

JVC

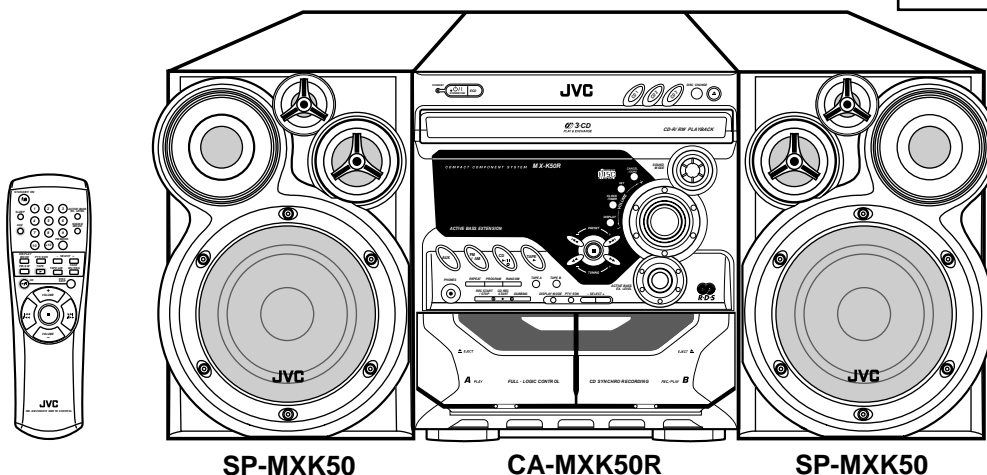
SERVICE MANUAL

COMPACT COMPONENT SYSTEM

MX-K50R

Area suffix

B ----- U.K.
 E ---- Continental Europe
 EN ---- Northern Europe
 EV ----- Eastern Europe



SP-MXK50

CA-MXK50R

SP-MXK50

COMPACT
 disc
 DIGITAL AUDIO



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Safety Precautions

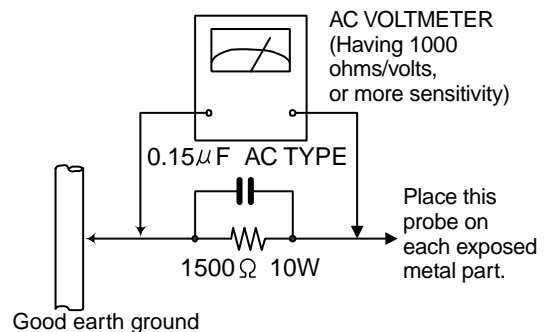
1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the 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 (\triangle) 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 current 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 1,500 Ω 10W resistor paralleled by a 0.15 μ F 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 each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure 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 performing 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 (\blacksquare), diode (\blacksquare) and ICP (\bullet) or identified by the " \triangle " mark nearby are critical for safety.


(This regulation does not correspond to J and C version.)

Safety precautions (U.K only)

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.
2. Any unauthorised design alterations or additions will void the manufacturer's guarantee ; furthermore the manufacturer cannot accept responsibility for personal injury or property damage resulting therefrom.
3. Essential safety critical components are identified by () on the Parts List and by shading on the schematics, and must never be replaced by parts other than those listed in the manual. Please note however that many electrical and mechanical parts in the product have special safety related characteristics. These characteristics are often not evident from visual inspection. Parts other than specified by the manufacturer may not have the same safety characteristics as the recommended replacement parts shown in the Parts List of the Service Manual and 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.

Warning

1. Service should be performed by qualified personnel only.
2. This equipment has been designed and manufactured to meet international safety standards.
3. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
4. Repairs must be made in accordance with the relevant safety standards.
5. It is essential that safety critical components are replaced by approved parts.
6. 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 performing repair of this system.

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.

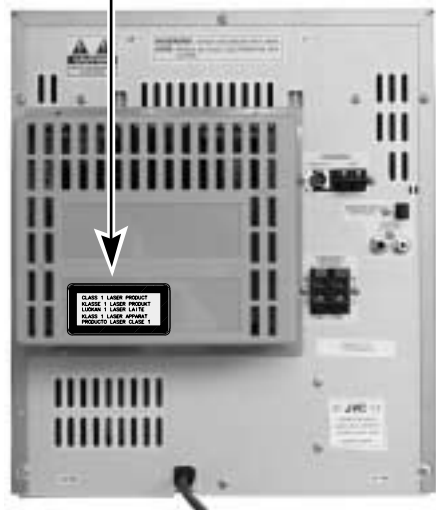
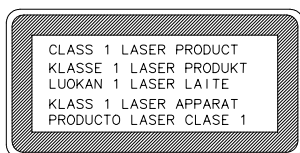
VARO : Avattaessa ja suojalukitus ohitettaessa olet alltiina näkymättömälle lasersäteilylle.Älä katso säteeseen.

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

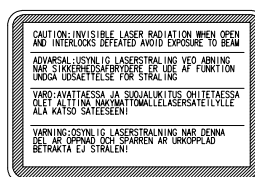
ADVARSEL : Usynlig laserstrålning ved åbning,når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

Position of labels

CLASS 1 LASER PRODUCT



WARNING LABEL



Preventing static electricity

1. Grounding to prevent damage by 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.

2. About the earth processing for the destruction prevention by static electricity

In the equipment which uses optical pick-up (laser diode), optical pick-up is destroyed by the static electricity of the work environment.

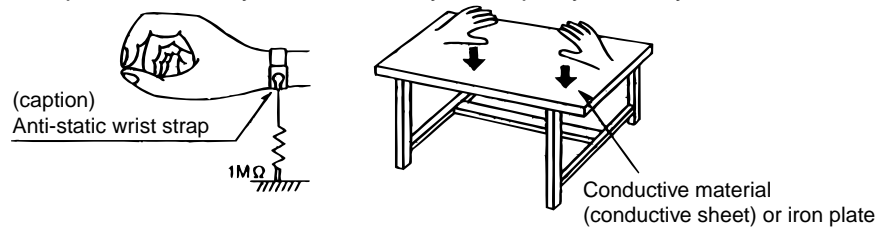
Be careful to use proper grounding in the area where repairs are being performed.

2-1 Ground the workbench

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

2-2 Ground yourself

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



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.

4. 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

Attention when CD mechanism assembly is decomposed

***Please refer to "Disassembly method" in the text for pick-up and how to detach the CD mechanism assembly.**

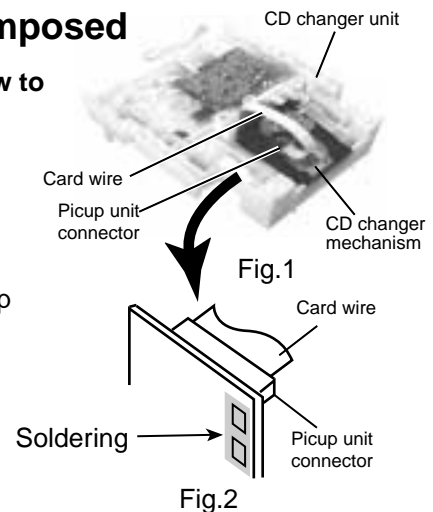
1. Remove the CD changer unit.

2. Remove the CD changer mechanism.

3. Solder is put up before the card wire is removed from the pickup unit connector on the CD mechanism assembly.

(When the card wire is removed without putting up solder, the CD pick-up assembly might destroy.)

4. Please remove solder after connecting the card wire with the pickup unit connector when you install picking up in the substrate.



Disassembly method

■ Removing the metal cover (See Fig.1)

1. Remove the three screws **A** attaching the metal cover on the back of the body.
2. Remove the six screws **B** attaching the metal cover on both sides of the body.
3. Remove the metal cover from the body by lifting the rear part of the cover.

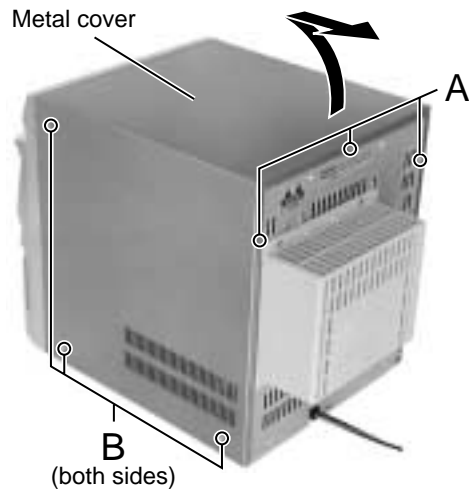


Fig.1

— ONE POINT —

■ How to eject the CD tray (see fig.2)

Although it will end if the OPEN/CLOSE button is pushed when a power supply can be taken, when that is not right, CD tray will be opened manually.

Turn the loading pulley gear at the bottom of the CD changer unit as shown in Fig.2 and draw the CD tray toward the front.

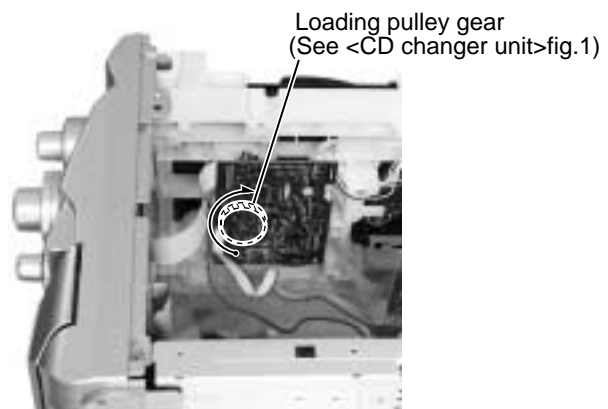


Fig.2

■ Removing the CD tray fitting (See Fig. 3)

- Prior to performing the following procedure, eject the CD tray.
1. After drawing the lower part of the tray fitting toward the front, remove the five claws. Then, while moving the tray fitting upward, remove it.

■ Removing the CD changer unit (See Fig.4 to 7)

- Prior to performing the following procedure, remove the metal cover and CD tray fitting.
1. Remove the card wire attached to CD changer unit on the adhesion tape.
 2. Disconnect the card wire from the connector CW105 on the CD board.
 3. Disconnect the harness from the connector RCW6 on the main board and CW107 on the CD board.
 4. Remove the two screws **C** attaching the CD changer unit to the rear panel.
 5. Remove the two screws **D** attaching the CD changer unit to both sides of the front panel assembly.
 6. Draw the CD changer unit upward from behind while pulling the rear panel outward.

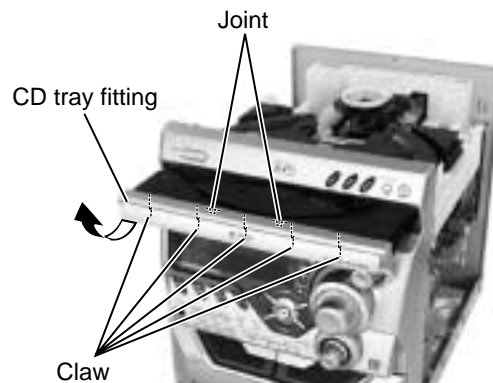


Fig.3

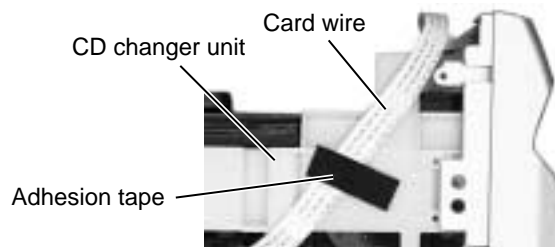


Fig.4

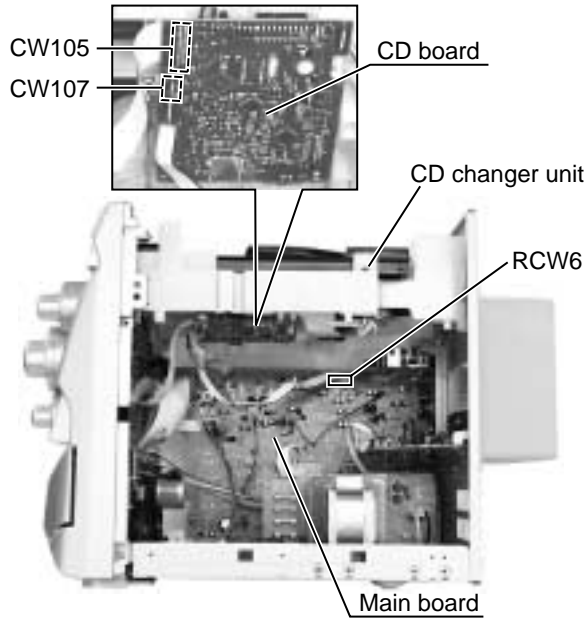


Fig.5

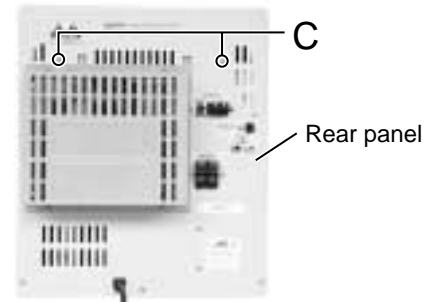


Fig.6

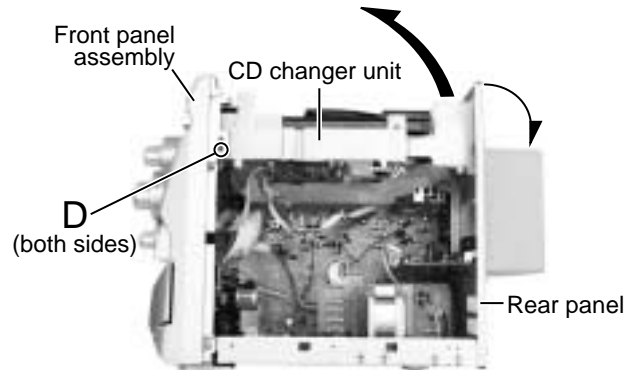


Fig.7

■ Removing the front panel assembly (See Fig.8 to 10)

• Prior to performing the following procedure, remove the metal cover and the CD changer unit.

1. Disconnect the card wire from the connector FCW3 on the main board.
2. Disconnect the harness from the connector JCW1, JCW2 and HCW3 on the main board.
3. Remove the screw **E** attaching the earth terminal extending from the cassette mechanism assembly.
4. Remove the two screws **F** attaching the front panel assembly to both sides of the body.
5. Remove the screw **G** attaching the main board to the front panel assembly.
6. Remove the screw **H** attaching the front panel assembly to bottom of the body.
7. Release the two joints1 and two joints2, and detach the front panel assembly toward the front.

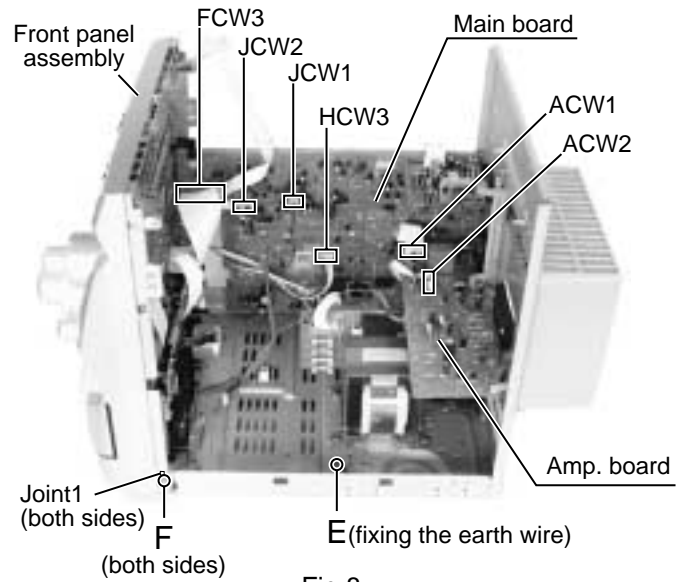


Fig.8

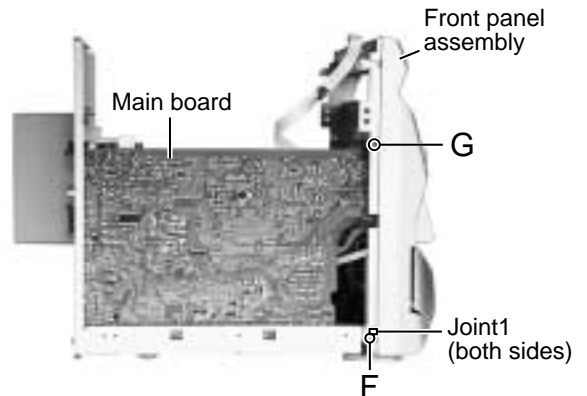


Fig.9 (both sides)

■Removing the heat sink & amp. board
(See Fig.8, 11 and 12)

- Prior to performing the following procedure, remove the metal cover and the CD changer unit.
1. Disconnect the card wire from the connector ACW1 and the harness from the connector ACW2 on the amp. board.
 2. Remove the four screws **I** attaching the heat sink cover to the rear panel. Remove the heat sink cover.
 3. Remove the four screws **J** attaching the heat sink and two screws **K** attaching the speaker terminal to the rear panel.
 4. After moving the heat sink upward, remove the claws. Then pull out the heat sink & amp. board inward.

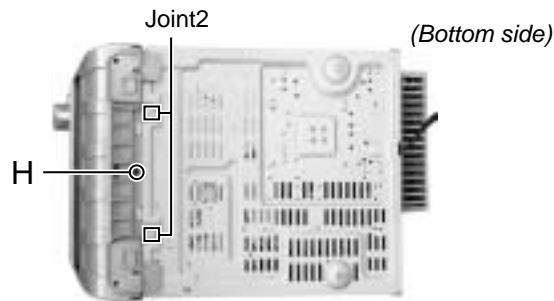


Fig.10

■Removing the tuner board
(See Fig.12 and 13)

- Prior to performing the following procedure, remove the metal cover.
1. Disconnect the card wire from the connector CON01 on the tuner board.
 2. Remove the two screws **L** attaching the tuner board to the rear panel.

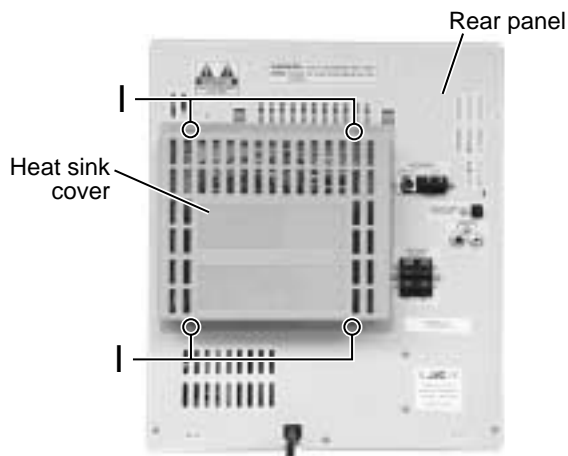


Fig.11

■Removing the EOC board
(See Fig.12 and 13)

- Prior to performing the following procedure, remove the metal cover, CD changer unit and heat sink & amp. board.
1. Disconnect the power cord from the connector PJ2 on the ECO board.
 2. Disconnect the harness from the connector PJ3 and RCW5 on the ECO board.
 3. Remove the two screws **M** attaching the ECO board to the rear panel.

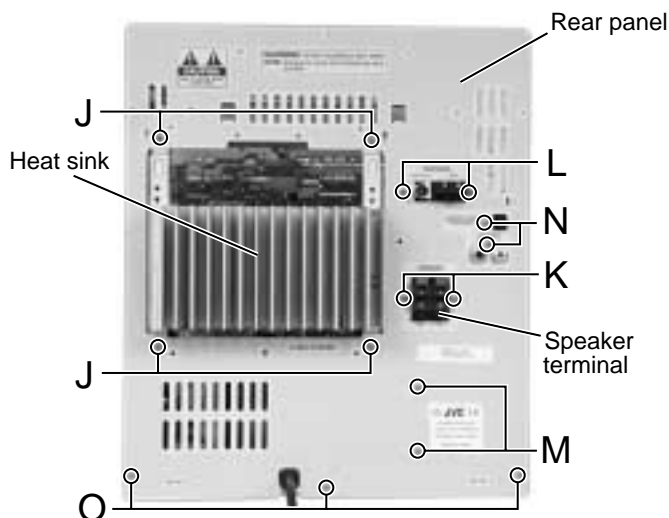


Fig.12

■Removing the rear panel (See Fig.12)

- Prior to performing the following procedure, remove the metal cover, CD changer unit, heat sink & amp. board, tuner board and ECO board.
1. Remove the two screws **N** and three screws **O** attaching the rear panel.

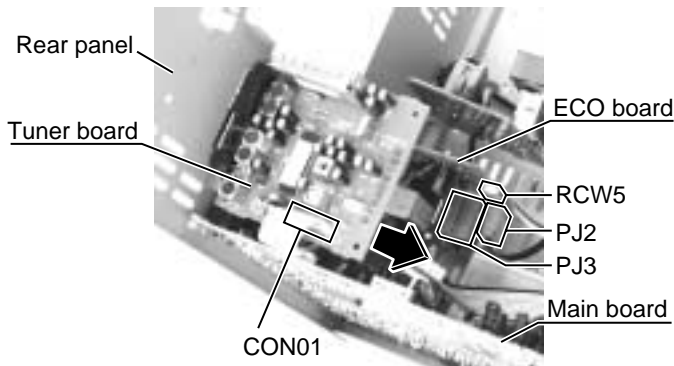


Fig.13

■ Removing the main board (See Fig. 14)

- Prior to performing the following procedure, remove the metal cover, CD changer unit and rear panel.
1. Disconnect the card wire from the connector FCW3 and the harness from the connector JCW1, JCW2 and HCW3 on the main board.
 2. Disconnect the harness from the connector PCW1 on the fuse board.
 3. Remove the screw **G** attaching the main board holder to the front panel assembly. (See Fig.9)
 4. Remove the two screws **P** attaching the heat sink to bottom chassis.

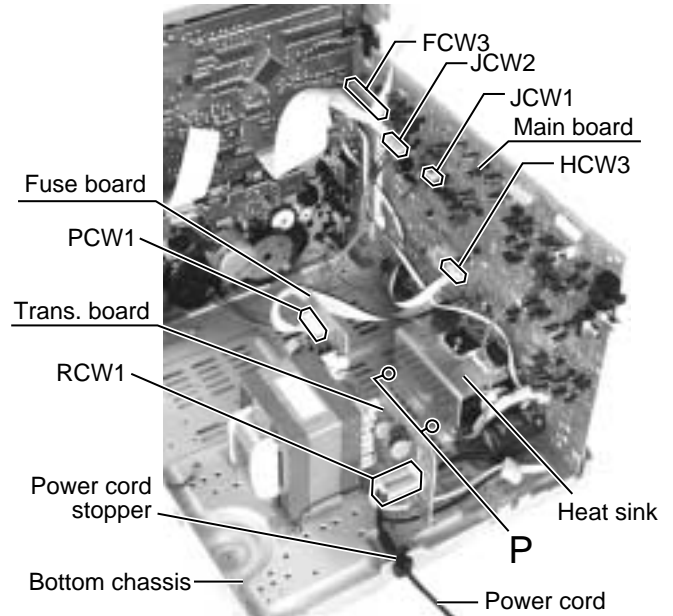


Fig.14

■ Removing the power cord (See Fig. 14)

- Prior to performing the following procedure, remove the metal cover, CD changer unit and rear panel.
1. Disconnect the power cord from the connector PJ2 on the ECO board (see fig.13) and pull up the power cord stopper upward.

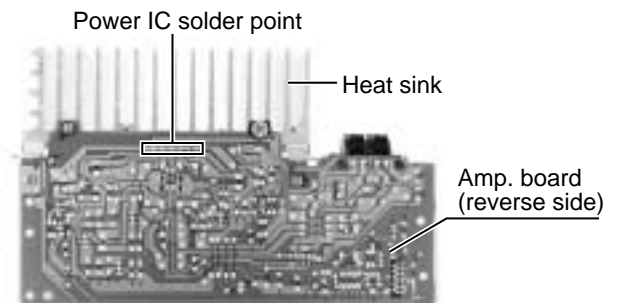


Fig.15

■ Removing the power IC (See Fig.15 and 16)

- Prior to performing the following procedure, remove the metal cover, CD changer unit and heat sink & amp. board.
1. Unsolder the power IC solder point.
 2. Remove the two screws **Q** attaching the power IC to the heat sink.

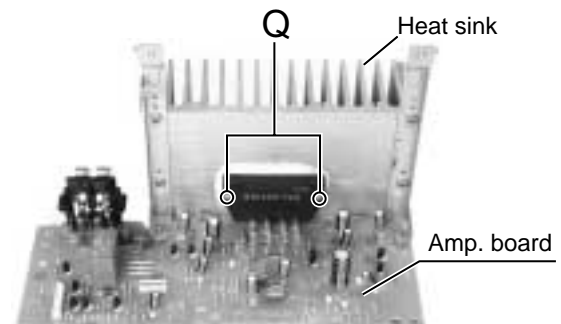


Fig.16

■ Removing the power transformer (See Fig .17)

- Prior to performing the following procedure, remove the metal cover, CD changer unit and heat sink & amp. board.
1. Disconnect the power cord from the connector RCW1 on the trans. board.
 2. Disconnect the harness from the connector PCW1 on the fuse board.
 3. Remove the four screws **R** attaching the power transformer on the bottom chassis.

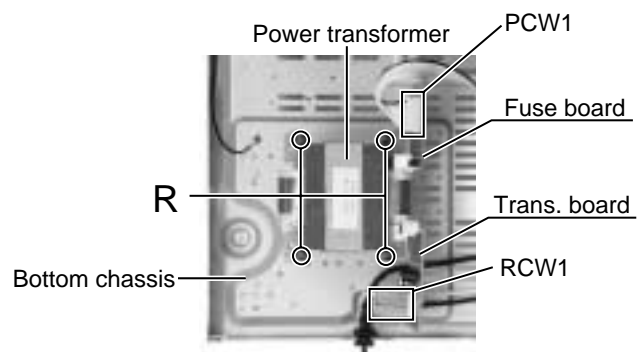


Fig.17

<CD changer unit>

- Prior to performing the following procedure, remove the CD changer unit.

■ Removing the CD tray (See Fig.1 and 2)

1. Turn the black loading pulley gear on the under side of the CD changer unit in the direction of the arrow and draw the CD tray toward the front until it stops.
2. Disconnect the card wire from connector CW103 on the CD board.
3. Push down the two tray stoppers marked **a** and pull out the CD tray.

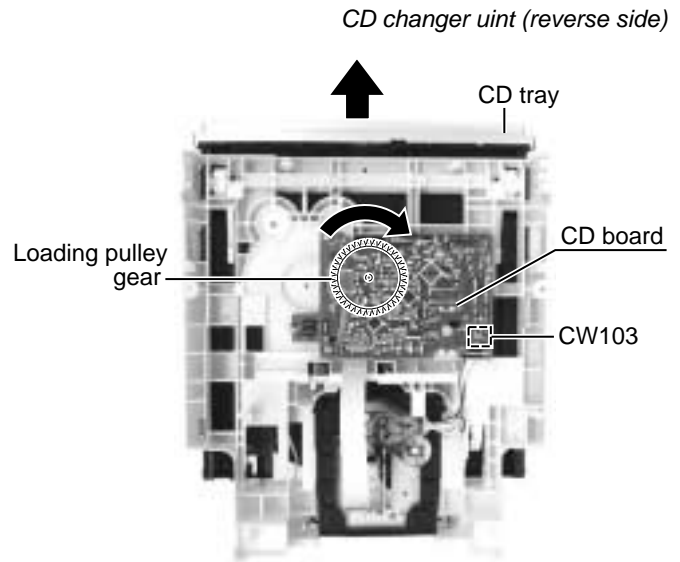


Fig.1

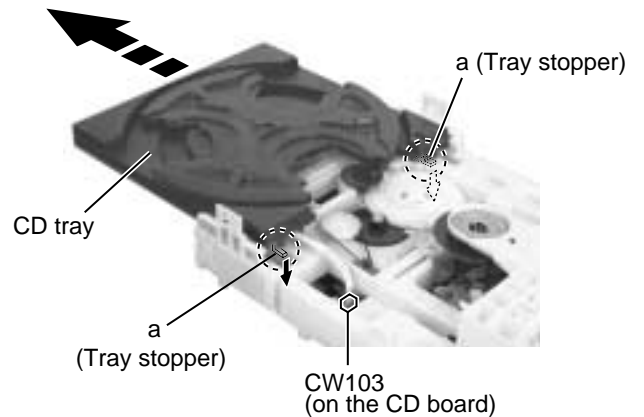


Fig.2

■ Reinstall the CD tray (See Fig.3 and 4)

1. Align the gear-cam with the gear-tray as shown fig.3, then mount the CD tray.
2. When assembling the CD tray, take extreme care not engage with gear - synchro.

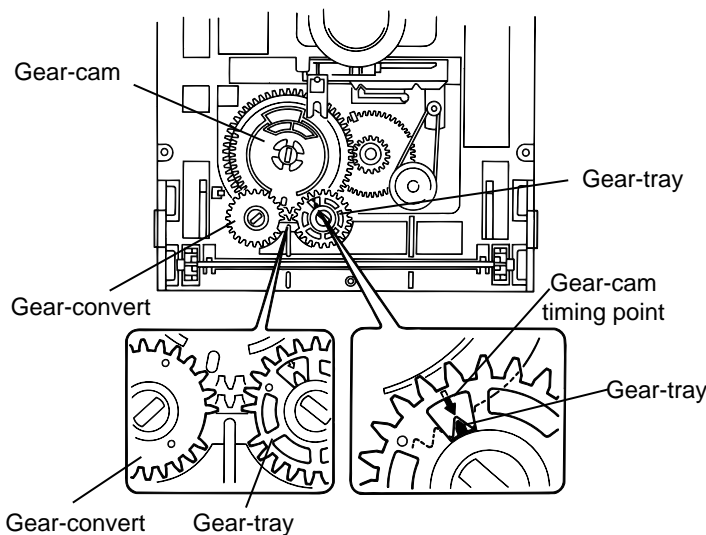


Fig.3

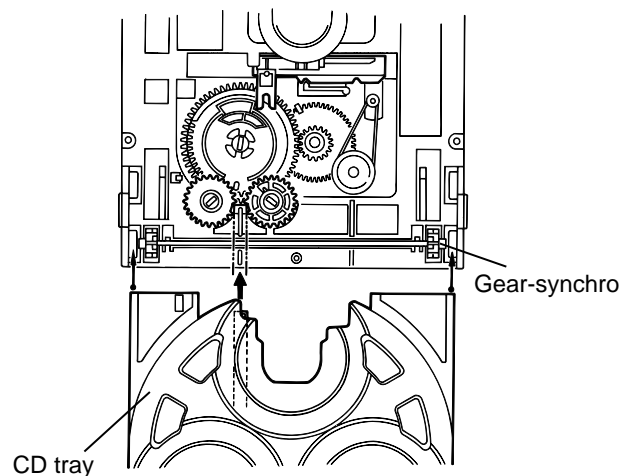


Fig.4

■Removing the sensor board (See Fig.5)

- Prior to performing the following procedure, remove the CD tray.
1. Remove the screw **A** attaching the sensor board on the CD tray.
 2. Remove the sensor board releasing the two tabs **a**.
 3. Disconnect the harness from the connector **CW1** on the sensor board.

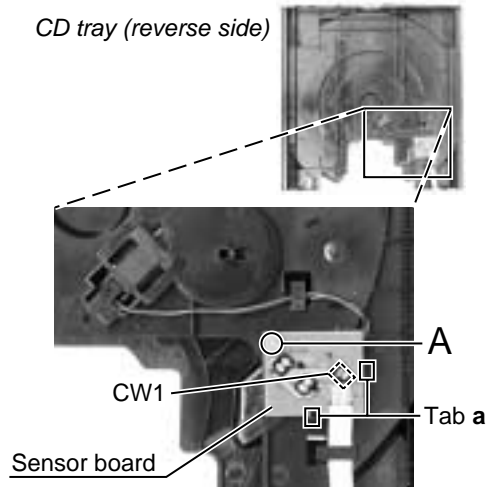


Fig.5

■Removing the turn tray motor (See Fig.6 and 7)

- Prior to performing the following procedure, remove the CD tray and sensor board.
1. Remove the screw **B** attaching the turn tray. Detach the turn tray from the base tray.
 2. Pull outward the tab **b** attaching the turn tray motor on the base tray and detach the turn tray motor.

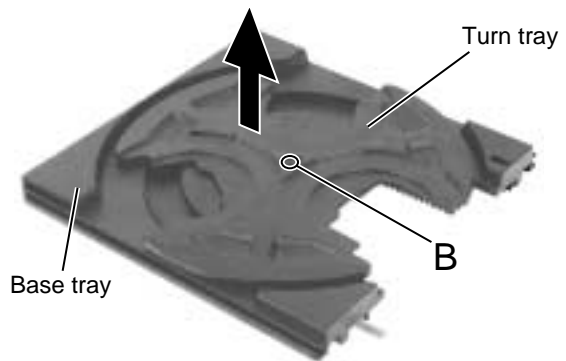


Fig.6

*Introductory notes:
Base tray + Turn tray = CD tray*

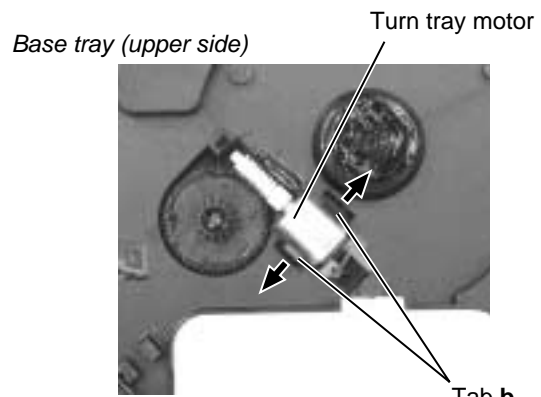


Fig.7

■ Removing the belt, the CD board and the switch board (See Fig.8 and 9)

- Prior to performing the following procedure, remove the CD tray.

1. Detach the belt from the pulley on the upper side of the CD changer unit (Do not stain the belt with grease).
2. Disconnect the card wire from the pickup unit connector on the under side of the CD changer unit.

Attention : Solder is put up before the card wire is removed from the pick-up unit connector on the CD mechanism assembly.
(When the card wire is removed without putting up solder, the CD pick-up unit assembly might destroy.)

3. Disconnect the motor wire harness from connector on the CD board.
4. Remove the screw **C** attaching the switch board and release the two tabs **e** attaching the switch board outward and detach the switch board.
5. Remove the two screws **D** attaching the CD board. First release the two tabs **f** and two tabs **g** attaching the motor, then release the CD board.

※ If the tabs **f** and **g** are hard to release, it is recommendable to unsolder the two soldered parts on the motor terminal of the CD board.

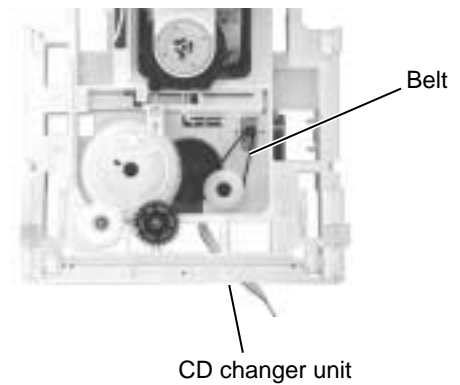


Fig.8

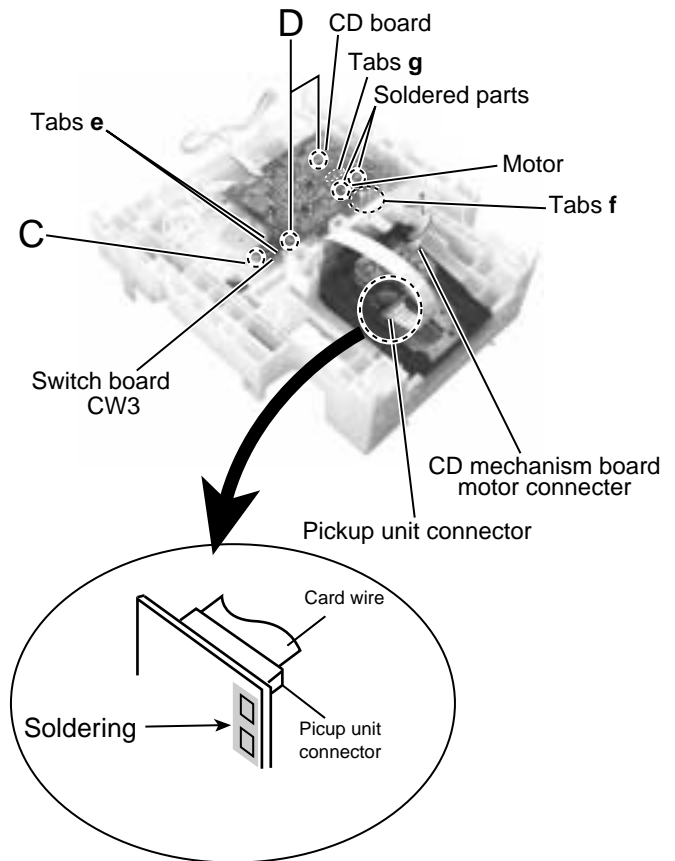


Fig.9

■ **Removing the CD mechanism holder assembly (mechanism included)**

(See Fig.10 to 13)

1. Disconnect the harness from connector on the CD mechanism board in the CD mechanism assembly on the under side of the CD changer unit. Disconnect the card wire from the pickup unit connector.

Attention : Solder is put up before the card wire is removed from the pick-up unit connector on the CD mechanism assembly. (Refer to Fig.9)
(When the card wire is removed without putting up solder, the CD pick-up unit assembly might destroy.)

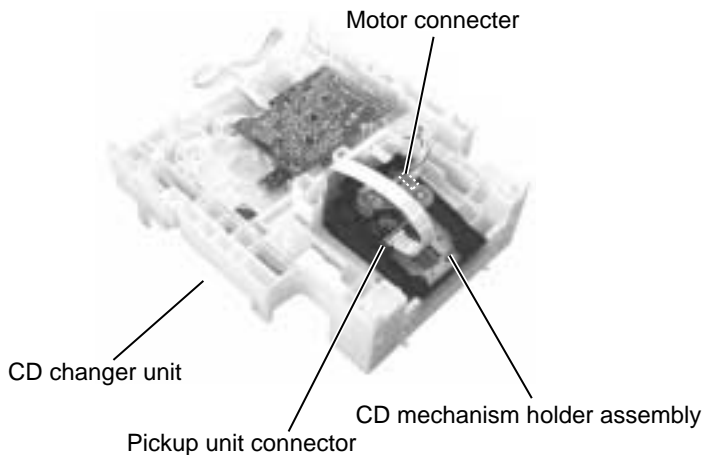


Fig.10

2. Remove the screw **E** attaching the shaft on the right side of the CD mechanism holder assembly. Pull outward the stopper fixing the shaft on the left side and remove the CD mechanism holder assembly from behind in the direction of the arrow **y**.
3. Turn the CD mechanism holder assembly half around the lift up slide shaft **h** of the CD mechanism holder assembly until the turn table is reversed, and pull out the CD mechanism holder assembly.

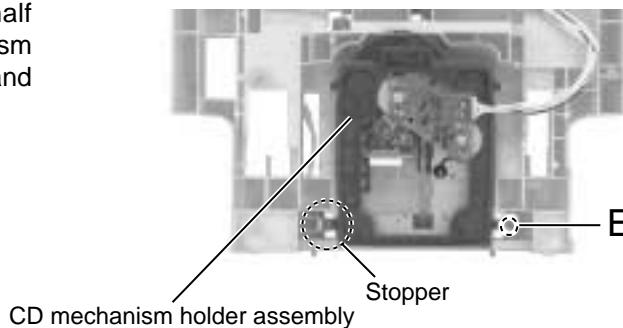


Fig.11

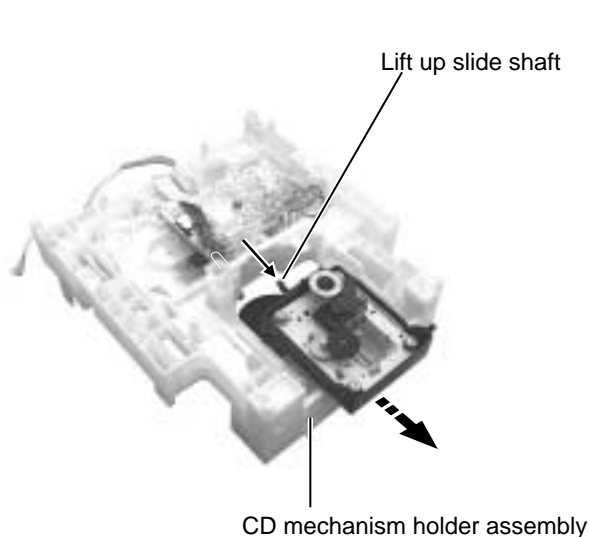


Fig.13

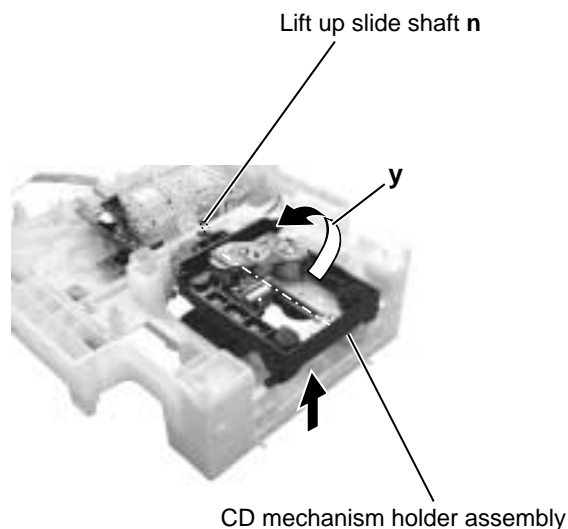


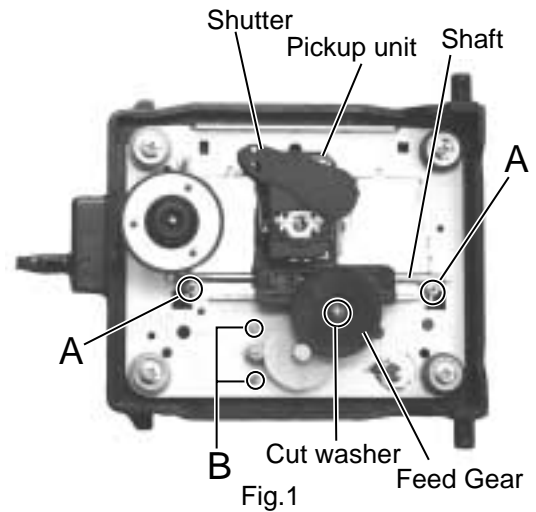
Fig.12

<CD mechanism section>

- Removing the CD mechanism holder from the CD chager unit.
(Refer to "Removing the CD mechanism holder assembly")

■ Removing the pickup unit (See Fig.1)

1. Removing the cut washer on the feed gear sleeve and pull out the feed gear.
2. Remove the two screws **A** fixing the pickup shaft.
3. Removing the pickup unit.



■ Removing the motor board (See Fig.2)

1. Unsolder the motor terminal on the motor board.
2. Remove the moter board.

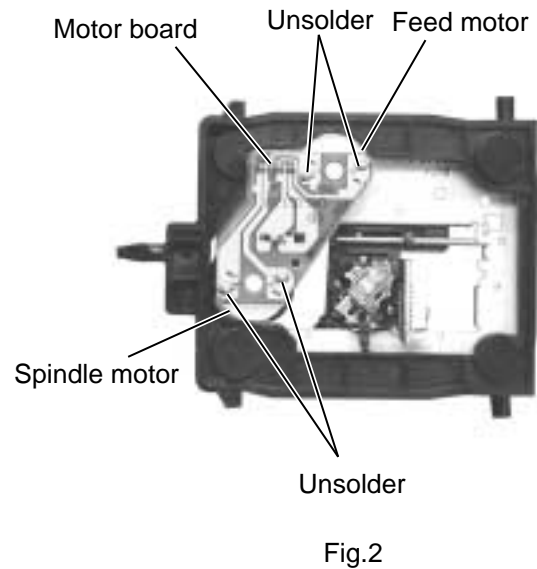
■ Removing the feed motor (See Fig.1)

Remove the two motor fixing screws at **B** and removing the feed motor.

■ Removing the spindle motor

The spindle motor cannot be removed as a single unit.

When removing the spindle motor, change the chasis and turntable together as aunit.



< Speaker section >

- It is exchange in a unit.
Please do not decompose.

<Cassette mechanism section>

- Removing the record/playback mechanism.

■ Removing the R/P head.

1. Remove the screw **A** on the right side of the R/P head.(Fig.1, Fig.2)
2. Remove the screw **B** on the left side of the R/P head.(Fig.1, Fig.2)

■ Remove the erase head.

Remove the screw **C** fixing the erase head.(Fig.1)

■ Removing the pinch roller.

1. Pull out the pinch roller by opening the pinch roller stopper outward to unlock .(Fig.3)
2. When reassembling the pinch roller, refer to fig. 4 to hook up the spring.

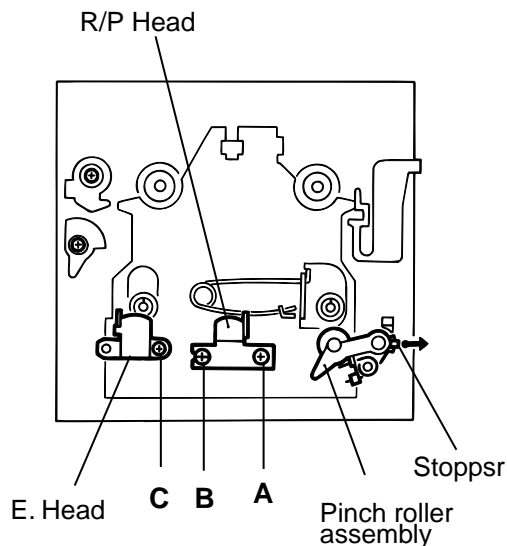


Fig.1

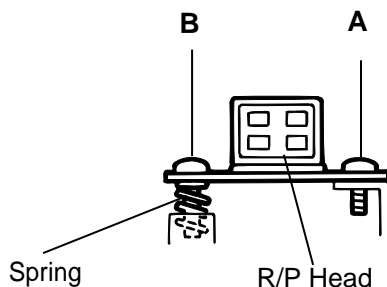


Fig.2

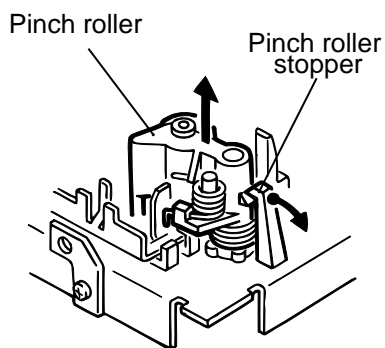


Fig.3

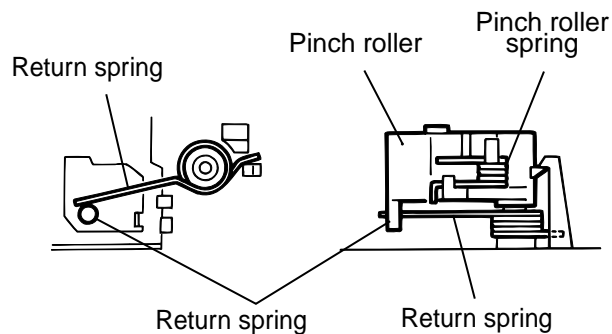


Fig.4

■ **Removing the motor.**

1. Remove the two screws **D** fixing the motor. Be careful to grease's splash when the drive belt comes off.(Fig.5, Fig.6)
2. Unsolder the motor terminal.(Fig.5)

■ **Removing the mechanism board.**

1. Unsolder the four parts **a** on the solenoid coil terminal.(Fig.5)
2. Remove the two screws **E** fixing the board.(Fig.5)
3. Unhook the three parts **b** from the board.(Fig.5)
4. Remove the mechanism board.(Fig.5)

■ **Removing the flywheel.**

Remove the cut-washers at **c** and **d** from the capstan shaft, then remove the flywheel. When reassembling the flywheel, be sure to use new washers as they cannot be reused.(Fig.8, Fig.9)

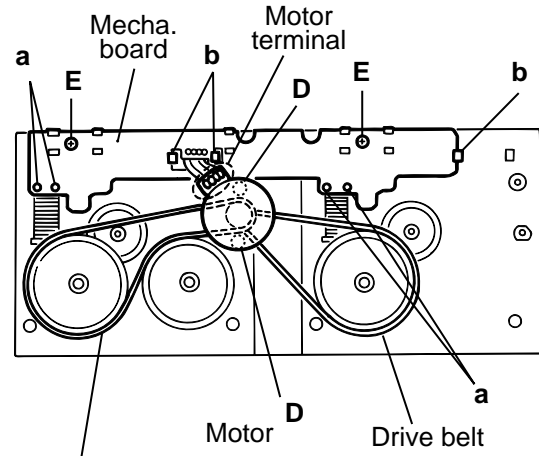


Fig.5

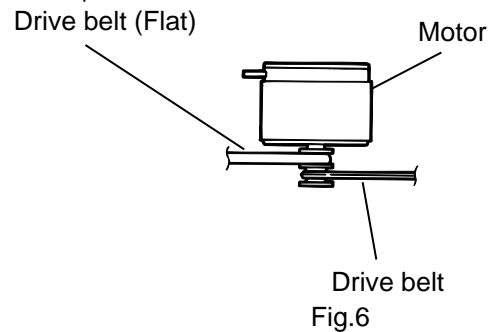


Fig.6

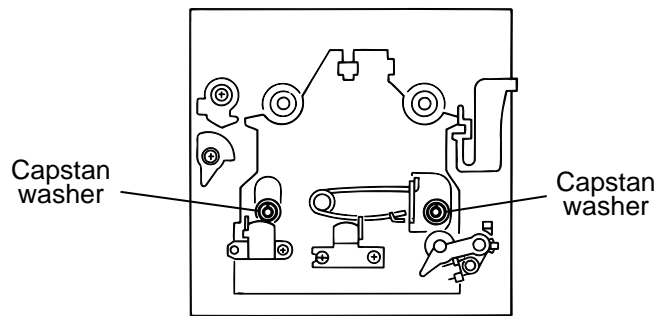


Fig.7

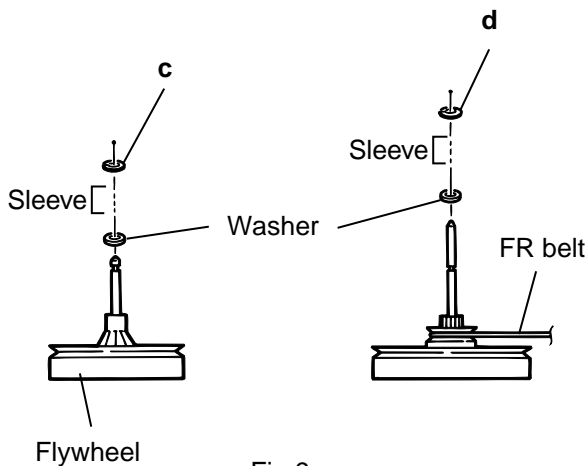


Fig.9

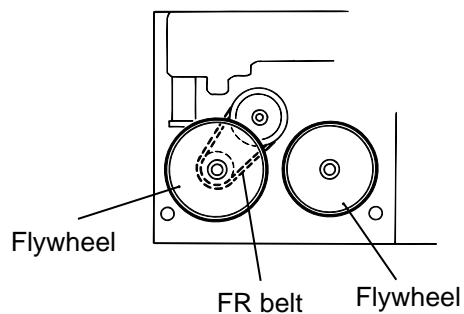
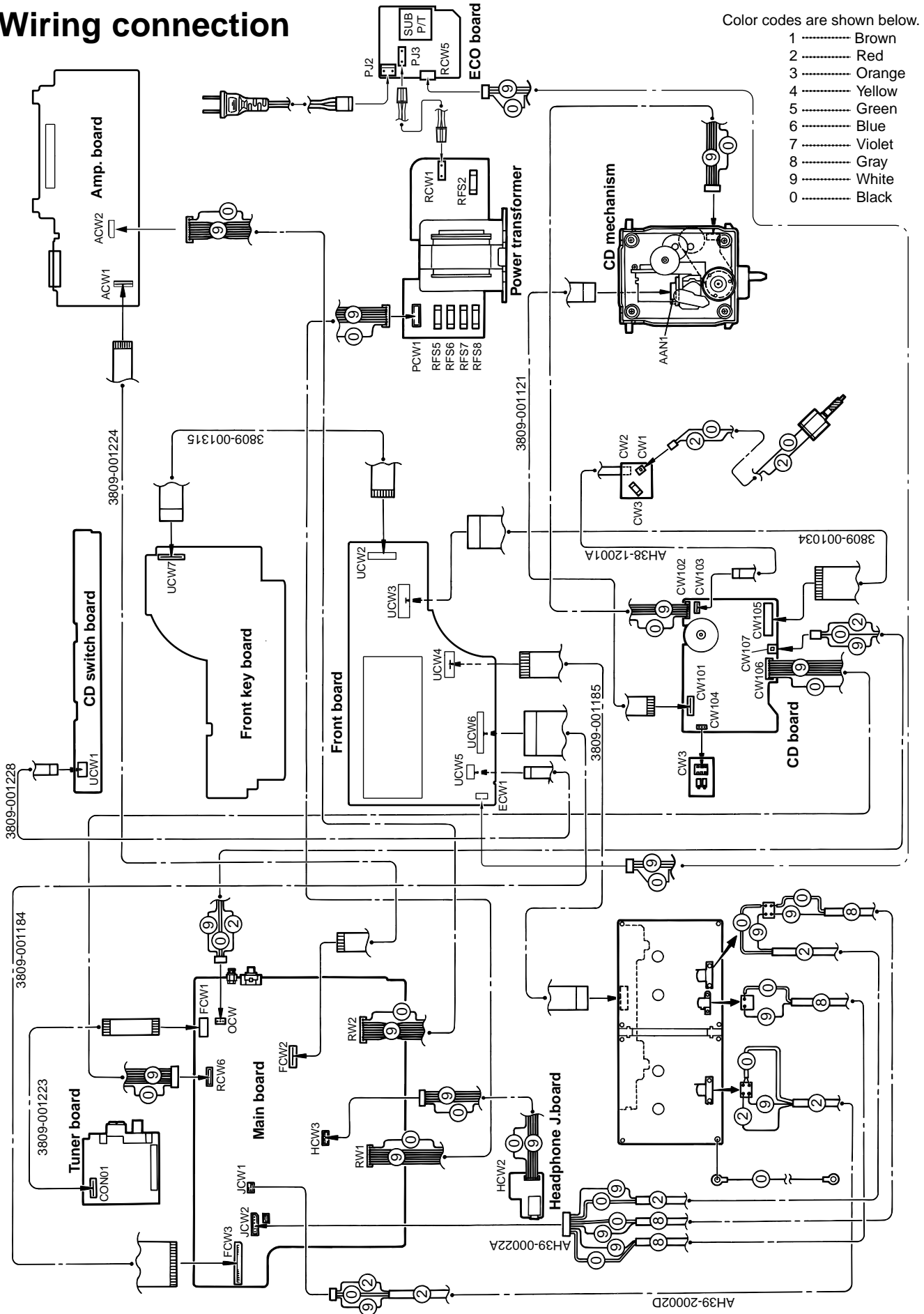


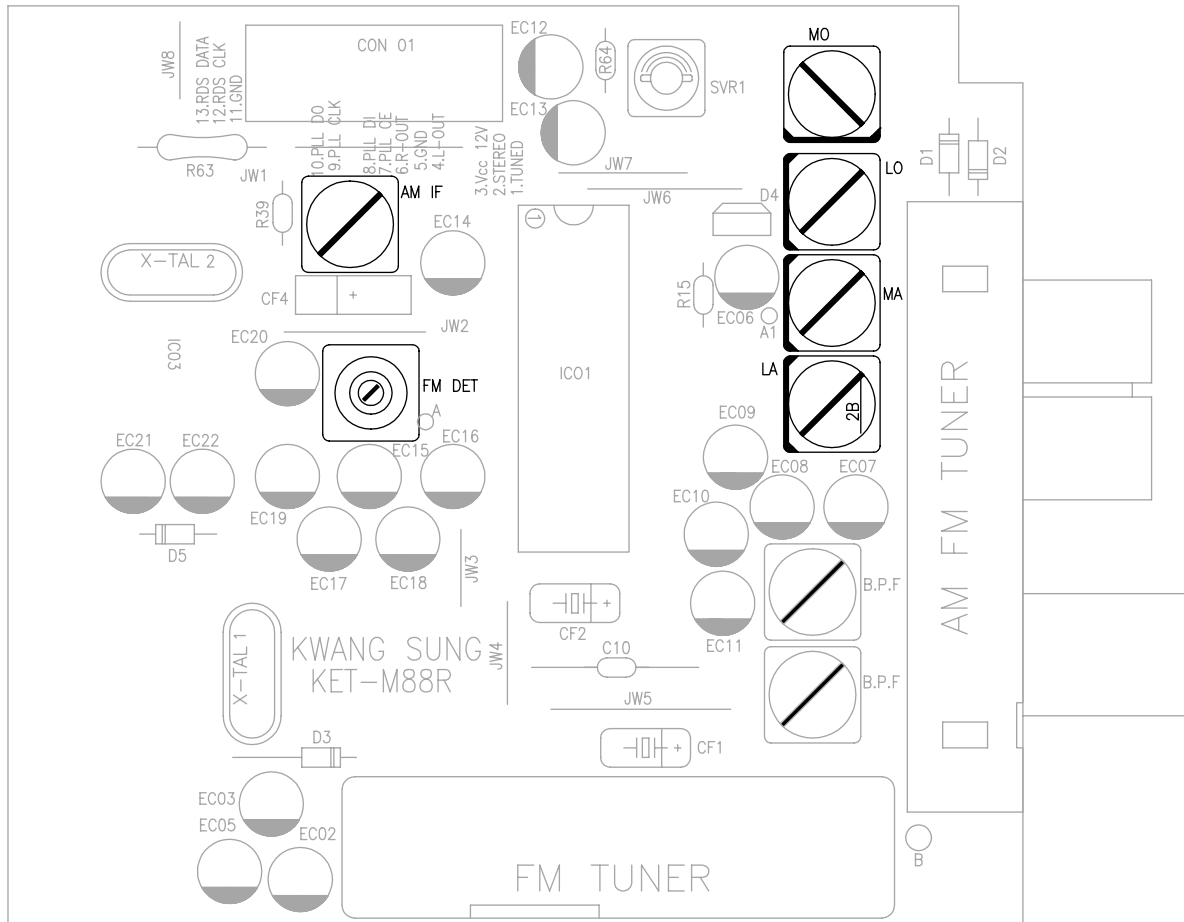
Fig.8

Wiring connection



Adjustment method

1. Tuner



* Adjustment Location of Tuner PCB

ITEAM	AM(MW) OSC Adjustment	AM(MW) RF Adjustment	LW OSC Adjustment	LW RF Adjustment
Received FREQ.	522~1629 KHz	594 KHz	144~288 KHz	150 KHz
Adjustment point	MO	MA	LO	LA
Output	1~7.0V	Maximum Output(Fig.1)	2~7.0V	Maximum Output(Fig.1)

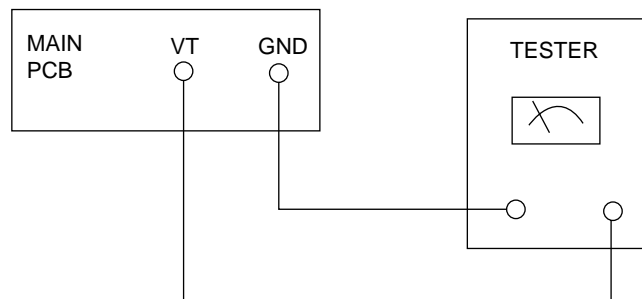


Fig.1 OSC Voltage

FM THD Adjustment	
SSG FREQ.	98 MHz
Adjustment point (FM DET)	FM DETECTOR COIL
Output	60 dB
Minimum Distortion (0.4% below) (Fig.2)	

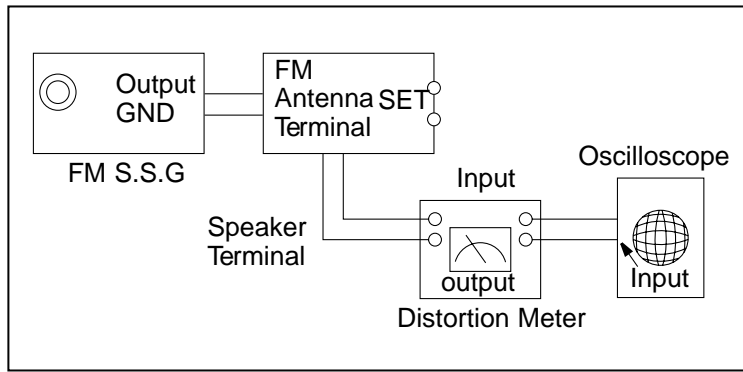


Fig.2 IF CENTER and THD Adjustment

FM Search Level Adjustment	
SSG FREQ.	98 MHz
Adjustment point (SVR1)	BEACON SENSITIVITY SEMI-VR(20KΩ)
Output	28 dB (± 2dB)
Adjust SVR1 so that "TUNED" of FLT is lighted (Fig.3)	

*Adjust FM S.S.G level to 28dB

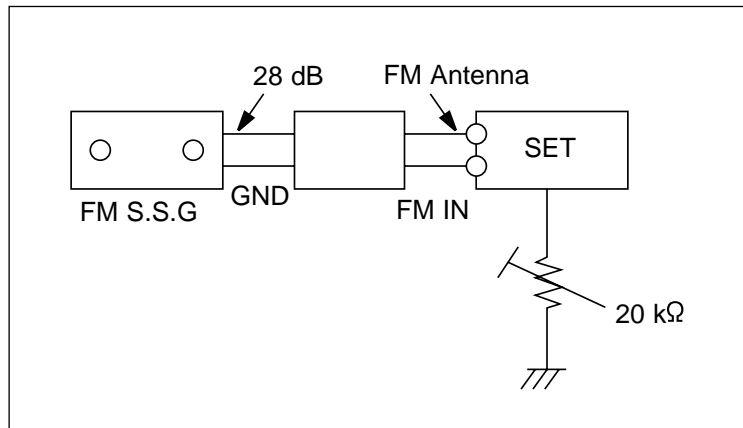


Fig.3 FM Auto Search Level Adjustment

AM(MW) I.F Adjustment	
SSG FREQ.	450 kHz
Frequency	522 kHz
Adjustment point	AM IF
Maximum output (Fig.4)	

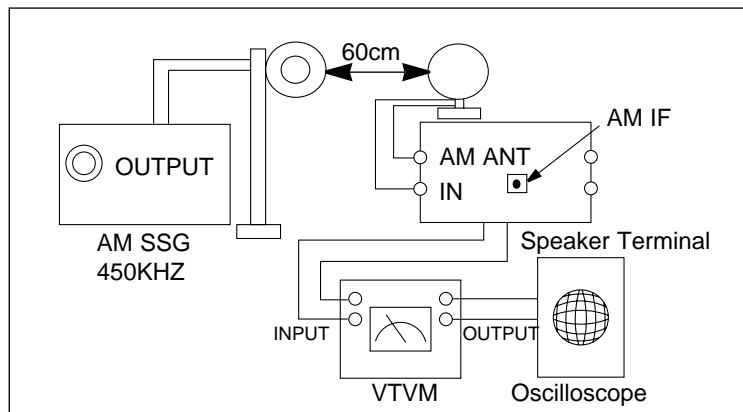


Fig.4 AM I.F Adjustment

2. Cassette Deck

■ To adjust tape speed

Notes

- 1) Measuring tape:
 - i) VT-712/MTT-111(or equivalent)
(Tapes recorded with 3kHz)
 - ii) AC-225/MTT-5512(or equivalent)
- 2) Connect the cassette deck to the frequency counter as in fig.1.

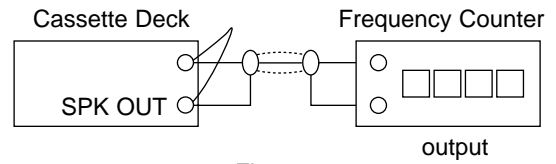


Fig.1

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	NOR SPEED Control	OUT (connected to the frequencycounter)	1) Deck 1:VT-712 2) Press PLAY SW button 3) Deck 2:Same as above	Turn VSR1 to left and right (FRONT PCB)	3KHz	±1% range

■ To adjust playabck level/REC

Notes

- 1) Before the actual adjustment, clean the play/recording head.
- 2) Measuring tape :
 - i) VT-703/MTT-114N(or equivalent 10kHz AZIMUTH control)
 - ii) AC-225/MTT-5512(or equivalent)
- 3) The cassette deck is connections as shown in fig.2.

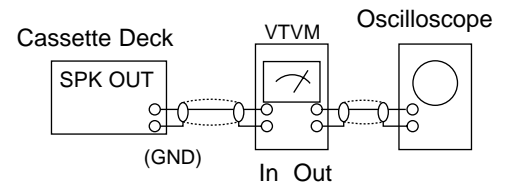


Fig.2

1. Adjust Deck 1 Play Level

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	AZIMUTH	SPK OUT (VTVM is connected to the scope)	After putting VT-703 into Deck 1 - Press FWD PLAY button.	Turn the control screw to as shownin Fig.3.	Max output and same phase (both channels)	After adjustment secure it with REGION LOCK.

2. Adjust Deck 2 Play Level/REC BIAS

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	AZIMUTH	SPK OUT (VTVM is connected to the scope)	After putting VT-703 into Deck 2 1) Press FWD PLAY button.	Turn the control screw to as shown in Fig.3.	Max output and same phase (both channels)	After adjustment secure it with REGION LOCK.
2	Recording Bias Voltage	Fig.4	After putting AC-225 into Deck 2 1) Press REC PLAY button. 2) MAIN PCB JCW3, connected to VTVM	Turn JSR2L, JSR2R to the right and left	7mV(±0.5mV)	

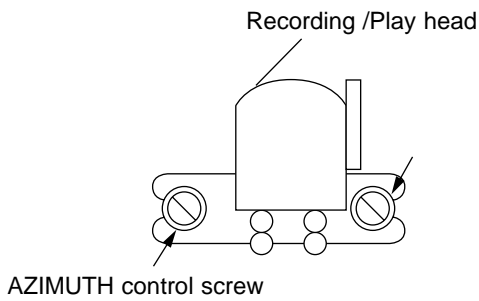


Fig.3

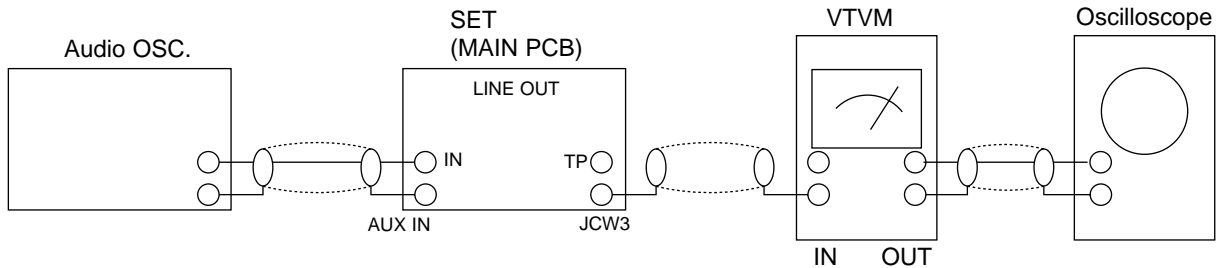
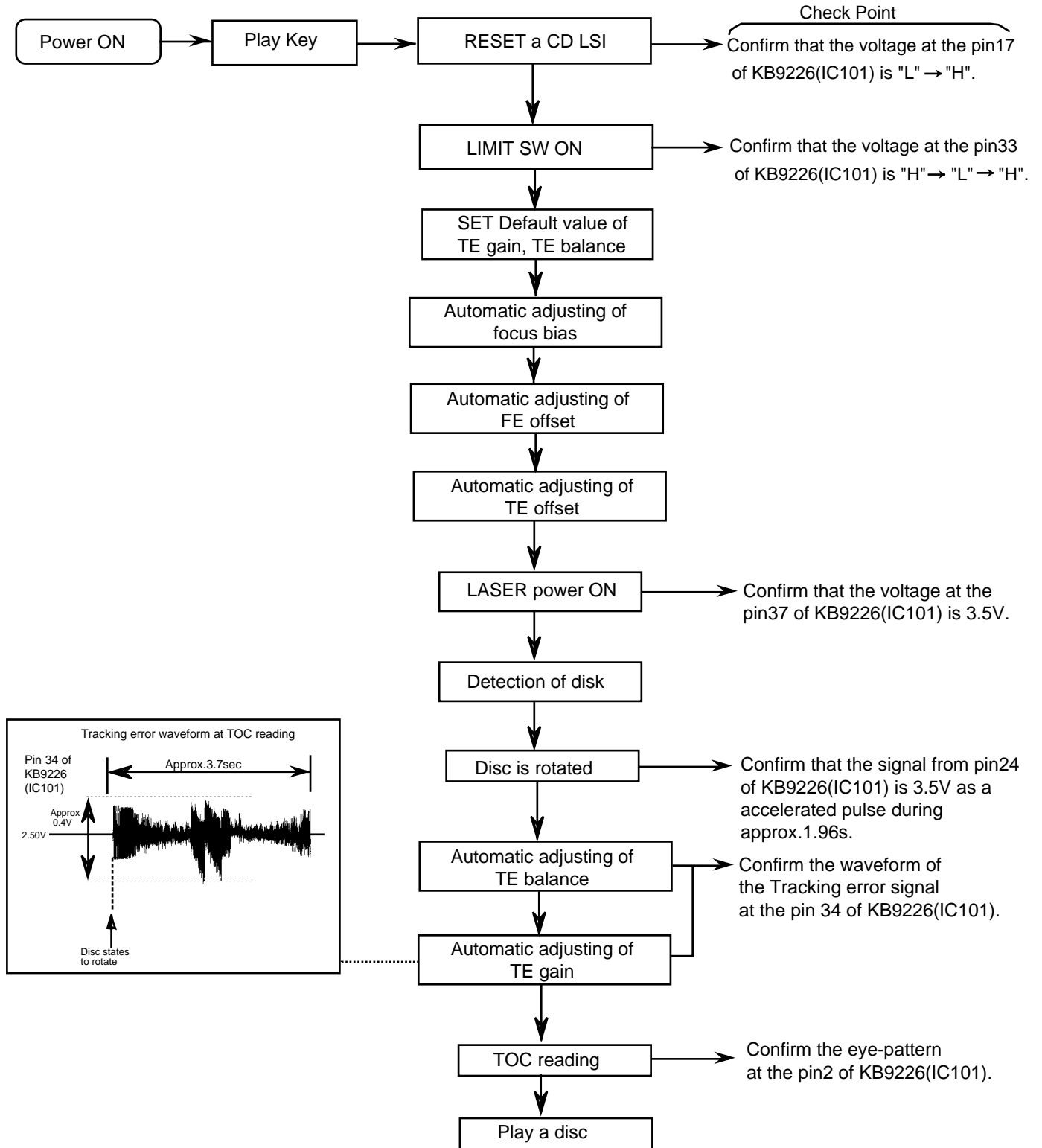


Fig.4

Flow of functional operation until TOC read



Maintenance of laser pickup

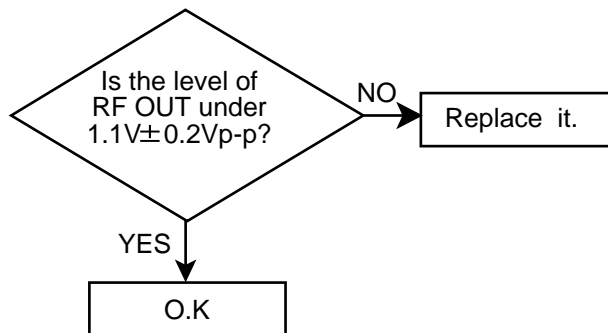
(1) Cleaning the pick up lens

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.



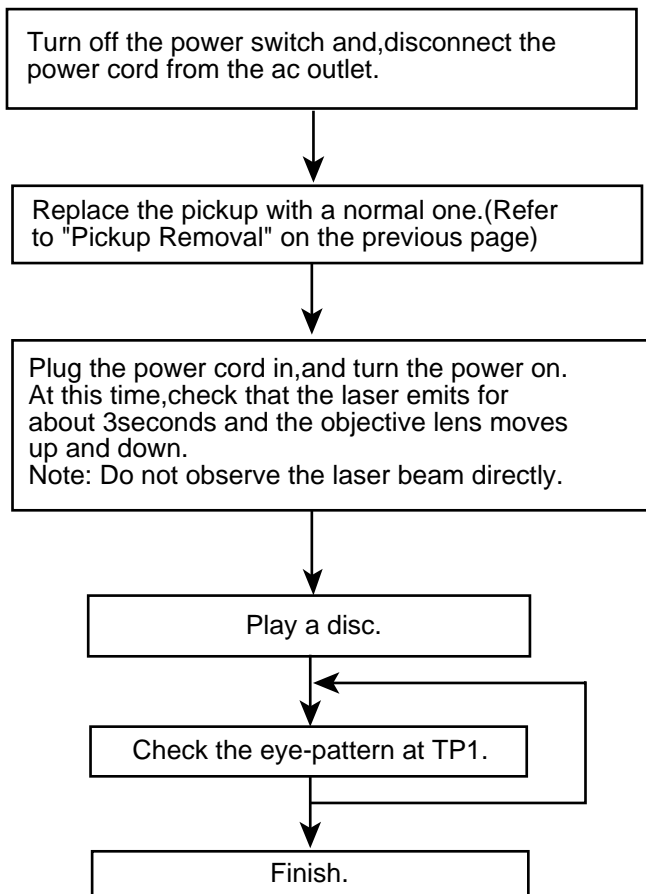
(3) Semi-fixed resistor on the APC PC board

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

If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.

If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

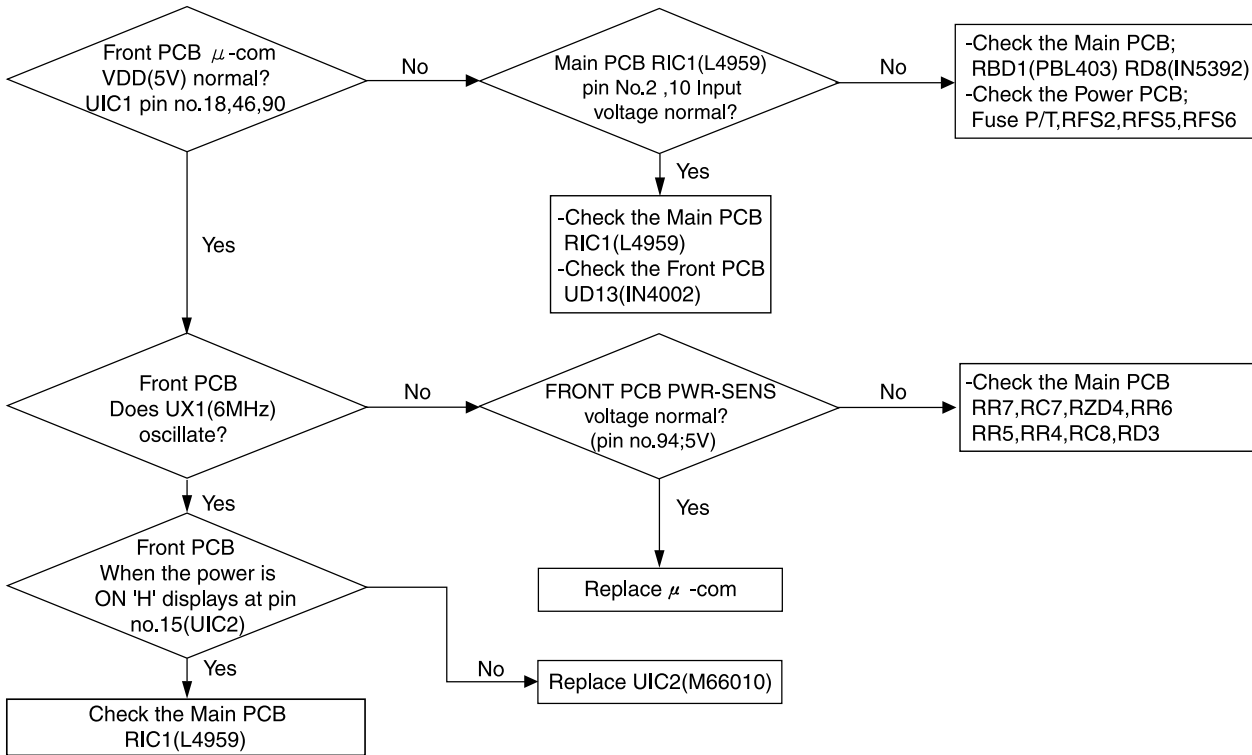
Replacement of laser pickup



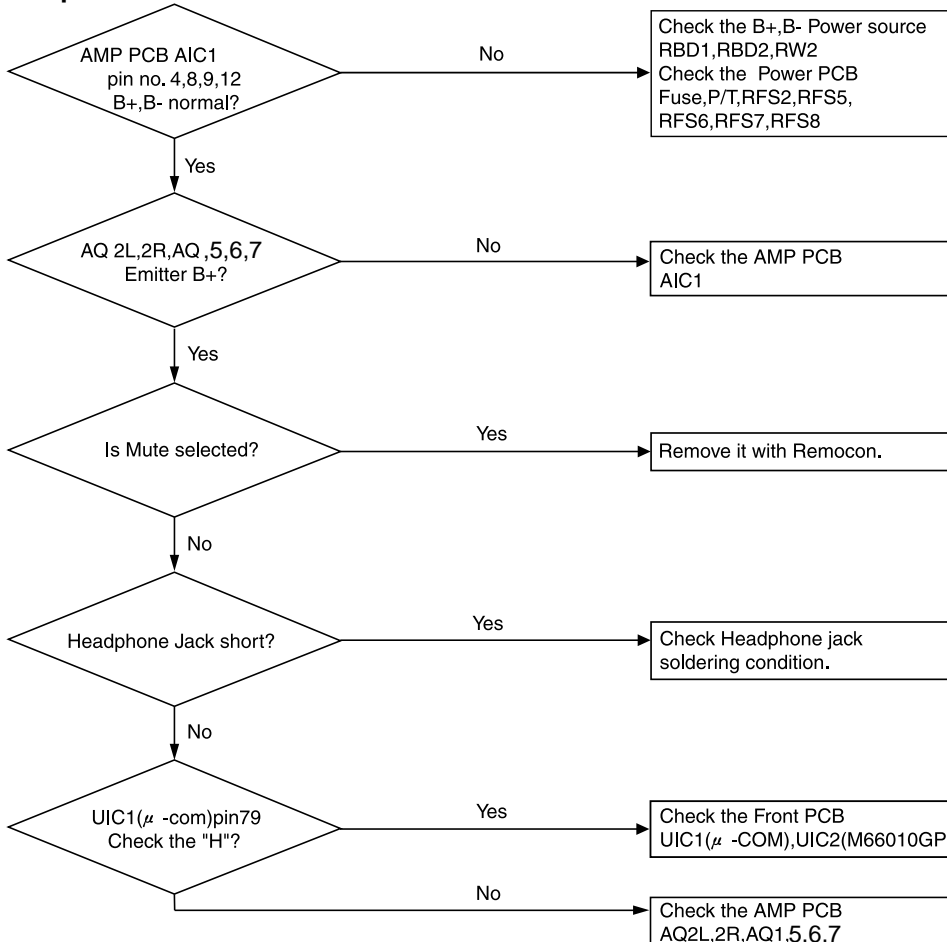
Troubleshooting

1. Amplifier

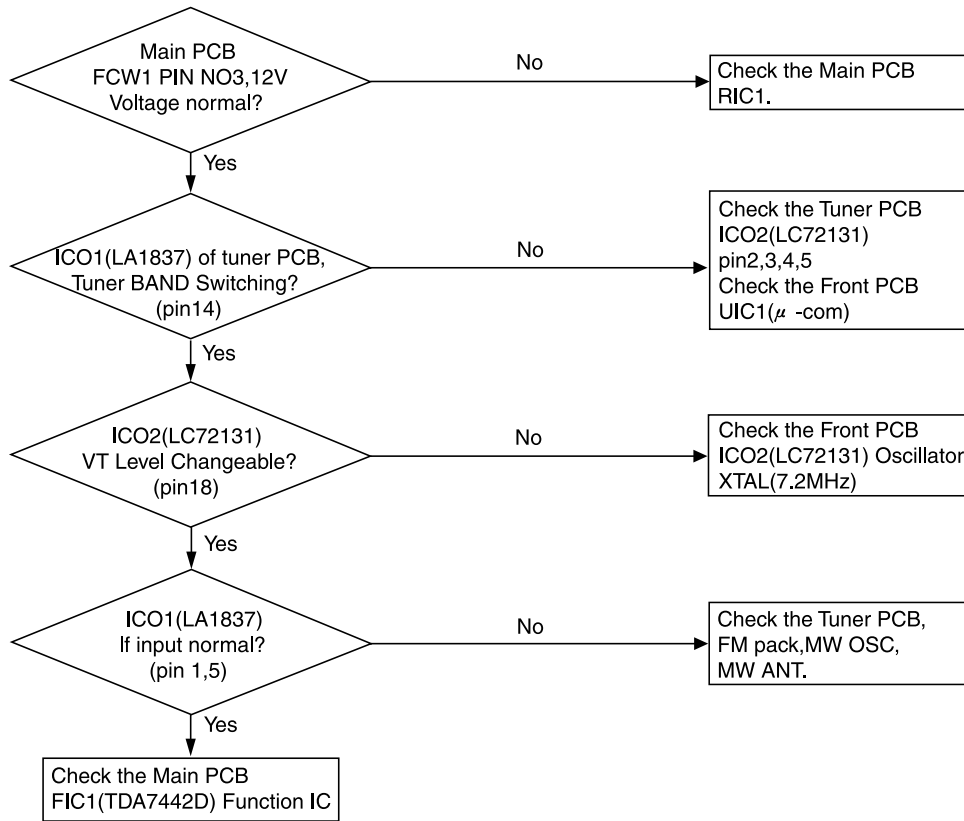
Power malfunction



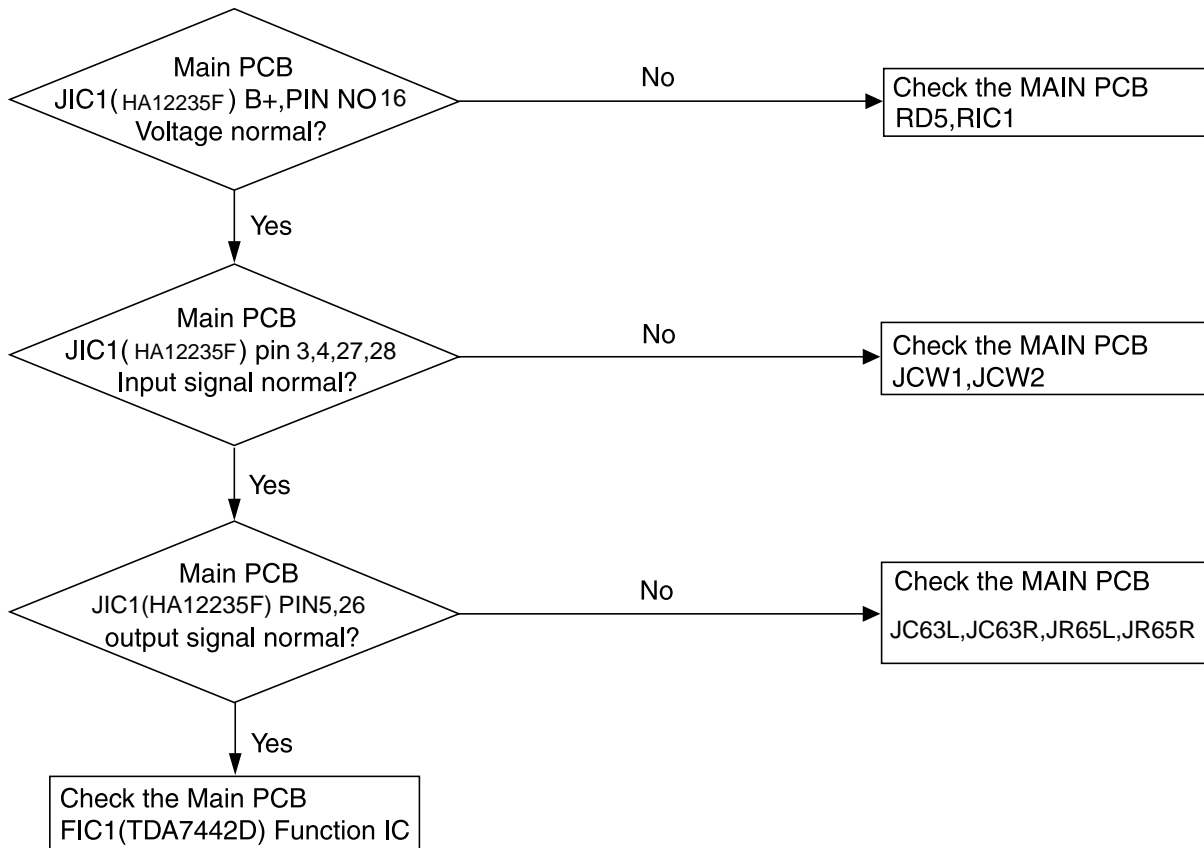
No output



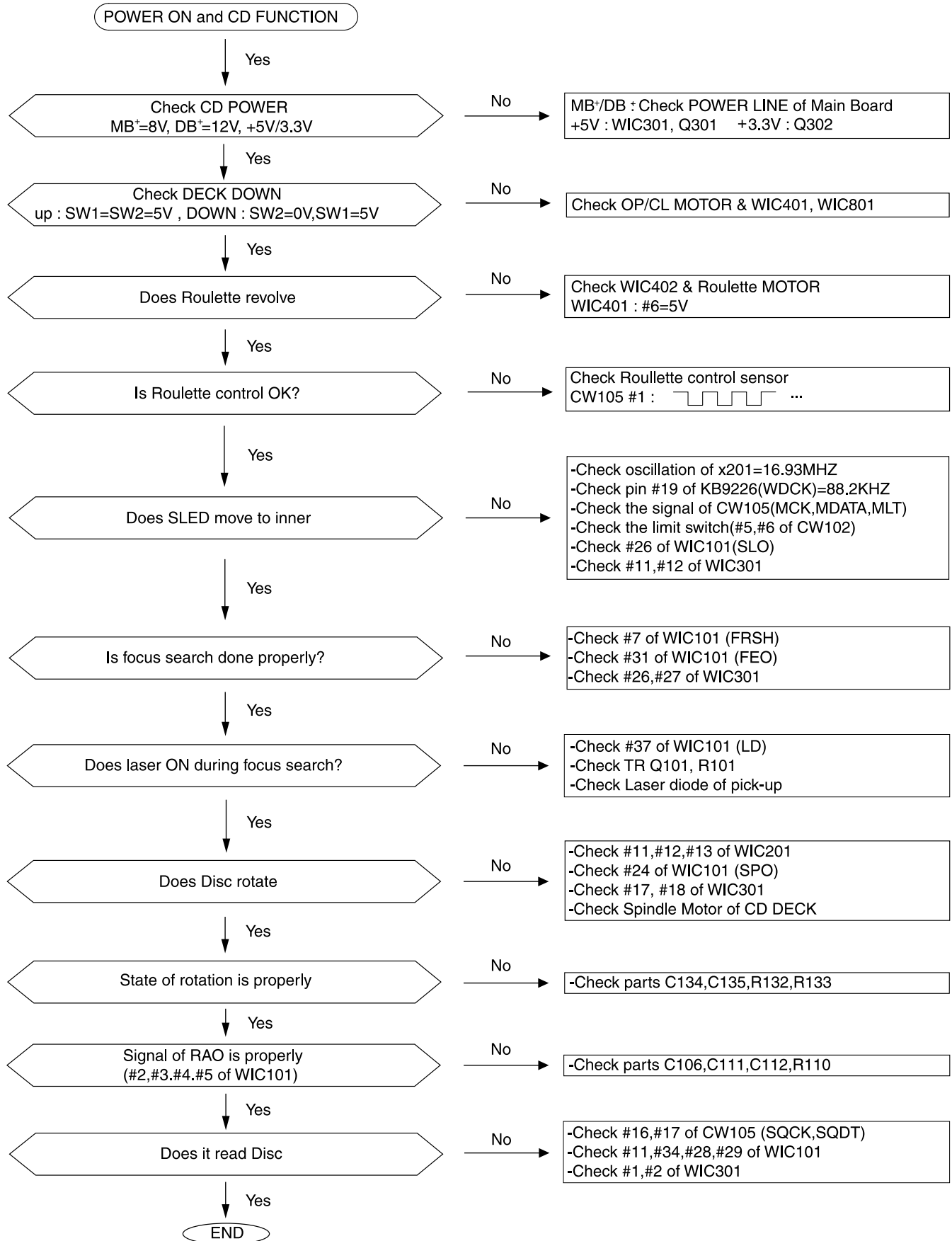
2.Tuner malfunction (FM/AM)



3.Tape



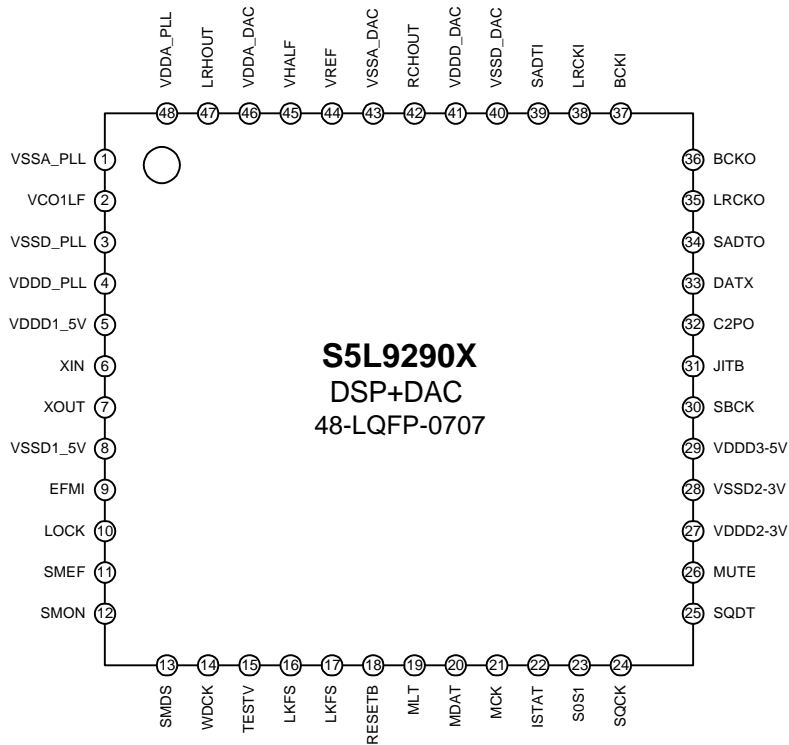
4.CD



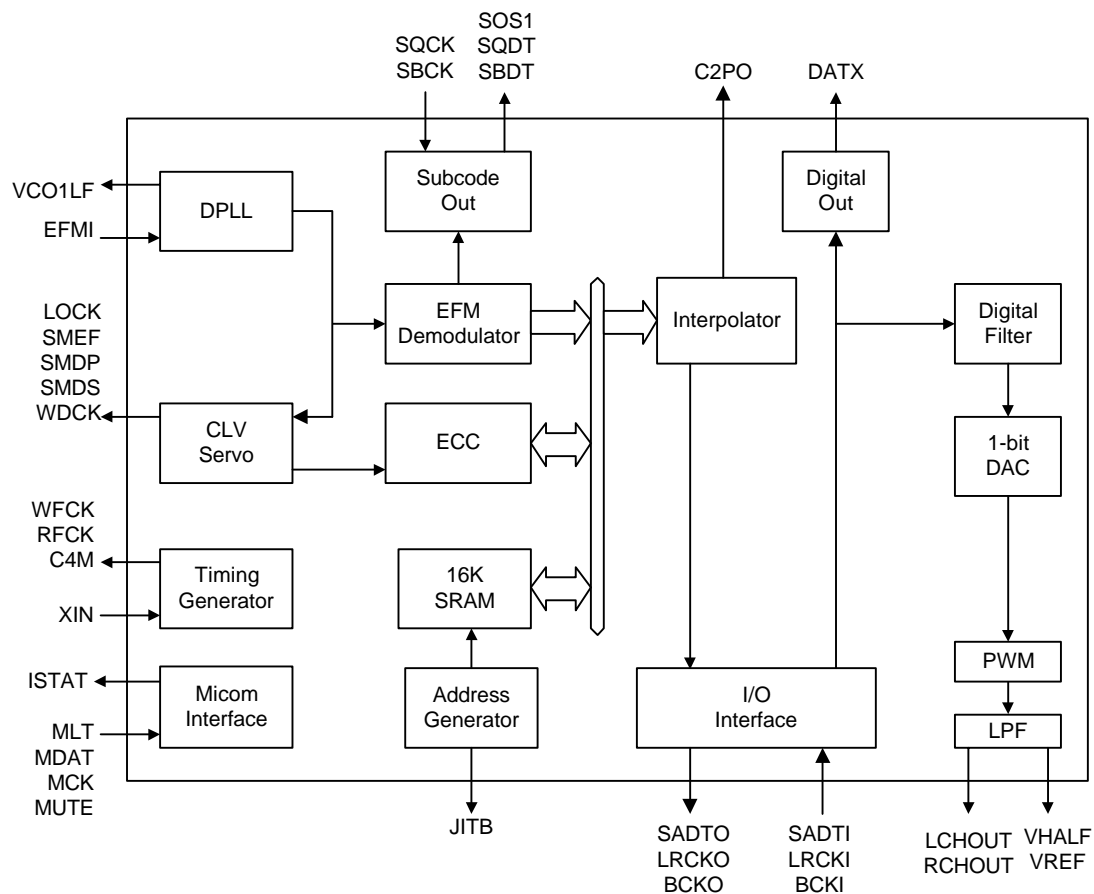
Description of major ICs

■ 5L9290 (IC201) : Digital signal processor for CDP

1. Pin layout



2. Block diagram

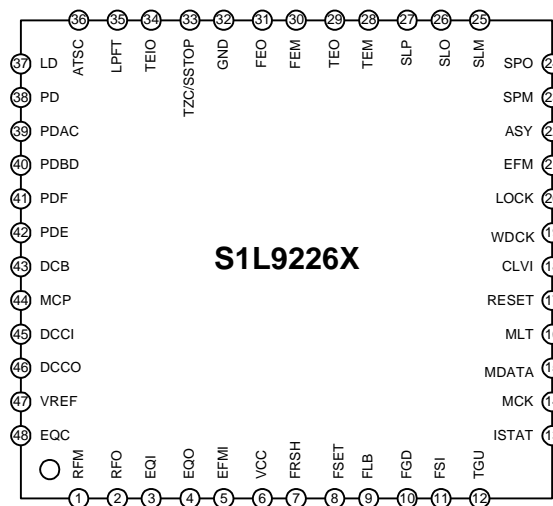


3. Pin function

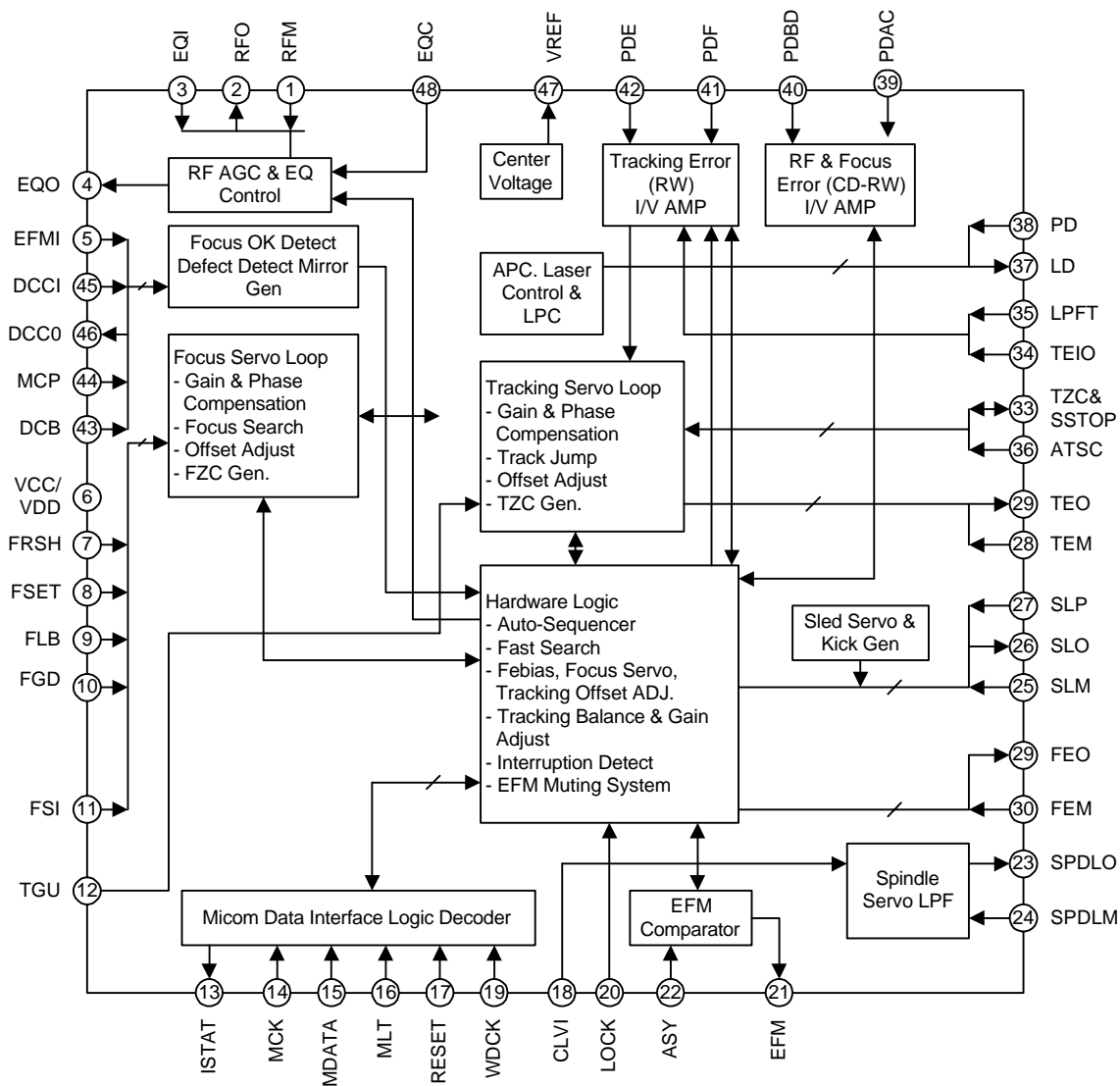
NO.	Symbol	I/O	Function
1	VSSA_PLL	-	Analog Ground for DPLL
2	VCO1LF	O	Pump out for VCO1
3	VSSD_PLL	-	Digital Ground Separated Bulk Bias for DPLL
4	VDDD_PLL	-	Digital Power Separated Bulk Bias for DPLL (3V Power)
5	VDDD1-5V	-	Digital Power (5V Power, I/O PAD)
6	XIN	I	X'tal oscillator input (16.9344MHz)
7	XOUT	O	X'tal oscillator output
8	VSSD1	-	Digital Ground (I/O PAD)
9	EFMI	I	EFM signal input
10	LOCK	O	CLV Servo locking status output
11	SMEF	O	LPF time constant control of the spindle servo error signal
12	SMDP	O	Phase control output for Spindle Motor drive
13	SMDS	O	Speed control output for Spindle Motor drive
14	WDCK	O	Word clock output (Normal Speed : 88.2KHz, Double Speed : 176.4KHz)
15	TESTV	I	Various Data/Clock Input
16	LKFS	O	The Lock status output of frame sync
17	C4M	O	4.2336MHz clock output
18	RESETB	I	System Reset at 'L'
19	MLT	I	Latch signal input from Micom
20	MDAT	I	Serial data input from Micom
21	MCK	I	Serial data receiving clock input from Micom
22	ISTAT	O	The internal status output to Micom
23	S0S1	O	Subcode sync signal(S0+S1) output
24	SQCK	I	Subcode-Q data transferring bit clock input
25	SQDT	O	Subcode-Q data serial output
26	MUTE	I	System mute at 'H'
27	VDDD2-3V	-	Digital Power (3V Power, Internal Logic)
28	VSSD2	-	Digital Ground (Internal Logic)
28	VDDD3-5V	-	Digital Power (5V Power, I/O PAD)
30	SBCK	I	Subcode data transferring bit clock
31	JITB	O	Internal SRAM jitter margin status output
32	C2PO	O	C2 pointer output
33	DATX	O	Digital audio data output
34	SADTO	O	Serial audio data output (48 slot, MSB first)
35	LRCKO	O	Channel clock output
36	BCKO	O	Bit clock output
37	BCKI	I	Bit clock input
38	LRCKI	I	Channel clock input
39	SADTI	I	Serial audio data input (48 slot, MSB first)
40	VSSD_DAC	-	Digital Ground for DAC
41	VDDD_DAC	-	Digital Power for DAC (3V Power)
42	RCHOUT	O	Right-Channel audio output through DAC
43	VSSA_DAC	-	Analog Ground for DAC
44	VREF	O	Referance Voltage output for bypass
45	VHALF	O	Referance Voltage output for bypass
46	VDDA_DAC	-	Analog Power for DAC (3V Power)
47	LCHOUT	O	Left-Channel audio output through DAC
48	VDDA_PLL	-	Analog Power for PLL (3V Power)

KB9226 (IC101) : RF amp. & servo signal processor

1. Pin layout



2. Block diagram



3. Pin function

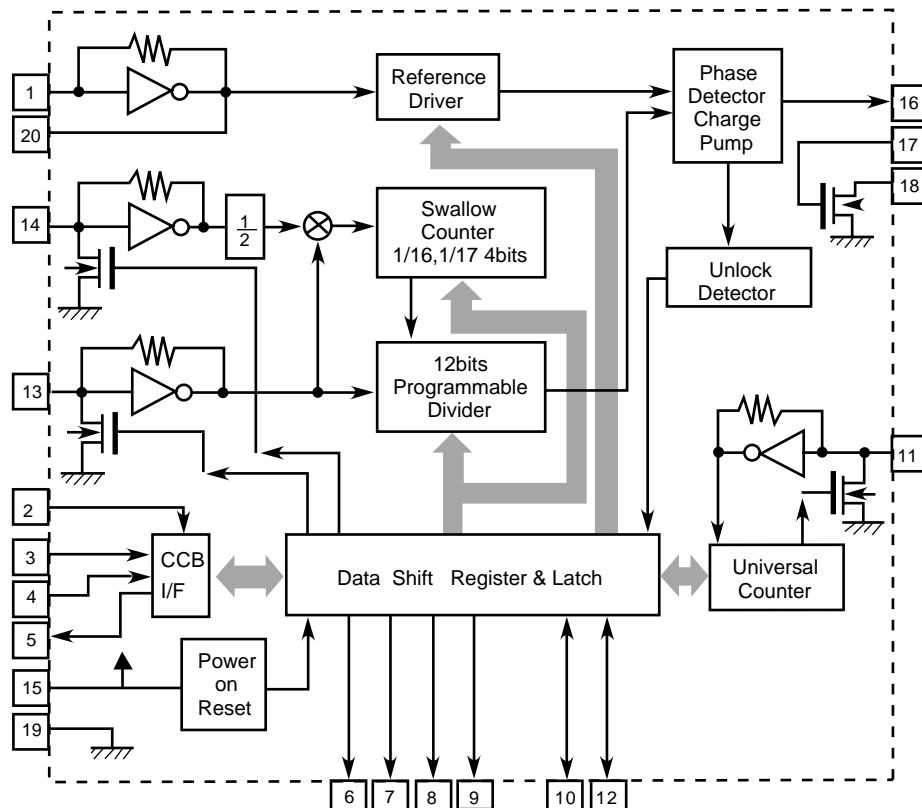
Pin No.	Symbol	I/O	Function
1	RFM	I	RF summing amp. inverting input
2	RFO	O	RF summing amp. output
3	EQI	I	RFO DC eliminating input(use by MIRROR, FOK ,AGC & EQ terminal)
4	EQO	O	RF equalizer output
5	EFMI	I	EFM slice input. (input impedance 47K)
6	VCC	P	Main power supply
7	FRSH	I	Capcitor connection to focus search
8	FSET	I	Filter bias for focus,tracking,spindle
9	FLB	I	Capacitor connection to make focus loop rising band
10	FGD	I	Terminal to change the high frequency gain of focus loop
11	FSI	I	Focus servo input
12	TGU	I	Connect the component to change the high frequency of tracking Loop
13	ISTAT	O	Internal status output
14	MCK	I	Micom clock
15	MDATA	I	Data input
16	MLT	I	Data latch input
17	RESET	I	Reset input
18	CLVI	I	Input the spindle control output from DSP
19	WDCK	I	88.2KHz input terminal from DSP
20	LOCK	I	Sled run away inhibit pin (L: sled off & tracking gain up)
21	EFM	O	EFM output for RFO slice(to DSP)
22	ASY	I	Auto asymmetry control input
23	SPM	I	Spindle amp. inverting input
24	SPO	O	Spindle amp. output
25	SLM	I	Sled servo inverting input
26	SLO	O	Sled servo output
27	SLP	I	Sled servo noninverting input
28	TEM	I	Tracking servo amp.inverting input
29	TEO	O	Tracking servo amp. output
30	FEM	I	Focus servo amp. inverting input
31	FEO	O	Focus servo amp. output pin
32	GND	P	Main ground
33	TZC/ SSTOP	I	Tracking zero crossing input & Check the position of pick-up whether inside or not
34	TEIO	B	Tracking error output & Tracking servo input
35	LPFT	I	Tracking error integration input (to automatic control)
36	ATSC	I	Anti-shock input
37	LD	O	APC amp. output
38	PD	I	APC amp. input
39	PDAC	I	Photo diode A & C RF I/V amp. inverting input
40	PDBD	I	Photo diode B & D RF I/V amp. inverting input
41	PDF	I	Photo diode F & tracking(F) I/V amp. inverting input
42	PDE	I	Photo diode E & tracking(E) I/V amp. inverting input
43	DCB	I	Capacitor connection to limit the defect detection
44	MCP	I	Capacitor connection to mirror hold
45	DCCI	O	Output pin to connect the component for defect detect
46	DCCO	I	Input pin to connect the component for defect detect
47	VREF	O	(VCC+GND)/2 Voltage reference output
48	EQC	I	AGC_equalize level control terminal & capacitor terminal to input in to VCA

LC72131(IC02) : PLL frequency synthesizer for electron alignment

1. Pin layout

XIN	1	20	XOUT
CE	2	19	VSS
DI	3	18	AOUT
CL	4	17	AIN
DO	5	16	PD
BO1	6	15	VDD
BO2	7	14	FMIN
BO3	8	13	AMIN
BO4	9	12	I02
I01	10	11	IFIN

2. Block diagram



3. Pin function

(1/2)

Symbol	Pin No.	Type	Functions	Circuit configuration
XIN XOUT	1 20	Xtal OSC	<ul style="list-style-type: none"> Crystal resonator connection (4.5MHz/7.2MHz) 	
FMIN	14	Local oscillator signal input	<ul style="list-style-type: none"> Serial data input : FMIN is selected when DVS is set to 1. The input frequency range is from 10 to 160MHz. The signal is passed through a built-in divide-by-two prescaler and then supplied to the swallow counter. A1 though the range of divisor setting is from 272 to 65, 535, the actual divisor is twice the setting since there is also a built-in divide-by-two prescaler. 	
AMIN	13	Local oscillator signal input	<ul style="list-style-type: none"> Serial data input : AMIN is selected when DVS is set to 0. Serial data input : When SNS is set to 1 : <ul style="list-style-type: none"> The input frequency range is form 2 to 40MHz The signal is supplied directly to the swallow counter. The range of divisor setting is from 272 to 65, 535 and the actual divisor will be the value set. Serial data input : When SNS is set to 0 : <ul style="list-style-type: none"> The input frequency ranges is from 0.5 to 10MHz. The signal is supplied directly to a 12-bit programmable divider. The range of divisor setting is from 4 to 4,095 and the actual divisor will be the value set. 	
CE	2	Chip enable	<ul style="list-style-type: none"> Most be set high when serial data is input to the LC72131M (DI), or when serial data is output (DO). 	

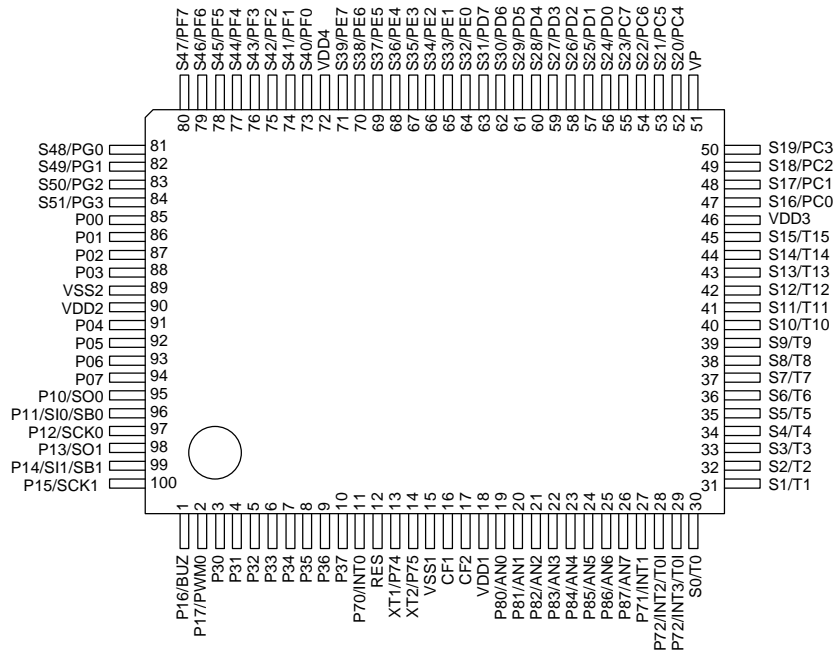
3.Pin function

(2/2)

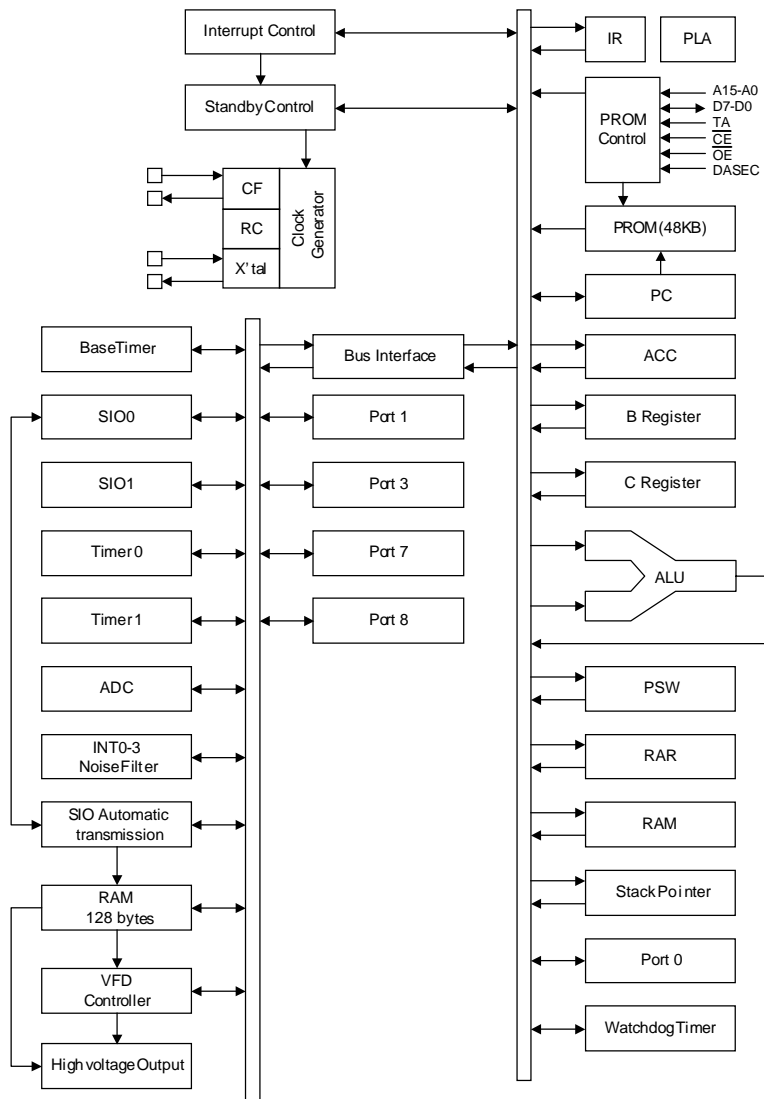
Symbol	Pin No.	Type	Functions	Circuit configuration
CL	4	Clock	<ul style="list-style-type: none"> Used as the synchronization clock when serial data is input to the LC72131 (DI), or when serial data is output (DO). 	
DI	3	Input data	<ul style="list-style-type: none"> Inputs serial data sent from the controller to the LC72131M. 	
DO	5	Output data	<ul style="list-style-type: none"> Output serial data sent from the LC72131M to the controller. The content of the output data is determined by the serial data DOCO to DOC2. 	
VDD	15	Power supply	<ul style="list-style-type: none"> The LC72131M power supply (VDD=4.5 to 5/5V) The power on reset circuit operates when power is first applied. 	
VSS	19	Ground	<ul style="list-style-type: none"> The LC72131M ground. 	
$\overline{\text{BO1}}$ $\overline{\text{BO2}}$ $\overline{\text{BO3}}$ $\overline{\text{BO4}}$	6 7 8 9	Output port	<ul style="list-style-type: none"> Dedicated output pins The output states are determined by BO1 to BO4 in the serial data. 'Data'=0:Open =1:Low The pins go to the open state after the power-on reset. An 8Hz time base signal can be output from $\overline{\text{BO1}}$ when TBC in the serial data is set to 1. Note that the ON impedance of the $\overline{\text{BO1}}$ pin is higher than that of the other pins (BO2 to BO4) 	
$\overline{\text{IO1}}$ $\overline{\text{IO2}}$	10 12	I/O Port	<ul style="list-style-type: none"> Pins used for both input and output The input or output state is determined by bits IOC1 and IOC2 in the serial state. 'Data'=0:Input port =1:Output port When specified for use as an input port : The input state is transmitted to the controller through the DO pin. 'Input state'=Low:data value → 0 =High:data value → 1 When specified for use as an output port : The output state is determined by bits IO1 and IO2 in the serial state. 'Data'=0:Open =1:Low These pins go to the input port state after the power-on reset. 	
PD	16	Charge pump output	<ul style="list-style-type: none"> PLL Charge pump output When the frequency generated by dividing the Local oscillator frequency by N is higher than the reference frequency, a high level will be output from the PD in. similarly, when that frequency is lower, a low level will be output. The PD pin goes to the high impedance state when the frequencies agree. 	
AIN AOUT	17 18	L.P.F amplifier Tr	<ul style="list-style-type: none"> The MOS transistor used for the PLL active Low-pass filter. 	
IFIN	11	IF counter	<ul style="list-style-type: none"> The input frequency range is from 0.4 to 12MHz. The signal is supplied directly to the IF counter. The result from the IF counter MBS is output through the DO pin. There are four measurement periods: 4, 8, 32 or 64ms. 	

■ LC86P6548 (UIC1) : Microcontroller

1.Pin layout



2.Block diagram

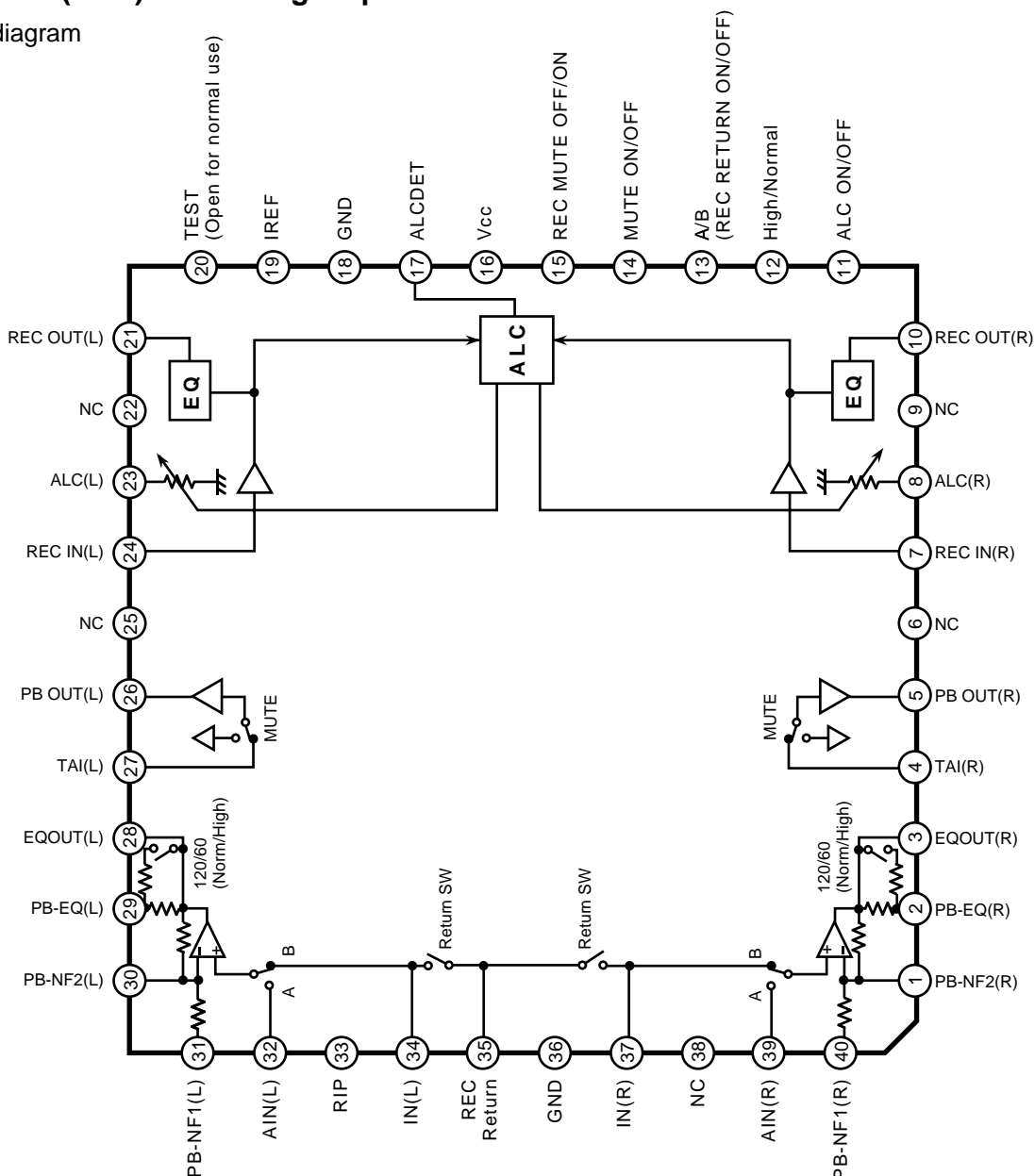


3. Pin function

Pin No.	Symbol	I/O	Function
1	P16/BUZ	I/O	Buzzer output
2	P17/PWM0	I/O	Timer 1 output (PWM0 output)
3 to 10	P30 to P37	I/O	8bit input/output port Input/output in bit unit 15V withstand at N-channel open drain output
11	P70/INT0	I/O	INT0 input /HOLD release/N-channel Tr. ouptput forwatchdog timer
12	RES	I	Reset pin
13	XT1/P74	I	32.768kHz crystal oscillation terminal XT1
14	XT2/P75	I	32.768kHz crystal oscillation terminal XT2
15	VSS1	-	Power pin (-)
16	CF1	I	Input pin for the ceramic resonator oscillation
17	CF2	O	Output pin for the ceramic resonator oscillation
18	VDD1	-	Power pin (+)
19 to 22	P80/AN0 to P83/AN3	I	4-bit input port Input /output in bit unit
23 to 26	P84/AN4 to P87/AN7	O	
27	P71/INT1	I	INT1 input/HOLD release input
28	P72/INT2/T0I	I	INT2 input/timer 0 event input
29	P72/INT3/T0I		
30 to 36	S0/T0 to S6/T6	O	Output for VFD display controller segment/timing incommon
37 to 45	S7/T7 to S15/T15	O	Output for VFD display controller segment/timing withinternal pull-down resistor in common Internal pull-down resistor output
46	VDD3	-	Power pin (+)
47 to 50	S16/PC0 to P19/PC3	I/O	Output for VFD display controller High voltage input port PC0 to PC3
51	VP	-	Power pin (+) for the VFD output pull-down resist
52 to 63	S20/PC4 to S31/PD7	I/O	Output for VFD display controller High voltage input port PC4 to PC7, PD0 to PD7
64 to 71	S32/PE0 to S39/PE7	I/O	Output for VFD displaya controller segment High voltage input port PE0 to PE7
72	VDD4	-	Power pin (+)
73 to 80	S40/PF0 to S47/PF7	I/O	Output for VFD displaya controller segment High voltage input port PF0 to PF7
81 to 84	S48/PG0 to S51/PG3	I/O	Output for VFD displaya controller segment High voltage I/O port PG0 to PG3
85	P00	I/O	8-bit input/output port. Input for port0 interrupt. Input/output in nibble unit Input for HOLD release 15V withstand at N-channel open drain output
86	P01		
87	P02		
88	P03		
89	VSS2	-	Power pin (-)
90	VDD2	-	Power pin (+)
91	P04	I/O	8-bit input/output port. Input for port0 interrupt. Input/output in nibble unit Input for HOLD release 15V withstand at N-channel open drain output
92	P05		
93	P06		
94	P07		
95	P10/SO0	I/O	SIO0 data output
96	P11/SI0/SB0		SIO0 data input/bus input/output
97	P12/SCK0		SIO0 clock input/output
98	P13/SO1		SIO1 data output
99	P14/SI1/SB1		SIO1 data input/bus input/output
100	P15/SCK1		SIO1 clock input/output
			8-bit input/output port Input/output can be specified in a bit unit

HA12235 (JIC1) : Audio signal processor

1. Block diagram

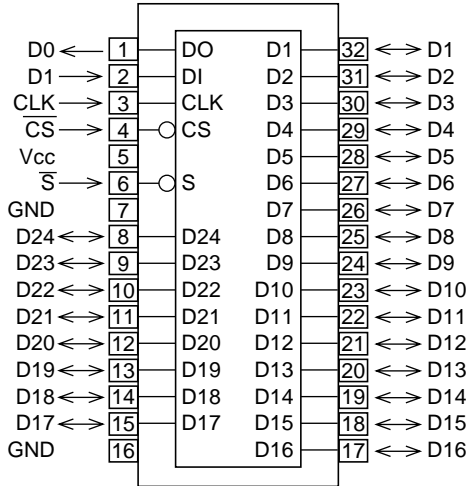


2. Pin function

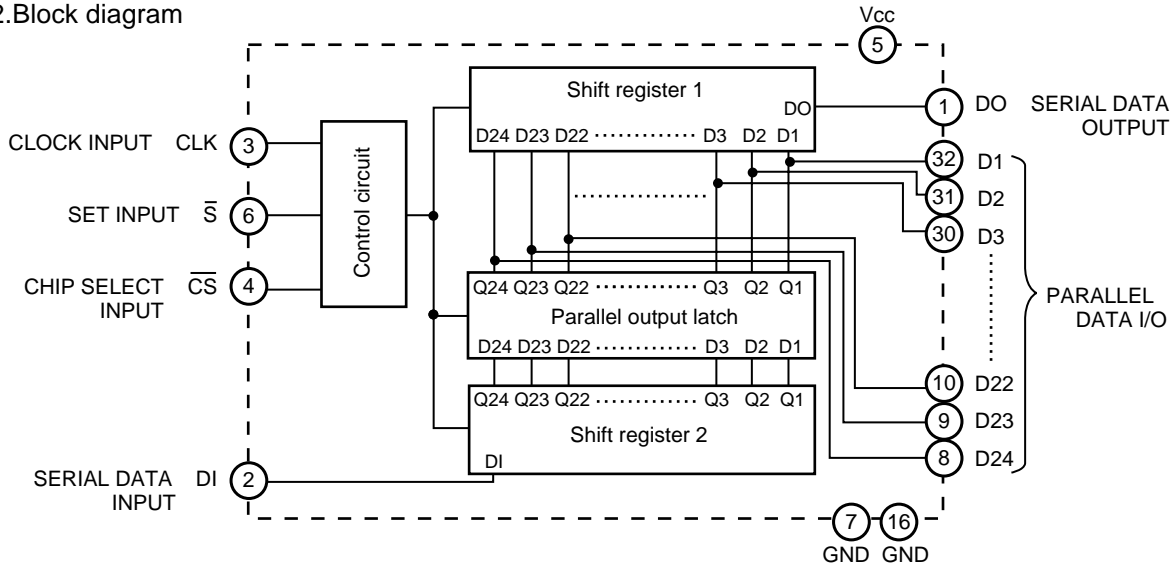
Pin No.	Symbol	Function	Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	PB-NF2(R)	PB EQ feed back	15	REC MUTE	Mode control input	27	TAI(L)	Tape input
2	PB-EQ(R)	NAB output		OFF/ON		28	EQOUT(L)	EQ output
3	EQOUT(R)	EQ output	16	Vcc	Vcc pin	29	PB-EQ(L)	NAB output
4	TAI(R)	Tape input	17			30	PB-NF2(L)	PB EQ feed back
5	PBOUT(R)	PB output	18	GND	GND pin	31	PB-NF(L)	PB EQ feed back
6	NC	NC pin	19	IREF	Equalizer reference current input	32	AIN(L)	PB A deck input
7	RECIN(R)	REC-EQ input	20	Test mode	Test mode pin	33	RIP	Ripple filter
8			21	RECOUT(L)	REC output	34	BIN(L)	PB B deck input
9	NC	NC pin	22	NC	NC pin	35	REC-RETURN	REC Return
10	RECOUT(R)	REC output	23			36	GND	GND pin
11	ALC ON/OFF	Mode control input	24	RECIN(L)	REC-EQ input	37	BIN(R)	PB B deck input
12	High/Norm	Mode control input	25	NC	NC pin	38	NC	NC pin
13	A/B	Mode control input	26	PBOUT(L)	PB output	39	AIN(R)	PB A deck input
14	MUTE ON/OFF	Mode control input				40	PB-NF1(R)	PB EQ feed back

■ M66010 (UIC2) : I/O control

1.Pin layout

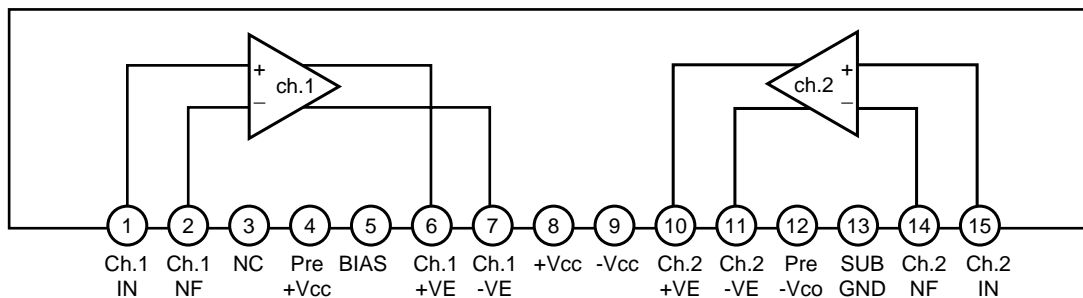


2.Block diagram



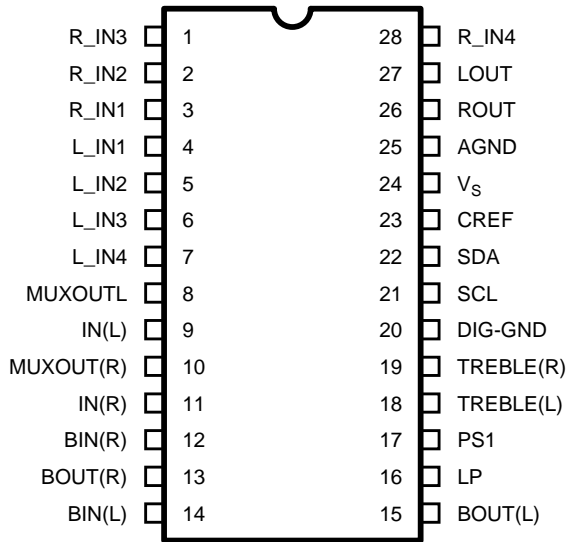
■ STK402-120 (AIC1) : Power amp.

1.Pin layout

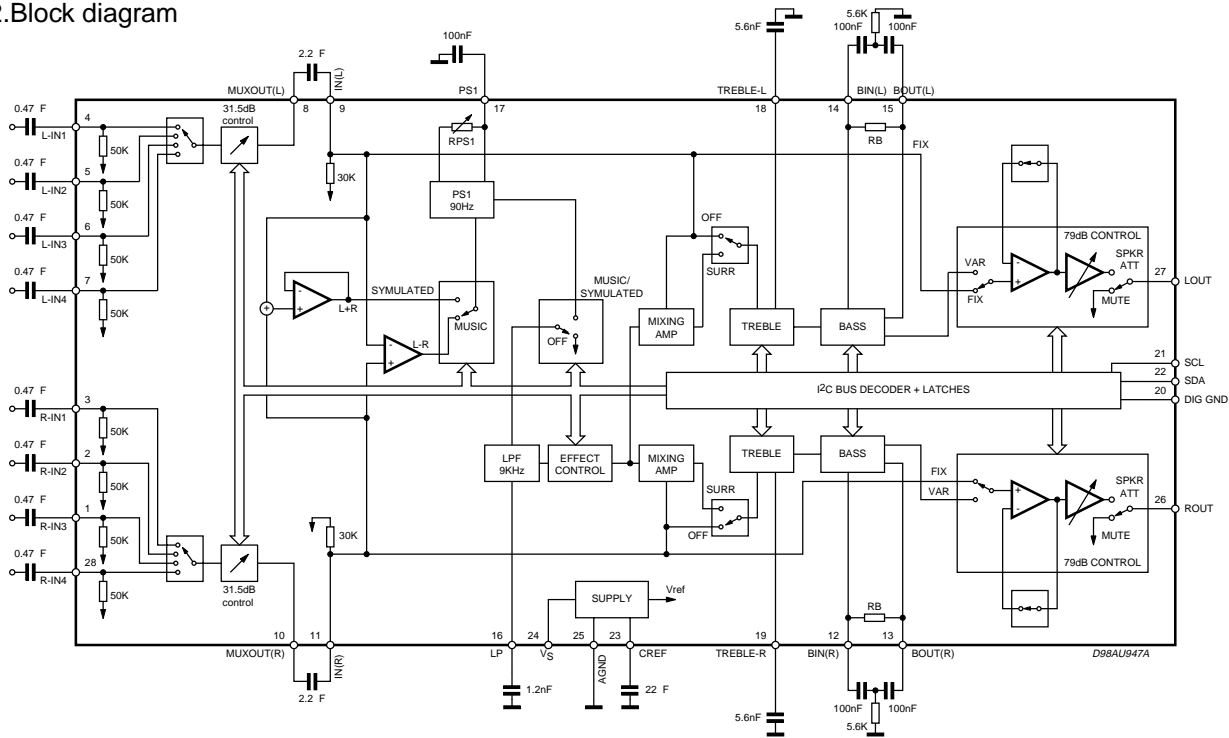


■ TDA7442D (FIC1) : Audio processor

1.Pin layout

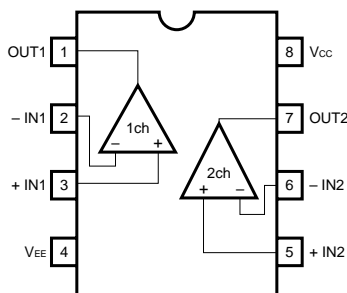


2.Block diagram



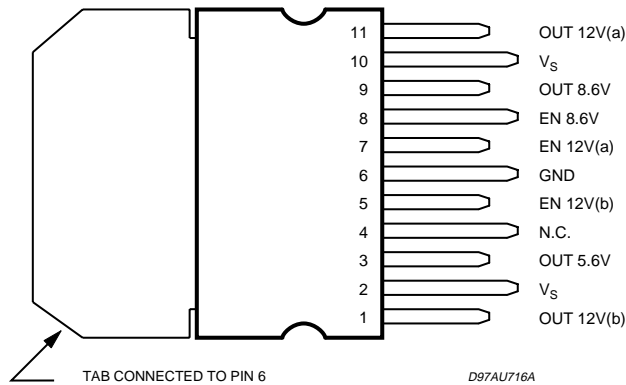
■ BA4560 (FIC4, HIC1) : Dual op amp.

1.Pin layout

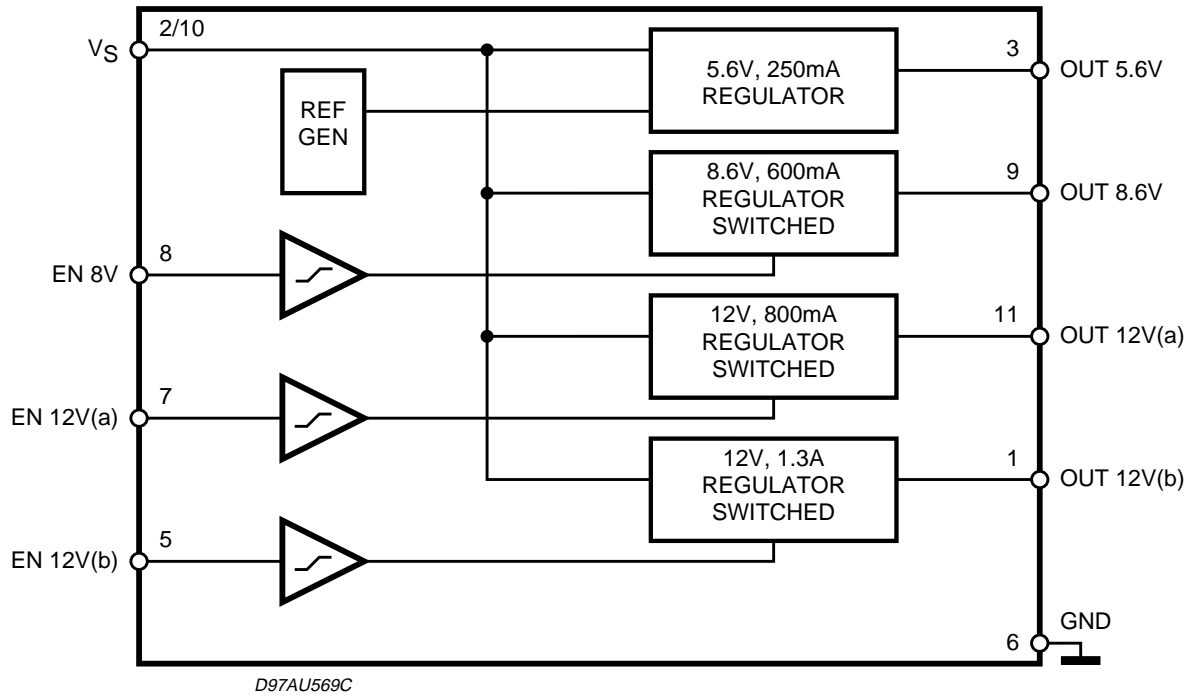


■ L4959 (RIC1) : Voltage regulator

1.Pin layout



2.Block diagram

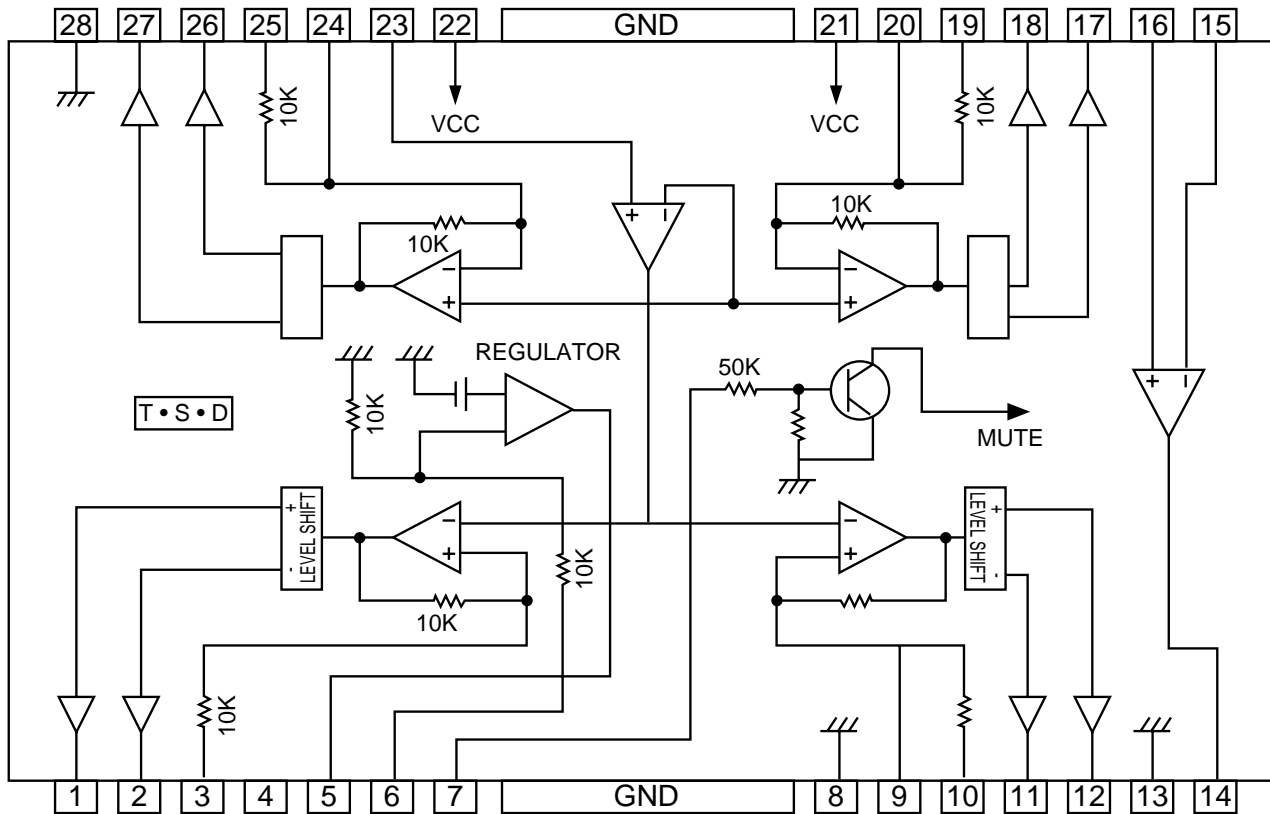


3.Pin function

Pin	Pins	Description
1	OUT 12V (b)	12V/1.3A SWITCHED OUTPUT VOLTAGE
2	V _s	Supply Voltage
3	OUT 5.6V	5.6V/250mA OUTPUT VOLTAGE
4	N.C.	not connected
5	EN 12V (b)	Enable 12V/1.3A SWITCHED OUTPUT VOLTAGE
6	GND	Ground
7	EN 12V (a)	Enable 12V/0.8A SWITCHED OUTPUT VOLTAGE
8	EN 8.6V	Enable 8.6V/0.6A SWITCHED OUTPUT VOLTAGE
9	OUT 8.6	8.6V/0.6A SWITCHED OUTPUT VOLTAGE
10	V _s	Supply Voltage
11	OUT 12V (a)	12V/0.8A SWITCHED OUTPUT VOLTAGE

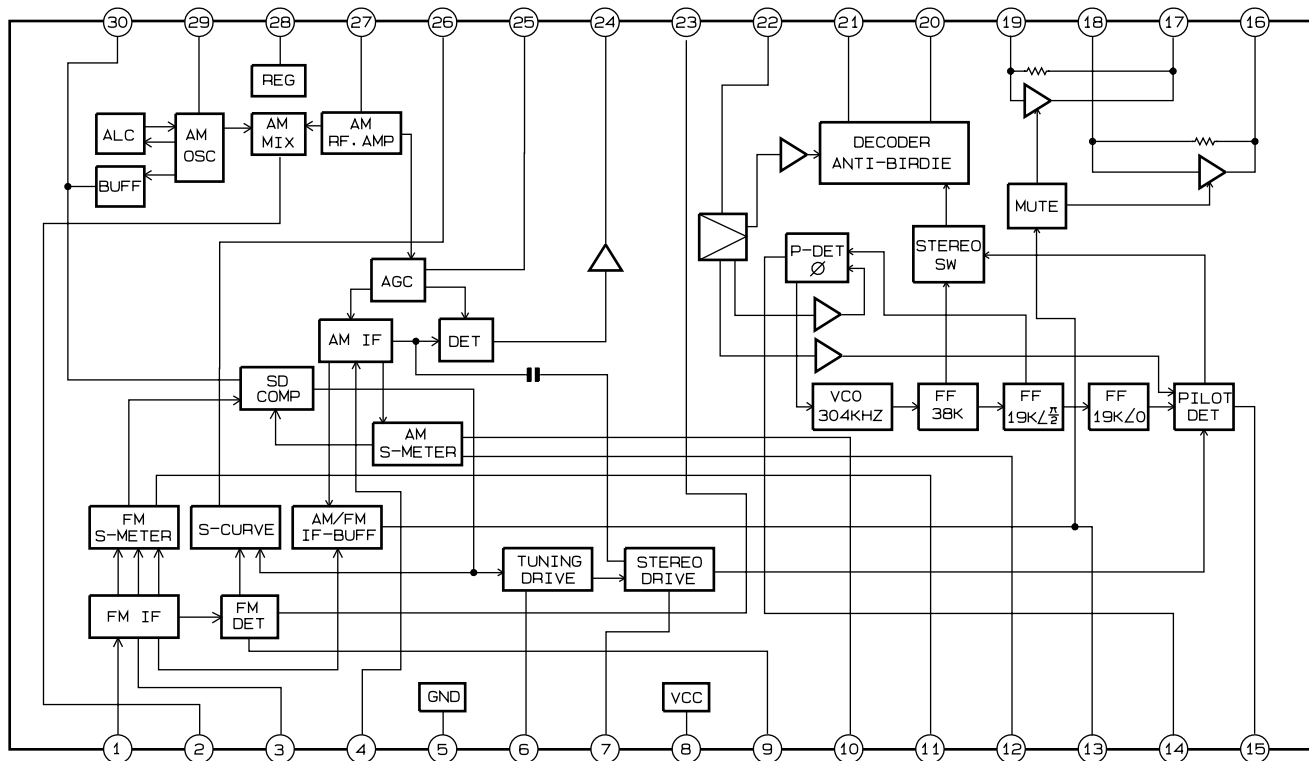
■ KA9258D (IC301) : 4-ch Motor driver

1. Block diagram



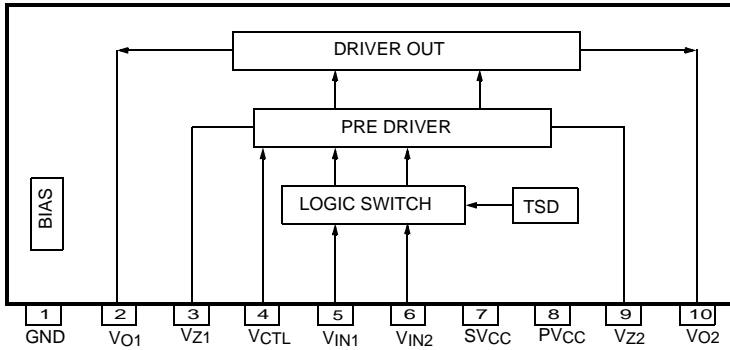
■ LA1837 (IC01) : FM IF/DET AM RF/IF/DET

1. Block diagram



KA3082 (IC401, IC402) : DC motor driver

1.Pin layout

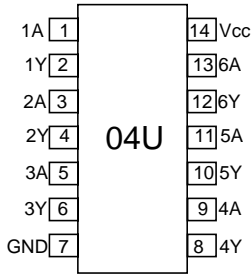


2.Pin function

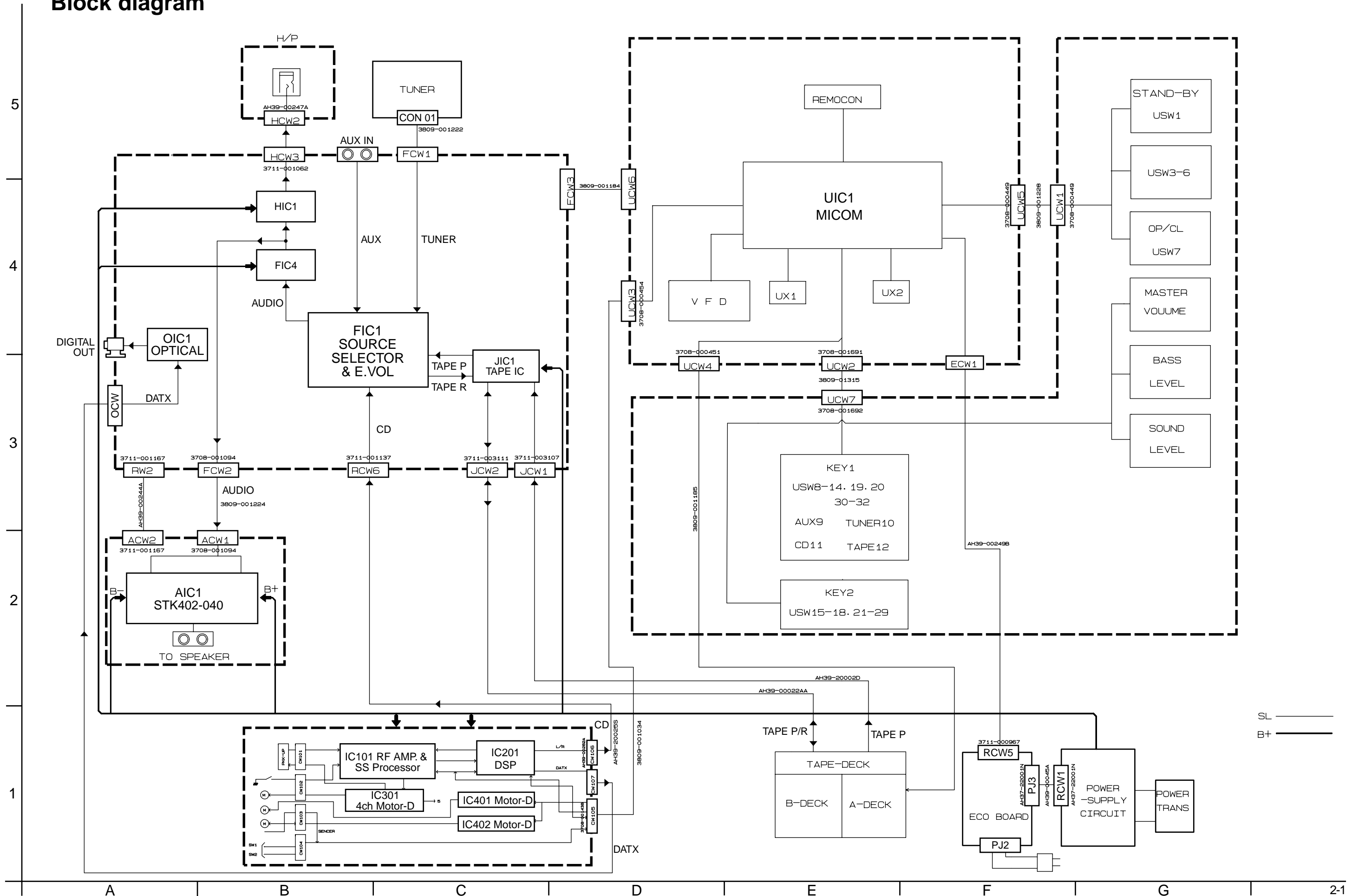
Pin No.	Symbol	I/O	Function
1	GND	-	Ground
2	VO1	O	Output 1
3	VZ1	-	Phase compensation
4	VCTL	I	Motor speed control
5	VIN1	I	Input 1
6	VIN2	I	Input 2
7	SVCC	-	Supply voltage (Signal)
8	PVCC	-	Supply voltage (Power)
9	VZ2	-	Phase compensation
10	VO2	O	Output 2

74HCU04 (OIC1) : Optical

1.Pin layout



Block diagram



Standard schematic diagrams

■ Main section

5

4

3

2

1

To UCW6
Sheet 2/5 (5, A)

To CON01
Sheet 5/5 (2, B)

To CW106
Sheet 4/5 (5, G)

To ACW1
Sheet 3/5 (2, B)

To CW107
Sheet 4/5 (4, G)

To ACW2
Sheet 3/5 (5, B)

To ECW1
Sheet 2/5 (5, C)

SHEET NUMBER	CIRCUIT DESCRIPTION
1/5	Main
2/5	FL display & System control
3/5	Amp.
4/5	CD
5/5	Tuner

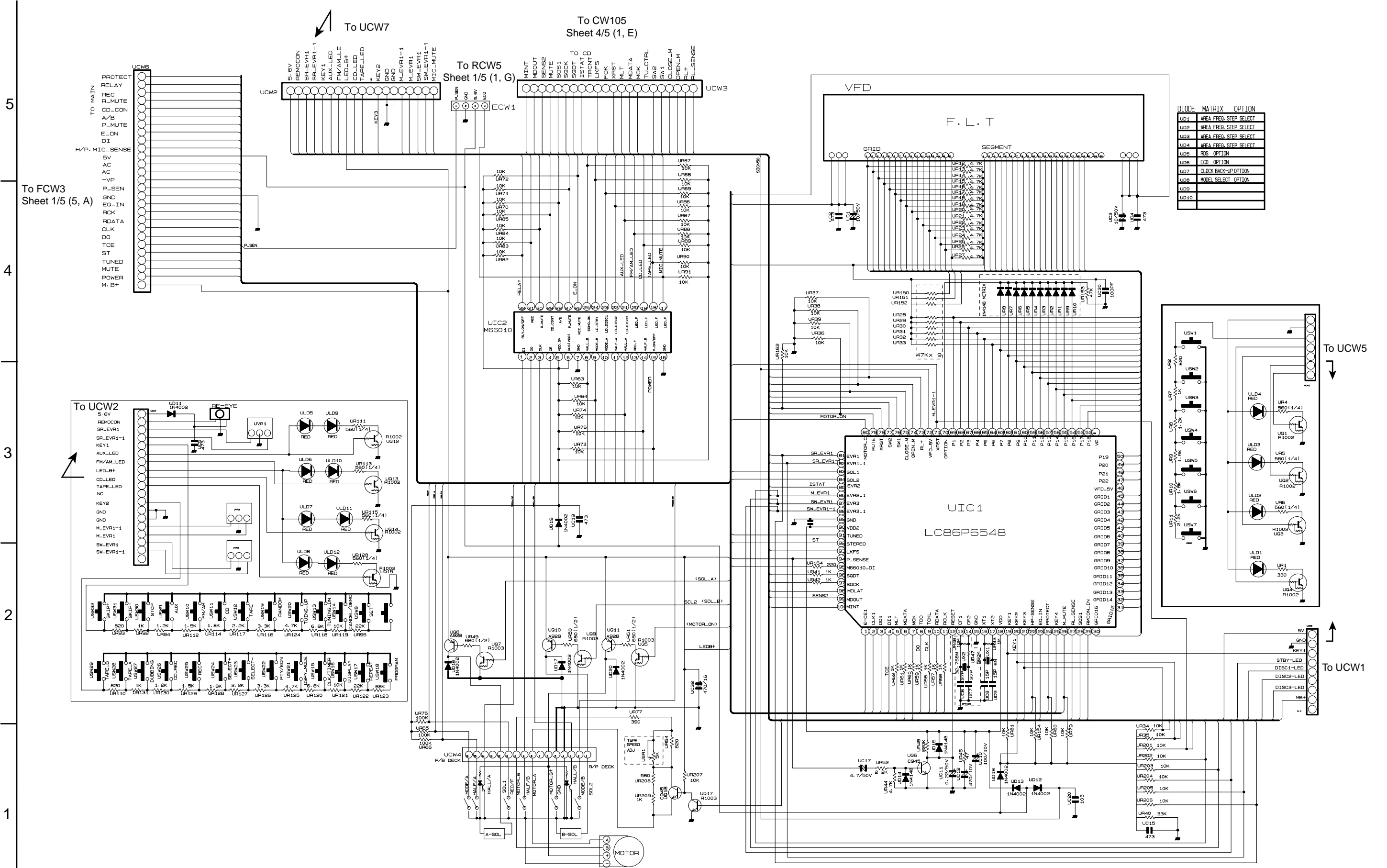
MX-K50 MAIN
BEV/ENE/EE

MAIN signal
 TUNER signal
 TAPE P.B. signal
 CD signal
 TAPE REC. signal

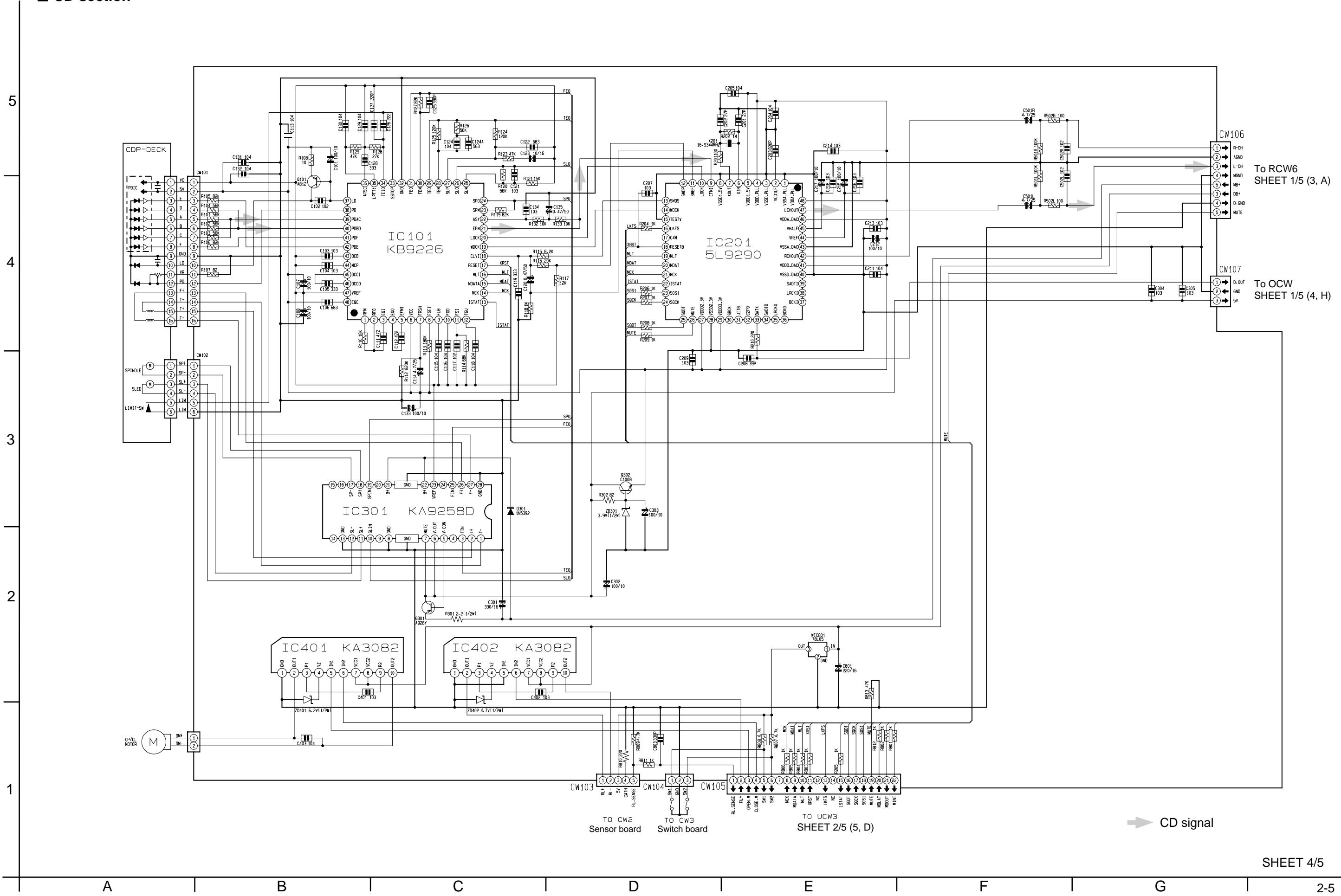
Parts are safety assurance parts.
 When replacing those parts, make
 sure to use the specified parts.

A B C D 2-2 E F G H

FL display & System control section



CD section



To RCW6 SHEET 1/5 (3, A)

To OCW SHEET 1/5 (4, H)

CD signal

■ Tuner section

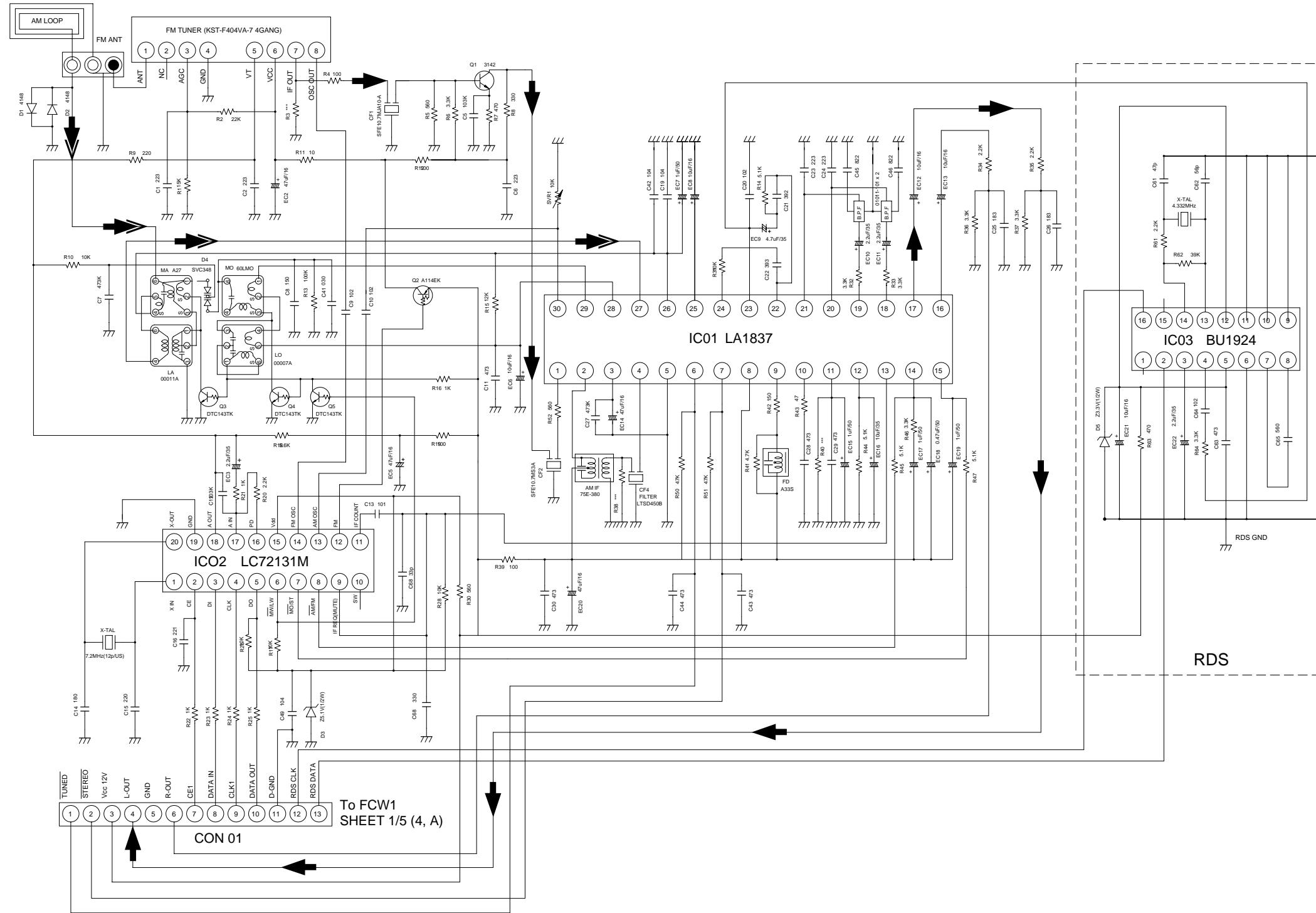
5



4

3

2

1



 FM/TUNER signal
 AM signal

A

B

C

2-6

D

E

F

G

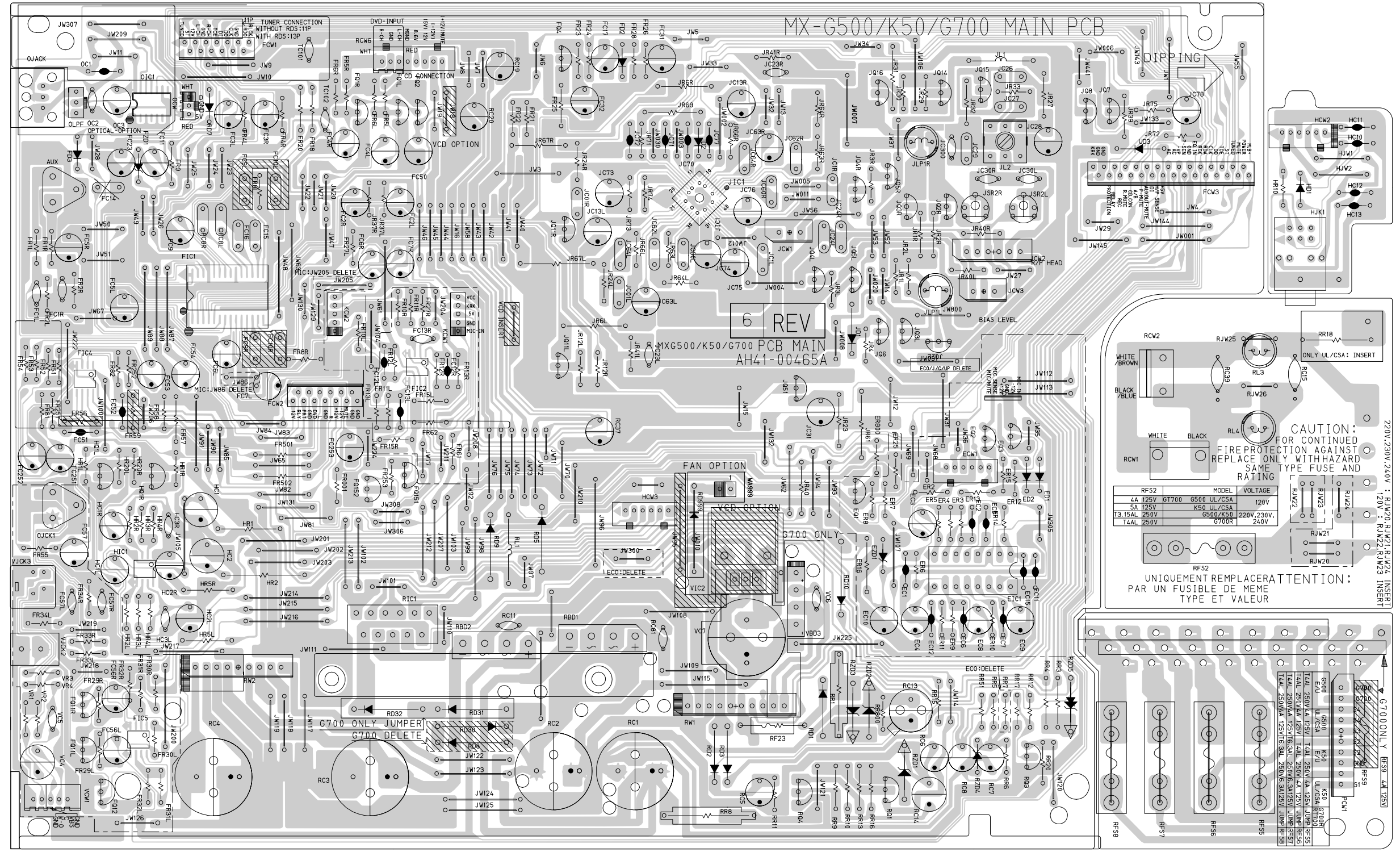
H

Printed circuit boards

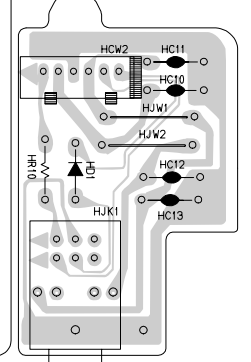
Main board

Main board

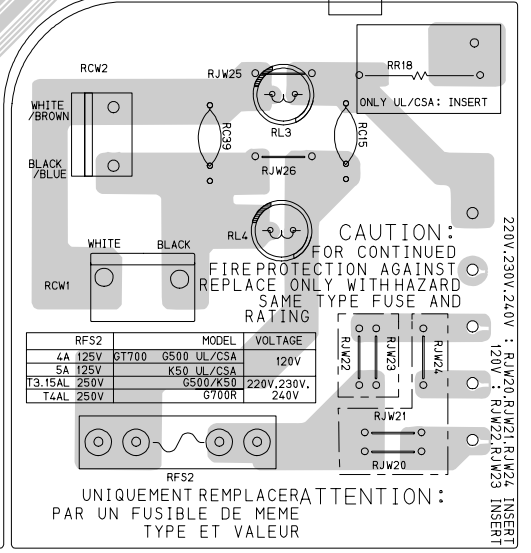
5
4
3
2
1



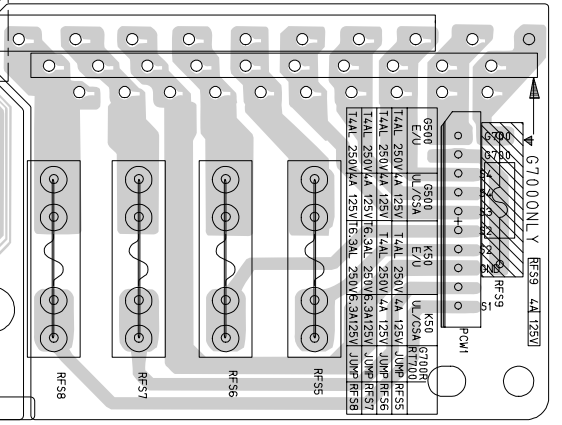
Headphone jack board



Trans. board



Fuse board



A B C D E F G

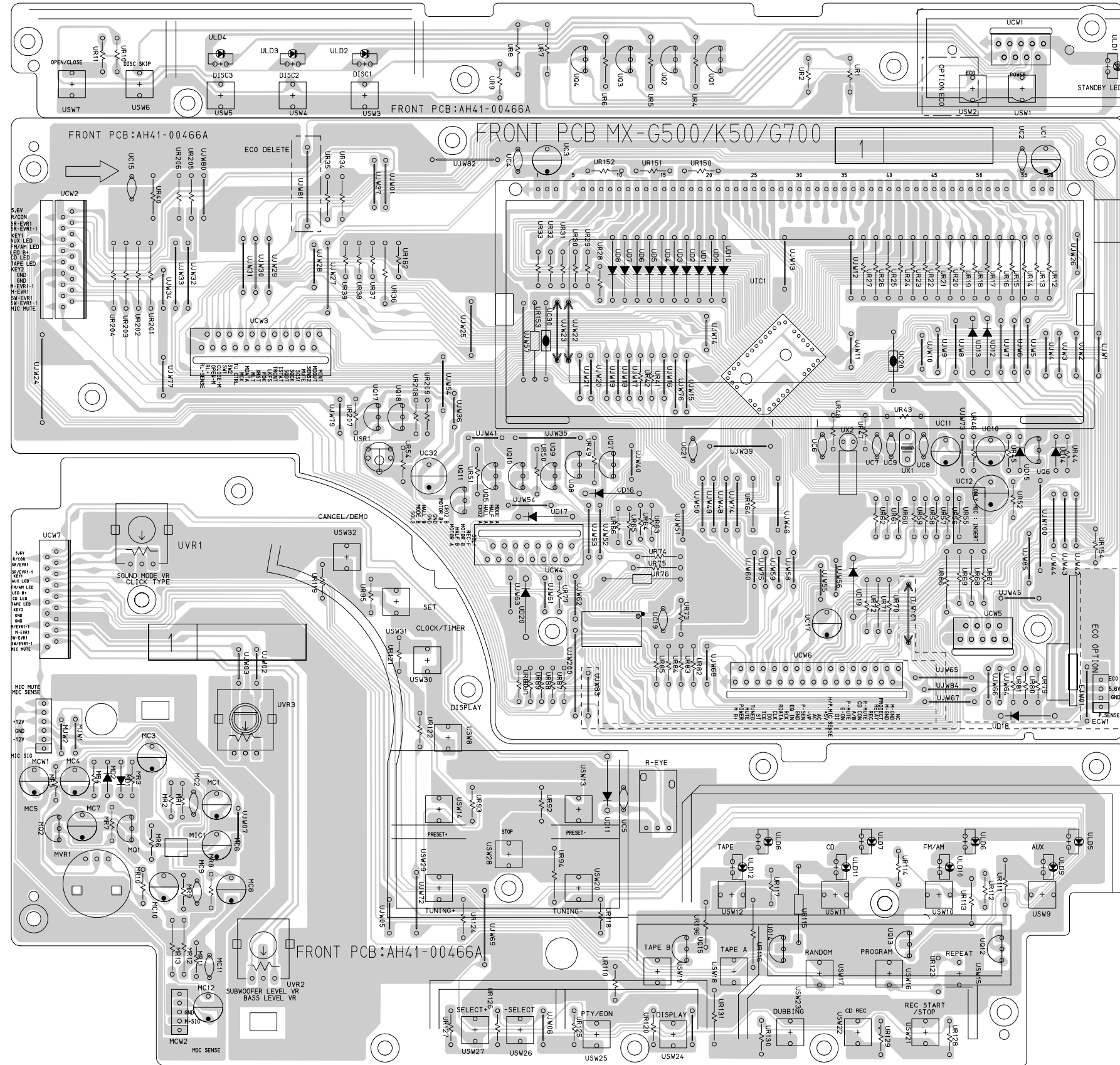
■ Front board

5
4
3
2
1

CD switch board

Front board

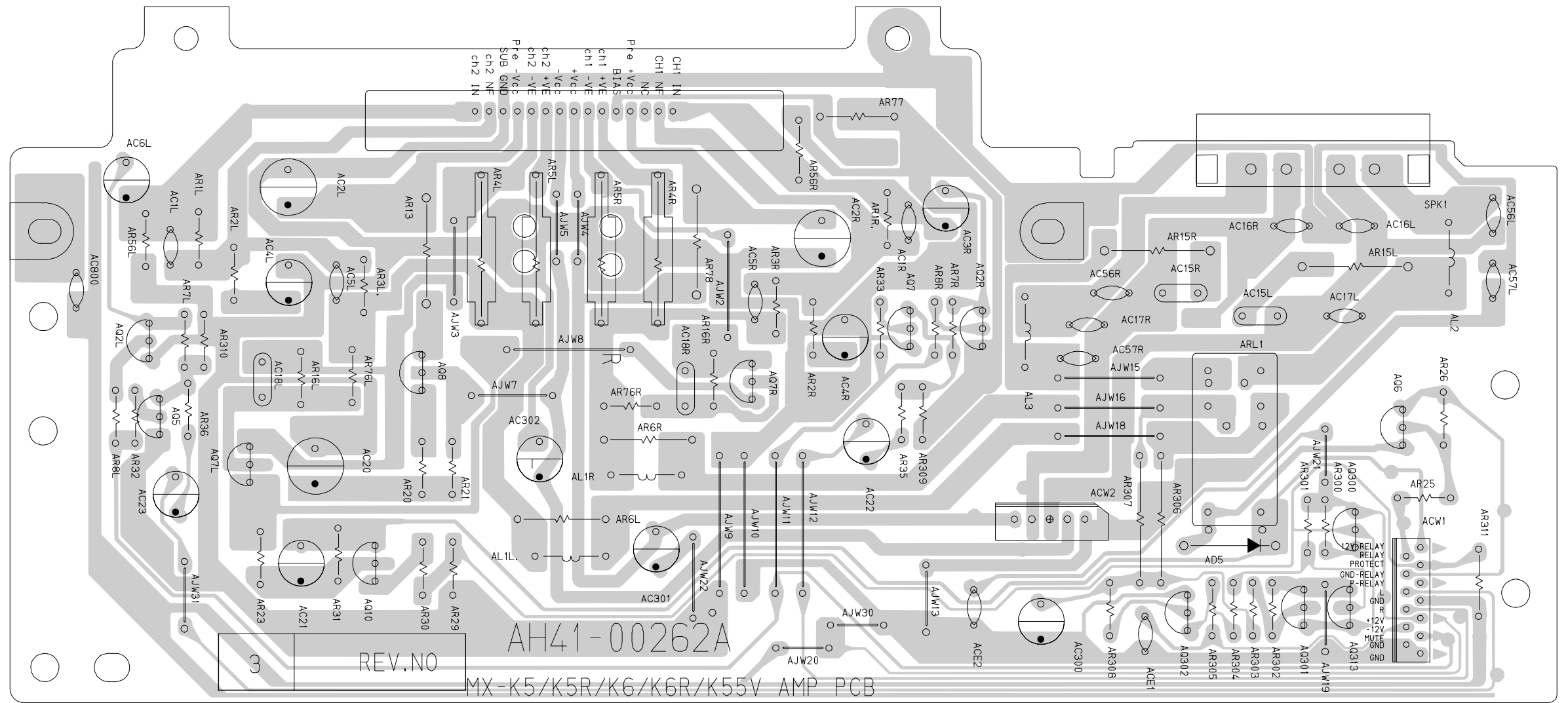
Front key board



A B C D E F G H

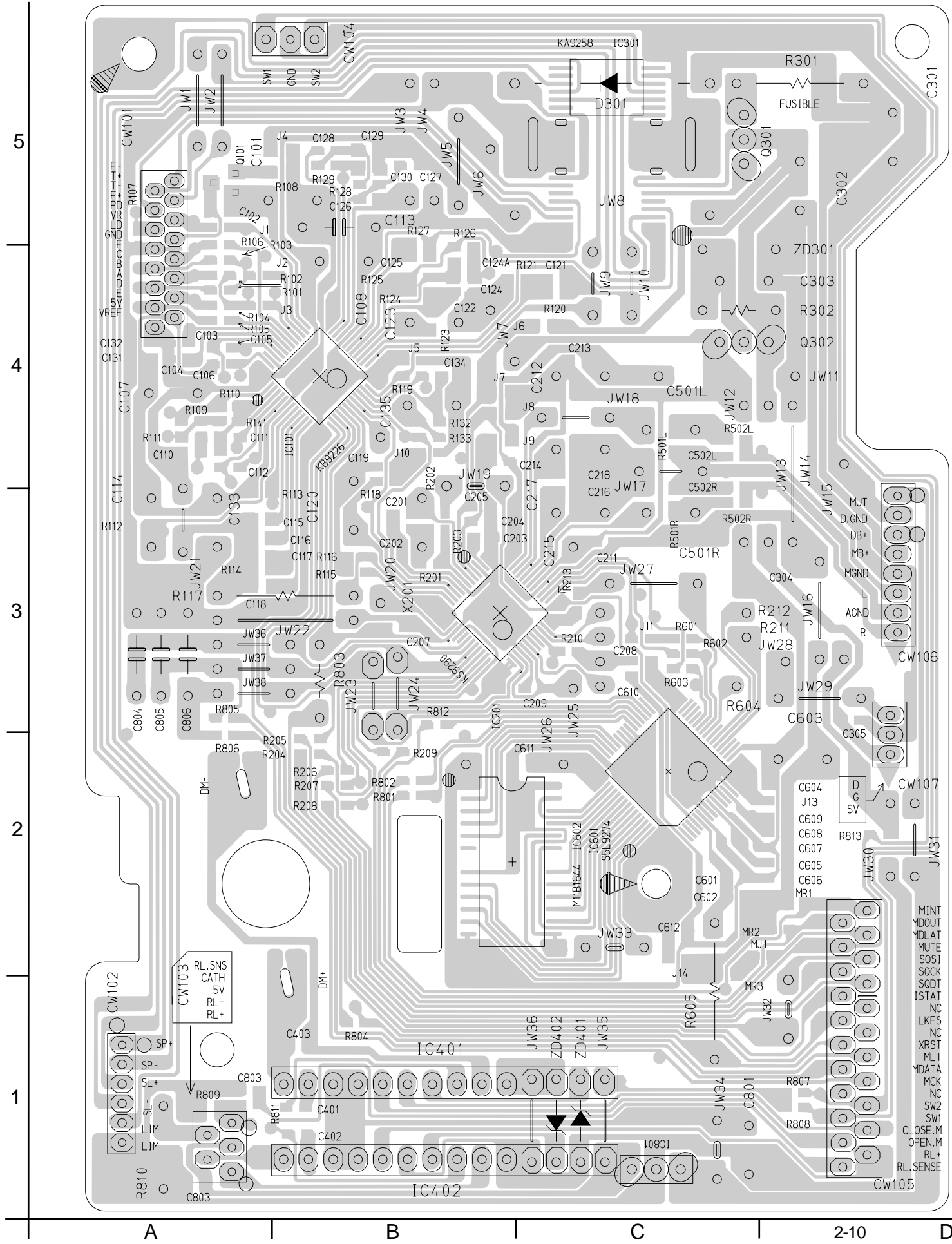
■ Amp. board

5
4
3
2
1

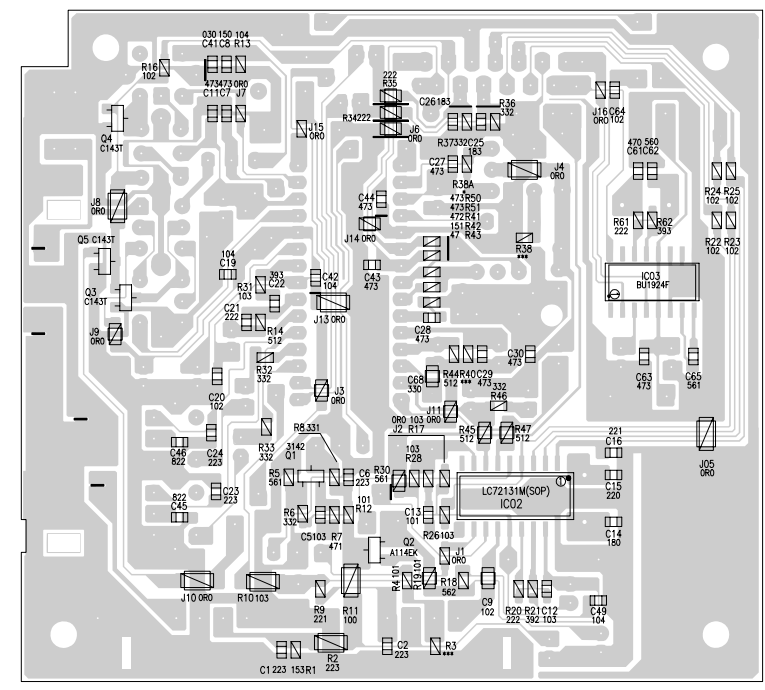


A B C D E F G 29

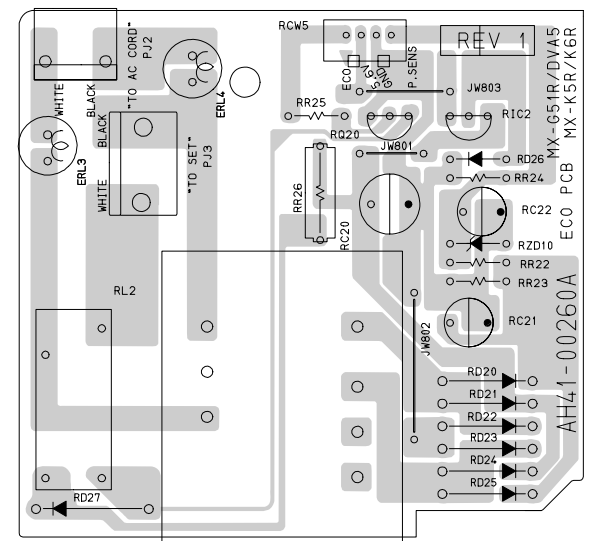
■ CD board



■ Tuner board



■ ECO board



PARTS LIST

[MX-K50R]

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

Area suffix

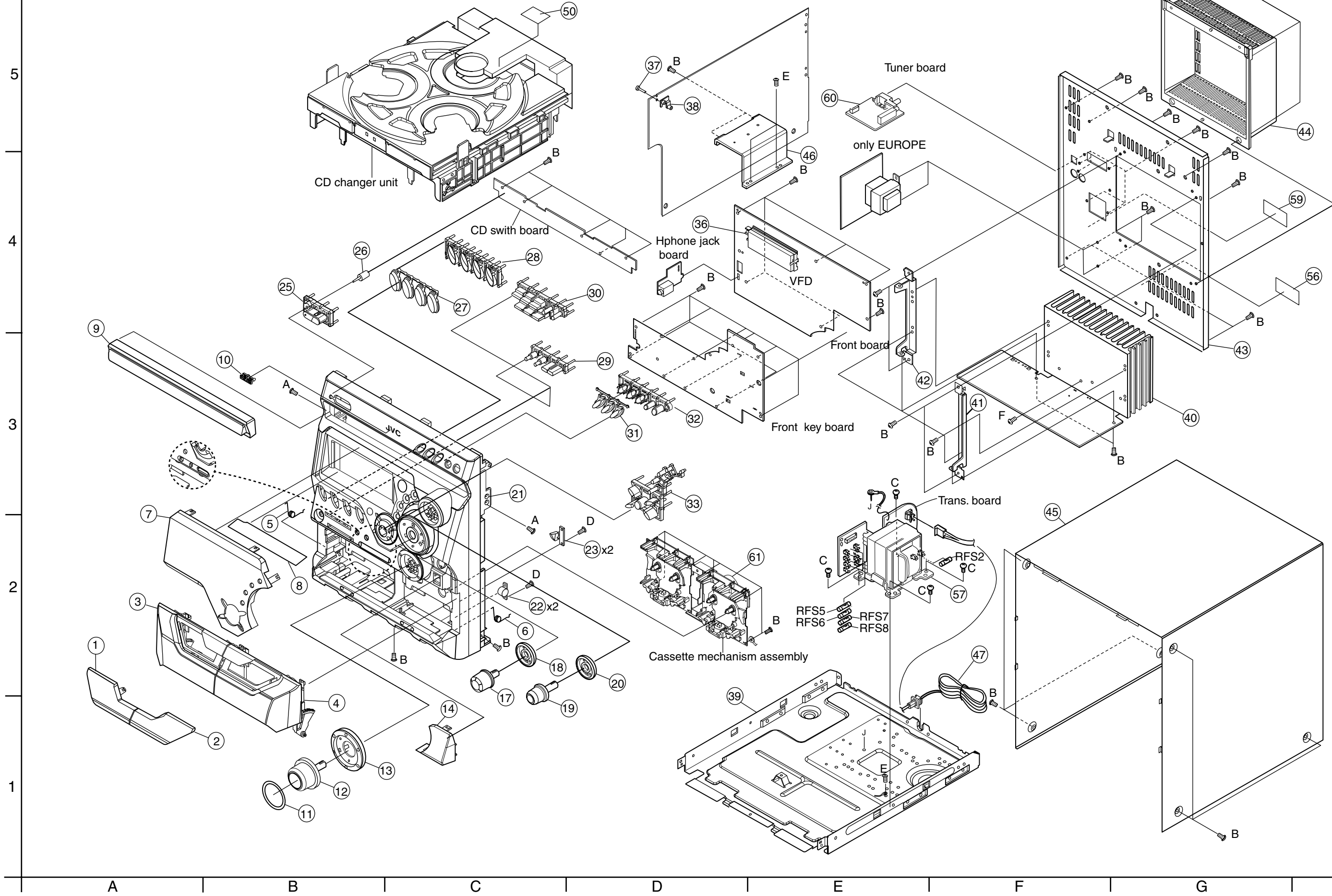
B ----- U.K.
 E ----- Continental Europe
 EN ----- Northern Europe
 EV ----- Eastern Europe

- Contents -

Exploded view of general assembly and parts list (Block No.M1)	3-	3
CD changer mechanism assembly and parts list (Block No.MA)	3-	5
Cassette mechanism assembly and parts list (Block No.MP)	3-	7
Electrical parts list (Block No.01~05)	3-	8
Packing materials and accessories parts list (Block No.M3,M5)	3-	17

Exploded view of general assembly and parts list

Block No. **M 1 M M**



MX-K50R

MX-K50R

■ Parts list (General assembly)

Block No. M1MM

■ Parts list (General assembly)

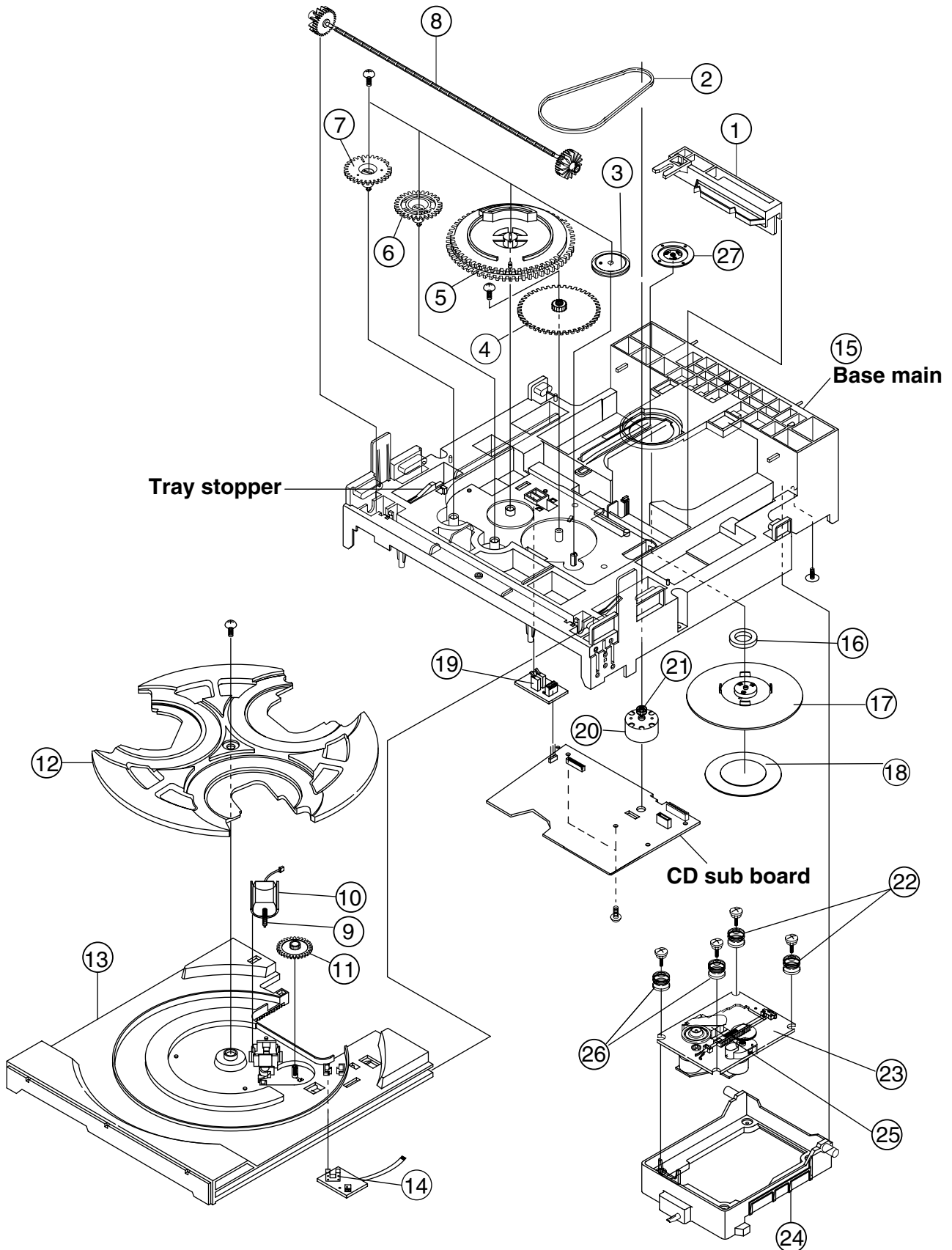
Block No. M1MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	A	6002-000126	SCREW	2	FH M3X10 BLK	
	B	6003-000276	SCREW	69	BH M3X10 YEL	
	C	AH60-10107A	SCREW	4	M4X6 YEL	
	D	6003-000277	SCREW	4	BH M3X12 YEL	
	E	6002-000398	SCREW	3	BH M3X6 YEL	
	F	6003-000278	SCREW	4	BH M3X14 YEL	
	1	AH64-01654A	WINDOW DOOR A	1		
	2	AH64-01655A	WINDOW DOOR B	1		
	3	AH64-01650B	CASSETTE DOOR A	1		
	4	AH64-01651B	CASSETTE DOOR B	1		
	5	AH61-00552A	DOOR SPRING A	1		
	6	AH61-00553A	DOOR SPRING B	1		
	7	AH64-01653C	WINDOW VFD	1		
	8	AH63-00390A	SHEET VFD	1		
	9	AH64-01649B	CD DOOR	1		
	10	AH64-00462C	BADGE JVC	1		
	11	AH63-00389A	SHEET VOLUME	1		
	12	AH64-01660B	KNOB VOLUME	1		
	13	AH64-01665B	DECO VOLUME	1		
	14	AH61-00930C	CAP DUMMY	1		
	17	AH64-01659B	KNOB SUBWOOFER	1		
	18	AH67-00147A	LENS SUBWOOFER	1		
	19	AH64-01661B	KNOB SOUND	1		
	20	AH67-00148A	LENS SOUND	1		
	21	AH64-01649C	FRONT CABINET	1		
	22	AH61-80030A	DAMPER ASSY	2		
	23	AH95-50001A	LATCH ASSY	2		
	25	AH64-01664B	BUTTON POWER	1		
	26	AH67-00151A	LENS POWER	1		
	27	AH67-00149B	LENS FUNCTION	1		
	28	AH61-00931A	HOLDER FUNCTION	1		
	29	AH64-01657B	BUTTON DISPLAY	1		
	30	AH64-01658B	BUTTON PRESET	1		
	31	AH67-00150B	LENS DISC	1		
	32	AH64-01662B	BUTTON DISC	1		
	33	AH64-01656B	BUTTON TAPE	1		
	36	AH61-00662A	HOLDER VFD	1		
	37	AH61-40014A	SUPPORT RIVET	1		
	38	AH61-00021A	SUPPORT PCB	1		
	39	AH64-30416C	BOTTOM CABINET	1		
	40	AH62-00043E	HEAT SINK	1		
	41	AH61-00655A	H.SINK BRAKET R	1		
	42	AH61-00656A	H.SINK BRAKET L	1		
	43	AH64-01666D	REAR CABINET	1		
	44	AH63-00250A	REAR COVER	1		
	45	AH64-30390F	TOP CABINET	1		
	46	AH62-00042A	HEAT-SINK	1		
△	47	AH39-00257A	POWER CORD	1		E,EN,EV

△	Item	Parts number	Parts name	Q'ty	Description	Area
△	47	AH39-00258Q	POWER CORD	1		B
	50	AH68-50275D	CD STICKER	1		
	56	AH68-01028H	RATING LABEL	1		B,E,EN
		AH68-01083A	RATING LABEL	1		EV
△	57	AH26-00110A	POWER TRANS	1		
	59	AH68-00486A	CAUTION LABEL B	1		EV
	60	AH40-00011A	TUNER PACK ASSY	1	KST-MB011MS	
	61	-----	CASSETTE MECHA	1	ADR248DSW	

CD changer mechanism assembly and parts list

Block No. M A M M

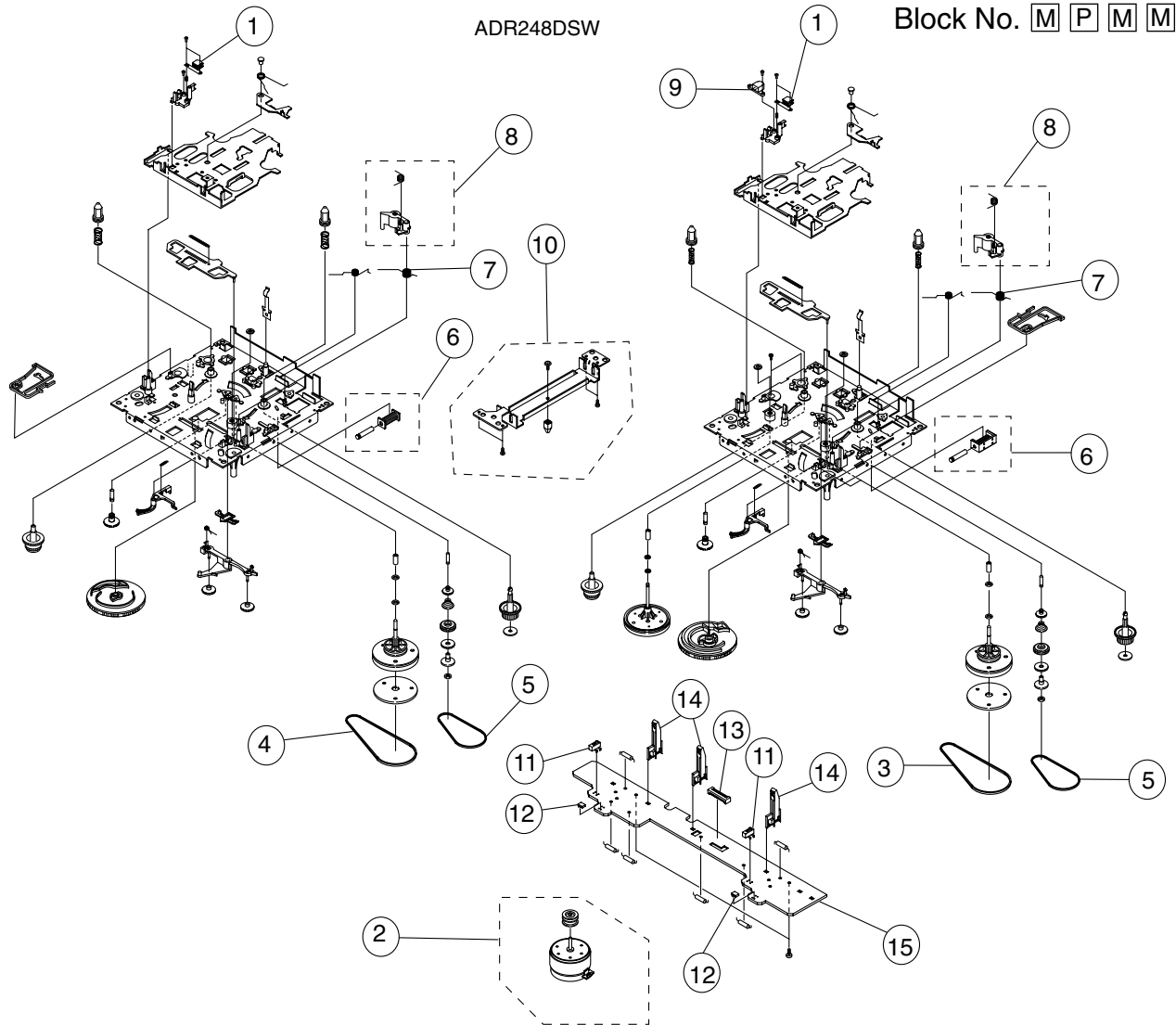


■ Parts list (CD changer mechanism)

Block No. MAMM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	AH66-80022A	SLIDE CAM	1	ABS HF-380 NTR	
	2	AH66-60034A	BELT LOAD	1	CR	
	3	AH66-20186A	GEAR PULLEY	1	POM (M90-44)WHT	
	4	AH66-20187A	GEAR-LOAD	1	POM (M90-44)BLK	
	5	AH66-20188A	GEAR-CAM	1	POM(M90-44)WHT	
	6	AH66-20189A	GEAR-TRAY	1	POM(M90-44)BLK	
	7	AH66-20190A	GEAR-CONVERTOR	1	POM (M90-44) WH	
	8	AH66-20191A	GEAR-SYNCR0	1	ABS HF-380 NTR	
	9	AH66-20192A	GEAR-WORM	1	POM (M90-44)WHT	
	10	AH31-12001A	LOADING MOTOR	1	FF-030PN-09120	
	11	AH66-20193A	GEAR-ROULETTE	1	POM(M90-44)BLK	
	12	AH66-90056A	TRAY-ROULETTE	1	ABS XR-401 BLK	
	13	AH66-90055A	TRAY DISC	1	ABS XR-401 BLK	
	14	AH32-10001F	SENSOR	1	KPI-L06	
	15	AH61-20428A-1	BASE MAIN	1	CMS-300,BLK	
	16	3302-000159	MAGNET-FERRITE	1	3500-3800G,6P	
	17	AH66-90053A	TABTE-CHUCK UNI	1	BLK,CMS300	
	18	AH63-00068B	SHEET CHUCK	1	HYMERON,BLK,0.4	
	19	3404-000101	SWICH MICRO	1	MLS-24	
	20	AH31-10021A	DC MORTOR	1	RF-500TB,9VDC	
	21	AH66-10008A	PULLEY-MOTOR	1	BLK,CMS-CR3	
	22	AH73-10031A	RUBBER-CD	1	RCD380,RED	
	23	AH91-60150C	SP MOTOR ASS'Y	1	CMS-D73SG6U	
	24	AH66-30098A	LEVER-LIFTER	1	ABS(BLK),CMS-30	
	25	AH30-00007A	CD PICKUP	1	SOH-AD3	
	26	AH73-10034A	RUBBER-CD(G)	1	CMS-300D,GREEN	
	27	AH61-00255A	BRKT CHUCK	1	SECL 0.8T	

Cassette mechanism assembly and parts list



Note: Parts listed on the Parts List below can be supplied individually but only by purchasing the whole Cassette Mechanism Assembly Unit. (When ordering, use the Parts No. AH59-00102A for Cassette Mechanism Assembly Unit.)

Parts list(Cassette mechanism)

Block No. MPMM

Item	Parts number	Parts name	Q'ty	Description	Area
1	AH81-00141A	REC/PB HEAD	2	TC881CB	
2	AH81-00422A	MOTOR ASS'Y	1	CCM09-120L2-2	
3	AH81-00364A	MAIN BELT 1	1	ADR2400-MAIN0.5	
4	AH81-00365A	MAIN BELT 2	1	ADR2400-MAIN1.3	
5	AH81-00101A	FR BELT	2	ADR2400-FR34.7	
6	AH81-00102A	SOLENOID	2	ADR2400-1	
7	AH81-00282A	SPRING	2	S/PP/R(F)	
8	AH81-00366A	PINCH R.ASS'Y	2	ADR2400-PINCH(F)	
9	AH81-00284A	E-HEAD	1	TC2131F	
10	AH81-00367A	MOTOR BRACKET	1	ADR241SW-BRKT 110	
11	AH81-00286A	SWICH	2	ADR2400-MODE	
12	AH81-00287A	PHOT SENSER	2	ADR2400-SENSOR	
13	AH81-00288A	CONNECTOR	1	ADR2400-16P	
14	AH81-00289A	LEEF SW	3	ADR2400-MXS00220	
15	AH81-00375A	PCB	1	ADR2400-1PCB	

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	AUX	3722-000379	PIN JACK	4P/2C 3.5MM			FR26	2001-000850	CARBON RESISTOR	560K 5% 1/8W	
	FCW1	3708-001223	CONNECTOR	13P 1.25MM			FR27L	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	FCW2	3708-001094	CONNECTOR	13P 1.25MM			FR28	2001-000645	CARBON RESISTOR	330K 5% 1/8W	
	FCW3	3708-001577	CONNECTOR	30P 1.25MM			FR4L	2001-000780	CARBON RESISTOR	470 5% 1/8W	
	FC1L	2201-000368	C.CAPACITOR	220PF 10% 50V			FR4R	2001-000780	CARBON RESISTOR	470 5% 1/8W	
	FC1R	2201-000368	C.CAPACITOR	220PF 10% 50V			FR5L	2001-000864	CARBON RESISTOR	56K 5% 1/8W	
	FC10L	2301-000387	M.CAPACITOR	150NF 5% 50V			FR5R	2001-000864	CARBON RESISTOR	56K 5% 1/8W	
	FC10R	2301-000387	M.CAPACITOR	150NF 5% 50V			FR51	2001-000515	CARBON RESISTOR	220 5% 1/8W	
	FC11	2401-001975	E.CAPACITOR	47UF 20% 16V			FR52	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	FC17	2401-001954	E.CAPACITOR	4.7UF 20% 50V			FR53	2001-000515	CARBON RESISTOR	220 5% 1/8W	
	FC2L	2401-001912	E.CAPACITOR	1UF 20% 50V			FR54	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	FC2R	2401-001912	E.CAPACITOR	1UF 20% 50V			FR55	2001-000890	CARBON RESISTOR	6.8K 5% 1/8W	
	FC23	2401-000419	E.CAPACITOR	10UF 20% 16V			FR56	2001-000008	CARBON RESISTOR	15K 5% 1/8W	
	FC251	2401-001912	E.CAPACITOR	1UF 20% 50V			FR57	2001-000273	CARBON RESISTOR	100K 5% 1/8W	
	FC252	2401-001912	E.CAPACITOR	1UF 20% 50V			FR58	2001-000273	CARBON RESISTOR	100K 5% 1/8W	
	FC253	2401-001912	E.CAPACITOR	1UF 20% 50V			FR59	2001-000008	CARBON RESISTOR	15K 5% 1/8W	
	FC3L	2401-001912	E.CAPACITOR	1UF 20% 50V			FR6L	2001-000411	CARBON RESISTOR	18K 5% 1/8W	
	FC3R	2401-001912	E.CAPACITOR	1UF 20% 50V			FR6R	2001-000411	CARBON RESISTOR	18K 5% 1/8W	
	FC31	2401-000759	E.CAPACITOR	220NF 20% 50V			FR8L	2001-000802	CARBON RESISTOR	5.6K 5% 1/8W	
	FC32	2401-001954	E.CAPACITOR	4.7UF 20% 50V			FR8R	2001-000802	CARBON RESISTOR	5.6K 5% 1/8W	
	FC35	2301-000361	M.CAPACITOR	1.2NF 10% 50V			FR81	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	FC36	2301-000375	M.CAPACITOR	100NF 5% 50V			FR82	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	FC4L	2401-001912	E.CAPACITOR	1UF 20% 50V			FR9	2001-000027	CARBON RESISTOR	100 5% 1/4W	
	FC4R	2401-001912	E.CAPACITOR	1UF 20% 50V			FZD1	0403-000372	ZENER DIODE	UZ9.1BM 9.1V	
	FC5L	2401-001912	E.CAPACITOR	1UF 20% 50V			HCW2	AH39-00247A	LEAD CONNECTOR		
	FC50	2401-000419	E.CAPACITOR	10UF 20% 16V			HCW3	3711-001062	CONNECTOR	6P 2MM	
	FC51	2202-000806	C.CAPASITOR	220PF 10% 50V			HC1	2401-000795	E.CAPACITOR	220UF 20% 16V	
	FC52	2202-000806	C.CAPASITOR	220PF 10% 50V			HC1L	2401-001912	E.CAPACITOR	1UF 20% 50V	
	FC53	2401-001912	E.CAPACITOR	1UF 20% 50V			HC1R	2401-001912	E.CAPACITOR	1UF 20% 50V	
	FC54	2401-001912	E.CAPACITOR	1UF 20% 50V			HC2	2401-000795	E.CAPACITOR	220UF 20% 16V	
	FC57	2401-001975	E.CAPACITOR	47UF 20% 16V			HC2L	2401-001164	E.CAPACITOR	33UF 20% 16V	
	FC6L	2401-002180	E.CAPACITOR	2.2UF 20% 50V			HC2R	2401-001164	E.CAPACITOR	33UF 20% 16V	
	FC6R	2401-002180	E.CAPACITOR	2.2UF 20% 50V			HC3L	2201-000642	C.CAPASITOR	0.68NF 10% 50V	
	FC7L	2401-001912	E.CAPACITOR	1UF 20% 50V			HC3R	2201-000642	C.CAPASITOR	0.68NF 10% 50V	
	FC8L	2301-000454	M.CAPACITOR	5.6NF 10% 50V			HD1	0401-000101	DIODE	1N4148 100V	
	FC8R	2301-000454	M.CAPACITOR	5.6NF 10% 50V			HIC1	1201-000163	IC	BA4560 8P	
	FC9	2401-000419	E.CAPACITOR	10UF 20% 16V			HJK1	3722-000351	MIC JACK	11P 3.5MM	
	FC9L	2301-000387	M.CAPACITOR	150NF 5% 50V			HQ1L	0501-000407	TRANSISTOR	KSD471A-Y	
	FC9R	2301-000387	M.CAPACITOR	150NF 5% 50V			HQ1R	0501-000407	TRANSISTOR	KSD471A-Y	
	FD2	0401-000101	DIODE	1N4148 100V			HRFS2	3602-000147	FUSE CLIP		
	FD3	0401-000101	DIODE	1N4148 100V			HRFS5	3602-000147	FUSE CLIP		
	FIC1	1204-001776	IC	TDA7442D 28P			HRFS6	3602-000147	FUSE CLIP		
	FIC4	1201-000163	IC	BA4560 8P			HRFS7	3602-000147	FUSE CLIP		
	FQ1L	0504-000122	DIGI TRANSISTOR	KSR1009Y			HRFS8	3602-000147	FUSE CLIP		
	FQ1R	0504-000122	DIGI TRANSISTOR	KSR1009Y			HR1	2001-000028	CARBON RESISTOR	100 5% 1/2W	
	FQ151	0504-000144	DIGI TRANSISTOR	KSR2002			HR1L	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	FQ152	0504-000118	DIGI TRANSISTOR	KSR1003			HR1R	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	FQ2	0504-001003	DIGI TRANSISTOR	KSR2003TA			HR2	2001-000110	CARBON RESISTOR	10 5% 1/2W	
	FQ4	0501-000398	TRANSISTOR	KSC945			HR2L	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	FR1L	2001-000411	CARBON RESISTOR	18K 5% 1/8W			HR2R	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	FR1R	2001-000411	CARBON RESISTOR	18K 5% 1/8W			HR20L	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	FR18	2001-000515	CARBON RESISTOR	220 5% 1/8W			HR20R	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	FR2L	2001-000411	CARBON RESISTOR	18K 5% 1/8W			HR3L	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	FR2R	2001-000411	CARBON RESISTOR	18K 5% 1/8W			HR3R	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	FR20	2001-000515	CARBON RESISTOR	220 5% 1/8W			HR4L	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	FR21	2001-000864	CARBON RESISTOR	56K 5% 1/8W			HR4R	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	FR22	2001-000864	CARBON RESISTOR	56K 5% 1/8W			HR5L	2001-000019	CARBON RESISTOR	10 5% 1/2W	
	FR23	2001-000773	CARBON RESISTOR	470K 5% 1/8W			HR5R	2001-000019	CARBON RESISTOR	10 5% 1/2W	
	FR24	2001-000290	CARBON RESISTOR	10K 5% 1/8W			JCW1	3711-003107	CONNECTOR	3P 2.5MM	
	FR25	2001-000429	CARBON RESISTOR	1K 5% 1/8W			JCW2	3711-003111	CONNECTOR	6P 2.5MM	
	FR251	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W			JCW3	3711-003107	CONNECTOR	3P 2.5MM	
	FR252	2001-000786	CARBON RESISTOR	47K 5% 1/8W			JC01L	2301-000393	M.CAPACITOR	18NF 10% 50V	
	FR253	2001-000290	CARBON RESISTOR	10K 5% 1/8W			JC01R	2301-000393	M.CAPACITOR	18NF 10% 50V	

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	JC1L	2301-000361	M.CAPACITOR	1.2NF 10% 50V			JR29	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	JC1R	2301-000361	M.CAPACITOR	1.2NF 10% 50V			JR3L	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	JC13L	2401-002180	E.CAPACITOR	2.2UF 20% 50V			JR3R	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	JC13R	2401-002180	E.CAPACITOR	2.2UF 20% 50V			JR30	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	JC23L	2201-000674	C.CAPASITOR	0.82NF 10% 50V			JR31	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	JC23R	2201-000674	C.CAPASITOR	0.82NF 10% 50V			JR32	2001-000456	CARBON RESISTOR	2.2 5% 1/4W	
	JC24L	2301-000361	M.CAPACITOR	1.2NF 10% 50V			JR33	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	JC24R	2301-000361	M.CAPACITOR	1.2NF 10% 50V			JR37L	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	JC26	2301-000404	M.CAPACITOR	2.2NF 10% 50V			JR37R	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	JC27	2301-000404	M.CAPACITOR	2.2NF 10% 50V			JR39	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	JC29	2301-000407	M.CAPACITOR	2.7NF 10% 50V			JR4	2001-000522	CARBON RESISTOR	22K 5% 1/8W	
	JC30L	2201-000368	C.CAPACITOR	220PF 10% 50V			JR40L	2001-000302	CARBON RESISTOR	10 5% 1/8W	
	JC30R	2201-000368	C.CAPACITOR	220PF 10% 50V			JR40R	2001-000302	CARBON RESISTOR	10 5% 1/8W	
	JC300	2201-000557	C.CAPASITOR	0.47NF 10% 50V			JR41L	2001-000008	CARBON RESISTOR	15K 5% 1/8W	
	JC60L	2301-000379	M.CAPACITOR	10NF 10% 50V			JR41R	2001-000008	CARBON RESISTOR	15K 5% 1/8W	
	JC60R	2301-000379	M.CAPACITOR	10NF 10% 50V			JR6L	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	JC62L	2301-000375	M.CAPACITOR	100NF 5% 50V			JR6R	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	JC62R	2301-000375	M.CAPACITOR	100NF 5% 50V			JR63L	2001-000977	CARBON RESISTOR	8.2K 5% 1/8W	
	JC63L	2401-002180	E.CAPACITOR	2.2UF 20% 50V			JR63R	2001-000977	CARBON RESISTOR	8.2K 5% 1/8W	
	JC63R	2401-002180	E.CAPACITOR	2.2UF 20% 50V			JR64L	2001-000241	CARBON RESISTOR	1.5K 5% 1/8W	
	JC64L	2301-000375	M.CAPACITOR	100NF 5% 50V			JR64R	2001-000241	CARBON RESISTOR	1.5K 5% 1/8W	
	JC64R	2301-000375	M.CAPACITOR	100NF 5% 50V			JR66L	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	JC70	2201-000146	C.CAPACITOR	100PF 5% 50V			JR66R	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	JC71	2201-000146	C.CAPACITOR	100PF 5% 50V			JR67L	2001-000802	CARBON RESISTOR	5.6K 5% 1/8W	
	JC72	2201-000146	C.CAPACITOR	100PF 5% 50V			JR67R	2001-000802	CARBON RESISTOR	5.6K 5% 1/8W	
	JC73	2401-000419	E.CAPACITOR	10UF 20% 16V			JR69	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	JC74	2401-000438	E.CAPACITOR	10UF 20% 25V			JR70	2001-000281	CARBON RESISTOR	100 5% 1/8W	
	JC75	2401-001912	E.CAPACITOR	1UF 20% 50V			JR71	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	JC76	2401-000438	E.CAPACITOR	10UF 20% 25V			JR72	2001-000281	CARBON RESISTOR	100 5% 1/8W	
	JC77	2202-000781	C.CAPASITOR	100PF 10% 50V			JR73	2001-000435	CARBON RESISTOR	1M 5% 1/8W	
	JC78	2401-001019	E.CAPACITOR	3.3UF 20% 50V			JR74	2001-000522	CARBON RESISTOR	22K 5% 1/8W	
	JD1	0401-000101	DIODE	1N4148 100V			JR75	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	JIC1	1201-001819	IC	HA12235F 44P			JSR2L	2103-000248	SEMI V.RESISTOR	200K 1/10W	
	JLP1L	AH26-10002W	TRAP COIL	BIAS-TRAP105K			JSR2R	2103-000248	SEMI V.RESISTOR	200K 1/10W	
	JLP1R	AH26-10002W	TRAP COIL	BIAS-TRAP105K			JW64	2001-000003	CARBON RESISTOR	330 5% 1/8W	
	JL1	2701-000298	INDUCTOR	470UH 10%			JW66	2001-000003	CARBON RESISTOR	330 5% 1/8W	
	JL2	AH26-10003C	TRAP COIL	PCHNS-5371EQJ			OCW2	AH39-00096B	LEAD CONNECTOR		
	JQ11L	0501-000407	TRANSISTOR	KSD471A-Y			OC1	2202-000807	C.CAPACITOR	22NF +80-20% 25V	
	JQ11R	0501-000407	TRANSISTOR	KSD471A-Y			OC2	2201-000483	C.CAPACITOR	0.033NF 5% 50V	
	JQ14	0501-000610	TRANSISTOR	KSA928A-Y			OC3	2401-000240	E.CAPACITOR	100MF 20% 10V	
	JQ15	0501-000369	TRANSISTOR	KSC2331-Y			OIC1	AH14-10004R	IC	M74HC04 14P	
	JQ16	0501-000398	TRANSISTOR	KSC945			OJACK	0603-001069	OPTICAL JACK	5V 8MB/S 17DBM	
	JQ18	0504-001003	DIGI TRANSISTOR	KSR2003TA			OLPF	2901-001139	CERAMIC FILTER	50V 5A	
	JQ2L	0501-000010	TRANSISTOR	KSC1008			PCW1	3711-003112	CONNECTOR	8P 2.5MM	
	JQ2R	0501-000010	TRANSISTOR	KSC1008			△ RBD1	0402-000450	BRIDGE DIODE	PBL403 200V 4A	
	JQ3L	0501-000010	TRANSISTOR	KSC1008			△ RBD2	0402-001258	BRIDGE DIODE	GBU606 6A 600V	
	JQ3R	0501-000010	TRANSISTOR	KSC1008			RCW2	3711-000190	CONNECTOR	2P 7.92MM	
	JQ4L	0501-000398	TRANSISTOR	KSC945			RCW6	3711-001137	CONNECTOR	8P 2MM	
	JQ4R	0501-000398	TRANSISTOR	KSC945			△ RC1	2401-001928	E.CAPACITOR	2200UF 20% 35V	
	JQ51	0504-001003	DIGI TRANSISTOR	KSR2003TA			△ RC11	2201-000161	C.CAPASITOR	10NF 500V	
	JQ6	0504-001003	DIGI TRANSISTOR	KSR2003TA			RC13	2401-000230	E.CAPACITOR	100UF 20% 100V	
	JQ7	0501-000407	TRANSISTOR	KSD471A-Y			RC14	2401-000795	E.CAPACITOR	220UF 20% 16V	
	JQ8	0504-001003	DIGI TRANSISTOR	KSR2003TA			RC19	2401-001895	E.CAPACITOR	100UF 20% 16V	
	JR1L	2001-000890	CARBON RESISTOR	6.8K 5% 1/8W			△ RC2	2401-001928	E.CAPACITOR	2200UF 20% 35V	
	JR1R	2001-000890	CARBON RESISTOR	6.8K 5% 1/8W			RC20	2401-001895	E.CAPACITOR	100UF 20% 16V	
	JR12L	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W			△ RC3	2401-003381	E.CAPACITOR	3300UF 20% 63V	
	JR12R	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W			RC37	2401-000438	E.CAPACITOR	10UF 20% 25V	
	JR2L	2001-000890	CARBON RESISTOR	6.8K 5% 1/8W			△ RC4	2401-003381	E.CAPACITOR	3300UF 20% 63V	
	JR2R	2001-000890	CARBON RESISTOR	6.8K 5% 1/8W			RC5	2401-001954	E.CAPACITOR	4.7UF 20% 50V	
	JR23	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W			RC6	2401-000907	E.CAPACITOR	22UF 20% 16V	
	JR24L	2001-000302	CARBON RESISTOR	10 5% 1/8W			RC7	2401-001912	E.CAPACITOR	1UF 20% 50V	
	JR24R	2001-000302	CARBON RESISTOR	10 5% 1/8W			RC8	2401-001954	E.CAPACITOR	4.7UF 20% 50V	
	JR27	2001-000023	CARBON RESISTOR	47 5% 1/4W			△ RC81	2201-000161	C.CAPASITOR	10NF 500V	

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area
	RD1	0402-000127	DIODE	1N4002 100V 1A	
	RD10	0402-000127	DIODE	1N4002 100V 1A	
	RD2	0402-000127	DIODE	1N4002 100V 1A	
	RD3	0402-000127	DIODE	1N4002 100V 1A	
	RD30	0402-000151	DIODE	1N5392 100V 1.5A	
	RD31	0402-000151	DIODE	1N5392 100V 1.5A	
	RD32	0402-000151	DIODE	1N5392 100V 1.5A	
	RD5	0402-000127	DIODE	1N4002 100V 1A	
	RD7	0401-000101	DIODE	1N4148 100V	
	RD8	0402-000151	DIODE	1N5392 100V 1.5A	
	RD9	0402-000127	DIODE	1N4002 100V 1A	
△	RFS2	3601-000263	FUSE	250V 15A	
△	RFS5	3601-000282	FUSE	250V 4A	
△	RFS6	3601-000282	FUSE	250V 4A	
△	RFS7	3601-000301	FUSE	250V 6.3A	
△	RFS8	3601-000301	FUSE	250V 6.3A	
△	RF23	2008-000135	FUSE RESISTOR	10HM 5% 1/2W	
	RIC1	1203-001653	IC	L4959 15P	
	RJW1	AH39-50001H	LEAD FASTEN		
	RL1	2701-000298	INDUCTOR	470UH 10%	
	RQ1	0501-000610	TRANSISTOR	KSA928A-Y	
	RQ3	0501-000331	TRANSISTOR	KSC1009-Y	
	RQ4	0501-000294	TRANSISTOR	KSA708-Y	
	RR1	2003-000701	OMF RESISTOR	470 5% 2W	
	RR10	2001-000055	CARBON RESISTOR	4.7K 5% 1/4W	
	RR11	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	RR12	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	RR13	2001-000111	CARBON RESISTOR	150 5% 1/4W	
	RR16	2001-000038	CARBON RESISTOR	390 5% 1/4W	
	RR17	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	RR18	2002-000126	CARBON RESISTOR	2.2M 5% 1/2W	
	RR20	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	RR3	2001-000023	CARBON RESISTOR	47 5% 1/4W	
	RR4	2001-000023	CARBON RESISTOR	47 5% 1/4W	
	RR5	2001-000613	CARBON RESISTOR	3.9K 5% 1/8W	
	RR51	2001-000890	CARBON RESISTOR	6.8K 5% 1/8W	
	RR52	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	RR6	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	RR8	2003-000455	OMF RESISTOR	100 5% 2W	
	RR800	2001-000660	CARBON RESISTOR	33K 5% 1/8W	
	RR9	2001-000563	CARBON RESISTOR	27K 5% 1/8W	
	RW1	AH39-00245A	LEAD CONNECTOR		
	RW2	AH39-00249A	LEAD CONNECTOR		
	RZD1	0403-000379	ZENER DIODE	UZP12B 12V 1W	
	RZD2	0403-000570	ZENER DIODE	UZP18B 18V 1W	
	RZD3	0403-000570	ZENER DIODE	UZP18B 18V 1W	
	RZD4	0403-000354	ZENER DIODE	UZ5.1B 5.1V	
	RZD5	0403-001010	ZENER DIODE	UZP5.6B 1W	
	R500	2001-000435	CARBON RESISTOR	1M 5% 1/8W	
	TC101	2201-000783	C.CAPACITOR	100NF 50V	
	TC102	2201-000783	C.CAPACITOR	100NF 50V	
	UD3	0401-000101	DIODE	1N4148 100V	

■ Electrical parts list (Front board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	ECW1	AH39-00249B	LEAD CONNECTOR	5P			UQ11	0501-000610	TRANSISTOR	KSA928A-Y 1W	
	MR16	2001-000855	CARBON RESISTOR	560 5% 1/4W			UQ12	0504-000117	DIGI TRANSISTOR	KSR1002	
	MR17	2001-000855	CARBON RESISTOR	560 5% 1/4W			UQ13	0504-000117	DIGI TRANSISTOR	KSR1002	
	R-EYE	AC59-60060A	MODULE-REMOCON	GP1U281R SHARP			UQ14	0504-000117	DIGI TRANSISTOR	KSR1002	
	UCW1	3708-000492	CONNECTOR	9P 1.25MM			UQ15	0504-000117	DIGI TRANSISTOR	KSR1002	
	UCW2	3708-001691	CONNECTOR	18P 1.25MM			UQ17	0504-000118	DIGI TRANSISTOR	KSR1003	
	UCW3	3708-000454	CONNECTOR	22P 1.25MM			UQ18	0501-000398	TRANSISTOR	KSC945	
	UCW4	3708-000451	CONNECTOR	16P 1.25MM			UQ2	0504-000117	DIGI TRANSISTOR	KSR1002	
	UCW5	3708-000492	CONNECTOR	9P 1.25MM			UQ3	0504-000117	DIGI TRANSISTOR	KSR1002	
	UCW6	3708-001488	CONNECTOR	30P 1.25MM			UQ4	0504-000117	DIGI TRANSISTOR	KSR1002	
	UCW7	3708-001692	CONNECTOR	18P 1.25MM			UQ5	0504-000118	DIGI TRANSISTOR	KSR1003	
	UC1	2401-000475	E.CAPACITOR	10UF 20% 50V			UQ6	0501-000398	TRANSISTOR	KSC945	
	UC10	2401-000240	E.CAPACITOR	100UF 20% 10V			UQ7	0504-000118	DIGI TRANSISTOR	KSR1003	
	UC11	2401-000759	E.CAPACITOR	220NF 20% 50V			UQ8	0501-000610	TRANSISTOR	KSA928A-Y 1W	
	UC12	2401-001355	E.CAPACITOR	470UF 20% 10V			UQ9	0504-000118	DIGI TRANSISTOR	KSR1003	
	UC15	2201-000565	C.CAPACITOR	47NF 50V			UR1	2001-000003	CARBON RESISTOR	330 5% 1/8W	
	UC17	2401-001954	E.CAPACITOR	4.7UF 20% 50V			UR10	2001-000258	CARBON RESISTOR	1.8K 5% 1/8W	
	UC19	2201-000565	C.CAPACITOR	47NF 50V			UR11	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	UC2	2201-000565	C.CAPACITOR	47NF 50V			UR110	2001-000995	CARBON RESISTOR	820 5% 1/8W	
	UC20	2201-000163	C.CAPASITOR	10NF +80-20% 50V			UR111	2001-000855	CARBON RESISTOR	560 5% 1/4W	
	UC21	2201-000163	C.CAPASITOR	10NF +80-20% 50V			UR112	2001-000241	CARBON RESISTOR	1.5K 5% 1/8W	
	UC3	2401-000475	E.CAPACITOR	10UF 20% 50V			UR113	2001-000855	CARBON RESISTOR	560 5% 1/4W	
	UC30	2202-000781	C.CAPASITOR	100PF 10% 50V			UR114	2001-000258	CARBON RESISTOR	1.8K 5% 1/8W	
	UC32	2401-001364	E.CAPACITOR	470UF 20% 16V			UR115	2001-000855	CARBON RESISTOR	560 5% 1/4W	
	UC4	2201-000565	C.CAPACITOR	47NF 50V			UR116	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	UC5	2201-000565	C.CAPACITOR	47NF 50V			UR117	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	UC6	2201-000423	C.CAPASITOR	0.027NF 5% 50V			UR118	2001-000890	CARBON RESISTOR	6.8K 5% 1/8W	
	UC7	2201-000423	C.CAPASITOR	0.027NF 5% 50V			UR119	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UC8	2201-000247	C.CAPASITOR	0.015NF 5% 50V			UR12	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UC9	2201-000247	C.CAPASITOR	0.015NF 5% 50V			UR120	2001-000890	CARBON RESISTOR	6.8K 5% 1/8W	
	UD1	0401-000101	DIODE	1N4148 100V			UR121	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UD11	0402-000127	DIODE	1N4002 100V 1A			UR122	2001-000522	CARBON RESISTOR	22K 5% 1/8W	
	UD12	0402-000127	DIODE	1N4002 100V 1A			UR123	2001-000010	CARBON RESISTOR	68K 5% 1/8W	
	UD13	0402-000127	DIODE	1N4002 100V 1A			UR124	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UD14	0401-000101	DIODE	1N4148 100V			UR125	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UD15	0401-000101	DIODE	1N4148 100V			UR126	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	UD16	0402-000127	DIODE	1N4002 100V 1A			UR127	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	UD17	0402-000127	DIODE	1N4002 100V 1A			UR128	2001-000258	CARBON RESISTOR	1.8K 5% 1/8W	
	UD18	0402-000127	DIODE	1N4002 100V 1A			UR129	2001-000241	CARBON RESISTOR	1.5K 5% 1/8W	
	UD19	0402-000127	DIODE	1N4002 100V 1A			UR13	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UD20	0402-000127	DIODE	1N4002 100V 1A			UR130	2001-000221	CARBON RESISTOR	1.2K 5% 1/8W	
	UD5	0401-000101	DIODE	1N4148 100V			UR131	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UD6	0401-000101	DIODE	1N4148 100V			UR14	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UIC1	AH11-00037C	IC MASK ROM	LC866P548V-5V95			UR15	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UIC2	0904-001316	IC	M66010 24BIT 32P			UR150	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	ULD1	0601-001238	LED	LTL-1CHESS-UA			UR151	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	ULD10	0601-001238	LED	LTL-1CHESS-UA			UR152	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	ULD11	0601-001238	LED	LTL-1CHESS-UA			UR153	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	ULD12	0601-001238	LED	LTL-1CHESS-UA			UR154	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	ULD13	0601-001238	LED	LTL-1CHESS-UA			UR16	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	ULD14	0601-001238	LED	LTL-1CHESS-UA			UR162	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	ULD15	0601-001238	LED	LTL-1CHESS-UA			UR164	2001-000515	CARBON RESISTOR	220 5% 1/8W	
	ULD16	0601-001238	LED	LTL-1CHESS-UA			UR17	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	ULD2	0601-001238	LED	LTL-1CHESS-UA			UR18	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	ULD3	0601-001238	LED	LTL-1CHESS-UA			UR19	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	ULD4	0601-001238	LED	LTL-1CHESS-UA			UR196	2001-000855	CARBON RESISTOR	560 5% 1/4W	
	ULD5	0601-001238	LED	LTL-1CHESS-UA			UR2	2001-000995	CARBON RESISTOR	820 5% 1/8W	
	ULD6	0601-001238	LED	LTL-1CHESS-UA			UR20	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	ULD7	0601-001238	LED	LTL-1CHESS-UA			UR201	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	ULD8	0601-001238	LED	LTL-1CHESS-UA			UR202	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	ULD9	0601-001238	LED	LTL-1CHESS-UA			UR203	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UQ1	0504-000117	DIGI TRANSISTOR	KSR1002			UR204	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UQ10	0501-000610	TRANSISTOR	KSA928A-Y 1W			UR205	2001-000290	CARBON RESISTOR	10K 5% 1/8W	

■ Electrical parts list (Front board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area
	UR206	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR207	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR208	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR209	2001-000857	CARBON RESISTOR	560 5% 1/8W	
	UR21	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UR22	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UR23	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UR24	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UR25	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UR26	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UR27	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UR28	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	UR29	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	UR30	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	UR31	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	UR32	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	UR33	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	UR34	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR35	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR36	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR37	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR38	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR39	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR4	2001-000855	CARBON RESISTOR	560 5% 1/4W	
	UR40	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	UR41	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR42	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR43	2001-000435	CARBON RESISTOR	1M 5% 1/8W	
	UR44	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	UR45	2001-000508	CARBON RESISTOR	220K 5% 1/8W	
	UR46	2001-000793	CARBON RESISTOR	47 5% 1/8W	
	UR47	2001-000850	CARBON RESISTOR	560K 5% 1/8W	
	UR48	2001-000295	CARBON RESISTOR	10M 5% 1/8W	
	UR49	2001-001178	CARBON RESISTOR	680 5% 1/2W	
	UR5	2001-000855	CARBON RESISTOR	560 5% 1/4W	
	UR50	2001-001178	CARBON RESISTOR	680 5% 1/2W	
	UR51	2001-001178	CARBON RESISTOR	680 5% 1/2W	
	UR52	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	UR54	2001-000995	CARBON RESISTOR	820 5% 1/8W	
	UR56	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR57	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR58	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR59	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR6	2001-000855	CARBON RESISTOR	560 5% 1/4W	
	UR60	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR61	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR62	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR63	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR64	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR65	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR66	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR67	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR68	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR69	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR7	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR70	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR71	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR72	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR73	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR74	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR75	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR76	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR77	2001-000005	CARBON RESISTOR	390 5% 1/8W	

△	Item	Parts number	Parts name	Remarks	Area
	UR79	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR8	2001-000221	CARBON RESISTOR	1.2K 5% 1/8W	
	UR80	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR81	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR82	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR83	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR84	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR85	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR86	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR87	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR88	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR89	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR9	2001-000241	CARBON RESISTOR	1.5K 5% 1/8W	
	UR90	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR91	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	UR92	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	UR93	2001-000995	CARBON RESISTOR	820 5% 1/8W	
	UR94	2001-000221	CARBON RESISTOR	1.2K 5% 1/8W	
	UR95	2001-000522	CARBON RESISTOR	22K 5% 1/8W	
	USR1	2103-000341	SEMI V.RESISTOR	2K 30% 1/10W	
	USW1	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW10	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW11	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW12	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW13	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW14	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW15	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW16	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW17	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW18	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW19	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW2	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW20	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW21	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW22	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW23	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW24	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW25	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW26	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW27	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW28	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW29	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW3	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW30	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW31	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW32	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW4	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW5	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW6	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW7	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW8	3404-000165	TACT SWITCH	12V 50MA 160GF	
	USW9	3404-000165	TACT SWITCH	12V 50MA 160GF	
	UVR1	3406-001071	ROTARY SWITCH		
	UVR2	3406-001047	ROTARY SWITCH		
	UVR3	3406-001047	ROTARY SWITCH		
	UX1	2802-000181	RESONATOR	6MHZ 0.3%	
	UX2	2801-001394	CRYSTAL	32.768KHZ	
	VFD	AH07-00040A	VF DISPLAY	BJ21GNK	

■ Electrical parts list (Amp board)

Block No. 03

△	Item	Parts number	Parts name	Remarks	Area
	ACE1	2201-000381	C.CAPACITOR	22NF 50V	
	ACE2	2201-000381	C.CAPACITOR	22NF 50V	
	ACW1	3708-001094	CONNECTOR	13P 1.25MM	
	ACW2	3711-001011	CONNECTOR	5P 2.5MM	
	AC1L	2201-000368	C.CAPACITOR	220PF 10% 50V	
	AC1R	2201-000368	C.CAPACITOR	220PF 10% 50V	
	AC15L	2301-000375	M.CAPACITOR	100NF 10% 50V	
	AC15R	2301-000375	M.CAPACITOR	100NF 10% 50V	
	AC2L	2401-000357	E.CAPACITOR	100UF 0.2 50V	
	AC2R	2401-000357	E.CAPACITOR	100UF 0.2 50V	
	AC20	2401-000871	E.CAPACITOR	220UF 20% 50V	
	AC22	2401-001912	E.CAPACITOR	1UF 20% 50V	
	AC23	2401-001912	E.CAPACITOR	1UF 20% 50V	
	AC3R	2401-000385	E.CAPACITOR	10UF 20% 100V	
	AC300	2401-001364	E.CAPACITOR	470UF 20% 16V	
	AC301	2401-000385	E.CAPACITOR	10UF 20% 100V	
	AC302	2401-000385	E.CAPACITOR	10UF 20% 100V	
	AC4L	2401-001154	E.CAPACITOR	33UF 20% 10V	
	AC4R	2401-001154	E.CAPACITOR	33UF 20% 10V	
	AC5L	2201-000838	C.CAPACITOR	3PF 0.3PF 50V	
	AC5R	2201-000838	C.CAPACITOR	3PF 0.3PF 50V	
	AC56L	2201-000532	M.CAPACITOR		
	AC56R	2201-000532	M.CAPACITOR		
	AC57L	2201-000532	M.CAPACITOR		
	AC57R	2201-000532	M.CAPACITOR		
	AC6L	2401-000385	E.CAPACITOR	10UF 20% 100V	
	AD5	0402-000127	DIODE	1N4002 100V 1A	
△	AIC1	1201-001599	IC	STK402-120 SIP 15P	
	AL1L	AH27-90001A	SPRING COIL	2.2UH	
	AL1R	AH27-90001A	SPRING COIL	2.2UH	
	AL2	AH27-90001A	SPRING COIL	300V	
	AL3	AH27-90001A	SPRING COIL	300V	
	AQ2L	0501-000407	TRANSISTOR	KSD471-YTA 40V	
	AQ2R	0501-000407	TRANSISTOR	KSD471-YTA 40V	
	AQ300	0501-000398	TRANSISTOR	KSC945-YTA	
	AQ301	0501-000398	TRANSISTOR	KSC945-YTA	
	AQ302	0501-000303	TRANSISTOR	KSA733YTA	
	AQ313	0501-000398	TRANSISTOR	KSC945-YTA	
	AQ5	0501-000407	TRANSISTOR	KSD471-YTA 40V	
	AQ6	0501-000010	TRANSISTOR	KSC1008-YTA	
	AQ7	0501-000407	TRANSISTOR	KSD471-YTA 40V	
	AQ8	0501-000610	TRANSISTOR	KSA928A	
	ARL1	3501-001197	RELAY	OSA-SS-212DM3	
	AR1L	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	AR1R	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	AR13	2003-000008	OMF RESISTOR	100 5% 1W	
	AR15L	2003-000689	OMF RESISTOR	4.7 5% 1W	
	AR15R	2003-000689	OMF RESISTOR	4.7 5% 1W	
	AR2L	2001-000221	CARBON RESISTOR	1.2K 5% 1/8W	
	AR2R	2001-000221	CARBON RESISTOR	1.2K 5% 1/8W	
	AR20	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	AR21	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	AR25	2001-000515	CARBON RESISTOR	220 5% 1/8W	
	AR26	2001-000273	CARBON RESISTOR	100K 5% 1/8W	
	AR3L	2001-000864	CARBON RESISTOR	56K 5% 1/8W	
	AR3R	2001-000864	CARBON RESISTOR	56K 5% 1/8W	
	AR300	2001-000522	CARBON RESISTOR	22K 5% 1/8W	
	AR301	2001-000660	CARBON RESISTOR	33K 5% 1/8W	
	AR302	2001-000522	CARBON RESISTOR	22K 5% 1/8W	
	AR303	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	AR304	2001-000290	CARBON RESISTOR	10K 5% 1/8W	
	AR305	2001-000522	CARBON RESISTOR	22K 5% 1/8W	
	AR306	2001-000864	CARBON RESISTOR	56K 5% 1/8W	

△	Item	Parts number	Parts name	Remarks	Area
	AR307	2001-000864	CARBON RESISTOR	56K 5% 1/8W	
	AR308	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	AR309	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	AR310	2001-000786	CARBON RESISTOR	47K 5% 1/8W	
	AR311	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	AR32	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	AR33	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	AR35	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	AR36	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	AR4L	2003-000390	OMF RESISTOR	0.27OHM 5% 2W	
	AR4R	2003-000390	OMF RESISTOR	0.27OHM 5% 2W	
	AR5L	2003-000390	OMF RESISTOR	0.27OHM 5% 2W	
	AR5R	2003-000390	OMF RESISTOR	0.27OHM 5% 2W	
	AR56L	2001-000864	CARBON RESISTOR	56K 5% 1/8W	
	AR56R	2001-000864	CARBON RESISTOR	56K 5% 1/8W	
	AR6L	2001-000017	CARBON RESISTOR	4.7 5% 1/4W	
	AR6R	2001-000017	CARBON RESISTOR	4.7 5% 1/4W	
	AR7L	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	AR7R	2001-000449	CARBON RESISTOR	2.2K 5% 1/8W	
	AR77	2001-000065	CARBON RESISTOR	10K 5% 1/4W	
	AR78	2003-000008	OMF RESISTOR	100 5% 1W	
	AR8L	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	AR8R	2001-000591	CARBON RESISTOR	3.3K 5% 1/8W	
	SPK1	3716-001132	TERMINAL BLOCK	SOLDER 4P	

■ Electrical parts list (ECO board)

Block No. 04

△	Item	Parts number	Parts name	Remarks	Area
	ERL3	AH27-10001F	CHOKE COIL	27UH	
	ERL4	AH27-10001F	CHOKE COIL	27UH	
△	P/T	AH26-80144W	POWER TRANS	220V 50HZ	
	PJ2	3711-000190	CONNECTOR	2P 7.92MM	
	PJ3	AH37-22001N	CONNECTOR	2P	
	RCW5	3711-000967	CONNECTOR	4P 2MM	
	RC20	2401-001969	E.CAPACITOR	470UF 20% 25V	
	RC21	2401-001954	E.CAPACITOR	4.7UF 20% 50V	
	RC22	2401-001912	E.CAPACITOR	1UF 20% 50V	
	RD20	0402-000127	DIODE	1N4002 100V 1A	
	RD21	0402-000127	DIODE	1N4002 100V 1A	
	RD22	0402-000127	DIODE	1N4002 100V 1A	
	RD23	0402-000127	DIODE	1N4002 100V 1A	
	RD24	0402-000127	DIODE	1N4002 100V 1A	
	RD25	0402-000127	DIODE	1N4002 100V 1A	
	RD26	0401-000101	DIODE	1N4148 100 200M	
	RD27	0402-000127	DIODE	1N4002 100V 1A	
△	RIC2	AC14-12001G	IC	KA78L05Z	
	RL2	3501-001159	RELAY	SDT-SS-112DM	
	RQ20	0501-000407	TRANSISTOR	KSD471A-Y	
	RR22	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	RR23	2001-000890	CARBON RESISTOR	6.8K 5% 1/8W	
	RR24	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	RR25	2001-000734	CARBON RESISTOR	4.7K 5% 1/8W	
	RR26	2001-001195	CARBON RESISTOR	82 5% 1/2W	
	RZD10	0403-000354	ZENER DIODE	UZ5.1B 500MW	

■ Electrical parts list (CD board)

Block No. 05

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	CW101	3708-001252	CONNECTOR	16P 1MM			C403	2203-000178	CHIP CAPACITOR	100NF 25V 1608	
	CW102	AH39-20561P	LEAD CONNECTOR	6P 150MM			C501L	2401-001954	E.CAPACITOR	4.7UF 20% 50V	
	CW103	3708-001131	CONNECTOR	5P			C501R	2401-001954	E.CAPACITOR	4.7UF 20% 50V	
	CW104	3711-003379	CONNECTOR				C502L	2203-000440	CHIP CAPACITOR	1NF 50V 1608	
	CW105	3708-001438	COMMECTOR	22P 1.25MM			C502R	2203-000440	CHIP CAPACITOR	1NF 50V 1608	
	CW106	AH39-20025S	LEAD CONNECTOR				C801	2401-000795	E.CAPACITOR	220UF 20% 16V	
	CW107	3711-000906	CONNECTOR	3P 2MM			C804	2202-000243	C.CAPACITOR	33PF 5% 50V	
	C101	2401-000240	E.CAPACITOR	100UF 20% 10V			C805	2202-000243	C.CAPACITOR	33PF 5% 50V	
	C102	2203-000440	CHIP CAPACITOR	1NF 50V 1608			C806	2202-000243	C.CAPACITOR	33PF 5% 50V	
	C103	2203-000257	CHIP CAPACITOR	10NF 50V 1608			D301	0402-000151	DIODE	1N5392 100V	
	C104	2203-000257	CHIP CAPACITOR	10NF 50V 1608			IC101	1204-001799	IC	KB9226 LQFP 48P	
	C105	2203-000257	CHIP CAPACITOR	10NF 50V 1608			IC201	0904-001524	IC	5L9290 QFP 48P	
	C106	2203-001140	CHIP CAPACITOR	68NF 16V 1608			IC301	1003-000179	IC	KA9258D SOP 28P	
	C107	2401-000240	E.CAPACITOR	100UF 20% 10V			IC401	1003-001162	IC	KA3082 10PIN	
	C108	2401-000240	E.CAPACITOR	100UF 20% 10V			IC402	1003-001162	IC	KA3082 10PIN	
	C111	2203-000888	CHIP CAPACITOR	4.7NF 50V 1608			IC801	AC14-12001G	IC	KA78L05Z	
	C112	2203-000888	CHIP CAPACITOR	4.7NF 50V 1608			J1	2007-000070	CHIP RESISTOR	0 1/16W 1608	
	C113	2202-000780	C.CAPACITOR	100NF +80-20% 50V			J10	2007-000070	CHIP RESISTOR	0 1/16W 1608	
	C114	2401-001954	E.CAPACITOR	4.7UF 20% 50V			J12	2007-000029	CHIP RESISTOR	0 1/10W 2012	
	C115	2203-000206	CHIP CAPACITOR	100NF 50V 2012			J13	2007-000070	CHIP RESISTOR	0 1/16W 1608	
	C116	2203-000206	CHIP CAPACITOR	100NF 50V 2012			J2	2007-000070	CHIP RESISTOR	0 1/16W 1608	
	C117	2203-000440	CHIP CAPACITOR	1NF 50V 1608			J3	2007-000070	CHIP RESISTOR	0 1/16W 1608	
	C118	2203-000206	CHIP CAPACITOR	100NF 50V 2012			J4	2007-000029	CHIP RESISTOR	0 1/10W 2012	
	C119	2203-000800	CHIP CAPACITOR	33NF 25V 1608			J5	2007-000070	CHIP RESISTOR	0 1/16W 1608	
	C120	2401-001968	E.CAPACITOR	470NF 20% 50V			J7	2007-000029	CHIP RESISTOR	0 1/10W 2012	
	C121	2203-000257	CHIP CAPACITOR	10NF 50V 1608			J8	2007-000029	CHIP RESISTOR	0 1/10W 2012	
	C122	2203-001140	CHIP CAPACITOR	68NF 16V 1608			J9	2007-000029	CHIP RESISTOR	0 1/10W 2012	
	C123	2401-000419	E.CAPACITOR	10UF 20% 16V			MU1	2007-000070	CHIP RESISTOR	0 1/16W 1608	
	C124	2203-000206	CHIP CAPACITOR	100NF 50V 2012			MR1	2007-000090	CHIP RESISTOR	10K 1/16W 1608	
	C124A	2203-001063	CHIP CAPACITOR	56NF 16V 1608			MR2	2007-000090	CHIP RESISTOR	10K 1/16W 1608	
	C126	2203-000491	CHIP CAPACITOR	2.2NF 50V 1608			MR3	2007-000090	CHIP RESISTOR	10K 1/16W 1608	
	C127	2203-000592	CHIP CAPACITOR	0.22NF 50V 1608			Q101	0501-000314	TRANSISTOR	KSA812	
	C128	2203-000800	CHIP CAPACITOR	33NF 25V 1608			Q301	0501-000610	TRANSISTOR	KSA928A	
	C129	2203-000206	CHIP CAPACITOR	100NF 50V 2012			Q302	0501-000010	TRANSISTOR	KSC1008-YTA	
	C130	2203-000206	CHIP CAPACITOR	100NF 50V 2012			R101	2007-000098	CHIP RESISTOR	56K 1/16W 1608	
	C131	2203-000178	CHIP CAPACITOR	100NF 25V 1608			R102	2007-000098	CHIP RESISTOR	56K 1/16W 1608	
	C132	2203-000178	CHIP CAPACITOR	100NF 25V 1608			R103	2007-000098	CHIP RESISTOR	56K 1/16W 1608	
	C133	2401-000240	E.CAPACITOR	100UF 20% 10V			R104	2007-000098	CHIP RESISTOR	56K 1/16W 1608	
	C134	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R105	2007-000100	CHIP RESISTOR	68K 1/16W 1608	
	C135	2401-001968	E.CAPACITOR	470NF 20% 50V			R106	2007-000100	CHIP RESISTOR	68K 1/16W 1608	
	C201	2203-000681	CHIP CAPACITOR	27PF 50V 1608			R107	2007-000115	CHIP RESISTOR	82 1/16W 1608	
	C202	2203-000681	CHIP CAPACITOR	27PF 50V 1608			R108	2007-000308	CHIP RESISTOR	10 1/10W 2012	
	C203	2203-001222	CHIP CAPACITOR	820PF 50V 1608			R110	2007-000455	CHIP RESISTOR	18K 1/16W 1608	
	C204	2203-000178	CHIP CAPACITOR	100NF 25V 1608			R112	2007-001196	CHIP RESISTOR	820K 1/16W 1608	
	C205	2203-000178	CHIP CAPACITOR	100NF 25V 1608			R113	2007-000132	CHIP RESISTOR	180K 1/16W 1608	
	C207	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R114	2007-000100	CHIP RESISTOR	68K 1/16W 1608	
	C208	2203-000851	CHIP CAPACITOR	0.039NF 50V 1608			R115	2007-001179	CHIP RESISTOR	8.2K 1/16W 1608	
	C209	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R116	2007-000093	CHIP RESISTOR	20K 1/16W 1608	
	C211	2203-000178	CHIP CAPACITOR	100NF 25V 1608			R117	2001-000331	CARBON RESISTOR	12K 5% 1/8W	
	C212	2401-000240	E.CAPACITOR	100UF 20% 10V			R118	2007-000109	CHIP RESISTOR	1M 1/16W 1608	
	C213	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R119	2007-000101	CHIP RESISTOR	82K 1/16W 1608	
	C214	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R120	2007-000098	CHIP RESISTOR	56K 1/16W 1608	
	C215	2401-000240	E.CAPACITOR	100UF 20% 10V			R121	2007-000092	CHIP RESISTOR	15K 1/16W 1608	
	C216	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R123	2007-000097	CHIP RESISTOR	47K 1/16W 1608	
	C217	2401-000240	E.CAPACITOR	100UF 20% 10V			R124	2007-000103	CHIP RESISTOR	120K 1/16W 1608	
	C218	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R125	2007-000103	CHIP RESISTOR	120K 1/16W 1608	
	C301	2401-001102	E.CAPACITOR	330UF 20% 16V			R126	2007-000098	CHIP RESISTOR	56K 1/16W 1608	
	C302	2401-000240	E.CAPACITOR	100UF 20% 10V			R127	2007-000100	CHIP RESISTOR	68K 1/16W 1608	
	C303	2401-000240	E.CAPACITOR	100UF 20% 10V			R128	2007-000129	CHIP RESISTOR	27K 1/16W 1608	
	C304	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R132	2007-000090	CHIP RESISTOR	10K 1/16W 1608	
	C305	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R133	2007-000090	CHIP RESISTOR	10K 1/16W 1608	
	C401	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R201	2007-000074	CHIP RESISTOR	100 1/16W 1608	
	C402	2203-000257	CHIP CAPACITOR	10NF 50V 1608			R202	2007-000109	CHIP RESISTOR	1M 1/16W 1608	

■ Electrical parts list (CD board)

Block No. 05

△	Item	Parts number	Parts name	Remarks	Area
	R204	2007-000078	CHIP RESISTOR	1K 1/16W 1608	
	R205	2007-000078	CHIP RESISTOR	1K 1/16W 1608	
	R206	2007-000078	CHIP RESISTOR	1K 1/16W 1608	
	R207	2007-000078	CHIP RESISTOR	1K 1/16W 1608	
	R208	2007-000078	CHIP RESISTOR	1K 1/16W 1608	
	R209	2007-000078	CHIP RESISTOR	1K 1/16W 1608	
	R210	2007-000075	CHIP RESISTOR	220 1/16W 1608	
	R301	2008-000140	FUS RESISTOR	2.2 5% 1/2W	
	R302	2001-001006	RESISTOR	82 5% 1/8W	
	R501L	2007-000102	CHIP RESISTOR	100K 1/16W	
	R501R	2007-000102	CHIP RESISTOR	100K 1/16W	
	R502L	2007-000074	CHIP RESISTOR	100 1/16W 1608	
	R502R	2007-000074	CHIP RESISTOR	100 1/16W 1608	
	R803	2001-000429	CARBON RESISTOR	1K 5% 1/8W	
	R804	2007-000078	CHIP RESISTOR	1K 1/16W 1608	
	R805	2007-000078	CHIP RESISTOR	1K 1/16W 1608	
	R806	2007-000078	CHIP RESISTOR	1K 1/16W 1608	
	R807	2007-000084	CHIP RESISTOR	4.7K 1/16W 1608	
	R808	2007-000084	CHIP RESISTOR	4.7K 1/16W 1608	
	R809	2007-000084	CHIP RESISTOR	4.7K 1/16W 1608	
	R810	2001-000515	CARBON RESISTOR	220 5% 1/8W	
	R811	2007-000078	CHIP RESISTOR	1K 1/16W 1608	
	R813	2007-000097	CHIP RESISTOR	47K 1/16W 1608	
	X201	2802-000211	RESONATOR	16.93MHZ 0.5%	
	ZD301	0403-000344	ZENER DIODE	UZ3.9B 3.9V	
	ZD401	0403-000361	ZENER DIODE	UZ6.2BSB 6.2V	
	ZD402	0403-000352	ZENER DIODE	UZ4.7BM 4.7V	

Packing materials and accessories parts list

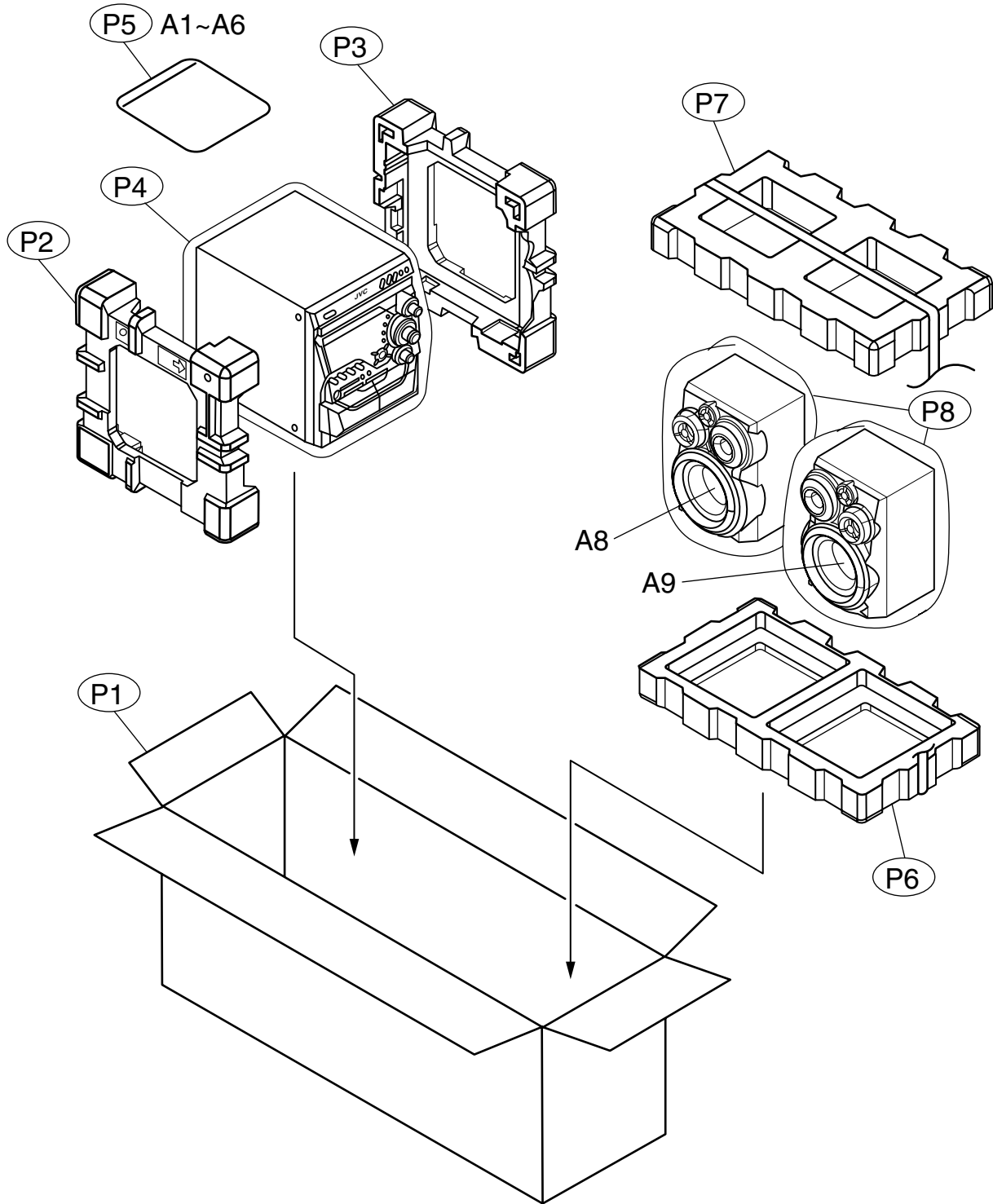
EV version

Block No.

M	3	M	M
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Block No.

M	5	M	M
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Packing materials and accessories parts list

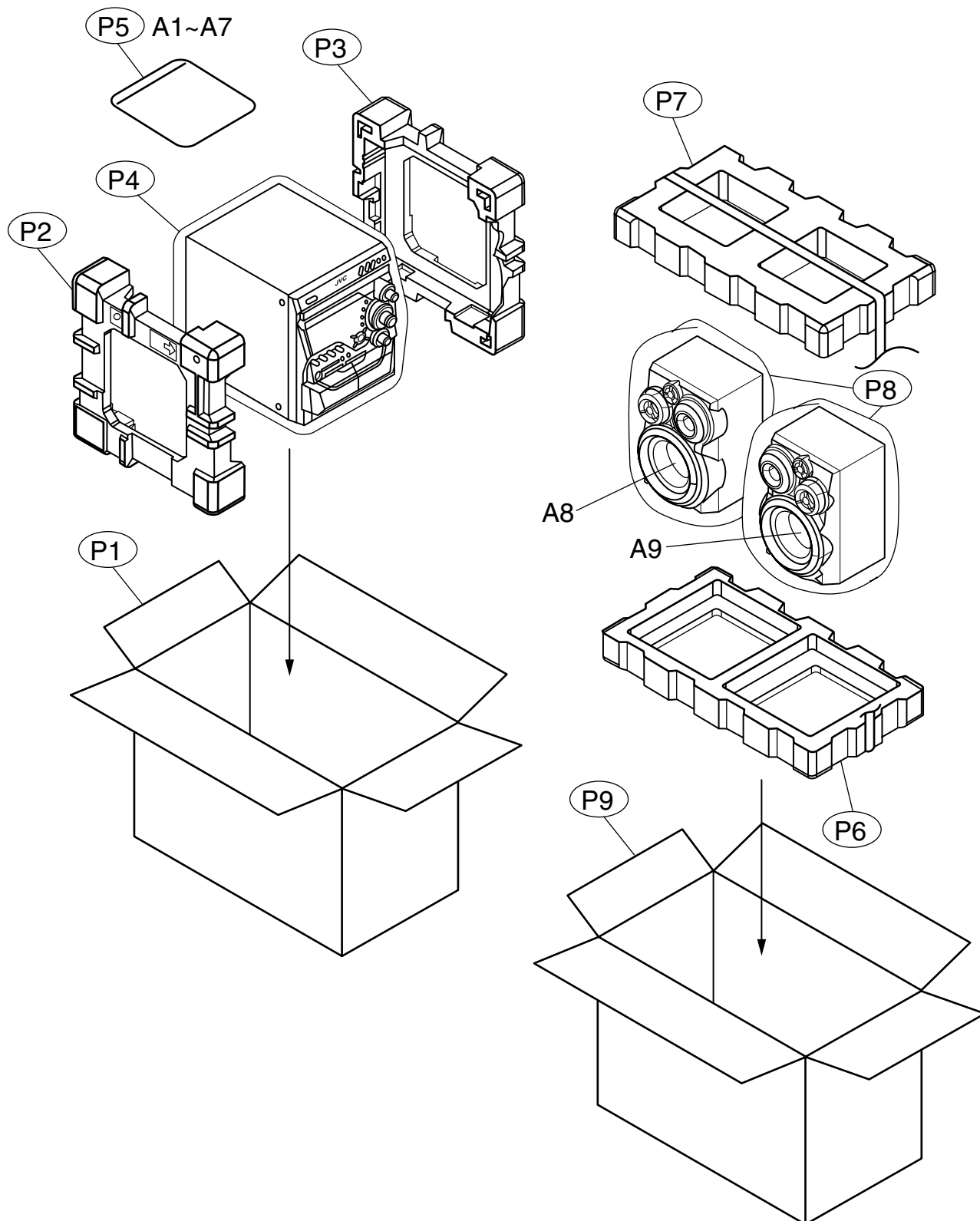
Block No.

M	3	M	M
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Block No.

M	5	M	M
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B,E,EN version



■ Parts list (Packing)

Block No. M3MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	AH69-00603A	PACKING CASE	1		B,E,EN
		AH69-00604D	PACKING CASE	1		EV
	P 2	AH69-00592A	CUSHION L	1	SET	
	P 3	AH69-00593A	CUSHION R	1	SET	
	P 4	AH69-30012T	POLY BAG	1	SET	
	P 5	AH69-00525A	POLY BAG	1	INSTRUCTIONS	
	P 6	AH81-00631Y	CUSHION BOTTOM	1	SPEAKER	
	P 7	AH81-00631V	CUSHION TOP	1	SPEAKER	EV
		AH81-00631X	CUSHION TOP	1	SPEAKER	B,E,EN
	P 8	AH81-00631U	PE-BAG	2	SPEAKER	
	P 9	AH69-00631Z	PACKING CASE	1	SPEAKER	B,E,EN

■ Parts list (Accessories)

Block No. M5MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	AH68-01065D	INSTRUCTIONS	1	ENG	B
		AH68-01065E	INSTRUCTIONS	1	GER,FRE,DUT	E
		AH68-01065F	INSTRUCTIONS	1	GER,FRE,SPA,ITA	EN
		AH68-01065F	INSTRUCTIONS	1	SWE,FIN,DAN	EN
		AH68-01065G	INSTRUCTIONS	1	RUS,POL,HUN,CZE	EV
	A 2	AH59-01045C	REMOCON ASSY	1	MX-K50R	
	A 3	AH38-10001A	FM ANTENNA	1		
	A 4	AH42-20001P	AM ANTENNA	1		
	A 5	-----	BATTERY	2		
	A 6	AH68-00415D	WARANTY CARD	1		B,E,EN
		AH68-00415F	WARANTY CARD	1		EV
	A 7	AH68-00415C	IMPORTANT CARD	1		B
	A 8	MX-K50R-SPBOX-L	SPK.WITH BOX	1		
	A 9	MX-K50R-SPBOX-R	SPK.WITH BOX	1		

MX-K50R

JVC

VICTOR COMPANY OF JAPAN, LIMITED

AUDIO & COMMUNICATION BUSINESS DIVISION

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