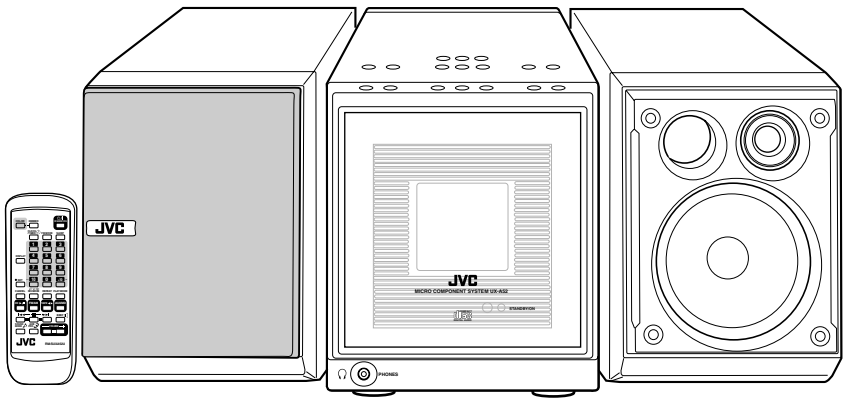
JVC

SERVICE MANUAL

MICRO COMPONENET SYSTEM

UX-A52



COMPACT disc DIGITAL AUDIO

Area Suffix

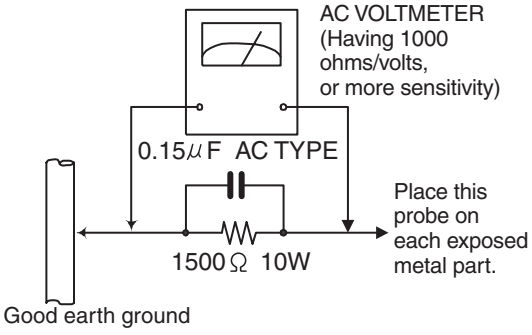
US ---------- Singapore
UJ ---------- U.S.Military
UP ---------- Korea
UW ------ Brazil,Mexico,Peru

Contents

No.21074
Feb. 2002

Safety Precautions

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



Warning

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

⚠ CAUTION

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

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▮) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.

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

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

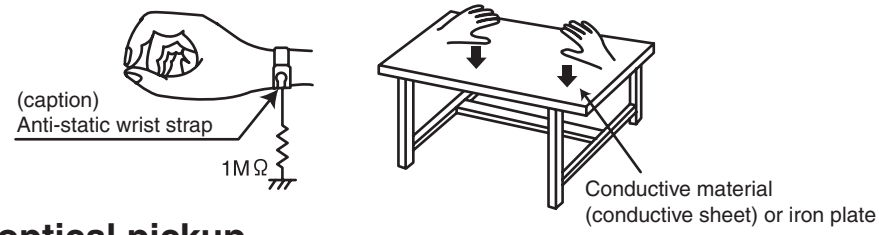
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as CD players. Be careful to use proper grounding in the area where repairs are being performed.

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.

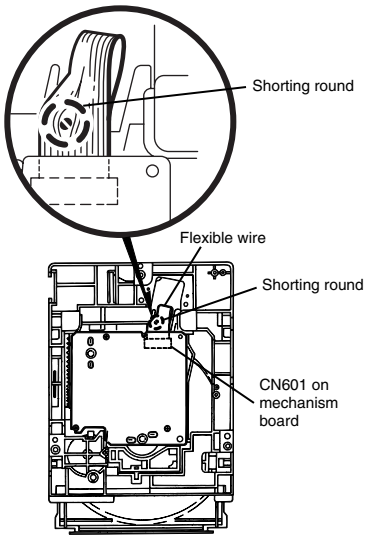
4. It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it

Attention when traverse unit is decomposed

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

1.Solder is put up before the card wire is removed from connector on the CD substrate as shown in Figure.
(When the wire is removed without putting up solder, the CD pick-up assembly might destroy.)

2.Please remove solder after connecting the card wire with when you install picking up in the substrate.



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 laserradiation and is equipped with safety switches whichprevent emission of radiation when the drawer is open and the safety interlocks have failed or are de feated. It is dangerous to defeat the safety switches.

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

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

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

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

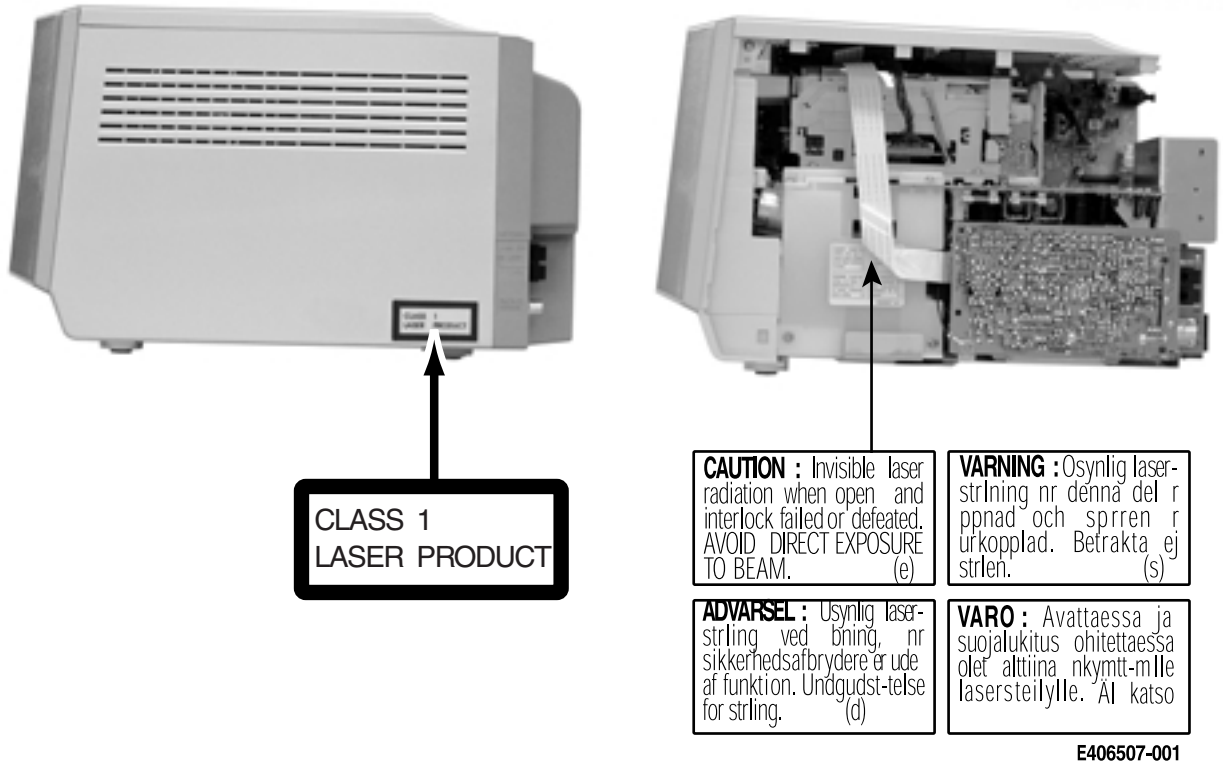
VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle.Älä katso säteeseen.

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

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

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL



Disassembly method

<Main body>

■ Removing the rear cover

(See Fig.1 and 2)

1. Remove the nine screws **A** on the back of the body.
2. Remove the two screws **B** on the bottom of the body.
3. Unlock the speaker terminal and the antenna terminal, then remove the rear cover backward with releasing the hooks.

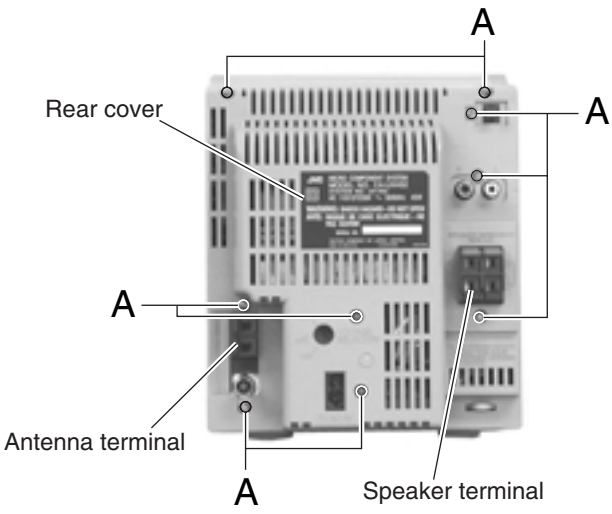


Fig.1

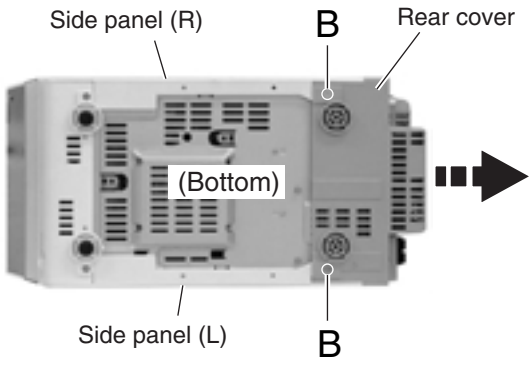


Fig.2

■ Removing the side panels

(See Fig.3 to 5)

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

1. Remove the two screws **C** attaching the side panels on the bottom of the body.
2. Remove each side panel backward while releasing the eight joints **a** as shown in Fig.4 and 5.

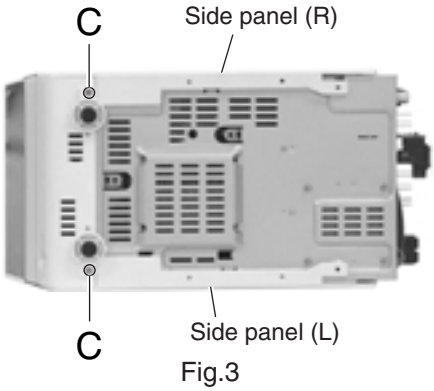


Fig.3

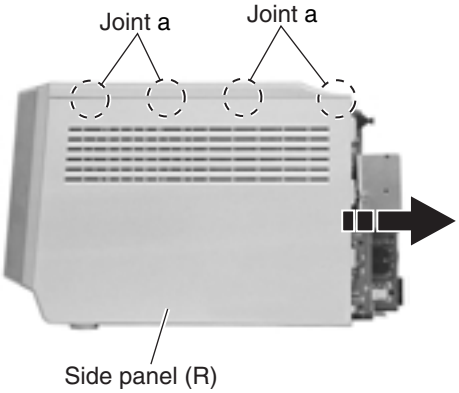


Fig.4

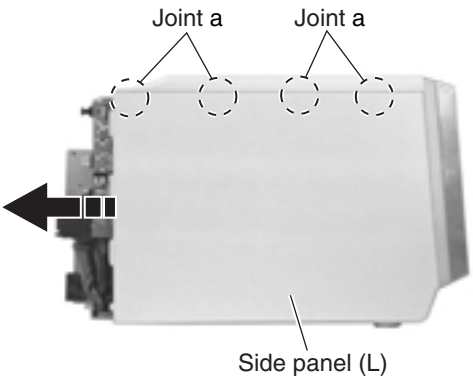


Fig.5

■ Removing the top panel (See Fig.6 and 7)

・ Prior to performing the following procedure, remove the rear cover and the side panels.

1. Remove the two screws **D** on each side of the body.
2. Release the two joints **b** on each side of the body and remove the top panel in the direction of the arrow.
3. Disconnect the card wires from connector CN705 on the system control board on the left side of the body.

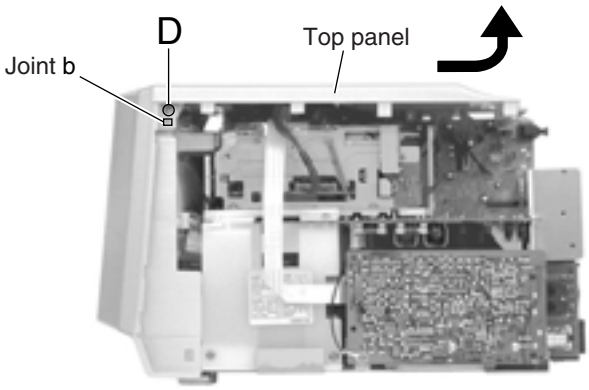


Fig.6

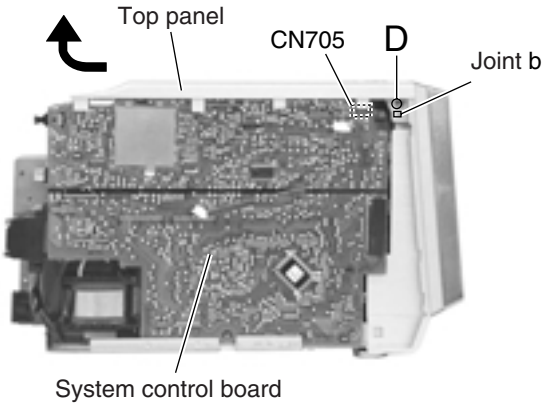


Fig.7

■ Removing the cassette mechanism assembly section (See Fig.8)

・ Prior to performing the following procedure, remove the rear cover, the side panels and the top panel.

1. Disconnect each wire from connector CN706, CN715 and CN716 on the system control board on top of the body.
2. Remove the four screws **E** retaining the cassette mechanism assembly section on top of the body.

REFERENCE: Reference: If necessary, remove the spacer marked **h** and the wire from the Cassette mechanism assembly section.

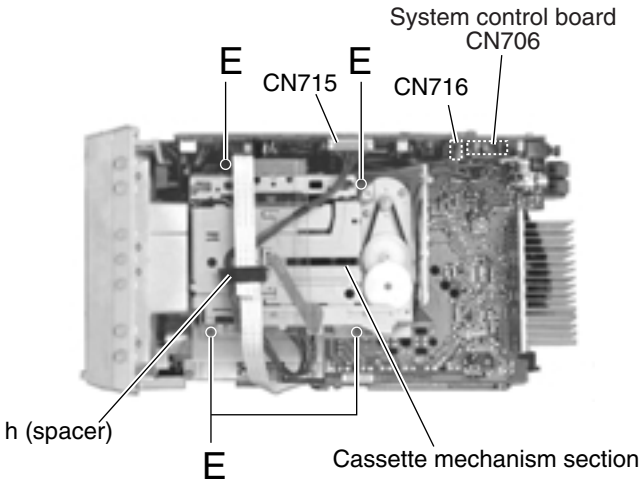


Fig.8

■ Removing the system control board (See Fig.9)

・ Prior to performing the following procedure, remove the rear cover, the side panels and the top panel.

1. Disconnect the card wire from connector CN701 and the wire from connector CN706, CN715, CN716 on the system control board.
2. Remove the screw **F** on the left side of the body.
3. Disconnect connector CN709, CN711 and CN712 on the system control board from the body outward.
4. Disconnect the card wire from connector CN704 on the underside of the system control board.

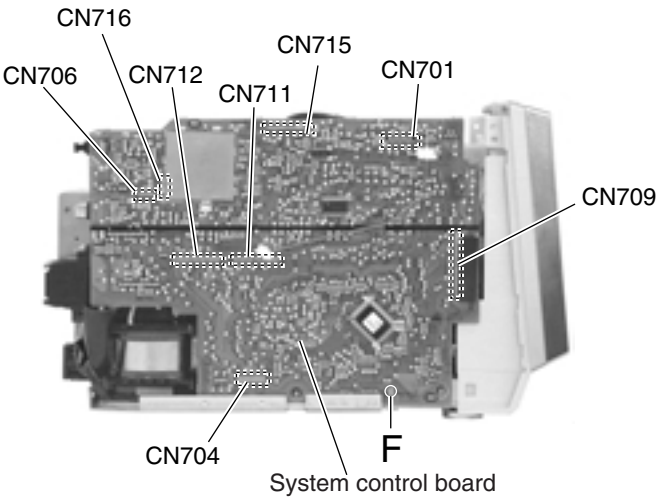


Fig.9

■ Removing the tuner board (See Fig.10)

・ Prior to performing the following procedure, remove the rear cover and the right side panel.

1. Disconnect the card wire from connector CN1 on the tuner board on the right side of the body.
2. Remove the screw **G** and remove the tuner board upward while disengaging the three joints **c**.

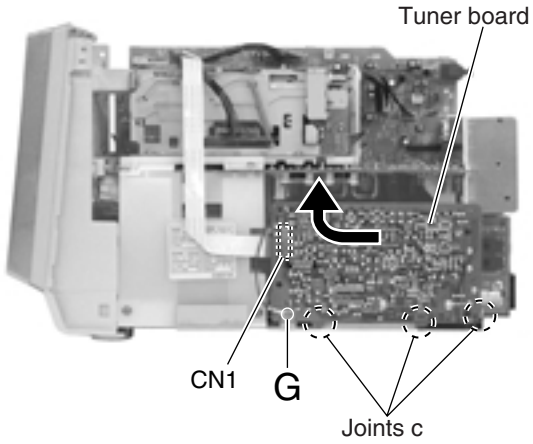


Fig.10

■Removing the front panel assembly (See Fig.11 and 12)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel and the system control board.

1. Release the two joints **d** on the lower right and left sides of the front panel assembly, then remove the front panel assembly toward the front.

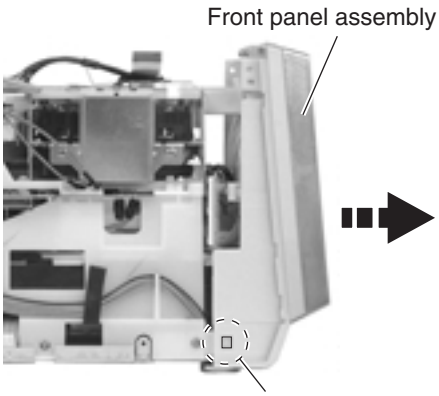


Fig.11

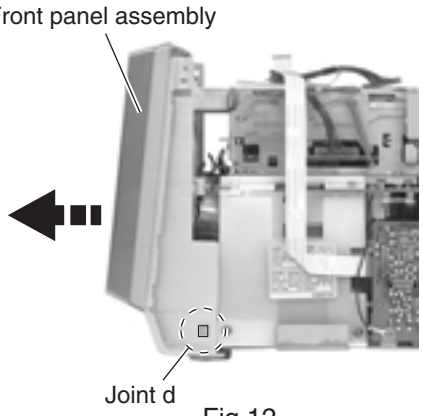


Fig.12

■Removing the headphone jack board (See Fig.13 and 14)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the system control board and the front panel assembly section.

1. Disconnect the wire from connector CN804 on the main board.

2. Remove the plastic rivet fixing the headphone jack board.

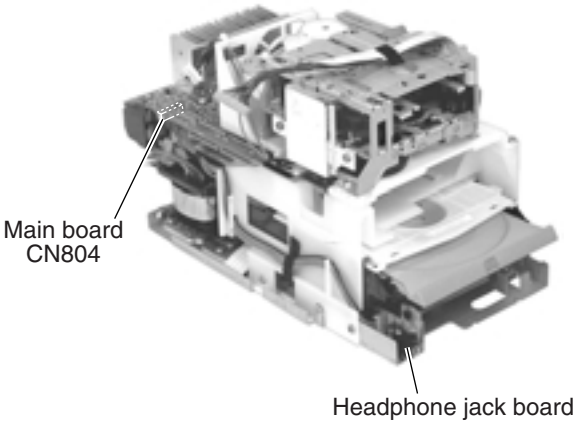


Fig.13

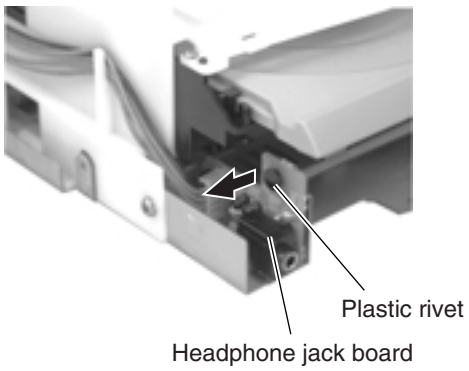


Fig.14

■ Removing the main board / the heat sink (See Fig.15 to 17)

・ Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the cassette mechanism assembly section and and the system control board.

1. Disconnect the wire from connector CN804 on the main board.

2. Remove the five screws **H** attaching the cassette mechanism bracket.

3. Remove the screw **G** attaching the grounding terminal extending from the main board.

4. Disconnect connector CN805 on the main board from the AC jack board while pulling out it. Remove the main board in the direction of the arrow and disconnect the wire from connector CN803 on the reverse side of the main board.

5. Remove the three screws **I** attaching the heat sink on the reverse side of the main board.

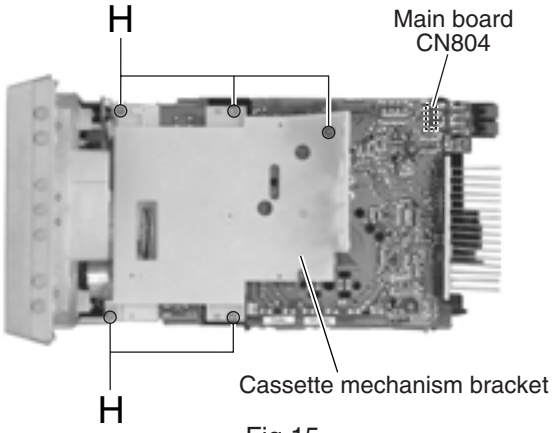


Fig.15

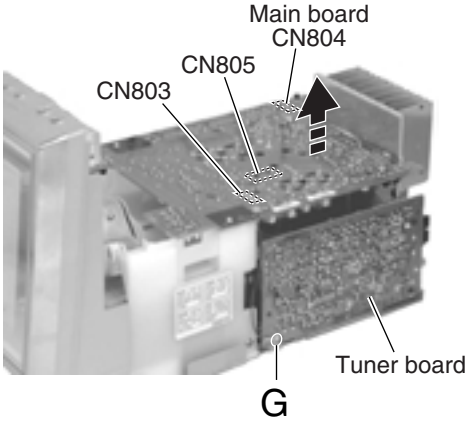


Fig.16

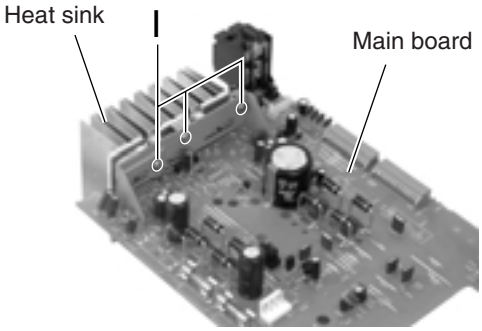


Fig.17

■Removing the AC jack board (See Fig.18 and 19)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the cassette mechanism assembly section, the system control board and the main board / the tuner board.

1. Disconnect the wire from connector CN809 on the AC jack board.
2. Remove the screw **J** and screw **K** attaching the AC jack board.

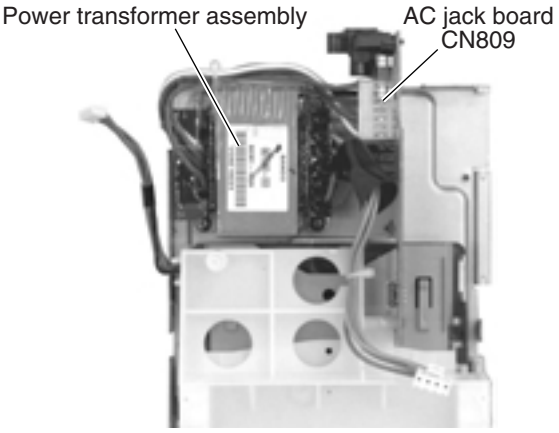


Fig.18

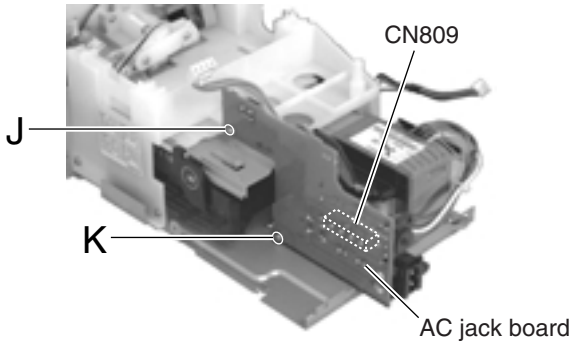


Fig.19

■Removing the power transformer assembly (See Fig.20)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the cassette mechanism assembly section, the system control board and the main board.

1. Disconnect the wire from connector CN809 on the AC jack board.
2. Cut off the band setting the wire on the CD mechanism cover.
3. Remove the four screws **L** attaching the power transformer assembly.

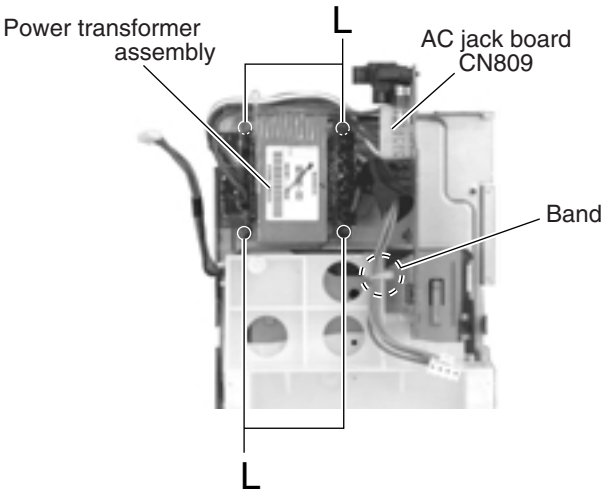


Fig.20

■ Removing the CD mechanism assembly (See Fig.21 to 23)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the cassette mechanism assembly section, the system control board, the front panel assembly section, the main board / the tuner board and the AC jack board.

1. Cut off the band setting the wire on the CD mechanism cover.

2. Release the wire extending from the headphone jack board from the spacer and the three notches of the CD mechanism cover on the left side of the body.

3. Remove the four screws **M** on the left and right side of the CD mechanism cover. Then remove the CD mechanism cover upward.

4. Remove the three screws **N** attaching the CD mechanism assembly.

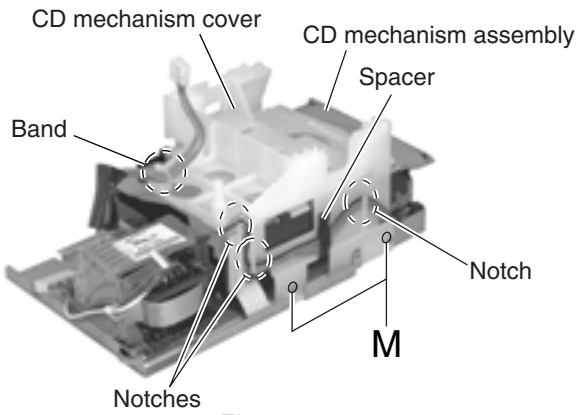


Fig.21

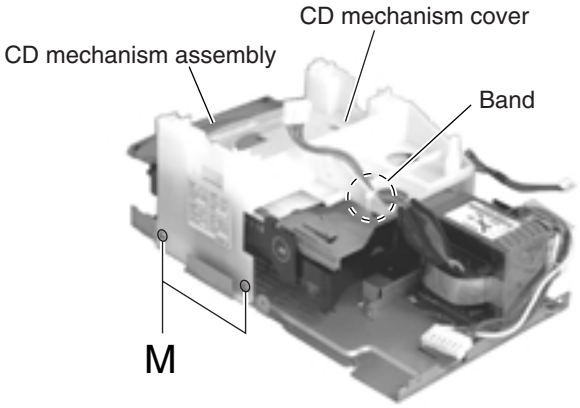


Fig.22

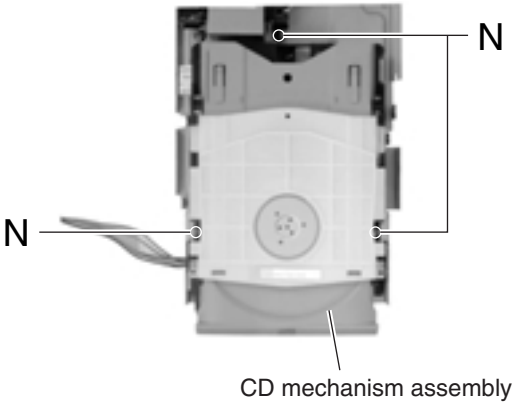


Fig.23

<Front panel assembly section>

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the system control board and the front panel assembly section.

■ Removing the relay board (See Fig. 24)

1. Disconnect the wire from connector CN906, CN907 and the card wire from CN908 on the relay board respectively.
2. Remove the two screws **O**.

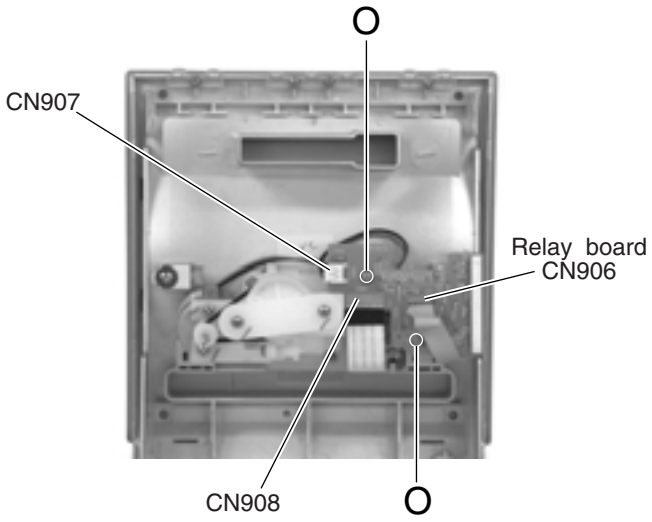


Fig.24

■ Removing the drive motor assembly (See Fig.25)

- Prior to performing the following procedure, remove the relay board.

1. Remove the four screws **P** attaching the drive motor assembly.

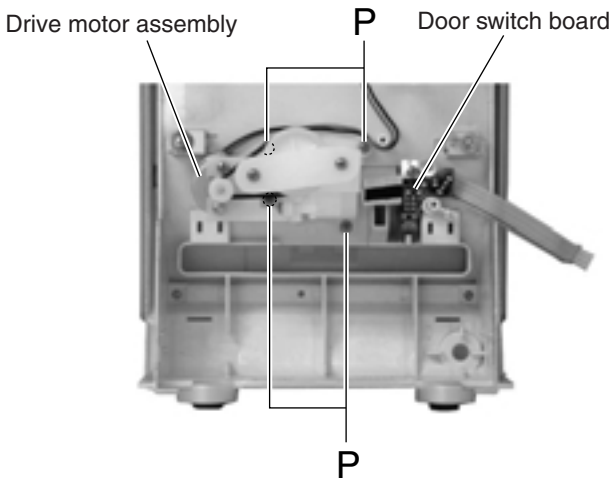


Fig.25

■ Removing the belt and the drive motor (See Fig.26)

REFERENCE: The belt and the drive motor can be removed respectively without removing the drive motor assembly from the front panel section.

1. Remove the two screws **Q** attaching the plate.
2. Remove the belt from the two pulleys.
3. Remove the two screws **R** attaching the drive motor.

REFERENCE: When removing the drive motor only, remove the belt from the drive motor pulleys in advance.

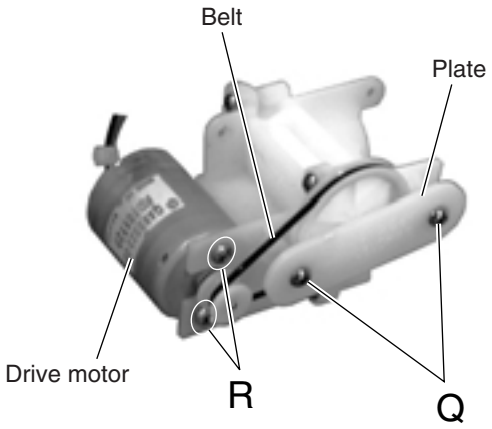


Fig.26

■ Removing the door switch board (See Fig.27 and 28)

・ Prior to performing the following procedure, remove the relay board.

1. Loosen the screw **S** attaching the door switch.
2. Remove the door switch board while releasing it from the joint **e**.

CAUTION: When reattaching the door switch board, fit it to the joint **e** and check the operating state of the switch before tightening the screw **S**.

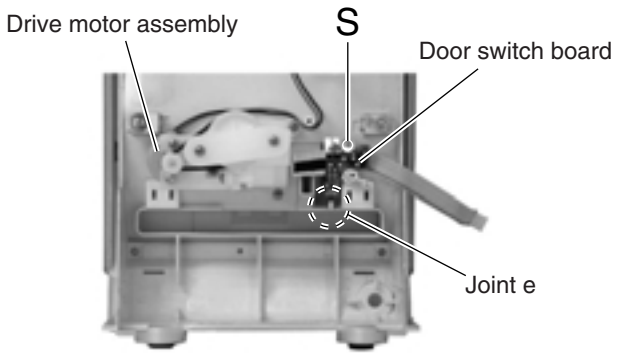


Fig.27

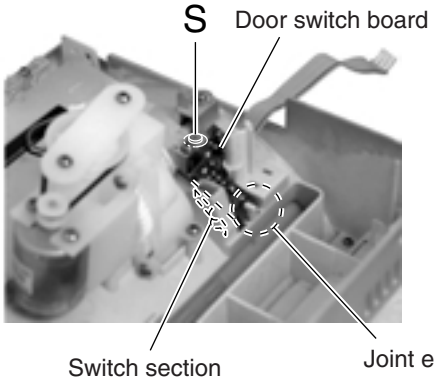


Fig.28

■ Removing the LCD section (See Fig.29 to 31)

・ Prior to performing the following procedure, remove the relay board.

1. Loosen the two screws **T** attaching the lock lever.
2. Push the part **f** of the lock lever in the direction of the arrow as shown in Fig.30-1 / 30-2 and disengage the LCD section from the front panel assembly.

CAUTION: Because the LCD may come off, hold it when loosening the screws **T**.

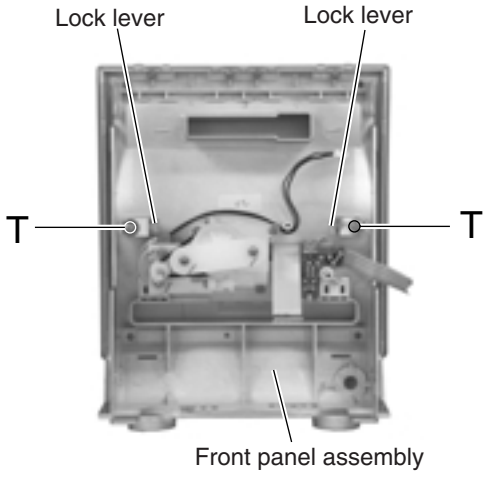


Fig.29

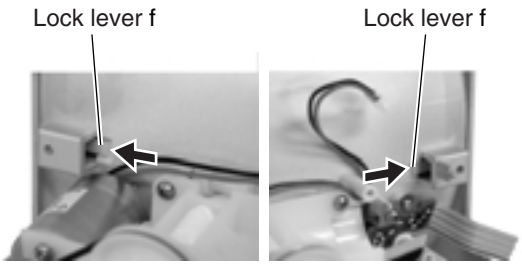


Fig.30-1 Fig.30-2

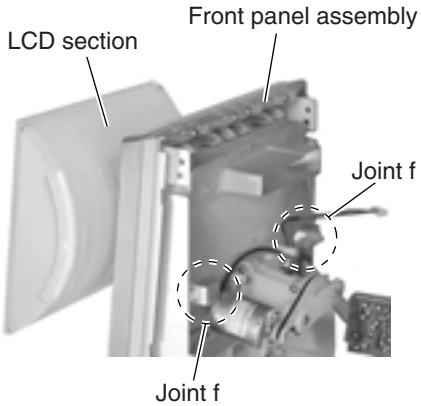


Fig.31

■ Removing the LCD board assembly (See Fig.32 to 36)

- Prior to performing the following procedure, remove the relay board and the LCD section.

1. Remove the four screws **U** attaching the case cover.
2. Remove the four screws **V** attaching the LCD panel on the back of the LCD section.
3. Remove the LCD cover.
4. Release the three joints **g** and remove the LCD board assembly in the direction of the arrow.

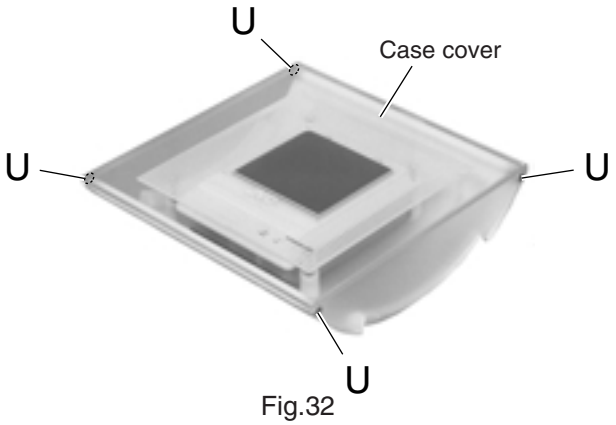


Fig.32

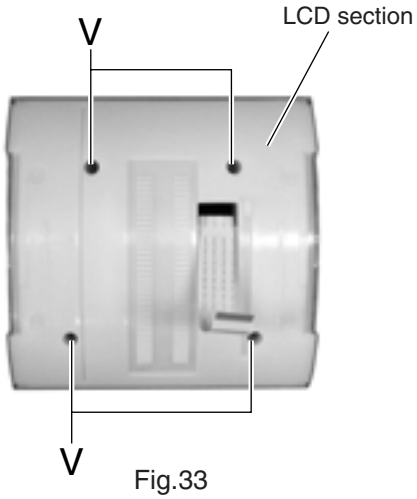


Fig.33

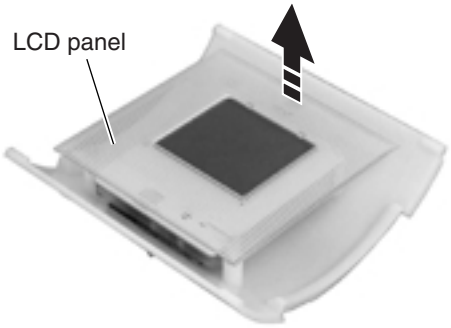


Fig.34

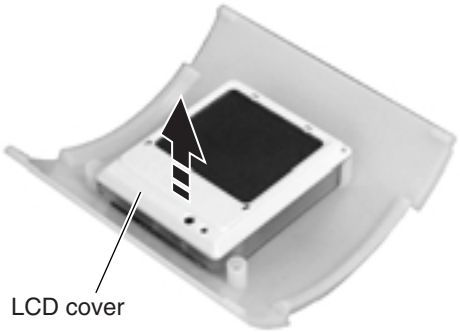


Fig.35

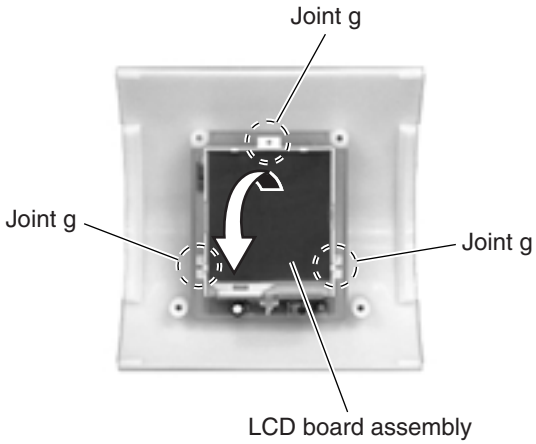


Fig.36

<Top panel section>

・ Prior to performing the following procedure, remove the rear cover, the side panels and the top panel.

■ Removing the operation switch board (See Fig.37)

1. Remove the seven screws **W** attaching the operation switch board on the reverse side of the top panel.

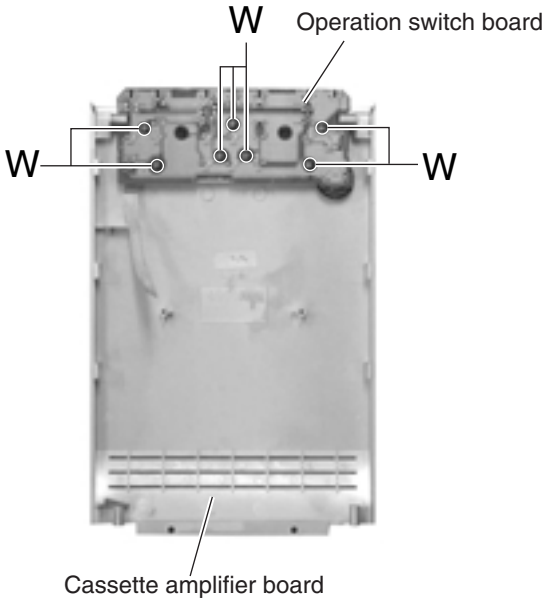


Fig.37

<CD Mechanism Assembly>

■ Removing the CL. Base Assembly and Tray (Refer to Figs. 1 to 5.)

1. Remove the two screws A fastening the CL. base assembly from the top of the CD mechanism assembly.

2. Move the CL. base assembly diagonally upwards as indicated by the arrow to release it from the two hooks a.

3. Turn the idle gear in the arrow-marked direction from the upper side of the CD mechanism assembly. Accordingly, the TRAMECHA assembly moves downwards.

> Note: When drawing out the tray, shift down the TRAMECHA assembly to the position where the tray does not contact the T-T assembly of the TRAMECHA assembly.

4. Draw out the tray frontwards for removing it.

> Note: When reinstalling the tray:
> - Turn the idle gear so that the part b of the tray gear is positioned in the part c shown in Fig. 4. (Eject position)
> - Engage the right and left hooks d and e of the tray with the right and left grooves of the TRAMECHA assembly respectively for retaining the tray.

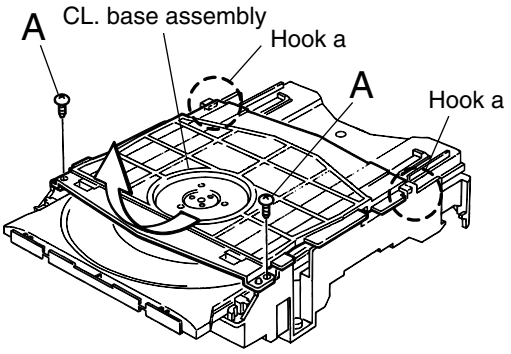


Fig. 1

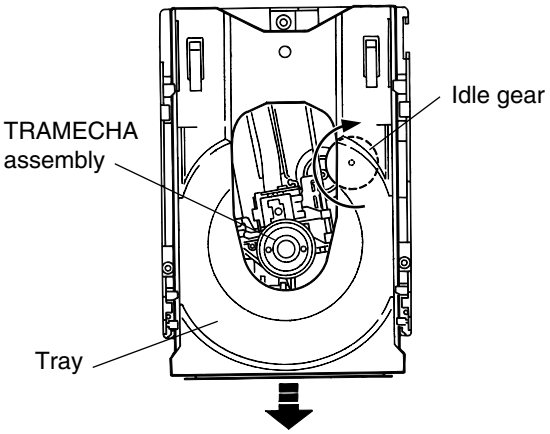


Fig. 2

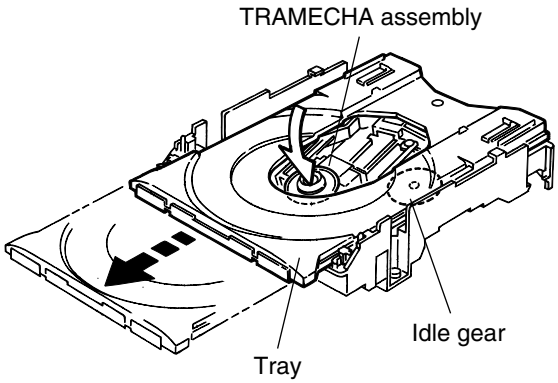


Fig. 3

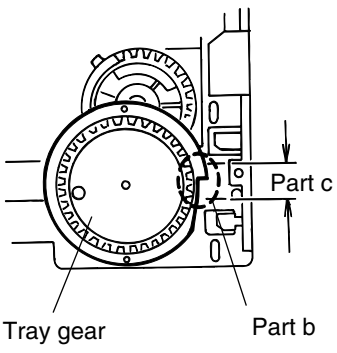


Fig. 4

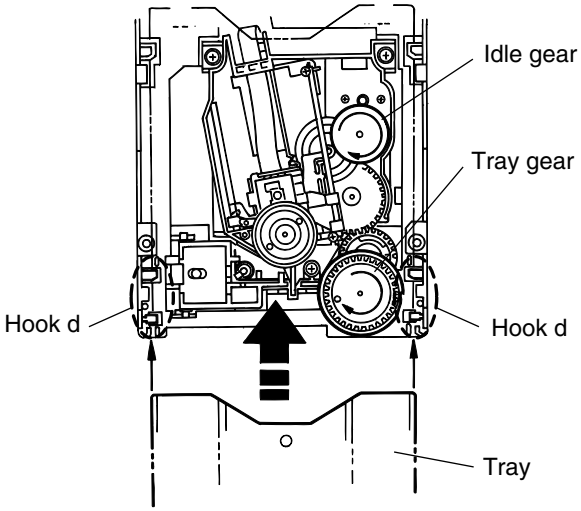


Fig. 5

■ Removing the TRAMECHA Assembly (Refer to Figs. 6 to 9.)

- Remove the CL. base assembly and tray.

Reference: The TRAMECHA assembly can be removed without removal of the mechanism board.

1. If the TRAMECHA assembly is lowered and it is located out of the PLAY position, turn the idle gear in the arrow-marked direction so that the hole in the part f of the tray gear meets the hole on the CL. base assembly. (Set the TRAMECHA assembly at the PLAY position.)

2. Remove the three screws B fastening the TRAMECHA assembly and then remove the TRAMECHA assembly upwards from the front side.

3. At the same time, remove the spring from the groove of the CH. base assembly in the part g of the TRAMECHA assembly.

Note: When reinstalling the TRAMECHA assembly:
- Check to see if the spring is properly engaged with groove of the CH. base assembly in the part g of the TRAMECHA assembly.
- After making sure that the three insulators of the TRAMECHA assembly are properly set on the bosses of the L. base assembly's guide, fasten them with the screws.

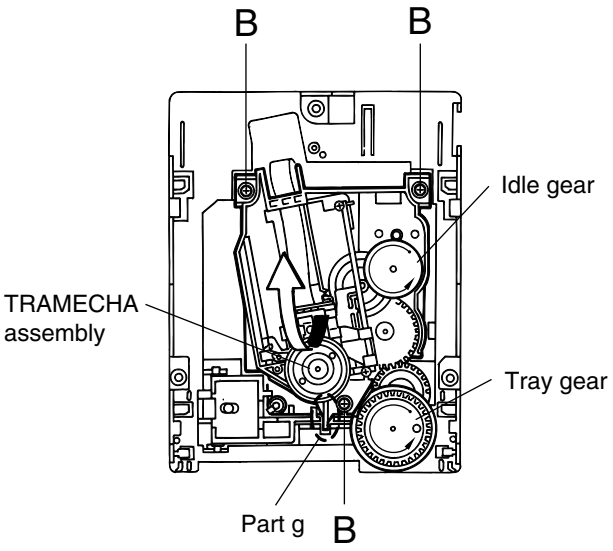


Fig. 6

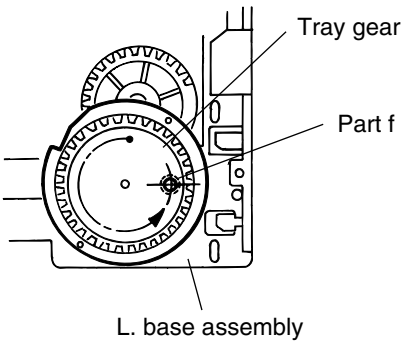


Fig. 7

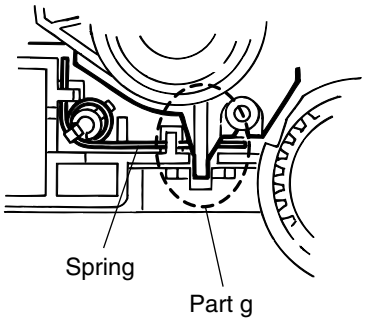


Fig. 8

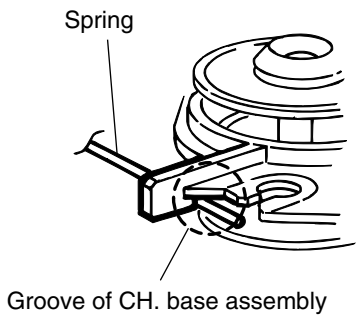


Fig. 9

■ Removing the Mechanism Board
(Refer to Fig 10.)

Reference: The mechanism board can be removed without removal of the TRAMECHA assembly.

Note: Before disconnecting the flexible wire coming from the pickup from the connector, be sure to solder its shorting round.
If the flexible wire is connected without soldering, it may cause breakdown of the pickup.

1. Solder the shorting round of the flexible wire connected with the mechanism board from the back of the mechanism assembly.
2. Disconnect the flexible wire from the connector CN601 on the mechanism board.
3. Remove the three screws C fastening the mechanism board.
4. Unsolder the two points of the part h and one point of the part i of the mechanism board. Then, remove the mechanism board upwards.

Note: When reinstalling the mechanism board, connect the flexible wire coming from the pickup to the connector first and then remove the solder from the shorting round of the flexible cable.

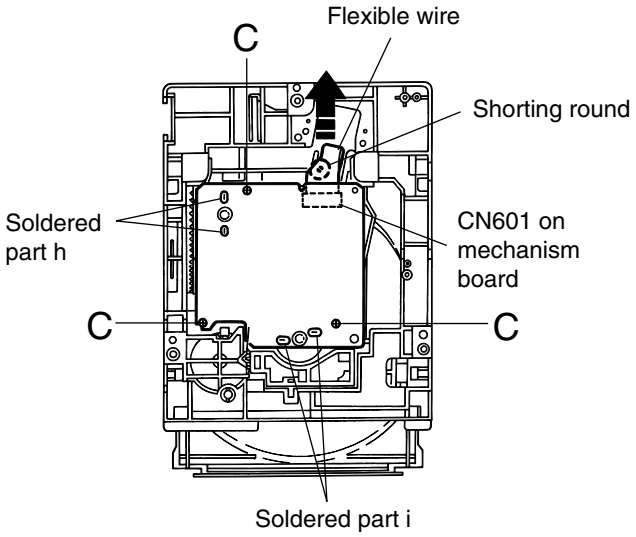


Fig. 10

■ Removing the Pickup (Refer to Figs. 11 to 14.)

- Remove the CL. base assembly and tray.
- Remove the TRAMECHA assembly.

Reference: The pickup can be removed without removal of the mechanism board.

Note: Before disconnecting the flexible wire coming from the pickup from the connector, be sure to solder its shorting round.
If the flexible wire is connected without soldering, it may cause breakdown of the pickup.

1. Solder the shorting round of the flexible wire connected with the mechanism board from the back of the TRAMECHA assembly.

2. Disconnect the flexible wire from the connector CN601 on the mechanism board.

3. Turn the idle gear in the arrow-marked direction from the top of the TRAMECHA assembly so that the pickup assembly is shifted to the reverse side of the T-T assembly.
Move the pickup assembly until the part j of the rack plate in the lower part of the pickup assembly comes out of the CH. base assembly.

4. Remove the two screws D retaining the shaft of the pickup assembly. Next, disengage the hook k from the CH. base assembly and then remove the pickup assembly together with the shaft.

5. Pull the shaft out of the pickup.

6. Remove the two screws E fastening the rack plate from the pickup.

7. Remove the screw F retaining the P.S. spring from the pickup.

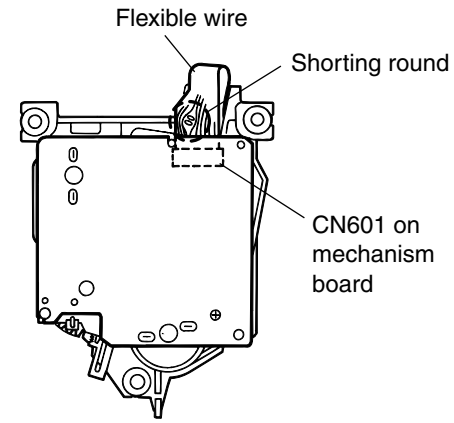


Fig. 11

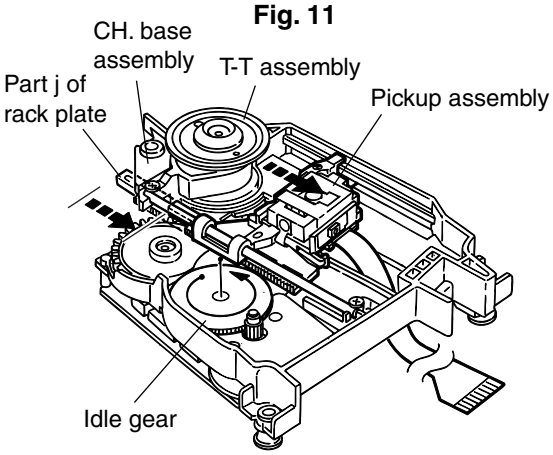


Fig. 12

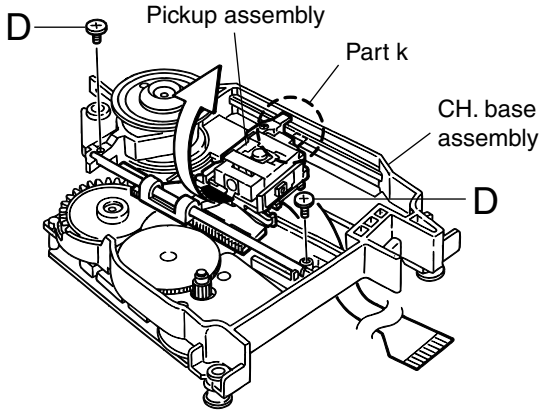


Fig. 13

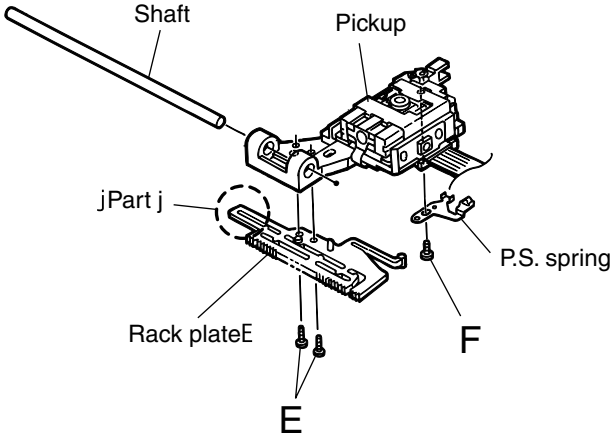


Fig. 14

■ Reinstalling the Pickup Assembly (Refer to Figs. 15 and 16.)

Reference: Refer to the explanation of "Removing the Pickup" on the preceding page.

1. Fit the P.S. spring and rack plate to the pickup.
2. Insert the shaft into the pickup.
3. Engage the hook k of the pickup assembly with the CH. base assembly first, and set the part j of the rack plate in the opening I next. Then, reinstall the pickup assembly while shifting it to the T-T side (inward) so that the part m of the rack plate is positioned as shown in Fig. 16.
4. Move the pickup assembly to the center position and fasten the shaft with the two screws D. (Make sure that the part n of the rack plate is correctly engaged with the middle gear.)
5. After passing the flexible wire coming from the pickup through the opening of the CH. base assembly, connect it to the connector CN601.

Note: When reinstalling the pickup assembly, remove the solder from the shorting round after connecting the flexible wire coming from the pick to the connector CN601.

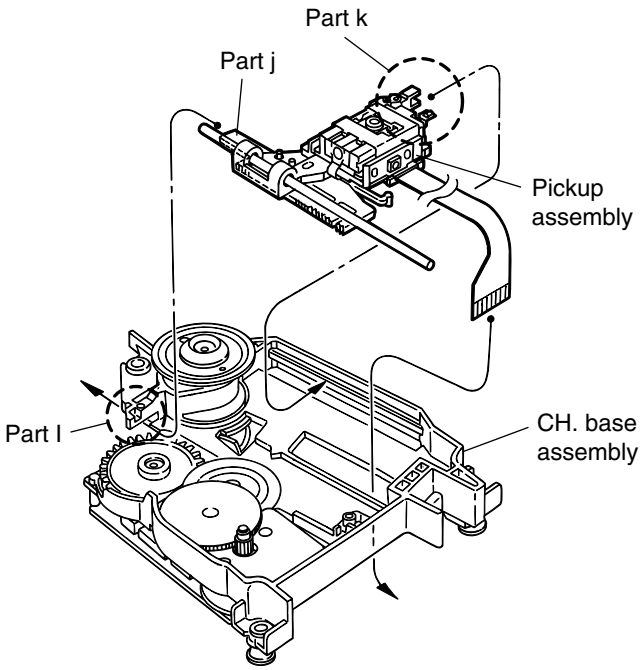


Fig. 15

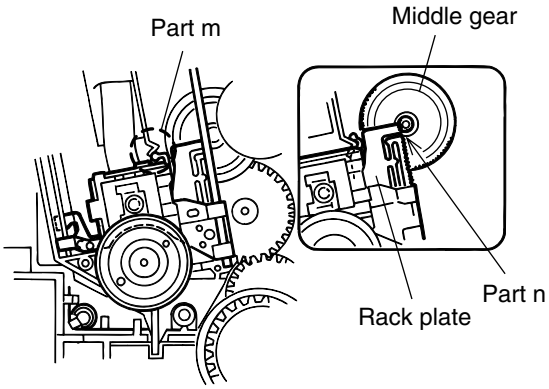


Fig. 16

■ Removing the Feed Motor Assembly (Refer to Fig. 17.)

- Remove the CL. base assembly and tray.
- Remove the mechanism board.

Remove the two screws E fastening the feed motor assembly from the top of the mechanism assembly.

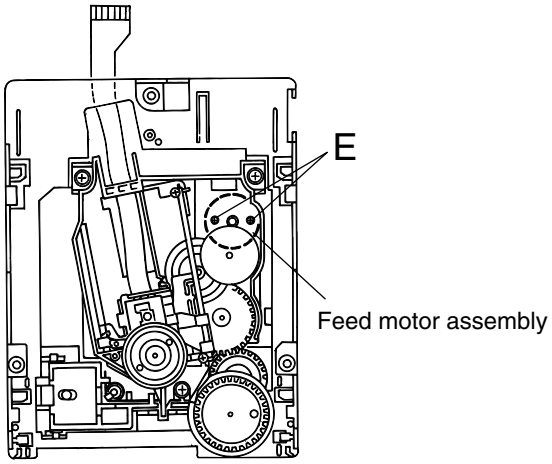


Fig. 17

<Cassette mechanism section>

CAUTION: Prior to performing the following procedures, turn the mode gear in the direction of the arrow to move each section to the eject position.

■ Removing the side bracket (L) and (R) / load board (See Fig.1 to 4)

1. Remove the E-washer attaching the load arm on the right side of the body.
2. Turn the load arm in the direction of the arrow to release from the cassette hook at the joint **a**.
3. Remove the spring (1) attaching the trig lever.
4. Move the trig lever in the direction of the arrow and release it from the two holes **b**.
5. Remove the screw **A** attaching the load board on the right side of the body and unsolder the wire extending from the sub motor.

REFERENCE: The side bracket unit (R) can be removed even if the load board is attached. In such case, make sure to unsolder the wire extending from the sub motor.

6. Remove the spring (2) and the holder collar on the right side of the body.
7. Remove the two screws **B** attaching the side bracket unit (R) in the direction of the arrow.
8. Remove the four screws **C** attaching the side bracket (L) in the direction of the arrow.

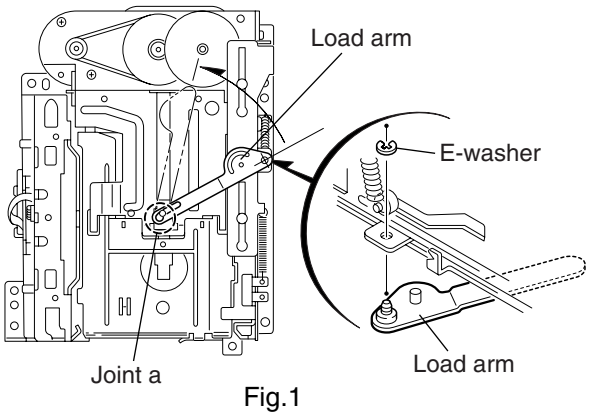


Fig.1

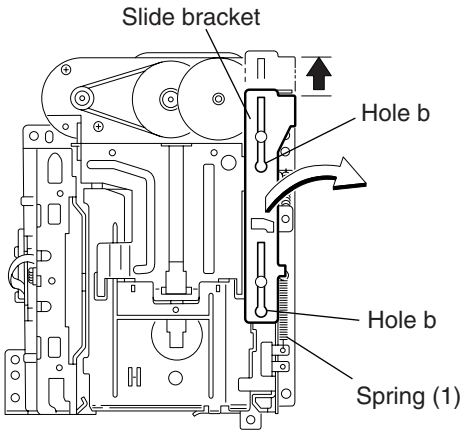


Fig.2

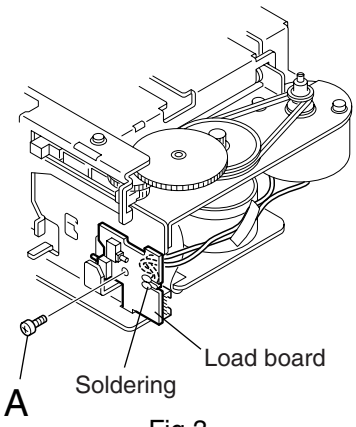


Fig.3

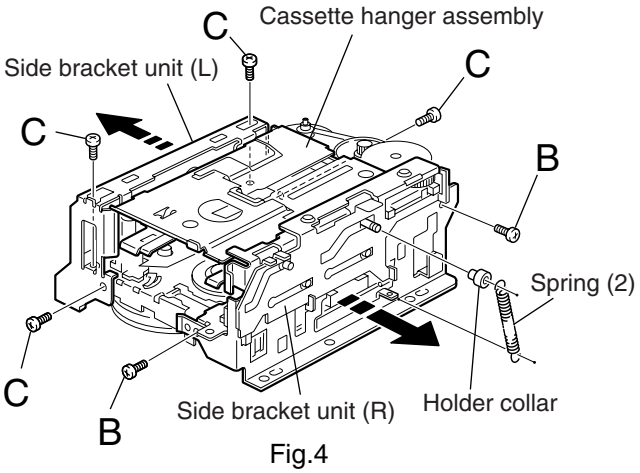


Fig.4

■ Removing the cassette hanger assembly / cassette holder (See Fig.5)

・ Prior to performing the following procedure, remove the side bracket (L) and (R).

1. Remove the slit washer attaching the cassette hanger assembly and pull out the pin.

2. Move the cassette hanger assembly in the direction of the arrow to release the boss of the joint **c** on the left rear side and detach the cassette hanger assembly upward.

REFERENCE: The cassette hanger assembly is detached with the cassette holder.

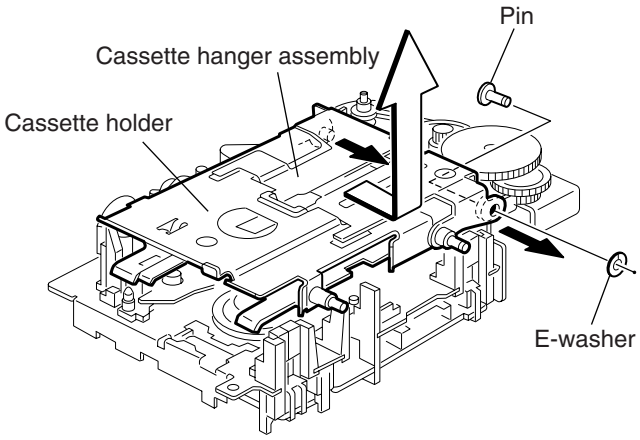


Fig.5

■ Removing the pinch roller (F) and (R) (See Fig.6 to 8)

・ Prior to performing the following procedure, remove the side bracket (L), (R), cassette hanger assembly / cassette holder.

1. Release the tab **d** in the direction of the arrow and pull out the pinch roller upward.

REFERENCE: The above method is for removing the pinch roller (F) and (R).

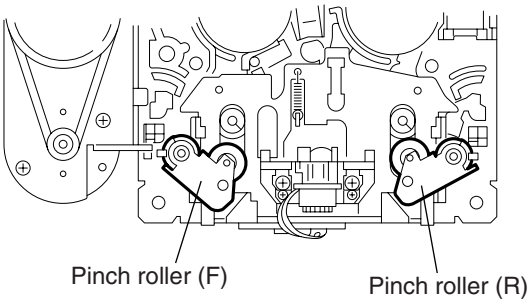


Fig.6

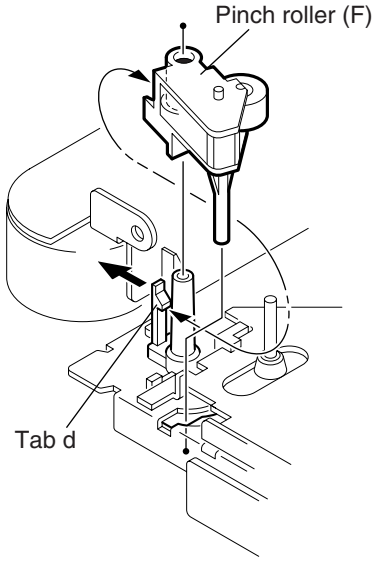


Fig.7

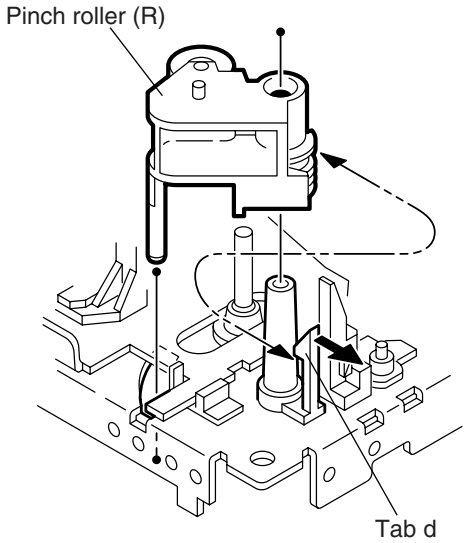


Fig.8

■ Removing the head assembly / head board (See Fig.9 and 10)

・ Prior to performing the following procedure, remove the side bracket (L), (R), cassette hanger assembly / cassette holder.

1. Remove the spring on the lower side of the head assembly.

2. Remove the two screws **D** and remove the head assembly upward.

3. Remove the screw **E** attaching the head board. Unsolder the flexible wire extending from the head assembly if necessary.

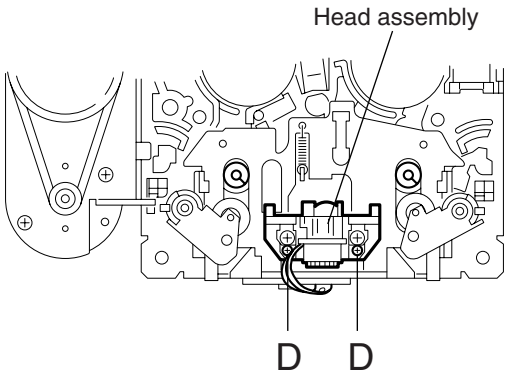


Fig.9

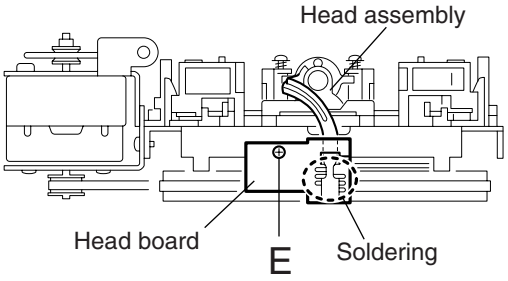


Fig.10

■ Removing the flywheel assembly (F) and (R) (See Fig.11 and 12)

・ Prior to performing the following procedure, remove the side bracket (L), (R), cassette hanger assembly / cassette holder.

1. Remove the belt and sub belt on the bottom of the body.

2. Remove the polywasher from the flywheel (F) and (R) on top of the body.

3. Pull out the flywheel (F) and (R).

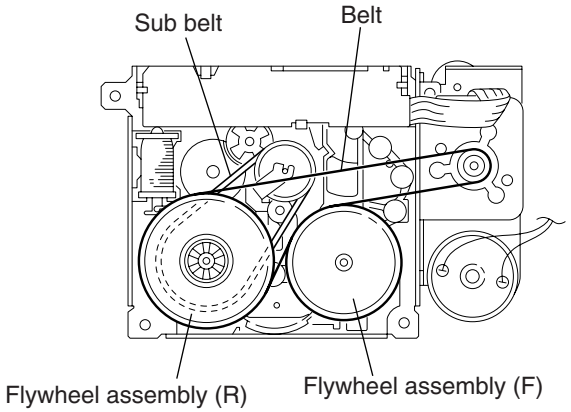


Fig.11

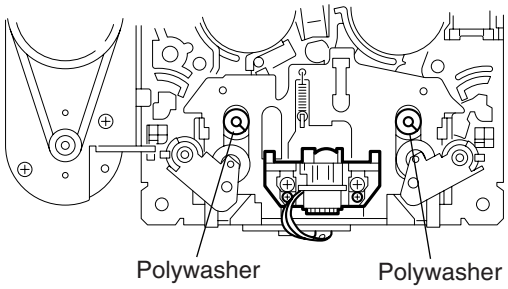


Fig.12

Adjustment Method

1. Jigs and test instruments

Test disc (CTS-1000)
Test tape (VT712)
Test tape (VT703)
Test tape (AC225)

2. Adjustment and check items

1) Indications in the modes that all LCD's are on

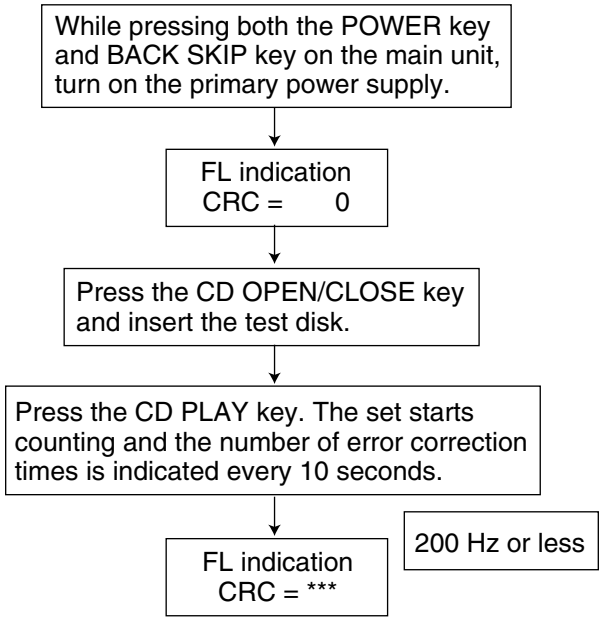
2) CD section

(1) Indication of the C1 error
(2) Cancel of the C1 error indication

3. Adjustment and check method

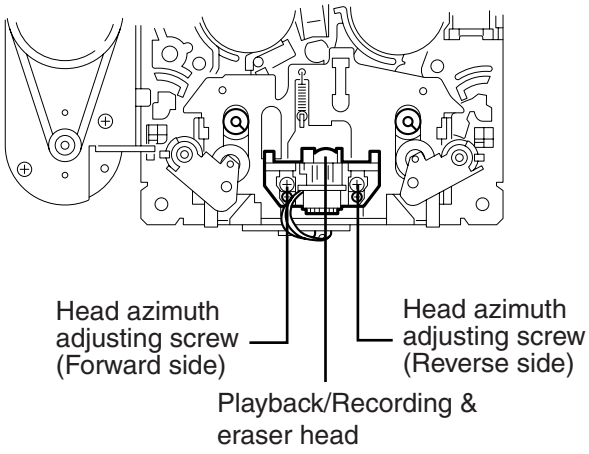
1) CD section

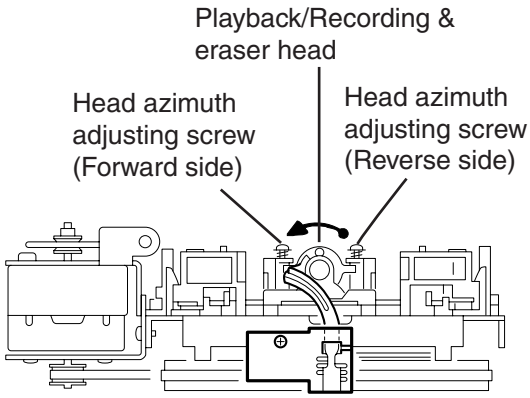
(1) Indication of the C1 error



(2) Cancel of the C1 error indication
To cancel the C1 error indication, cut off the power supply.

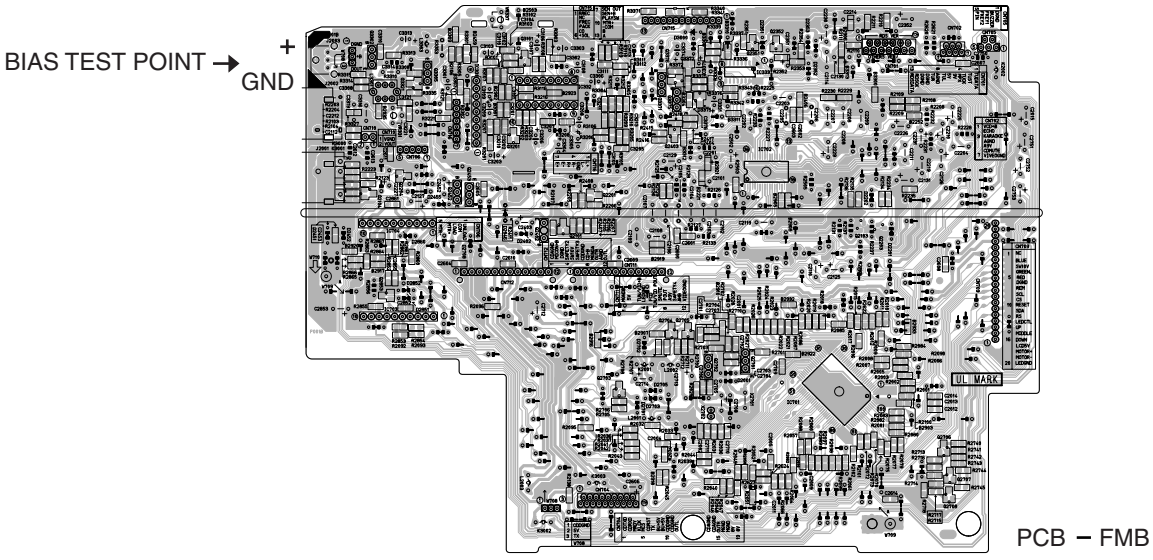
■ Cassette section



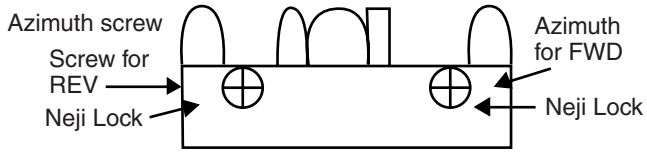
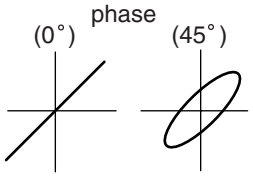


Removing the Cassette Mechanism Assembly

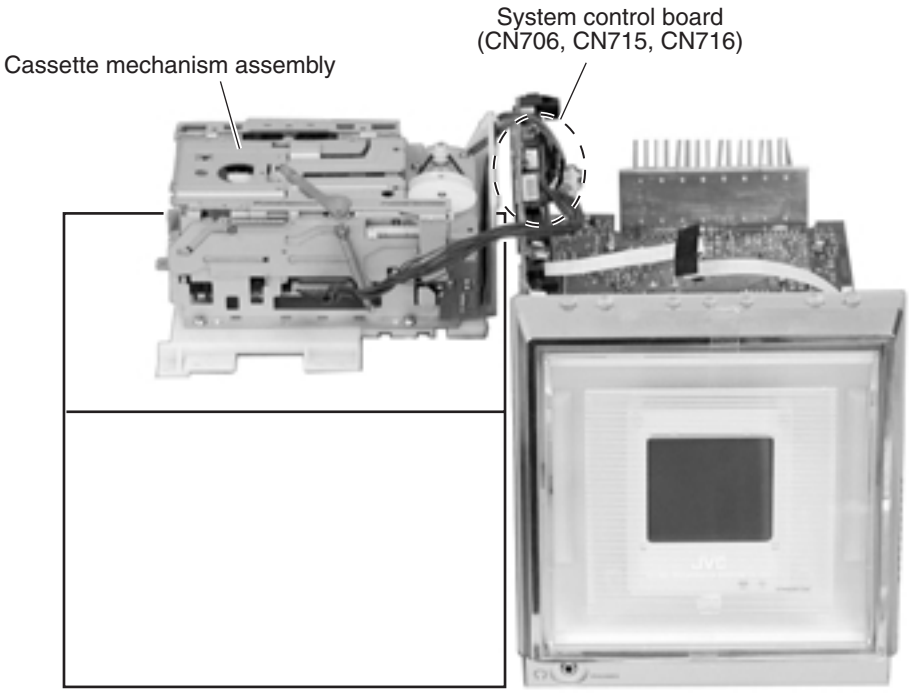
1. Remove the rear cover.
2. Remove the side panels (right and left).
3. Remove the cassette mechanism assembly.
4. Remove the four screws S fastening the cassette mechanism assembly from the back of the cassette mechanism.
5. Press the EJECT button on the front side of the cassette mechanism assembly to open the cassette door, and then remove the cassette mechanism assembly.

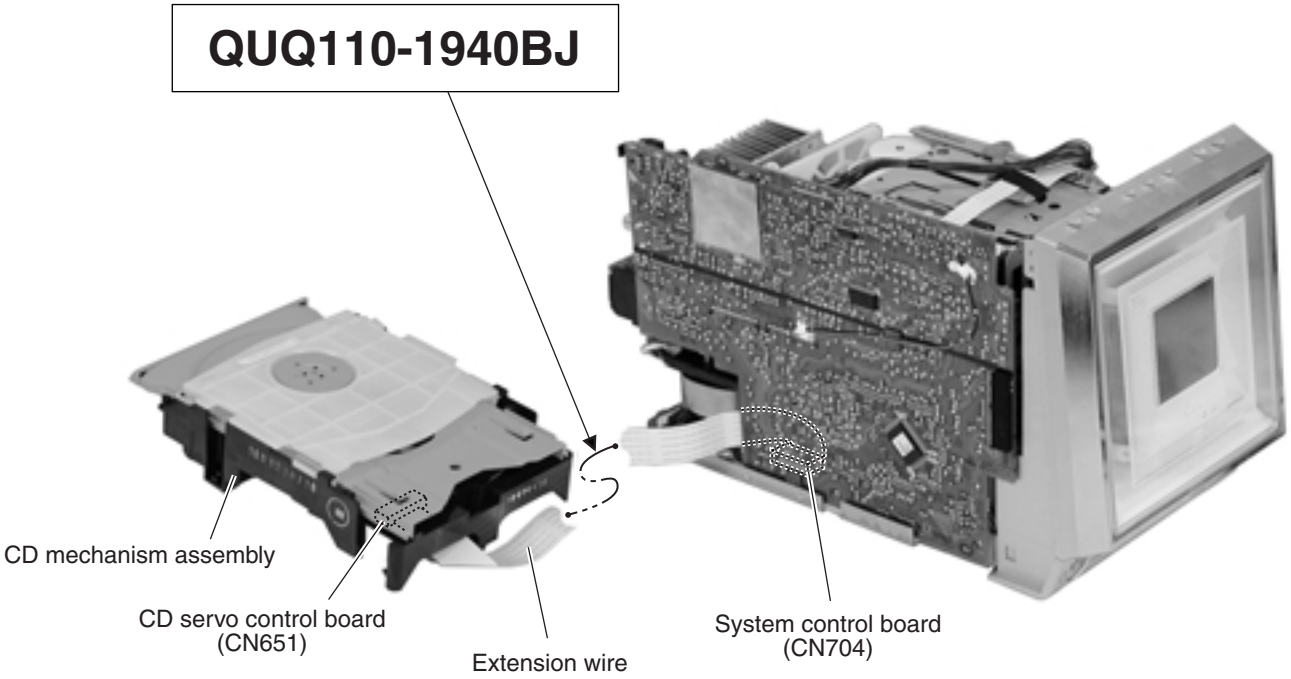


■ Check and adjustment of the Head amplifier section

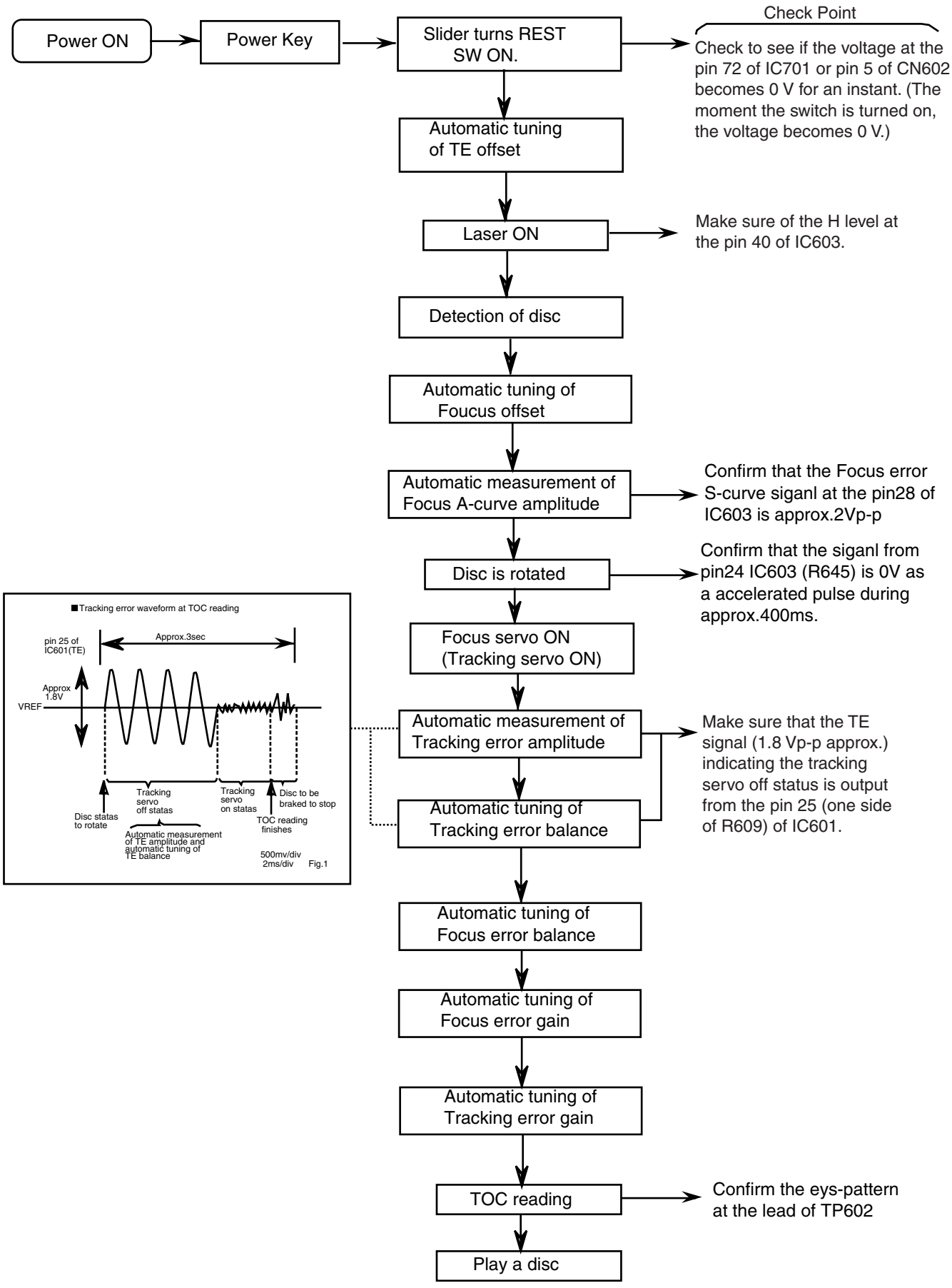
Item	Check/Adjustment Method	Adjusting Point	Standard Value
1. Head azimuth adjustment	1) Play back the end part of the test tape VT703 (10 kHz). 2) Adjust the head azimuth screws so that the output becomes maximum in both the normal and reverse directions. After adjustment, lock the screws with screw bond without fail. Measuring output terminal: Speaker terminal, 4Ωload resistance Difference between L-ch and R-ch: Within 3 dB Difference between FWD and REV directions: Within 4 dB Adjust max level in FWD and REV. After adjusting, should be Applied bond (THREEBOND 1401 A/C) to screw.  	Head azimuth screw	Maximum output 
2. Tape speed adjustment	1) Play back the end part of the test tape VT712 (3 kHz). 2) Adjust VR37 so that the frequency counter reads 3000 ± 15 Hz in playback in the normal direction.	VR37	3000 ± 15Hz
(Reference value) Speed difference between the normal and reverse directions	Measuring output terminal: Speaker terminal Make sure that speed difference between the normal and reverse directions is 60 Hz or less by reading of the frequency counter. (With the beginning part of the test tape)	—	60 Hz or less
Wow and flutter	Play back the end part of the test tape VT712 (3 kHz). Make sure that the wow and flutter meter reads 0.25 % (WRMS) or less.		0.25 % (WRMS) or less
3. Recording / playback frequency characteristic adjustment	1) Set a blank cassette tape (Type I: AC225) and enter the set into the recording pause mode. 2) Cancel the pause mode and start recording. Repeat to input the 1 kHz and 10 kHz reference signals alternately from the CD test disk to record the signals on the blank tape. 3) While playing back the repeatedly input 1 kHz and 10 kHz reference signals, adjust VR31 so that output level of 10 kHz signals is +2 dB ± 1 dB of 1 kHz.	VR31	-1dB ± 1dB
(Reference value) Recording bias frequency	1) Set a blank cassette tape (Type I: AC225) and enter the set into the recording pause mode. 2) Make sure that the bias frequency at the bias test point (Refer on 1-25 board drowing) on the head amplifier board is 70 ± 9 kHz.	—	70 ± 9kHz
(Reference value) Erasing current	1) Set a blank cassette tape (Type I: AC225) and enter the set into the recording pause mode. 2) After connecting a 1Ω resistor to the erasing head in series, cancel the pause mode and start recording. Connect the electronic voltmeter to both the terminals and measure the erasing current.	—	Erasing current: 60 mA (Type I tape)

■ Extension code connecting method





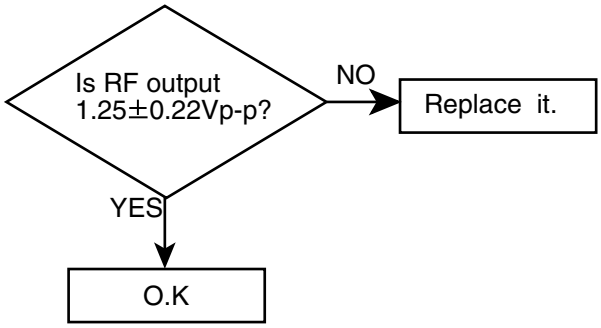
Flow of functional operation until TOC read (CD)



Maintenance of laser pickup

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

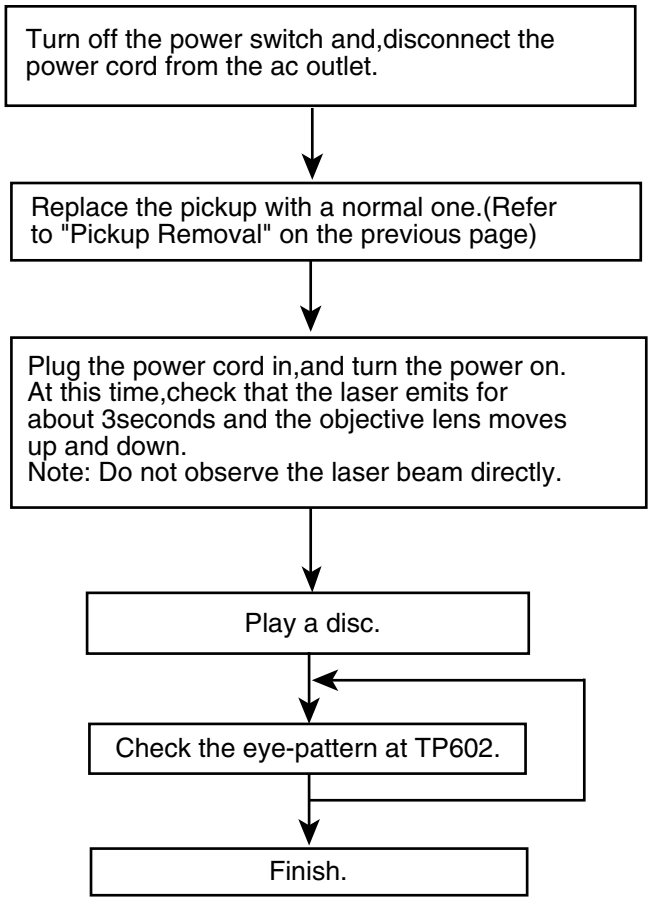
(2) Life of the laser diode (Fig.1)
When the life of the laser diode has expired, the following symptoms wil appear.
(1) The level of RF output (EFM output:amplitude of eye pattern) will below.



(Fig.1)

(3) Semi-fixed resistor on the APC PC board
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power.Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value,the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally,the laser pickup may be damaged due to excessive current.

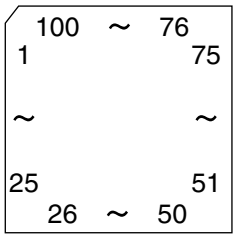
Replacement of laser pickup



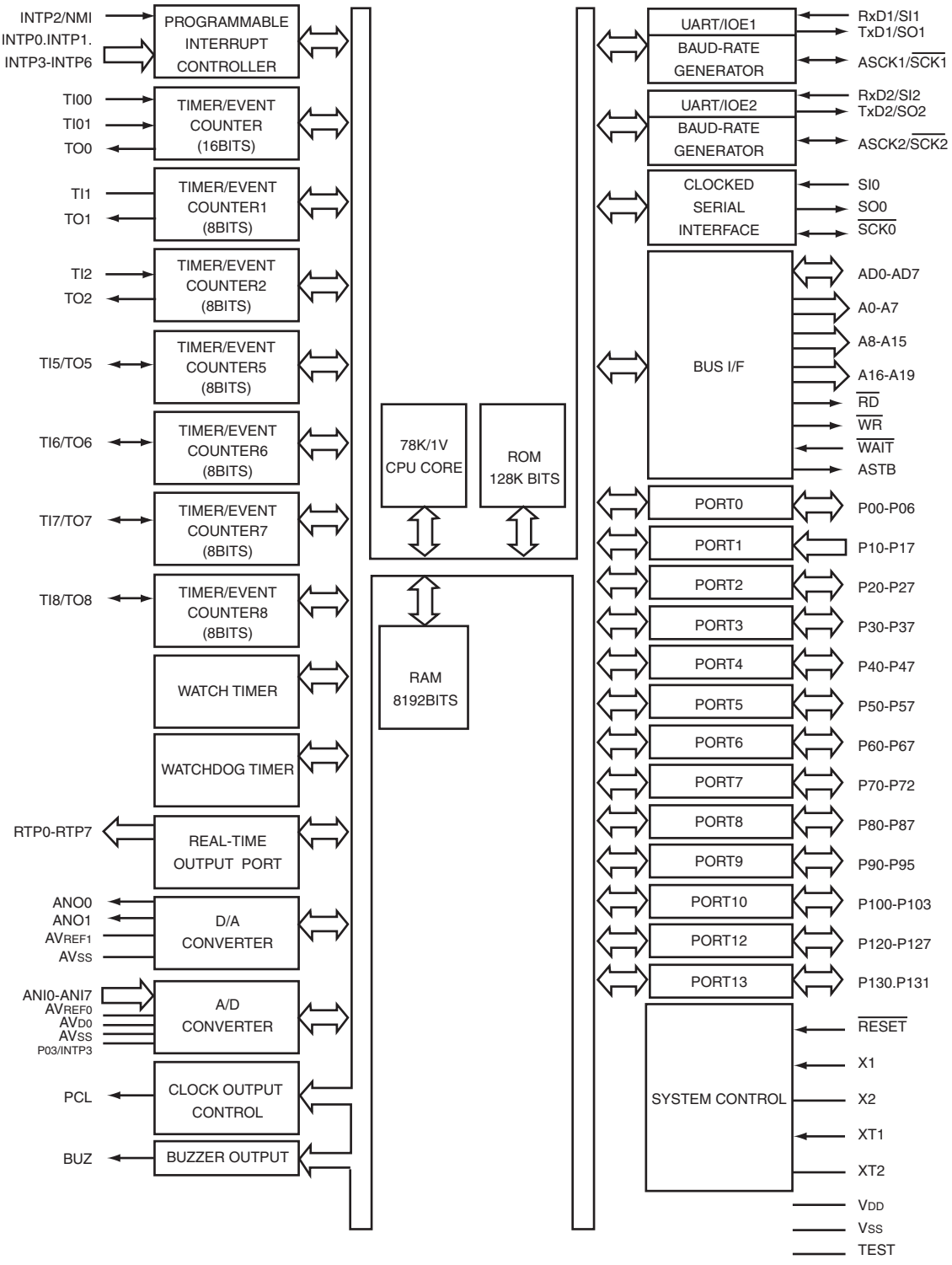
Description of major ICs

UPD784216AGF (IC701) : System micon

1. Pin layout



2. Block diagram



3. Pin function (1/2)

Pin No.	Symbol	I/O	Description
1	FAUX2	-	Not connected
2	NC	-	Not connected
3	RDSDATA	-	Not connected
4	MPX	I	Stereo detection
5	TUST	I	Stereo indicator detection
6	NC	O	Not connected
7	FTUNER	O	Tuner switch output
8	FCD	O	CD switch output
9	VDD	-	Connected with VDD
10	NC	-	Not connected
11	PBMUTE	O	PB mute output
12	NC	-	Not connected
13	PIN	I	Power key input
14	LEDCTL	O	LED control output
15	BUZER	O	Buzzer output
16	MDPOUT	O	MD PB output
17	MDRESET	O	MD reset output
18	SMUTE	O	System mute output
19	NC	-	Not connected
20	NC	-	Not connected
21	POUT	O	Power-on control output
22	VPP	I	GND
23	UP	I	Door position detection - UP
24	RMT0	O	Door open/shut motor control output
25	RMT1	O	Door open/shut motor control output
26	MIDDLE	I	Door position detection - MIDDLE
27	DOWN	I	Door position detection - DOWN
28	RMSPEED	O	Door open/shut motor speed control output
29	VOLCK	O	Volume control clock
30	VOLCE	O	Volume control chip enable
31	VOLDA	O	Volume control data
32	AHB	O	Active hyper bus control
33	BUB	I	Backup detection
34	BTCL	O	Battery control
35	NC	O	Not connected
36	XKILL	I/O	Power-off clock oscillator control
37	VDD	I	Power supply
38	X1	I	Master clock
39	X2	O	Master clock
40	VSS	I	GND
41	XT2	O	Clock for timer
42	XT1	I	Clock for timer
43	RESET	I	Power-on reset
44	REM	I	Remote control sensor
45	RDSCK	-	Not connected
46	NC	-	Not connected
47	PHOTO	I	Reel pulse detection
48	SAFTEY4	I	Current detection
49	NC	-	Not connected
50	NC	-	Not connected

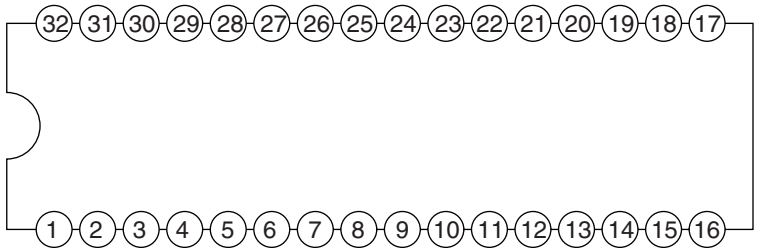
3. Pin function (2/2)

UPD784216AGF(2/2)

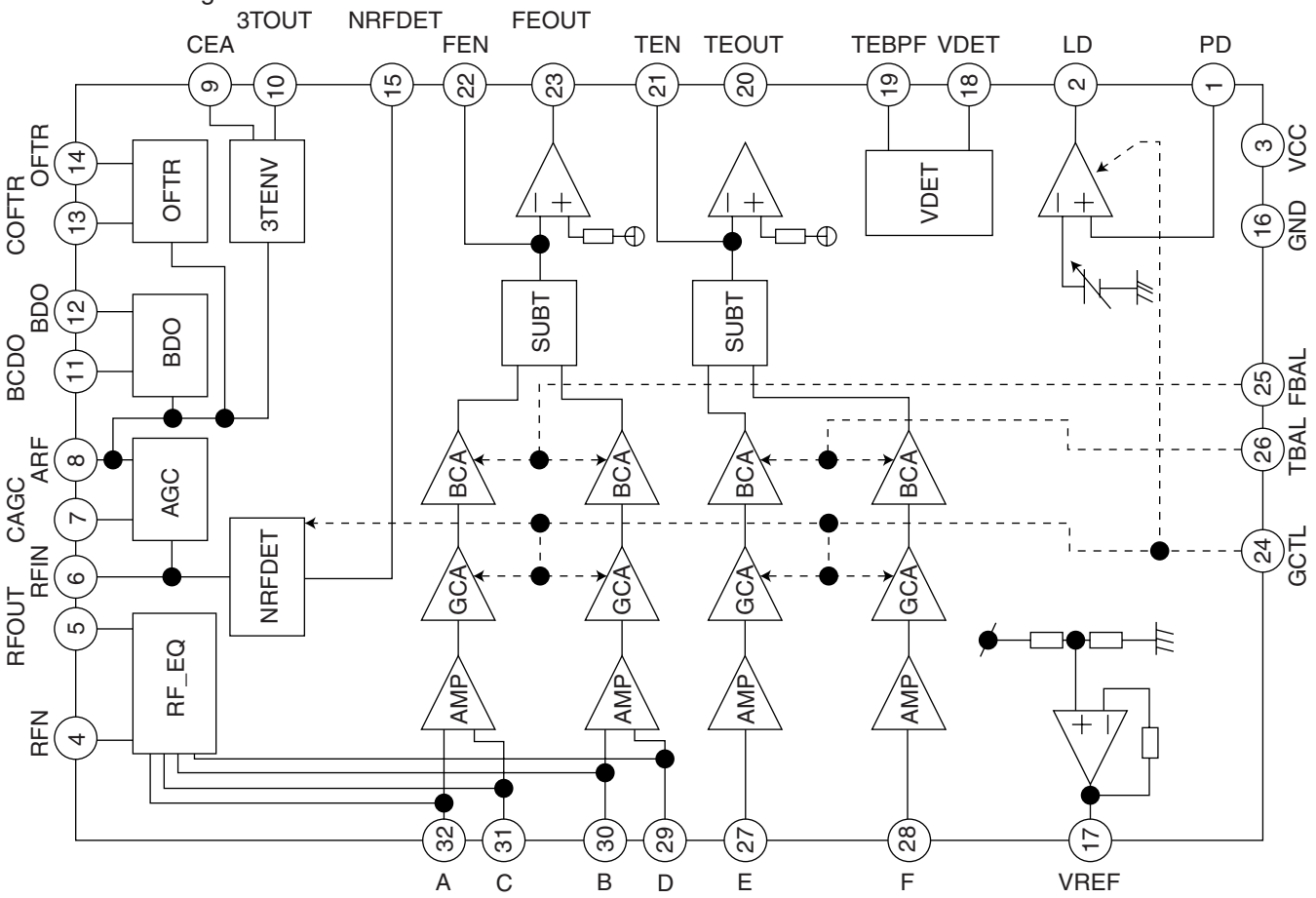
Pin No.	Symbol	I/O	Description
51	AVREF	I	Reference power supply +5 V
52	AVREF0	I	Reference power supply +5 V
53	SEFTY2	I	Current detection
54	SEFTY3	I	Current detection
55	LDCK	I/O	
56	FKEY1	I	Function switch key input
57	VERSION	I	Destination switch input
58	FKEY2	I	Function switch key input
59	KEY1	I	Cassette key input
60	SEFTY1	I	Current detection
61	VSS	I	GND
62	RCDL	O	LED color display control
63	BCDL	O	LED color display control
64	AVREF1	I	Reference power supply +5 V
65	RXD	I	Digital input
66	TXD	O	Digital output
67	NC	-	Not connected
68	CDRXD	I	CD digital input
69	CDTXD	O	CD digital output
70	CDRST	O	CD reset
71	GCDL	O	LED color display control
72	NC	-	Not connected
73	TUDATA (1)	I	Tuner data
74	TUDATA	O	Tuner data
75	TUCK	O	Tuner clock
76	NC	-	Not connected
77	NC	-	Not connected
78	NC	-	Not connected
79	NC	-	Not connected
80	NC	-	Not connected
81	NC	-	Not connected
82	NC	-	Not connected
83	NC	-	Not connected
84	NC	-	Not connected
85	NC	-	Not connected
86	NC	-	Not connected
87	NC	-	Not connected
88	SCL	O	LCD clock
89	CS	O	LCD power supply
90	RESET	O	LCD reset
91	SDA	I/O	LCD serial data
92	NC	-	Not connected
93	RS	I	LCD start
94	NC	-	Not connected
95	NC	-	Not connected
96	SDATA	I/O	Cassette control serial data
97	SCK	I/O	Cassette control serial clock
98	STTA	I/O	Cassette control status signal
99	PLAY	O	Cassette PB switch detection
100	VSS	I	GND

■ AN22000A-W (IC601) : RF head amp.

1. Pin layout



2. Block diagram

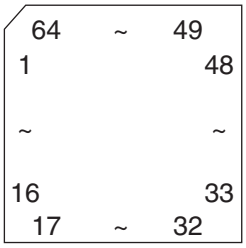


3. Pin function

Pin No.	Function	Pin No.	Function
1	APC amp input terminal.	17	VREF output terminal.
2	APC amp output terminal.	18	VDET output terminal.
3	Power supply.	19	VDET input terminal.
4	RF amp negative input terminal.	20	TE amp. output terminal.
5	RF amp output terminal.	21	TE amp. negative input terminal.
6	AGC input terminal.	22	FE amp. negative input terminal.
7	AGC loop filter capacitor connection terminal.	23	FE amp. output terminal.
8	AGC output terminal.	24	GCTL & APC terminal.
9	Capacitor connection terminal for HPF-amp.	25	FBAL control terminal.
10	3TENV output terminal.	26	TBAL control terminal.
11	Capacitor connection terminal for RF enberope detection.	27	Tracking signal input terminal 1.
12	BDO output terminal.	28	Tracking signal input terminal 2.
13	Capacitor connection terminal for RF enverope detection.	29	Focus signal input terminal 4.
14	OFTR output terminal.	30	Focus signal input terminal 3.
15	NRDET output terminal.	31	Focus signal input terminal 2.
16	Ground terminal.	32	Focus signal input terminal 1.

■ UPD780024AGKB21 (IC251) : Unit micon

1. Pin layout



2. Pin function (1/2)

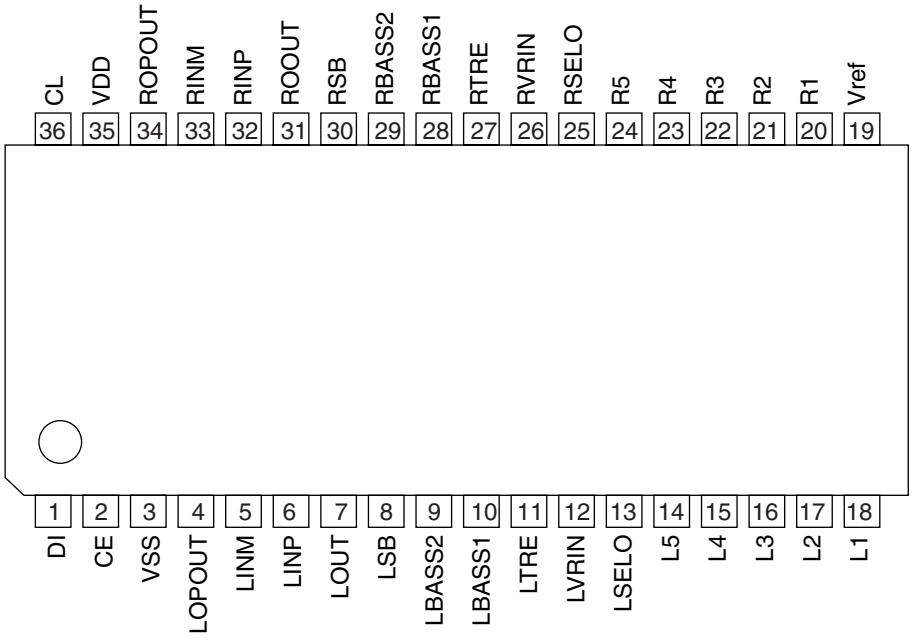
Pin No.	Symbol	I/O	Description
1	P50/A8	-	Connected to GND
2	P59/A9	-	Not used
3	MCS	-	Pull-up +B
4	MRDY	-	Not used
5	CDINDEX	-	Not used
6	CDEMP	I	CD emphasis detection
7	CDTNO	I	CD track No. detection
8	CDCOPY	I	CD copy detection
9	VSS0	-	GND
10	VDD0	-	Power supply
11	P30	-	Not used
12	P31	-	Not used
13	P32	-	Not used
14	MUTE	O	Mute output
15	SUBQ	I	Sub-code Q data input from IC651
16	P35/SO31	-	Not used
17	SQCK	O	Sub-code Q register clock output to IC651
18	KCMND	O	Kick command data
19	MSTAT	O	CD control status output to IC801
20	MCLK	I	CD control command clock input from IC801
21	RXDO	I	Digital data input
22	TXDO	O	Digital data output
23	P25/SCK0	-	Connected to GND
24	VDD1	-	Power supply
25	AVSS	-	GND
26	KEY1	I	Key input 1
27	KEY2	I	Key input 2
28	PCHK	I	Parity check
29	P14/AN14	-	Connected to GND
30	P13/AN13	-	Connected to GND
31	/OPEN	I	Open switch input
32	/REST	I	Rest switch input

2. Pin function (2/2)

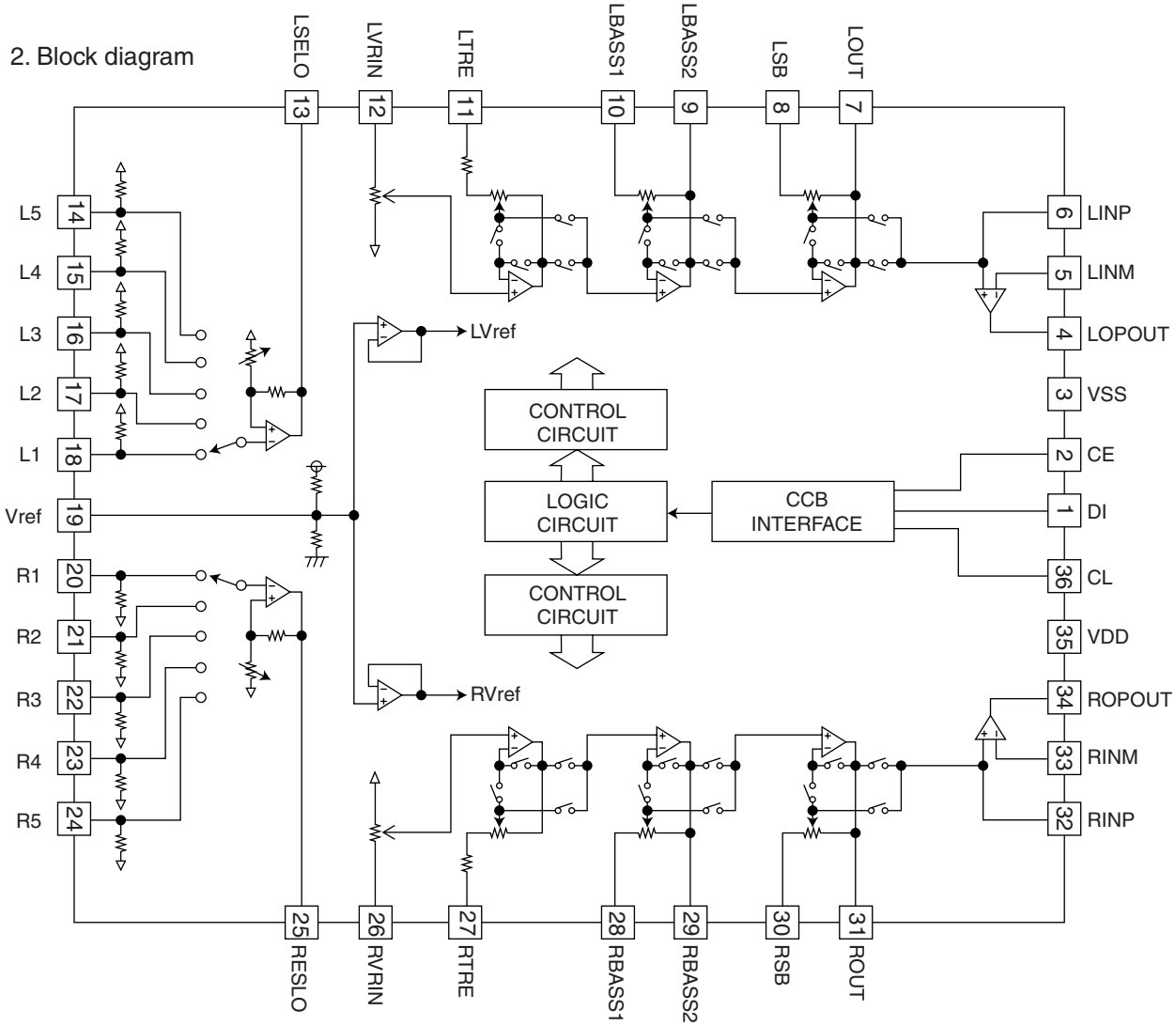
Pin No.	Symbol	I/O	Function
33	P10/AN10	-	Connected to GND
34	AVREF	-	Analog circuit reference voltage. Connected with analog circuit power supply
35	AVDD	-	Analog circuit power supply
36	/RESET	I	CD control reset input from IC801
37	XT2	-	Not used
38	XT1	-	Connected with power supply
39	IC	O	Flash memory control
40	X2	-	Connected with external crystal oscillator
41	X1	-	Connected with external crystal oscillator
42	VSS1	-	GND
43	FLAG	I	Flag signal input from IC651
44	BLKCK	I	Sub-code block clock signal input from IC651
45	/RFDET	I	RF signal amplitude detection input
46	EQx2	O	×2 equalizer switch output
47	EQx4	O	×4 equalizer switch output
48	VCOx4	-	Not used
49	OPEN	I	Open door detection
50	/CLOSE	I	Closed door detection
51	IREFx4	O	×4 DSP current switch output
52	P75/BUZ	-	Not used
53	/RESET	O	Reset signal output to IC651 (L: Reset)
54	STAT	I	Status signal input from IC651
55	/DMUTE	O	Muting output to IC651
56	/P.ON	O	Power on/off switch signal output to IC291
57	MLD	O	Microcomputer command load signal output to IC651
58	MDATA	O	Microcomputer command data output to IC651
59	MCLK	O	Microcomputer command clock signal output to IC651
60	CLKSW	-	Not used
61	JIG	-	Not used
62	JIG	-	Not used
63	JIG	-	Not used
64	JIG	-	Connected to GND

■ LC75345M-X (IC702) : E.volume

1. Pin layout



2. Block diagram

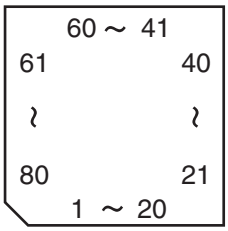


3. Pin function

Pin No.	Symbol	Function
1	DI	Serial data and clock input pin for control.
2	CE	Chip enable pin.
3	VSS	Ground pin.
4	LOPOUT	Output pin of general-purpose operation amplifier.
5	LINM	Non-inverted input pin of general-purpuse operation amplifier.
6	LINP	Non-inverted input pin of general-purpuse operation amplifier.
7	LOUT	ATT + equalizer output pin.
8	LSB	Capacitor and resistor connection pin comprising filters for bass and super-bass band.
9	LBASS2	Capacitor and resistor connection pin comprising filters for bass and super-bass band.
10	LBASS1	Capacitor and resistor connection pin comprising filters for bass and super-bass band.
11	LTRE	Capacitor and resistor connection pin comprising treble band filter.
12	LVRIN	Volume input pin.
13	LSELO	Input selector output pin.
14	L5	Input signal pin.
15	L4	Input signal pin.
16	L3	Input signal pin.
17	L2	Input signal pin.
18	L1	Input signal pin.
19	Vref	0.5 x VDD voltage generation block for analog ground.
20	R1	Input signal pin.
21	R2	Input signal pin.
22	R3	Input signal pin.
23	R4	Input signal pin.
24	R5	Input signal pin.
25	RSELO	Input selector output pin.
26	RVRIN	Volume input pin.
27	RTRE	Capacitor connection pin comprising treble band filter.
28	RBASS1	Capacitor and resistor connection pin comprising filter for bass and super-bass band.
29	RBASS2	Capacitor and resistor connection pin comprising filter for bass and super-bass band.
30	RSB	Capacitor and resistor connection pin comprising filter for bass and super-bass band.
31	ROUT	ATT + equalizer output pin.
32	RINP	Non inverted input pin of general-purpose operation amplifier.
33	RINM	Non inverted input pin of general purpose operation amplifier.
34	ROPOUT	Output pin of general-purpose operation amplifier.
35	VDD	Supply pin.
36	CL	Serial data and clock input pin for control.

■ MN662790RSC (IC651) : Digital servo & processor

1.Pin layout



2.Pin function

MN662790RSC (1/2)

Pin No.	Symbol	I/O	Description
1	BCLK	O	Bit clock output for SRDATA
2	LRCK	O	Identifying signal output of L,R
3	SRDATA	O	Serial data output
4	DVDD1	-	Power supply for digital circuit
5	DVSS1	-	Connect to ground for digital circuit
6	TX	O	Digital audio interface output signal
7	MCLK	I	Micom command clock signal input
8	MDATA	I	Micom command data signal input
9	MLD	I	Micom command load signal input L:load
10	SENSE	-	Non connect
11	FLOCK	-	Non connect
12	TLOCK	-	Non connect
13	BLKCK	O	Sub code block clock signal (Command execution : CD-TEXT data readout enabling signal (DQSY) output)
14	SQCK	I	Export clock signal input for sub code Q resister
15	SUBQ	O	Sub code Q data output
16	DMUTE	I	Muting input H:muting
17	STAT	O	Status signal output
18	LSI_RST	I	Reset signal input L:reset
19	SMCK	O	Clock signal output MSEL is H : 8.4672 MHz MSEL is L : 4.2336 MHz
20	CSEL	I	Oscillation frequency specification terminal H:33.8688 MHz L:16.9344 MHz
21	TEST2	-	TEST2 terminal usually : open
22	TVD	O	Traverse drive output
23	PC	-	Non connect
24	ECM	O	Spindle motor drive signal output (Compulsion mode output)
25	ECS	O	Spindle motor drive signal output (Servo error signal output)
26	VDETMON	-	Non connect
27	TRD	O	Tracking drive signal output
28	FOD	O	Focus drive signal output
29	VREF	-	Reference voltage for DA output section
30	FBAL	O	Focus balance adjust signal output
31	TBAL	O	Tracking balance adjust signal output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF Envelope signal input (analog input)
35	TEST3	I	TEST3 Terminal usually : Fixation L
36	OFT	I	Off track signal input H : off track
37	TRCRS	I	Track cross signal input (analog input)
38	RFDET	I	RF detection signal input L : detection
39	BDO	I	Dropout signal input H : dropout
40	LDON	-	Non connect

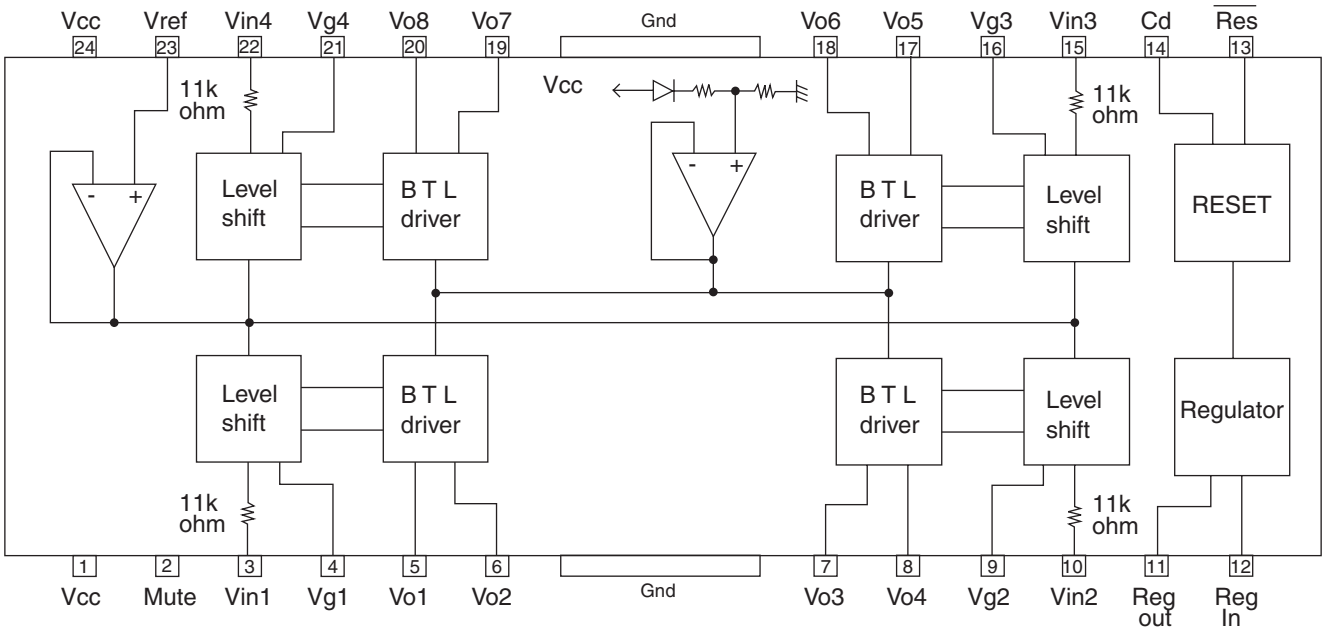
2.Pin function

MN662790RSC (2/2)

Pin No.	Symbol	I/O	Functions
41	PLLF2	I/O	Terminal for loop filter characteristic switch for PLL
42	DSLBDA	-	Non connect
43	WVEL	-	Non connect
44	ARF	I	RF Signal output
45	IREF	I	Standard electric current input terminal
46	DRF	I	Bias terminal for DSL
47	DSLF	I/O	Loop filter terminal for DSL
48	PLLF	I/O	Loop filter terminal for PLL
49	VCOF	I/O	Loop filter terminal for VCO
50	AVDD2	-	Power supply terminal for analog circuit
51	AVSS2	-	Connect to ground terminal for analog circuit
52	EFM	-	Non connect
53	DSLB	O	PLL extraction clock output
54	VCOF2	I/O	Loop filter terminal for VCO
55	SUBC	O	Sub code serial output
56	SBCK	I	Clock signal input for sub code serial output
57	VSS	-	Connect to ground terminal for oscillation circuit
58	X1	I	Oscillation circuit input terminal f=16.9344 MHz, 33.8688 MHz
59	X2	O	Oscillation circuit output terminal f=16.9344 MHz, 33.8688 MHz
60	VDD	-	Power supply terminal for oscillation circuit
61	BYTCK	-	Non connect
62	LDON	O	Laser ON signal output H : ON
63	GCTRL	O	General I/O port
64	IPFLAG	-	Non connect
65	FLAG	O	Flag signal output
66	CLVS	-	Non connect
67	CRC	-	Non connect
68	DEMPH	O	De-emphasis detection signal output
69	RESY	-	Non connect
70	IOSEL	I	Mode switch terminal
71	TEST	I	TEST terminal usually : H
72	AVDD1	-	Power supply terminal for analog circuit (for audio output section)
73	OUTL	O	Lch audio output
74	AVSS1	-	Connect to ground terminal for analog circuit (for audio output section)
75	OUTR	O	Rch audio output
76	DQSY	I	RF signal polarity specification terminal
77	VCC5V	-	Power supply terminal (5V)
78	PSEL	O	IOSEL=H TEST terminal IOSEL=L SRDATA input
79	MSEL	O	IOSEL=H SMCK terminal output (frequency switch terminal) IOSEL=L LRCK input
80	SSEL	O	IOSEL=H SUBQ terminal output mode switch terminal IOSEL=L BCLK input

■ LA6541-X (IC801) : Servo driver

1. Pin layout & Block diagram

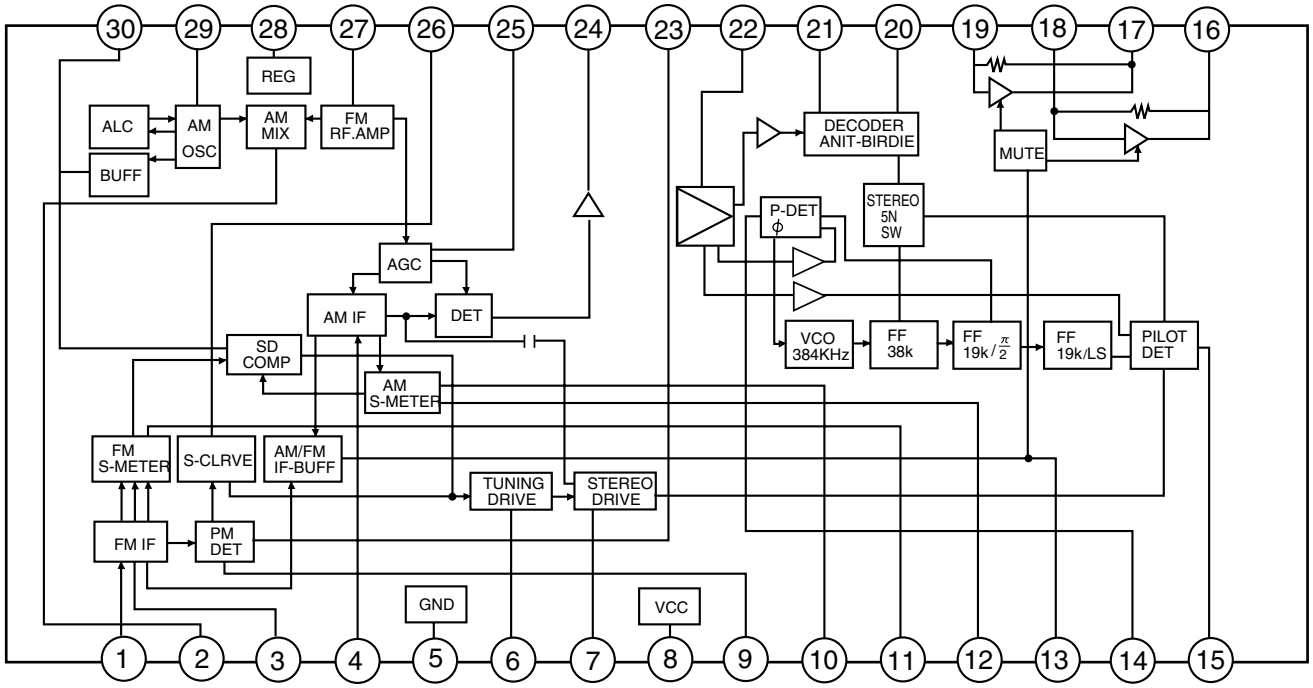


2. Pin function

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

■ LA1838 (IC1) : FM AM IF amp & Detector, FM MPX decoder

1. Block diagram

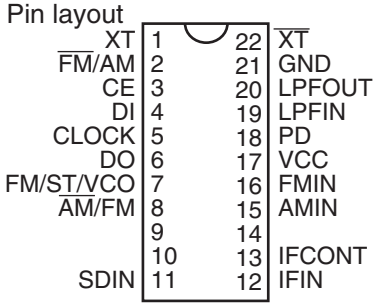


2. Pin function

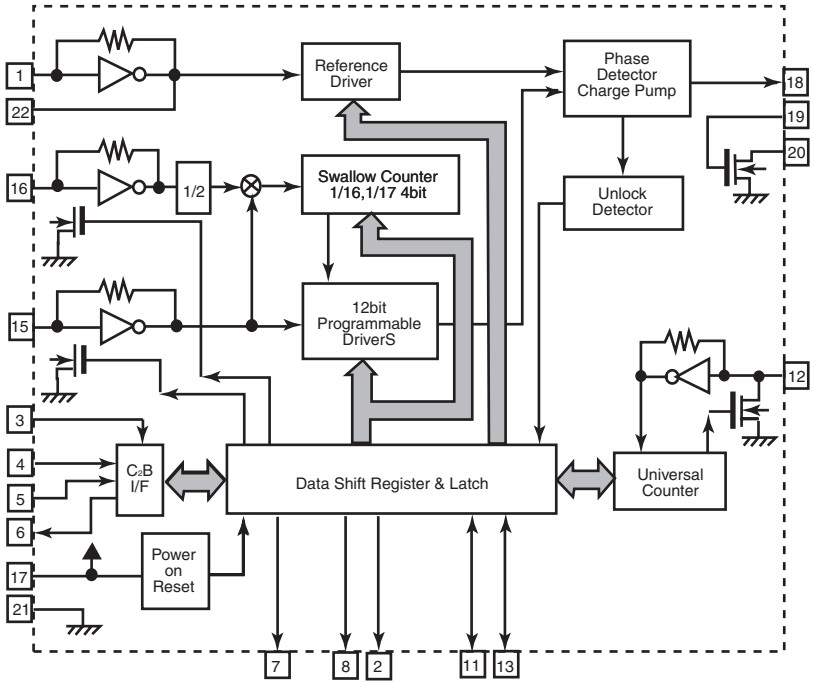
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	FM IN	I	This is an input terminal of FM IF signal.	16	L OUT	O	Left channel signal output.
2	AM MIX	O	This is an out put terminal for AM mixer.	17	R OUT	O	Right channel signal output.
3	FM IF	I	Bypass of FM IF	18	L IN	I	Input terminal of the Left channel post AMP.
4	AM IF	I	Input of AM IF Signal.	19	R IN	I	Input terminal of the Right channel post AMP.
5	GND	—	This is the device ground terminal.	20	RO	O	Mpx Right channel signal output.
6	$\overline{\text{TUNED}}$	O	When the set is tunning,this terminal becomes "L".	21	LO	O	Mpx Left channel signal output.
7	$\overline{\text{STEREO}}$	O	Stereo indicator output. Stereo "L", Mono: "H"	22	MPX IN	I	Mpx input terminal
8	VCC	—	This is the power supply terminal.	23	FM OUT	O	FM detection output.
9	FM DET	—	FM detect transformer.	24	AM DET	O	AM detection output.
10	AM SD	—	This is a terminal of AM ceramic filter.	25	AM AGC	I	This is an AGC voltage input terminal for AM
11	FM VSM	O	Adjust FM SD sensitivity.	26	AFC	—	This is an output terminal of voltage for FM-AFC.
12	AM VSM	O	Adjust AM SD sensitivity.	27	AM RF	I	AM RF signal input.
13	MUTE	I/O	When the signal of IF REQ of IC121(LC72131) appear, the signal of FM/AM IF output. //Muting control input.	28	REG	O	Register value between pin 26 and pin28 besides the frequency width of the input signal.
14	FM/$\overline{\text{AM}}$	I	Change over the FM/AM input. "H" :FM, "L" : AM	29	AM OSC	—	This is a terminal of AM Local oscillation circuit.
15	$\overline{\text{MONO}}$/ST	O	Stereo : "H", Mono: "L"	30	OSC BUFFER	O	AM Local oscillation Signal output.

■ LC72136N (IC2) : PLL frequency synthesizer

1. Pin layout



2. Block diagram

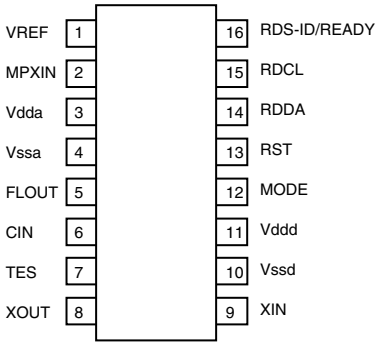


3. Pin function

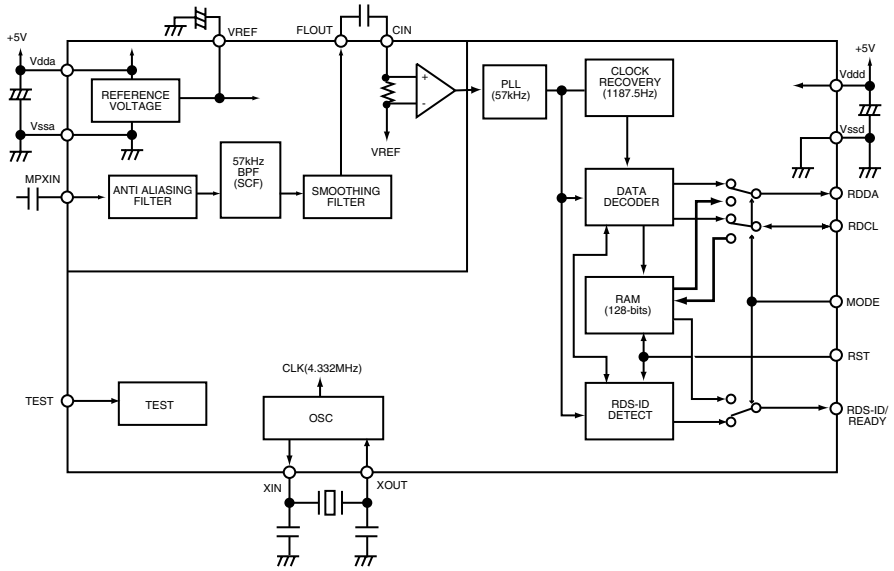
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XT	I	X'tal oscillator connect (75kHz)	12	IFIN	I	IF counter signal input
2	$\overline{FM}$/AM	O	LOW:FM mode	13	IFCONT	O	IF signal output
3	CE	I	When data output/input for 4pin(input) and 6pin(output): H	14		-	Not use
4	DI	I	Input for receive the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

■ LA72723 (IC3) : RDS demodulation

1. Pin layout



2. Block Diagram

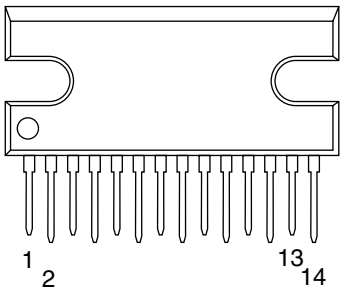


3. Pin functions

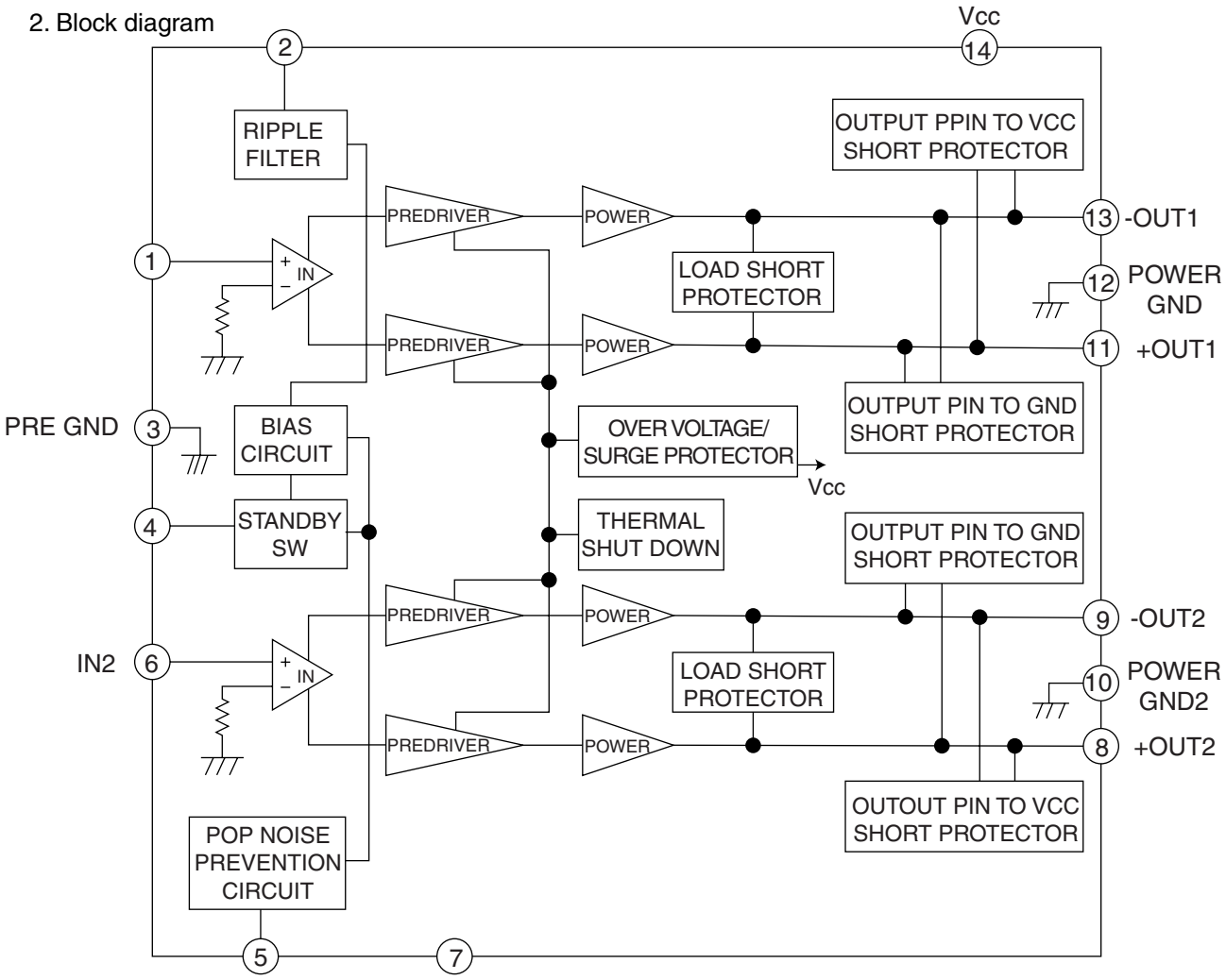
Pin No.	Symbol	I/O	Function
1	VREF	O	Reference voltage output (Vdda/2)
2	MPXIN	I	Baseband (multiplexed) signal input
3	Vdda	—	Analog power supply (+5V)
4	Vssa	—	Analog ground
5	FLOUT	O	Subcarrier input (filter output)
6	CIN	I	Subcarrier input (comparator input)
7	TEST	I	Test input
8	XOUT	O	Crystal oscillator output (4.332MHz)
9	XIN	I	Crystal oscillator input (exeternal reference input)
10	Vssd	—	Digtal ground
11	Vddd	—	Digtal power supply
12	MODE	I	Read mode setting (0:master,1:slave)
13	RST	I	RDS-ID/RAM reset (positive polarity)
14	RDDA	O	RDS data output
15	RDCL	I/O	RDS clock output (master mode)/RDS clock input (slave mode)
16	RDS-ID READY	O	RDS-ID/READY output (negative polarity)

■ LA4628 (IC801) : Power amp.

1. Pin layout

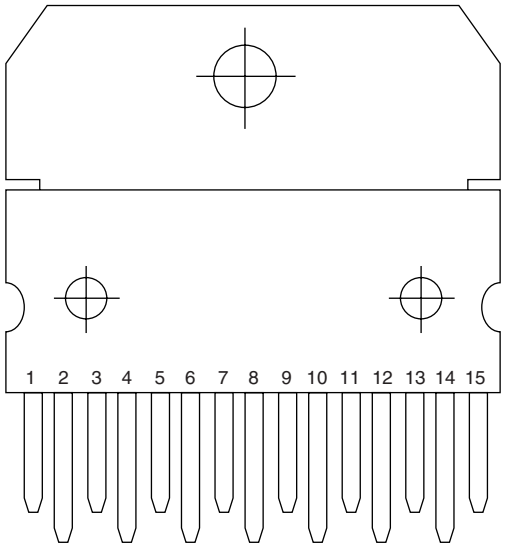


2. Block diagram

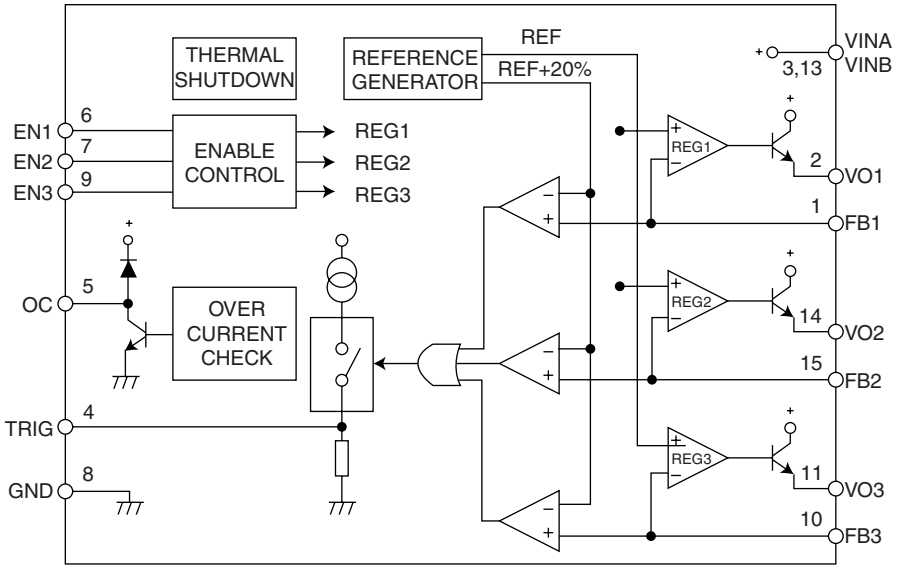


■ L4909 (IC802) : Regulator

1. Pin layout



2. Block diagram

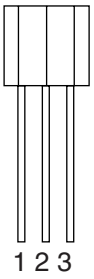


3. Pin functions

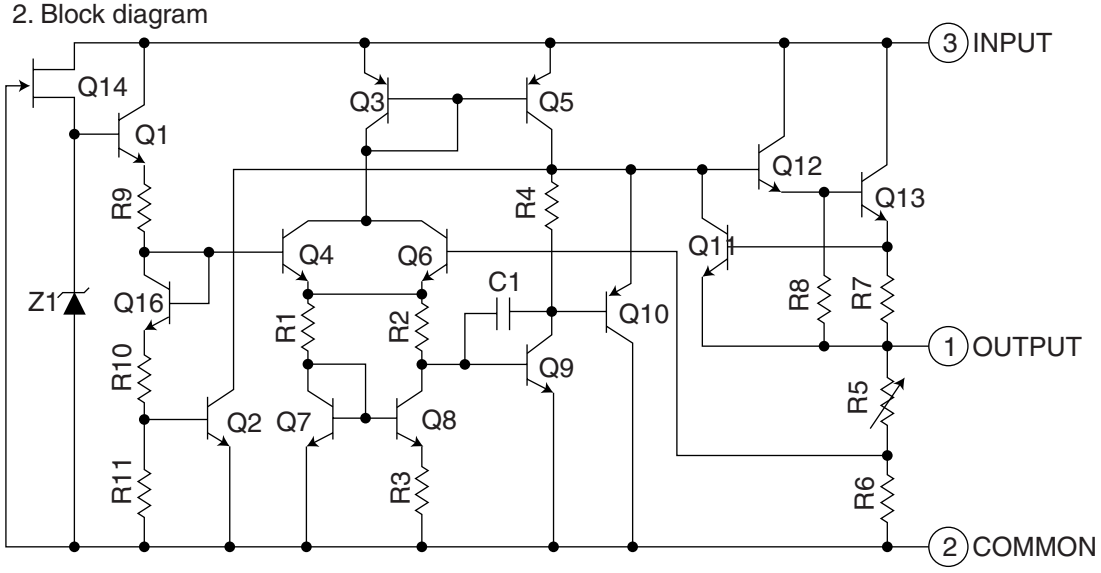
Pin No.	Symbol	Function
1	FB1	REG1 feedback voltage input
2	VO1	REG1 output voltage
3	VINA	Input DC supply voltage
4	TRIG	Trigger for external SCR (crowbar protection)
5	OC	Over current warning output
6	EN1	REG1 enable input
7	EN2	REG2 enable input
8	GND	Analog ground
9	EN3	REG3 enable input
10	FB3	REG3 feedback voltage input
11	VO3	REG3 output voltage
12	N.C.	Not connected
13	VINB	Input DC supply voltage
14	VO2	REG2 output voltage
15	FB2	REG2 feedback voltage input

■ KIA78S05P-T (IC803) : Reglator

1. Pin layout

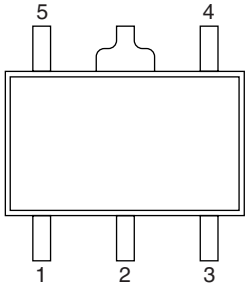


2. Block diagram

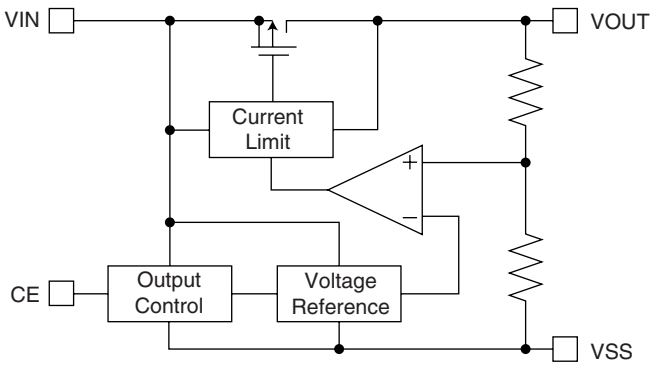


■ XC62HR3502P-X (IC291) : Regulator

1. Pin layout



2. Block diagram

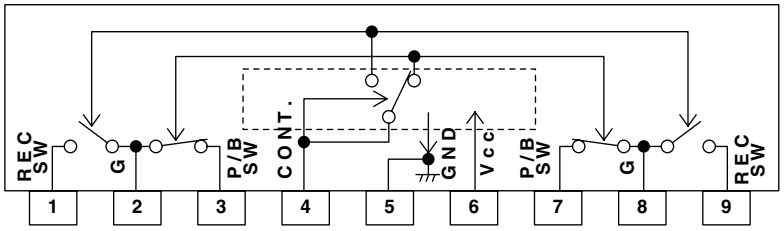


3. Pin function

Pin No.	Symbol	Function
1	VSS	Ground
2	VIN	Supply voltage input
3	CE	Chip enable
4	NC	Non connect
5	VOUT	Regulated output voltage

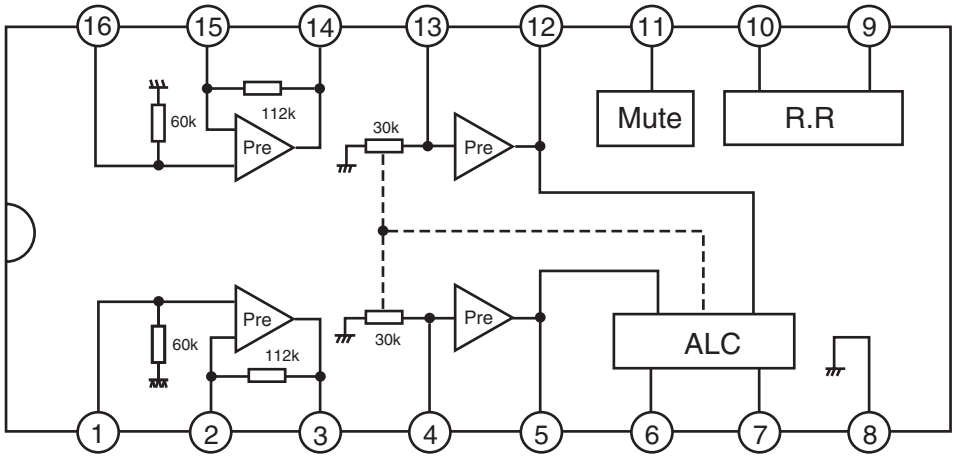
■ BA3126N (IC331) : R / P switch

1. Pin layout & Block diagram



■ AN7317 (IC332) : R / P amp

1. Pin layout & Block diagram

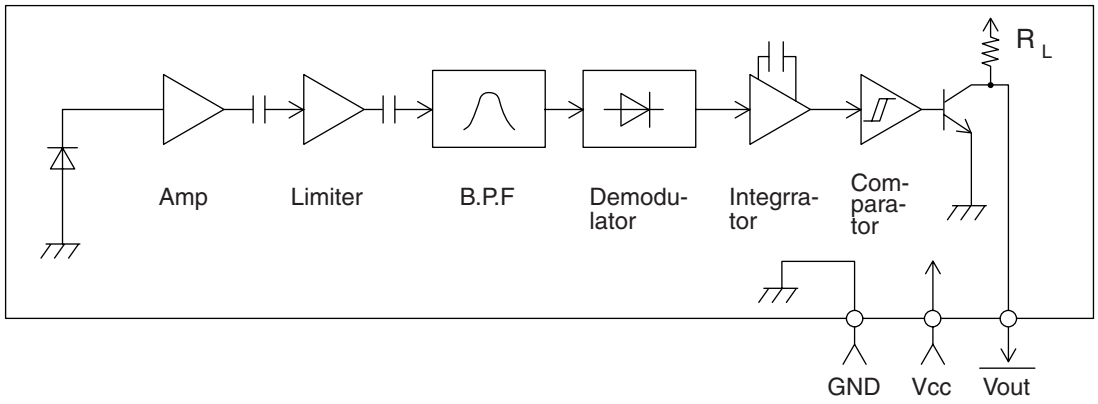


2. Pin function

Pin No.	Function
1	CH1 playback amp input
2	Feedback of CH1 playback amp
3	CH1 playback amp output
4	CH1 recording amp input
5	CH1 recording amp output
6	Low cut of ALC
7	Time of ALC
8	GND
9	Vcc
10	Lipple filter
11	Recording amp mute
12	CH2 recording amp output
13	CH2 recording amp input
14	CH2 playback amp output
15	Feedback of CH2 playback amp
16	CH2 playback amp input

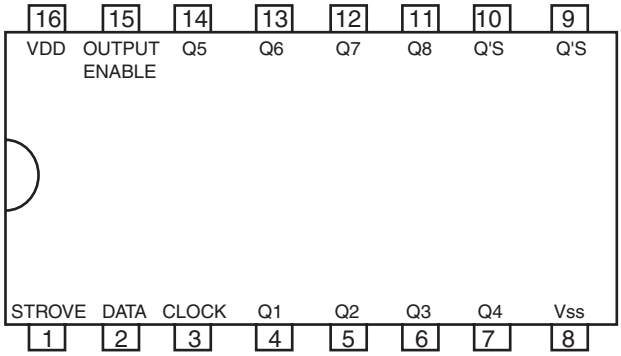
■ GP1UM271XK (IC901) : Remocon

1. Block diagram

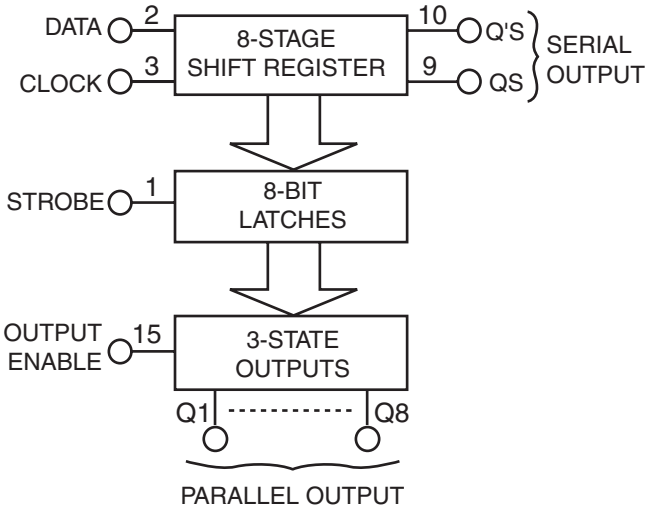


■ BU4094BCF-X (IC333) : Shift / Store registor

1. Pin layout

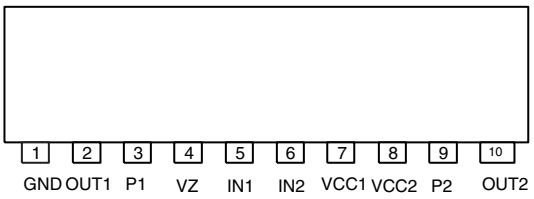


2. Block diagram



■ LB1641 (IC703, IC704) : DC motor driver

1. Pin layout



2. Pin function

Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	CLOCKWISE
0	1	0	1	COUNTER-CLOCKWISE
1	1	0	0	Brake

< MEMO >

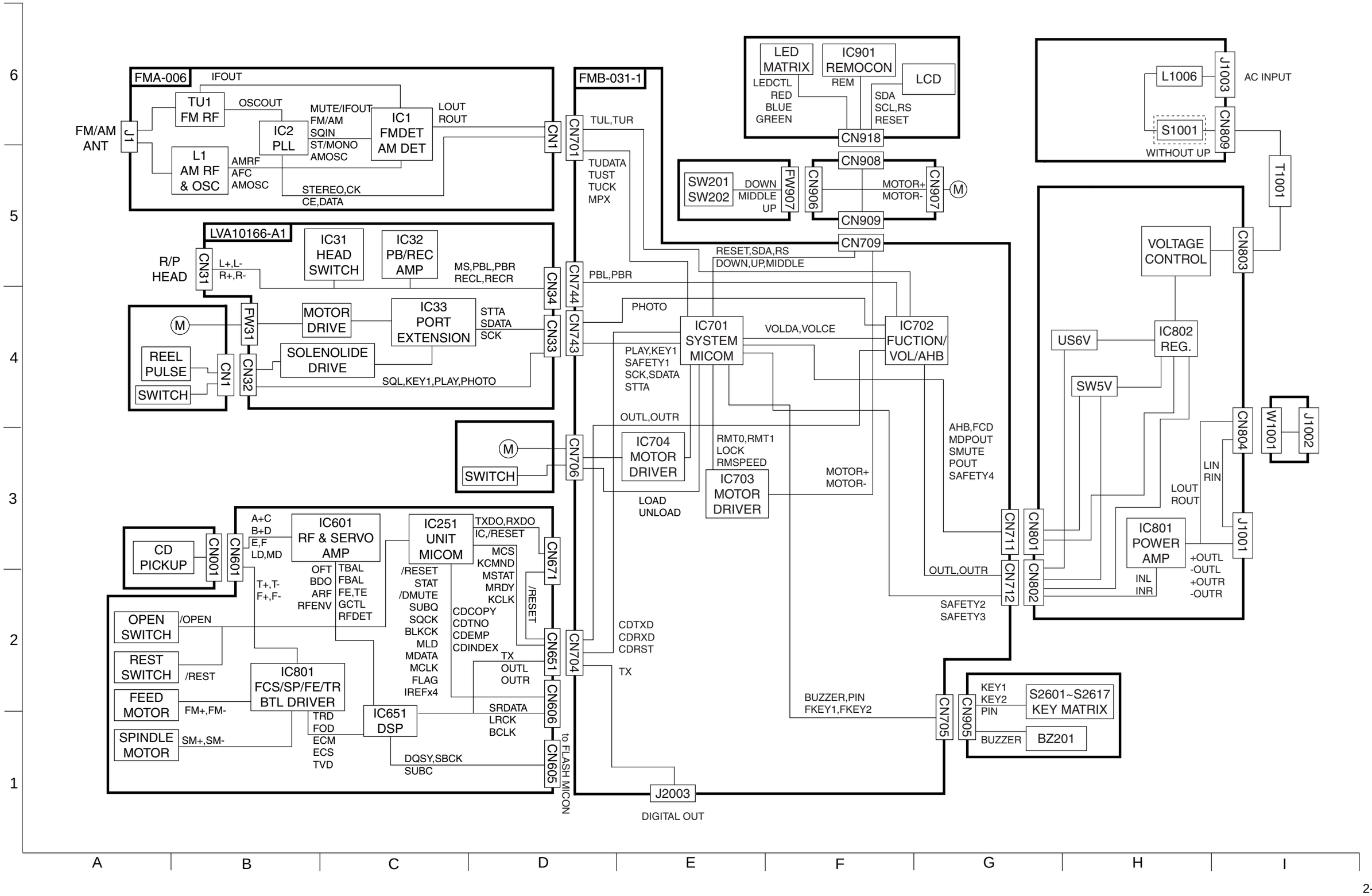
JVC

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

(No.21074)

200202

Block diagram



Standard schematic diagrams

■ Main & control circuit

FUNC./VOL/AHB IC VOLTAGE MEASUREMENT

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOLT	0	0	0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
PIN NO.	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
VOLT	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	9.8	0

※MARK

	B/E/EN/EV	A	USeries	J/C
R2039	10K	11K	22K	20K
R2040	NONE	13K	4.7K	10K
R2411	FR 5.6 1/4W		NONE	
D2046	NONE		IN4003S-T5	
L2003	GQL244K-100Z		GUY150-050Y	
C2606	QEKC1CM-226Z		NONE	

FMB-031-2

FMH-034-6

CONNECTION BOARD

FMH-034-5

TO CN1 OF FMA-006

CASSETTE MOTOR DRIVER

DOOR MOTOR DRIVER

SYSTEM MICOM

CLOCK SHIFT

BACKUP

RESET

SW5V

FUNC./VOL/AHB

PHOTO BUFFER

FMH-034-4

EJECT AHB TAPE CD AUX CD EJECT VOL+ VOL− SLEEP

POWER COLOR FM/AM REC MODE REC |<< STOP >>|

TO CN851 OF FMU-N1

FROM CN802 OF FMH-034-1

FROM CN801 OF FMH-034-1

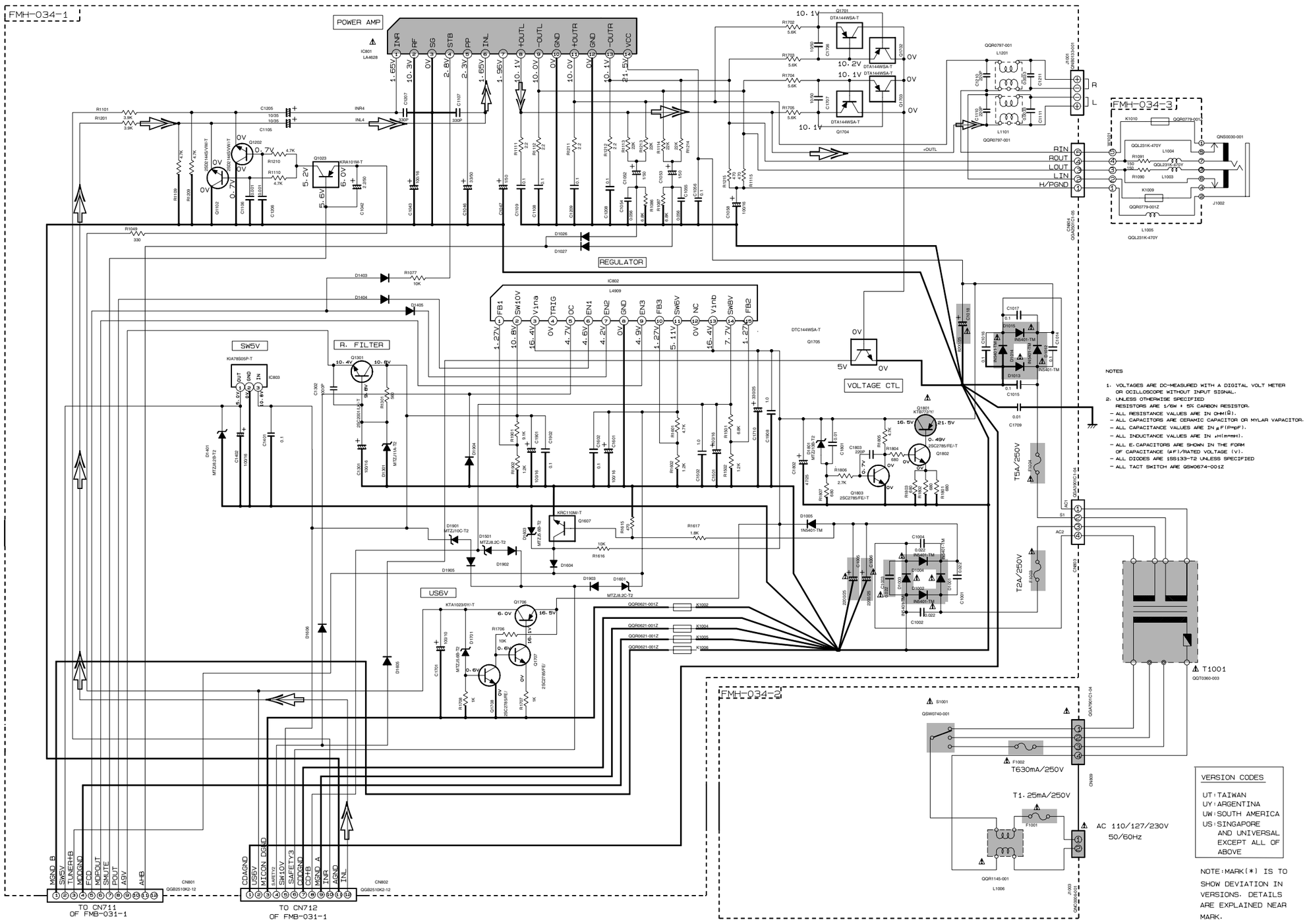
TO CASSETTE SECTION

FMB-031-1

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION —— CD STOP MODE
2. UNLESS OTHERWISE SPECIFIED
   RESISTORS ARE 1/8W ±5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHMS Ω.
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN μF(PμF).
   ALL INDUCTANCE VALUES ARE IN μH(mmH).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133-T2 UNLESS SPECIFIED
   ALL TACT SWITCH ARE QSW0674-001Z

■ Power amplifier & Power supply circuit



NOTES

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2. UNLESS OTHERWISE SPECIFIED
   RESISTORS ARE 1/6W ± 5% CARBON RESISTOR.
   - ALL RESISTANCE VALUES ARE IN OHM(Ω).
   - ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR VAPACITOR.
   - ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   - ALL INDUCTANCE VALUES ARE IN μH(m=mH).
   - ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   - ALL DIODES ARE 1SS133-T2 UNLESS SPECIFIED
   - ALL TACT SWITCH ARE QSW0674-001Z

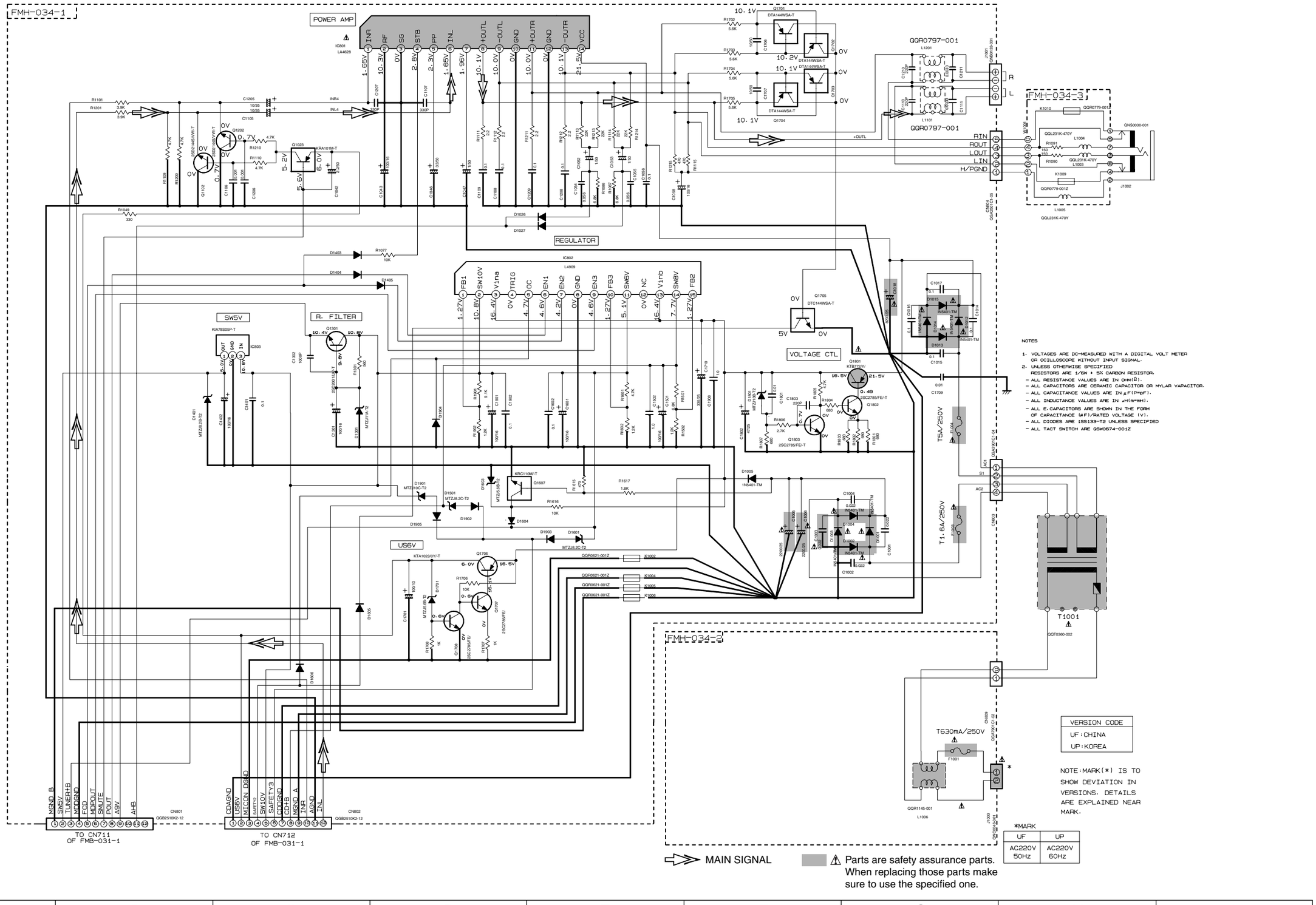
VERSION CODES
UT : TAIWAN
UY : ARGENTINA
UW : SOUTH AMERICA
US : SINGAPORE AND UNIVERSAL EXCEPT ALL OF ABOVE

NOTE : MARK(*) IS TO SHOW DEVIATION IN VERSIONS. DETAILS ARE EXPLAINED NEAR MARK.

MAIN SIGNAL

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

■ Power amplifier & Power supply circuit (UP only)



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OCILLOSCOPE WITHOUT INPUT SIGNAL.
2. UNLESS OTHERWISE SPECIFIED
   RESISTORS ARE 1/6W ± 5% CARBON RESISTOR.
   - ALL RESISTANCE VALUES ARE IN OHM(Ω).
   - ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR VAPACITOR.
   - ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   - ALL INDUCTANCE VALUES ARE IN μH(m=mH).
   - ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   - ALL DIODES ARE 1SS133-T2 UNLESS SPECIFIED
   - ALL TACT SWITCH ARE QSW0574-001Z

VERSION CODE
UF : CHINA
UP : KOREA

NOTE : MARK(*) IS TO SHOW DEVIATION IN VERSIONS. DETAILS ARE EXPLAINED NEAR MARK.

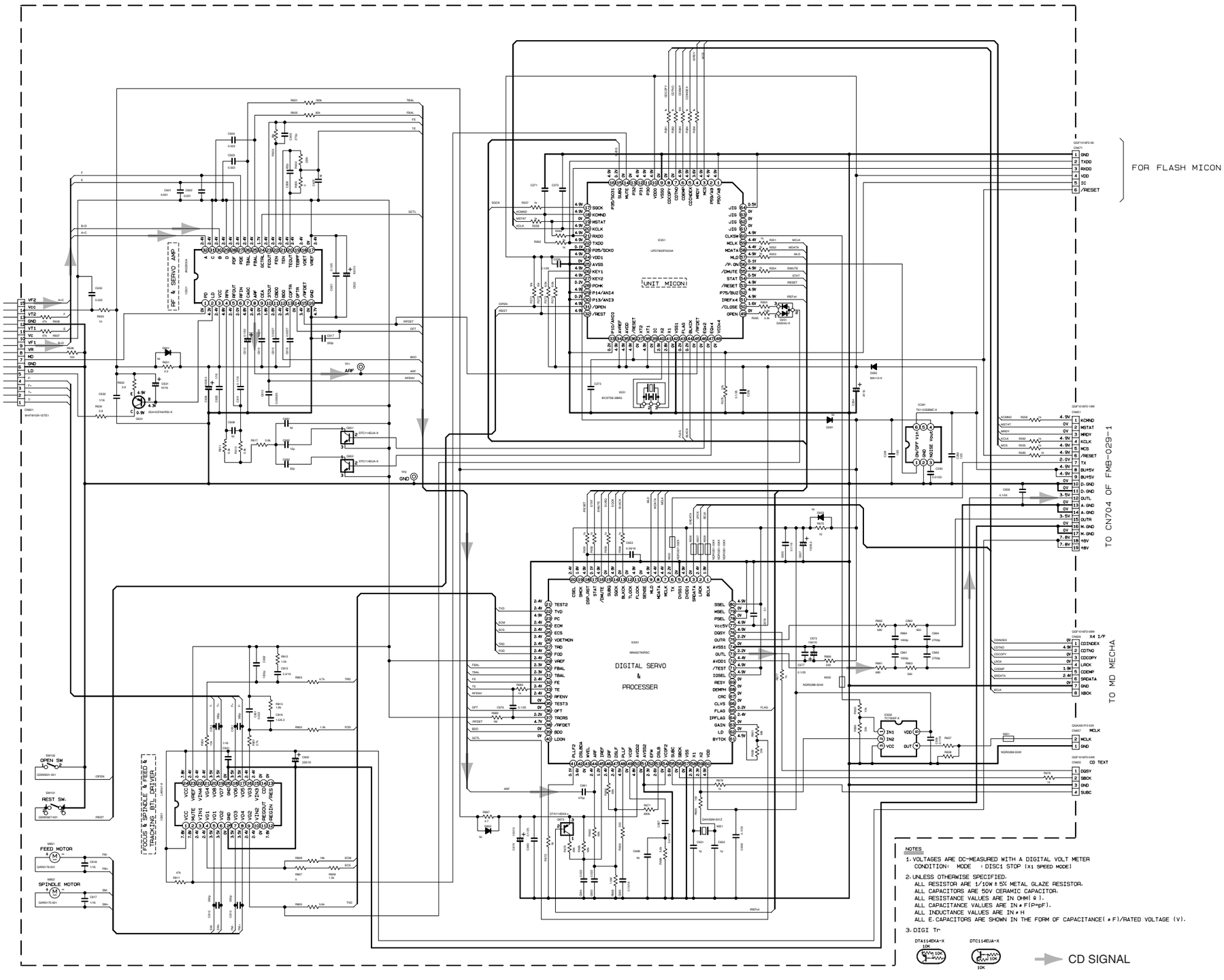
*MARK

UF	UP
AC220V 50Hz	AC220V 60Hz

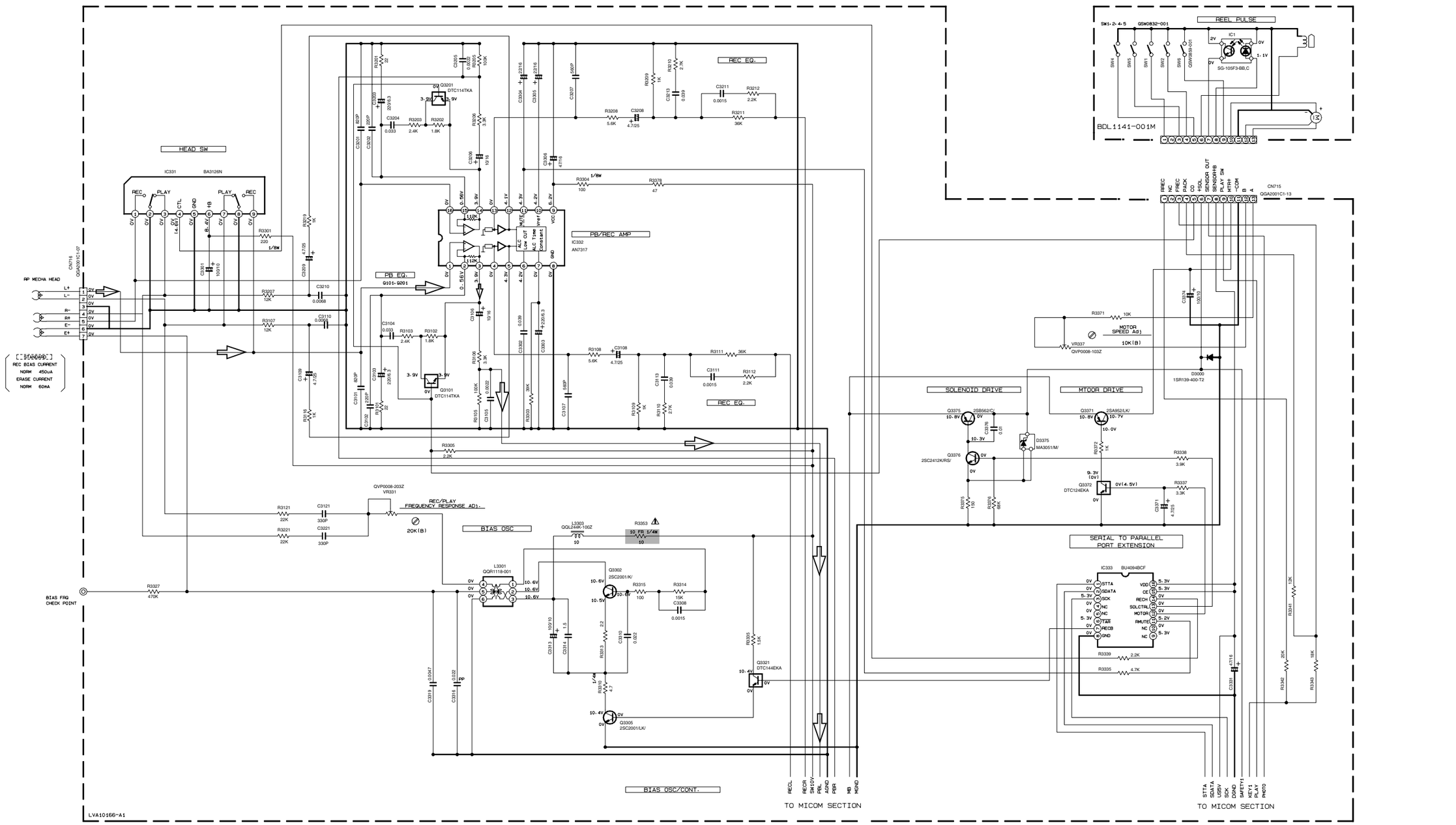
MAIN SIGNAL

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

■ CD control circuit



■ Tape circuit



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION : MECHA STOP MODE

2. UNLESS OTHERWISE SPECIFIED ・RESISTORS ARE 1/10W ±5% METAL GLAZE RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL INDUCTANCE VALUES ARE IN μH(m=mH).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   POLYPROPYLENE CAPACITOR

PARTS	NAME	REF.NO
	FA14Z or DTC114TKA	Q101-Q201 Q103-Q203 Q331
	FA1L4M or DTC144EKA	Q321
	FA1F4M or DTC124EKA	Q372

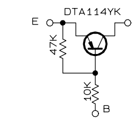
TAPE P. B. SIGNAL

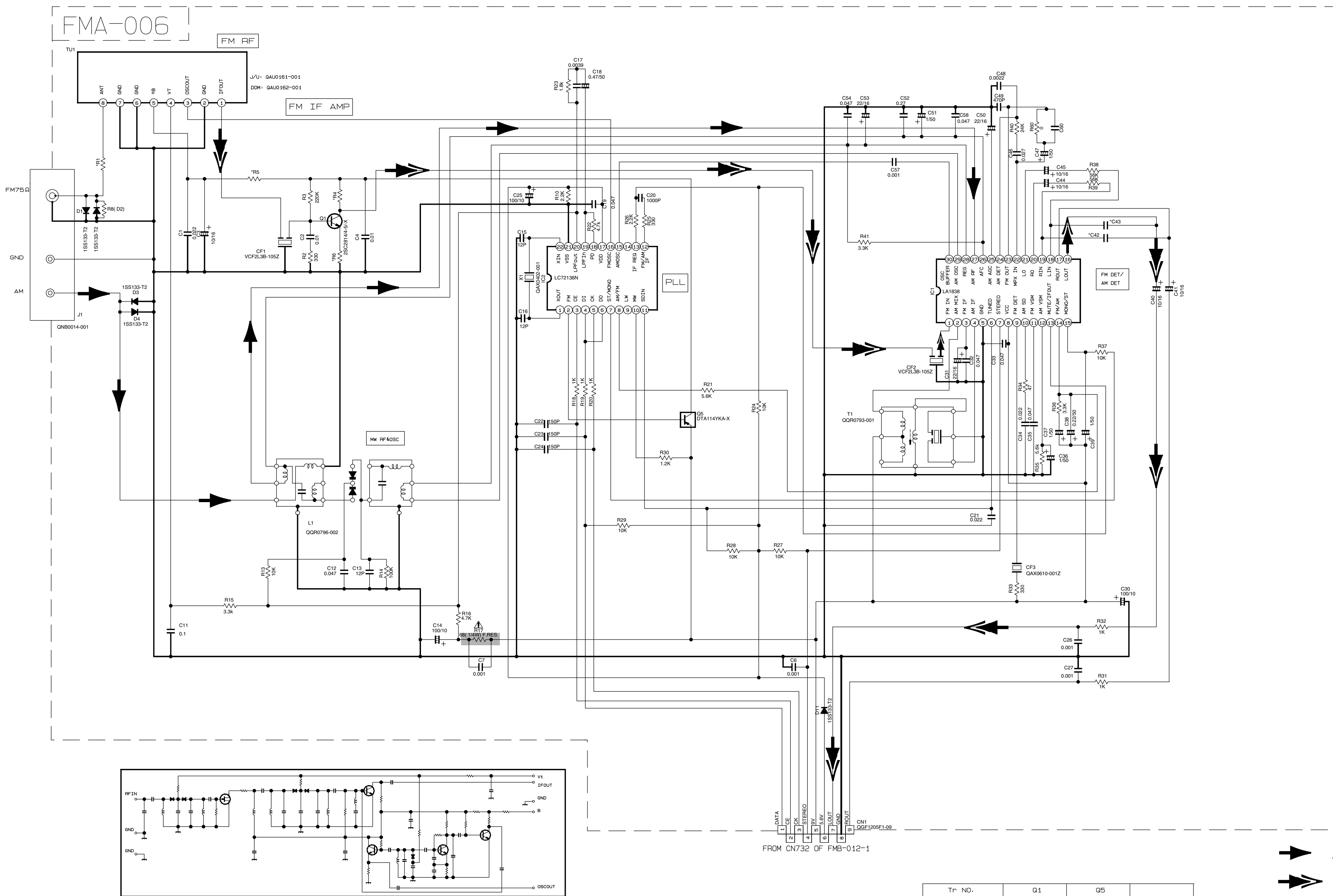
⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

■ Tuner circuit

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER.
2. ALL RESISTORS ARE 1/8W ±5% METAL GLAZE RESISTOR.
3. ALL RESISTANCE VALUES ARE IN OHM(Ω).
4. ALL CAPASITANCE VALUES ARE IN μF(P=pF).
5. ALL E.CAPASITORS ARE SHOWN IN THE FORM OF CAPASITANCE (μF)/RATED VOLTAGE (V).
6. SI DIODES (▶|) ARE ALL 1SS133-T THAT CAN BE CHANGED TO SIMILAR DIODE SUCH AS MA165 OR HSS104J.
7. PARTS NO. OF TRANSISTORS ARE AS FOLLOWS.
   Q1 2SC2814/4-5/-X Q2,Q3 2SC2412K/R/-X
   Q4,Q5 DTA114YKA-X
8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS.





	VERSION		
	J/C	Useries	DOM UX MODEL ONLY
C42	0.0022	0.0015	0.0018
C43	0.0022	0.0015	0.0018
R1	560	560	270
R4	331	331	221
R5	560	560	270
R6	240	240	180
R8	D2	D2	101

➡ AM SIGNAL

⇛ FM/TUNER SIGNAL

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

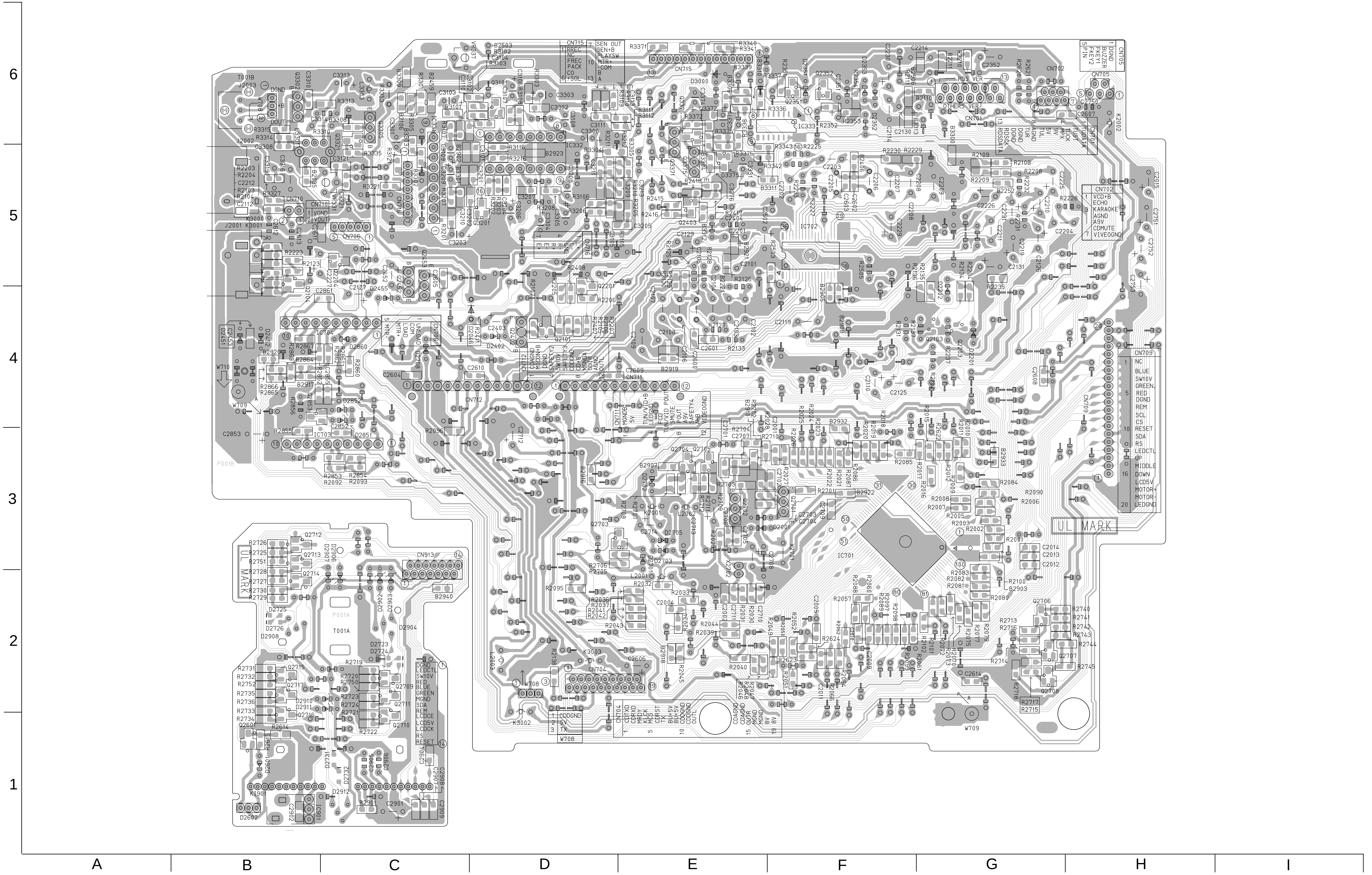
	CONDITION PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
IC1	FM NO SIGNAL	3.6	8.9	3.6	3.6	0	5.0	5.0	8.9	8.9	1.3	0.1	0	0.9	7.8	7.8	4.3	4.3	4.3	4.3	3.4	3.4	2.8	3.4	0	0	3.5	3.5	3.6	3.6	2.7
	FM 60dB STEREO	3.6	8.9	3.6	3.6	0	0	5.0	8.9	8.9	1.3	4.3	0	0.9	7.8	7.8	4.3	4.3	4.3	4.3	3.4	3.4	2.8	3.4	0	0	3.6	3.6	3.6	3.6	2.7
	AM NO SIGNAL	3.5	9.0	3.5	3.5	0	5.0	5.1	9.0	2.6	1.3	0	0	0.9	4.7	5.5	4.3	4.3	4.3	4.3	3.3	3.2	2.8	ust	0.7	0.7	3.6	3.6	3.6	3.6	2.1
IC2	FM NO SIGNAL	2.5	0	0	5.0	4.9	5.0	7.9	7.8	3.6	6.1	5.1	0	0	0	0	2.5	5.1	0.9	0.9	3.8	0	2.3								

Tr NO.	Q1			Q5					
PIN NO.	E	C	B	E	C	B			
FM 87.5MHz NO SIGNAL	0	7.1	0.85	8.9	8.8	0			
AM 522KHz NO SIGNAL	0	0	0	9.0	0	8.9			
Tr NO.	Q2			Q3			Q4		
PIN NO.	E	C	B	E	C	B	E	C	B
AM 522KHz NO SIGNAL	0	0	0.7	0	0	0.7	0	3.6	0.7
AM 144KHz NO SIGNAL	0	0	0.3	0	0.3	0.3	3.6	3.6	3.6

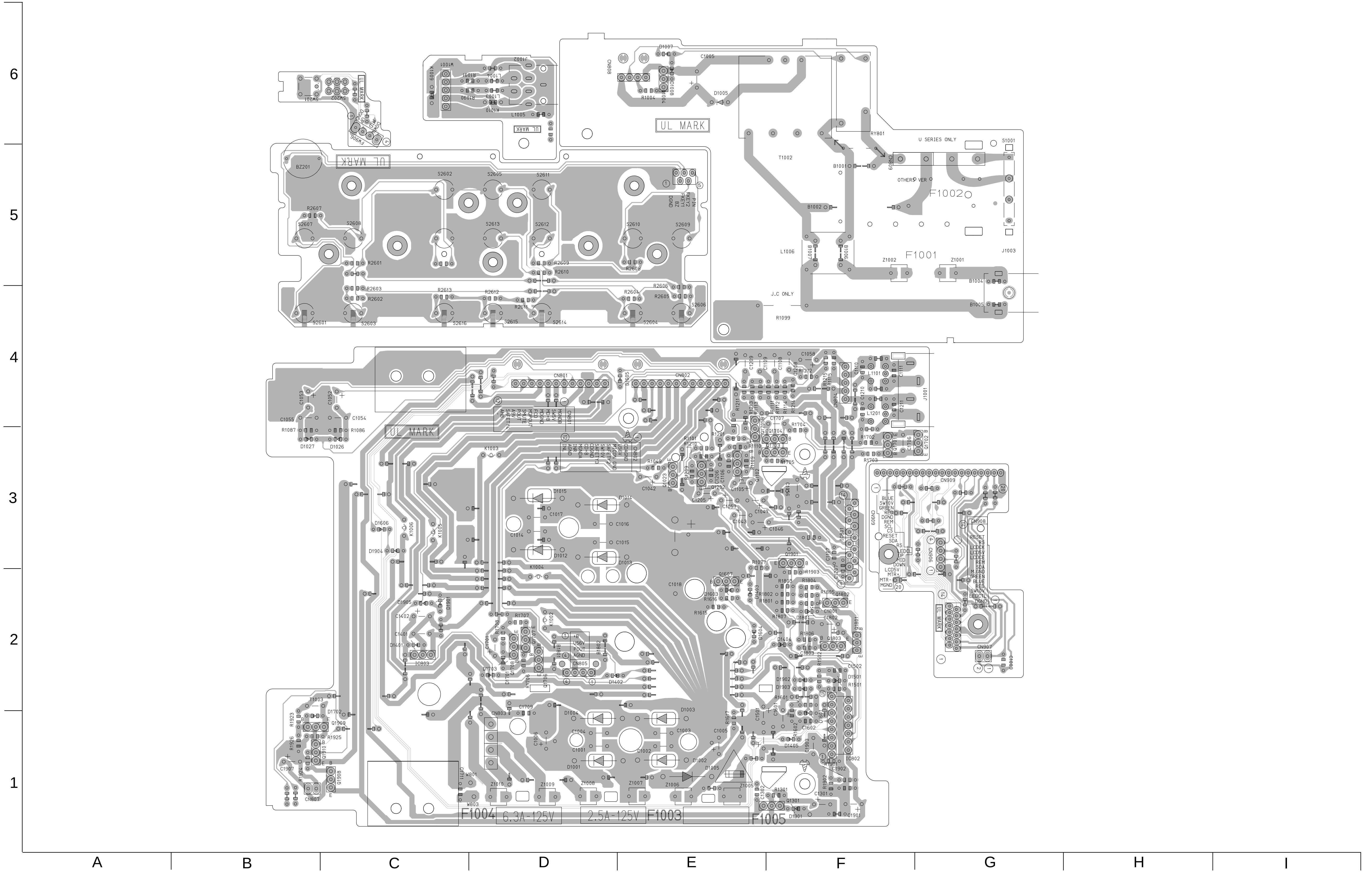
SHEET 1/7

Printed circuit boards

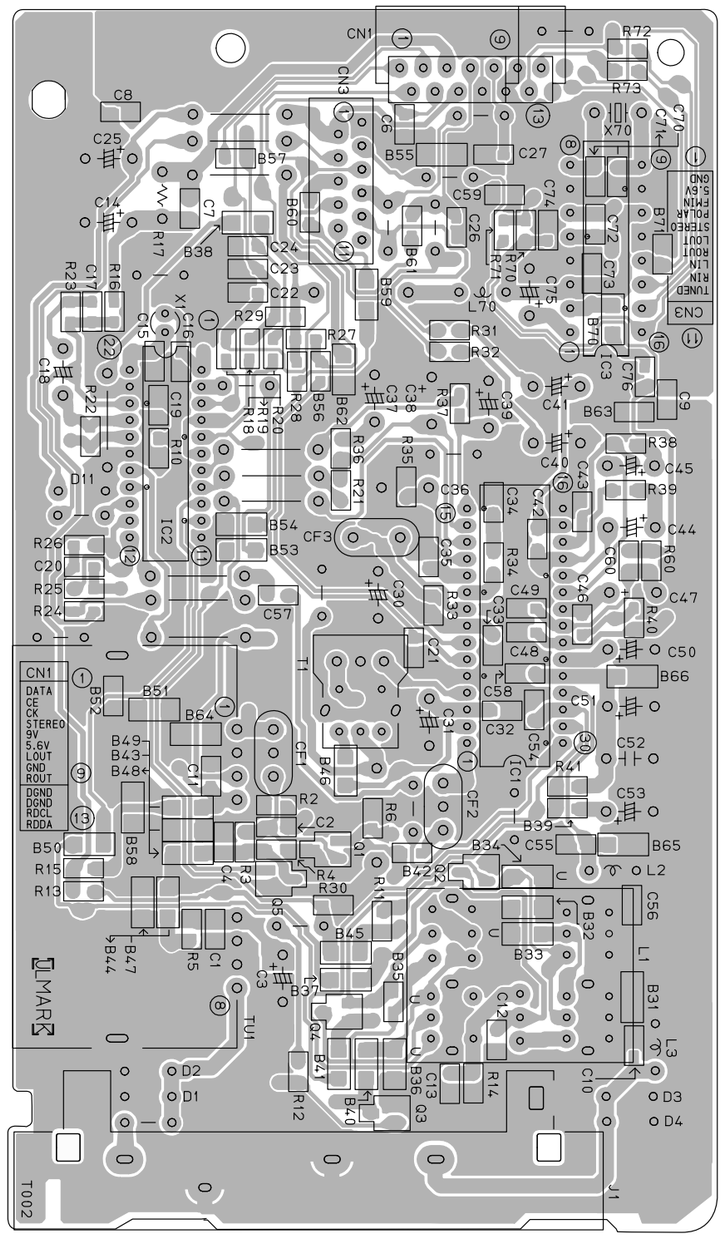
■Main board



■ Power amplifier board

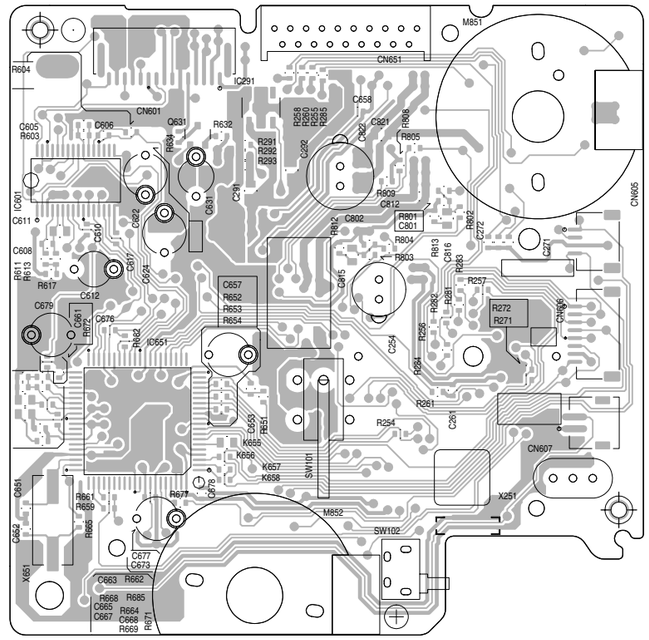


■Tuner board

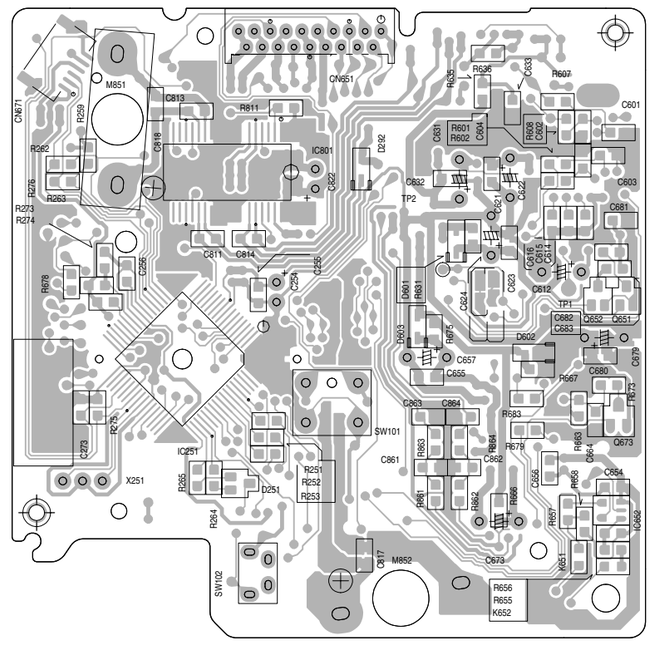


■CD servo control board

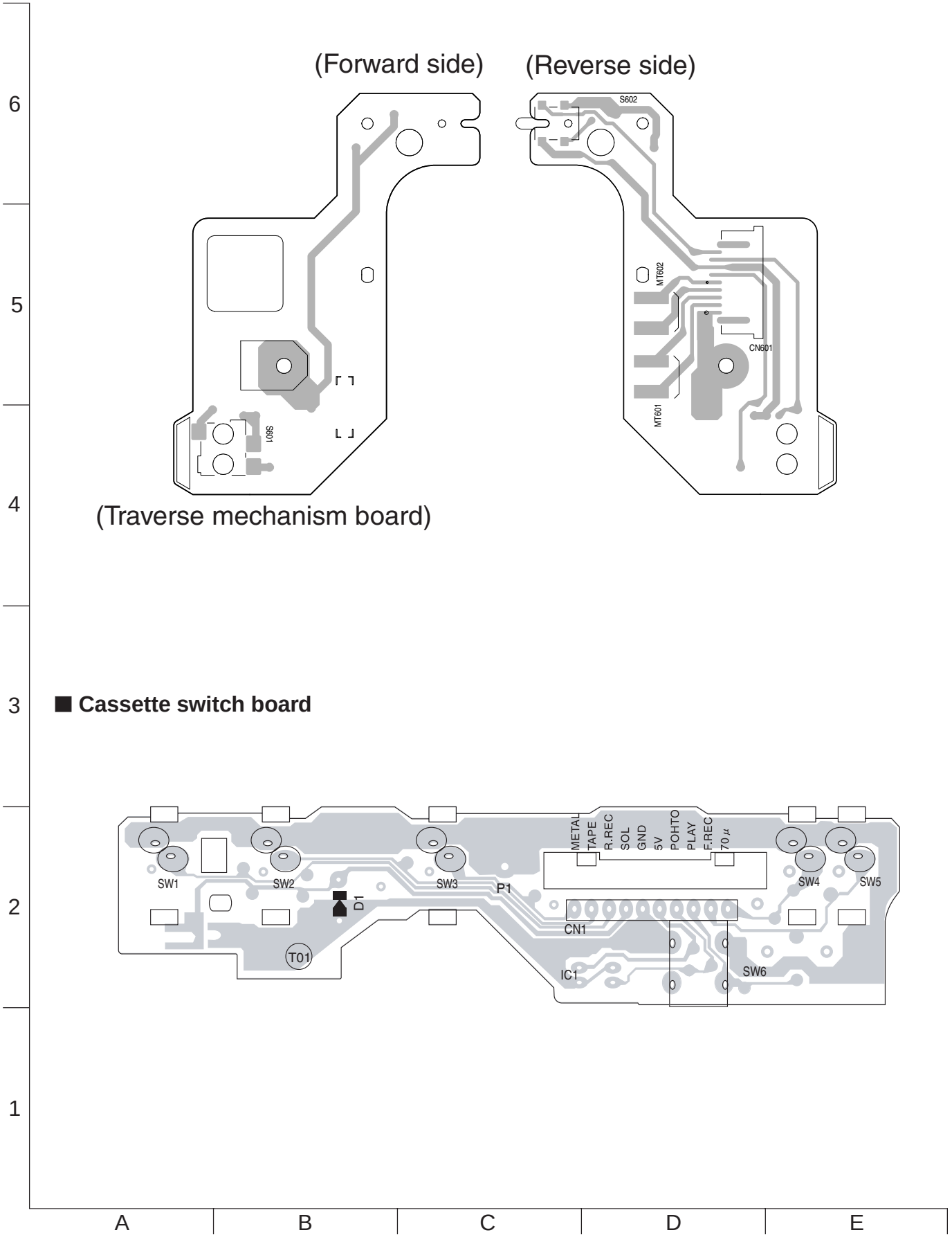
(Forward side)



(Reverse side)



■ Traverse mechanism board



■ Cassette switch board

PARTS LIST

[UX-A52]

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

Area suffix

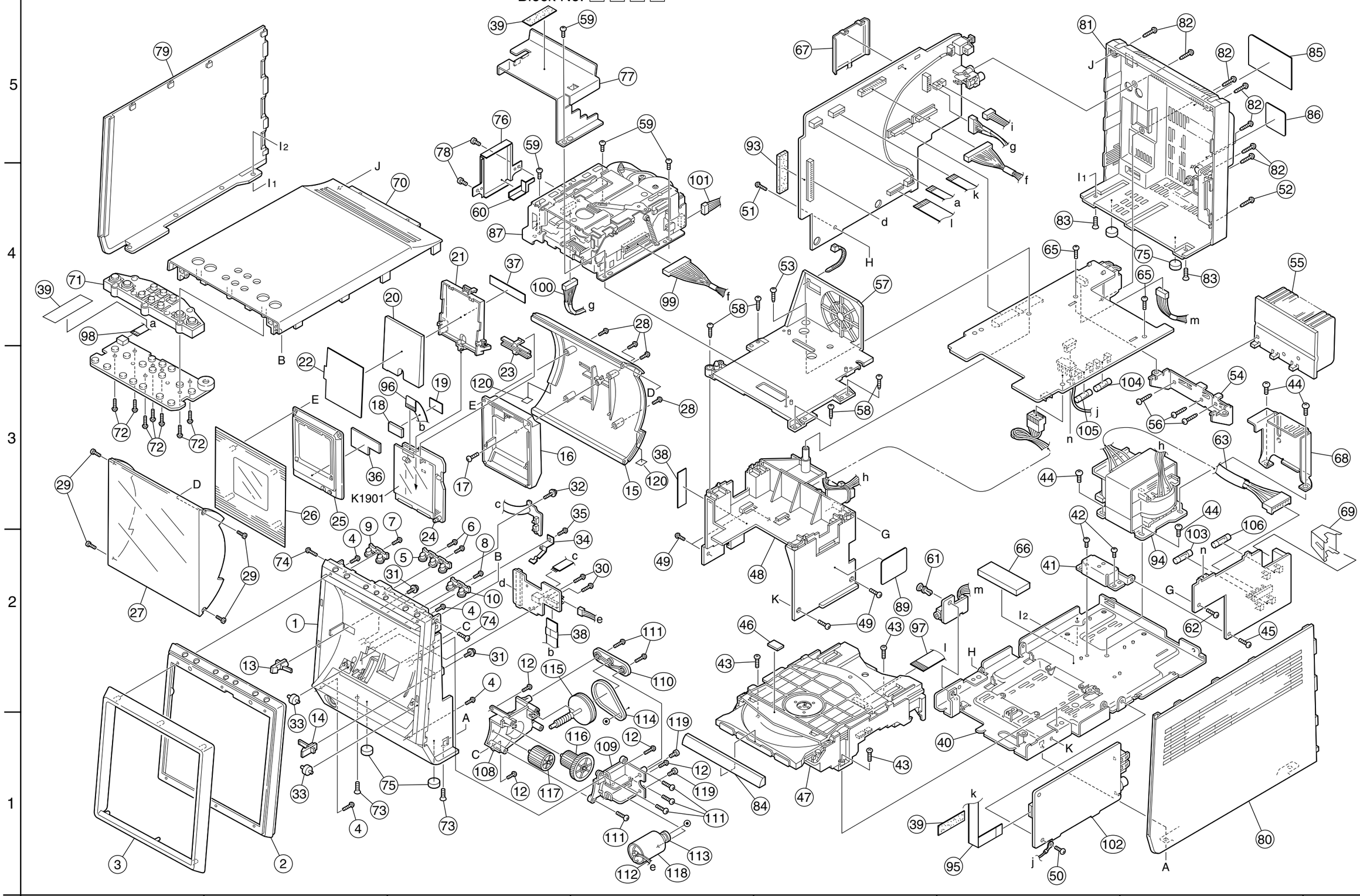
US ---------- Singapore
UP ---------- Korea
UW ---------- Brazil,Mexico,Peru
UJ ---------- U.S.Military

- Contents -

< MEMO >

Exploded view of general assembly and parts list

Block No. M 1 M M



■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	GV10076-019A	FRONT PANEL	1		
	2	GV10077-001A	SUB FRAME	1		
	3	GV10078-001A	MAIN FRAME	1		
	4	QYSBSF2008Z	SCREW	4	FRONT PNL+MAIN	
	5	GV40190-001A	CONTROL BUTTON	1		
	6	QYSBSF2608Z	T.SCREW	2	FRONT+CONT.BTN	
	7	QYSBSF2608Z	T.SCREW	1	+ FRONT PANEL	
	8	QYSBSF2608Z	T.SCREW	1	FRONT+E.BTN.B	
	9	GV40197-001A	EJECT BUTTON A	1		
	10	GV40198-001A	EJECT BUTTON B	1		
	12	QYSBSF2608Z	T.SCREW	4	FRONT+ GEAR ASS	
	13	GV40200-002A	PANEL HOLDER L	1		
	14	GV40201-002A	PANEL HOLDER R	1		
	15	GV20131-002A	FRONT CASE	1		
	16	GV30207-001A	LED LENS	1		
	17	QYSBSF2608Z	T.SCREW	1	LED LENS+FRONT	
	18	GV40217-001A	SPACER	1		
	19	GV40217-002A	SPACER	1		
	20	GV40210-001A	LCD LENS	1		
	21	GV30206-001A	LCD HOLDER	1		
	22	GV40221-001A	LCD SHEET	1		
	23	GV40202-001A	LED HOLDER	1		
	24	GV40203-002A	LED HOLDER B	1		
	25	GV30208-002A	LED COVER	1		
	26	GV30213-002A	LCD COVER	1		
	27	GV20132-003A	FRONT LENS	1		
	28	QYSBSF2610Z	SCREW	4	LCD COVER+F.CAS	
	29	QYSDSF2006N	SCREW	4	F.LENS+ F.CASE	
	30	QYSBSF2608Z	T.SCREW	2	CON.PWB+ F.PANE	
	31	GV40035-001A	SPECIAL SCREW	2	F.PANEL+PANEL H	
	32	GV40219-001A	SPECIAL SCREW	1	DETEC.SW.PWB+F.	
	33	GV40199-001A	ROLLER	2		
	34	GV40214-001A	FRONT SPRING	1		
	35	QYSBSF2608Z	T.SCREW	1	F.SPRING/F.BRD	
	36	GV40235-003A	SPACER	1		
	37	GV40243-001A	SPACER	1	STICK AT LCD HO	
	38	GV40242-003A	COMMON SPACER	2	MOV.PNL/PHONE W	
	39	GV40242-004A	SPACER	3	WIRE ARRANGE.	
	40	GV10081-002A	BOTTOM CHASSIS	1		
	41	GV40195-001A	CD MECHA BRACKE	1		
	42	QYSBST3004Z	T.SCREW	2	CD M.BKT+BTM.CH	
	43	QYSBST3008Z	T.SCREW	3	CD MECHA+BTM.CH	
	44	QYSBST4006Z	T.SCREW	4	TRANS +BTM.CHAS	
	45	QYSBST3006Z	T.SCREW	1	BKT.+ AC PWB.	
	46	GV40247-001A	SPACER	1		
	47	----------	CD SINGLE MECHA	1		
	48	GV10080-001A	INNER CHASSIS	1		
	49	QYSBST3006Z	T.SCREW	4	INNER CHA+ BTTM	

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■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	50	QYSBST3006Z	T.SCREW	1	TUNER PWB+ BTTM	
	51	QYSBST3006Z	T.SCREW	1	FMB PWB+BTM.CHA	
	52	QYSBSF3010N	TAP SCREW	1	TUNER+BTM.CHAS(	
	53	QYSBSF3010Z	SCREW	1	CHASSIS+MECH.BR	
	54	GV30201-002A	IC HOLDER	1		
	55	GV30203-001A	HEAT SINK	1		
	56	QYSBSF3012Z	SCREW	3	IC HOLD.+ H.SIN	
	57	GV20153-002A	MECHA BRACKET	1		
	58	QYSBSF3010Z	SCREW	4	CASS.MEC/IN.CHA	
	59	QYSBSF3008Z	SCREW	4	CASS./MECH.BRAC	
	60	GV40242-004A	SPACER	1	FOR HEAD SHIELD	
	61	E310243-002	PLASTIC RIVET	1	PHONE PWB+BTTM.	
	62	QYSBSF3010Z	SCREW	1	AC PWB+INNER CH	
	63	QWTBG00-130	VINYL TUBE	1		UP
	65	QYSBSF3008Z	SCREW	2	MAIN BRD/BRACKE	
	66	GV40251-002A	SPACER	1		
	67	GV40259-001A	PROTECT SHEET	1	(MICOM)	
	68	GV40260-002A	PROTECT SHEET	1	(TRANS)	US,UJ,UW
	69	GV40302-001A	JAK HOLDER	1		US,UJ,UW
	70	GV10089-001A	TOP COVER(EXP)	1		
	71	GV30197-002A	BUTTON	1		
	72	QYSBSF2608Z	T.SCREW	7	BUTTON+TOP COVE	
	73	QYSSST3010Z	SCREW	2	F.PNL/BTTM CHAS	
	74	QYSBSF3008Z	SCREW	2	F.PANEL/T.COVER	
	75	GV40091-002A	FOOT	4	FRONT & REAR	
	76	GV30233-001A	HEAD SHIELD	1		
	77	GV30234-001A	SLC COVER	1		
	78	QYSDST3004Z	SCREW	2	FOR HEAD SHEILD	
	79	GV10082-002A	SIDE PANEL(L)	1		
	80	GV10083-006A	SIDE PANEL(R)	1		
	81	GV10085-008A	REAR COVER	1		UP
		GV10085-009A	REAR COVER	1		US,UJ,UW
	82	QYSBSF3010N	TAP SCREW	6	FOR REAR COVER	UP
		QYSBSF3010N	TAP SCREW	7	FOR REAR COVER	US,UJ,UW
	83	QYSSST3010Z	SCREW	2	+ REAR COVER	
	84	GV30200-002A	CD FITTING	1		
	85	GV30226-009A	RATING LABEL	1		US,UJ,UW
		GV30226-010A	RATING LABEL	1		UP
	86	VND4118-003	CAUTION LABEL	1		UP
	87	BDL1141-001M	C MECHA UNIT	1	CASSETTE MECH.	
	89	E406507-001	LASER CAUTION	1		
	93	GV40250-001A	BOARD SPACER	1	STICK AT FMB BO	
⚠	94	QQT0360-002	POWER TRANSF	1		UP
⚠		QQT0360-003	POWER TRANSF	1		US,UJ,UW
	95	QUQ412-0930CJ	FFC WIRE	1	FMB-TUNER	
	96	QUQ610-1415BFS	FFC WIRE	1	CONN-LCD	
	97	QUQ110-1915BJ	FFC WIRE	1	FMB-CD	
	98	QUQ412-0510DJ	FFC WIRE	1	FMB-FKEY	

■ Parts list (General assembly)

Block No. M1MM

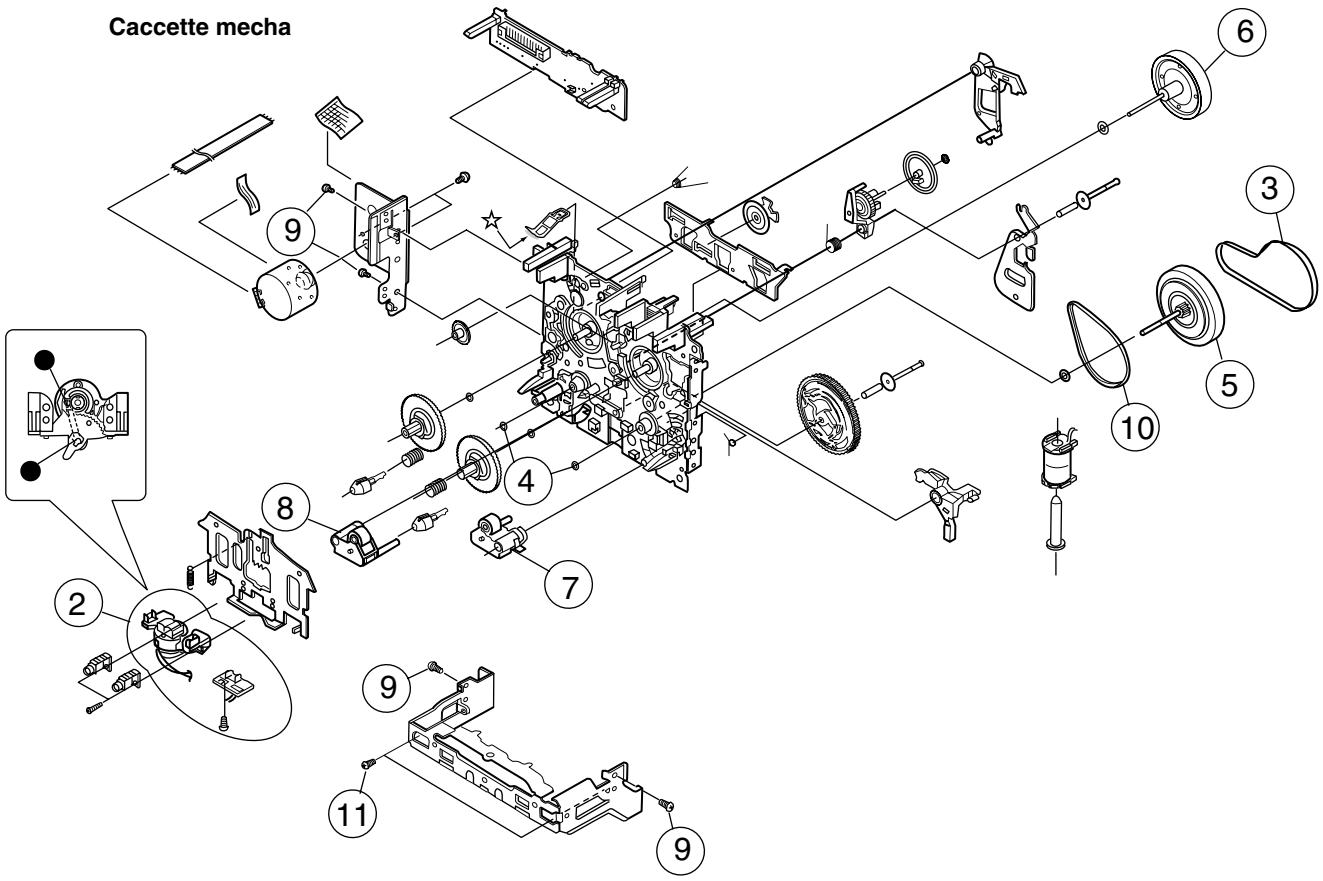
⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	99	QJA003-132520	WIRE	1		
	100	QJA003-051700	SIN ID C-C WIRE	1		
	101	WJN0074-001A	E-SH C WIRE C-C	1		
	102	----------	TUNER MODULE	1	TUNER MODULE	
⚠	103	QMF51W2-R63-J8	FUSE	1		UP
⚠		QMF51W2-1R25-J8	FUSE	1		US,UJ,UW
⚠	104	QMF51W2-1R6-J8	FUSE	1		
⚠	105	QMF51W2-5R0-J8	FUSE	1		
⚠	106	QMF51W2-R63-J8	FUSE	1		US,UJ,UW
	108	GV20216-001A	GEAR HOLDER A	1		
	109	GV20217-001A	GEAR HOLDER B	1		
	110	GV40191-001A	GEAR HOLDER C	1		
	111	QYSBSF2608Z	T.SCREW	6		
	112	WJM0072-001A	WIRE CONNECTOR	1		
	113	GV40126-001A	PULLEY	1		
	114	GV30038-001A	BELT	1		
	115	GV40098-001A	WORM/PULLEY	1		
	116	GV40097-001A	GEAR B	1		
	117	GV40096-001A	GEAR A	1		
	118	QAR0023-001	MOTOR	1		
	119	QYSPSP3004Z	SCREW	2		
	120	GV40124-004A	SPACER	2		
	KI901	QLD0184-001	LCD MODULE	1	LCD	

Cassette mechanism assembly and parts list

Block No. M P M M

Grease
- ● EM-60L
- ☆ FL-721

Caccette mecha



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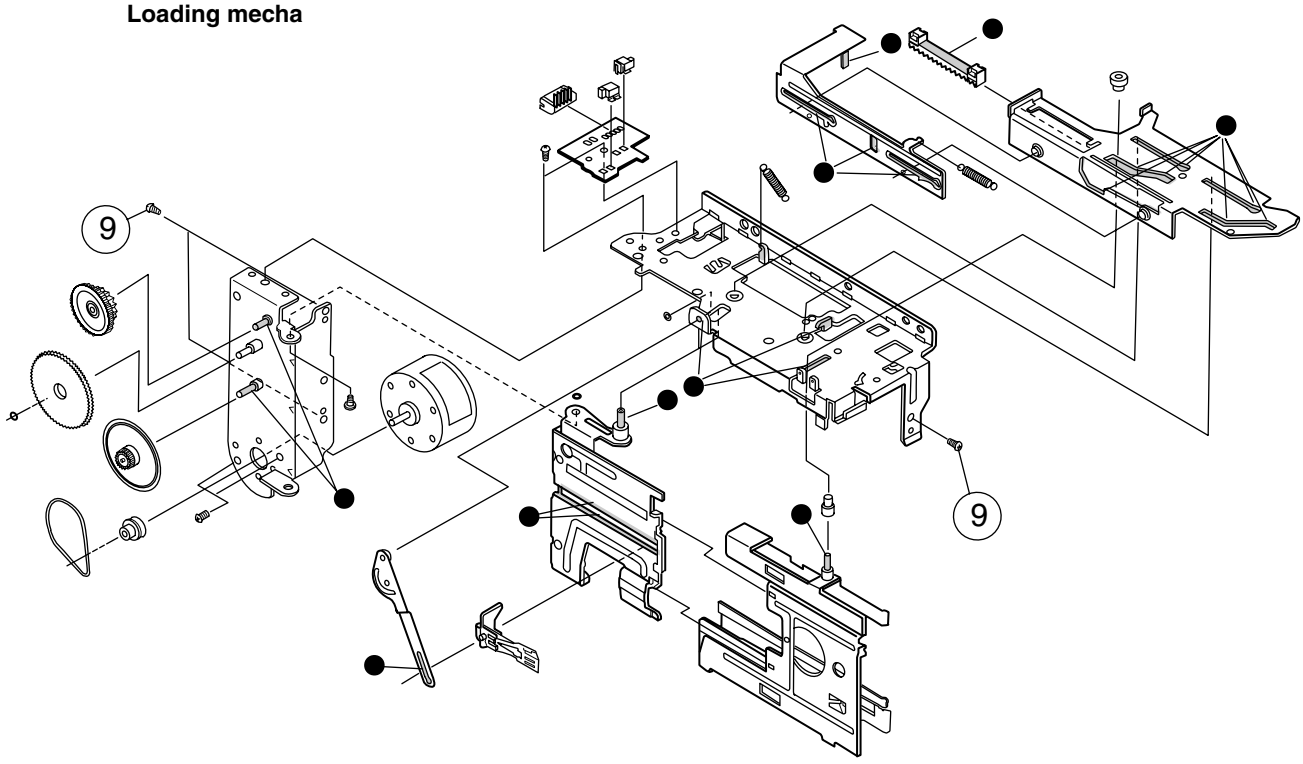


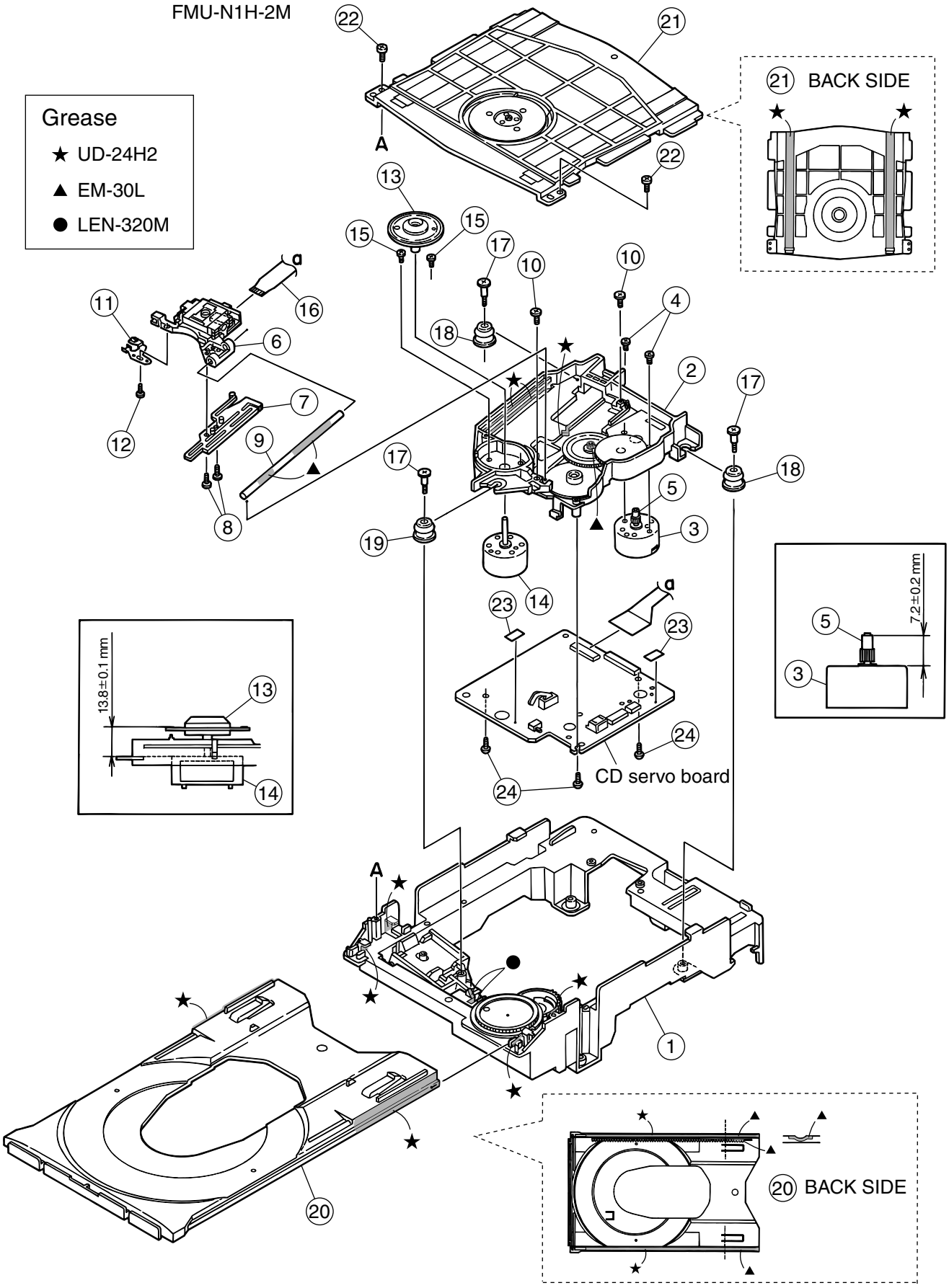
■ Parts list (Cassette mechanism)

Block No. MPMM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	BDL1141-001M	C MECHA UNIT	1		
	2	F513-884	HEAD BLOCK	1		
	3	FF19Y	MAIN BELT	1		
	4	UJ16F-11	WASHER	1		
	5	F522-064	FLYWHEEL	1		
	6	FR26K	FLYWHEEL	1		
	7	F514-129	PINCH ROLLER	1		
	8	F514-130	PINCH ROLLER	1		
	9	KG194-28	TT.SCREW	1	2.6X4	
	10	FF18W	F/R BELT	1		
	11	KG194-34	TT.SCREW	1	2.0X4	

CD mechanism assembly and parts list

Block No. M B M M



■ Parts list (CD mechanism)

Block No. MBMM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LV32649-005A	L.BASE ASSY	1		
	2	LV32651-002A	CH.BASE ASSY	1		
	3	QAR0176-001	FEED MOTOR	1		
	4	VKZ4743-001	SPECIAL SCREW	2		
	5	LV42229-001A	MOTOR GEAR	1		
	6	OPTIMA-725B1	CD PICK UP	1		
	7	LV20993-002A	RACK PLATE	1		
	8	QYSPSGT1735M	MINI SCREW	2		
	9	E406777-002SM	C.D SHAFT	1		
	10	LV41741-001A	SPECIAL SCREW	2		
	11	LV31744-001A	P.S.SPRING	1		
	12	QYSPSGT1425M	TAP SCREW	1		
	13	LV42350-001A	T.T.ASSY	1		
	14	QAR0175-001	SP.MOTOR	1		
	15	VKZ4743-001	SPECIAL SCREW	2		
	16	LVB30008-001A	FPC	1		
	17	LV41424-001A	SPECIAL SCREW	3		
	18	LV41659-001A	INSULATOR	2		
	19	LV41659-002A	INSULATOR	1		
	20	LV10503-002A	TRAY	1		
	21	LV32650-001A	CL.BASE ASSY	1		
	22	QYSBSF2005Z	T.SCREW	2		
	23	LV30225-0B6A	SPACER	2		
	24	QYSBSF2005Z	T.SCREW	3		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	BZ201	QAN0045-001	BUZZER	SOUNDER	
	CN801	QGB2510K2-12	CONNECTOR		
	CN802	QGB2510K2-12	CONNECTOR		
	CN803	QGA3901C1-04	CONNECTOR		
	CN804	QGA2501C1-05	5P CONNECTOR		
	CN805	QGB2510J1-04	CONNECTOR		
	CN808	QGB2510K2-04	CONNECTOR		
	CN809	QGA7901C1-04	CONNECTOR		US,UJ,U
	CN809	QGA7901C1-02	CONNECTOR		UP
	CN905	QGF1201F3-05	CONNECTOR		
	CN906	QGD2504C1-04Z	SOCKET I.M	TO FUNCTION KEY	
	CN907	QGA2501F1-02	CONNECTOR		
	CN908	QGF1016F1-14	FFC/FPC CONNE	TO CONN. BOARD	
	CN909	QGB2024J1-20S	B TO B CONNE		
	C1001	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C1002	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
⚠	C1003	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C1004	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
⚠	C1005	QETM1EM-228	E CAPACITOR	2200MF 20% 25V	
⚠	C1006	QETM1EM-228	E CAPACITOR	2200MF 20% 25V	
	C1009	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
	C1014	QFLA1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C1015	QFLA1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C1016	QFLA1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C1017	QFLA1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
⚠	C1018	QEZ0512-828	E CAPACITOR	8200MF	
	C1042	QETC1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C1043	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1046	QETN1HM-336Z	E CAPACITOR	33MF 20% 50V	
	C1047	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C1052	EETC1HM-105ZJC	E.CAPA. I.M		
	C1053	EETC1HM-105ZJC	E.CAPA. I.M		
	C1054	QFLC1HJ-563Z	M CAPACITOR	.056MF 5% 50V	
	C1055	QFLC1HJ-563Z	M CAPACITOR	.056MF 5% 50V	
	C1056	QFLA1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C1058	QEKC1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1105	QTE1V06-106Z	E CAPACITOR		
	C1106	QDGB1HK-102Y	C CAPACITOR		
	C1107	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V	
	C1108	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1109	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1110	QCBB1HK-221Y	C CAPACITOR	EMC	
	C1111	QDXB1CM-332Y	C CAPACITOR	EMC	
	C1205	QTE1V06-106Z	E CAPACITOR		
	C1206	QDGB1HK-102Y	C CAPACITOR		
	C1207	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V	
	C1208	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1209	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1210	QCBB1HK-221Y	C CAPACITOR	EMC	
	C1211	QDXB1CM-332Y	C CAPACITOR	EMC	
	C1301	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1302	QDGB1HK-102Y	C CAPACITOR		
	C1401	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1402	QEKC1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1501	EETC1CM-107ZJC	E CAPACITOR		
	C1502	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
	C1601	EETC1CM-107ZJC	E CAPACITOR		
	C1602	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C1701	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1704	QDGB1HK-102Y	C CAPACITOR		
	C1705	QDGB1HK-102Y	C CAPACITOR		
	C1706	QENC1HM-106Z	NP E CAPACITOR	10MF 20% 50V	
	C1707	QENC1HM-106Z	NP E CAPACITOR	10MF 20% 50V	

⚠	Item	Parts number	Parts name	Remarks	Area
	C1709	QDYB1CM-103Y	C CAPACITOR		
	C1710	QETN1EM-337Z	E CAPACITOR	330MF 20% 25V	
	C1801	QDYB1CM-103Y	C CAPACITOR		
	C1802	EETC1EM-476ZJC	E.CAPA. I.M		
	C1803	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C1901	EETC1CM-107ZJC	E CAPACITOR		
	C1902	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C1908	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
⚠	D1001	1N5401-TM	DIODE		
⚠	D1002	1N5401-TM	DIODE		
⚠	D1003	1N5401-TM	DIODE		
⚠	D1004	1N5401-TM	DIODE		
	D1005	1N5401-TM	DIODE		
⚠	D1012	1N5401-TM	DIODE		
⚠	D1013	1N5401-TM	DIODE		
⚠	D1014	1N5401-TM	DIODE		
⚠	D1015	1N5401-TM	DIODE		
	D1026	1SS133-T2	SI DIODE IM		
	D1027	1SS133-T2	SI DIODE IM		
	D1301	MTZJ11A-T2	ZENER DIODE		
	D1401	MTZJ8.2B-T2	DIODE		
	D1402	1SS133-T2	SI DIODE IM		
	D1403	1SS133-T2	SI DIODE IM		
	D1404	1SS133-T2	SI DIODE IM		
	D1405	1SS133-T2	SI DIODE IM		
	D1501	MTZJ8.2C-T2	ZENER DIODE		
	D1601	MTZJ8.2C-T2	ZENER DIODE		
	D1603	MTZJ5.6B-T2	ZENER DIODE		
	D1604	1SS133-T2	SI DIODE IM		
	D1605	1SS133-T2	SI DIODE IM		
	D1606	1SS133-T2	SI DIODE IM		
	D1701	MTZJ5.6B-T2	ZENER DIODE		
	D1801	MTZJ13B-T2	Z DIODE		
	D1901	MTZJ10C-T2	Z.DIODE I.M		
	D1902	1SS133-T2	SI DIODE IM		
	D1903	1SS133-T2	SI DIODE IM		
	D1904	1SS133-T2	SI DIODE IM		
	D1905	1SS133-T2	SI DIODE IM		
	FW906	QUM024-10DGZ3	PARA RIBON WIRE	TO CONN BOARD	
⚠	IC801	LA4628	IC		
	IC802	L4909	REGULATOR IC		
	IC803	KIA78S05P-T	IC	SW5V REG	
	J1001	QNB0133-001	SPK TERMINAL		
	J1002	QNS0030-001	JACK		
⚠	J1003	QNC0006-001	AC SOCKET		
	K1002	QQR0621-001Z	FERRITE BEADS	EMC	
	K1003	QUY150-050Y	BUS WIRE	EMC	
	K1004	QQR0621-001Z	FERRITE BEADS	EMC	
	K1005	QQR0621-001Z	FERRITE BEADS	EMC	
	K1006	QQR0621-001Z	FERRITE BEADS	EMC	
	K1009	QQR0779-001Z	INDUCTOR	EMC	
	K1010	QQR0779-001Z	INDUCTOR	EMC	
	L1003	QQL231K-470Y	INDUCTOR	EMC	
	L1004	QQL231K-470Y	INDUCTOR	EMC	
	L1005	QQL231K-470Y	INDUCTOR	EMC	
⚠	L1006	QQR1145-001	LINE FILTER	EMC FILTER	
	L1101	QQR0797-001	INDUCTOR	EMC	
	L1201	QQR0797-001	INDUCTOR	EMC	
	Q1023	KRA101M-T	TR I/M		
	Q1102	2SC3576-JVC-T	TRANSISTOR I/M		
	Q1202	2SC3576-JVC-T	TRANSISTOR I/M		
	Q1301	2SC2001/LK/-T	TRANSISTOR		
	Q1607	KRC110M-T	TR I/M		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	Q1701	DTA144WSA-T	D.TR.I.M		
	Q1702	DTA144WSA-T	D.TR.I.M		
	Q1703	DTA144WSA-T	D.TR.I.M		
	Q1704	DTA144WSA-T	D.TR.I.M		
	Q1705	DTC144WSA-T	DIGI TRANSISTOR		
	Q1706	KTA1023/OY/-T	TRANSISTOR		
	Q1707	KTC3199/GL/-T	TRANSISTOR		
	Q1708	KTC3199/GL/-T	TRANSISTOR		
⚠	Q1801	KTB772/Y/	TRANSISTOR		
	Q1802	KTC3199/GL/-T	TRANSISTOR		
	Q1803	KTC3199/GL/-T	TRANSISTOR		
	R1049	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R1077	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1086	QRE141J-682Y	C RESISTOR	6.8K 5% 1/4W	
	R1087	QRE141J-682Y	C RESISTOR	6.8K 5% 1/4W	
	R1090	QRE141J-151Y	C RESISTOR	150 5% 1/4W	
	R1091	QRE141J-151Y	C RESISTOR	150 5% 1/4W	
	R1101	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R1109	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R1110	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1111	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R1112	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R1113	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R1114	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R1115	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1201	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R1209	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R1210	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1211	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R1212	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R1213	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R1214	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R1215	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1301	QRE141J-561Y	C RESISTOR	560 5% 1/4W	
	R1501	QRE141J-622Y	C RESISTOR	6.2K 5% 1/4W	
	R1502	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R1601	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1602	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R1615	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1616	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1617	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R1702	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R1703	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R1704	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R1705	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R1706	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1707	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R1708	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R1801	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R1802	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R1803	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R1804	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R1805	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1806	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R1807	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R1901	QRE141J-912Y	C RESISTOR	9.1K 5% 1/4W	
	R1902	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R2601	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R2602	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R2603	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R2604	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R2605	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2606	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R2607	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R2608	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R2609	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R2610	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R2611	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R2612	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2613	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R2617	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	SW201	QSW0803-001		MIDDLE SWITCH	
	SW202	QSW0933-001	DETECT SWITCH	UP/DOWN SWITCH	
⚠	S1001	QSW0740-001	VOLTAGE SWITCH		US,UJ,U
	S2601	QSW0674-001Z	TACT SWITCH	MD OPEN/CLOSE	
	S2602	QSW0674-001Z	TACT SWITCH	MD	
	S2603	QSW0674-001Z	TACT SWITCH	CD	
	S2604	QSW0674-001Z	TACT SWITCH	TAPE	
	S2605	QSW0674-001Z	TACT SWITCH	FM/AM	
	S2606	QSW0674-001Z	TACT SWITCH	CD OPEN/CLOSE	
	S2607	QSW0674-001Z	TACT SWITCH	VOLUME +	
	S2608	QSW0674-001Z	TACT SWITCH	VOLUME -	
	S2609	QSW0674-001Z	TACT SWITCH	POWER	
	S2610	QSW0674-001Z	TACT SWITCH	COLOR	
	S2611	QSW0674-001Z	TACT SWITCH	AUX	
	S2612	QSW0674-001Z	TACT SWITCH	REC MODE	
	S2613	QSW0674-001Z	TACT SWITCH	REC	
	S2614	QSW0674-001Z	TACT SWITCH	REVERSE	
	S2615	QSW0674-001Z	TACT SWITCH	FORWARD	
	S2616	QSW0674-001Z	TACT SWITCH	STOP	
	S2617	QSW0674-001Z	TACT SWITCH	MD GROUP	
	W 801	QUB230-10DMHP	SIN TWIST WIRE		
	W1001	WJK0135-001A	E-SI C WIRE C-B		
	Z1001	QNG0020-001Z	FUSE CLIP		
	Z1002	QNG0020-001Z	FUSE CLIP		
	Z1003	QNG0020-001Z	FUSE CLIP	U VERSION	US,UJ,U
	Z1004	QNG0020-001Z	FUSE CLIP	U VERSION	US,UJ,U
	Z1007	QNG0020-001Z	FUSE CLIP		
	Z1008	QNG0020-001Z	FUSE CLIP		
	Z1009	QNG0020-001Z	FUSE CLIP		
	Z1010	QNG0020-001Z	FUSE CLIP		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	CN701	QGF1205C1-09	CONNECTOR	TO TUNER	
	CN704	QGF1016C1-19	CONNECTOR	TO CD MECHA	
	CN705	QGF1201C3-05	CONNECTOR	TO FUNCTION KEY	
	CN706	QGA2001C1-05	5P PLUG ASSY	TO CASS. MECHA	
	CN709	QGB2024K1-20S		TO CONN BOARD	
	CN711	QGB2510J1-12	CONNECTOR	TO FMH	
	CN712	QGB2510J1-12	CONNECTOR	TO FMH	
	CN715	QGA2001C1-13	13P PLUG ASSY	TO CASS. MECHA	
	CN716	QGA2001C1-07	7P PLUG ASSY	TO CASS. MECHA	
	CN913	QGF1016F1-14	FFC/FPC CONNE	LED CONN.	
	C2001	NCB31HK-103X	C CAPACITOR		
	C2002	NCB31HK-103X	C CAPACITOR		
	C2005	NCB31HK-103X	C CAPACITOR		
	C2009	NCS31HJ-101X	C.CAPA. C.M		
	C2010	NCS31HJ-101X	C.CAPA. C.M		
	C2011	NCS31HJ-101X	C.CAPA. C.M		
	C2012	NCS31HJ-101X	C.CAPA. C.M		
	C2013	NCS31HJ-101X	C.CAPA. C.M		
	C2014	NCS31HJ-101X	C.CAPA. C.M		
	C2015	EEKC1AM-476ZJC			
	C2101	QTE1C06-226Z	E CAPACITOR		
	C2102	QFV61HJ-823Z	MF CAPACITOR	.082MF 5% 50V	
	C2103	QFV61HJ-823Z	MF CAPACITOR	.082MF 5% 50V	
	C2104	QFV61HJ-274Z	MF CAPACITOR	.27MF 5% 50V	
	C2105	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2106	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2107	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2108	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2109	QFLC1HJ-272Z	M CAPACITOR	2700PF 5% 50V	
	C2110	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2112	NCS31HJ-221X	C.CAPA. C.M		
	C2114	QFN31HJ-822Z	M CAPACITOR	8200PF 5% 50V	
	C2119	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V	
	C2125	QETC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2126	QTE1V06-106Z	E CAPACITOR		
	C2127	QETC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2129	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2130	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2131	EEKC1HM-105ZJC	E CAPACITOR		
	C2201	QTE1C06-226Z	E CAPACITOR		
	C2202	QFV61HJ-823Z	MF CAPACITOR	.082MF 5% 50V	
	C2203	QFV61HJ-823Z	MF CAPACITOR	.082MF 5% 50V	
	C2204	QFV61HJ-274Z	MF CAPACITOR	.27MF 5% 50V	
	C2205	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2206	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2207	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2208	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2209	QFLC1HJ-272Z	M CAPACITOR	2700PF 5% 50V	
	C2210	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2211	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V	
	C2212	NCS31HJ-221X	C.CAPA. C.M		
	C2214	QFN31HJ-822Z	M CAPACITOR	8200PF 5% 50V	
	C2219	EEKC1CM-106ZJC	E CAPACITOR		
	C2225	QETC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2226	QTE1V06-106Z	E CAPACITOR		
	C2227	QETC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2229	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2230	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2231	EEKC1CM-226ZJC	E.CAPA. I.M		
	C2404	NCB31HK-103X	C CAPACITOR		
	C2453	NCB31HK-103X	C CAPACITOR		
	C2502	EETC1CM-107ZJC	E CAPACITOR		
	C2600	NCB31CK-823X	C CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C2601	NCB31CK-823X	C CAPACITOR		
	C2602	NCB31CK-823X	C CAPACITOR		
	C2603	NCB31CK-823X	C CAPACITOR		
	C2604	NCB21HK-102X	C CAPACITOR		
	C2605	NCB21HK-102X	C CAPACITOR		
	C2704	NCS31HJ-330X	C CAPACITOR		
	C2705	NCS31HJ-330X	C CAPACITOR		
	C2708	EEKC1CM-107ZJC	E CAPACITOR		
	C2709	NCB31HK-103X	C CAPACITOR		
	C2710	NCS31HJ-220X	C CAPACITOR		
	C2711	NCS31HJ-220X	C CAPACITOR		
	C2712	QETM0JM-228	E CAPACITOR	2200MF 20% 6.3V	
	C2713	EEKC1HM-225ZJC			
	C2714	EEKC1HM-475ZJC	E CAPACITOR		
	C2750	QDGB1HK-102Y	C CAPACITOR		
	C2751	EEKC1HM-105ZJC	E CAPACITOR		
	C2752	EEKC1HM-105ZJC	E CAPACITOR		
	C2753	EEKC1HM-105ZJC	E CAPACITOR		
	C2852	NCB21HK-103X	C CAPACITOR		
	C2853	EEKC1CM-107ZJC	E CAPACITOR		
	C2855	NCB21HK-103X	C CAPACITOR		
	C2861	NCB21HK-103X	C CAPACITOR		
	C2901	QER61AM-107Z	E CAPACITOR	100MF 20% 10V	
	C2902	NCB31HK-102X	C CAPACITOR		
	C2905	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
	C2906	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
	C3101	NCS21HJ-821X	C CAPACITOR		
	C3102	NCS21HJ-221X	C CAPACITOR		
	C3103	QEKJ0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C3104	NCB21HK-333X	C CAPACITOR		
	C3105	NCB21HK-222X	C CAPACITOR		
	C3106	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C3107	NCS21HJ-561X	C CAPACITOR		
	C3108	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C3109	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C3110	NCB21HK-682X	C.CAPA. C.M		
	C3111	NCB21HK-152X	C CAPACITOR		
	C3113	NCB21HK-393X	C CAPACITOR		
	C3121	NCS21HJ-331X	C CAPACITOR		
	C3201	NCS21HJ-821X	C CAPACITOR		
	C3202	NCS21HJ-221X	C CAPACITOR		
	C3203	QEKJ0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C3204	NCB21HK-333X	C CAPACITOR		
	C3205	NCB21HK-222X	C CAPACITOR		
	C3206	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C3207	NCS21HJ-561X	C CAPACITOR		
	C3208	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C3209	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C3210	NCB21HK-682X	C.CAPA. C.M		
	C3211	NCB21HK-152X	C CAPACITOR		
	C3213	NCB21HK-393X	C CAPACITOR		
	C3221	NCS21HJ-331X	C CAPACITOR		
	C3301	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C3302	NCB21HK-393X	C CAPACITOR		
	C3303	QEKJ0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C3304	QEKJ1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C3305	QEKJ1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C3306	QEKJ1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C3308	NCB21HK-152X	C CAPACITOR		
	C3310	NCB21HK-223X	C CAPACITOR		
	C3313	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C3314	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
	C3316	QFG32AJ-223Z	PP CAPACITOR	TANK	

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

⚠	Item	Parts number	Parts name	Remarks	Area
	C3319	QFLM1HJ-472Z	M CAPACITOR	TANK	
	C3331	QEKJ1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C3371	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C3374	QEKJ1AM-107Z	E CAPACITOR	MOTOR +B	
	C3376	NCB21HK-103X	C CAPACITOR		
	D2001	1SS133-T2	SI DIODE IM		
	D2046	1N4003S-T5	SI DIODE	J/C & U ONLY	
	D2201	1SS133-T2	SI DIODE IM		
	D2202	1SS133-T2	SI DIODE IM		
	D2451	1SS133-T2	SI DIODE IM		
	D2452	1SS133-T2	SI DIODE IM		
	D2601	1SS133-T2	SI DIODE IM		
	D2602	SPR-39MVWF	LED		
	D2701	1SS133-T2	SI DIODE IM	US5V	
	D2702	1SS133-T2	SI DIODE IM		
	D2703	MTZJ5.1C-T2	ZENER DIODE		
	D2705	1SS133-T2	SI DIODE IM		
	D2708	1SS133-T2	SI DIODE IM		
	D2723	1SS355-X	DIODE C.M		
	D2724	1SS355-X	DIODE C.M		
	D2725	1SS355-X	DIODE C.M		
	D2726	1SS355-X	DIODE C.M		
	D2731	1SS355-X	DIODE C.M		
	D2732	1SS355-X	DIODE C.M		
	D2852	MTZJ7.5C-T2	ZENER DIODE		
	D2860	MTZJ7.5C-T2	ZENER DIODE		
	D2902	MTZJ7.5C-T2	ZENER DIODE		
	D2903	MTZJ7.5C-T2	ZENER DIODE		
	D2904	NSTM515AS	LED	COLOR LED	
	D2906	MTZJ7.5C-T2	ZENER DIODE		
	D2907	MTZJ7.5C-T2	ZENER DIODE		
	D2908	NSTM515AS	LED	COLOR LED	
	D2910	MTZJ7.5C-T2	ZENER DIODE		
	D2911	MTZJ7.5C-T2	ZENER DIODE		
	D2912	NSTM515AS	LED	COLOR LED	
	D3000	1SR139-400-T2	SI DIODE		
	D3375	MA3062/M/-X	ZENER DIODE		
	IC331	BA3126N	IC	HEAD SW	
	IC332	AN7317	IC	PB&REC	
	IC333	BU4094BCF-X	IC		
	IC701	UPD784214AGF527		SYSTEM MICOM	
	IC702	LC75345M-X	IC		
	IC703	LB1641	IC		
	IC704	LB1641	IC		
	IC901	GP1UM271XK	IR DETECT UNIT	REMOCON SENS	
	J2001	QNN0215-001	PIN JACK	AUX IN JACK	
	J2003	GP1FA550TZ	OPT TRANSMITTER	DIGITAL OUTPUT	
	K2001	QQR0621-001Z	FERRITE BEADS		
	K2002	QQR0621-001Z	FERRITE BEADS		
	K3002	QQR0621-001Z	FERRITE BEADS		
	K3003	QQR0621-001Z	FERRITE BEADS		
	L2001	QQL244K-100Z	INDUCTOR		
	L2002	QQL244K-100Z	INDUCTOR		
	L2003	QUY150-050Y	BUS WIRE		
	L3301	QQR1118-001	OSC COIL(BIAS)		
	L3303	QQL244K-100Z	INDUCTOR		
	PP701	VYH7653-001T	IC HOLDER	FOR PP ONLY	
	Q2103	KTC3875/GR/-X	TRANSISTOR		
	Q2203	KTC3875/GR/-X	TRANSISTOR		
	Q2403	KTC3875/GR/-X	TRANSISTOR		
	Q2601	KRC102S-X	DIGITAL.TR		
	Q2703	KTA1504/GR-X		SW5V	
	Q2704	KTC3875/GR/-X	TRANSISTOR	RESET SW	

⚠	Item	Parts number	Parts name	Remarks	Area
	Q2705	KTC3875/GR/-X	TRANSISTOR	BACKUP CONT	
	Q2706	KTC3875/GR/-X	TRANSISTOR		
	Q2707	KTC3875/GR/-X	TRANSISTOR		
	Q2708	KTC3875/GR/-X	TRANSISTOR		
	Q2709	KTC3875/GR/-X	TRANSISTOR		
	Q2710	KTC3875/GR/-X	TRANSISTOR		
	Q2711	KTC3875/GR/-X	TRANSISTOR		
	Q2712	KTC3875/GR/-X	TRANSISTOR		
	Q2713	KTC3875/GR/-X	TRANSISTOR		
	Q2714	KTC3875/GR/-X	TRANSISTOR		
	Q2715	KTC3875/GR/-X	TRANSISTOR		
	Q2716	KTC3875/GR/-X	TRANSISTOR		
	Q2717	KTC3875/GR/-X	TRANSISTOR		
	Q3101	DTC114TKA-X	TRANSISTOR	70U/12U	
	Q3201	DTC114TKA-X	TRANSISTOR	70U/12U	
	Q3302	2SC2001/K/-T	TRANSISTOR	OSC	
	Q3305	2SC2001/LK/-T	TRANSISTOR	SW	
	Q3321	DTC144EKA-X	TRANSISTOR	BUFFER	
	Q3371	2SA952/LK/-T	TRANSISTOR	MOTER+B	
	Q3372	DTC124EKA-X	TRANSISTOR		
	Q3375	2SB562/C/-T	TRANSISTOR	SOLENOID DRIVE	
	Q3376	2SC2412K/RS/-X	CHIP TRANSISTOR		
	R2002	NRSA63J-103X	MG RESISTOR		
	R2003	NRSA63J-222X	MG RESISTOR		
	R2006	NRSA63J-222X	MG RESISTOR		
	R2007	NRSA63J-222X	MG RESISTOR		
	R2008	NRSA63J-103X	MG RESISTOR		
	R2009	NRSA63J-222X	MG RESISTOR		
	R2010	NRSA63J-222X	MG RESISTOR		
	R2011	NRSA63J-102X	MG RESISTOR		
	R2012	NRSA63J-153X	MG RESISTOR		
	R2015	NRSA63J-102X	MG RESISTOR		
	R2016	NRSA63J-103X	MG RESISTOR		
	R2017	NRSA63J-103X	MG RESISTOR		
	R2018	NRSA63J-222X	MG RESISTOR		
	R2019	NRSA63J-222X	MG RESISTOR		
	R2020	NRSA63J-103X	MG RESISTOR		
	R2021	NRSA63J-103X	MG RESISTOR		
	R2022	NRSA63J-222X	MG RESISTOR		
	R2023	NRSA63J-102X	MG RESISTOR		
	R2024	NRSA63J-102X	MG RESISTOR		
	R2025	NRSA63J-102X	MG RESISTOR		
	R2026	NRSA63J-222X	MG RESISTOR		
	R2027	NRSA63J-102X	MG RESISTOR		
	R2028	NRSA63J-103X	MG RESISTOR		
	R2029	NRSA63J-102X	MG RESISTOR		
	R2030	NRSA63J-104X	MG RESISTOR		
	R2031	NRSA63J-104X	MG RESISTOR		
	R2032	NRSA63J-102X	MG RESISTOR		
	R2033	NRSA63J-222X	MG RESISTOR		
	R2039	NRSA63J-223X	MG RESISTOR	VERSION	
	R2040	NRSA63J-472X	MG RESISTOR	VERSION	
	R2041	NRSA63J-222X	MG RESISTOR		
	R2042	NRSA63J-222X	MG RESISTOR		
	R2043	NRSA63J-222X	MG RESISTOR		
	R2044	NRSA63J-222X	MG RESISTOR		
	R2045	NRSA63J-103X	MG RESISTOR		
	R2046	NRSA63J-222X	MG RESISTOR		
	R2047	NRSA63J-103X	MG RESISTOR		
	R2048	NRSA63J-222X	MG RESISTOR		
	R2049	NRSA63J-103X	MG RESISTOR		
	R2050	NRSA63J-222X	MG RESISTOR		
	R2051	NRSA63J-222X	MG RESISTOR		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	R2052	NRSA63J-222X	MG RESISTOR		
	R2057	NRSA63J-222X	MG RESISTOR		
	R2060	NRSA63J-222X	MG RESISTOR		
	R2061	NRSA63J-222X	MG RESISTOR		
	R2062	NRSA63J-102X	MG RESISTOR		
	R2064	NRSA63J-102X	MG RESISTOR		
	R2066	NRSA63J-102X	MG RESISTOR		
	R2070	NRSA63J-101X	MG RESISTOR		
	R2072	NRSA63J-101X	MG RESISTOR		
	R2073	NRSA63J-101X	MG RESISTOR		
	R2075	NRSA63J-101X	MG RESISTOR		
	R2077	NRSA63J-101X	MG RESISTOR		
	R2079	NRSA63J-222X	MG RESISTOR		
	R2080	NRSA63J-222X	MG RESISTOR		
	R2081	NRSA63J-222X	MG RESISTOR		
	R2082	NRSA63J-222X	MG RESISTOR		
	R2083	NRSA63J-103X	MG RESISTOR		
	R2084	NRSA63J-103X	MG RESISTOR		
	R2085	NRSA63J-473X	MG RESISTOR	SENSOR P/UP	
	R2086	NRSA63J-473X	MG RESISTOR	SENSOR P/UP	
	R2087	NRSA63J-473X	MG RESISTOR	SENSOR P/UP	
	R2088	NRSA63J-104X	MG RESISTOR	PWM	
	R2089	NRSA63J-222X	MG RESISTOR		
	R2092	NRSA63J-473X	MG RESISTOR	RMT0 P/U	
	R2093	NRSA63J-473X	MG RESISTOR	RMT1 P/U	
	R2095	NRSA63J-103X	MG RESISTOR		
	R2096	NRSA63J-103X	MG RESISTOR		
	R2097	NRSA63J-222X	MG RESISTOR		
	R2098	NRSA63J-102X	MG RESISTOR		
	R2099	NRSA63J-102X	MG RESISTOR		
	R2103	NRSA63J-393X	MG RESISTOR		
	R2104	NRSA63J-103X	MG RESISTOR		
	R2105	NRSA63J-472X	MG RESISTOR		
	R2106	NRSA63J-153X	MG RESISTOR		
	R2108	NRSA63J-182X	MG RESISTOR		
	R2109	NRSA63J-182X	MG RESISTOR		
	R2110	NRSA63J-122X	MG RESISTOR		
	R2111	NRSA63J-682X	MG RESISTOR		
	R2125	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2126	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2127	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2128	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R2129	NRSA63J-752X	MG RESISTOR		
	R2130	NRSA63J-752X	MG RESISTOR		
	R2131	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2132	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2133	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
	R2134	NRSA63J-103X	MG RESISTOR		
	R2135	NRSA63J-124X	MG RESISTOR		
	R2136	NRSA63J-154X	MG RESISTOR		
	R2137	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R2138	NRSA63J-103X	MG RESISTOR		
	R2203	NRSA63J-393X	MG RESISTOR		
	R2204	NRSA63J-103X	MG RESISTOR		
	R2205	NRSA63J-472X	MG RESISTOR		
	R2206	NRSA63J-153X	MG RESISTOR		
	R2208	NRSA63J-182X	MG RESISTOR		
	R2209	NRSA63J-182X	MG RESISTOR		
	R2210	NRSA63J-122X	MG RESISTOR		
	R2211	NRSA63J-682X	MG RESISTOR		
	R2225	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2226	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2227	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R2228	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R2229	NRSA63J-752X	MG RESISTOR		
	R2230	NRSA63J-752X	MG RESISTOR		
	R2231	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2232	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2233	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
	R2234	NRSA63J-103X	MG RESISTOR		
	R2235	NRSA63J-513X	MG RESISTOR		
	R2237	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R2407	NRSA63J-332X	MG RESISTOR		
	R2408	NRSA63J-392X	MG RESISTOR		
	R2415	NRSA63J-823X	MG RESISTOR		
	R2416	NRSA63J-823X	MG RESISTOR		
	R2417	NRSA63J-394X	MG RESISTOR		
	R2418	NRSA63J-104X	MG RESISTOR		
	R2503	NRSA63J-222X	MG RESISTOR		
	R2505	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2614	NRSA63J-161X			
	R2615	NRSA63J-470X	MG RESISTOR		
	R2620	QRE141J-820Y	C RESISTOR	82 5% 1/4W	
	R2621	QRE141J-820Y	C RESISTOR	82 5% 1/4W	
	R2622	NRSA63J-222X	MG RESISTOR		
	R2624	NRSA63J-0R0X	MG RESISTOR		
	R2705	NRSA63J-331X	MG RESISTOR		
	R2706	NRSA63J-103X	MG RESISTOR		
	R2707	NRSA63J-103X	MG RESISTOR		
	R2708	NRSA63J-103X	MG RESISTOR		
	R2709	NRSA63J-103X	MG RESISTOR		
	R2710	NRSA63J-104X	MG RESISTOR		
	R2711	NRSA63J-473X	MG RESISTOR		
	R2712	NRSA63J-333X	MG RESISTOR		
	R2713	NRSA63J-102X	MG RESISTOR		
	R2714	NRSA63J-102X	MG RESISTOR		
	R2715	NRSA63J-102X	MG RESISTOR		
	R2716	NRSA63J-102X	MG RESISTOR		
	R2717	NRSA63J-102X	MG RESISTOR		
	R2718	NRSA63J-102X	MG RESISTOR		
	R2719	NRSA63J-221X	MG RESISTOR		
	R2720	NRSA63J-221X	MG RESISTOR		
	R2721	NRSA63J-271X	MG RESISTOR		
	R2722	NRSA63J-271X	MG RESISTOR		
	R2723	NRSA63J-271X	MG RESISTOR		
	R2724	NRSA63J-271X	MG RESISTOR		
	R2725	NRSA63J-221X	MG RESISTOR		
	R2726	NRSA63J-221X	MG RESISTOR		
	R2727	NRSA63J-271X	MG RESISTOR		
	R2728	NRSA63J-271X	MG RESISTOR		
	R2729	NRSA63J-271X	MG RESISTOR		
	R2730	NRSA63J-271X	MG RESISTOR		
	R2731	NRSA63J-221X	MG RESISTOR		
	R2732	NRSA63J-221X	MG RESISTOR		
	R2733	NRSA63J-271X	MG RESISTOR		
	R2734	NRSA63J-271X	MG RESISTOR		
	R2735	NRSA63J-271X	MG RESISTOR		
	R2736	NRSA63J-271X	MG RESISTOR		
	R2740	NRSA63J-222X	MG RESISTOR		
	R2741	NRSA63J-222X	MG RESISTOR		
	R2742	NRSA63J-222X	MG RESISTOR		
	R2743	NRSA63J-222X	MG RESISTOR		
	R2744	NRSA63J-222X	MG RESISTOR		
	R2745	NRSA63J-222X	MG RESISTOR		
	R2750	NRSA63J-221X	MG RESISTOR		
	R2751	NRSA63J-221X	MG RESISTOR		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	R2752	NRSA63J-221X	MG RESISTOR		
	R2852	NRSA63J-100X	MG RESISTOR		
	R2853	NRSA63J-222X	MG RESISTOR		
	R2854	NRSA63J-222X	MG RESISTOR		
	R2855	NRSA63J-100X	MG RESISTOR		
	R2856	QRE141J-9R1Y	C RESISTOR	9.1 5% 1/4W	
	R2860	NRSA63J-100X	MG RESISTOR		
	R2861	NRSA63J-222X	MG RESISTOR		
	R2862	NRSA63J-222X	MG RESISTOR		
	R2863	NRSA63J-103X	MG RESISTOR		
	R2864	NRSA63J-103X	MG RESISTOR		
	R2865	NRSA63J-103X	MG RESISTOR		
	R2866	NRSA63J-103X	MG RESISTOR		
	R2867	NRSA63J-100X	MG RESISTOR		
	R2901	NRSA63J-103X	MG RESISTOR		
	R3101	NRSA63J-220X	MG RESISTOR		
	R3102	NRSA63J-182X	MG RESISTOR		
	R3103	NRSA63J-242X	MG RESISTOR		
	R3105	NRSA63J-104X	MG RESISTOR		
	R3106	NRSA63J-332X	MG RESISTOR		
	R3107	NRSA63J-123X	MG RESISTOR		
	R3108	NRSA63J-562X	MG RESISTOR		
	R3109	NRSA63J-102X	MG RESISTOR		
	R3110	NRSA63J-272X	MG RESISTOR		
	R3111	NRSA63J-363X	MG.RES C.M		
	R3112	NRSA63J-222X	MG RESISTOR		
	R3116	NRSA63J-102X	MG RESISTOR		
	R3121	NRSA63J-223X	MG RESISTOR		
	R3201	NRSA63J-220X	MG RESISTOR		
	R3202	NRSA63J-182X	MG RESISTOR		
	R3203	NRSA63J-242X	MG RESISTOR		
	R3205	NRSA63J-104X	MG RESISTOR		
	R3206	NRSA63J-332X	MG RESISTOR		
	R3207	NRSA63J-123X	MG RESISTOR		
	R3208	NRSA63J-562X	MG RESISTOR		
	R3209	NRSA63J-102X	MG RESISTOR		
	R3210	NRSA63J-272X	MG RESISTOR		
	R3211	NRSA63J-363X	MG.RES C.M		
	R3212	NRSA63J-222X	MG RESISTOR		
	R3216	NRSA63J-102X	MG RESISTOR		
	R3221	NRSA63J-223X	MG RESISTOR		
	R3301	NRS181J-221X	MG RESISTOR	VCC	
	R3303	NRSA63J-393X	MG RESISTOR		
	R3304	NRS181J-101X	MG RESISTOR	VCC	
	R3305	NRSA63J-222X	MG RESISTOR		
	R3310	QRJ146J-4R7X	UNF C RESISTOR	4.7 5% 1/4W	
	R3313	NRSA63J-2R2X	MG RESISTOR		
	R3314	NRSA63J-153X	MG RESISTOR		
	R3315	NRSA63J-101X	MG RESISTOR	DUMP	
	R3327	NRSA63J-474X	MG RESISTOR	BIAS T.P	
	R3335	NRSA63J-152X	MG RESISTOR	BIAS SW	
	R3336	NRSA63J-472X	MG RESISTOR		
	R3337	NRSA63J-332X	MG RESISTOR		
	R3338	NRSA63J-392X	MG RESISTOR		
	R3339	NRSA63J-222X	MG RESISTOR		
	R3340	NRS181J-0R0X	MG RESISTOR	VDD	
	R3341	NRSA63J-123X	MG RESISTOR		
	R3342	NRSA63J-203X	MG RESISTOR		
	R3343	NRSA63J-183X	MG RESISTOR		
⚠	R3353	QRZ9005-100X	F RESISTOR	+B	
	R3371	NRSA63J-103X	MG RESISTOR		
	R3372	NRSA63J-102X	MG RESISTOR		
	R3375	NRSA02J-151X	MG RESISTOR	1/8W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R3376	NRSA02J-683X	MG RESISTOR		
	SP709	LV30064-092A	SPACER		
	VR331	QVP0077-203Z	SEMI V RESISTOR	BIAS ADJ	
	VR337	QVP0077-103Z	SEMI V RESISTOR	TAPE SPEED ADJ	
	W 708	QJQ009-032601	SHI CR B-B WIRE	DIGITAL OUTPUT	
	W 709	QUB230-22HPHP	SIN TWIST WIRE		
	X2701	QAX0283-001Z	C RESONATOR	MAIN CLOCK	
	X2702	QAX0401-001	CRYSTAL	SUB CLOCK	

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

⚠	Item	Parts number	Parts name	Remarks	Area
	C 1	NCB21HK-223X	C CAPACITOR		
	C 2	NCB21HK-103X	C CAPACITOR		
	C 3	EETC1CM-106ZJC	E.CAPACITOR		
	C 4	NCB21HK-103X	C CAPACITOR		
	C 6	NCB21HK-102X	C CAPACITOR		
	C 7	NCB21HK-102X	C CAPACITOR		
	C 8	NCB21HK-102X	C CAPACITOR		
	C 10	NRSA02J-0R0X	MG RESISTOR		
	C 11	NCB21HK-223X	C CAPACITOR		
	C 12	NCB21HK-473X	C CAPACITOR		
	C 13	NCS21HJ-120X	C CAPACITOR		
	C 14	QEKC1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 15	NCS21HJ-120X	C CAPACITOR		
	C 16	NCS21HJ-120X	C CAPACITOR		
	C 17	NCB21HK-392X	C CAPACITOR		
	C 18	QEQ61HM-474Z	NP E CAPACITOR	.47MF 20% 50V	
	C 19	NCB21HK-473X	C CAPACITOR		
	C 20	NCB21HK-102X	C CAPACITOR		
	C 21	NCB21HK-223X	C CAPACITOR		
	C 22	NCS21HJ-151X	C CAPACITOR		
	C 23	NCS21HJ-151X	C CAPACITOR		
	C 24	NCS21HJ-151X	C CAPACITOR		
	C 25	QEKC1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 26	NCB21HK-102X	C CAPACITOR		
	C 27	NCB21HK-102X	C CAPACITOR		
	C 30	EETC1CM-107ZJC	E CAPACITOR		
	C 31	EEKC1CM-226ZJC	E.CAPA. I.M		
	C 32	NCB21HK-473X	C CAPACITOR		
	C 33	NCB21HK-473X	C CAPACITOR		
	C 34	NCB21HK-223X	C CAPACITOR		
	C 35	NCB21HK-473X	C CAPACITOR		
	C 36	EEKC1HM-105ZJC	E CAPACITOR		
	C 37	EEKC1HM-105ZJC	E CAPACITOR		
	C 38	EETC1HM-224ZJC	E.CAPA. I.M		
	C 39	EETC1HM-105ZJC	E.CAPA. I.M		
	C 40	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 41	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 42	NCB21HK-152X	C CAPACITOR		
	C 43	NCB21HK-152X	C CAPACITOR		
	C 44	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 45	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 46	NCB21HK-273X	C CAPACITOR		
	C 47	EETC1HM-105ZJC	E.CAPA. I.M		
	C 48	NCB21HK-222X	C CAPACITOR		
	C 49	NCS21HJ-471X	C CAPACITOR		
	C 50	EETC1CM-226ZJC	E.CAPA. I.M		
	C 51	EEKC1HM-105ZJC	E CAPACITOR		
	C 52	QFVJ1HJ-274Z	MF CAPACITOR	.27MF 5% 50V	
	C 53	EETC1CM-226ZJC	E.CAPA. I.M		
	C 54	NCB21HK-473X	C CAPACITOR		
	C 57	NCB21HK-102X	C CAPACITOR		
	C 58	NCB21HK-473X	C CAPACITOR		
	C 59	NCB21HK-102X	C CAPACITOR		
	CF 1	QAX0677-001Z	C FILTER		
	CF 2	QAX0677-001Z	C FILTER		
	CF 3	QAX0610-001Z	C DISCRIMINATOR		
	CN 1	QGF1205F1-09	CONNECTOR		
	D 1	1SS133-T2	SI DIODE IM		
	D 2	1SS133-T2	SI DIODE IM		
	D 3	1SS133-T2	SI DIODE IM		
	D 4	1SS133-T2	SI DIODE IM		
	D 11	1SS133-T2	SI DIODE IM		
	IC 1	LA1838	IC		

⚠	Item	Parts number	Parts name	Remarks	Area
	IC 2	LC72136N	IC		
	J 1	QNB0014-001	ANT TERMINAL		
	L 1	QQR0796-002	COIL BLOCK		
	Q 1	2SC2814/4-5/-X	TRANSISTOR		
	Q 5	DTA114YKA-X	TRANSISTOR		
	R 1	QRE141J-560Y	C RESISTOR	56 5% 1/4W	
	R 2	NRSA02J-331X	MG RESISTOR		
	R 3	NRSA02J-224X	MG RESISTOR		
	R 4	NRSA02J-331X	MG RESISTOR		
	R 5	NRSA02J-560X	MG RESISTOR		
	R 6	NRSA02J-240X	RES. C.M		
	R 10	NRSA02J-222X	MG RESISTOR		
	R 13	NRSA02J-103X	MG RESISTOR		
	R 14	NRSA02J-104X	MG RESISTOR		
	R 15	NRSA02J-332X	MG RESISTOR		
	R 16	NRSA02J-472X	MG RESISTOR		
⚠	R 17	QRZ9005-680X	F RESISTOR	68 1/4W	
	R 18	NRSA02J-102X	MG RESISTOR		
	R 19	NRSA02J-102X	MG RESISTOR		
	R 20	NRSA02J-102X	MG RESISTOR		
	R 21	NRSA02J-562X	MG RESISTOR		
	R 22	NRSA02J-472X	MG RESISTOR		
	R 23	NRSA02J-182X	MG RESISTOR		
	R 24	NRSA02J-103X	MG RESISTOR		
	R 25	NRSA02J-331X	MG RESISTOR		
	R 26	NRSA02J-222X	MG RESISTOR		
	R 27	NRSA02J-103X	MG RESISTOR		
	R 28	NRSA02J-103X	MG RESISTOR		
	R 29	NRSA02J-103X	MG RESISTOR		
	R 30	NRSA02J-122X	MG RESISTOR		
	R 31	NRSA02J-102X	MG RESISTOR		
	R 32	NRSA02J-102X	MG RESISTOR		
	R 33	NRSA02J-331X	MG RESISTOR		
	R 34	NRSA02J-470X	MG RESISTOR		
	R 35	NRSA02J-562X	MG RESISTOR		
	R 36	NRSA02J-332X	MG RESISTOR		
	R 37	NRSA02J-103X	MG RESISTOR		
	R 38	NRSA02J-563X	MG RESISTOR		
	R 39	NRSA02J-623X	MG RESISTOR		
	R 40	NRSA02J-243X	MG RESISTOR		
	R 41	NRSA02J-332X	MG RESISTOR		
	R 60	NRSA02J-0R0X	MG RESISTOR		
	T 1	QQR0793-001	IFT		
	TU 1	QAU0161-001	FRONT END		
	X 1	QAX0402-001	CRYSTAL		

■ **Electrical parts list (CD servo board)** **Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 254	QERF1AM-476Z	E CAPACITOR	47MF 20% 10V	
	C 255	NCB31CK-104X	C CAPACITOR		
	C 256	NCB31CK-104X	C CAPACITOR		
	C 271	NCS31HJ-101X	C CAPACITOR		
	C 272	NCS31HJ-101X	C CAPACITOR		
	C 273	NCB31CK-104X	C CAPACITOR		
	C 291	NCB21CK-105X	C CAPACITOR		
	C 292	NCB21CK-105X	C CAPACITOR		
	C 601	NCB31HK-102X	C CAPACITOR		
	C 602	NCB31HK-102X	C CAPACITOR		
	C 603	NCB31EK-223X	C CAPACITOR		
	C 604	NCB31EK-223X	C CAPACITOR		
	C 605	NCS31HJ-271X	C CAPACITOR		
	C 606	NCS31HJ-820X	C CAPACITOR		
	C 610	NCB31CK-563X	C CAPACITOR		
	C 611	NCB21CK-104X	C CAPACITOR		
	C 612	QEKC1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 614	NCB31CK-393X	C CAPACITOR		
	C 615	NCB31HK-272X	C CAPACITOR		
	C 616	NCB31HK-681X	C CAPACITOR		
	C 617	NCB31HK-331X	C CAPACITOR		
	C 621	NCB31CK-104X	C CAPACITOR		
	C 622	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 623	NCF21CZ-105X	C CAPACITOR		
	C 624	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 631	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 632	NCF21CZ-105X	C CAPACITOR		
	C 633	NCB31EK-223X	C CAPACITOR		
	C 651	NCS31HJ-1R0X	C CAPACITOR		
	C 652	NCS31HJ-1R0X	C CAPACITOR		
	C 653	NCB31AK-334X	C CAPACITOR		
	C 655	NCB31CK-104X	C CAPACITOR		
	C 656	NCB31CK-104X	C CAPACITOR		
	C 657	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 658	NCB31CK-104X	C CAPACITOR		
	C 661	NCS31HJ-471X	C CAPACITOR		
	C 663	NCB31EK-223X	C CAPACITOR		
	C 664	NCB31EK-223X	C CAPACITOR		
	C 665	NCB21CK-154X	C CAPACITOR		
	C 667	NCB21CK-474X	C CAPACITOR		
	C 668	NCB31CK-473X	C CAPACITOR		
	C 673	QER60JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 676	NCB31CK-104X	C CAPACITOR		
	C 677	NCB31CK-104X	C CAPACITOR		
	C 678	NCB31CK-104X	C CAPACITOR		
	C 679	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 680	NCB31CK-104X	C CAPACITOR		
	C 681	NCS31HJ-6R0X	C CAPACITOR		
	C 682	NCS31HJ-150X	C CAPACITOR		
	C 683	NCS31HJ-220X	C CAPACITOR		
	C 801	NCB31EK-223X	C CAPACITOR		
	C 802	NCS31HJ-102X	C CAPACITOR		
	C 811	NCS31HJ-391X	C CAPACITOR		
	C 812	NCS31HJ-391X	C CAPACITOR		
	C 813	NCS31HJ-391X	C CAPACITOR		
	C 814	NCS31HJ-391X	C CAPACITOR		
	C 815	NCB21AK-105X	C CAPACITOR		
	C 816	NCB20JK-155X	C CAPACITOR		
	C 817	NCF21CZ-105X	C CAPACITOR		
	C 818	NCF21CZ-105X	C CAPACITOR		
	C 821	NCF21CZ-105X	C CAPACITOR		
	C 822	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 861	NCB31HK-102X	C CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C 862	NCB31HK-102X	C CAPACITOR		
	C 863	NCB31HK-272X	C CAPACITOR		
	C 864	NCB31HK-272X	C CAPACITOR		
	CN601	QGF1037F1-15W	CONNECTOR	PICK UP/TR.MECH	
	CN605	QGF1016F2-04W	CONNECTOR	CD TEXT	
	CN606	QGF1016F2-08W	CONNECTOR	4T I/F	
	CN651	QGF1016F3-19	CONNECTOR	MAIN	
	D 251	DA204U-X	DIODE		
	D 292	MA112-X	DIODE		
	D 603	1SS355-X	DIODE		
	HL251	VYH7653-002	IC HOLDER	FOR IC251	
	IC251	UPD780024AGKB21	IC	MICOM	
	IC291	XC62HR3502P-X	IC	3.5VREG	
	IC601	AN22000A-W	IC	RF AMP	
	IC651	MN662790RSC	IC	DSP & DAC	
	IC801	LA6541-X	IC	PU DRIVE	
	K 655	NQR0007-002X	FERRITE BEADS	TX	
	K 656	NQR0251-004X	FERRITE BEADS	SRDATA	
	K 657	NQR0251-004X	FERRITE BEADS	LRCK	
	K 658	NQR0251-004X	FERRITE BEADS	BCLK	
	Q 631	2SA1037AK/RS/-X	TRANSISTOR	APC	
	Q 651	DTC114EUA-X	TRANSISTOR		
	Q 652	DTC114EUA-X	TRANSISTOR	RF EQ	
	Q 673	DTA114EKA-X	DIGITAL.TRANSIS	IREF CHANGE	
	R 251	NRSA63J-102X	MG RESISTOR		
	R 252	NRSA63J-102X	MG RESISTOR		
	R 253	NRSA63J-102X	MG RESISTOR		
	R 254	NRSA63J-102X	MG RESISTOR		
	R 255	NRSA63J-102X	MG RESISTOR		
	R 256	NRSA63J-102X	MG RESISTOR		
	R 257	NRSA63J-102X	MG RESISTOR		
	R 258	NRSA63J-102X	MG RESISTOR		
	R 259	NRSA63J-102X	MG RESISTOR		
	R 260	NRSA63J-102X	MG RESISTOR		
	R 261	NRSA63J-0R0X	MG RESISTOR		
	R 262	NRSA63J-102X	MG RESISTOR		
	R 263	NRSA63J-102X	MG RESISTOR		
	R 264	NRSA63J-103X	MG RESISTOR		
	R 265	NRSA63J-183X	MG RESISTOR		
	R 271	NRSA63J-103X	MG RESISTOR		
	R 272	NRSA63J-103X	MG RESISTOR		
	R 273	NRSA63J-103X	MG RESISTOR		
	R 274	NRSA63J-682X	MG RESISTOR		
	R 275	NRSA63J-103X	MG RESISTOR		
	R 281	NRSA63J-102X	MG RESISTOR		
	R 282	NRSA63J-102X	MG RESISTOR		
	R 283	NRSA63J-101X	MG RESISTOR		
	R 284	NRSA63J-102X	MG RESISTOR		
	R 285	NRSA63J-102X	MG RESISTOR		
	R 291	NRSA63J-103X	MG RESISTOR		
	R 292	NRSA63J-1R0X	MG RESISTOR		
	R 293	NRSA63J-1R0X	MG RESISTOR		
	R 601	NRSA63J-224X	MG RESISTOR		
	R 602	NRSA63J-823X	MG RESISTOR		
	R 603	NRSA63J-393X	MG RESISTOR		
	R 604	NRSA63J-224X	MG RESISTOR		
	R 607	NRSA63J-473X	MG RESISTOR		
	R 608	NRSA63J-473X	MG RESISTOR		
	R 611	NRSA63J-562X	MG RESISTOR		
	R 613	NRSA63J-562X	MG RESISTOR		
	R 617	NRSA63J-332X	MG RESISTOR		
	R 631	NRSA63J-2R2X	MG RESISTOR		
	R 632	NRSA63J-3R9X	MG RESISTOR		

■ **Electrical parts list (CD servo board)** **Block No. 04**

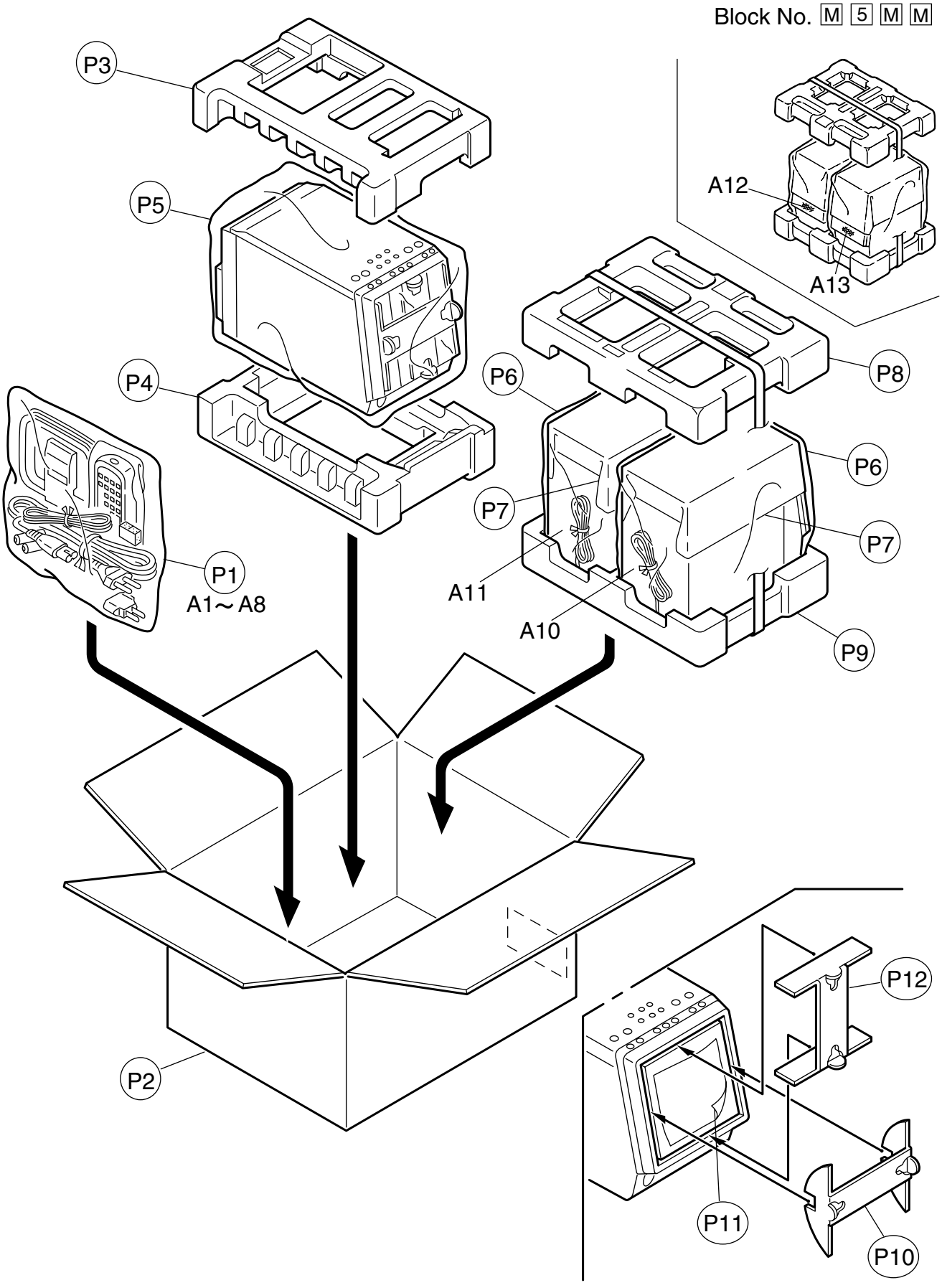
⚠	Item	Parts number	Parts name	Remarks	Area
	R 634	NRSA63J-3R9X	MG RESISTOR		
	R 635	NRSA63J-100X	MG RESISTOR		
	R 636	NRSA63J-151X	MG RESISTOR		
	R 651	NRSA63J-102X	MG RESISTOR		
	R 652	NRSA63J-102X	MG RESISTOR		
	R 653	NRSA63J-102X	MG RESISTOR		
	R 654	NRSA63J-102X	MG RESISTOR		
	R 659	NRSA63J-203X	MG RESISTOR		
	R 661	NRSA63J-473X	MG RESISTOR		
	R 662	NRSA63J-683X	MG RESISTOR		
	R 663	NRSA63J-683X	MG RESISTOR		
	R 664	NRSA63J-331X	MG RESISTOR		
	R 665	NRSA63J-101X	MG RESISTOR		
	R 666	NRSA02J-101X	MG RESISTOR		
	R 667	NRSA63J-4R7X	MG RESISTOR		
	R 668	NRSA63J-155X	MG RESISTOR		
	R 669	NRSA63J-562X	MG RESISTOR		
	R 671	NRSA63J-684X	MG RESISTOR		
	R 673	NRSA63J-683X	MG RESISTOR		
	R 675	NRSA63J-100X	MG RESISTOR		
	R 677	NRSA63J-102X	MG RESISTOR		
	R 678	NRSA63J-102X	MG RESISTOR		
	R 679	NRSA63J-102X	MG RESISTOR		
	R 682	NRSA63J-102X	MG RESISTOR		
	R 683	NRSA63J-105X	MG RESISTOR		
	R 685	NRSA63J-683X	MG RESISTOR		
	R 801	NRSA63J-272X	MG RESISTOR		
	R 802	NRSA63J-152X	MG RESISTOR		
	R 803	NRSA63J-472X	MG RESISTOR		
	R 804	NRSA63J-103X	MG RESISTOR		
	R 805	NRSA63J-123X	MG RESISTOR		
	R 808	NRSA63J-183X	MG RESISTOR		
	R 809	NRSA63J-152X	MG RESISTOR		
	R 811	NRSA63J-473X	MG RESISTOR		
	R 812	NRSA63J-152X	MG RESISTOR		
	R 813	NRSA63J-182X	MG RESISTOR		
	R 861	NRSA63J-681X	MG RESISTOR		
	R 862	NRSA63J-681X	MG RESISTOR		
	R 863	NRSA63J-561X	MG RESISTOR		
	R 864	NRSA63J-561X	MG RESISTOR		
	SW101	QSW0927-001	SWITCH	REST SW	
	SW102	QSW0931-001	SWITCH	TRAY SW	
	X 251	QAX0664-001Z	C OSCILLATOR	FOR IC251 8.38M	
	X 651	NAX0476-001X	CRYSTAL	FOR IC651	

< MEMO >

Packing materials and accessories parts list

Block No. M 3 M M

Block No. M 5 M M



■ Parts list (Packing)

Block No. M3MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	QPC02503515P	POLY BAG	1		
	P 2	GV20154-002A	CARTON ASSY	1	MASTER PACKING	
	P 3	GV10087-001A	CUSHION(TOP)	1		
	P 4	GV10088-001A	CUSHION(BOTTOM)	1		
	P 5	QPC05005015P	POLY BAG	1		
	P 6	700-120070-10	POLY BAG	1		
	P 7	715-250035-00	MIRROR MAT	1		
	P 8	720-TUXF70-00	TOP CUSHION	1		
	P 9	720-BUXF70-00	BOTTOM CUSHION	1		
	P 10	GV30228-002A	CARTON SPACER	1	COVER MOVING PA	
	P 11	GV40168-004A	SHEET	1	STICK AT C.SPAC	
	P 12	GV30229-001A	CARTON SPACER	1		

■ Parts list (Accessories)

Block No. M5MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	EWP503-001C	ANT.WIRE	1		
	A 2	QAL0014-001	AM LOOP ANT	1		
	A 3	GVT0071-013A	INST.BOOK	1	ENG.SPA.POR	UW
		GVT0071-003A	INST.BOOK	1	ENG.CHI	US,UJ
		GVT0071-004A	INST.BOOK	1	KOR	UP
⚠	A 4	QMPL060-183-JD	POWER CORD	1		US,UJ,UW
⚠		QMP0121-001	POWER CORD	1		UP
	A 5	RM-SUXA52U	REMOCON	1		
	A 6	----------	BATTERY	2		
	A 7	BT-56010-1	WARRANTY CARD	1		UP
⚠	A 8	QAM0112-001	AC PLUG ADAPTER	1		US,UJ,UW
	A 10	UXA52R-SPBOX-L	SPK.WITH BOX	1		
	A 11	UXA52R-SPBOX-R	SPK.WITH BOX	1		
	A 12	201-0070US-10	SARAN BOARD	1		
	A 13	201-1070US-10	SARAN BOARD	1		