and remove the front panel assembly toward the front.

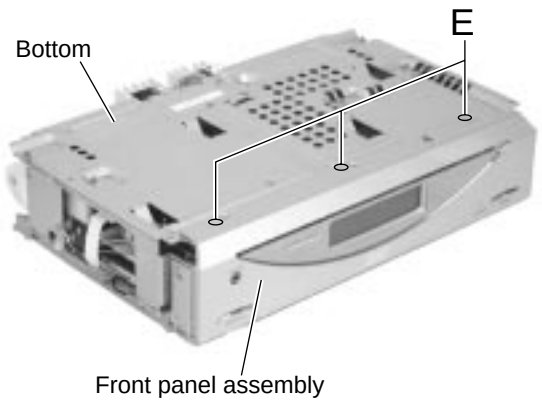


Fig.4

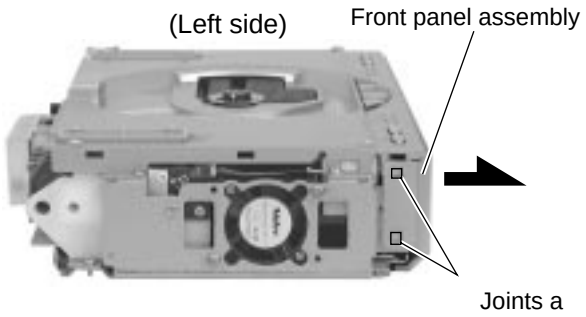


Fig.5

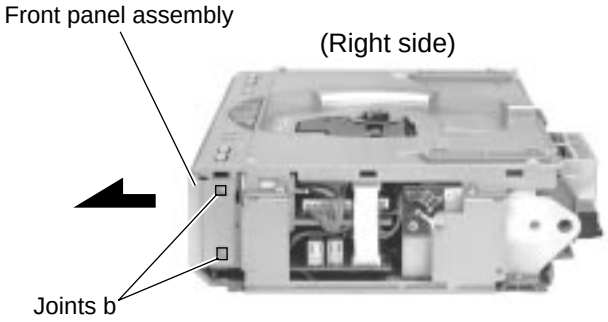


Fig.6

■Removing the CD mechanism base assembly (See Fig.7 to 14)

・Prior to performing the following procedure, remove the CD door, the rear cover, the side covers and the front panel assembly.

1. Disconnect the card wire from connector CN104 and CN105 of the main board in the front part of the body. Disconnect the card wire from CN101 of the main board on the right side, and the wire from CN705 and CN708 of the CD mechanism base assembly respectively.

2. Remove the four screws **F** attaching the CD mechanism base assembly on the upper side of the body. Remove the screw **I** attaching the earth terminal on the right side.

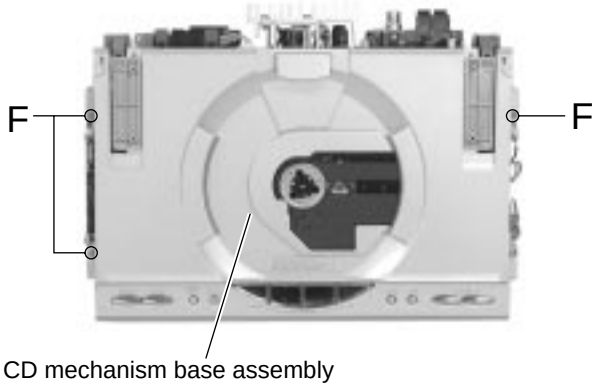


Fig.7

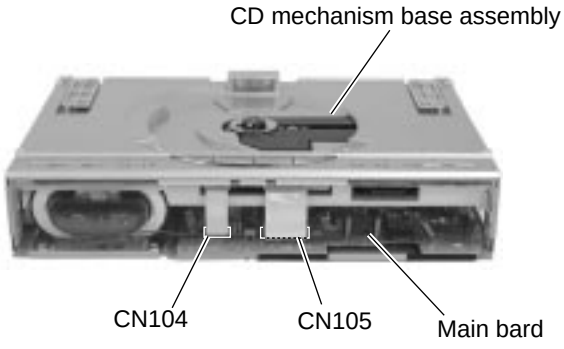


Fig.8

3. Remove the screw **G** attaching the power amplifier board on the back of the body. Disconnect the wire from connector CN301 and pull the power amplifier board fully outward.

4. Raise the right and left door arms by turning the gear **a** in the rear of the power amplifier board.

5. After the CD mechanism base assembly is detached from the door arms, pull the CD mechanism base assembly toward the front and disconnect the wire from connector CN804 on the left side of the door arm board.

6. Pull out the CD mechanism base assembly toward the front.

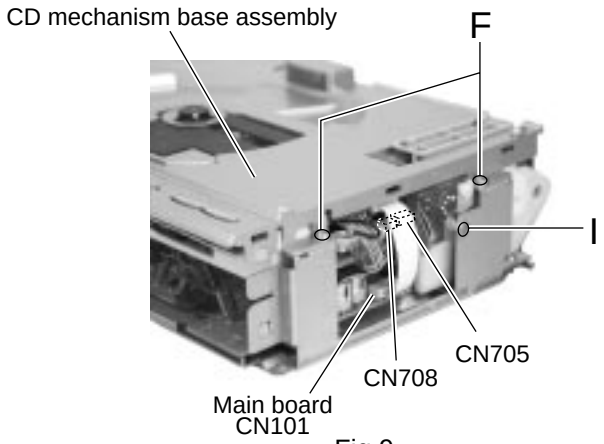


Fig.9

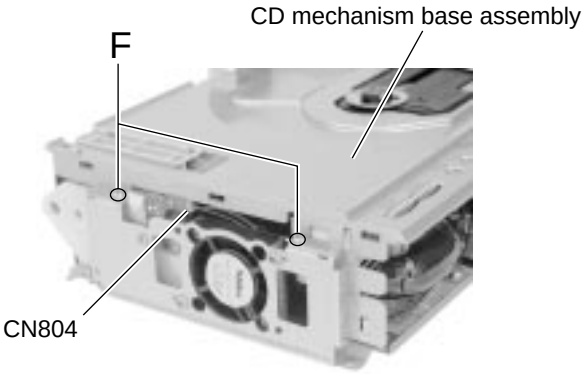


Fig.10

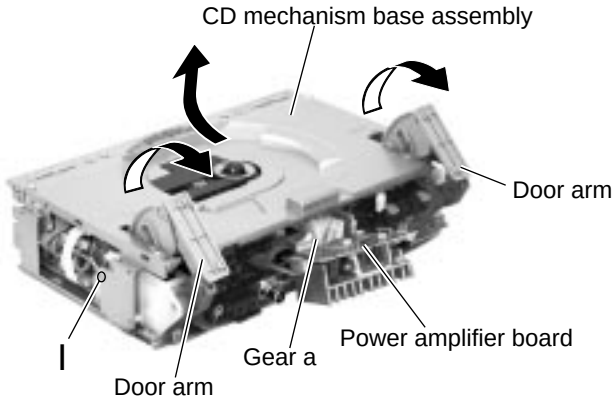


Fig.12

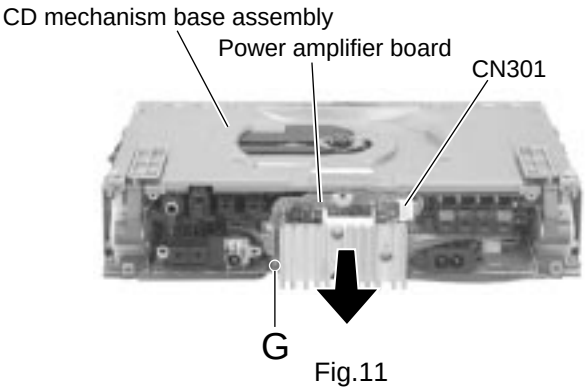


Fig.11

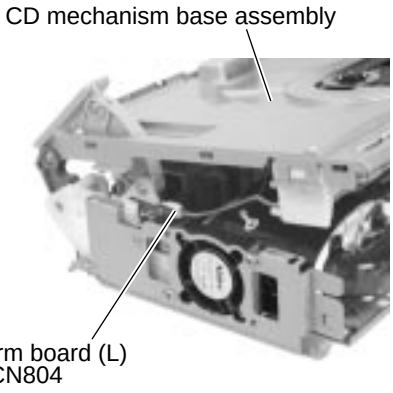


Fig.14

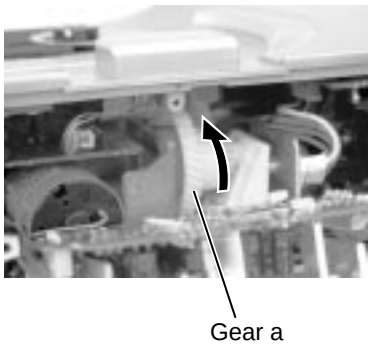


Fig.13

■Removing the door arm assembly / the door arm board (R) and (L) (See Fig.15 to 20)

・ Prior to performing the following procedure, remove the rear cover, the side covers, the front panel assembly and the CD mechanism base assembly.

1. In case that the upper parts of the door arms attached to the CD door are not level, let down them to the level position by turning the gear **a** in the direction of the arrow.

ATTENTION: When the door arms incline, the door arm assembly and the door arm board (R) and (L) may not be removed.

2. Remove the four screws **H** on the upper side and the one screw **I** on the left side of the body.

3. Remove the four screws **J** attaching the door arm board (L) and (R) on both sides of the door arm assembly.

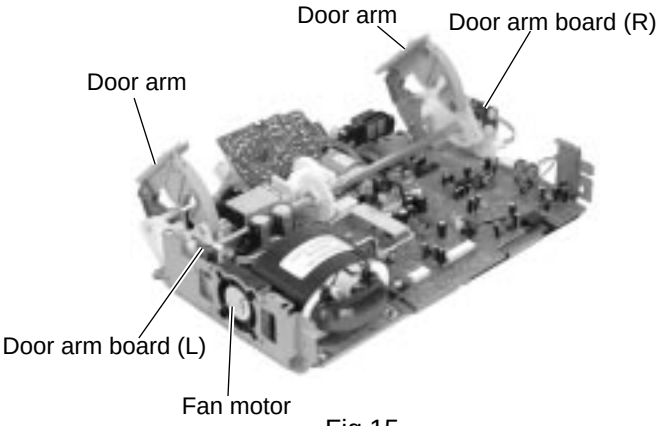


Fig.15

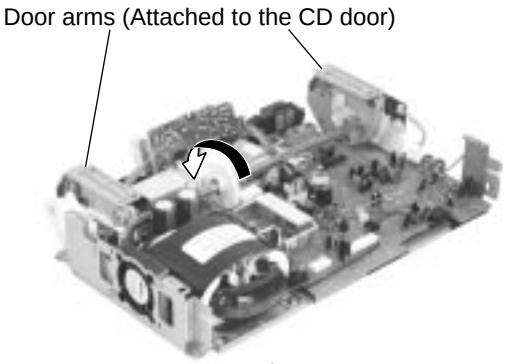


Fig.16

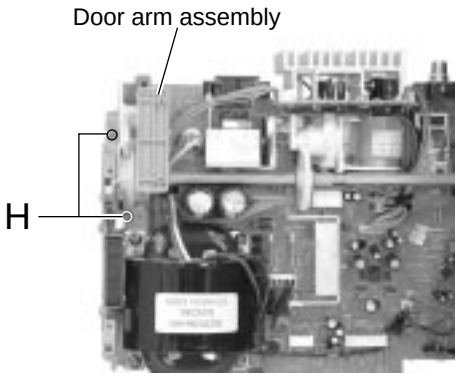


Fig.17

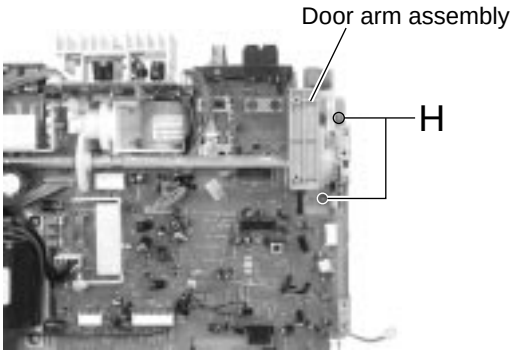


Fig.18

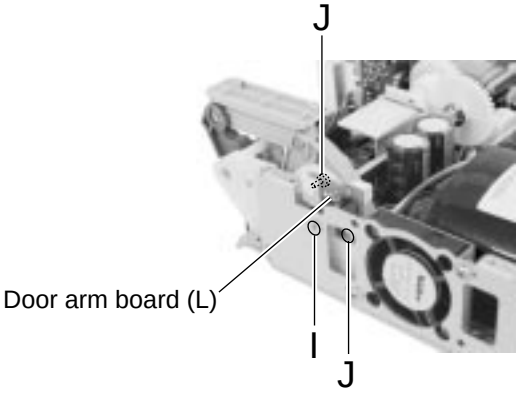


Fig.19

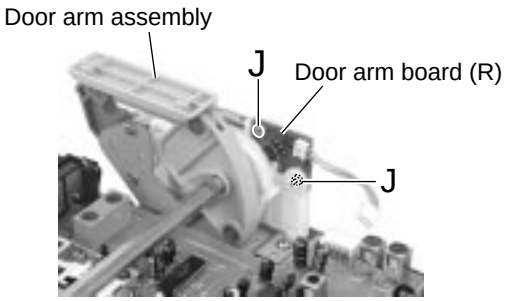


Fig.20

■Removing the power amplifier board (See Fig.21 and 22)

・Prior to performing the following procedure, remove the CD mechanism base assembly.

1. Disconnect the wires from connector CN102 and CN193 on the main board and release them from the cord stopper respectively.

2. Remove the two screws **K** and the two screws **L** attaching the heat sink and the power amplifier board.

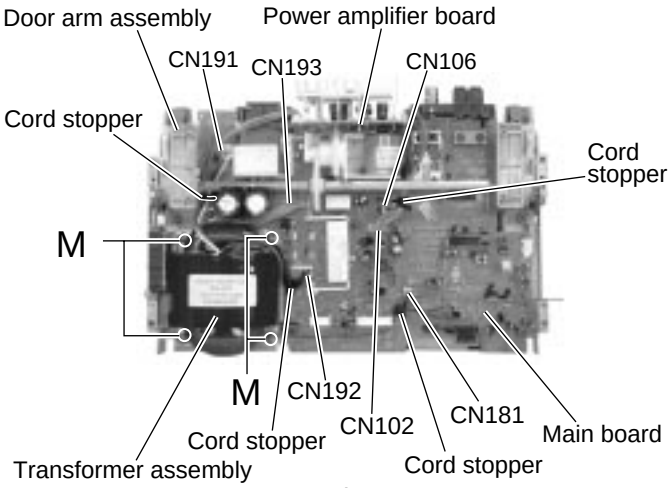


Fig.21

■Removing the transformer assembly (See Fig.21)

・Prior to performing the following procedure, remove the CD mechanism base assembly.

1. Disconnect the wires from connector CN191 and CN192 on the main board and release them from the cord stopper respectively.

2. Remove the four screws **M** attaching the transformer assembly.

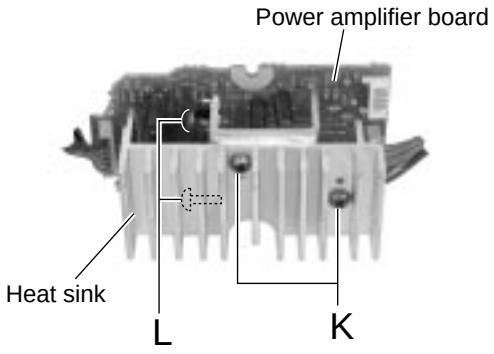


Fig.22

■Removing the gear motor assembly (See Fig.23 and 24)

・Prior to performing the following procedure, remove the CD mechanism base assembly and the door arm assembly.

1. Disconnect the wires from connector CN106 on the main board and release it from the cord stopper.

2. Remove the three screws **N** attaching the gear motor assembly. Remove the gear motor assembly with the gear motor stopper.

3. Remove the belt from the gear motor assembly.

4. Remove the two screws **O** from the gear motor assembly.

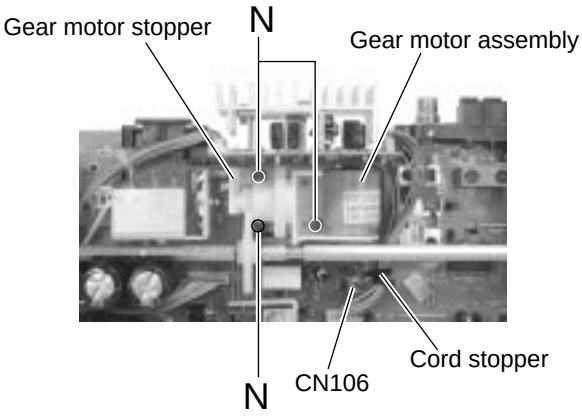


Fig.23

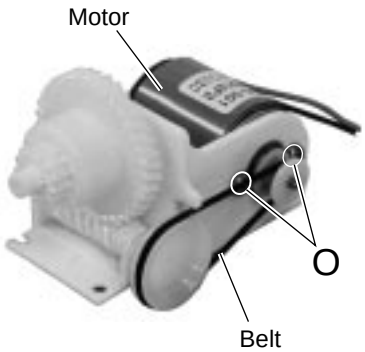


Fig.24

■Removing the fan motor assembly (See Fig.25 and 26)

・Prior to performing the following procedure, remove the CD mechanism base assembly.

1. Disconnect the wires from connector CN181 on the main board.
2. Remove the two screws **P** on the left side of the body. Move the fan motor assembly upward to remove it from the base chassis.
3. Remove the two screws **Q** and the fan motor from the fan bracket.

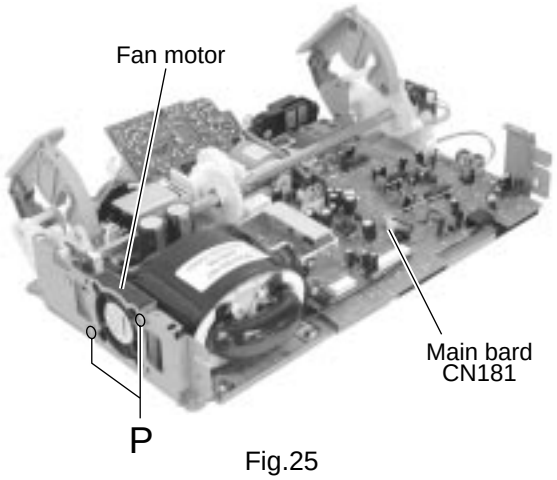


Fig.25

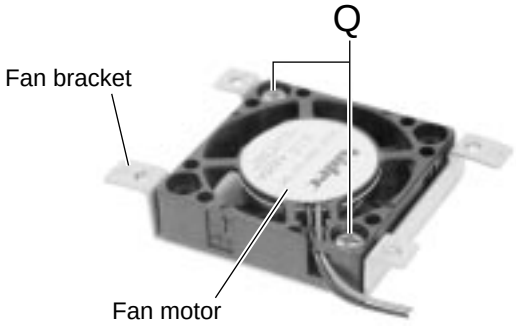


Fig.26

■Removing the main board (See Fig.27)

・Prior to performing the following procedure, remove the CD mechanism base assembly and the door arm assembly.

・To facilitate operation process, remove the gear motor assembly before performing the following procedure.

1. Disconnect the wires from connector CN102, CN106, CN191, CN192, CN193 and CN181 on the main board.
2. Remove the five screws **R** attaching the main board with the cord stopper.

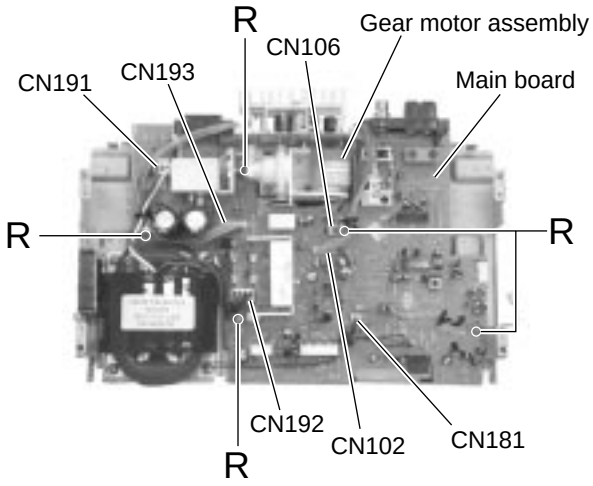


Fig.27

<Front panel assembly>

■Removing the front panel board (See Fig.28)

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

1. Remove the seven screws **S** attaching the front panel board inside the front panel assembly.

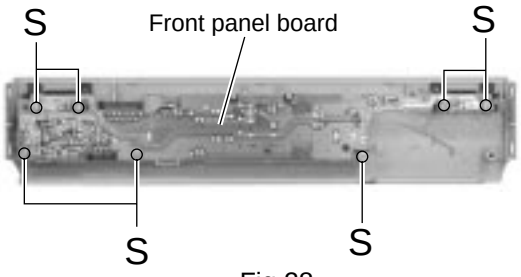


Fig.28

<CD mechanism base assembly>

- Prior to performing the following procedure, remove the CD mechanism base assembly.
- Refer to "Dismantling and assembling the CD mechanism assembly" on page 1-5 for the treatment of optical pickup.

■Removing the speaker terminal board (See Fig.29)

1. Remove the screw **T** attaching the speaker terminal board on the underside of the CD mechanism base assembly.

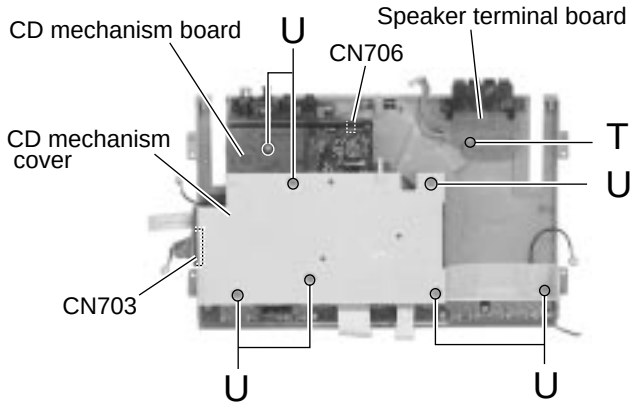


Fig.29

■Removing the CD mechanism board / CD mechanism assembly (See Fig.29 to 34)

1. Turn over the CD mechanism base assembly and disconnect the wires from connector CN703 and CN706 on the CD mechanism board.
2. Remove the seven screws **U** attaching the CD mechanism cover and the CD mechanism board.
3. Turn back the CD mechanism assembly and detach the CD mechanism cover while pulling the CD mechanism assembly outward to release the two joint tabs marked **c**.

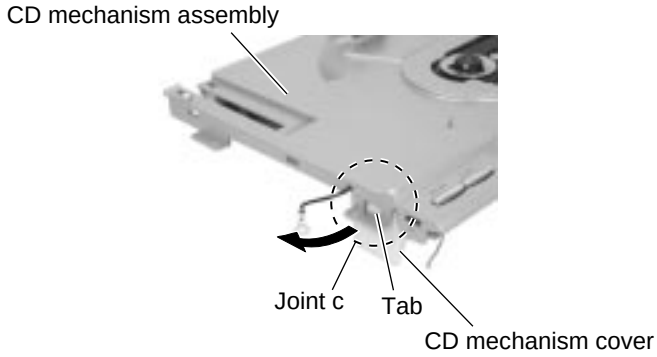


Fig.30

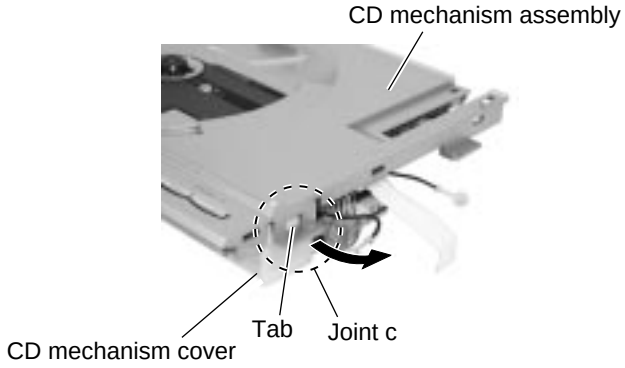


Fig.31

4. Solder the short circuit land on the sub board.

5. Disconnect the wire from connector CN605 on the main board.
   Disconnect the sub board from connector CN603 on the main board while peeling off the adhesive tape on the underside of the sub board.

6. Remove the CD mechanism assembly from the three shafts of the CD mechanism
   cover.

ATTENTION:	When reassembling, confirm that the cushion of the CD mechanism assembly is reattached to the three shafts.

7. Remove the CD mechanism board from the CD mechanism cover.

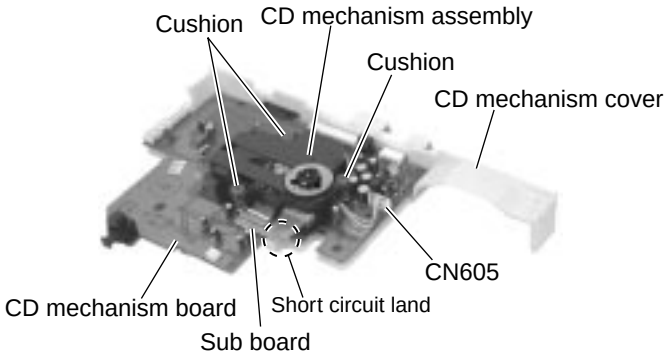


Fig.32

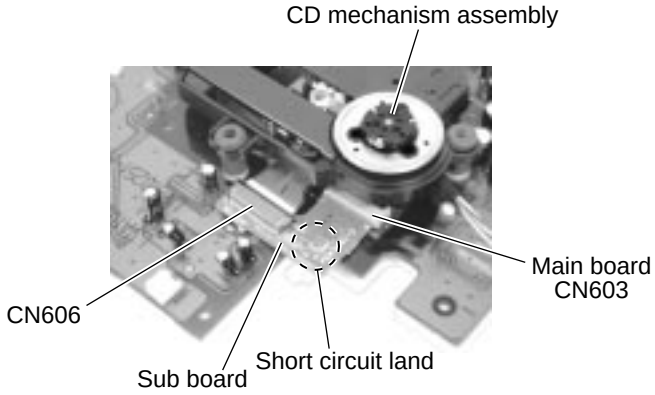


Fig.33

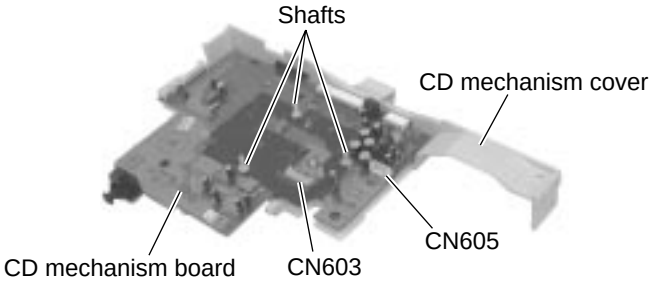


Fig.34

■Removing the jack board (See Fig.35)

・Prior to performing following procedure, remove the CD mechanism board.

1. Disconnect the wire from connector CN502 on the jack board.
2. Remove the two screws **V** attaching the jack board.

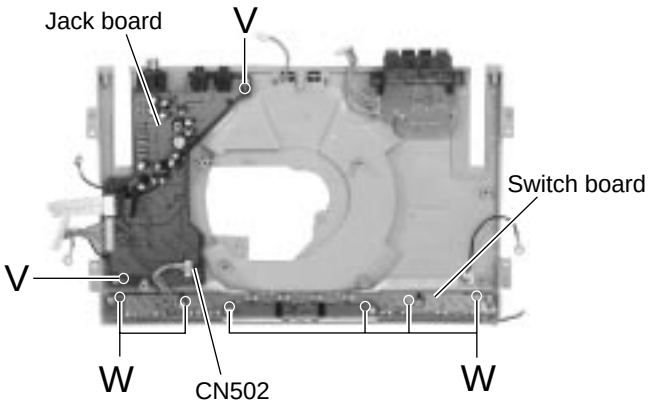


Fig.35

■Removing the switch board (See Fig.35)

・Prior to performing following procedure, remove the CD mechanism board.

1. Disconnect the wire from connector CN502 on the jack board.
2. Remove the six screws **W** attaching the switch board.

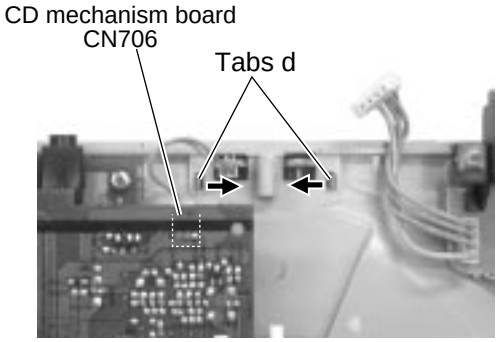


Fig.36

■Removing the LED board (See Fig.36 and 37)

1. Disconnect the harness from connector CN706 on the CD mechanism board on the underside of the CD mechanism base assembly.
2. Push inward the two tabs d attaching the LED board case and release them.
3. Pull out the LED board from the LED board case.

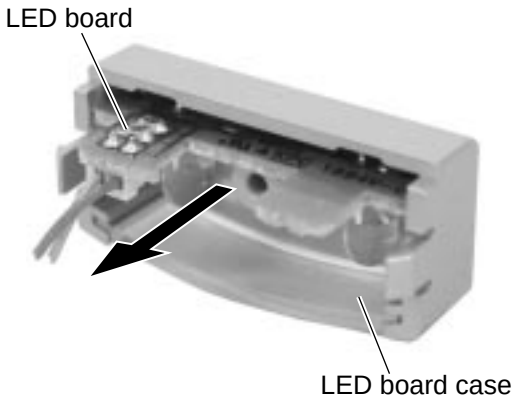


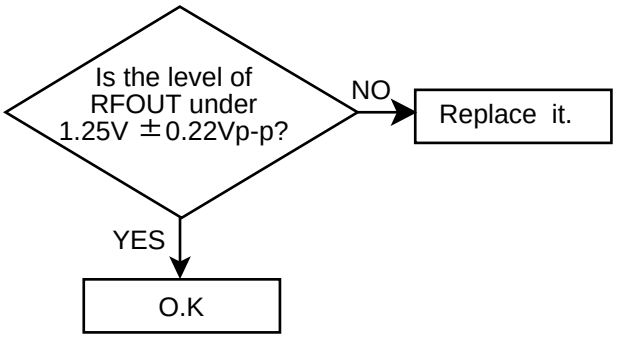
Fig.37

Maintenance of laser pickup

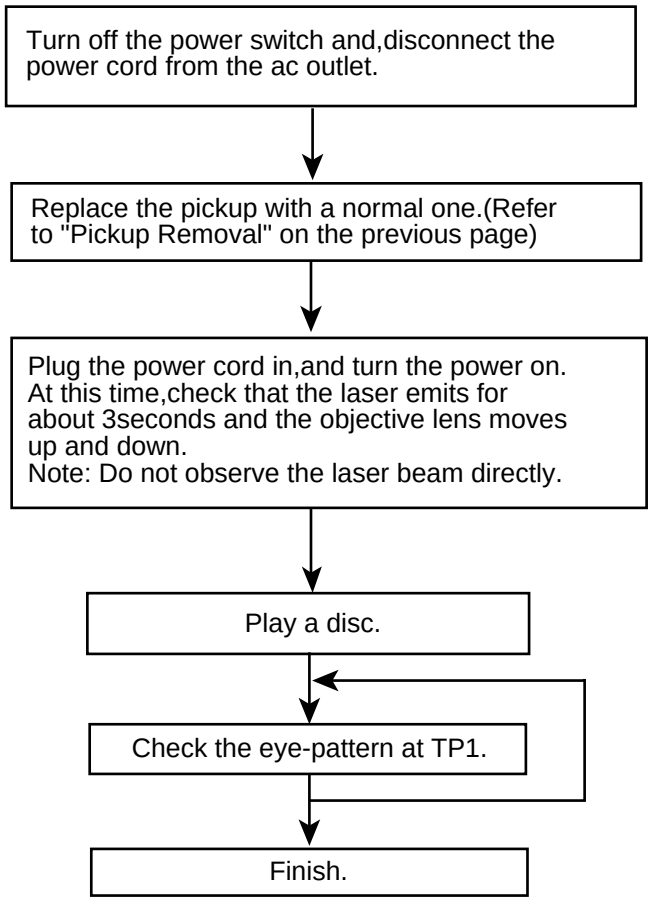
(1) Cleaning the pick up lens
Before you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

(2) Life of the laser diode
When the life of the laser diode has expired, the following symptoms will appear.

1. The level of RF output (EFM output:amplitude of eye pattern) will below.

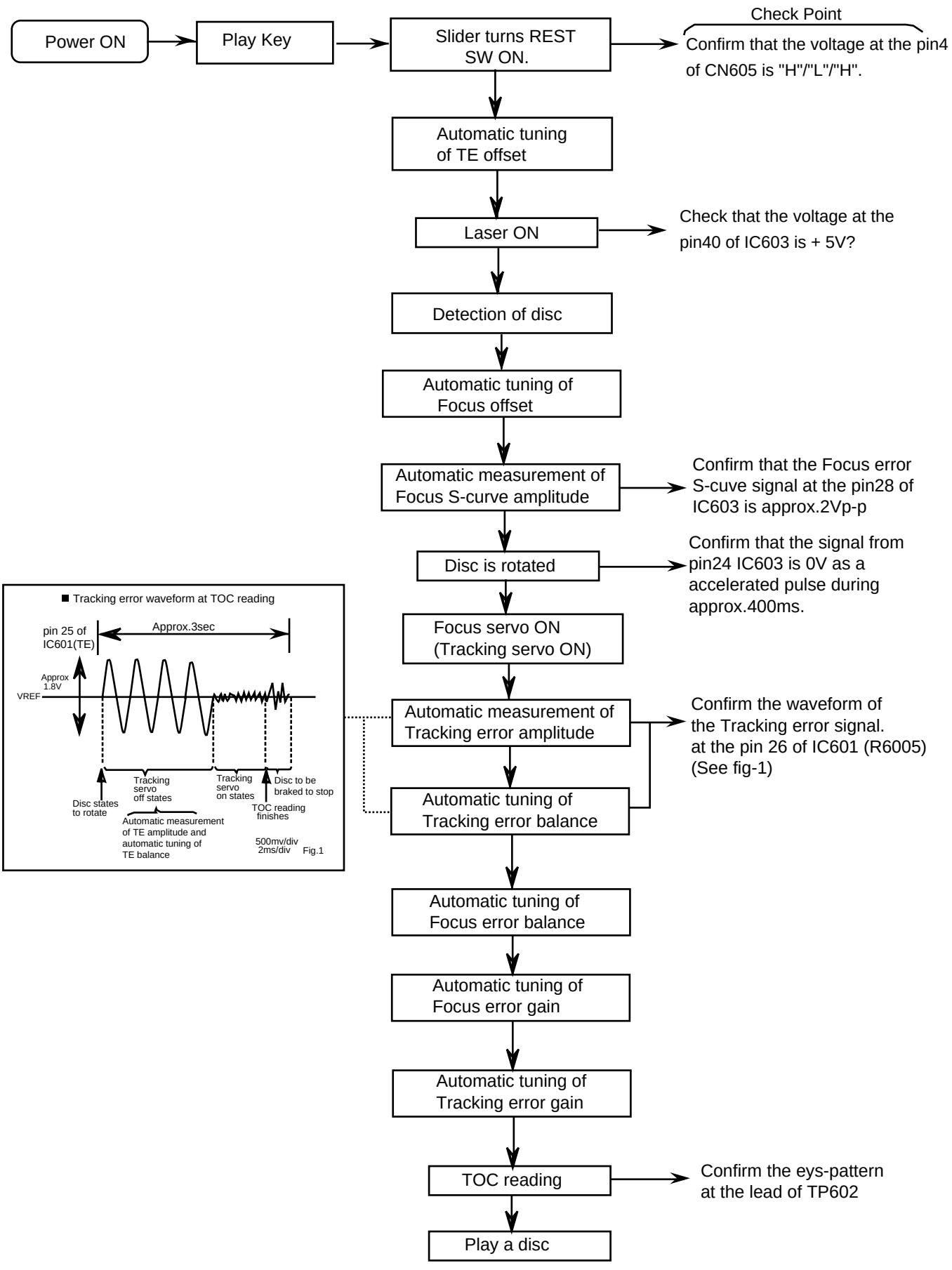


Replacement of laser pickup



(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.

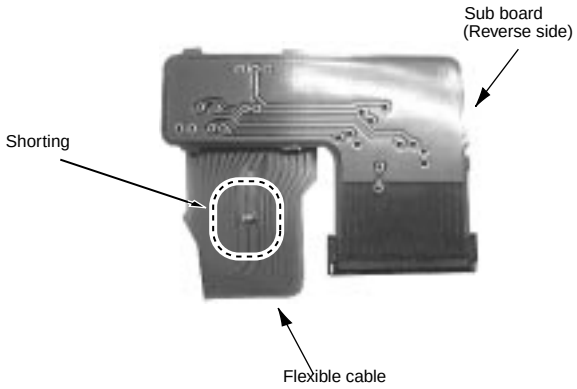
Flow of functional operation until TOC read



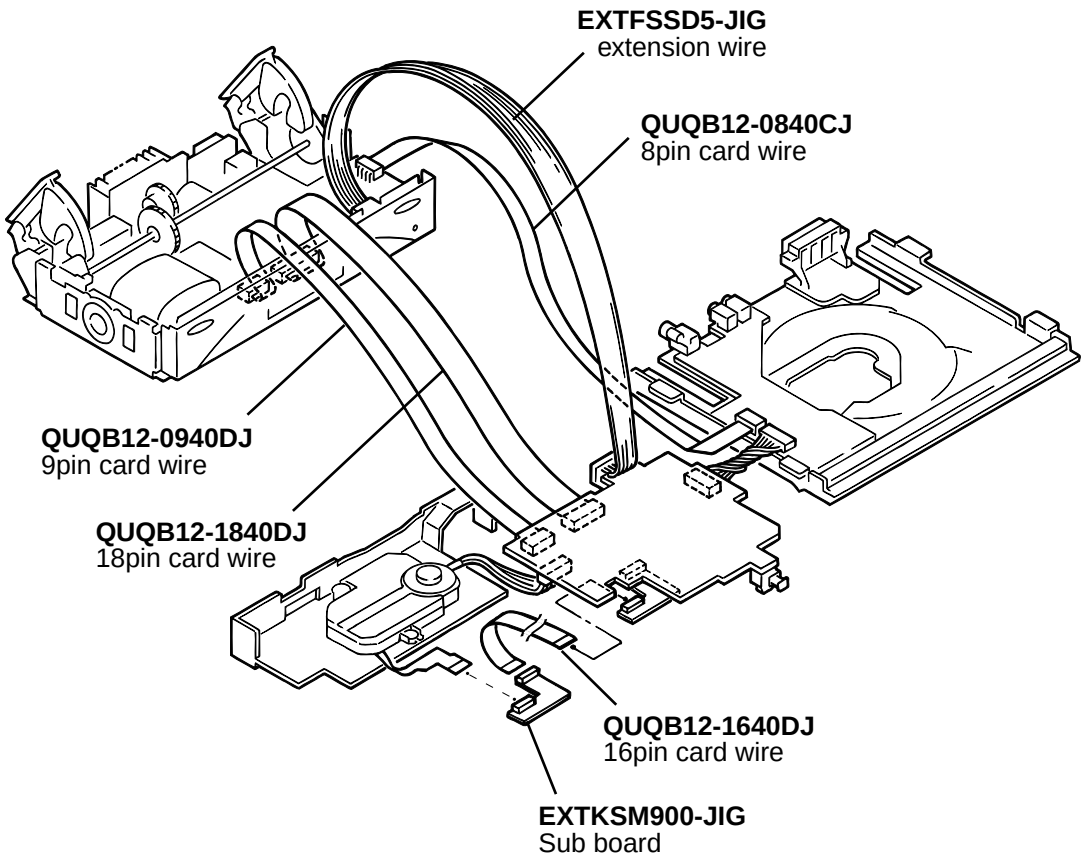
Method of connecting treatment device wire

First short-circuit the pickup circuit before removing the pickup.Then carry out the replacement.
Refer to "Dismantling and assembling the traverse unit" on page 1-5.

KSM-900AAH



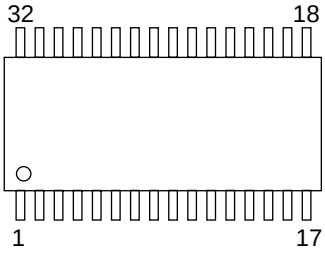
When the KSM-900AAH mechanism is used, the expansion cable is used as follows.



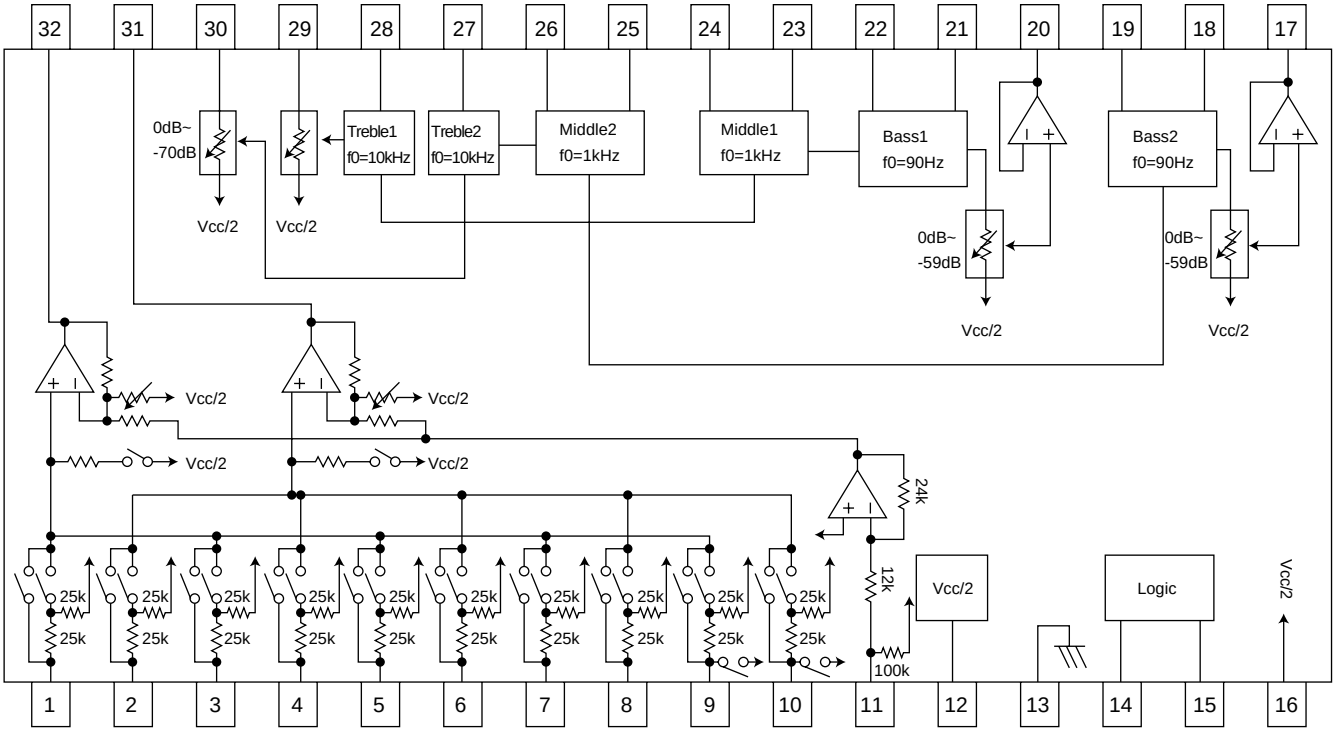
Description of major ICs

■BD3861FS-X (IC501) : Audio sound control

1. Pin layout



2. Block diagram

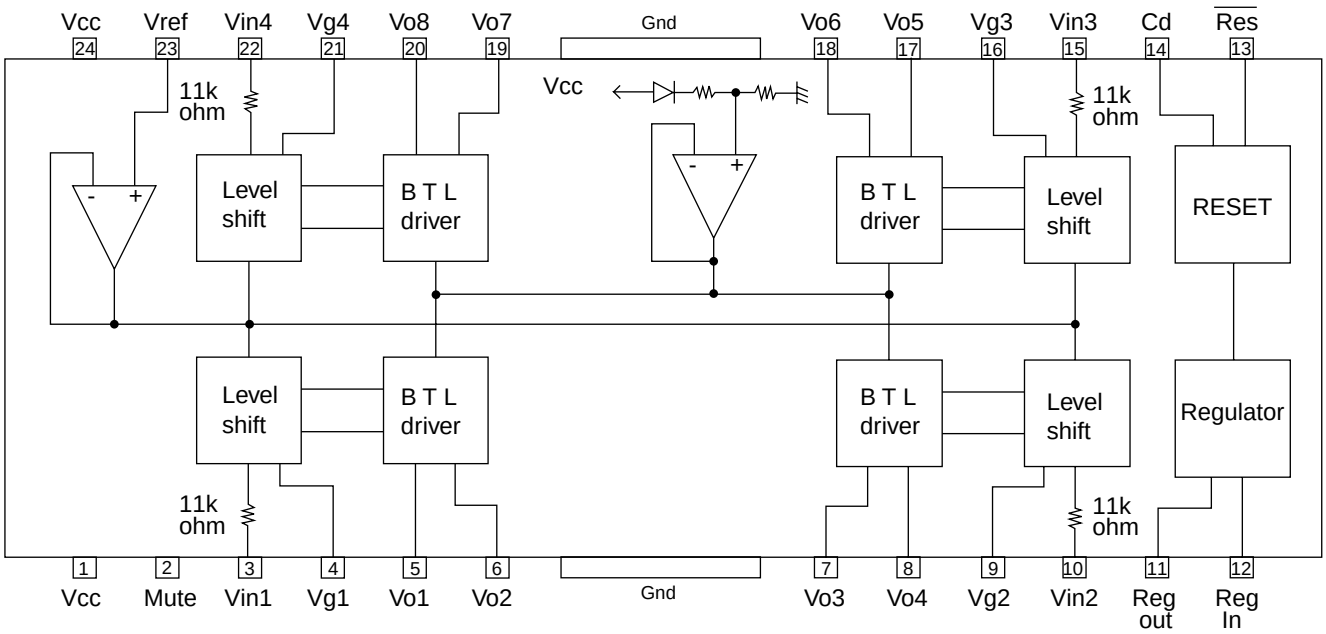


3. Pin function

Pin No.	Symbol	Function		Symbol	Function
1	A1	CH1 input pin A	17	OUT2	CH2 output pin
2	A2	CH2 input pin A	18	BASS21	CH2 bass filter setting pin
3	B1	CH1 input pin B	19	BASS22	CH2 bass filter setting pin
4	B2	CH2 input pin B	20	OUT1	CH1 output pin
5	C1	CH1 input pin C	21	BASS11	CH1 bass filter setting pin
6	C2	CH2 input pin C	22	BASS12	CH1 bass filter setting pin
7	D1	CH1 input pin D	23	MID11	CH1 middle filter setting pin
8	D2	CH2 input pin D	24	MID12	CH1 middle filter setting pin
9	E1	CH1 input pin E	25	MID21	CH2 middle filter setting pin
10	E2	CH2 input pin E	26	MID22	CH2 middle filter setting pin
11	MIC	Microphone input pin	27	TRE2	CH2 treble filter setting pin
12	FIL	Filter pin	28	TRE1	CH1 treble filter setting pin
13	GND	Ground pin	29	VOL1	CH1 input volume input pin
14	DATA	Serial data latch receiving pin	30	VOL2	CH2 input volume input pin
15	CLK	Serial clock receiving pin	31	GOUT2	CH2 input gain output pin
16	Vcc	Power supply pin	32	GOUT1	CH1 input gain output pin

■ LA6541-X(IC602) : Servo Driver

1. Pin Layout & Block Diagram

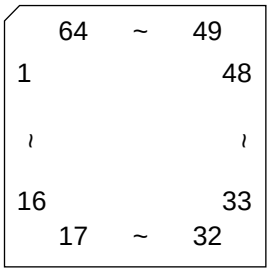


2. Pin functions

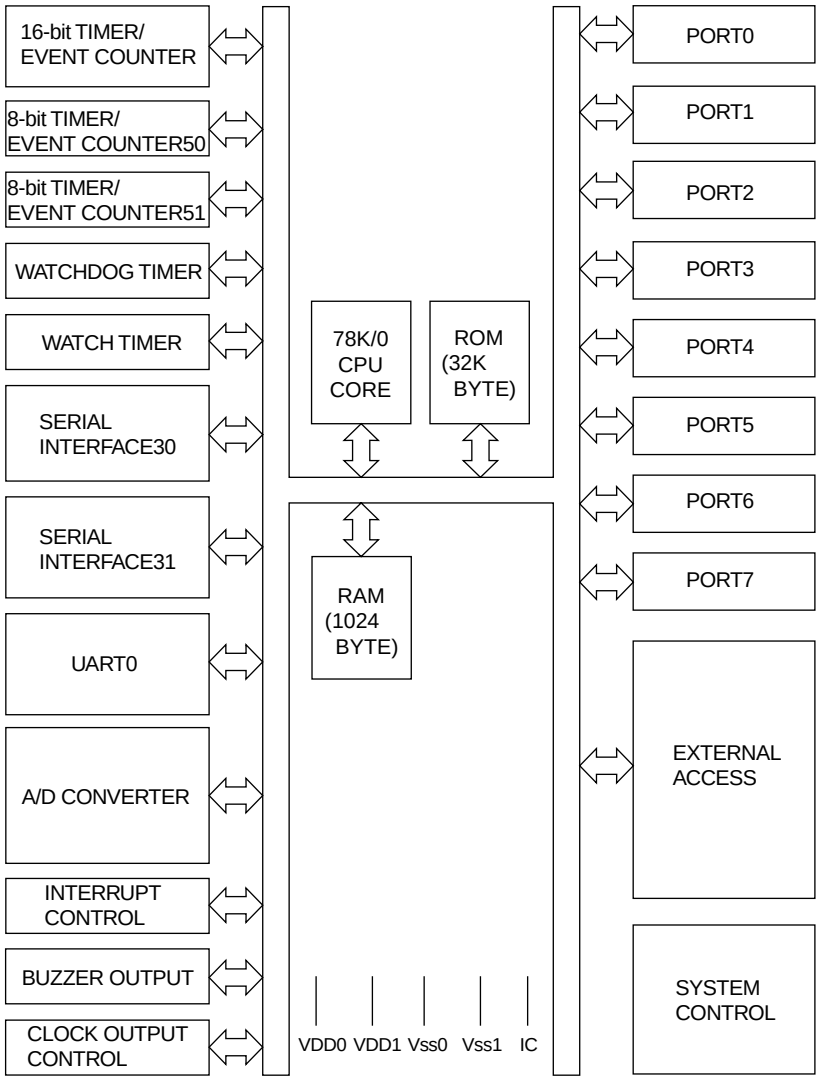
Pin No.	Symbol	Function
1	Vcc	Power supply (Shorted to pin 24)
2	Mute	All BTL amplifier outputs ON/OFF
3	Vin1	BTL AMP 1 input pin
4	Vg1	BTL AMP 1 input pin (For gain adjustment)
5	Vo1	BTL AMP 1 input pin (Non inverting side)
6	Vo2	BTL AMP 1 input pin (Inverting side)
7	Vo3	BTL AMP 2 input pin (Inverting side)
8	Vo4	BTL AMP 2 input pin (Non inverting side)
9	Vg2	BTL AMP 2 input pin (For gain adjustment)
10	Vin2	BTL AMP 2 input pin
11	Reg Out	External transistor collector (PNP) connection. 5V power supply output
12	Reg In	External transistor (PNP) base connection
13	Res	Reset output
14	Cd	Reset output delay time setting (Capacitor connected externally)
15	Vin3	BTL AMP 3 input pin
16	Vg3	BTL AMP 3 input pin (For gain adjustment)
17	Vo5	BTL AMP 3 output pin (Non inverting side)
18	Vo6	BTL AMP 3 output pin (Inverting side)
19	Vo7	BTL AMP 4 output pin (Inverting side)
20	Vo8	BTL AMP 4 output pin (Non inverting side)
21	Vg4	BTL AMP 4 output pin (For gain adjustment)
22	Vin4	BTL AMP 4 output pin
23	Vref	Level shift circuit's reference voltage application
24	Vcc	Power supply (Shorted to pin 1)

■ UPD780024AGKB19 (IC701) : CPU

1. Pin layout



2. Block diagram



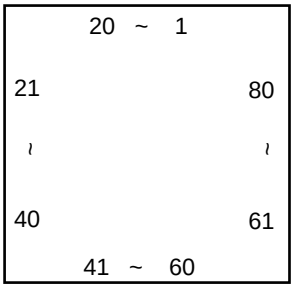
3. Pin function

UPD780024AGKB19

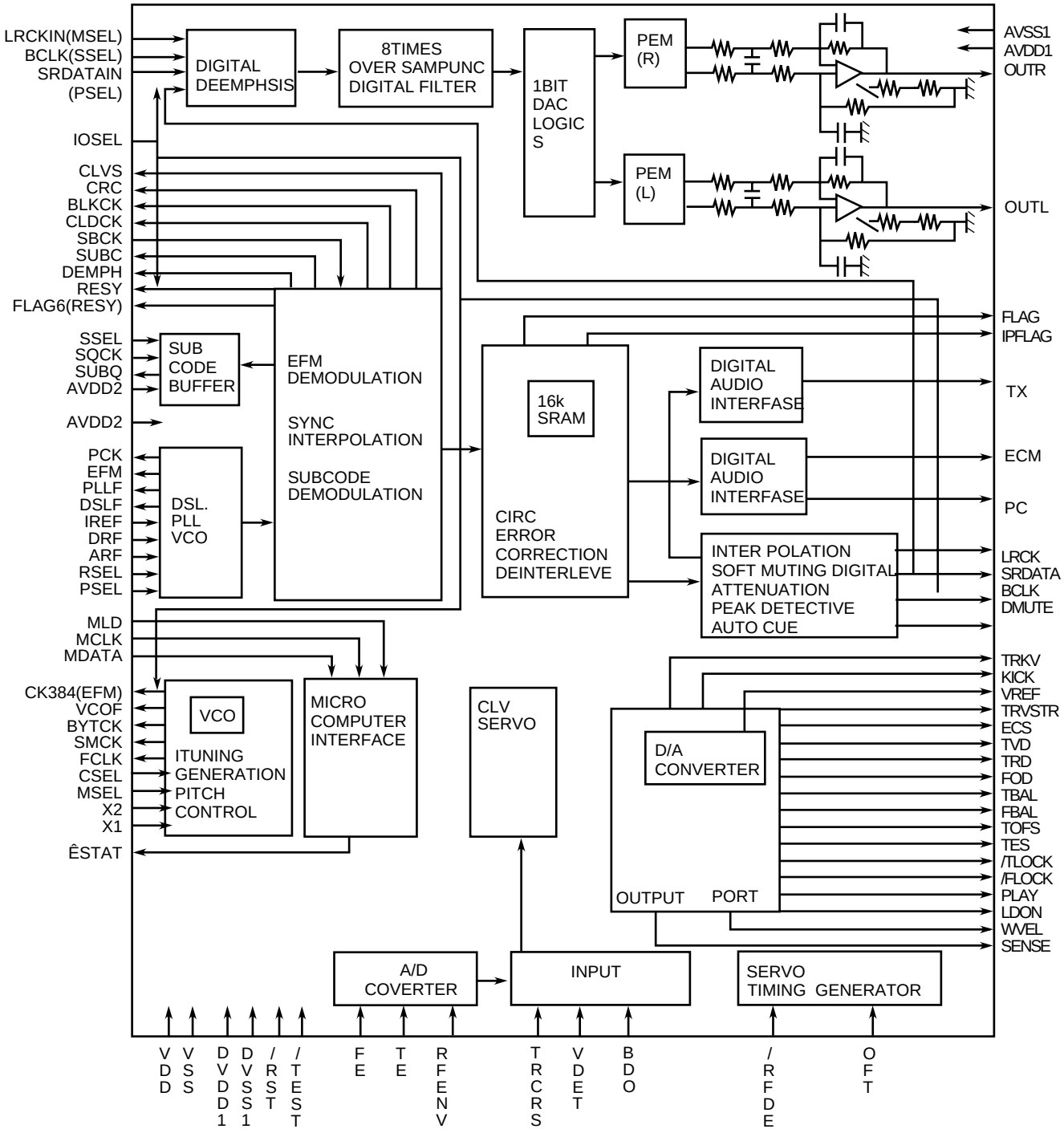
Pin No.	Symbol	I/O	Function
1	MT0	O	CD door motor control signal 0 output
2	MT1	O	CD door motor control signal 1 output
3	MTS	O	Motor speed control output (L:Normal, H:Slow)
4	BLCTL	O	Back light power supply control output
5	AHB	O	AHB ON/OFF control signal output (L:ON, H:OFF)
6	SMUTE	O	System mute control signal output
7	TUST	O	Tuner control strove output
8	CDLED	O	CD LED control signal output (L:OFF, H:ON)
9	VSS0	-	Ground at port section
10	VDD0	-	Power supply at port section
11	MPX	I	Stereo indicator control signal input (L:Stereo)
12	RDSDI	I	RDS data input
13	DRMUTE	O	Driver mute output
14	SCD	I	Voltage detection for safety of CD
15	TUDATA(I)	I	Tuner control data input
16	TUDATA(O)	O	Tuner control data output
17	TUCK	O	Tuner control clock output
18	SUBQ	I	CD control Q code input
19	XRST	O	CD control reset signal output
20	SQCK	O	CD control Q code clock signal output
21	MLD	O	CD control command load signal output
22	MDATA	O	CD control command data signal output
23	MCLK	O	CD control command clock signal output
24	VDD1	-	Power supply without port section
25	AVSS	-	Ground of A/D converter
26	STAT	I	CD control status signal input
27	REST	I	CD rest switch detection signal input
28	KEY1	I	Main body top section tact switch detection signal input
29	KEY2	I	Main body top section tact switch detection signal input
30	KEY3	I	Main body front section tact switch detection signal input
31	SAFETY	I	Voltage detection for safety
32	LDCK	I	CD door motor lock detection signal input
33	VERSION	I	Version detection
34	AVREF	I	Reference voltage input for A/D converter
35	AVDD	-	Analog power supply for A/D converter
36	RESET	I	System reset signal input
37	XT2	-	Sub clock
38	XT1	I	Sub clock signal input 32.768kHz
39	IC	I	Connect to VSS0 or VSS1
40	X2	-	Main clock
41	X1	I	Main clock signal input 4.19MHz
42	VSS1	-	Ground without port section
43	REM	I	Remote controller signal input
44	RDSCK	I	RDS clock signal input
45	XKILL	O	Sub clock OSC control signal output
46	BEAT	O	Main clock shift control signal output
47	BUP	I	Back up detection signal input
48	+BCTL	O	Power supply control at back up operating
49	VDATA	O	BD3861FS (VOL & FUNC IC) control data signal output
50	VCLK	O	BD3861FS (VOL & FUNC IC) control clock signal output
51	DOOR1	I	Cd door position detection switch input
52	DOOR2	I	CD door position detection switch input
53	DOOR3	I	CD door position detection switch input
54	LOMUTE	O	LINE OUT muting control signal output
55	RS	O	LCD driver control resistor select signal output
56	E	O	LCD driver control enable signal output
57	D84	O	LCD driver control data bus signal output
58	D85	O	LCD driver control data bus signal output
59	D86	O	LCD driver control data bus signal output
60	D87	O	LCD driver control data bus signal output
61	DIMMER	O	Back light DIMMER control signal output
62	POUT	O	Power supply control signal output for amp section
63	FTU	O	Power supply control signal output for TUNER function
64	FCD	O	Power supply control signal output for CD function

■ MN662748RPM (IC603) : Digital servo & digital signal processer

1. Pin layout



2.Block diagram



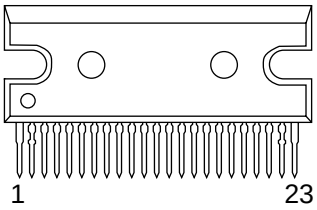
3. Pin function

MN662748RPM(2/2)

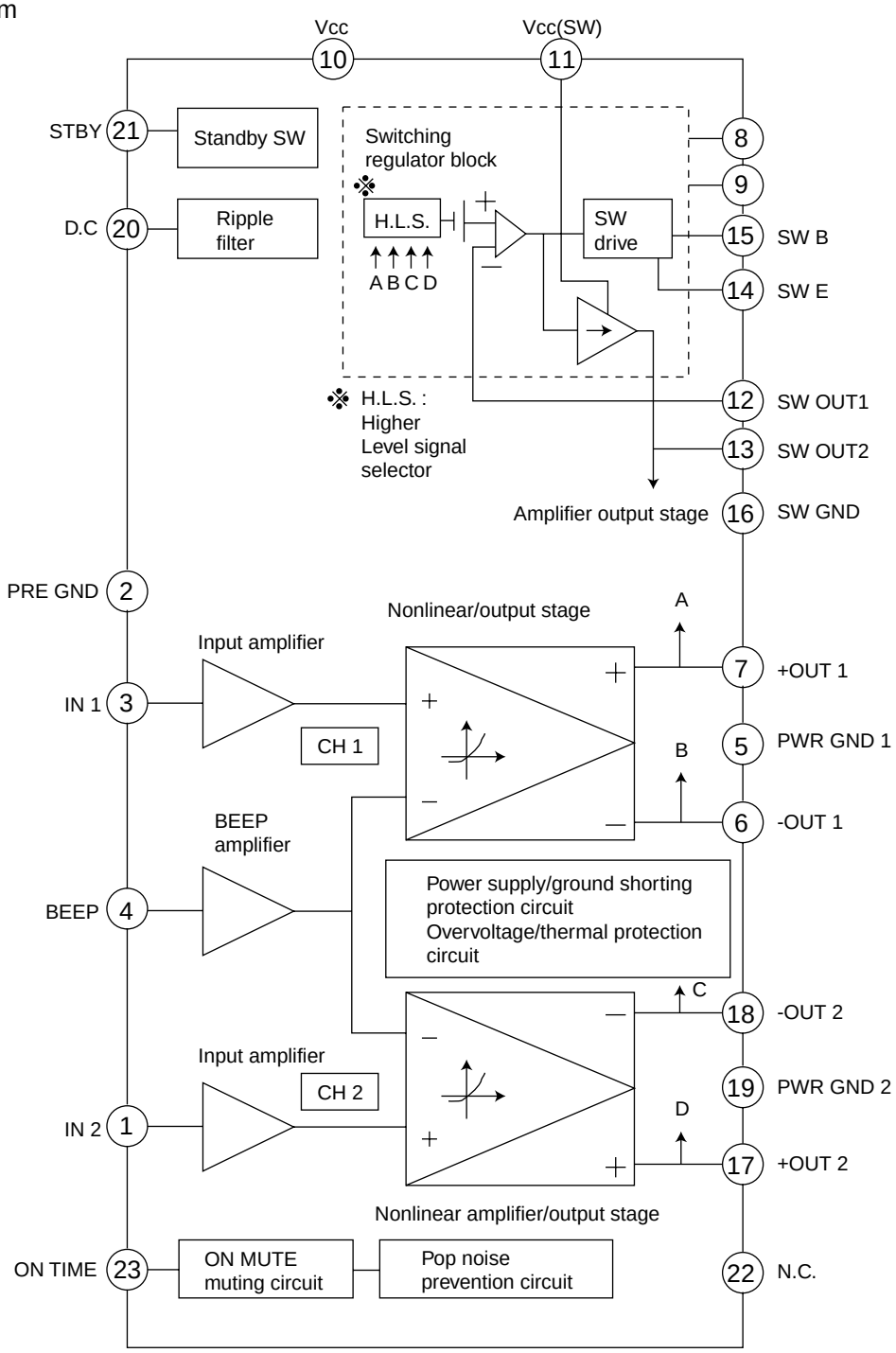
Pin No.	Dymbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	BCLK	O	Not used	41	PLLF2	O	Tracking error shunt signal output (H:shunt)
2	LRCK	O	Not used	42	TOFS	–	Not used
3	SRDATA	O	Not used	43	WVEL	–	Not used
4	DVDD1	–	Power supply (Digital)	44	ARF	I	RF signal input
5	DVSS1	–	Connected to GND	45	IREF	I	Reference current input pin
6	TX	O	Digital audio interface output	46	DRF	I	Bias pin for DSL
7	MCLK	I	CPU command clock signal input (Data is latched at signal's rising point)	47	DSLF	I/O	Loop filter pin for DSL
8	MDATA	I	CPU command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	CPU command load signal input	49	VCOF	–	Not used
10	SENSE	O	Sense signal output	50	AVDD2	–	Power supply (Analog)
11	FLOCK	O	Focus lock signal output Active :Low	51	AVSS2	–	Connected to GND (Analog)
12	TLOCK	O	Tracking lock signal output Active :Low	52	EFM	–	Not used
13	BLKCK	O	sub-code/block/clock signal output	53	PCK	–	Not used
14	SQCK	I	Outside clock for sub-code Q resister input	54	VCOF2	–	Not used
15	SUBQ	O	Sub-code Q -code output	55	SUBC	–	Not used
16	DMUTE	–	Connected to GND	56	SBCK	–	Not used
17	STATUS	O	Status signal (CRC,CUE,CLVS,TTSTOP,ECLV,SQOK)	57	VSS	–	Connected to GND (for X'tal oscillation circuit)
18	RST	I	Reset signal input (L:Reset)	58	XI	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	–	Not used	59	X2	O	Output of X'tal oscillation circuit
20	PMCK	–	Not used	60	VDD	–	Power supply (for X'tal oscillation circuit)
21	TRV	O	Traverse enforced output	61	BYTCK	–	Not used
22	TVD	O	Traverse drive output	62	CLDCK	O	Clock signal output (for RE & SERVO amp)
23	PC	–	Not used	63	FLAG	–	Not used
24	ECM	O	Spindle motor drive signal (Enforced mode output) 3-State	64	IPPLAG	–	Not used
25	ECS	O	Spindle motor drive signal (Servo error signal output)	65	FLAG	–	Not used
26	KICK	O	Kick pulse output	66	CLVS	–	Not used
27	TRD	O	Tracking drive output	67	CRC	–	Not used
28	FOD	O	Focus drive output	68	DEMPH		Not used
29	VREF	I	Reference voltage input pin for D/A output block (TVD,FOD,FBA,TBAL)	69	RESY	–	Not used
30	FBAL	O	Focus Balance adjust signal output	70	IOSEL	–	pull up
31	TBAL	O	Tracking Balance adjust signal output	71	TEST	–	pull up
32	FE	I	Focus error signal input (Analog input)	72	AVDD1	–	Power supply (Digital)
33	TE	I	Tracking error signal input (Analog input)	73	OUT L	O	Lch audio output
34	RF ENV	I	RF envelope signal input (Analog input)	74	AVSS1	–	Connected to GND
35	VDET	I	Vibration detect signal input (H:detect)	75	OUT R	O	Rch audio output
36	OFT	I	Off track signal input (H:off track)	76	RSEL	–	pull up
37	TRCRS	I	Track cross signal input	77	CSEL	–	Connected to GND
38	RFDET	I	RF detect signal input (L:detect)	78	PSEL	–	Connected to GND
39	BDO	I	BDO input pin (L:detect)	79	MSEL	–	Connected to GND
40	LDON	O	Laser ON signal output (H:on)	80	SSEL	–	Pull up

■ LA4905 (IC301) : 2ch BTL power IC

1. Pinlayput

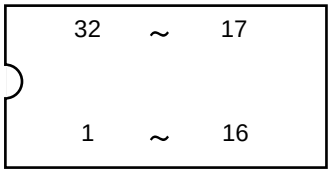


2. Block diagram

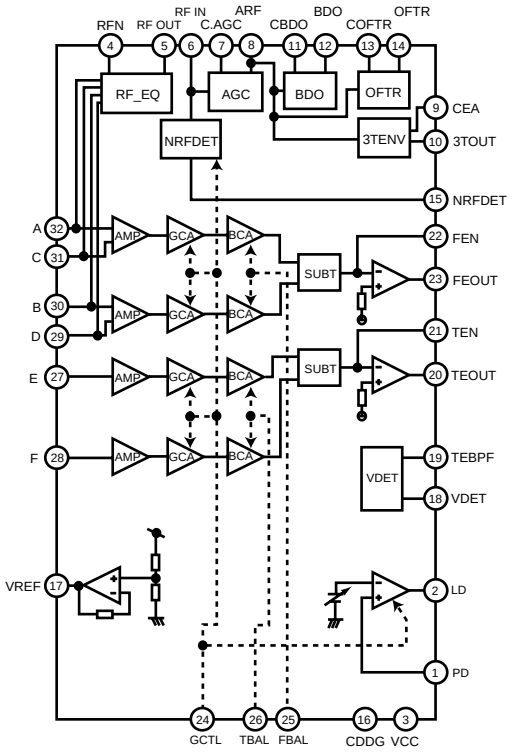


■AN22000A(IC601):RF & SERVO AMP

1. Pin layout



2. Block diagram

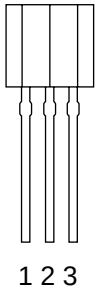


3. Function

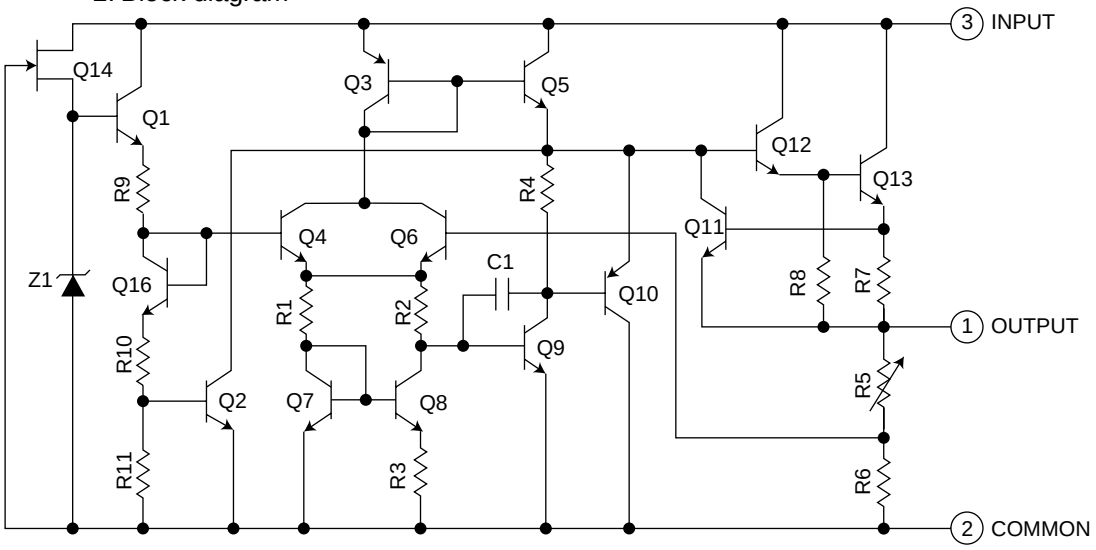
Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	PD	APC Amp. Input terminal	16	CDDG	Earth terminal
2	LD	APC Amp.Output terminal	17	VREF	VREF output terminal
3	VCC	Power supply terminal	18	VDET	VDET output terminal
4	RFN	RF addition Amp.Reversing input terminal	19	TEBPF	VDET input terminal
5	RF OUT	RF addition Amp.Output terminal	20	TEOUT	TE Amp. output terminal
6	RF IN	AGC input terminal	21	TEN	TE Amp. reversing input terminal
7	C.AGC	Terminal of connection of capacity of AGC loop filter.	22	FEN	FE Amp. reversing input terminal
			23	FEOUT	FE Amp. output terminal
8	ARF	AGC output terminal	24	GCTL	Terminal GCTL & APC
9	CEA	Capacity connection terminal for HPF-Amp.	25	FBAL	FBAL control terminal
10	3TOUT	3TENV output terminal	26	TBAL	TBAL control terminal
11	CBDO	Capacity connection terminal for RF shade side envelope detection	27	E	Tracking signal input terminal 1
			28	F	Tracking signal input terminal 2
12	BDO	BDO output terminal	29	D	Focus signal input terminal 4
13	COFTR	Capacity connection terminal for RF discernment side envelope detection	30	B	Focus signal input terminal 2
			31	C	Focus signal input terminal 3
14	OFTR	OFTR output terminal	32	A	Focus signal input terminal 1
15	NRFDET	NRFDET output terminal			

■ KIA78S06P-T (IC702) : Regulator

1. Pin layout

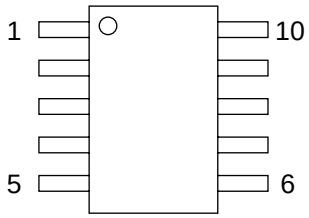


2. Block diagram



■ TA8409F-W (IC108) : Bridge driver

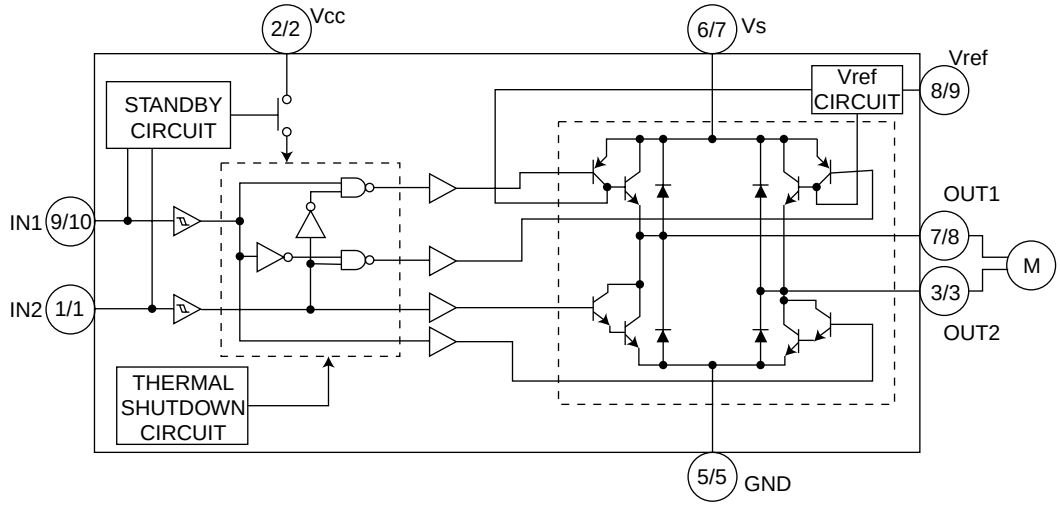
1. Pin layout



2. Pin function

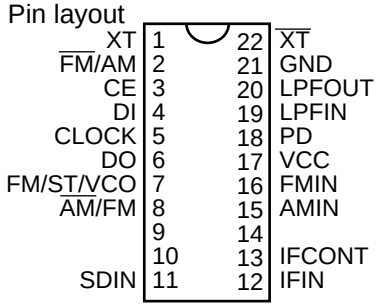
Pin No.	SYMBOL	FUNCTION
1	IN2	INput terminal
2	Vcc	Supply voltage terminal for logic
3	OUT2	Output terminal
4	NC	Non connection
5	GND	GND terminal
6	NC	Non connection
7	Vs	Supply voltage terminal for motor driver
8	OUT1	Output terminal
9	Vref	Reference voltage terminal for control circuit
10	IN1	Input terminal

3. Block diagram

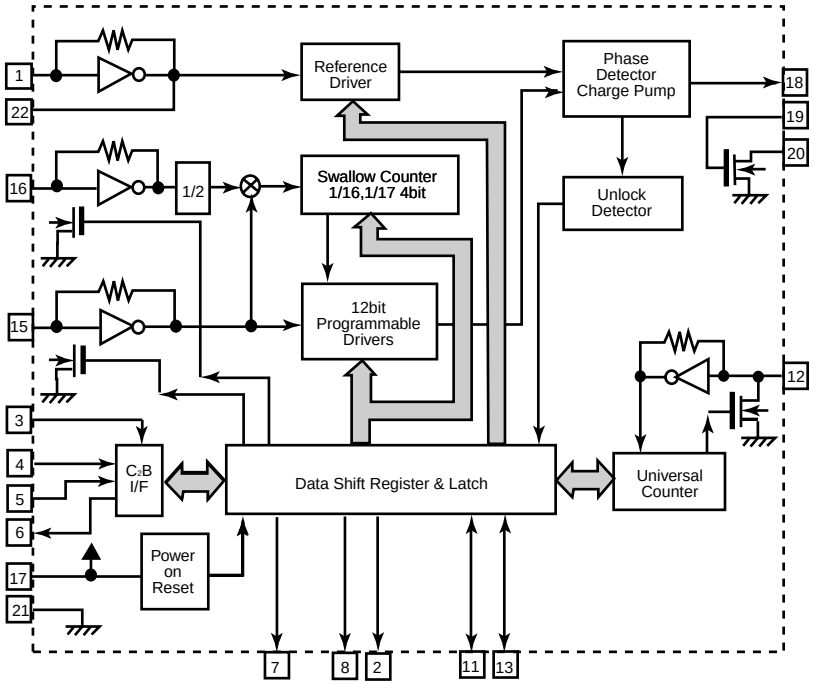


■LC72136N (IC2) : PLL Frequency synthesizer

1. Pin layout



2. Block

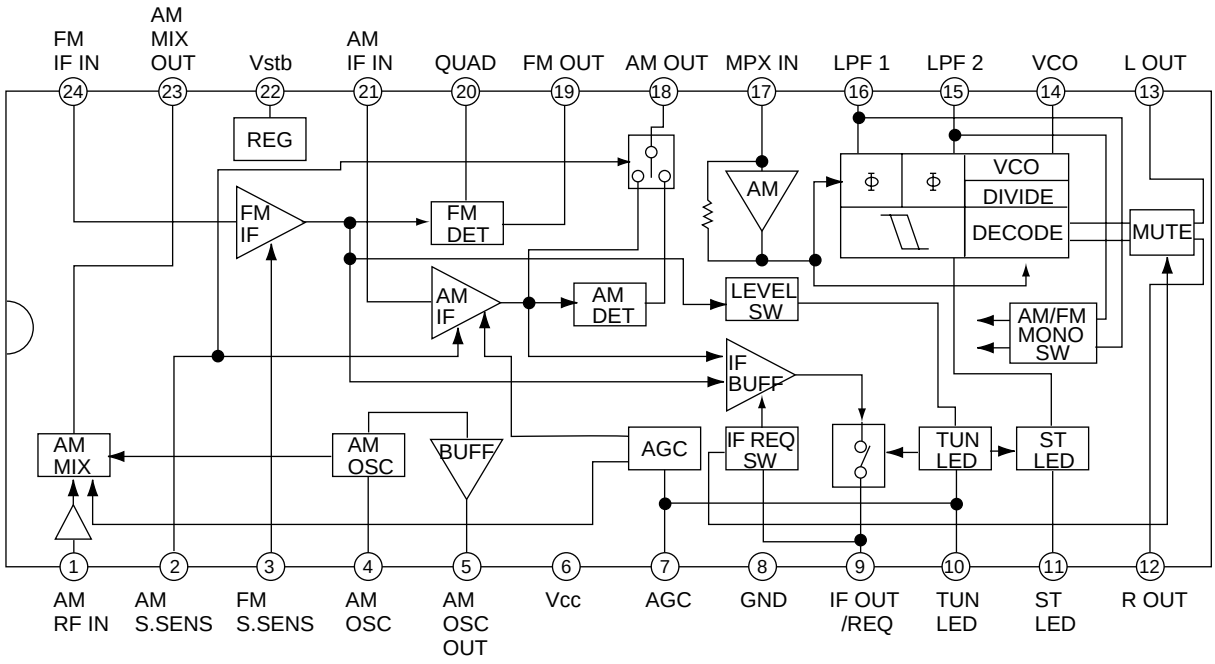


3. Function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XT	I	X'tal oscillator connect (75kHz)	12	IFIN	I	IF counter signal input
2	$\overline{FM}$/AM	O	LOW:FM mode	13	IFCONT	O	IF signal output
3	CE	I	When data output/input for 4pin(input) and 6pin(output): H	14		-	Not use
4	DI	I	Input for receive the serial data from controller	15	AMIN	I	AM Local OSC signal output
5	CLOCK	I	Sync signal input use	16	FMIN	I	FM Local OSC signal input
6	DO	O	Data output for Controller Output port	17	VCC	-	Power suplly(VDD=4.5-5.5V) When power ON:Reset circuit move
7	FM/ST/VCO	O	"Low": MW mode	18	PD	O	PLL charge pump output(H: Local OSC frequency Height than Reference frequency. L: Low Agreement: Height impedance)
8	$\overline{AM}$/FM	O	Open state after the power on reset	19	LPFIN	I	Input for active lowpassfilter of PLL
9	LW	I/O	Input/output port	20	LPFOUT	O	Output for active lowpassfilter of PLL
10	MW	I/O	Input/output port	21	GND	-	Connected to GND
11	SDIN	I/O	Data input/output	22	$\overline{XT}$	I	X'tal oscillator(75KHz)

■ TA2057N (IC1) : FM/AM IF AMP & Detector

1.Block Diagrams

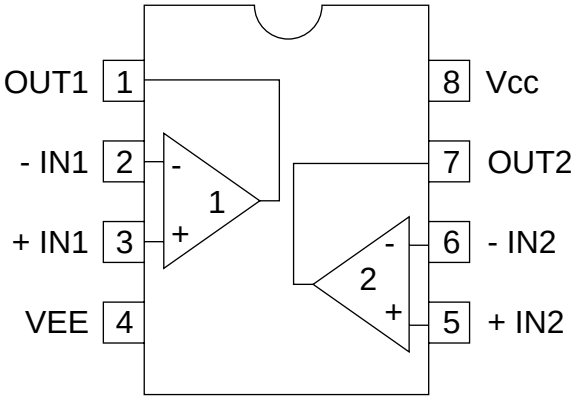


2.Pin Function

Pin No.	I/O	Symbol	Function	Pin No.	I/O	Symbol	Function
1	I	AM RF	AMRF signal input	13	O	Lch OUT	Output Lch
2		AM S.SENS		14	O	VCO	Voltage controlled terminal
3		FM S.SENS		15	O	LPF2	When voltage of terminal is MONO
4	-	AM OSC	AM local oscillation circuit				at "H" and ST at "L"
5	O	AM OSC OUT	AM local oscillation signal output	16	O	LPF1	When voltage of terminal is AM at
6	-	VCC	Power supply				"H" and FM at "L"
7	I	AGC	AGC voltage input terminal	17	I	MPX IN	Multi plex signal input
8	-	GND	Connect to GND	18	O	AM OUT	AM detection signal output
9	O	IF OUT	IF REQ signal output to IC2	19	O	FM OUT	FM detection signal output
10	O	TU IND	Indicator drive output when tuning	20	I	FM QUAD	Bypass to FMIF
11	O	ST IND	Stereo indicator output	21	I	AM IF IN	Input of AMIF signal
			"H"mono . "L"stereo	22	-	Vst	Fixed voltage output terminal
12	O	Rch OUT	Output Rch	23	O	AM MIX OUT	Output terminal for AM mixer
				24	I	FM IF IN	Input of FMIF signal

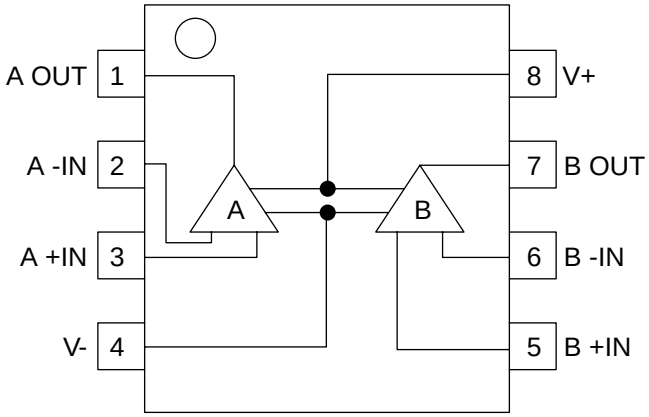
■ BA15218F-XE (IC102) : Dual ope. amp.

1. Pin layout & Block diagram

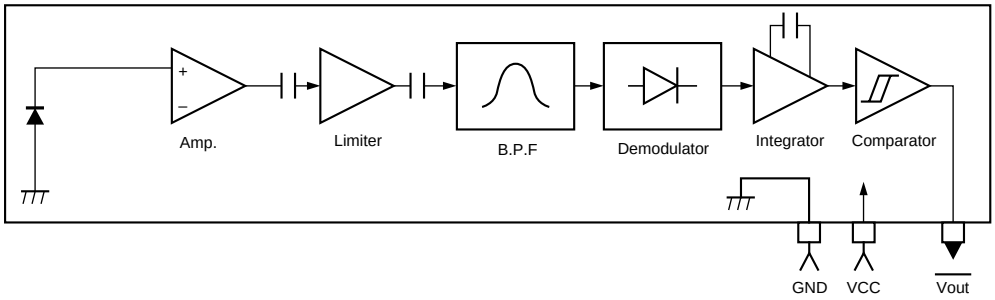


■NJM4580D-D (IC101) : Dual ope amp.

1. Pin layout & Block diagram

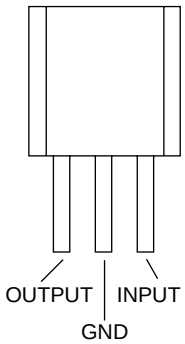


■GP1U271X (IC801) : Receiver for remote

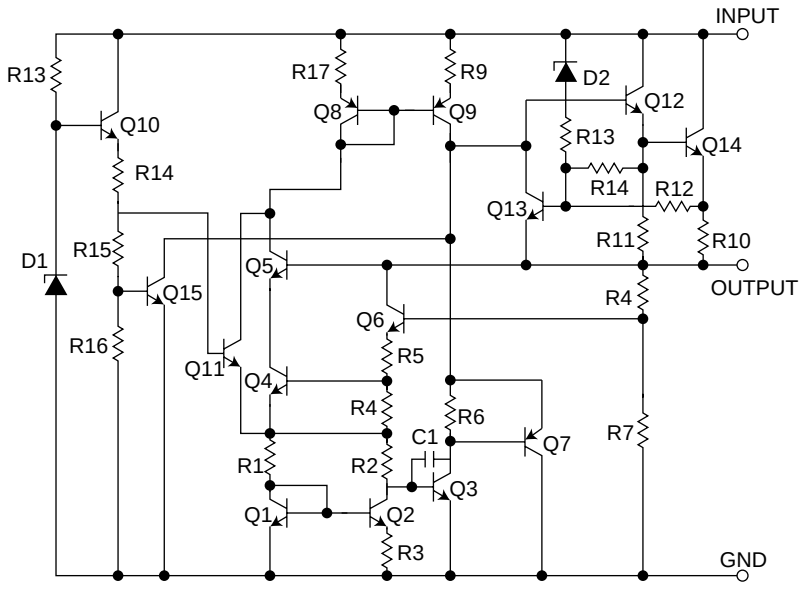


■ UPC78L05J-T (IC191) : Regulator

1. Pin layout



2. Block diagram



FS-SD990 / FS-SD770
FS-SD550

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO & COMMUNICATION BUSINESS DIVISION
PERSONAL & MOBILE NETWORK BUSINESS UNIT. 10-1,1Chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

No.20947

Printed in Japan
200104(V)

PARTS LIST

[FS-SD990]
[FS-SD770]
[FS-SD550]

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

Area suffix

J ---------- U.S.A.
C ---------- Canada

- Contents -

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Electrical parts list ---------- 3- 5
Packing materials and accessories parts list ---------- 3-13

■ Parts list(General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LV10325-004A	FRONT PANEL	1	FS-SD990	
		LV10325-002A	FRONT PANEL	1	FS-SD770/SD550	
	2	LV31677-201A	PUSH BUTTON 1	2	ABS/PLATING	
	3	QYSDSF2608Z	SCREW	7		
	4	GN30006-001A	SPACER	2		
	5	GN30001-002A	LENS	1	FS-SD770/SD550	
		GN30001-004A	LENS	1	FS-SD990	
	6	LV31679-001A	LCD CASE	1	ABS	
	7	LV41519-001A	SHEET	1	LCD FILTER	
	8	LV31680-001A	REFLECTOR	1	PMMA/MILKY	
	9	LV41520-001A	INDICATOR	1	STANDBY LED	
	10	KSM-900AAH	CD MECHA	1	CD MECHA	
	11	GN30006-001A	SPACER	1		
	12	QYSDSF2608Z	SCREW	7		
	13	LV40770-002A	INSULATOR	3		
	14	GN30006-002A	SPACER	1		
	15	LV10326-002A	CD CHASSIS	1	MIPS	
	17	LV31687-001A	MOTOR BASE	1	ABS	
	18	LV41522-002A	WORM GEAR	1	POM	
	19	LV41523-001A	WORM WHEEL	1	POM	
	20	LV41536-001A	PULLEY	1	POM	
	21	LV41598-001A	BELT	1		
	22	QAR0100-001	DC MOTOR	1		
	23	QYSPSP3004Z	SCREW	2	DC MOTOR+M.BASE	
	24	QYSBST3006Z	T.SCREW	3	MOTER.B+BOTTOM.	
	25	LV31688-001A	WHEEL STOPPER	1	ABS	
	26	LV41524-001A	MAIN GEAR	1	POM	
	27	LV31689-002A	SHAFT 1	1	SUS	
	28	LV31690-002A	ARM	2	FS-SD990	
		LV31690-001A	ARM	2	FS-SD770/SD550	
	29	LV31691-001A	G.WHEEL(L)	1	POM	
	30	LV31692-001A	G.WHEEL(R)	1	POM	
	31	LV31693-001A	G.GEAR(L)	1	PBT	
	32	LV31694-001A	G.GEAR(R)	1	PBT	
	33	LV31695-001A	ARM GEAR(L)	1	FS-SD770/SD550	
		LV31695-002A	ARM GEAR(L)	1	FS-SD990	
	34	LV31696-002A	ARM GEAR(R)	1	FS-SD990	
		LV31696-001A	ARM GEAR(R)	1	FS-SD770/SD550	
	35	LV31697-002A	GEAR BASE(L)	1	PBT	
	36	QYSBST3006Z	T.SCREW	4		
	37	LV31698-002A	GEAR BASE(R)	1	PBT	
	39	LV32127-001A	GEAR BKT(L)	1	EGC T1	
	40	LV32128-001A	GEAR BKT(R)	1	EGC T1	
	41	LV41929-001A	SHAFT 4	4	FS-SD770/SD550	
		LV41929-002A	SHAFT 4	4	FS-SD990	
	42	LV41930-001A	SHAFT 5	2	SUS	
	43	LV31701-002A	DOOR BASE	2	FS-SD990	
		LV31701-001A	DOOR BASE	2	FS-SD770/SD550	

■ Parts list(General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	44	QYSPSFG2605N	SCREW	6	DOOR BASE+ARM	
	45	QYSPSPG3006Z	SCREW	2	SAFT 1+G.BASE	
	46	QYSDSF2606Z	SCREW	6	G.BKT+G.BASE	
	47	QYSDSF2606Z	SCREW	4	SW.PWB+G.BASE	
	48	QYREE6000X	E RING	2		
	49	LV10328-004A	CD DOOR	1	FS-SD990	
		LV10328-003A	CD DOOR	1	FS-SD770/SD550	
	50	LV31702-012A	DOOR COVER	1	FS-SD550	
		LV31702-014A	DOOR COVER	1	FS-SD770	
		LV31702-016A	DOOR COVER	1	FS-SD990	
	51	LV41758-001A	CUSTOM SCREW	4	D.C.BKT+D.COVER	
	52	LV41587-001A	SPECIAL SCREW	4	CD DOOR+D.BASE	
	53	LV41819-001A	CD CAUTION	1		
	54	LV10329-001A	BOTTOM CHASSIS	1	EGC T1.0	
	55	GN30006-003A	SPACER	1		
	56	GN30006-004A	SPACER	2		
	57	QYSBST4006Z	T.SCREW	4	BOTTOM.C+TRANS	
	58	QYSBST3006Z	T.SCREW	1	BOTTOM.C+AMP PW	
	59	QYSSST3006Z	SCREW	3	BOTTOM+FRONT.P	
	60	QYSBST3006Z	T.SCREW	5	BOTTOM+MAIN PWB	
	61	QYSDSF2606Z	SCREW	2		
	62	LV31901-001A	BURRER	1	BETW.AC&BTM	
	63	QAR0148-001	FAN MOTOR	1		
	64	LV41799-001A	FAN BRACKET	1		
	65	QYSPST3012Z	T.SCREW	2		
	66	QYSBST3006Z	T.SCREW	2		
	67	LV10440-004A	TOP COVER	1	FS-SD990	
		LV10440-002A	TOP COVER	1	FS-SD770/SD550	
	68	LV41821-002A	FELT	4	FS-SD990	
		LV41821-001A	FELT	4	FS-SD770/SD550	
	69	LV31681-201A	PUSH BUTTON 3	1	ABS/PLATING	
	70	QYSDSF2608Z	SCREW	6		
	71	LV41826-001A	SHIELID(A)	1		
	72	LV41828-002A	PROTECTOR	1		
	73	GN30007-003A	SPACER	2		
	74	LV31682-201A	PUSH BUTTON 2	1	ABS/PLATINGR	
	75	LV41827-001A	SHIELD(R)	1		
	76	QYSBST3006Z	T.SCREW	4	BOTTOM.C+TOP	
	77	GN30008-004A	FUNC BTN ASSY	1	FS-SD990	
		GN30008-003A	FUNC BTN ASSY	1	FS-SD770/SD550	
	78	QYSDSF2608Z	SCREW	1	SPK.PWB+TOP	
	79	QYSDSF2606Z	SCREW	2	JACK PWB+TOP	
	80	LV31686-001A	LED BOX	1	FS-SD770/SD550	
		LV31686-002A	LED BOX	1	FS-SD990	
	81	LV41521-001A	LED COVER	1	ABS	
	82	LV31704-001A	IC HOLDER	1	AL T2	
	83	QYSBSF3010Z	SCREW	2	IC+IC HOLDER	
	84	LV31849-001A	HEAT SINK2	1	AL T2	

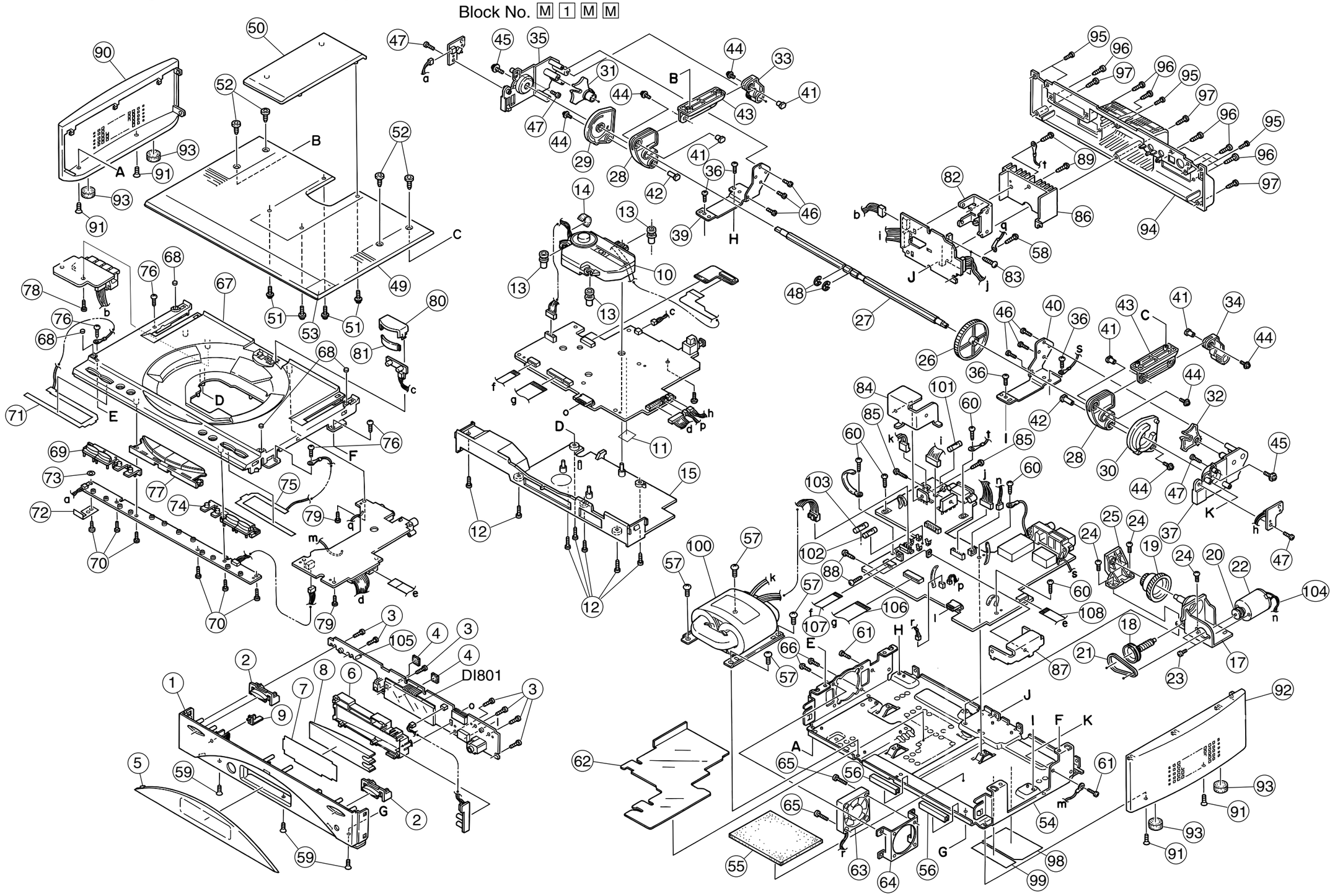
■ Parts list(General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	85	QYSBSF3010Z	SCREW	2		
	86	LV31705-002A	HEAT SINK	1	AL	
	87	LV31850-001A	HEAT SINK3	1	AL T2	
	88	QYSBSF3010Z	SCREW	2		
	89	QYSBSF3008Z	SCREW	2	IC HOLDER+H.SIN	
	90	LV10330-002A	SIDE PANEL(L)	1	FS-SD990	
		LV10330-001A	SIDE PANEL(L)	1	FS-SD770/SD550	
	91	QYSSST3006Z	SCREW	4		
	92	LV10331-002A	SIDE PANEL(R)	1	FS-SD990	
		LV10331-001A	SIDE PANEL(R)	1	FS-SD770/SD550	
	93	LV41832-001A	FOOT	4	SIDE PANEL	
	94	LV10332-005A	REAR PANEL	1	FS-SD990	
		LV10332-002A	REAR PANEL	1	FS-SD770/SD550	
	95	QYSDSF2608N	SCREW	5	REAR+TOP	
	96	QYSDSG3008N	T.SCREW	7	REAR+JACK	
	97	QYSDSG3008N	T.SCREW	3	REAR+BOTTOM	
	98	GN30026-011A	RATING LABEL	1	FS-SD770	
		GN30025-011A	RATING LABEL	1	FS-SD550	
		GN30027-011A	RATING LABEL	1	FS-SD990	
	99	LV41772-001A	CAUTION LABEL	1	REAR PANEL	
⚠	100	QQT0286-002	POWER TRANS	1		
⚠	101	QMF51N2-1R0-J1	FUSE	1		
⚠	102	QMF51U1-8R0-J1	FUSE	1		
⚠	103	QMF51U1-4R0-J1	FUSE	1		
	104	WJM0133-001A	E-SI C WIRE C-F	1		
	105	LV40859-001A	SPACER	1		
	106	QUQB12-1805DJ	FFC WIRE	1	MAIN - MICOM	
	107	QUQB12-0905DJ	FFC WIRE	1	MAIN - MICOM	
	108	QUQB12-0806CJ	FFC WIRE	1	MAIN - FUNCTION	
	DI801	QLD0185-001	LCD MODULE	1	FS-SD990	
		QLD0120-001	LCD MODULE	1	FS-SD770/SD550	

Exploded view of general assembly and parts list

Block No. M 1 M M



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

⚠	Item	Parts number	Parts name	Remarks	Area
	C 1	NCB21HK-223X	C CAPACITOR		
	C 2	NCB21HK-102X	C CAPACITOR		
	C 3	NCB21EK-473X	C CAPACITOR		
	C 4	NCB21HK-103X	C CAPACITOR		
	C 5	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 6	NCB21HK-102X	C CAPACITOR		
	C 9	NCB21HK-102X	C CAPACITOR		
	C 12	NDU21HJ-100X	C CAPACITOR		
	C 13	NCB21EK-473X	C CAPACITOR		
	C 14	NCB21HK-103X	C CAPACITOR		
	C 21	NCB21EK-473X	C CAPACITOR		
	C 30	QEKC1CM-476Z	E.CAPACITOR	47MF 20% 16V	
	C 32	NCB21HK-102X	C CAPACITOR		
	C 33	QEKC1AM-107Z	E.CAPACITOR	100MF 20% 10V	
	C 34	NCS21HJ-150X	C CAPACITOR		
	C 35	NCB21HK-102X	C CAPACITOR		
	C 36	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 37	NCB21EK-473X	C CAPACITOR		
	C 39	NCB21EK-473X	C CAPACITOR		
	C 40	NCB21HK-103X	C CAPACITOR		
	C 41	QEKC1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 42	QEKC1HM-474Z	E CAPACITOR	.47MF 20% 50V	
	C 44	NCS21HJ-221X	C CAPACITOR		
	C 45	QEKC1HM-335Z	E CAPACITOR	3.3MF 20% 50V	
	C 46	NCB21HK-223X	C CAPACITOR		
	C 47	NCB21HK-103X	C CAPACITOR		
	C 49	NCB21HK-223X	C CAPACITOR		
	C 50	NCB21HK-223X	C CAPACITOR		
	C 51	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 52	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 60	QEKC1AM-107Z	E.CAPACITOR	100MF 20% 10V	
	C 61	NCS21HJ-120X	C CAPACITOR		
	C 62	NCS21HJ-120X	C CAPACITOR		
	C 63	NCB21EK-473X	C CAPACITOR		
	C 65	NCB21HK-102X	C CAPACITOR		
	C 66	NCS21HJ-151X	C CAPACITOR		
	C 67	NCS21HJ-101X	C CAPACITOR		
	C 68	NCS21HJ-101X	C CAPACITOR		
	C 69	QEKC1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 70	NCB21HK-392X	C CAPACITOR		
	C 71	QEKC1HM-335Z	E CAPACITOR	3.3MF 20% 50V	
	C 72	NCB21HK-102X	C CAPACITOR		
	C 91	NCB21HK-103X	C CAPACITOR		
	CF 1	QAX0419-001Z	C FILTER	FM IF	
	CF 2	QAX0419-001Z	C FILTER	FM IF	
	CF 3	QAX0418-001Z	C FILTER		
	CF 4	QAX0409-001	CERA LOCK		
	CN101	QGF1201F3-08	CONNECTOR	TO.FUNC.	
	CN102	QGA2501C1-06	6P CONNECTOR	TO.PO.	
	CN103	QGB1216J1-08S	CONNECTOR	TO.FRONT	
	CN104	QGF1201F3-09	CONNECTOR	TO.MICOM	
	CN105	QGF1201F3-18	CONNECTOR	TO.MICOM	
	CN106	QGA2501C1-02	2P CONNECTOR	TO.MOTOR	
	CN181	QGA2001C1-02	2P PLUG ASSY		
⚠	CN191	QGA7901C1-02	CONNECTOR	PRI.	
	CN192	QGA3901C1-04	4P CONNECTOR	SEC.	
⚠	CN193	QGA2501C1-07	7P CONNECTOR	TO.PO.	
	CN301	QGA2501F1-04	CONNECTOR	FROM SP.JACK	
	CN801	QGB1216K1-08S	CONNECTOR	TO AMP/TUNER	
	CN802	QGB1216K1-14S	CONNECTOR	TO MICON/CD	
	CN803	QGA2001C1-02	2P PLUG ASSY	TO BACK LIGHT	
	C1101	QFN31HJ-562Z	M CAPACITOR	MPX	
	C1102	QFVJ1HJ-224Z	MF CAPACITOR	LPF	

⚠	Item	Parts number	Parts name	Remarks	Area
	C1103	QFVJ1HJ-563Z	MF CAPACITOR	FS-SD990	
	C1103	QFN31HJ-563Z	M CAPACITOR	FS-SD770/SD550	
	C1104	QFN31HJ-563Z	M CAPACIROE	FS-SD770/SD550	
	C1104	QFVJ1HJ-563Z	MF CAPACITOR	FS-SD990	
	C1105	QTE1C06-476Z	E CAPACITOR	AHB	
	C1106	QTE1C06-226Z	E CAPACITOR	AHB	
	C1107	QETN1HM-475Z	E CAPACITOR	HP	
	C1108	NCS21HJ-151X	C CAPACITOR	HP	
	C1109	NCS21HJ-222X	C CAPACITOR	HP	
	C1110	NCS21HJ-102X	C CAPACITOR		
	C1201	QFN31HJ-562Z	M CAPACITOR	MPX	
	C1202	QFVJ1HJ-224Z	MF CAPACITOR	LPF	
	C1203	QFVJ1HJ-563Z	MF CAPACITOR	FS-SD990	
	C1203	QFN31HJ-563Z	M CAPACITOR	FS-SD770/SD550	
	C1204	QFN31HJ-563Z	M CAPACIROE	FS-SD770/SD550	
	C1204	QFVJ1HJ-563Z	MF CAPACITOR	FS-SD990	
	C1205	QTE1C06-476Z	E CAPACITOR	AHB	
	C1206	QTE1C06-226Z	E CAPACITOR	AHB	
	C1207	QETN1HM-475Z	E CAPACITOR	HP	
	C1208	NCS21HJ-151X	C CAPACITOR	HP	
	C1209	NCS21HJ-222X	C CAPACITOR	HP	
	C1210	NCS21HJ-102X	C CAPACITOR		
	C1301	QETN1EM-106Z	E CAPACITOR	AHB	
	C1302	QETN1EM-476Z	E CAPACITOR	AHB	
	C1303	QTE1E06-476Z	E CAPACITOR	FS-SD990	
	C1303	QTE1C06-226Z	AL E.CAPACITOR	FS-SD770/SD550	
	C1304	QETN1HM-105Z	E CAPACITOR	AHB	
	C1305	QETN1VM-107Z	E CAPACITOR	HP	
	C1306	QETN1CM-476Z	E CAPACITOR	HP	
	C1307	QETN1HM-106Z	E CAPACITOR	HP.MUTE.D	
	C1308	QETN1HM-106Z	E CAPACITOR	S.MUTE.D	
	C1801	QETN1HM-106Z	E CAPACITOR	M.DRIVE	
	C1802	QETN1VM-107Z	E CAPACITOR	M.DRIVE	
	C1803	QCZ0205-155Z	ML C CAPACITOR	M.DRIVE	
⚠	C1901	QFVJ1HJ-104Z	MF CAPACITOR	HV	
⚠	C1902	QFVJ1HJ-104Z	MF CAPACITOR	HV	
⚠	C1903	QFVJ1HJ-104Z	MF CAPACITOR	HV	
⚠	C1904	QFVJ1HJ-104Z	MF CAPACITOR	HV	
⚠	C1905	QFVJ1HJ-104Z	MF CAPACITOR	LV	
⚠	C1906	QFVJ1HJ-104Z	MF CAPACITOR	LV	
⚠	C1907	QFVJ1HJ-104Z	MF CAPACITOR	LV	
⚠	C1908	QFVJ1HJ-104Z	MF CAPACITOR	LV	
⚠	C1910	QETM1EM-828	E CAPACITOR	HV	
⚠	C1911	QETM1EM-688	E CAPACITOR	LV	
	C1912	NCS21HJ-221X	C CAPACITOR	SW10	
	C1913	NCB21HK-103X	C CAPACITOR	SW10	
	C1914	QETN1HM-476Z	E CAPACITOR	SW10	
	C1915	QETN1CM-107Z	E CAPACITOR	L.FIL	
	C1916	NCS21HJ-221X	C CAPACITOR	CD6.5	
	C1917	NCB21HK-103X	C CAPACITOR	CD6.5	
	C1918	QTE1E06-476Z	E CAPACITOR	CD6.5	
	C1919	QETN1CM-106Z	E CAPACITOR	BL7	
	C1920	QETN1EM-226Z	E CAPACITOR	BL7	
	C1921	QFVJ1HJ-104Z	MF CAPACITOR	US5	
	C1922	QETN1EM-106Z	E CAPACITOR	US5	
	C1923	QETN1HM-475Z	E CAPACITOR	TU5	
	C1924	QETN1CM-107Z	E CAPACITOR	TU5	
	C1925	QFZ0160-223Z	PP CAPACITOR	FS-SD990	
	C1925	QFN31HJ-103Z	M CAPACITOR	FS-SD770/SD550	
⚠	C1926	QCBB1HK-103Y	C CAPACITOR	LV	
⚠	C1927	QCBB1HK-103Y	C CAPACITOR	HV	
	C1928	QCBB1HK-103Y	C CAPACITOR	.010MF 10% 50V	
	C1929	NCB21HK-103X	C CAPACITOR		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	C3101	QTE1V06-106Z	E CAPACITOR	IN	
	C3102	QDGB1HK-102Y	C CAPACITOR	IN	
	C3103	QCBB1HK-104Y	TF CAPACITOR	OUT	
	C3104	QCBB1HK-104Y	TF CAPACITOR	OUT	
	C3201	QTE1V06-106Z	E CAPACITOR	IN	
	C3202	QDGB1HK-102Y	C CAPACITOR	IN	
	C3203	QCBB1HK-104Y	TF CAPACITOR	OUT	
	C3204	QCBB1HK-104Y	TF CAPACITOR	OUT	
	C3301	QETN1CM-106Z	E CAPACITOR	BEEP	
	C3302	NCS21HJ-152X	C CAPACITOR		
	C3303	QCBB1HK-104Y	TF CAPACITOR	FS-SD990	
	C3303	QCBB1HK-103Y	TF CAPACITOR	FS-SD770/SD550	
	C3304	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C3306	QTE1E06-476Z	E CAPACITOR	FS-SD990	
	C3306	QTE1V28-107Z	AL E.CAPACITOR	FS-SD770/SD550	
	C3308	QETN1CM-336Z	E CAPACITOR	ON.TIME	
	C3309	QETN1HM-105Z	E CAPACITOR	AHB NF	
	C3310	QETN1HM-105Z	E CAPACITOR	AHB NF	
	C3311	QCBB1HK-473Y	C CAPACITOR	AHB NF	
	C3312	QCBB1HK-473Y	C CAPACITOR	AHB NF	
	C8001	NCB21HK-103X	C CAPACITOR		
	C8002	QER61AM-107Z	E CAPACITOR	100MF 20% 10V	
	C8003	NCB21HK-223X	C CAPACITOR		
	C8004	NCS21HJ-101X	C CAPACITOR		
	C8101	QER61AM-227Z	E.CAPA. I.M	220MF 20% 10V	
	C8102	NCB21HK-103X	C CAPACITOR		
	C8201	QER61AM-227Z	E.CAPA. I.M	220MF 20% 10V	
	C8202	NCB21HK-103X	C CAPACITOR		
	D 1	1SS133-T2	SI DIODE		
	D 2	1SS133-T2	SI DIODE		
	D 3	1SS133-T2	SI DIODE		
	D 4	1SS133-T2	SI DIODE		
	D1301	1SS133-T2	SI DIODE	AHB	
	D1302	MTZJ5.1A-T2	ZENER DIODE	AHB	
	D1303	1SS133-T2	SI DIODE	AHB	
	D1304	1SS133-T2	SI DIODE	HP.MUTE	
	D1305	1SS133-T2	SI DIODE	S.MUTE	
	D1801	DSK10C-T1	DIODE	M.DRIV	
⚠	D1901	D5SBA20-S1	SI DIODE	HV	
⚠	D1902	D3SBA20-S1	DIODE	LV	
	D1903	1SS133-T2	SI DIODE	SW10	
	D1904	MTZJ5.6C-T2	ZENER DIODE	SW10	
	D1905	MTZJ10A-T2	ZENER DIODE	SW10	
	D1906	MTZJ11A-T2	ZENER DIODE	L.FIL	
	D1907	1SS133-T2	SI DIODE	L.FIL	
	D1908	1SS133-T2	SI DIODE	CD6.5	
	D1909	MTZJ6.8B-T2	ZENER DIODE	CD6.5	
⚠	D1910	6A10E2	SI DIODE	LV	
	D1911	MTZJ6.8A-T2	ZENER DIODE	BL7	
⚠	D1912	MTZJ10A-T2	ZENER DIODE	BL7	
⚠	D1913	MTZJ6.8B-T2	ZENER DIODE	US5V	
	D1914	MTZJ3.9B-T2	ZENER DIODE	TU5	
	D1915	1SS133-T2	SI DIODE	TU5	
	D1916	1SS133-T2	SI DIODE	TU5	
	D1917	1SS133-T2	SI DIODE		
	D3302	1SS133-T2	SI DIODE	AHB NF	
	D3303	1SS133-T2	SI DIODE	AHB NF	
	D8001	SPR-39MVWF	LED	POWER/STANDBY	
	D8002	1SS133-T2	SI DIODE		
	D8021	TLYH156P/ST/	LED	FS-SD990	
	D8021	SELU1E50CM	LED	FS-SD770/SD550	
	D8022	SELU1E50CM	LED	FS-SD770/SD550	
	D8022	TLYH156P/ST/	LED	FS-SD990	

⚠	Item	Parts number	Parts name	Remarks	Area
	D8025	MTZJ10C-T2	ZENER DIODE	FS-SD770/SD550	
	D8031	SELU1E56BM	LED	FS-SD770/SD550	
	D8031	TLYH156P/ST/	LED	FS-SD990	
	D8032	TLYH156P/ST/	LED	FS-SD990	
	D8032	SELU1E56BM	LED	FS-SD770/SD550	
	D8035	MA3100/M/-X	ZENER DIODE	FS-SD770/SD550	
	EP131	QNZ0136-001Z	EARTH PLATE		
	EP191	QNZ0136-001Z	EARTH PLATE	J.ONLY	
	IC 1	TA2057N	IC		
	IC 2	LC72136N	IC		
	IC101	NJM4580DD	IC	AHB	
	IC102	BA15218F-XE	IC	HP	
	IC108	TA8409F-W	IC	M.DRIVE	
⚠	IC191	UPC78L05J-T	I C	US5	
⚠	IC301	LA4905	IC		
	IC801	GP1U271X	RM RECIVER		
	J 1	QNB0014-001	ANT TERMINAL	AM/FM ANT COAX	
⚠	J1901	QNC0052-001	AC INLET		
	J3001	QNB0092-001	SPK TERMINAL		
	J8301	QNS0162-001	JACK	HP.JACK	
	K1801	QQR0779-001Z	INDUCTOR		
	K8301	QQR0601-001Z	FERRITE BEADS		
	L 1	QQR0796-001	COIL BLOCK	MW RF/OSC	
	L 4	QQL231K-221Y	INDUCTOR		
	LF111	QQR0590-001	FILTER	MPX.FILTER	
	LF121	QQR0590-001	FILTER	MPX.FILTER	
	L1801	QQL25CK-221Z	INDUCTOR	M.DRIVER	
	L8101	QQL231K-470Y	INDUCTOR		
	L8201	QQL231K-470Y	INDUCTOR		
	PP101	QZW0038-001	WIRE CLAMP		
	PP102	QZW0038-001	WIRE CLAMP		
	PP103	QZW0038-001	WIRE CLAMP		
	PP104	QZW0038-001	WIRE CLAMP		
	Q 1	2SC2668/O/-T	TRANSISTOR		
	Q 6	DTA114YKA-X	TRANSISTOR		
	Q 7	2SA1037AK/R/-X	TRANSISTOR		
	Q 8	2SA1037AK/R/-X	TRANSISTOR		
	Q1101	2SD2114K/VW/-X	CHIP TRANSISTOR	AHB	
	Q1102	2SC2412K/R/-X	TRANSISTOR	HP.MUTE	
	Q1201	2SD2114K/VW/-X	CHIP TRANSISTOR	AHB	
	Q1202	2SC2412K/R/-X	TRANSISTOR	HP.MUTE	
	Q1301	DTA123EKA-X	DIGITAL.TR	S.MUTE.D	
	Q1302	DTA123EKA-X	DIGITAL.TR	HP.MUTE.D	
	Q1801	2SC2412K/R/-X	TRANSISTOR	M.DRIV	
⚠	Q1901	2SA1359/OY/	TRANSISTOR	SW10	
	Q1902	2SC2412K/R/-X	TRANSISTOR	SW10	
	Q1903	2SC2412K/R/-X	TRANSISTOR	SW10	
	Q1904	2SA1037AK/R/-X	TRANSISTOR	SW10	
	Q1905	DTA144TKA-X	TRANSISTOR	SW10	
	Q1906	DTC144TKA-X	TRANSISTOR	SW10	
	Q1907	2SD2144S/VW/-T	TRANSISTOR	L.FIL	
⚠	Q1908	2SA1359/OY/	TRANSISTOR	CD6.5	
	Q1909	2SC2412K/R/-X	TRANSISTOR	CD6.5	
	Q1910	2SC2412K/R/-X	TRANSISTOR	CD6.5	
⚠	Q1912	2SA1175/FE/-T	TRANSISTOR	BL7	
	Q1913	2SC2412K/R/-X	TRANSISTOR	BL7	
	Q1914	2SA1037AK/R/-X	TRANSISTOR	TU5	
	Q1915	2SC2412K/R/-X	TRANSISTOR	TU5	
	Q3101	2SD2114K/VW/-X	CHIP TRANSISTOR	S.MUTE	
	Q3201	2SD2114K/VW/-X	CHIP TRANSISTOR	S.MUTE	
	Q3301	DTA143TKA-X	TRANSISTOR	S.MUTE BUFF	
	Q8001	DTC114TKA-X	TRANSISTOR		
	Q8002	DTC114EKA-X	TRANSISTOR		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	Q8003	DTA114EKA-X	DIGITAL.TRANSIS		
	Q8101	2SD2114K/VW/-X	CHIP TRANSISTOR		
	Q8201	2SD2114K/VW/-X	CHIP TRANSISTOR		
	R 1	NRSA02J-102X	MG RESISTOR		
	R 2	NRSA02J-820X	MG RESISTOR		
	R 12	NRSA02J-102X	MG RESISTOR		
	R 13	NRSA02J-104X	MG RESISTOR		
	R 20	NRSA02J-331X	MG RESISTOR		
	R 21	NRSA02J-224X	MG RESISTOR		
	R 22	NRSA02J-331X	MG RESISTOR		
	R 23	NRSA02J-270X	MG RESISTOR		
	R 24	NRSA02J-271X	MG RESISTOR		
	R 25	NRSA02J-473X	MG RESISTOR		
	R 27	NRSA02J-223X	MG RESISTOR		
	R 29	NRSA02J-473X	MG RESISTOR		
	R 30	NRSA02J-103X	MG RESISTOR		
	R 31	NRSA02J-103X	MG RESISTOR		
	R 32	NRSA02J-473X	MG RESISTOR		
	R 34	NRSA02J-333X	MG RESISTOR		
	R 35	NRSA02J-333X	MG RESISTOR		
	R 36	NRSA02J-103X	MG RESISTOR		
	R 37	NRSA02J-472X	MG RESISTOR		
	R 38	NRSA02J-392X	MG RESISTOR		
	R 39	NRSA02J-392X	MG RESISTOR		
	R 42	NRSA02J-102X	MG RESISTOR		
	R 43	NRSA02J-102X	MG RESISTOR		
	R 44	NRSA02J-102X	MG RESISTOR		
	R 45	NRSA02J-102X	MG RESISTOR		
	R 46	NRSA02J-473X	MG RESISTOR		
	R 48	NRSA02J-102X	MG RESISTOR		
	R 52	NRSA02J-472X	MG RESISTOR		
	R 54	NRSA02J-472X	MG RESISTOR		
	R 55	NRSA02J-182X	MG RESISTOR		
	R 56	NRSA02J-332X	MG RESISTOR		
	R 57	NRSA02J-102X	MG RESISTOR		
	R 66	NRSA02J-222X	MG RESISTOR		
	R 68	NRSA02J-223X	MG RESISTOR		
	R 69	NRSA02J-222X	MG RESISTOR		
⚠	RY191	QSK0116-001	RELAY		
	R1101	NRSA02J-122X	MG RESISTOR	TU	
	R1102	NRSA02J-562X	MG RESISTOR	TU	
	R1103	NRSA02J-103X	MG RESISTOR	AHB	
	R1104	NRSA02J-332X	MG RESISTOR	LPF	
	R1105	NRSA02J-272X	MG RESISTOR	LPF	
	R1106	NRSA02J-392X	MG RESISTOR	AHB	
	R1107	NRSA02J-153X	MG RESISTOR	AHB	
	R1108	NRSA02J-432X	MG RESISTOR	AHB	
	R1109	NRSA02J-153X	MG RESISTOR	AHB	
	R1110	NRSA02J-224X	MG RESISTOR	AHB	
	R1111	NRSA02J-103X	MG RESISTOR	AHB	
	R1112	NRSA02J-332X	MG RESISTOR	HP	
	R1113	NRSA02J-563X	MG RESISTOR	HP	
	R1114	NRSA02J-102X	MG RESISTOR	HP	
	R1115	NRSA02J-561X	MG RESISTOR	HP	
	R1116	NRSA02J-222X	MG RESISTOR	HP.MUTE	
	R1118	NRSA02J-1R0X	MG RESISTOR		
	R1201	NRSA02J-122X	MG RESISTOR	TU	
	R1202	NRSA02J-562X	MG RESISTOR	TU	
	R1203	NRSA02J-103X	MG RESISTOR	AHB	
	R1204	NRSA02J-332X	MG RESISTOR	LPF	
	R1205	NRSA02J-272X	MG RESISTOR	LPF	
	R1206	NRSA02J-392X	MG RESISTOR	AHB	
	R1207	NRSA02J-153X	MG RESISTOR	AHB	

⚠	Item	Parts number	Parts name	Remarks	Area
	R1208	NRSA02J-432X	MG RESISTOR	AHB	
	R1209	NRSA02J-153X	MG RESISTOR	AHB	
	R1210	NRSA02J-224X	MG RESISTOR	AHB	
	R1211	NRSA02J-103X	MG RESISTOR	AHB	
	R1212	NRSA02J-332X	MG RESISTOR	HP	
	R1213	NRSA02J-563X	MG RESISTOR	HP	
	R1214	NRSA02J-102X	MG RESISTOR	HP	
	R1215	NRSA02J-561X	MG RESISTOR	HP	
	R1216	NRSA02J-222X	MG RESISTOR	HP.MUTE	
	R1218	NRSA02J-1R0X	MG RESISTOR		
	R1301	NRSA02J-513X	MG RESISTOR	AHB	
	R1302	NRSA02J-471X	MG RESISTOR	AHB	
	R1303	NRSA02J-102X	MG RESISTOR	AHB	
	R1304	NRSA02J-224X	MG RESISTOR	AHB	
	R1305	NRSA02J-124X	MG RESISTOR	AHB	
	R1306	NRSA02J-563X	MG RESISTOR	AHB	
	R1307	NRSA02J-912X	MG RESISTOR	HP	
	R1308	NRSA02J-103X	MG RESISTOR	HP	
	R1309	NRSA02J-100X	MG RESISTOR	HP	
	R1310	NRSA02J-102X	MG RESISTOR	HP.MUTE.D	
	R1311	NRSA02J-102X	MG RESISTOR	S.MUTE.D	
	R1312	NRSA02J-471X	MG RESISTOR		
	R1313	NRSA02J-471X	MG RESISTOR		
	R1801	NRSA02J-471X	MG RESISTOR	M.DRIVER	
	R1802	NRSA02J-153X	MG RESISTOR	M.DRIVER	
	R1803	NRSA02J-473X	MG RESISTOR	M.DRIVER	
	R1804	NRSA02J-100X	MG RESISTOR	M.DRIVER	
	R1805	NRSA02J-100X	MG RESISTOR	M.DRIVER	
	R1806	NRSA02J-183X	MG RESISTOR	M.DRIVER	
	R1807	NRSA02J-471X	MG RESISTOR		
	R1808	NRSA02J-471X	MG RESISTOR		
⚠	R1901	QRZ9037-335	COMP RESISTOR	J.ONLY	
⚠	R1902	NRSA02J-1R0X	MG RESISTOR	SW10	
⚠	R1903	NRSA02J-1R0X	MG RESISTOR	SW10	
⚠	R1904	NRSA02J-1R0X	MG RESISTOR	SW10	
	R1905	NRSA02J-151X	MG RESISTOR	SW10	
	R1906	NRSA02J-102X	MG RESISTOR	SW10	
⚠	R1907	NRSA02J-102X	MG RESISTOR	SW10	
⚠	R1908	NRSA02J-102X	MG RESISTOR	SW10	
⚠	R1909	NRSA02J-102X	MG RESISTOR	SW10	
	R1910	NRSA02J-472X	MG RESISTOR	SW10	
	R1911	NRSA02J-471X	MG RESISTOR	SW10	
	R1912	NRSA02J-561X	MG RESISTOR	SW10	
	R1913	NRSA02J-272X	MG RESISTOR	SW10	
	R1914	NRSA02J-471X	MG RESISTOR	SW10	
	R1915	NRSA02J-822X	MG RESISTOR	SW10	
	R1916	NRSA02J-102X	MG RESISTOR	SW10	
	R1917	NRSA02J-122X	MG RESISTOR	SW10	
	R1918	NRSA02J-153X	MG RESISTOR	SW10	
	R1919	NRSA02J-512X	MG RESISTOR	SW10	
	R1920	NRSA02J-102X	MG RESISTOR	R.FIL	
⚠	R1921	QRZ9006-4R7X	F RESISTOR	BL7	
⚠	R1922	QRZ9006-4R7X	F RESISTOR	US5V	
⚠	R1923	QRZ9006-4R7X	F RESISTOR	TO.MICOM+B	
	R1924	NRSA02J-103X	MG RESISTOR	CD6.5	
	R1925	NRSA02J-561X	MG RESISTOR	BL7	
	R1926	NRSA02J-123X	MG RESISTOR	BL7	
	R1927	NRSA02J-103X	MG RESISTOR	BL7	
	R1928	NRSA02J-122X	MG RESISTOR	TU5	
	R1929	NRSA02J-273X	MG RESISTOR	TU5	
	R1930	NRSA02J-102X	MG RESISTOR	TU5	
	R1931	NRSA02J-390X	MG RESISTOR	TU5	
⚠	R1932	NRSA02J-331X	MG RESISTOR	CD6.5	

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

⚠	Item	Parts number	Parts name	Remarks	Area
	R1933	NRSA02J-681X	MG RESISTOR	CD6.5	
	R1934	NRSA02J-152X	MG RESISTOR	CD6.5	
	R1935	NRSA02J-272X	MG RESISTOR	CD6.5	
	R1936	NRSA02J-151X	MG RESISTOR	CD6.5	
	R1937	NRSA02J-562X	MG RESISTOR		
⚠	R1938	NRSA02J-102X	MG RESISTOR		
	R3101	QRE141J-432Y	C RESISTOR	IN	
	R3102	QRE141J-103Y	C RESISTOR	IN	
	R3103	QRE141J-2R2Y	C RESISTOR	OUT	
	R3104	QRE141J-2R2Y	C RESISTOR	OUT	
	R3105	NRSA02J-223X	MG RESISTOR	AHB NF	
	R3106	NRSA02J-223X	MG RESISTOR	AHB NF	
	R3107	QRE141J-222Y	C RESISTOR	S.MUTE	
	R3201	QRE141J-432Y	C RESISTOR	IN	
	R3202	QRE141J-103Y	C RESISTOR	IN	
	R3203	QRE141J-2R2Y	C RESISTOR	OUT	
	R3204	QRE141J-2R2Y	C RESISTOR	OUT	
	R3205	NRSA02J-223X	MG RESISTOR	AHB NF	
	R3206	NRSA02J-223X	MG RESISTOR	AHB NF	
	R3207	QRE141J-222Y	C RESISTOR	S.MUTE	
	R3303	QRE141J-103Y	C RESISTOR	ST.BY	
	R3304	NRSA02J-682X	MG RESISTOR	AHB NF	
	R3305	NRSA02J-682X	MG RESISTOR	AHB NF	
	R8001	NRSA02J-102X	MG RESISTOR		
	R8002	NRSA02J-103X	MG RESISTOR		
	R8003	NRSA02J-331X	MG RESISTOR		
	R8004	NRSA02J-331X	MG RESISTOR		
	R8005	NRSA02J-561X	MG RESISTOR		
	R8007	NRSA02J-432X	MG RESISTOR		
	R8010	NRSA02J-104X	MG RESISTOR		
	R8021	NRSA02J-391X	MG RESISTOR	FS-SD990	
	R8021	NRSA02J-101X	MG RESISTOR	FS-SD770/SD550	
	R8022	NRSA02J-101X	MG RESISTOR	FS-SD770/SD550	
	R8022	NRSA02J-391X	MG RESISTOR	FS-SD990	
	R8031	NRSA02J-561X	MG RESISTOR	FS-SD990	
	R8031	NRSA02J-431X	MG RESISTOR	FS-SD770/SD550	
	R8032	NRSA02J-431X	MG RESISTOR	FS-SD770/SD550	
	R8032	NRSA02J-561X	MG RESISTOR	FS-SD990	
	R8051	NRSA02J-101X	MG RESISTOR		
	R8052	NRSA02J-272X	MG RESISTOR		
	R8053	NRSA02J-332X	MG RESISTOR		
	R8054	NRSA02J-562X	MG RESISTOR		
	R8055	NRSA02J-123X	MG RESISTOR		
	R8056	NRSA02J-393X	MG RESISTOR		
	R8057	NRSA02J-101X	MG RESISTOR		
	R8058	NRSA02J-272X	MG RESISTOR		
	R8059	NRSA02J-332X	MG RESISTOR		
	R8060	NRSA02J-562X	MG RESISTOR		
	R8061	NRSA02J-123X	MG RESISTOR		
	R8062	NRSA02J-393X	MG RESISTOR		
	R8101	NRSA02J-220X	MG RESISTOR		
	R8102	NRSA02J-222X	MG RESISTOR		
	R8103	NRSA02J-272X	MG RESISTOR		
	R8201	NRSA02J-220X	MG RESISTOR		
	R8202	NRSA02J-222X	MG RESISTOR		
	R8203	NRSA02J-272X	MG RESISTOR		
	R8301	NRSA02J-222X	MG RESISTOR		
	R8302	NRSA02J-222X	MG RESISTOR		
	S8001	QSW0683-001Z	PUSH SWITCH	OP/CL	
	S8002	QSW0683-001Z	PUSH SWITCH	POWER	
	S8003	QSW0683-001Z	PUSH SWITCH	VOL+	
	S8004	QSW0683-001Z	PUSH SWITCH	VOL-	
	S8005	QSW0683-001Z	PUSH SWITCH	TIMER	

⚠	Item	Parts number	Parts name	Remarks	Area
	S8006	QSW0683-001Z	PUSH SWITCH	CLOCK	
	S8007	QSW0683-001Z	PUSH SWITCH	UP	
	S8008	QSW0683-001Z	PUSH SWITCH	CD	
	S8009	QSW0683-001Z	PUSH SWITCH	STOP	
	S8010	QSW0683-001Z	PUSH SWITCH	DOWN	
	S8011	QSW0683-001Z	PUSH SWITCH	AHB	
	S8012	QSW0683-001Z	PUSH SWITCH	PRESET TU	
	S8013	QSW0683-001Z	PUSH SWITCH	TUNER	
	S8014	QSW0683-001Z	PUSH SWITCH	AUX	
	T 1	QQR0793-001	IFT		
	TU 1	QAU0097-001	FRONT END	FM TU	
	X 1	QAX0402-001	CRYSTAL		
⚠	Z1901	QNG0003-001Z	FUSE CLIP	FOR F1901	
⚠	Z1902	QNG0003-001Z	FUSE CLIP	FOR F1901	
⚠	Z1903	QNG0003-001Z	FUSE CLIP	FOR F1902	
⚠	Z1904	QNG0003-001Z	FUSE CLIP	FOR F1902	
⚠	Z1905	QNG0003-001Z	FUSE CLIP	FOR F1903	
⚠	Z1906	QNG0003-001Z	FUSE CLIP	FOR F1903	

■ **Electrical parts list(CD board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	CN501	QGF1201F3-08	CONNECTOR	TO MAIN	
	CN502	QGA2001C1-04	4P PLUG ASSY	TO TOPKEY	
	CN603	QGF1008F1-16	16PIN CONNECTOR		
	CN605	QGA2001C1-06	6P PLUG ASSY		
	CN701	QGF1201F3-09	CONNECTOR	TO AMP/TUNER	
	CN702	QGF1201F3-18	CONNECTOR	TO AMP/TUNER	
	CN703	QGA2001F1-11	11P CN RIG	TO FUNCTION	
	CN704	QGB1216J1-14S	CONNECTOR	TO LCD	
	CN705	QGA2001F1-03	CONNECTOR	TO CD DOOR DT1	
	CN706	QGA2001F1-02	2P CONNECTOR	TO DISC LED	
	CN708	QGA2001F1-02	2P CONNECTOR		
	CN804	QGA2001F1-02	2P CONNECTOR		
	C5101	QETN1HM-475Z	E CAPACITOR	LINE IN	
	C5102	QETN1HM-475Z	E CAPACITOR	TU IN	
	C5103	QTE1H06-475Z	E CAPACITOR	CD IN	
	C5104	QTE1V06-106Z	E CAPACITOR	FUC.OUT	
	C5105	QETN1CM-106Z	E CAPACITOR	LINE OUT	
	C5107	QTE1C06-226Z	E CAPACITOR	VOL OUT	
	C5108	QFN31HJ-332Z	M CAPACITOR	TRE.	
	C5109	QFVJ1HJ-154Z	MF CAPACITOR	BASS	
	C5110	QFVJ1HJ-154Z	MF CAPACITOR	BASS	
	C5111	NDC31HJ-151X	C CAPACITOR	LINE IN	
	C5112	NCB31HK-102X	C CAPACITOR	LINE OUT	
	C5201	QETN1HM-475Z	E CAPACITOR	LINE IN	
	C5202	QETN1HM-475Z	E CAPACITOR	TU IN	
	C5203	QTE1H06-475Z	E CAPACITOR	CD IN	
	C5204	QTE1V06-106Z	E CAPACITOR	FUC.OUT	
	C5205	QETN1CM-106Z	E CAPACITOR	LINE OUT	
	C5207	QTE1C06-226Z	E CAPACITOR	VOL OUT	
	C5208	QFN31HJ-332Z	M CAPACITOR	TRE.	
	C5209	QFVJ1HJ-154Z	MF CAPACITOR	BASS	
	C5210	QFVJ1HJ-154Z	MF CAPACITOR	BASS	
	C5211	NDC31HJ-151X	C CAPACITOR	LINE IN	
	C5212	NCB31HK-102X	C CAPACITOR	LINE OUT	
	C5301	QETN1CM-107Z	E CAPACITOR	VCC	
	C5302	QTE1V06-476Z	E CAPACITOR	1/2VCC	
	C5303	QETN1HM-105Z	E CAPACITOR	L/O MUTE.D	
	C5304	NCB31HK-102X	C CAPACITOR	S.W.OUT	
	C5307	NCB31HK-103X	C CAPACITOR		
	C5308	NCB31HK-103X	C CAPACITOR		
	C5309	NCB31HK-103X	C CAPACITOR		
	C6001	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C6002	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C6005	NDC31HJ-331X	C CAPACITOR		
	C6006	NCB31HK-222X	C CAPACITOR		
	C6007	NCB31HK-222X	C CAPACITOR		
	C6008	QEKC1HM-105Z	E.CAPACITOR	1.0MF 20% 50V	
	C6009	NCB31CK-104X	C CAPACITOR		
	C6010	NCB31CK-273X	C CAPACITOR		
	C6011	NCB31HK-222X	C CAPACITOR		
	C6012	NCB31HK-103X	C CAPACITOR		
	C6014	NCB21CK-224X	C CAPACITOR		
	C6015	NCB31HK-223X	C CAPACITOR		
	C6016	NCB31HK-223X	C CAPACITOR		
	C6017	NCB31HK-223X	C CAPACITOR		
	C6018	NCB31HK-222X	C CAPACITOR		
	C6019	NDC31HJ-471X	C CAPACITOR		
	C6020	NDC31HJ-331X	C CAPACITOR		
	C6021	NCB31HK-152X	C CAPACITOR		
	C6022	QEKC0JM-476Z	E.CAPACITOR	47MF 20% 6.3V	
	C6023	NCB31CK-273X	C CAPACITOR		
	C6028	NCB31CK-473X	C CAPACITOR		
	C6029	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	

⚠	Item	Parts number	Parts name	Remarks	Area
	C6031	QEKC1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C6032	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C6033	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C6051	NDC31HJ-120X	C CAPACITOR		
	C6052	NDC31HJ-150X	C CAPACITOR		
	C6053	NCB31HK-223X	C CAPACITOR		
	C6055	NCB31CK-473X	C CAPACITOR		
	C6058	NDC31HJ-6R0X	C CAPACITOR		
	C6061	NDC31HJ-471X	C CAPACITOR		
	C6062	NCB21CK-474X	C CAPACITOR		
	C6063	NCB31HK-223X	C CAPACITOR		
	C6064	NCB31HK-223X	C CAPACITOR		
	C6065	NCB21CK-154X	C.CAPACITOR		
	C6071	NCB31HK-222X	C CAPACITOR		
	C6072	NCB31HK-222X	C CAPACITOR		
	C6073	QEKC1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C6075	NCB31HK-102X	C CAPACITOR		
	C6076	NCB31HK-102X	C CAPACITOR		
	C6080	QEKC1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C6081	QEKC1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C6083	NCB31HK-223X	C CAPACITOR		
	C6089	NCB31HK-472X	C CAPACITOR		
	C6090	NCB31HK-682X	C CAPACITOR		
	C6091	QENC1HM-105Z	NP E.CAPACITOR	1.0MF 20% 50V	
	C6094	NCB31CK-104X	C CAPACITOR		
	C6096	NDC31HJ-391X	C CAPACITOR		
	C6097	NDC31HJ-391X	C CAPACITOR		
	C6098	NDC31HJ-391X	C CAPACITOR		
	C6099	NDC31HJ-391X	C CAPACITOR		
	C6154	NDC31HJ-101X	C.CAPACITOR		
	C6156	NDC31HJ-151X	C CAPACITOR		
	C6157	NDC31HJ-151X	C CAPACITOR		
	C6158	NDC31HJ-151X	C CAPACITOR		
	C6159	NCB31CK-104X	C CAPACITOR		
	C6199	QCZ0205-155Z	ML C CAPACITOR	1.5MF	
	C6201	NDC31HJ-680X	C.CAPA. C.M		
	C6251	NCB31CK-104X	C CAPACITOR		
	C6253	NCB21CK-334X	C CAPACITOR		
	C7001	NDC31HJ-180X	C.CAPACITOR		
	C7002	NDC31HJ-180X	C.CAPACITOR		
	C7003	NDC31HJ-390X	C CAPACITOR		
	C7004	NCS21HJ-360X	C CAPACITOR		
	C7005	NDC31HJ-220X	C CAPACITOR		
	C7006	NCS21HJ-200X	C CAPACITOR		
	C7007	NCB31HK-102X	C CAPACITOR		
	C7008	NCB31HK-102X	C CAPACITOR		
	C7009	NCB31HK-103X	C CAPACITOR		
	C7010	QEKC1AM-107Z	E.CAPACITOR	100MF 20% 10V	
	C7011	NCB31CK-104X	C CAPACITOR		
	C7012	QEZ0229-479Z	EDL.CAPACITOR	47000MF	
	C7013	QEKC1CM-107Z	E.CAPACITOR	100MF 20% 16V	
	C7014	QFN31HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C7016	NDC31HJ-101X	C.CAPACITOR		
	C7017	NDC31HJ-101X	C.CAPACITOR		
	C7018	NCB31HK-103X	C CAPACITOR		
	C7019	QEKC1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C7020	QEKC1HM-475Z	E.CAPACITOR	4.7MF 20% 50V	
	C7022	NCB31HK-103X	C CAPACITOR		
	C7023	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	D6001	1SS355-X	DIODE		
	D6031	MTZJ5.6C-T2	ZENER DIODE		
	D6033	1SR35-400A-T5	DIODE		
	D6061	1SS355-X	DIODE		

■ **Electrical parts list(CD board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	D6062	1SS355-X	DIODE		
	D6063	1SS355-X	DIODE		
	D6500	MTZJ8.2B-T2	DIODE		
	D7001	1SS355-X	DIODE		
	D7002	1SS355-X	DIODE		
	D7003	1SS133-T2	SI DIODE		
	D7004	1SS133-T2	SI DIODE		
	D7005	1SS133-T2	SI DIODE		
	D7006	1SS355-X	DIODE		
	D7007	MTZJ5.1C-T2	ZENER DIODE		
	D7008	1SS133-T2	SI DIODE		
	D7009	MTZJ8.2B-T2	DIODE		
	D7010	1SS355-X	DIODE		
	IC501	BD3861FS-X	IC	FUNC/VOL	
	IC601	AN22000A	IC		
	IC602	LA6541-X	IC		
	IC603	MN662748RPMFA	IC		
	IC701	UPD780024AGKB19	IC		
	IC702	KIA78S06P-T	IC		
	J5301	QNS0047-001	JACK	LINE IN	
	J5302	QNS0047-001	JACK	LINE OUT	
	J5303	QNN0198-001	1PIN PINJ BLACK	S.W. OUT	
	J6001	GP1FA550TZ	OPT TRANSMITTER		
	K5302	QQR0601-001Z	FERRITE BEADS	DG	
	K6051	QQR0601-001Z	FERRITE BEADS		
	K7001	QQR0601-001Z	FERRITE BEADS		
	L7001	QQL244K-100Z	INDUCTOR		
	L7002	QQL244K-100Z	INDUCTOR		
	PP501	QZW0038-001	WIRE CLAMP		
	Q5101	2SD2114K/VW/-X	CHIP TRANSISTOR	L/O MUTE	
	Q5201	2SD2114K/VW/-X	CHIP TRANSISTOR	L/O MUTE	
	Q5301	DTA114EKA-X	DIGITAL.TRANSIS	L/O MUTE.D	
	Q5302	2SD2114K/VW/-X	CHIP TRANSISTOR	S.W.MUTE	
	Q6001	2SA1037AK/R/-X	TRANSISTOR		
	Q6031	2SC2060/QR/-T	TRANSISTOR		
	Q6500	DTD123TK-X	CHIP D.TR		
	Q7001	2SC2814/4-5/-X	TRANSISTOR		
	Q7002	2SC2814/4-5/-X	TRANSISTOR		
	Q7003	DTA114TKA-X	DIGITAL.TR		
	Q7004	2SC2412K/R/-X	TRANSISTOR		
	Q7006	2SC2412K/R/-X	TRANSISTOR		
	Q7007	DTC114EKA-X	TRANSISTOR		
	Q7008	DTA114EKA-X	DIGITAL.TRANSIS		
	Q7009	2SA1037AK/R/-X	TRANSISTOR		
	Q7010	DTC144EKA-X	TRANSISTOR		
	Q7011	2SA1037AK/R/-X	TRANSISTOR		
	R5101	NRSA63J-223X	MG RESISTOR	LINE IN	
	R5102	NRSA63J-683X	MG RESISTOR	LINE IN	
	R5103	NRSA63J-302X	MG RESISTOR	CD IN	
	R5104	NRSA63J-182X	MG RESISTOR	FUC.OUT	
	R5105	NRSA63J-473X	MG RESISTOR	LINE OUT	
	R5106	NRSA63J-392X	MG RESISTOR	LINE OUT	
	R5107	NRSA63J-102X	MG RESISTOR	LINE OUT	
	R5108	NRSA63J-222X	MG RESISTOR	L/O MUTE	
	R5109	NRSA63J-563X	MG RESISTOR	S.W.OUT	
	R5110	NRSA63J-332X	MG RESISTOR	BASS	
	R5201	NRSA63J-223X	MG RESISTOR	LINE IN	
	R5202	NRSA63J-683X	MG RESISTOR	LINE IN	
	R5203	NRSA63J-302X	MG RESISTOR	CD IN	
	R5204	NRSA63J-182X	MG RESISTOR	FUC.OUT	
	R5205	NRSA63J-473X	MG RESISTOR	LINE OUT	
	R5206	NRSA63J-392X	MG RESISTOR	LINE OUT	
	R5207	NRSA63J-102X	MG RESISTOR	LINE OUT	

⚠	Item	Parts number	Parts name	Remarks	Area
	R5208	NRSA63J-222X	MG RESISTOR	L/O MUTE	
	R5209	NRSA63J-563X	MG RESISTOR	S.W.OUT	
	R5210	NRSA63J-332X	MG RESISTOR	BASS	
	R5301	NRSA63J-223X	MG RESISTOR	L/O MUTE D	
	R5302	NRSA63J-222X	MG RESISTOR	S.W.MUTE	
	R5303	NRSA63J-473X	MG RESISTOR	S.W.OUT	
	R5304	NRSA63J-102X	MG RESISTOR	S.W.OUT	
	R5305	NRSA63J-1R5X	MG RESISTOR	VCC	
	R6001	NRSA63J-682X	MG RESISTOR		
	R6005	NRSA63J-184X	MG RESISTOR		
	R6006	NRSA63J-274X	MG RESISTOR		
	R6007	NRSA63J-393X	MG RESISTOR		
	R6008	NRSA63J-394X	MG RESISTOR		
	R6009	NRSA63J-473X	MG RESISTOR		
	R6010	NRSA63J-154X	MG RESISTOR		
	R6012	NRSA63J-822X	MG RESISTOR		
	R6013	NRSA63J-121X	MG RESISTOR		
	R6014	NRSA63J-100X	MG RESISTOR		
	R6015	NRSA63J-120X	MG RESISTOR		
	R6016	NRSA63J-910X	MG RESISTOR		
	R6021	NRSA63J-330X	MG RESISTOR		
	R6024	NRSA63J-103X	MG RESISTOR		
	R6025	NRSA63J-103X	MG RESISTOR		
	R6026	NRSA63J-222X	MG RESISTOR		
	R6028	NRSA63J-222X	MG RESISTOR		
	R6031	NRSA63J-102X	MG RESISTOR		
	R6032	NRSA63J-102X	MG RESISTOR		
	R6033	NRSA63J-102X	MG RESISTOR		
	R6040	NRSA63J-102X	MG RESISTOR		
	R6041	NRSA63J-184X	MG RESISTOR		
	R6042	NRSA63J-472X	MG RESISTOR		
	R6043	NRSA63J-912X	MG RESISTOR		
	R6044	NRSA63J-393X	MG RESISTOR		
	R6045	NRSA63J-433X	MG RESISTOR		
	R6046	NRSA63J-392X	MG RESISTOR		
	R6047	NRSA63J-472X	MG RESISTOR		
	R6048	NRSA63J-272X	MG RESISTOR		
	R6050	NRSA63J-332X	MG RESISTOR		
	R6051	NRSA63J-102X	MG RESISTOR		
	R6052	NRSA63J-102X	MG RESISTOR		
	R6053	NRSA63J-101X	MG RESISTOR		
	R6054	NRSA63J-102X	MG RESISTOR		
	R6056	NRSA63J-0R0X	MG RESISTOR		
	R6057	NRSA63J-0R0X	MG RESISTOR		
	R6058	NRSA63J-0R0X	MG RESISTOR		
	R6059	NRSA63J-471X	MG RESISTOR		
	R6060	NRSA63J-471X	MG RESISTOR		
	R6061	NRSA63J-104X	MG RESISTOR		
	R6063	NRSA63J-124X	MG RESISTOR		
	R6064	NRSA63J-331X	MG RESISTOR		
	R6066	NRSA63J-470X	MG RESISTOR		
	R6067	NRSA63J-220X	MG RESISTOR		
	R6068	NRSA63J-220X	MG RESISTOR		
	R6069	NRSA63J-155X	MG RESISTOR		
	R6071	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R6072	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R6201	NRSA63J-472X	MG RESISTOR		
	R6202	NRSA63J-222X	MG RESISTOR		
	R6203	NRSA63J-0R0X	MG RESISTOR		
	R6204	NRSA63J-623X	MG RESISTOR		
	R6205	NRSA63J-393X	MG RESISTOR		
	R6251	NRSA63J-102X	MG RESISTOR		
	R6252	NRSA63J-105X	MG RESISTOR		

■ **Electrical parts list(CD board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	R6254	NRSA63J-104X	MG RESISTOR		
	R6256	NRSA63J-564X	MG RESISTOR		
	R6257	NRSA63J-0R0X	MG RESISTOR		
	R6258	NRSA63J-272X	MG RESISTOR		
	R6500	NRSA63J-272X	MG RESISTOR		
	R7001	NRSA63J-822X	MG RESISTOR		
	R7002	NRSA63J-822X	MG RESISTOR		
	R7003	NRSA63J-103X	MG RESISTOR		
	R7004	NRSA63J-103X	MG RESISTOR		
	R7005	NRSA63J-331X	MG RESISTOR		
	R7006	NRSA63J-222X	MG RESISTOR		
	R7007	NRSA63J-222X	MG RESISTOR		
	R7008	NRSA63J-222X	MG RESISTOR		
	R7009	NRSA63J-222X	MG RESISTOR		
	R7010	NRSA63J-222X	MG RESISTOR		
	R7011	NRSA63J-222X	MG RESISTOR		
	R7012	NRSA63J-222X	MG RESISTOR		
	R7013	NRSA63J-102X	MG RESISTOR		
	R7014	NRSA63J-103X	MG RESISTOR		
	R7016	NRSA63J-222X	MG RESISTOR		
	R7017	NRSA63J-222X	MG RESISTOR		
	R7018	NRSA63J-0R0X	MG RESISTOR		
	R7019	NRSA63J-102X	MG RESISTOR		
	R7020	NRSA63J-222X	MG RESISTOR		
	R7021	NRSA63J-102X	MG RESISTOR		
	R7022	NRSA63J-102X	MG RESISTOR		
	R7023	NRSA63J-101X	MG RESISTOR		
	R7024	NRSA63J-102X	MG RESISTOR		
	R7025	NRSA63J-102X	MG RESISTOR		
	R7026	NRSA63J-102X	MG RESISTOR		
	R7027	NRSA63J-102X	MG RESISTOR		
	R7028	NRSA63J-222X	MG RESISTOR		
	R7029	NRSA63J-103X	MG RESISTOR		
	R7030	NRSA63J-222X	MG RESISTOR		
	R7031	NRSA63J-103X	MG RESISTOR		
	R7032	NRSA63J-222X	MG RESISTOR		
	R7033	NRSA63J-103X	MG RESISTOR		
	R7034	NRSA63J-222X	MG RESISTOR		
	R7035	NRSA63J-103X	MG RESISTOR		
	R7036	NRSA63J-222X	MG RESISTOR		
	R7037	NRSA63J-222X	MG RESISTOR		
	R7038	NRSA63J-473X	MG RESISTOR	VERSION	
	R7039	NRSA63J-333X	MG RESISTOR	VERSION	
	R7040	NRSA63J-102X	MG RESISTOR		
	R7041	NRSA63J-103X	MG RESISTOR		
	R7042	NRSA63J-103X	MG RESISTOR		
	R7043	NRSA63J-103X	MG RESISTOR		
	R7044	NRSA63J-103X	MG RESISTOR		
	R7045	NRSA63J-222X	MG RESISTOR		
	R7046	NRSA63J-222X	MG RESISTOR		
	R7048	NRSA63J-102X	MG RESISTOR		
	R7049	NRSA63J-102X	MG RESISTOR		
	R7050	NRSA63J-104X	MG RESISTOR		
	R7051	NRSA63J-473X	MG RESISTOR		
	R7052	NRSA63J-333X	MG RESISTOR		
	R7053	NRSA63J-222X	MG RESISTOR		
	R7054	NRSA63J-222X	MG RESISTOR		
	R7055	NRSA63J-222X	MG RESISTOR		
	R7056	NRSA63J-103X	MG RESISTOR		
	R7057	NRSA63J-103X	MG RESISTOR		
	R7058	NRSA63J-103X	MG RESISTOR		
	R7059	NRSA63J-103X	MG RESISTOR		
	R7060	NRSA63J-103X	MG RESISTOR		
	R7061	NRSA63J-103X	MG RESISTOR		
	R7062	NRSA63J-222X	MG RESISTOR		
	R7063	NRSA63J-222X	MG RESISTOR		
	R7064	NRSA63J-471X	MG RESISTOR		
	R7065	NRSA63J-222X	MG RESISTOR		
	R7066	NRSA63J-222X	MG RESISTOR		
	R7067	NRSA63J-222X	MG RESISTOR		
	R7068	NRSA63J-222X	MG RESISTOR		
	R7069	NRSA63J-222X	MG RESISTOR		
	R7070	NRSA63J-102X	MG RESISTOR		
	R7071	NRSA63J-102X	MG RESISTOR		
	R7072	NRSA63J-222X	MG RESISTOR		
	R7073	NRSA63J-102X	MG RESISTOR		
	R7074	NRSA63J-103X	MG RESISTOR		
	R7075	NRSA63J-103X	MG RESISTOR		
	R7076	NRSA63J-103X	MG RESISTOR		
	R7077	NRSA63J-103X	MG RESISTOR		
	R7078	NRSA63J-103X	MG RESISTOR		
	R7079	NRSA63J-512X	MG RESISTOR		
	SP603	VYH7653-001	IC HOLDER	IC603 IC-HOLDER	
	SP701	VYH7653-002	IC HOLDER		
	S8021	QSW0851-001	DETECT SWITCH		
	S8022	QSW0851-001	DETECT SWITCH		
	TH701	QAD0015-103Z	THERMISTOR		
	WR 1	QUB220-07HPDM	SIN TWIST WIRE		
	WR501	QUB220-15HPDM	SIN TWIST WIRE		
	W1801	QJK021-021502	SIN CR C-B WIRE		
	W3001	QJK002-061201	SIN CR C-B WIRE		
	W3002	QJK019-040704	SIN CR C-B WIRE		
⚠	W3901	QJK019-072002	SIN CR C-B WIRE		
	W5001	QJK018-110501	SIN CR C-B WIRE		
	W8001	QJK018-020502	SIN CR C-B WIRE		
	W8002	QJK018-040504	SIN CR C-B WIRE		
	W8003	QJK018-021202	SIN CR C-B WIRE		
	W8004	QJK018-030503	SIN CR C-B WIRE		
	W8005	QJK018-020502	SIN CR C-B WIRE		
	X6051	QAX0413-001Z	CRYSTAL		
	X7001	QAX0401-001	CRYSTAL		
	X7002	QAX0410-001	CERA LOCK		

■ **Electrical parts list(Sub board)** **Block No. 03**

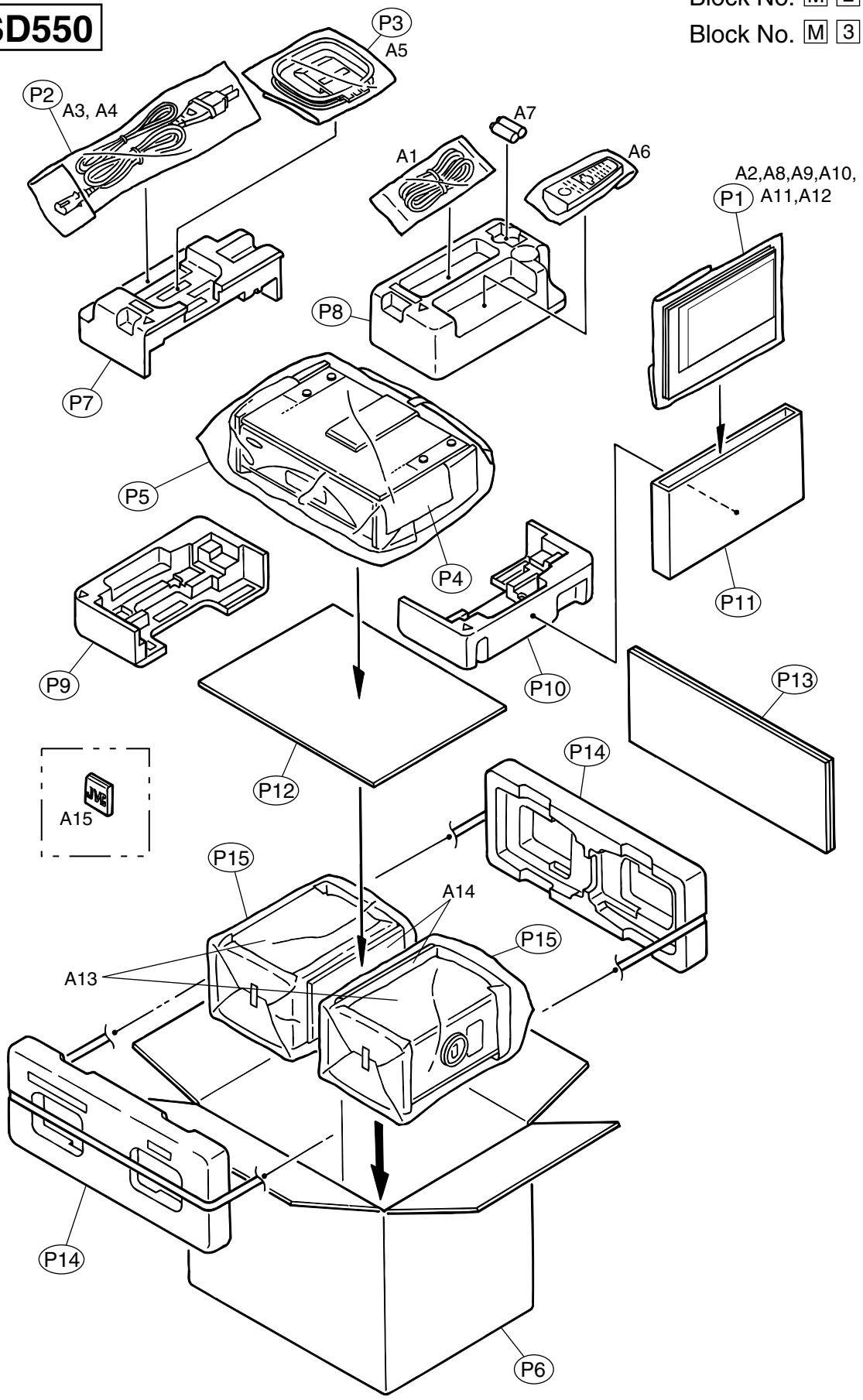
⚠	Item	Parts number	Parts name	Remarks	Area
	CN606	QGF1006F1-16W	CONN.TERMINAL		

< MEMO >

Packing materials and accessories parts list

Block No. M 2 M M
Block No. M 3 M M

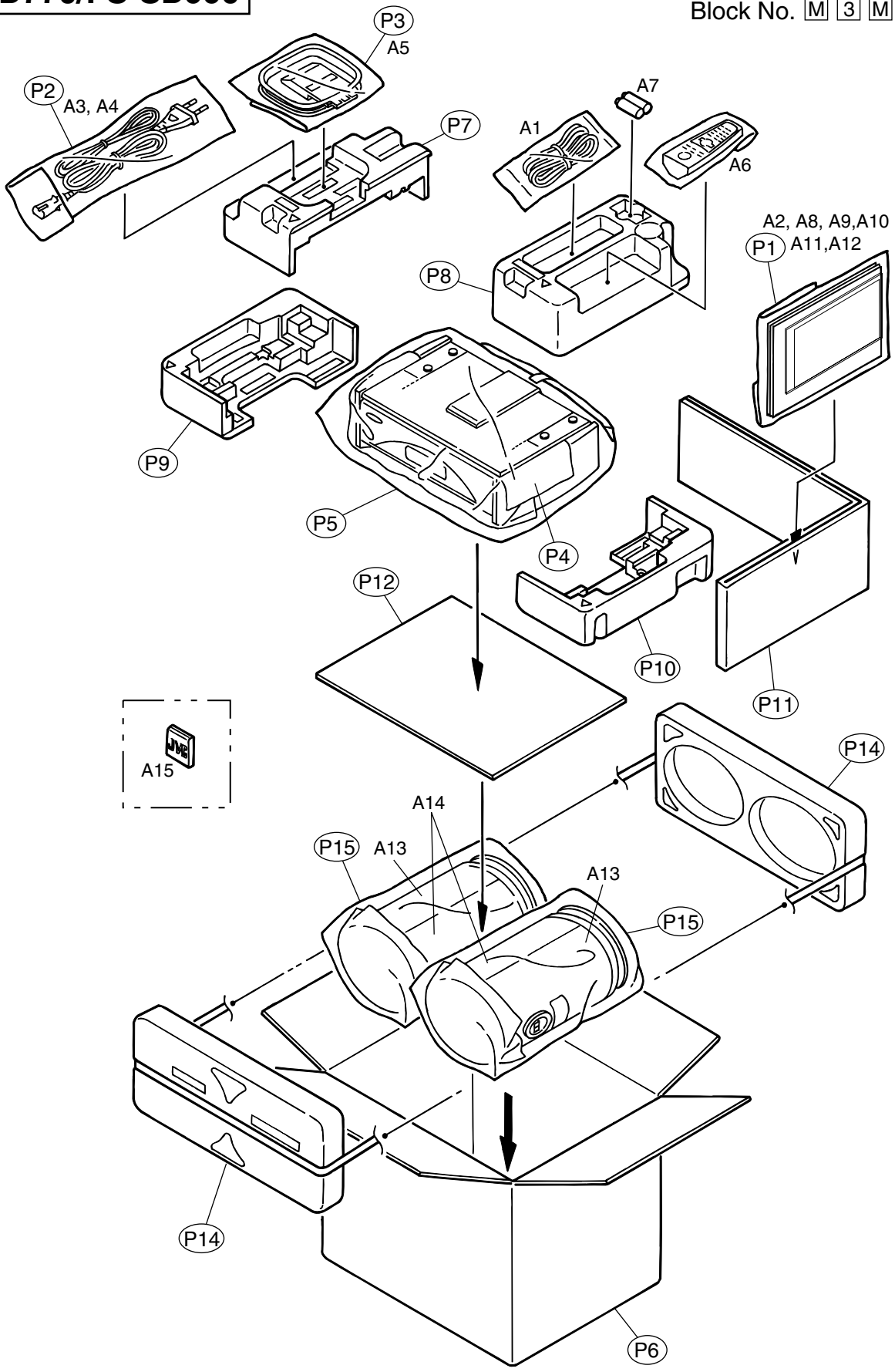
FS-SD550



Packing materials and accessories parts list

FS-SD770/FS-SD990

Block No. M 2 M M
Block No. M 3 M M



■ Parts list(Packing)

Block No. M2MM

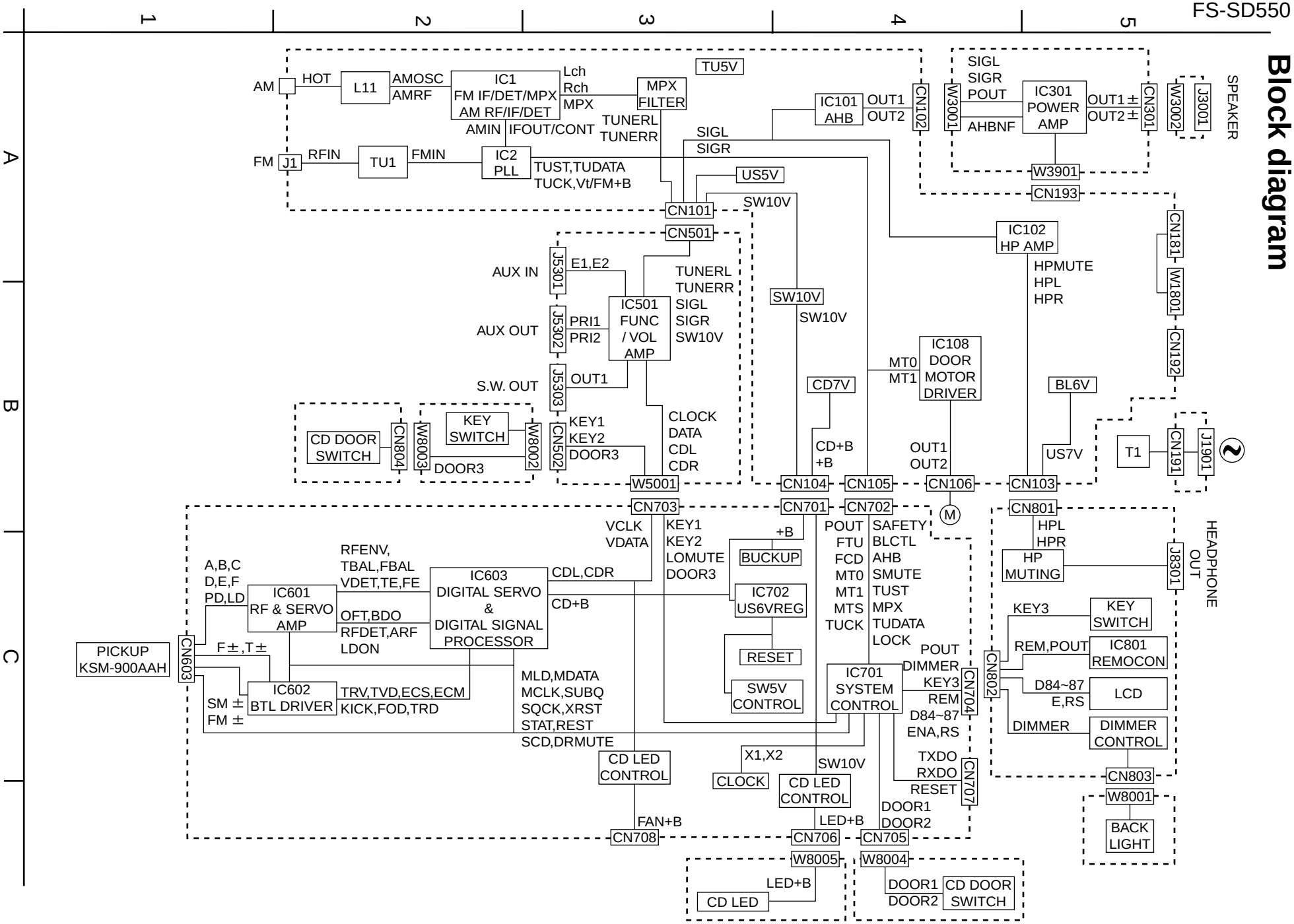
⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	QPA02503503P	POLY BAG	1	FOR INST	
	P 2	QPA01503503	POLY BAG	1	FOR P.CORD	
	P 3	QPA01702503P	POLY BAG	1	FOR AM ANT	
	P 4	GN30034-001A	SHEET	1		
	P 5	QPC04504515P	POLY BAG	1	FOR SET	
	P 6	GN10002-006A	PACKING CASE	1	FS-SD550	
		GN10003-006A	PACKING CASE	1	FS-SD770	
		GN10004-006A	PACKING CASE	1	FS-SD990	
	P 7	LV20760-201A	CUSHION TOP(L)	1	TOP (L)	
	P 8	LV20760-202A	CUSHION TOP(R)	1	TOP (R)	
	P 9	LV20761-201A	CUSHION BTM (L)	1	BOTTOM (L)	
	P 10	LV20761-202A	CUSHION BTM (R)	1	BOTTOM (R)	
	P 11	GN30016-003A	PACKING SPACER	1	FS-SD990/SD770	
		GN30016-002A	PACKING SPACER	1	FS-SD550	
	P 12	GN30032-001A	PACKING SPACER	1		
	P 13	GN30015-001A	PACKING SPACER	2	FS-SD550	
	P 14	LV32600-001A	PACKING PAD	1	SP-FSSD550	
		LV32601-001A	PACKING PAD	1	SP-FSSD990/770	
	P 15	D77-KO-00-01	POLY BAG	1	SP-FSSD990/770	
		D55-KO-00-01	POLY BAG	1	SP-FSSD550	

■ Parts list(Accessories)

Block No. M3MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	QAM0293-001	SPK.CORD(2PCS)	1	SPEAKER CORD OF	
	A 2	GNT0008-013A	INST.BOOK	1	ENG FRE	C
		GNT0008-001A	INST BOOK	1	ENG	J
⚠	A 3	QMPE090-183-JD	POWER CORD	1		
	A 4	EWP503-001C	ANT.WIRE	1	FM ANT	
	A 5	QAL0014-001	AM LOOP ANT	1	AM ANT	
	A 6	RM-SFSSD9J	REMOCON UNIT	1	FS-SD990	
		RM-SFSSD7J	REMOCON UNIT	1	FS-SD770/SD550	
	A 7	----------	BATTERY	2		
	A 8	BT-51018-2	WARRANTY CARD	1		
	A 9	BT-51020-2	J=REGIST CARD	1		
	A 10	BT-20044G	WARRANTY CARD	1		
	A 11	BT-52004-1	WARRANTY CARD	1		
	A 12	BT-20071B	JVC CENTER LIST	1		
	A 13	FSSD550K-SPBOX	SPEAKER BOX	2	SP-FSSD550	
		FSSD770K-SPBOX	SPEAKER BOX	2	SP-FSSD770	
		FSSD990K-SPBOX	SPEAKER BOX	2	SP-FSSD990	
	A 14	LV10497-001A	SARAN BOARD	1	SP-FSSD550	
		LV10498-001A	SARAN BOARD	1	SP-FSSD770	
		LV10498-002A	SARAN BOARD	1	SP-FSSD990	
	A 15	SD5SJ0101	JVC MARK	1	SP-FSSD550/770	
		SD7SJ0001	JVC MARK	1	SP-FSSD990	

Block diagram



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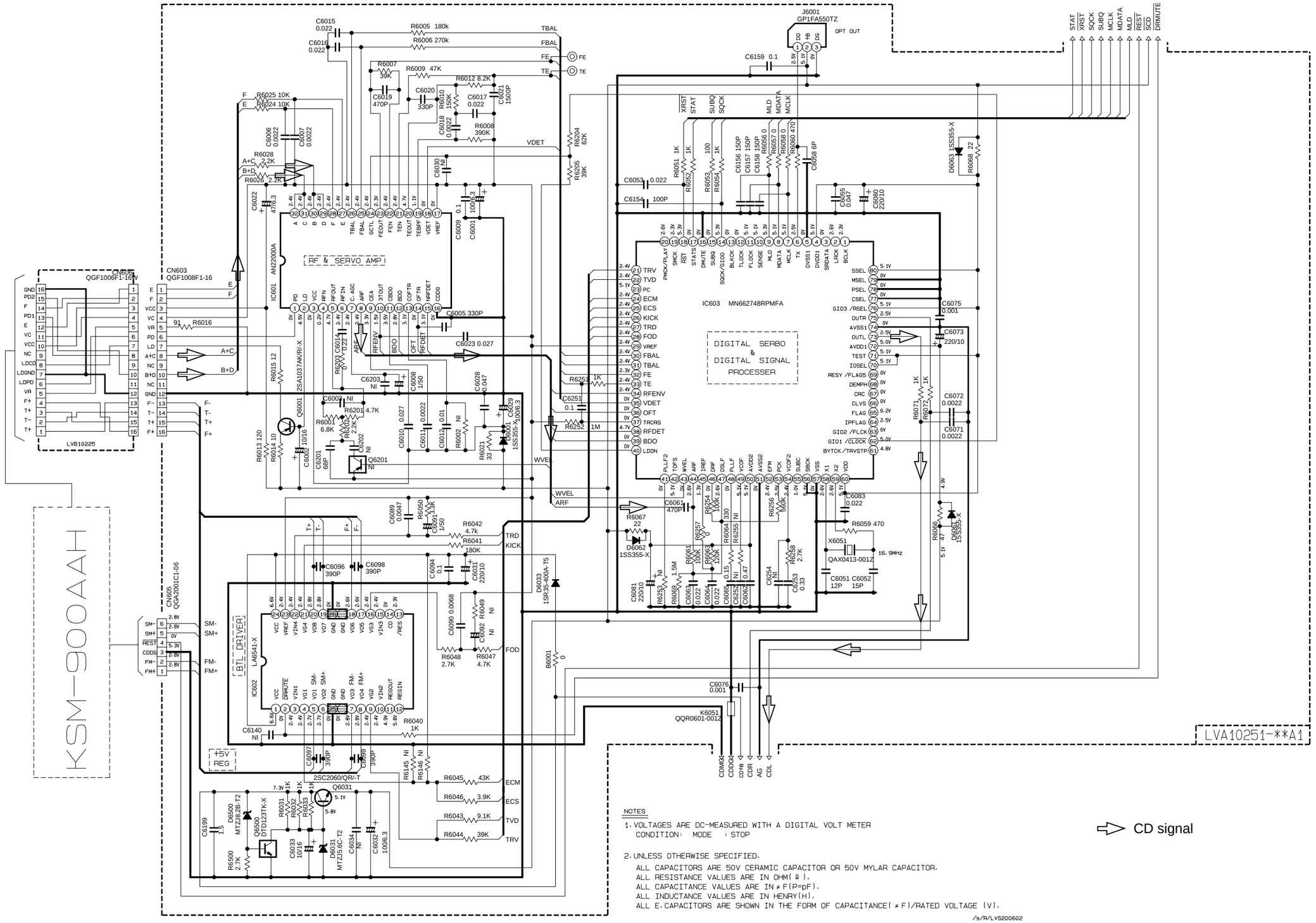
Standard schematic diagrams

■CD servo control section

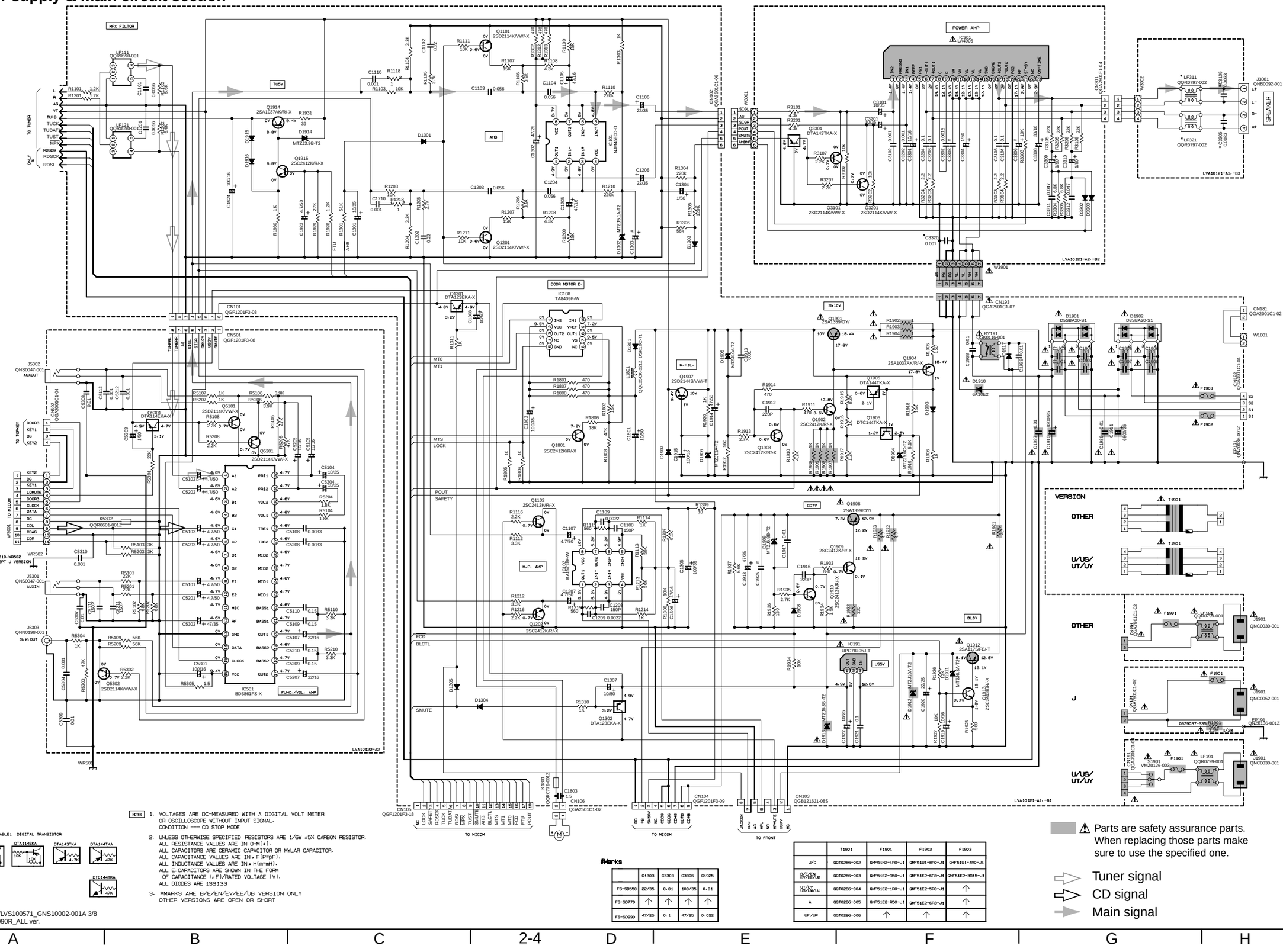


Note:/tr/s/jsc/sd550/LVS200602_GNS10002-001A 2/8
FS-SD550R/770R/990R_ALL ver.

FS-SD990 / FS-SD770
FS-SD550

FS-SD990 / FS-SD770
FS-SD550

■Power supply & main circuit section



NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION — CD STOP MODE
2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHM(±).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN ,F(P=pF).
   ALL INDUCTANCE VALUES ARE IN ,H(m=mH).
   ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (,F)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133
3. *MARKS ARE B/E/EN/EV/EE/UB VERSION ONLY
   OTHER VERSIONS ARE OPEN OR SHORT

TABLE1 DIGITAL TRANSISTOR

#Marks

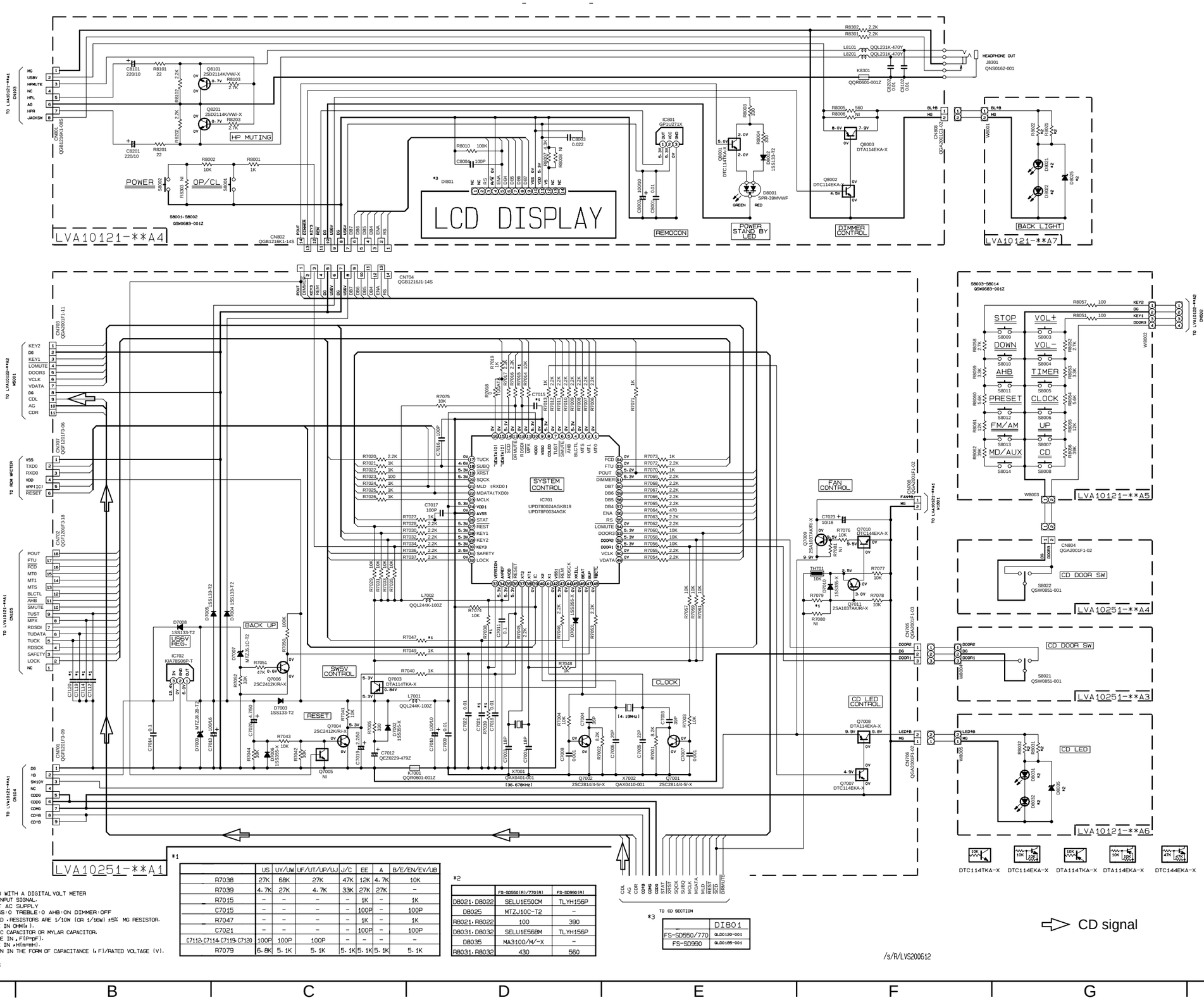
	C1303	C3303	C3306	C1925
FS-SD550	22/35	0.01	100/35	0.01
FS-SD770	↑	↑	↑	↑
FS-SD990	47/25	0.1	47/25	0.022

	T1901	F1901	F1902	F1903
J/C	QQT0206-002	GMF51N2-1R0-J1	GMF51U1-6R0-J1	GMF51U1-4R0-J1
B/E/EN/EV/EE/UB	QQT0206-003	GMF51E2-R50-J1	GMF51E2-6R3-J1	GMF51E2-3R15-J1
UT/UY US/UW/UJ	QQT0206-004	GMF51E2-1R0-J1	GMF51E2-5R0-J1	↑
A	QQT0206-005	GMF51E2-R50-J1	GMF51E2-6R3-J1	↑
UF/UP	QQT0206-006	↑	↑	↑

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

Tuner signal
CD signal
Main signal

■ System control section



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION ---- CD STOP AT AC SUPPLY
   VOL:16 BASS:0 TREBLE:0 AHB:ON DIMMER:OFF
2. UNLESS OTHERWISE SPECIFIED ,RESISTORS ARE 1/10W (OR 1/16W) ±5% MG RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHM(s).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN ,F(P=pF).
   ALL INDUCTANCE VALUES ARE IN ,H(m=mH).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (,F)/RATED VOLTAGE (V).

*1

	US	UY/UW	UF/UT/UP/UJ	UJ/C	EE	A	B/E/EN/EV/UB
R7038	27K	68K	27K	47K	12K	4.7K	10K
R7039	4.7K	27K	4.7K	33K	27K	27K	–
R7015	–	–	–	–	1K	–	1K
C7015	–	–	–	–	100P	–	100P
R7047	–	–	–	–	1K	–	1K
C7021	–	–	–	–	100P	–	100P
C7112,C7114,C7119,C7120	100P	100P	100P	–	–	–	–
R7079	6.8K	5.1K	5.1K	5.1K	5.1K	5.1K	5.1K

*2

	FS-SD550(R)/770(R)	FS-SD990(R)
D8021,D8022	SELU1E50CM	TLYH156P
D8025	MTZJ10C-T2	–
R8021,R8022	100	390
D8031,D8032	SELU1E56BM	TLYH156P
D8035	MA3100/M/-X	–
R8031,R8032	430	560

*3

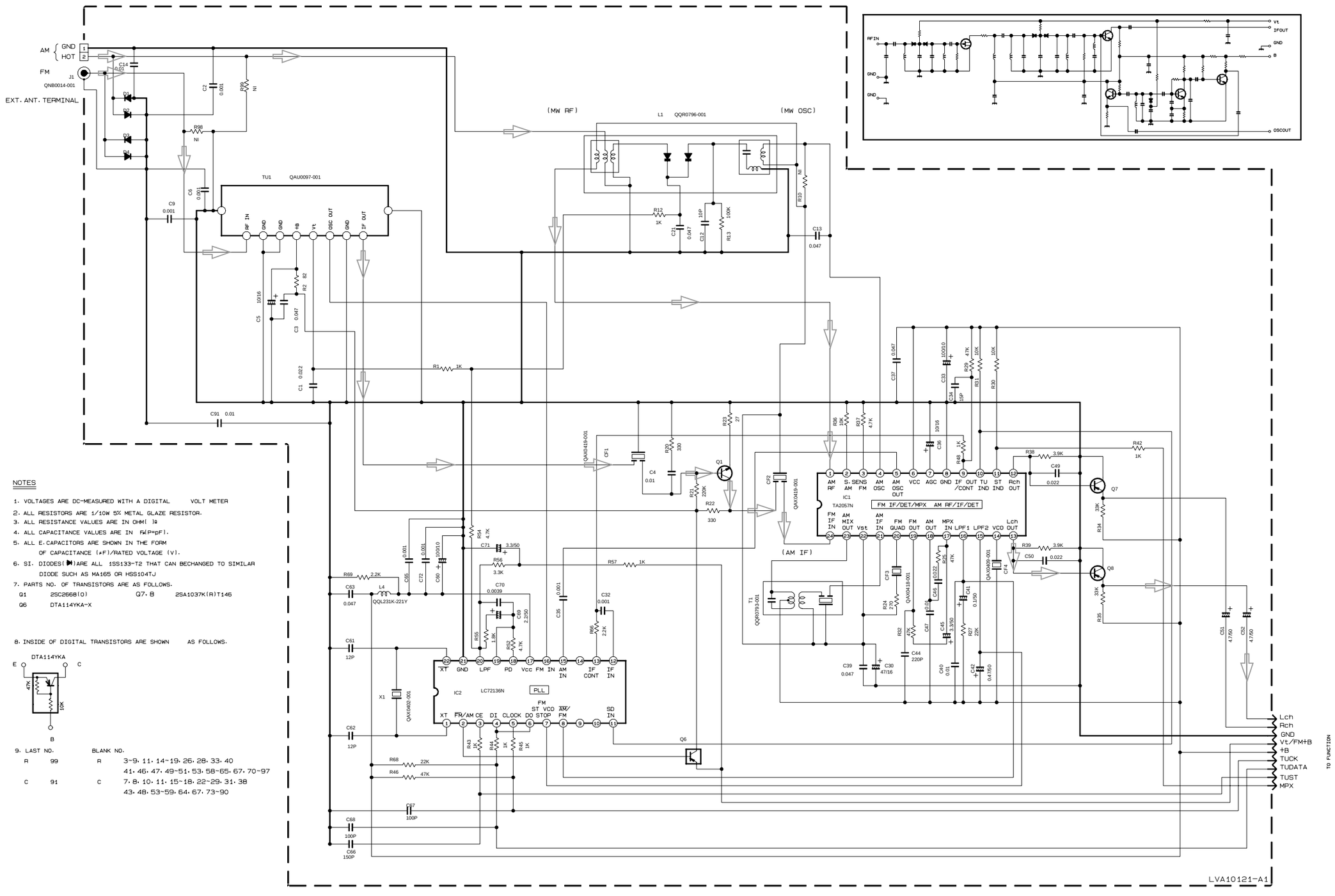
	DIB01
FS-SD550/770	GLD0120-001
FS-SD990	GLD0185-001

/s/R/LVS200612

Note:/tr/s/jsc/sd550/LVS200612GNS10002-001A 1/8
FS-SD550R/770R/990R_ALL ver.

FS-SD990 / FS-SD770
FS-SD550

■ Tuner section



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER
2. ALL RESISTORS ARE 1/10W 5% METAL GLAZE RESISTOR.
3. ALL RESISTANCE VALUES ARE IN OHM( )Ω
4. ALL CAPACITANCE VALUES ARE IN F(P=pF).
5. ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (×F)/RATED VOLTAGE (V).
6. SI. DIODES( )ARE ALL 1SS133-T2 THAT CAN BECHANGED TO SIMILAR DIODE SUCH AS MA165 OR HSS104TJ
7. PARTS NO. OF TRANSISTORS ARE AS FOLLOWS.
   Q1 2SC2668(O) Q7. 8 2SA1037K(R)T146
   Q6 DTA114YKA-X
8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS.

9. LAST NO. BLANK NO.
   R 99 R 3-9. 11. 14-19. 26. 28. 33. 40 41. 46. 47. 49-51. 53. 58-65. 67. 70-97
   C 91 C 7. 8. 10. 11. 15-18. 22-29. 31. 38 43. 48. 53-59. 64. 67. 73-90

	CONDITION PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IC1	FM NO SIGNAL	2.0	0.5	0	2.0	5.1	5.1	0	0	0.3	5.1	5.1	1.1	1.1	4.4	3.7	3.7	1.4	0	1.3	1.1	2.0	2.0	5.1	2.0
	FM 60dB STEREO	2.0	0.5	0	2.0	5.1	5.1	1.1	0	0.3	0	0	1.1	1.1	4.3	4.1	3.7	1.4	0	1.4	1.1	2.0	2.0	5.1	2.0
	AM NO SIGNAL	2.0	0.5	0	2.0	5.1	5.1	0	0	0.3	5.1	5.1	1.1	1.1	4.5	0.1	0	1.4	1.4	1.5	1.6	2.0	2.0	5.1	2.0
IC2	FM NO SIGNAL	2.4	0	0	1.1	5.0	1.1	3.7	3.7	0	0	5.1	0	0	0	0	2.6	5.1	1.0	1.0	3.7	0	2.7		

Tr No.	Q1			Q6			Q7			Q8		
PIN NAME	E	C	B	E	C	B	E	C	B	E	C	B
FM 87.5MHz	0	7.5	0.7	8.8	8.8	0	1.6	0	1.1	1.6	0	1.1
AM 520KHz	0	0	0	8.8	0	8.7	1.6	0	1.1	1.6	0	1.1

Tuner signal

Printed circuit boards

■Power IC board

■Main board

■LCD lamp board

■Lamp board

■Speaker jack board

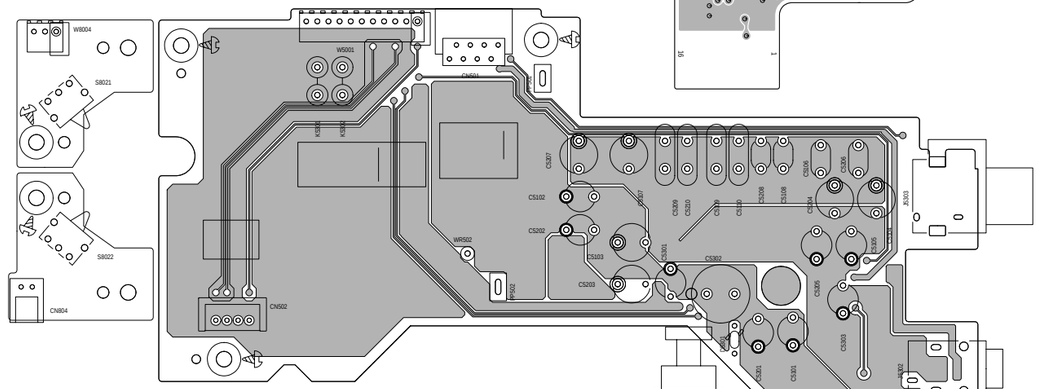
■Switch board

■LCD board

Note:/d1/r/lvb10121/003a/10121
FS-SD990/FS-SD770/FS-SD550_JC ver.

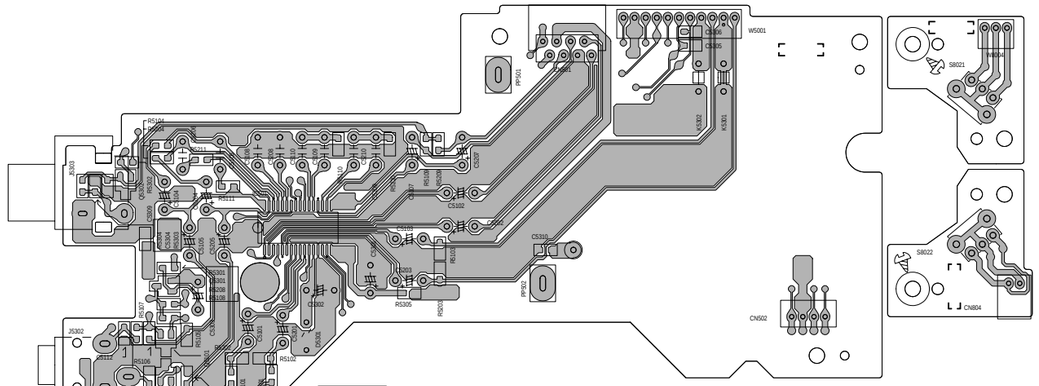
FS-SD990 / FS-SD770
FS-SD550

■ Line board (Forward side)

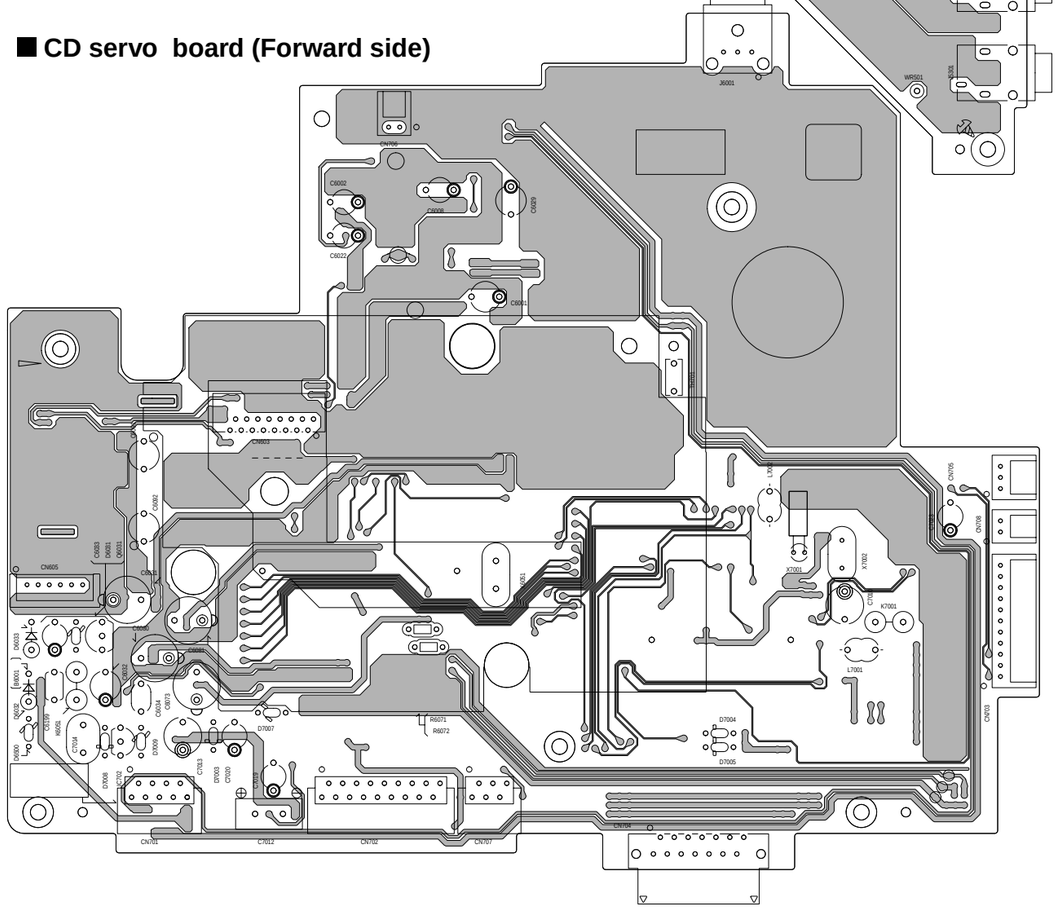


■ Sub board (forward side)

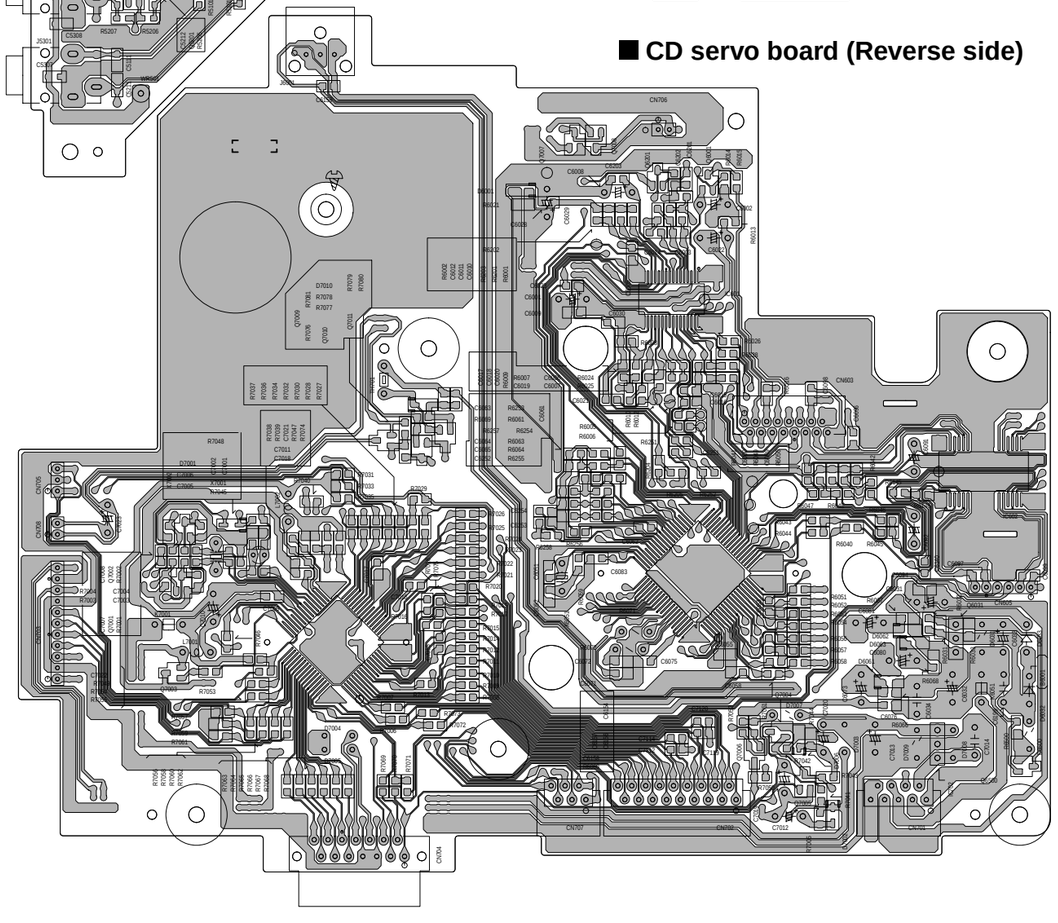
■ Line board (Reverse side)



■ CD servo board (Forward side)



■ CD servo board (Reverse side)



Note:/d4/n/lvb10251/001a/10251
FS-SD550R/FS-SD770R/FS-SD990R

Note:/d4/n/lvb10251/001a/10251
FS-SD550R/FS-SD770R/FS-SD990R