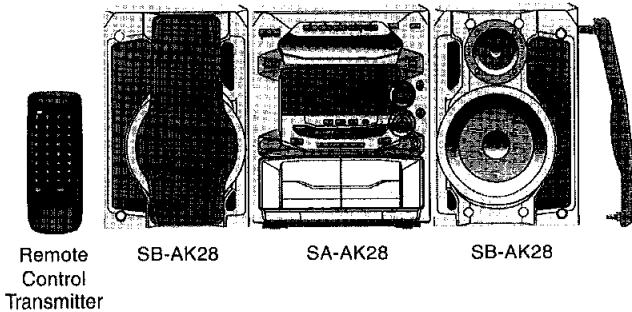


Service Manual

CD Stereo System

COMPACT
disc
DIGITAL AUDIO

SA-AK28



Colour

(S)... Silver Type

Area

(E)... Europe

(EB)... Great Britain

(EG)... Germany and Italy

TAPE SECTION :

AR2 MECHANISM SERIES

CD SECTION :

RAE0152Z-3 TRAVERSE DECK SERIES

Specifications

■ AMPLIFIER SECTION

RMS power output

THD 10%, both channels driven

(HIGH)	40 W per channel (6 Ω)
(LOW)	100 W per channel (6 Ω)
(TOTAL)	140 W per channel (6 Ω)

Input sensitivity

AUX 250 mV

Input Impedance

AUX 13.9 kΩ

■ FM TUNER SECTION

Frequency range 87.50 - 108.00 MHz(50 kHz steps)

Sensitivity 1.8 μV (IHF)

S/N 26 dB 1.5 μV

Antenna terminal(s) 75 Ω (unbalanced)

■ AM TUNER SECTION

Frequency range 522 - 1629 kHz (9 kHz steps)

Sensitivity 560 μV/m

S/N 20 dB (at 999 kHz)

■ CASSETTE DECK SECTION

Track system 4 track, 2 channel

Heads

Record/playback Solid permalloy head

Erasure Double gap ferrite head

Motor DC servo motor

Recording system AC bias 100 kHz

Erasing system AC erase 100 kHz

Tape speed 4.8 cm/s

Frequency response (+3 dB, -6 dB at DECK OUT)

NORMAL (TYPE I) 35 Hz - 14 kHz

HIGH (TYPE II) 35 Hz - 14 kHz

S/N 50 dB (A weighted)

Wow and flutter 0.18 % (WRMS)

Fast forward and rewind time Approx. 120 seconds with

C-60 cassette tape

■ CD SECTION

Sampling frequency 44.1 kHz

Decoding 16 bit linear

Beam source/wave length Semiconductor laser/780 nm

Number of channels Stereo

Frequency response 20 Hz - 20 kHz (+1, -2 dB)

Wow and flutter Below measurable limit

Digital filter 8 fs

D/A converter MASH (1 bit DAC)

Panasonic®

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■ GENERAL

Power supply	
For E, EG area	AC 230 V, 50Hz
For EB area	AC 230 V - 240 V, 50 Hz
Power consumption	170 W
Power consumption in standby mode	
Eco mode on	0.4 W
Eco mode off	12 W
Dimensions (W x H x D)	270 x 330 x 335 mm
Weight	8.2 kg

■ SYSTEM

SC-AK28 (E)	Music Center: SA-AK28 (E)
	Speaker: SB-AK28 (E)
SC-AK28 (EB)	Music Center: SA-AK28 (EB)
	Speaker: SB-AK28 (E)
SC-AK28 (EG)	Music Center: SA-AK28 (EG)
	Speaker: SB-AK28 (E)

Notes:

1. Specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C571~C574, C558 through a 10Ω, 5W resistor to ground. DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices. After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

Current consumption at AC 230V, 50 Hz in NO SIGNAL mode should be ~400mA.

2 Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

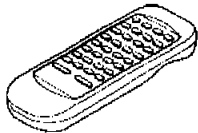
If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

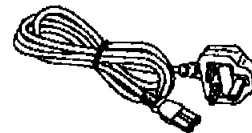
Note :

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

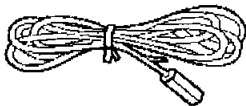
3 Accessories



Remote Control
Transmitter



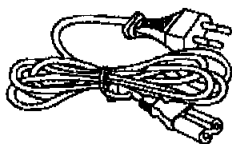
AC main lead (EB)



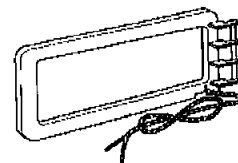
FM indoor antenna



FM antenna Plug
Adaptor (EB)



AC mains lead (E,EG)



AM Loop antenna

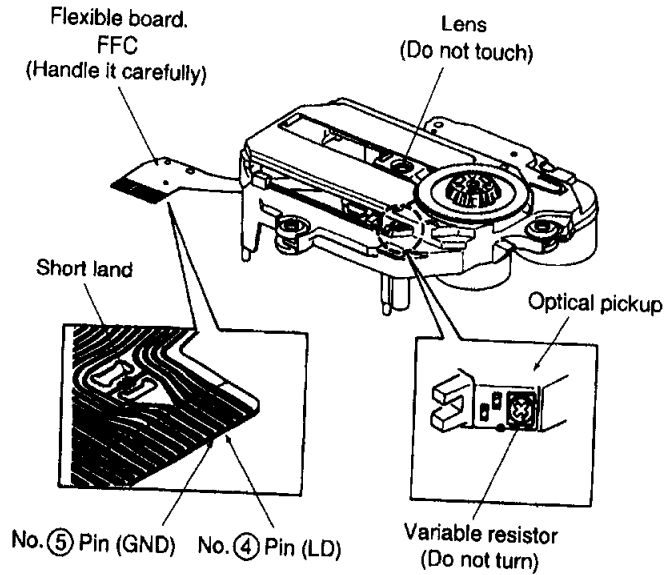
4 Handling Precautions For Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.

So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

• Handling of traverse deck (optical pickup)

1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. The short land between the No.4(LD) and No.5(GND) pins on the flexible board (FFC) is shorted with a solder build-up to prevent damage to the laser diode. To connect to the PC board, be sure to open by removing the solder build-up, and finish the work quickly.
3. Take care not to apply excessive stress to the flexible board (FFC).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.



• **Grounding for electrostatic breakdown prevention**

1. Human body grounding

Use the anti-static wrist strap to discharge the static electricity from your body.

2. Work table grounding

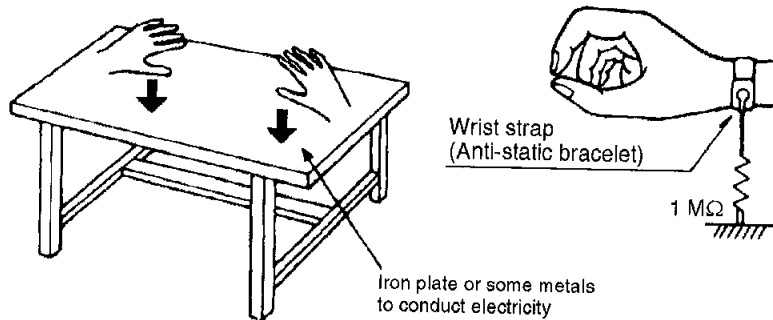
Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution :

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

Caution when Replacing the Traverse Deck :

The traverse deck has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.



5 Precaution of Laser Diode

CAUTION :

This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pickup lens.

Wavelength : 780 nm

Maximum output radiation power from pick up : 100µW/VDE

Laser radiation from pick up unit is safety level, but be sure the followings:

1. Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

ACHTUNG :

Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge : 780nm

Maximale Strahlungsleistung der Lasereinheit : 100µW/VDE

Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.

ADVARSEL : I dette a apparat anvendes laser.

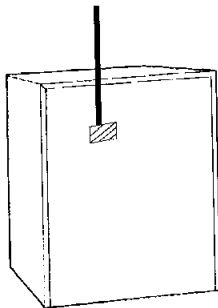
CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

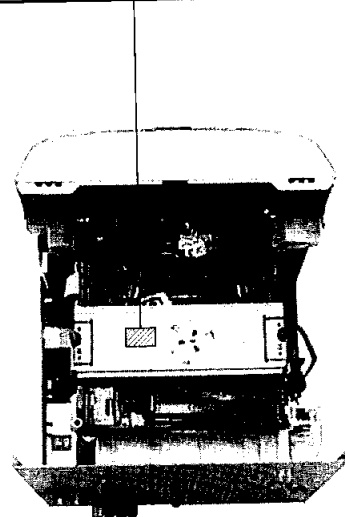
■ Use of Caution Labels



**LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT**



DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ DIREKTE UDSTYRELSE FOR STRÅLING.
VARO!	AVATTAESSA JA SUGJALUKITUS OHIETTAESSA OLET ALTIHRA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KÄTSO SÄTEESEEN.
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄNNEN ÄR I RIKOPPLAD. BETRÄKTA EJ STRÅLEN.
ADVARSEL	USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES OG SIKKERHEDSÅS BRYTES. UNDGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	UNVISIBLARE LASERSTRÄHLUNG WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.



6 Caution for AC Mains Lead


(For "EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:


Blue: Neutral,

Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

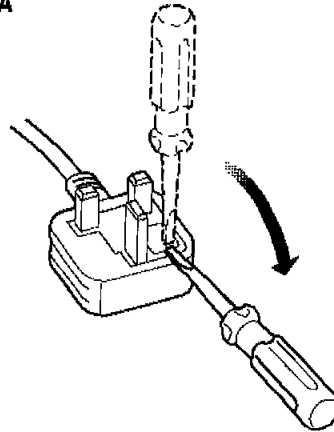
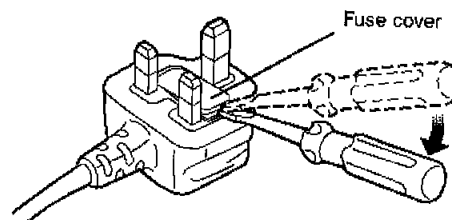


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

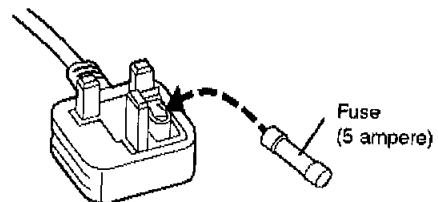
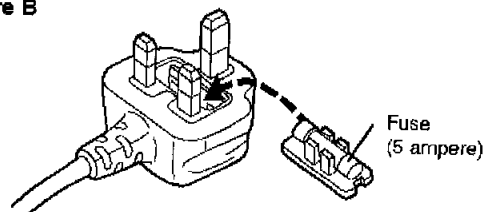
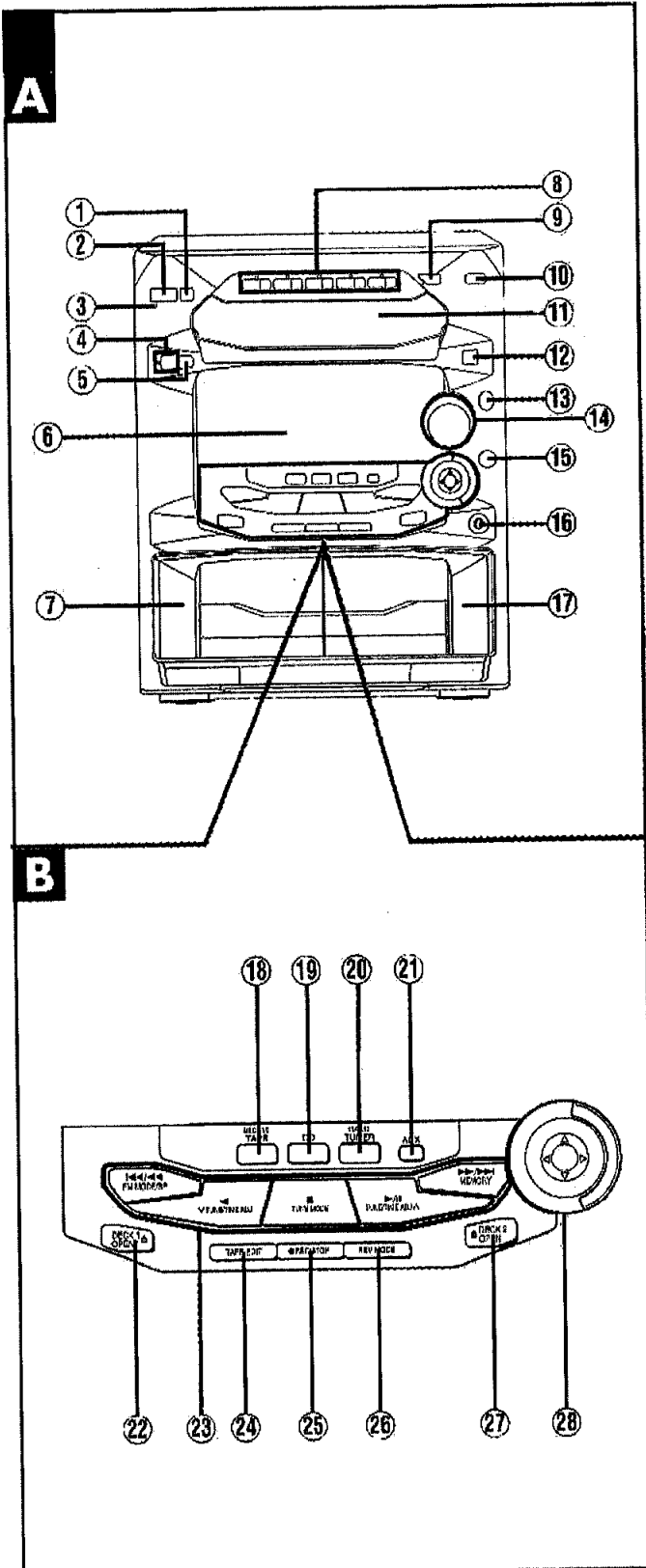


Figure B



7 Operation Procedures



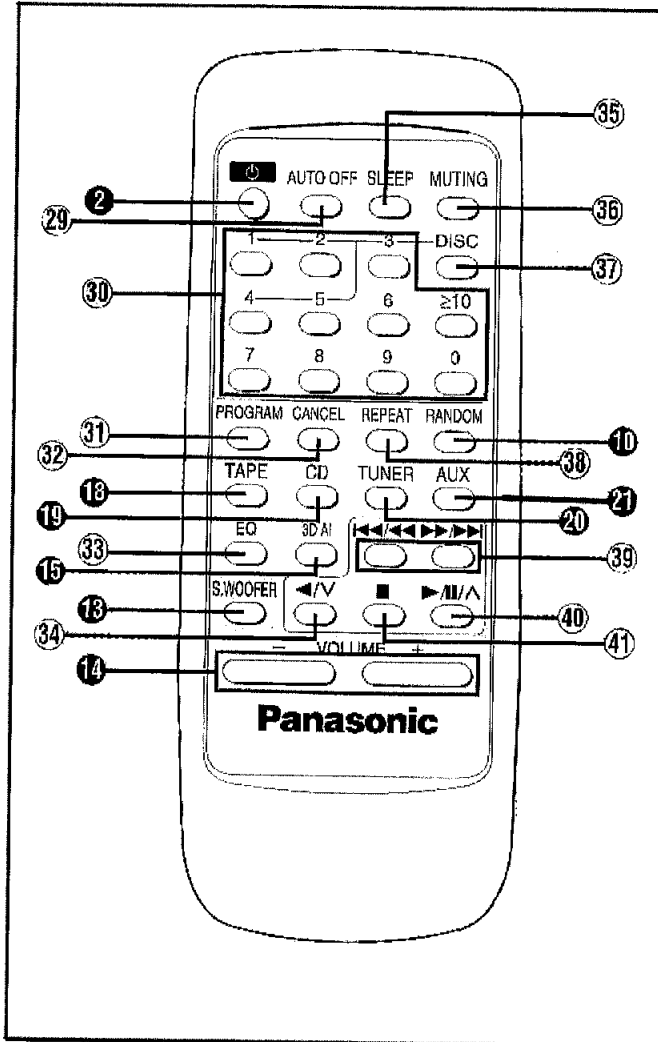
Front panel controls

Main unit **A**

- | No. | Name |
|-----|---|
| ① | Eco button (MODE) |
| ② | Standby/on switch (⏻/⏻) |
| | Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power. |
| ③ | AC supply indicator (AC IN) |
| | This indicator lights when the unit is connected to the AC mains supply. |
| ④ | Play timer/record timer button and indicator (⏻/⏻) |
| ⑤ | Clock/timer button (CLOCK/TIMER) |
| ⑥ | Display |
| ⑦ | Deck 1 cassette holder |
| ⑧ | Disc direct play, open/close buttons and indicators (CD 1 ~ CD 5, ⏻) |
| ⑨ | CD manager button (CD MANAGER) |
| ⑩ | Random play button (RANDOM) |
| ⑪ | Disc tray |
| ⑫ | Display select/demonstration button (-DISP/-DEMO) |
| ⑬ | Super woofer on/off button (S.WOOFER) |
| ⑭ | Volume control (VOLUME) |
| ⑮ | 3D AI EQ button (3D AI EQ) |
| ⑯ | Headphone Jack (PHONES) |
| ⑰ | Deck 2 cassette holder |

Center console **B**

- | | |
|---|---|
| ⑩ | Tape/deck select button (TAPE, DECK 1/2) |
| ⑪ | CD button (CD) |
| ⑫ | Tuner/band select button (TUNER, BAND) |
| ⑬ | AUX button (AUX) |
| ⑭ | Deck 1 open button (⏻ DECK 1 OPEN) |
| ⑮ | Basic operating buttons |
| | Functions change according to the source. |
| ⑯ | Tape edit button (TAPE EDIT) |
| ⑰ | Recording start/stop button (● REC/STOP) |
| ⑱ | Reverse mode select button (REV MODE) |
| ⑲ | Deck 2 open button (⏻ DECK 2 OPEN) |
| ⑳ | Sound equalizer control (SOUND EQ) |



Front panel controls

Remote control

Buttons such as ② functions in exactly the same way as the buttons on the main unit.

No.	Name
-----	------

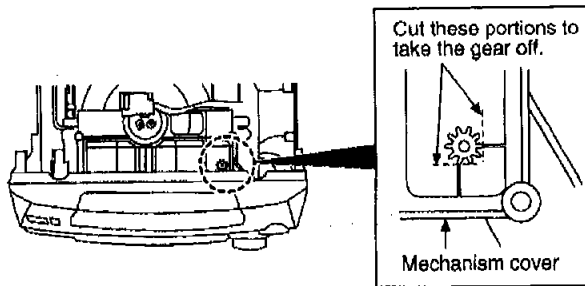
- | | |
|----|---|
| ② | Standby/on button (⏻) |
| ②⑨ | Auto off button (AUTO OFF) |
| ③⑩ | Numeric buttons (≥10, 1-0) |
| ③① | Program button (PROGRAM) |
| ③② | Cancel button (CANCEL) |
| ①⑧ | Tape/deck select button (TAPE) |
| ①⑨ | CD button (CD) |
| ③③ | EQ select button (EQ) |
| ①⑤ | 3D AI EQ select button (3D AI) |
| ①⑥ | Super woofer on/off button (S.WOOFER) |
| ③④ | Reverse side playback/preset channel select button (◀/V). |
| ①④ | Volume buttons (- VOLUME +) |
| ③⑤ | Sleep button (SLEEP) |
| ③⑥ | Muting button (MUTING) |
| ③⑦ | Disc button (DISC) |
| ⑩ | Random button (RANDOM) |
| ③⑧ | Repeat button (REPEAT) |
| ②① | AUX button (AUX) |
| ②② | Tuner/band select button (TUNER) |
| ③⑨ | Skip/search buttons (◀◀/◀, ▶▶/▶) |
| ④① | Play/pause/preset channel select button (▶/ /∧) |
| ④② | Stop button (■) |

8 Operation Checks and Main Component Replacement Procedures

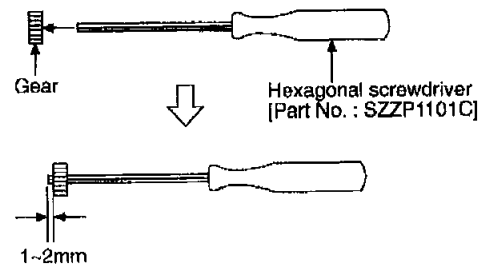
Gear for servicing (jig) information

1. This unit has a gear which is used for checking items (Open/close of disc tray, up/down operation of traverse unit by manually) when servicing.
2. For preparation of gear (for servicing), Perform the procedures as follows.
3. In case of re-servicing the same set, the "gear for servicing" may have been taken off because it has been used. The "gear for servicing" must be stored.

1. Remove the gear provided with mechanism cover as shown below.



2. Insert the hexagonal screwdriver (2mm) into the gear, and then project the tip of screwdriver for 1~2mm in length.



"ATTENTION SERVICER"

Some chassis components may have sharp edges.

Be careful when disassembling and servicing.

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.

Contents

- **Checking Procedure for each major P.C.B.**
 1. Checking of the Main, Panel, Deck and Power P.C.B.
- **Main Component Replacement Procedures**
 1. Replacement of the Traverse Deck.
 2. Replacement of the Power Amplifier IC.
- **Disassembly and assembly of the Traverse Unit**
- **Disassembly and assembly of the Disc Tray**

Warning :

This product uses a laser diode. Refer to caution statement on page 5.

ACHTUNG :

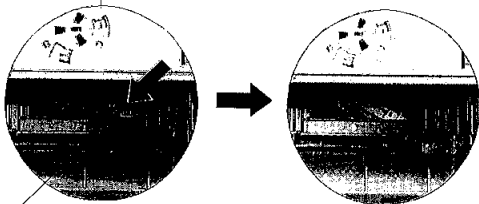
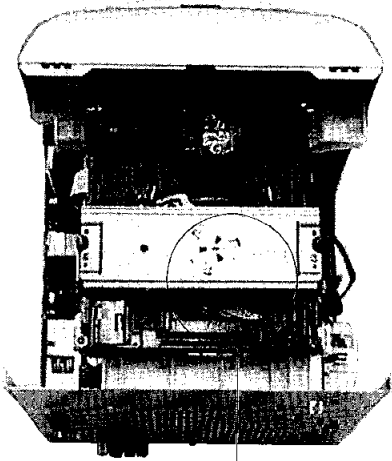
- Die Lasereinheit nicht zerlegen.
- Die Lasereinheit darf nur gegen eine vom Hersteller spezifizierte Einheit ausgetauscht werden.

8.1. Checking Procedure for each major P.C.B.

1. Checking of the Main, Panel, Deck and Power P.C.B.

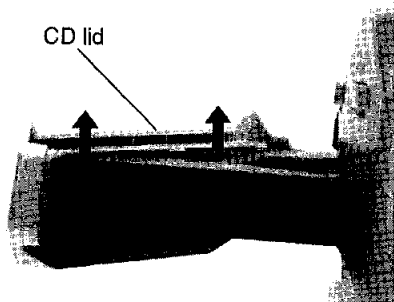
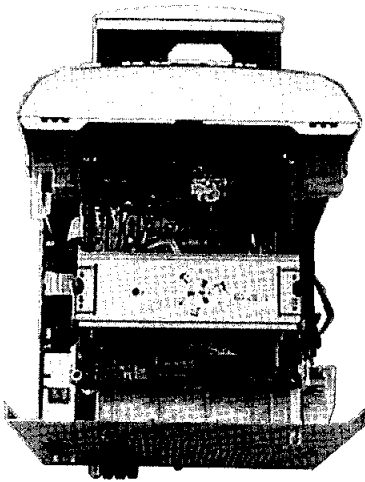
Step 1 Remove the Top Cabinet

Step 2 Push the lever in the direction of the arrow.



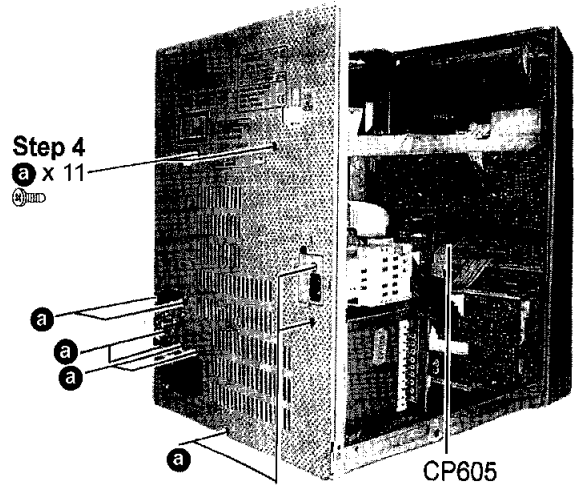
Lever

Step 3 Pull out the CD tray as shown and remove the CD lid. Push back the CD tray after the CD lid has been removed.



CD lid

Step 4



Step 4

a x 11

a

a

a

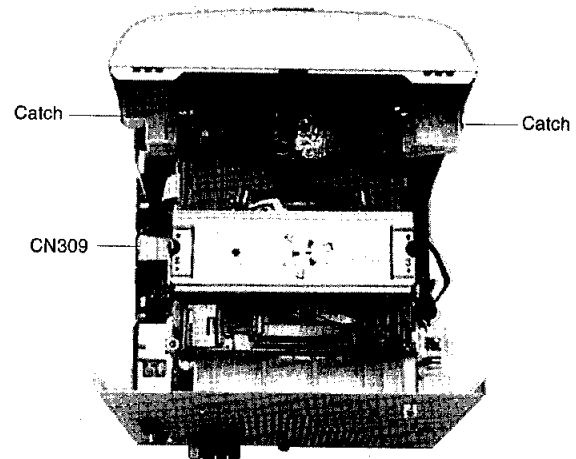
a

a

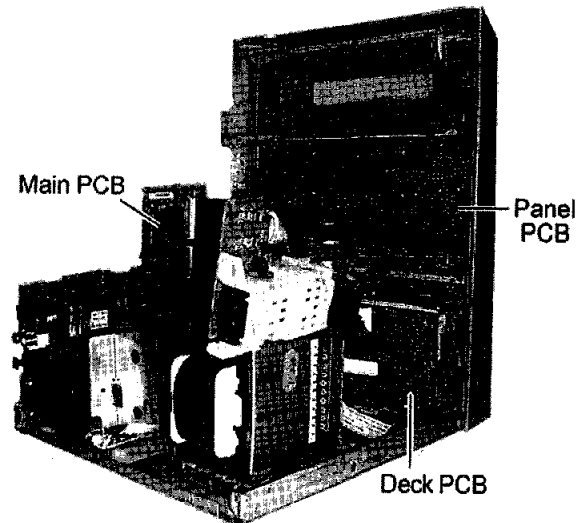
CP605

Step 5 Remove the wire at CP605 and CN309

Step 6 Release 2 catches and remove the CD changer base together with the CD changer.



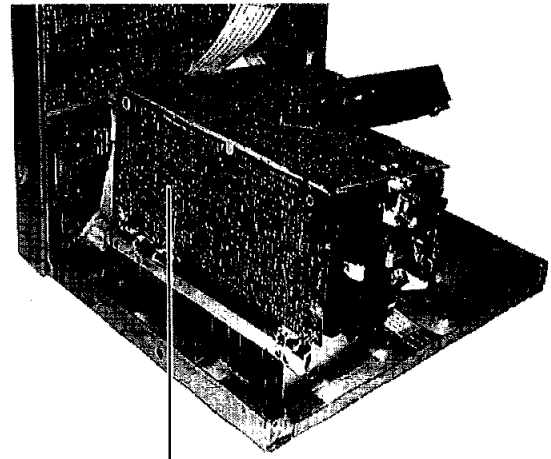
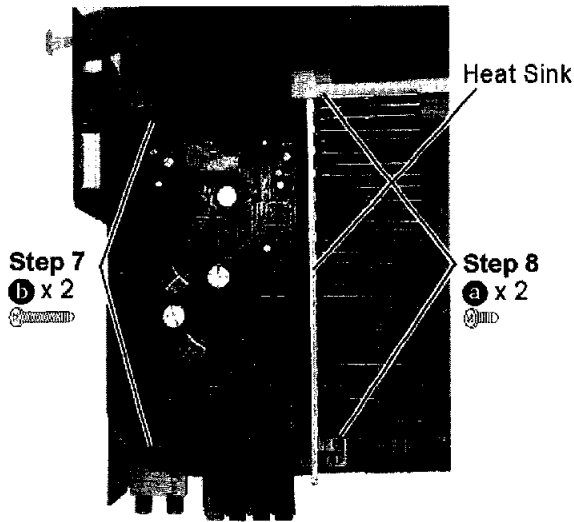
• Checking for Main P.C.B, Panel P.C.B. and Deck P.C.B



Main PCB

Panel PCB

Deck PCB



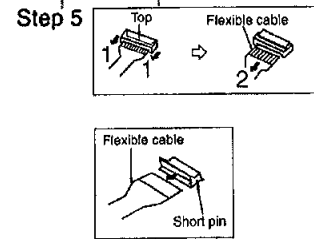
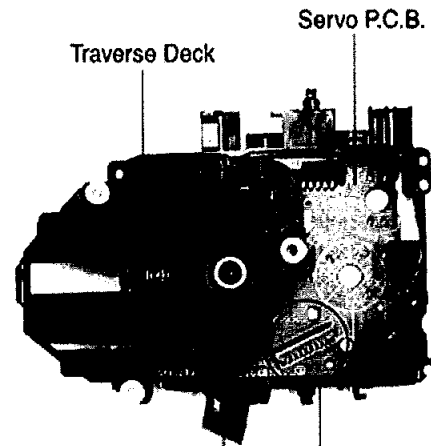
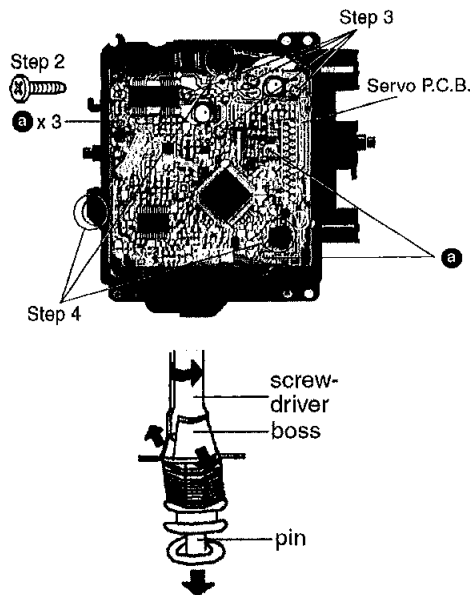
Power PCB

• Checking for Power P.C.B.

8.2. Main Component Replacement Procedures

1. Replacement of the Traverse Deck

Step 1 Follow the procedures in 'Disassembly of the Traverse Unit' (Step 1 - Step 4)



Step 3 Desolder the 4 legs of the 2 motors and pull out the Servo P.C.B.

Step 4 Widen the 3 bosses with a flat screwdriver and pull out the 3 pins. Then remove the Traverse Deck.

Step 5 Remove the flexible cable CN 701.

- Removal of the flexible cable. Push the top of the connector in the direction of the arrow 1, and then pull out the flexible cable in the direction of the arrow 2.

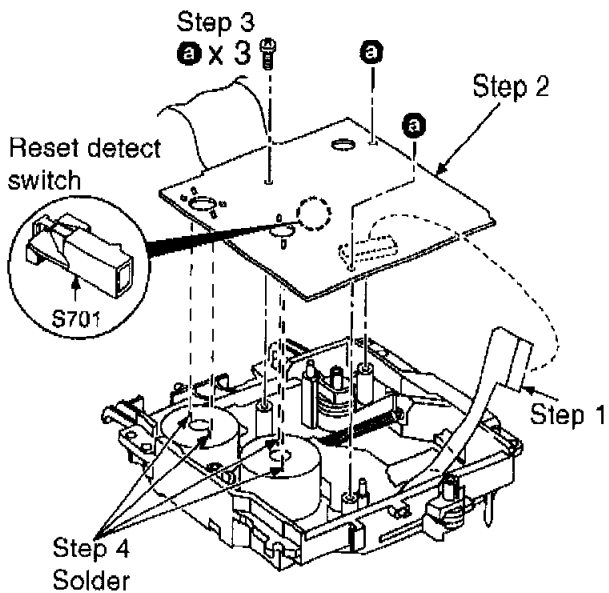
Note:

Insert a short pin into the flexible cable for traverse unit.

• Installation of the CD servo P.C.B. after replacement

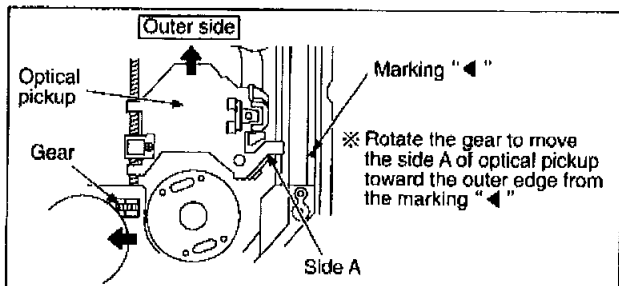
Step 1 Connect the FFC board.

Step 2 Install the CD servo P.C.B. in the traverse deck assembly.



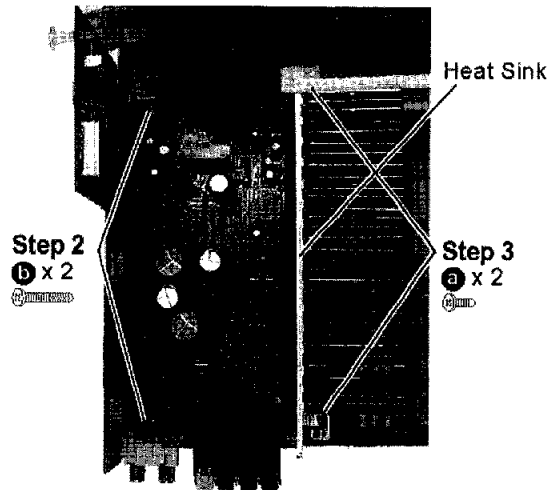
Note:

Before installing the CD servo P.C.B., move the optical pickup towards the outer edge from the marking (black triangle). [Otherwise, the reset detect switch (S701) mounted on the CD servo P.C.B. may be damaged.]

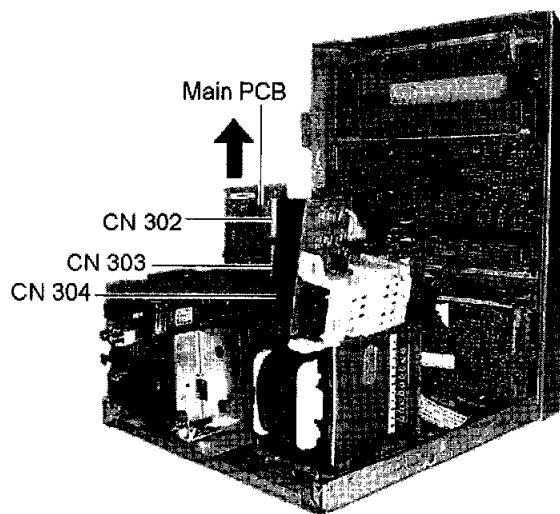


2. Replacement of the Power Amplifier IC

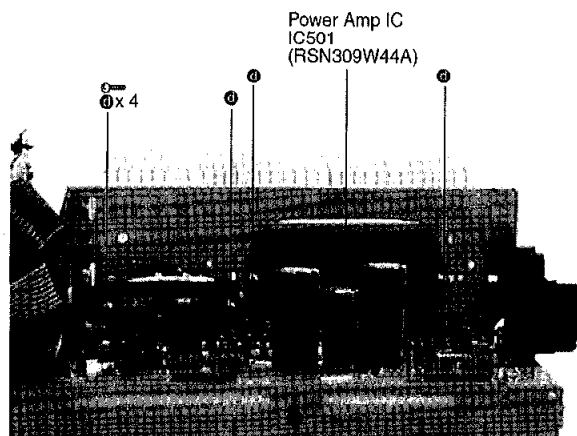
Step 1 Follow the procedures in 'Checking Procedure for each major P.C.B.' (Step 1 - Step 6).



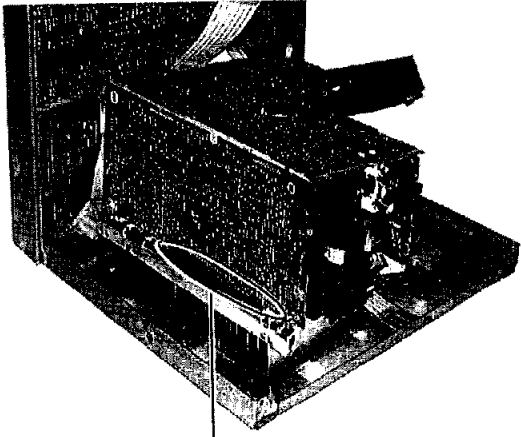
Step 4 Remove the wires at CN302, CN303 and CN304 and pull out the Main P.C.B.



Step 5 Remove 4 screws fixed to the Power Amplifier IC.



Step 6 Unsolder the terminals of Power Amp IC and replace the respective component.



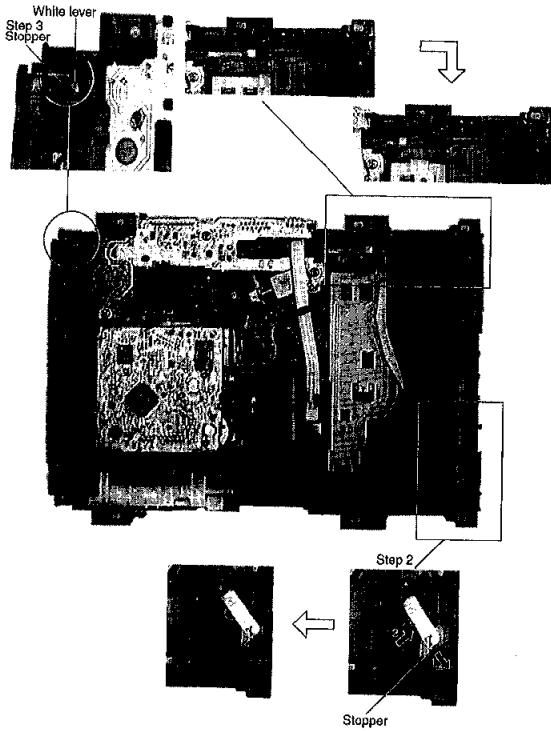
Step 6

8.3. Disassembly and assembly of the Traverse Unit

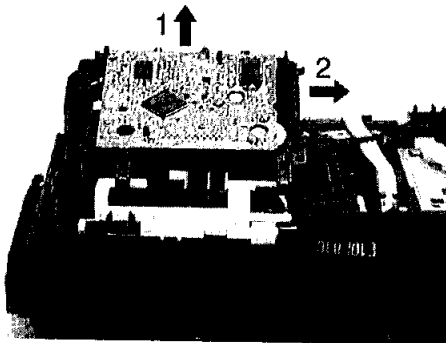
Step 1 Push the lever from position A to B.

Step 2 Pull the stopper (black) in the direction of arrow 1 and push the lever in the direction of arrow 2.

Step 3 Push the steeper (black) down until the white lever eject out.



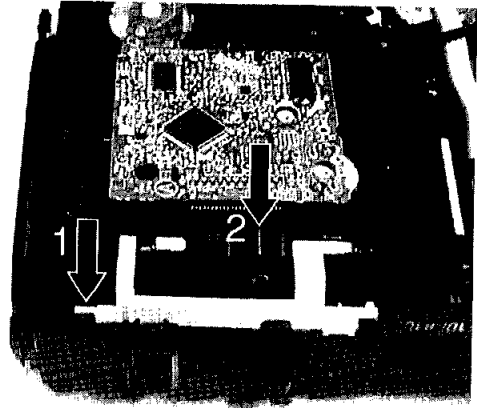
Step 4 Lift up the traverse unit and slide out the unit as shown.



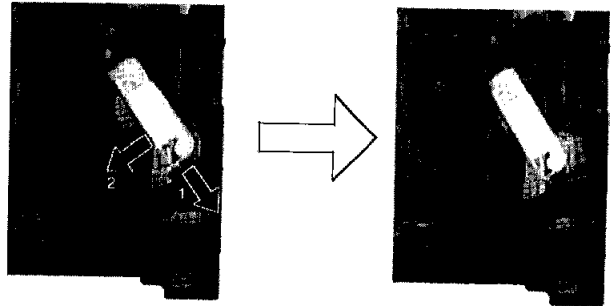
• Replacement of Traverse Unit

Step 1 Place the traverse unit as shown.

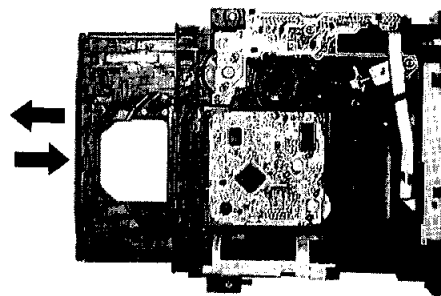
Step 2 Press in the lever shaft in the direction of arrow 1 as shown and push the traverse unit into the position in the direction of arrow 2.



Step 3 Pull the stopper in the direction of arrow 1 and release the lever in the direction of arrow 2 as shown.



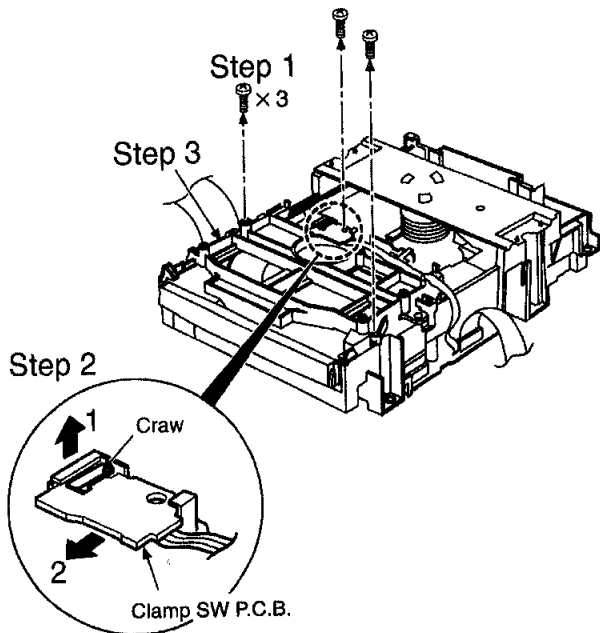
Step 4 Pull out the tray half way and push it back fully.



Step 5 Push the lever to the initial position indicated 'I---I'.

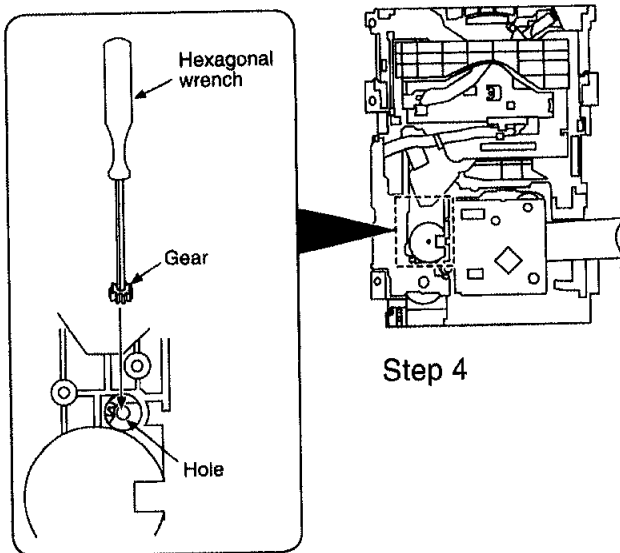


8.4. Disassembly and assembly of the Disc Tray

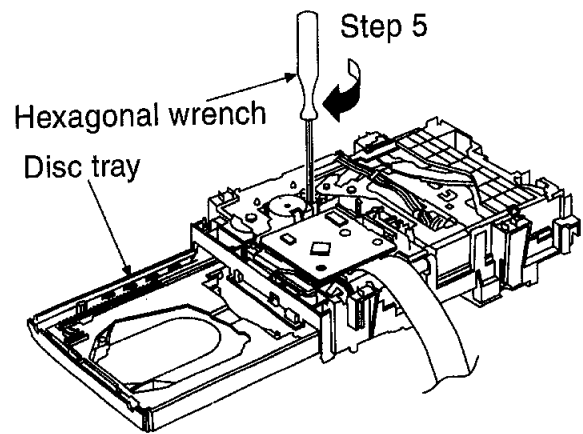


Step 2 With lifting the claw in the direction of arrow 1, draw the clamp SW P.C.B. in the direction of arrow 2.

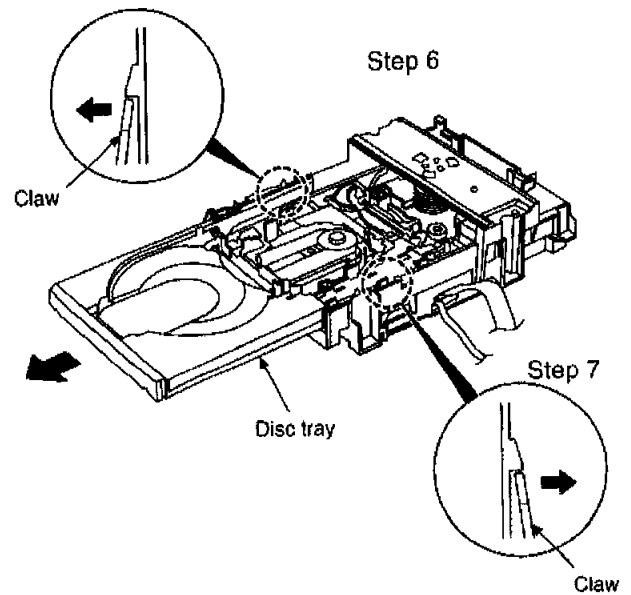
Step 3 Remove the mechanism cover.



Step 4 Insert the gear with hexagonal wrench into the hole.

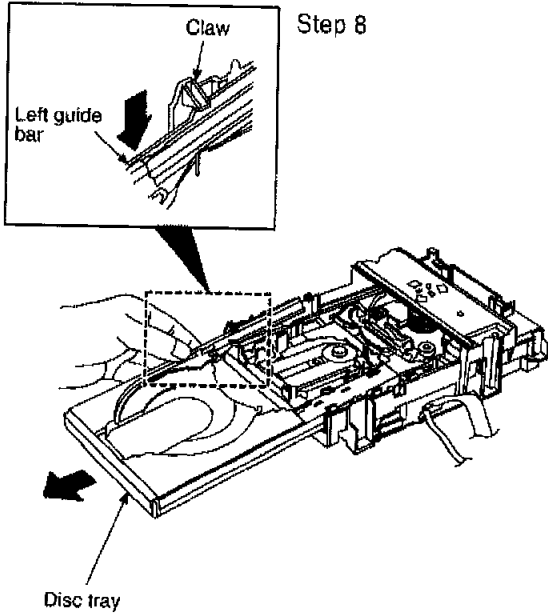


Step 5 Rotate the hexagonal wrench in the direction of arrow (clockwise), and then open the disc tray fully.

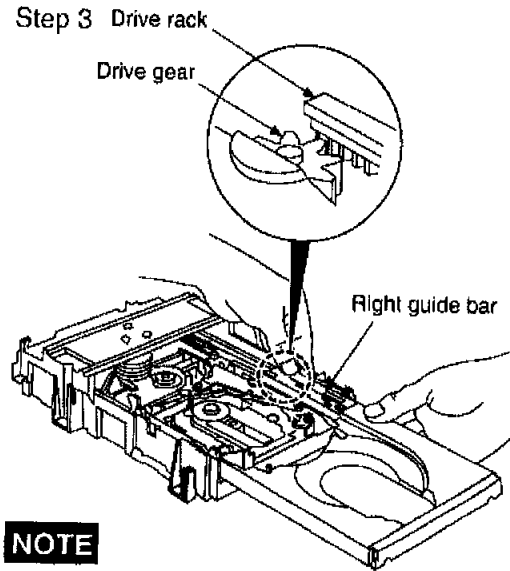


Step 6 Upset the CD changer unit again.

Step 7 Release both the claws, and then draw the disc tray.



Step 8



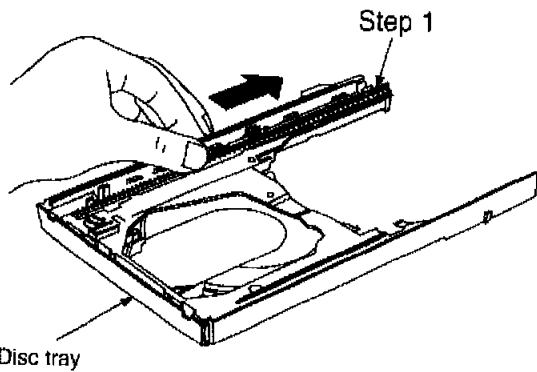
NOTE

Force the right guide bar of tray base manually not to move upwards.

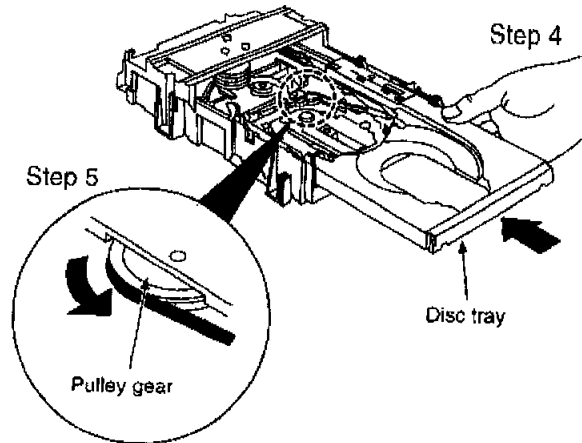
Step 8 With forcing the left guide bar manually because the left guide bar interferes with claw, draw the disc tray.

Step 3 Align the drive rack with the driver gear.

• **Installation of the disc tray after replacement**



Step 1



Step 4

Step 5

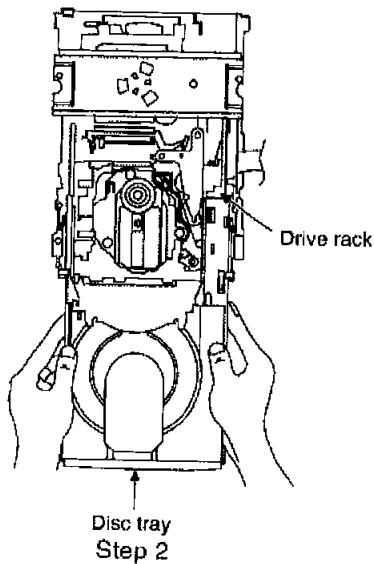
Disc tray

Pulley gear

Step 1 Slide the drive rack fully in the direction of arrow.

Step 4 Holding the disc tray manually, rotate the pulley gear in the direction of arrow.

Step 5 Rotate the gear 5 or 6 times manually, and then push the disc tray.



Disc tray
Step 2

Step 2 Holding the drive rack not to move, install the disc tray.

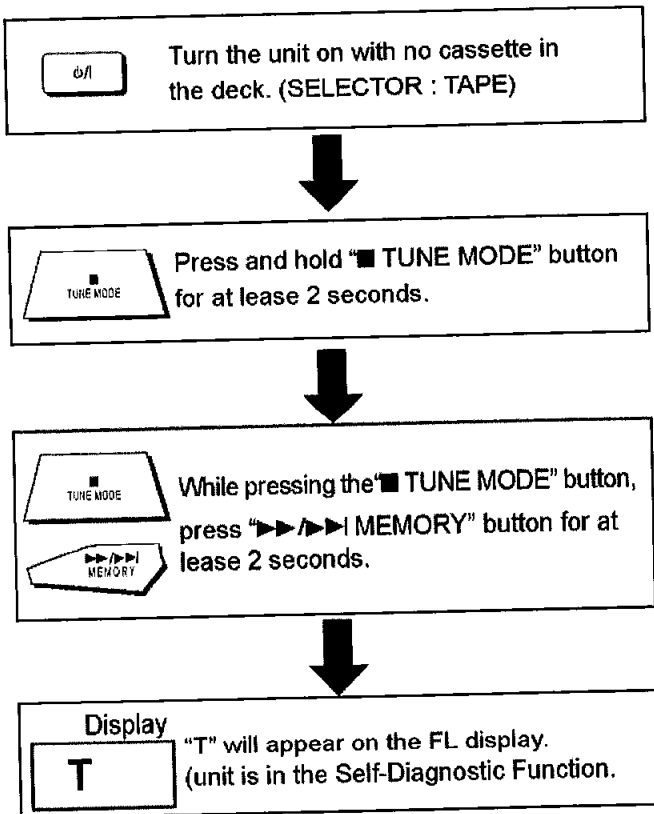
9 Self-Diagnostic Function

9.1. Self-diagnostic display

This unit is equipped with a self-diagnostic display function which, if a problem occurs, will display an error code corresponding to the problem.

Use this function when performing maintenance on the unit.

9.2. How to enter the Self-Diagnostic Function



9.3. Cassette Mechanism Test (For error code H01, H02, H03, F01, F02)

1. Press "TAPE, DECK 1/2" to select Deck 2.
2. Load a cassette tape with the erasure prevention tab, remove from left side only and close the cassette holder.
3. Press "FAST FORWARD MEMORY" (Tape will be stop after 2 seconds)
4. Load a cassette tape with the erasure prevention tab, remove from right side only and close the cassette holder.
5. Press "REVERSE FM MODE/BP" (Tape will be stop after 2 seconds)
6. Load a pre-recorded tape with both side record tabs intact and close the cassette holder.
7. Press "PLAY/TUNE/TIME ADJ UP" (After TPS function, tape will stop automatically)
8. Press "REC/STOP" (Tape will not move)
9. Press "STOP/TUNE MODE" to indicate Error code.
 - If several problem exist, error code will change each time when "TUNE MODE" is pressed.
(e.g. H01 → H03 → F01etc.)
10. Press "TAPE, DECK 1/2" to select Deck 1.
11. Repeat step 2 to 9 to test Deck 1. (Tape Deck 1 will not check H02 because of no recording function)

9.4. CD Mechanism Test (F15, F26, F16, F17, F27, F28, F29, H15)

1. Press "CD".
2. Press "OPEN/CLOSE (1)" and place a CD.
3. Press "OPEN/CLOSE (1)" to close the tray.

4. Press "OPEN/CLOSE (5)" and wait until the tray is open.

5. Press "OPEN/CLOSE (1)" and remove the CD.

6. Press "OPEN/CLOSE (1)" to close the tray.

7. Press "■/TUNE MODE" to indicate Error Code.

- If several problem exist, error code will change each time when "■/TUNE MODE" is pressed. (e.g. F15 → F26 → F16etc).

9.5. To clear all Error code

1. Press "STOP/TUNE MODE" button for 5 seconds.

2. FL indicator shows "CLEAR" for 1 second and change to "T".

9.6. How to get out from Self-Diagnostic function

1. Press "Power" button OFF.

9.7. Power Amplifier Failure (F61)

1. When power amplifier fail, F61 will indicate automatically.

10 Description of Error Code

10.1. Error detection for Cassette Mechanism block

No.	Error	Error Display	Problem condition
1	MODE SW detection error	H01	Faulty operation of cassette mechanism. Faulty contact or short-circuit of mechanism mode switch (S951, S971).
2	REC INH SW detection error	H02	Recording not possible. Faulty contact or short-circuit of REC INH switch (S974, S975).
3	HALF SW detection error	H03	Playback cannot perform. Faulty contact or short-circuit of HALF switch (S952, S972).
4	Reel Pulse detection error	F01	The tape advances slightly and then stops. Faulty reel pulse, faulty hole detect IC (IC951, IC971).
5	TPS abnormal	F02	Cassette deck will not perform TPS function. Faulty playback EQ/recording amplifier IC (IC101).

10.2. Error detection for CD/Changer block

No.	Error	Error Display	Problem condition
1	REST SW detection error	F15	CD does not function. This error occurs when the Optical Pick Up REST SW (S701) is not detected within the specified time (about 8 seconds)
2	CD tray opens automatically	F16	CLAMP switch (S4) NG (Check & Replace)
3	Does not startup when [PLAY] button is pressed	F17	BOTTOM switch (S5) NG (Check & Replace)
4	Transmission error between CD servo LSI and micon	F26	CD does not function. This error occurs when the POWER is ON for the CD block and an error is detected after the transmission has started.
5	Startup fails even when you insert CD or the selected disc tray does not open	F27	Tray 1 detect switch or Tray 2 detect switch NG (Check & Replace)
6	Cannot insert CD	F28	Tray 1 detect switch NG (Check & Replace)
7	Cannot eject CD	F29	Check if disc is stuck. Tray 2 detect switch NG (Confirm & Replace)
8	The CD tray closes	H15	CD disc tray detect switch NG (S3) (Check & Replace)

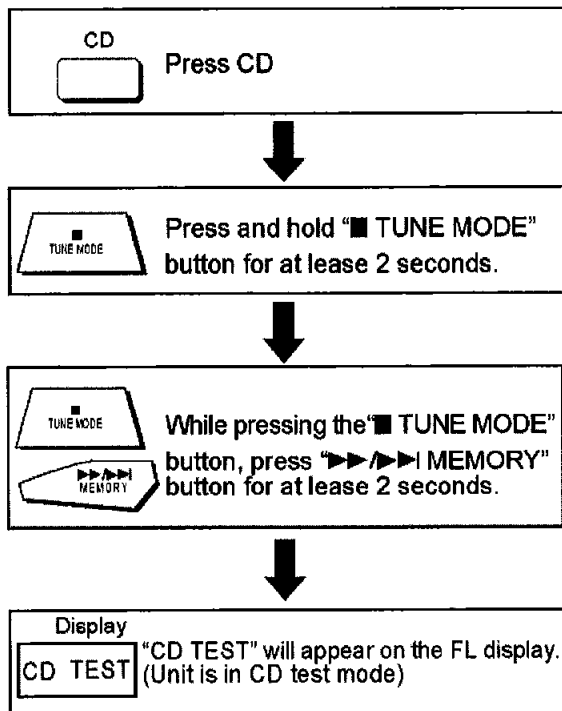
10.3. Power Supply related error detection

No.	Error	Error Display	Problem condition
1	POWER AMP output abnormal	F61	When POWER is switched on, power become off automatically. During normal operation, if DC DET become L, PCNT shall become L and the error display on the left shall be displayed. (IC501)

11 CD Test Mode Function

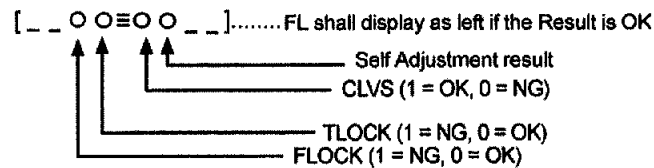
This CD test mode is provided to check CD unit without connecting to changer loading mechanism. This mode shall operate CD PLAY with CD unit being connected only and CD Automatic Alignment result is shown on FL display.

11.1. How to set CD test mode



11.2. CD Automatically Adjustment result indication

Under CD test mode, pressing the numeric key '0' on the remote controller will display the auto adjustment result. FLOCK, TLOCK and CLVS status shall be shown as below:



During the above display, executing CD PLAY will display auto adjustment result for CD PLAY mode.

12 Measurements and Adjustments

12.1. Cassette Deck Section

- Measurement Condition
 - Reverse-mode selector switch:
 - Tape edit: NORMAL
 - Record timer: OFF
 - Make sure head, capstan and press roller are clean.
 - Judgeable room temperature $20 \pm 5 \text{ }^\circ\text{C}$ ($68 \pm 9 \text{ }^\circ\text{F}$)
- Measuring instrument
 - EVM (Electronic Voltmeter)
 - Digital quency counter
- Test Tape
 - Head azimuth adjustment (8 kHz, -20 dB); QZZCFM
 - Tape speed gain adjustment (3 kHz, -10 dB); QZZCWAT
 - Playback gain adjustment (315 Hz, 0 dB); QZZCFM
 - CrO2 tape, QZZCRX

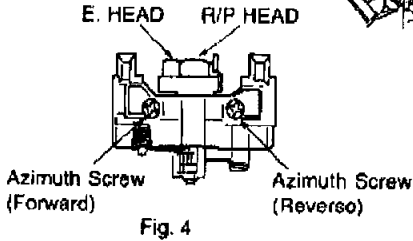
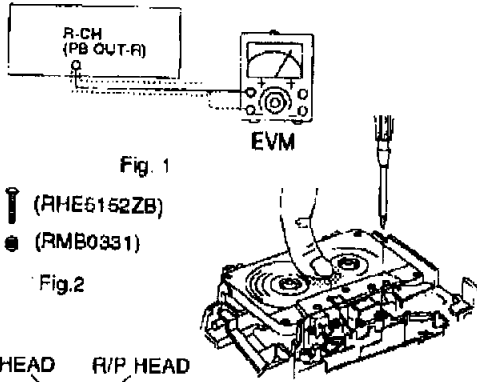
12.1.1. Head Azimuth Adjustment (Deck 1/2)

Caution:

- Please replace both azimuth adjustment screw (RHE5152ZB) and springs (RM0331) simultaneously when readjusting the head azimuth. (shown in Fig. 2) Even if you

wish to readjust the head azimuth without replacing the acrews and springs, a fine adjustment to the azimuth screw and spring.

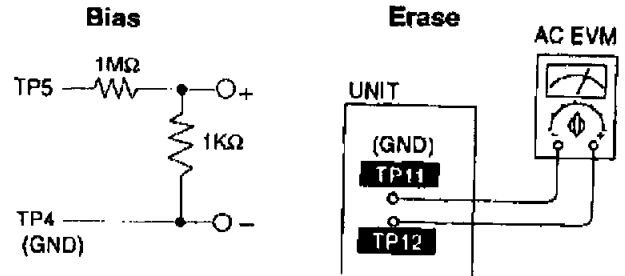
- Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
 - If you wish to readjust the head azimuth, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (shown in Fig. 3)
1. Playback the azimuth adjustment portion (8 kHz, -20dB) of the test tape (QZZCFM) in the forward play mode. Vary the azimuth adjustment screw until the output of the R-CH (PB OUT-R) are maximized.
 2. Perform the same adjustment in the reverse play mode.
 3. After the adjustment, apply screwlock to the azimuth adjusting screw.



12.1.3. Bias and Erase Voltage Check

1. Set the unit "AUX" position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and the unit to "REC" mode (use ● REC/STOP key).
3. Measure and make sure that the output is within the standard value.
4. Insert the CrO2 tape (QZZCRX).
5. Repeat step 2 and 3.

Bias voltage for Deck 2 (Standard value)	14 ± 4mV (Normal) 17 ± 5mV (CrO2)
Erase voltage for Deck 2	more than 80mV (Normal) more than 90mV (CrO2)



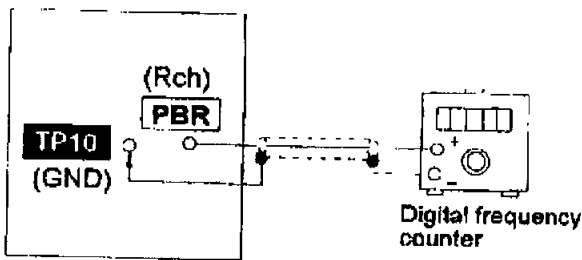
12.1.2. Tape Speed Adjustment (Deck 1/2)

1. Set the tape edit button to "NORMAL" position.
2. Insert the test tape (QZZCWAT) to DECK 2 and playback (FWD side) the middle portion of it.
3. Adjust Motor VR (DECK 2) for the output value shown below.

Adjustment target: 2940 ~ 3060 Hz (NORMAL speed)

4. After alignment, assure that the output frequency of the DECK 2 REV and DECK 1 FWD are within ±45Hz and ±60 Hz respectively of the value of the output frequency of DECK 2 FWD.

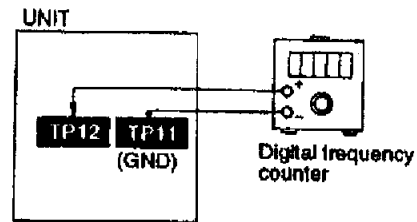
UNIT



12.1.4. Bias Frequency Adjustment (Deck 1/2)

1. Set the unit to "AUX" position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and set the unit to "REC" mode (● use "REC/STOP" key).
3. Adjust L1002 so that the output frequency is within the standard value.

Standard Value: 97 ± 8 kHz



12.2. Tuner Section

12.2.1. AM-IF Alignment

• AM-IF ALIGNMENT

SIGNAL GENERATOR OR SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER OSCILLOSCOPE)	ADJUSTMENT(Shown in Fig.3)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate signal into loop of receiver.	455 kHz 30% Mod. at 40Hz.	Point of non-interference (on/about 600 kHz)	Headphone Jack (32Ω) Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.	Z102 (AM IFT)	Adjust for maximum output.

• AM-RF ALIGNMENT

SIGNAL GENERATOR OR SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER OSCILLOSCOPE)	ADJUSTMENT(Shown in Fig.1)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate signal into loop of receiver.	522 kHz	Tuning capacitor fully closed.	Headphone Jack (32Ω) Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.	Z101 (AM OSC Coil)	Adjust for maximum output.
Fashion a loop of several turns of wire and radiate signal into loop of receiver.	603 kHz	Tuning capacitor fully open.	Headphone Jack (32Ω) Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.	Z101 (AM ANT Coil)	Adjust for maximum output.

12.3. Alignment Points

Cassette Deck Section

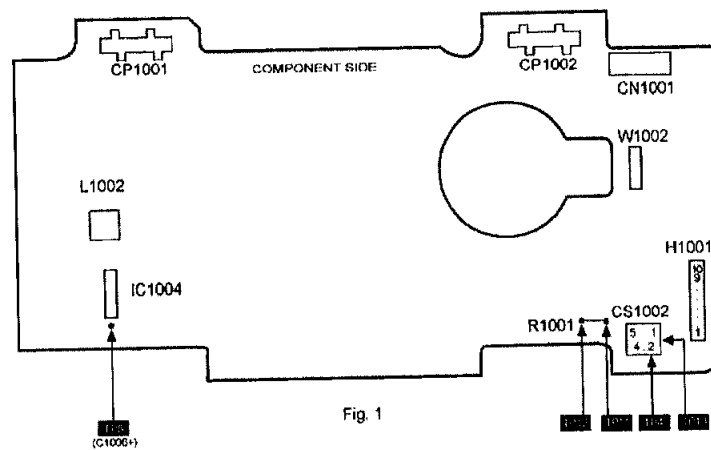


Fig. 1

Tuner Section

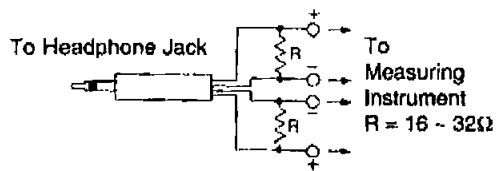


Fig. 2

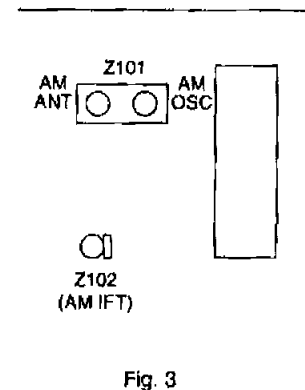
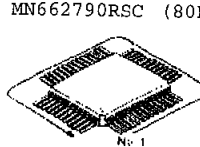
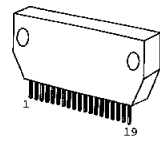
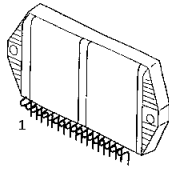

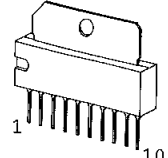
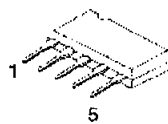
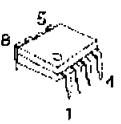
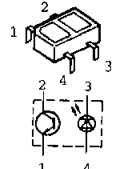
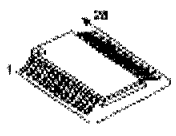
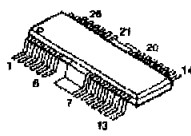

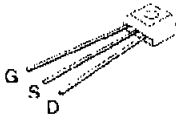
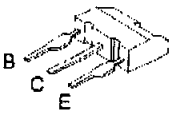
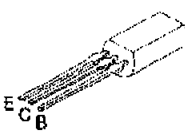
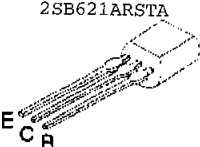
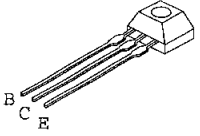
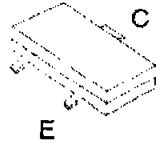
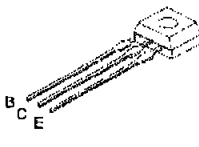
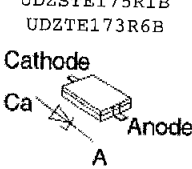
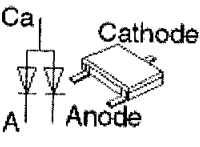
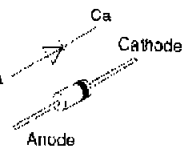
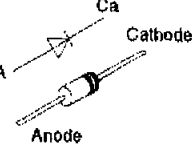
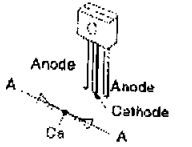
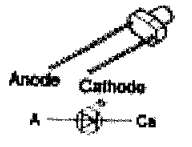
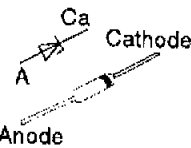
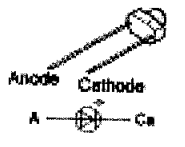
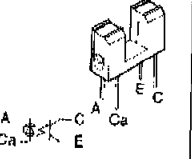
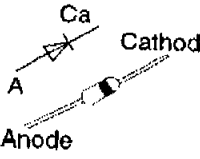


Fig. 3

13 Illustration of IC's, Transistors and Diodes

<p>M38199MF227 (100P) M62433AFP (80P) MN662790RSC (80P)</p>  <p>No. 1</p>	<p>STK470-020A</p>  <p>1 19</p>	<p>RSN309W44A</p>  <p>1 26</p>	<p>BU2090AF-E2 (16P) LA1833NMNTLM (24P) LC72131MDTRM (20P) AN7348STA-E1 (24P) No. 1 BA4558FE2 (8P) M62456FPE1 (24P) M62457AFPE1 (16P)</p> 	<p>TA7291P</p>  <p>1 10</p>	
<p>BA7755A</p>  <p>1 5</p>	<p>M5218AP</p>  <p>1 4</p>	<p>ON2180RLC1</p>  <p>1 2 3 4</p>	<p>AN8839NSBE2 (28P)</p>  <p>1 28</p>	<p>AN8739SBE2</p>  <p>1 26 21 20 14 10</p>	<p>2SC2058SPTA</p>  <p>E C B</p>
<p>2SK544F-AC</p>  <p>G S D</p>	<p>2SB1238QRTV2 2SD1859QRTV2 2SB1417PQTA</p>  <p>B C E</p>	<p>2SC3940AQSTA</p>  <p>E C B</p>	<p>KTA12710YTA 2SD965RTA 2SB621ARSTA</p>  <p>E C B</p>	<p>KRC110MTA KRA102MTA KRC103MTA KRC102MTA</p>  <p>B C E</p>	
<p>2SA1037AKSTX 2SC2412KT96R DTC144TKA146 DTA114EKA146 KRA102STA</p>	<p>KTC3875GRTA KRC111STA KTD1304TA KRC102STA</p>	 <p>B C E</p>	<p>2SA933SSTA 2SC1740SSTA 2SC2787FL1TA 2SD2144STA KTC3199GRTA RVTDTC143EST 2SC2786MTA 2SC2784FTA</p>  <p>B C E</p>	<p>1SS355TE17 UDZSTE175R1B UDZTE173R6B</p>  <p>Cathode Ca Anode A</p>	
<p>DAP202KT146</p>  <p>Cathode Ca Anode A</p>	<p>1D3E RL1N4003S-P</p>  <p>Cathode Ca Anode A</p>	<p>RK306LFU1</p>  <p>Cathode Ca Anode A</p>	<p>SVC211SPA-AL</p>  <p>Anode Cathode Ca A</p>	<p>SLI325URCT31 SLI325DCT31 SLR325MCT31W SLR505DCT31</p>  <p>Anode Cathode Ca A</p>	
<p>MTZJ10BTA MTZJ4R7BTA MTZJ15CTA MTZJ12BTA MTZJ24DTA MA4020LTA MTZJ6R8BTA MTZJ30BTA MTZJ16BTA</p>  <p>Cathode Ca Anode A</p>		<p>LNJ301MPUJAD</p>  <p>Anode Cathode Ca A</p>	<p>GP1S94</p>  <p>Anode Cathode Ca A</p>	<p>RVD1SS133TA 1SS291TA MA165TA MA700ATA MA723TA</p>  <p>Cathode Ca Anode A</p>	

14 Terminal Function of IC's

14.1. IC701 (AN8839NSBE2) Servo Amplifier

Pin No.	Mark	I/O	Function
1	PDE	I	Tracking signal input 1
2	PDF	I	Tracking signal input 2
3	VCC	I	Power supply
4	PDA	I	Focus signal input terminal 1
5	PDB	I	Focus signal input terminal 2
6	LPD	I	APC amp input
7	LD	O	APC amp output
8	RF	O	RFsumming output
9	RFIN	I	Detector's input
10	CSBRT	I	Capacitor for OFTR connection
11	CEA	I	Capacitor for HPF amp connection
12	BDO	O	BDO output ("H" : drop out)
13	LDON	I	APC control
14	GND	—	Ground

Pin No.	Mark	I/O	Function
15	/RFDET	O	NRFDET output ("L" : detection)
16	PDOWN	O	Power-down input
17	OFTR	O	OFTR output
18	NC	O	N.C.
19	ENV	O	3T-ENV output
20	NC	I	N.C.
21	NC	I	N.C.
22	TEN	I	TE amp input
23	TEOUT	O	TE amp output
24	FEOUT	O	FE amp output
25	FEN	I	FE amp input
26	VREF	O	Reference voltage output
27	TBAL	I	Tracking balance control
28	FBAL	I	Focus balance control

14.2. IC702 (MN662790RSC) Servo processor/ Digital signal processor/ Digital filter/ D/A converter

No.	Mark	I/O	Function
1	BCLK	O	N.C.
2	LRCK	O	N.C.
3	SRDATA	O	N.C.
4	DVDD1	I	Power supply input (for digital circuit)
5	DVSS1	I	GND (for digital circuit)
6	TX	O	Digital audio interface signal output (Latches data at first transition)
7	MCLK	I	Microprocessor command clock signal input
8	MDATA	I	Microprocessor command data signal input
9	MLD	I	Microprocessor command load signal input
10	SENSE	O	Sense signal output (OFT, FESL,MAGEND,NAJEND,PO SAD,SFG) (Not used, open)
11	/FLOCK	O	Focus servo feeding signal output ("L" : Feed)
12	/TLOCK	O	Tracking servo feeding signal output ("L" : Feed)
13	BLKCK	O	Sub-code block clock signal output (BLKCK1 = 75Hz during normal playback)
14	SQCK	I	External clock signal input for sub-code Q resistor
15	SUBQ	O	Sub-code Q code output
16	DMUTE	I	Muting input ("H" : mute)
17	STAT	O	Status signal output (CRC,CUE,CLVS,TTSTVP,F CLV,SQCK)
18	/RST	I	Reset signal input
19	SMCK	O	1/2-divided clock signal of crystal oscillating at MSEL = "H" (fSMCK = 8.4672 MHz) 1/4-divided clock signal of crystal oscillating at MSEL = "L" (fSMCK = 4.2336 MHz)
20	CSEL	I	Frequency Selection Terminal H = 33.8688 MHz ; L = 16.9344 MHz
21	TRV	O	N.C.
22	TVD	O	Traverse drive output
23	PC	O	Spindle motor ON output ("L" : ON)

No.	Mark	I/O	Function
24	ECM	O	Spindle motor drive signal output(forced mode output)
25	ECS	O	Spindle motor drive signal output (servo error signal output)
26	KICK	O	N.C.
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output
29	VREF	I	D/A (drive) output (TVD, ECS, TRD, FOD, FBAL, TBAL) Reference voltage input
30	FBAL	O	Focus balance adjustment output
31	TBAL	O	Tracking balance adjustment 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
35	VDET	I	Vibration detection signal input ("H" :detection)
36	OFT	I	Off-track signal input ("H" : off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal input ("L" : detection)
39	BDO	I	Dropout signal input ("H" : Dropout)
40	LDON	O	Laser on signal output ("H" : ON)
41	PLL2	I/O	N.C.
42	DSL2	O	Tracking Offset alignment output/DSL Balance Output (DA Output)
43	WVEL	O	N.C.
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias terminal (Not used, open)
47	DSL2	I/O	DSL loop filter terminal
48	PLL2	I/O	PLL loop filter terminal
49	VCOF	I/O	VCO loop filter terminal
50	AVDD2	I	Power supply input (for analog circuit)
51	AVSS2	I	GND (for analog circuit)

No.	Mark	I/O	Function
52	EFM	-	EFM signal output
53	PCK	-	PLL extraction clock output (fPCK = 4.321 MHz during normal playback)
54	VCOF2	I/O	VCO Loop filter for 33.8688 MHz conversation terminal for 16.9344 MHz crystal mode, must use other circuit
55	SUBC	O	Sub-code serial data output
56	SBCK	I	Clock input for sub-code serial data
57	VSS	I	GND
58	X1 IN	I	Crystal oscillating circuit input (f = 16.9344MHz)
59	X2 OUT	O	Crystal oscillating circuit input (f = 16.9344 MHz)
60	VDD	I	Power supply input (for oscillating circuit)
61	BYTCK	-	Byte clock output
62	/CLDCK	-	Sub-code frame clock signal output (fCLDCK = 7.35 kHz during normal playback)
63	FCLK	-	Crystal frame clock signal output (fCLK = 7.35 kHz, double = 14.7 kHz)
64	IPFLAG	-	Interpolation flag output ("H" : Interpolation)
65	FLAG	-	Flag output

No.	Mark	I/O	Function
66	CLVS	-	Spindle servo phase synchronizing signal output ("H" : CLV, "L" : rough servo)
67	CRC	-	Sub-code CRC checked output ("H" :OK, "L" :NG)
68	DEMPH	-	De-emphasis ON signal output ("H" :ON)
69	RESY	-	Frame re-synchronizing signal output
70	IOSEL	I	Mode Switching Terminal
71	/TEST	I	Test input
72	AVDD1	I	Power supply input (for analog circuit)
73	OUTL	O	Left channel audio signal output
74	AVSS1	I	GND
75	OUTR	O	Right channel audio signal output
76	RSEL	I	RF signal polarity assignment input (at "H" level, RSEL="H", at "L" level, RSEL="L")
77	IOVOD	I	5V supply input
78	PSEL	I	Test terminal (connected to Gnd)
79	MSEL	I	SMCK oscillating frequency designation input ("L":4.2336 MHz, "H":8.4672 MHz)
80	SSEL	I	SUBQ output mode select ("H":Q-code buffer mode)

14.3. IC703 (AN8739SBE2) Focus coil/ Tracking coil/ Traverse motor/ Spindle motor driver

No.	Mark	I/O	Function
1	/RST	-	RESET output terminal
2	NC	-	N.C.
3	IN2	I	Motor Drive (2) input
4	PC2	I	Turntable motor drive signal ("L" :ON)
5	NC	-	N.C.
6	IN1	I	Motor driver (1) input
7	NC	I	N.C.
8	PVCC1	I	Power supply (1) for driver
9	PGND1	-	Ground connection (1) for driver
10	NC	-	N.C.
11	D1-	O	Motor driver (1) reverse-action output
12	D1+	O	Motor driver (1) forward-action output
13	D2-	O	Motor driver (2) reverse-action output
14	D2+	O	Motor driver (2) forward-action output

No.	Mark	I/O	Function
15	D3-	O	Motor driver (3) reverse-action output
16	D3+	O	Motor driver (3) forward-action output
17	D4-	O	Motor driver (4) reverse-action output
18	D4+	O	Motor driver (4) forward-action output
19	NC	-	N.C.
20	PGND2	-	Ground connection (2) for driver
21	PVCC2	I	Power supply (2) for driver
22	NC	-	N.C.
23	VCC	I	Power supply terminal
24	VREF	I	Reference voltage input
25	IN4	I	Motor driver (4) input
26	IN3	I	Motor driver (3) input
27	RSTIN	I	Reset terminal
28	NC	-	N.C.

14.4. IC600 (M38199MF227) System Microprocessor

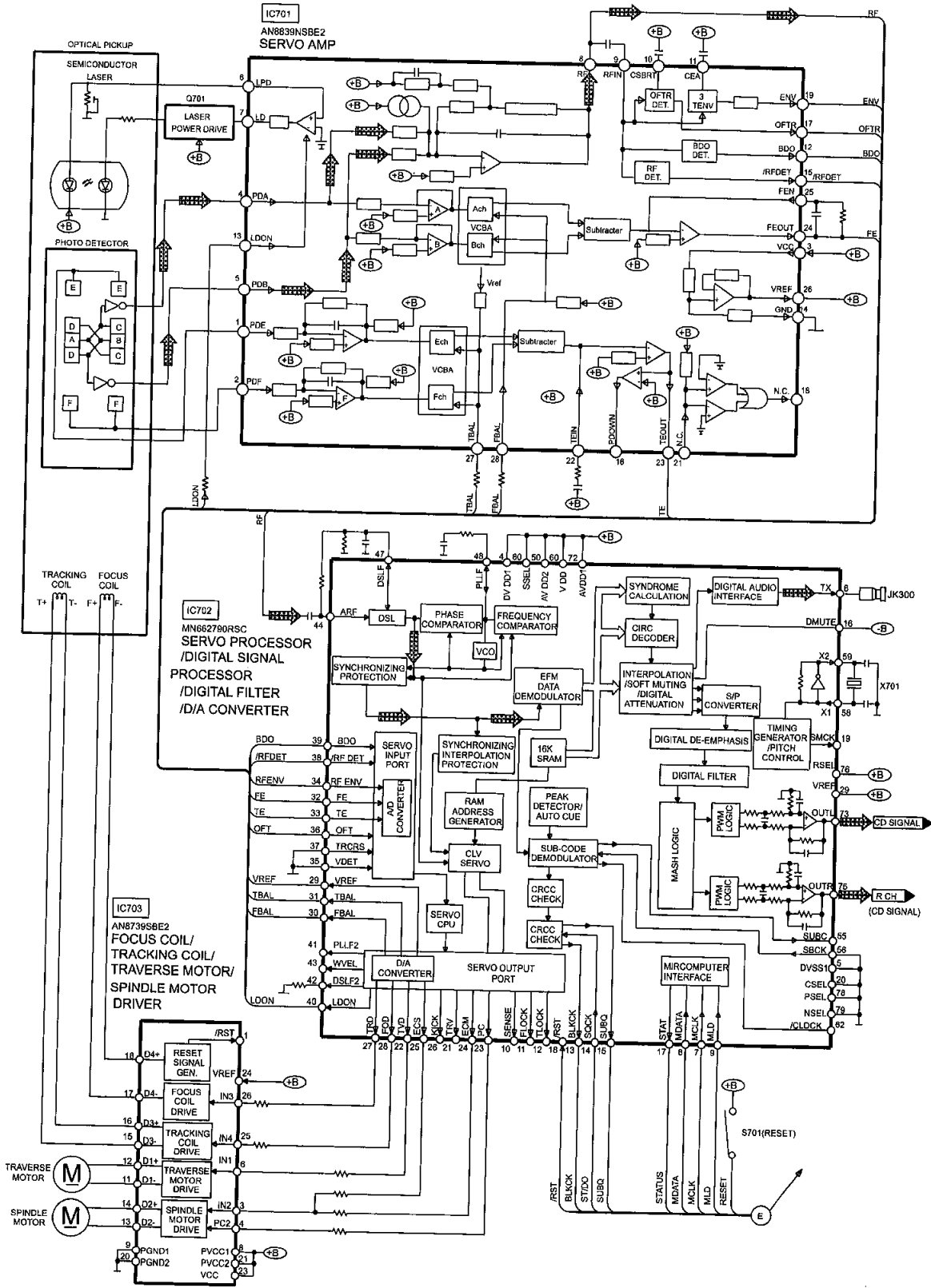
No.	Mark	I/O	Function
1	CRT/SER 4	I/O	CRT Timer/ (SP_LTH) latch signal for ASP
2	TPS	I	Tape Mecha TPS input
3	DECK 1	I	Tape Mecha condition input (HALF 1/ MODE/ PHOTO 1/PHOTO 2)
4	DECK 2	I	Tape Mecha condition input (HALF 2/ RECL_F/ MODE/ RECL_R)
5	KEY 4	I	Key 4 input
6	KEY 3	I	Key 3 input
7	KEY 2	I	Key 2 input
8	KEY 1	I	Key 1 input

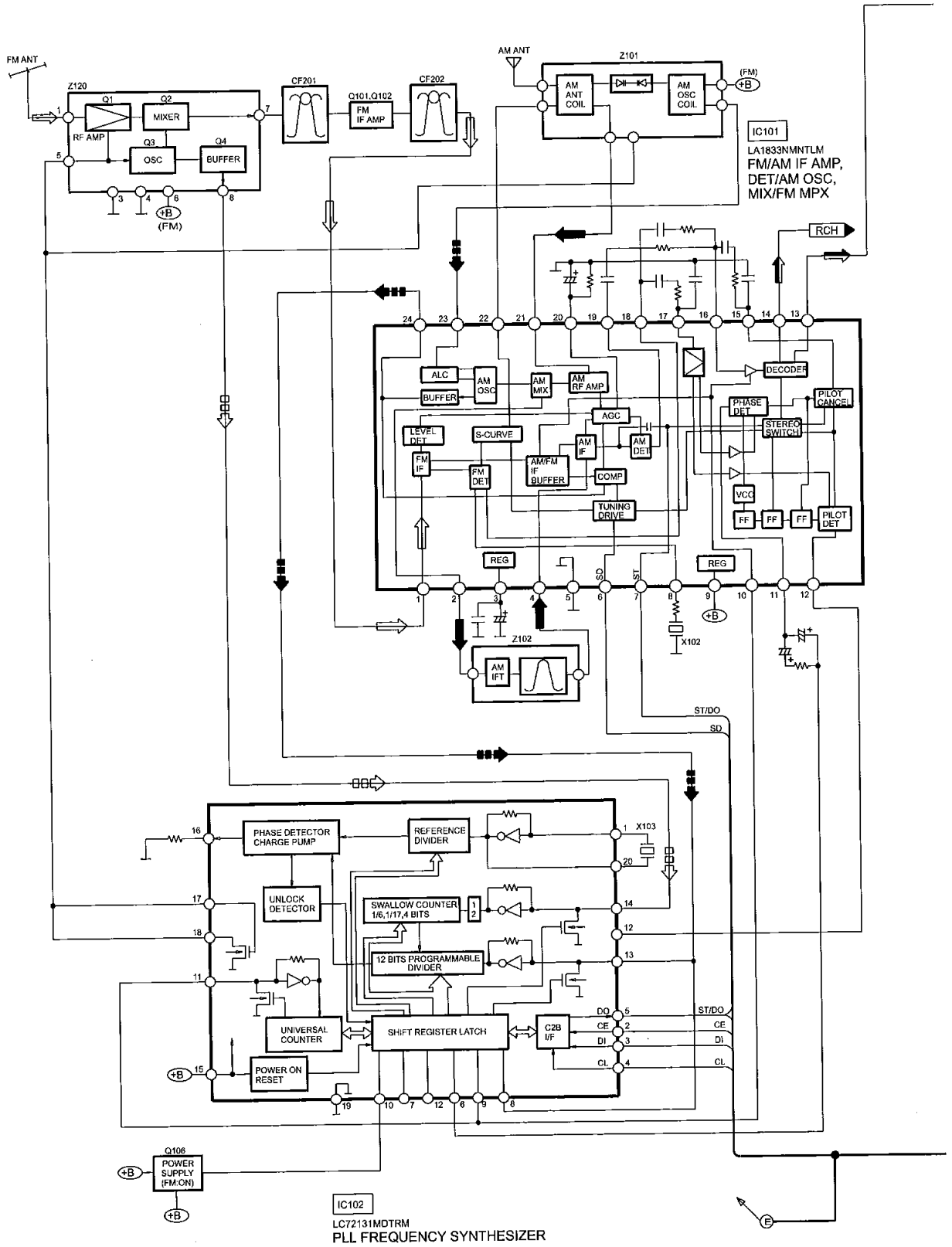
No.	Mark	I/O	Function
9	SER 1	O	Serial Data/Clock (D_CLK, F_CLK)
10	SER 2	O	Serial Data/Clock (MKDATA, D_DAT)
11	SER 3	O	Serial Data/Clock (F_DAT, SP_DAT)
12	SER 5	O	Deck Control/ASP Clock output (MKCLK, SP_CLK)
13	SPE	I	Speana input
14	V_JOG_AB	I	Volume jog A-D detection input
15	J_JOG_AB	I	EQ Joy jog A-D detection input

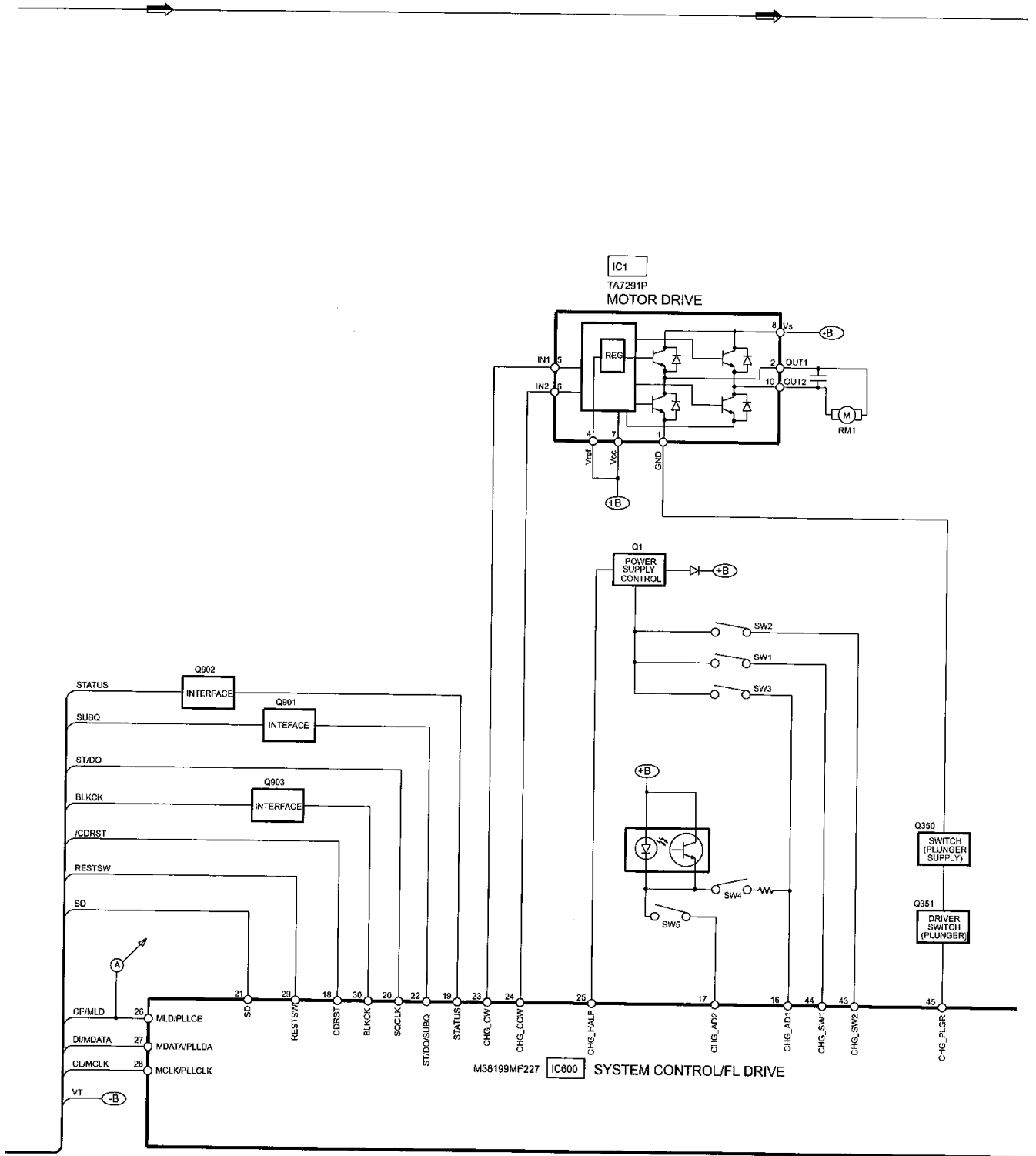
No.	Mark	I/O	Function
16	CHG_AD1	I	(OPEN/CLAMP)Changer switch A-D detection input 1
17	CHG_AD2	I	(POSITION/BOTTOM) Changer switch A-D detection input 2
18	CDRST	I/O	CD RESET output
19	STATUS	I	CD Signal Processor status input (INV)
20	SQCLK	I/O	Tuner IF data/ Stereo input and CD Subcode Clock output
21	SD	I/O	Tuner Signal detect input
22	ST/DO/SUBQ	I	CD Subcode data input (INV)
23	CHG_CW	O	Changer motor CW output
24	CHG_CCW	O	Changer motor CCW output
25	CHG_HALF	O	Changer half drive output
26	MLD/PPLCE	O	CD command load output/Tuner PLL chip enable
27	MDATA/ PLLDA	O	CD command data output/Tuner PLL data output
28	MDATA/ PLLCLK	O	CD command clock output/Tuner PLL clock output
29	/RESTSW	I	CD limit switch input for the most inner point
30	BLKCK	I	CD block clock input (INV)
31	RMT	I	Remote control input
32	DCDET	I	DC detect input
33	ECONO	O	Main transformer control output for economy mode
34	SYNC	I	AC failure detect input
35	RESET	-	RESET input
36	XCIN	-	X'tal oscillator (f = 32.768 kHz sub clock)
37	XCOUT	-	X'tal oscillator (f = 32.768 kHz sub clock)
38	XIN	-	X'tal oscillator (f = 8.0 MHz main clock)
39	XOUT	-	X'tal oscillator (f = 8.0 MHz main clock)
40	VSS	-	Ground (0V)
41	MBP1	O	MPU beat proof output 1
42	MBP 2	O	MPU beat proof output 2
43	CHG_SW 2	I/O	CD changer switch 2 input
44	CHG_SW 1	I/O	CD changer switch 1 input
45	CHG_PLGR	O	Changer plunger output
46	SP_A	O	Speana control output A
47	SP_B	O	Speana control output B
48	SP_C	O	Speana control output C
49-54	GRD8-GRD13	O	Digit drive output (Grid drive output)
55-61	GRD1-GRD7	O	Digit drive output (Grid drive output)
62-83	SEG32-SEG11	O	Segment drive output (Anode drive output)
84-90	SEG10-SEG4/REG10-REG4	O	Segment drive output (Anode drive output)/For region setting/Function selection use/Key scan output at RESET START
91	VCC	-	Power supply (+5V)
92	REG3/SEG3	O	Segment drive output (Anode drive output)
93	REG2/SEG2	O	For region setting/Function selection use
94	REG1/SEG1	O	Key scan output at RESET START
95	REG_IN/EECS	I/O	Region and function setting input and EEPROM clock output
96	EEDAT	I/O	EEPROM data input
97	EECS	O	EEPROM chip select output

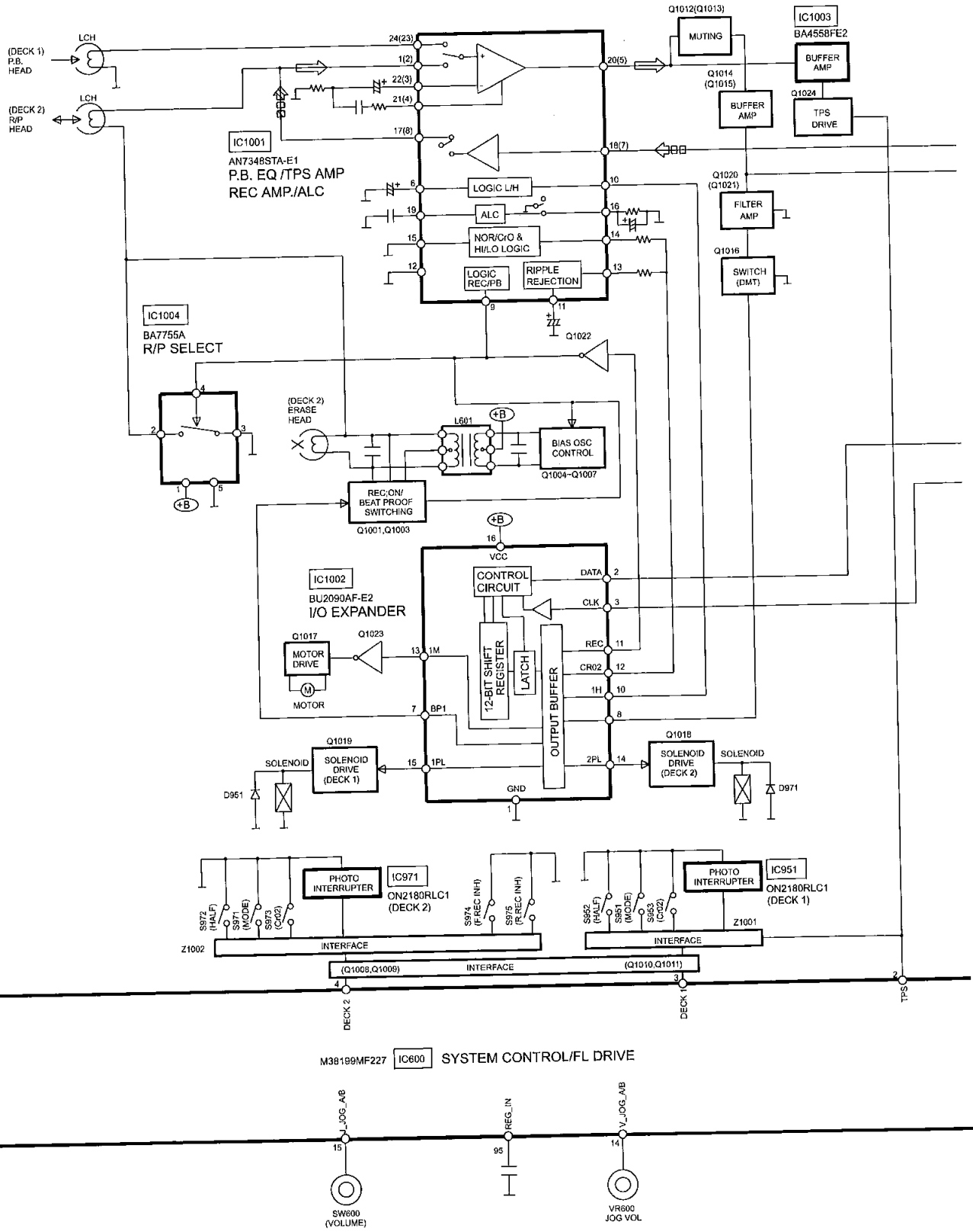
No.	Mark	I/O	Function
98	VEE	-	Power supply (-30V)
99	AVSS	-	Analog Ground (0V)
100	VREF	-	Reference for A-D

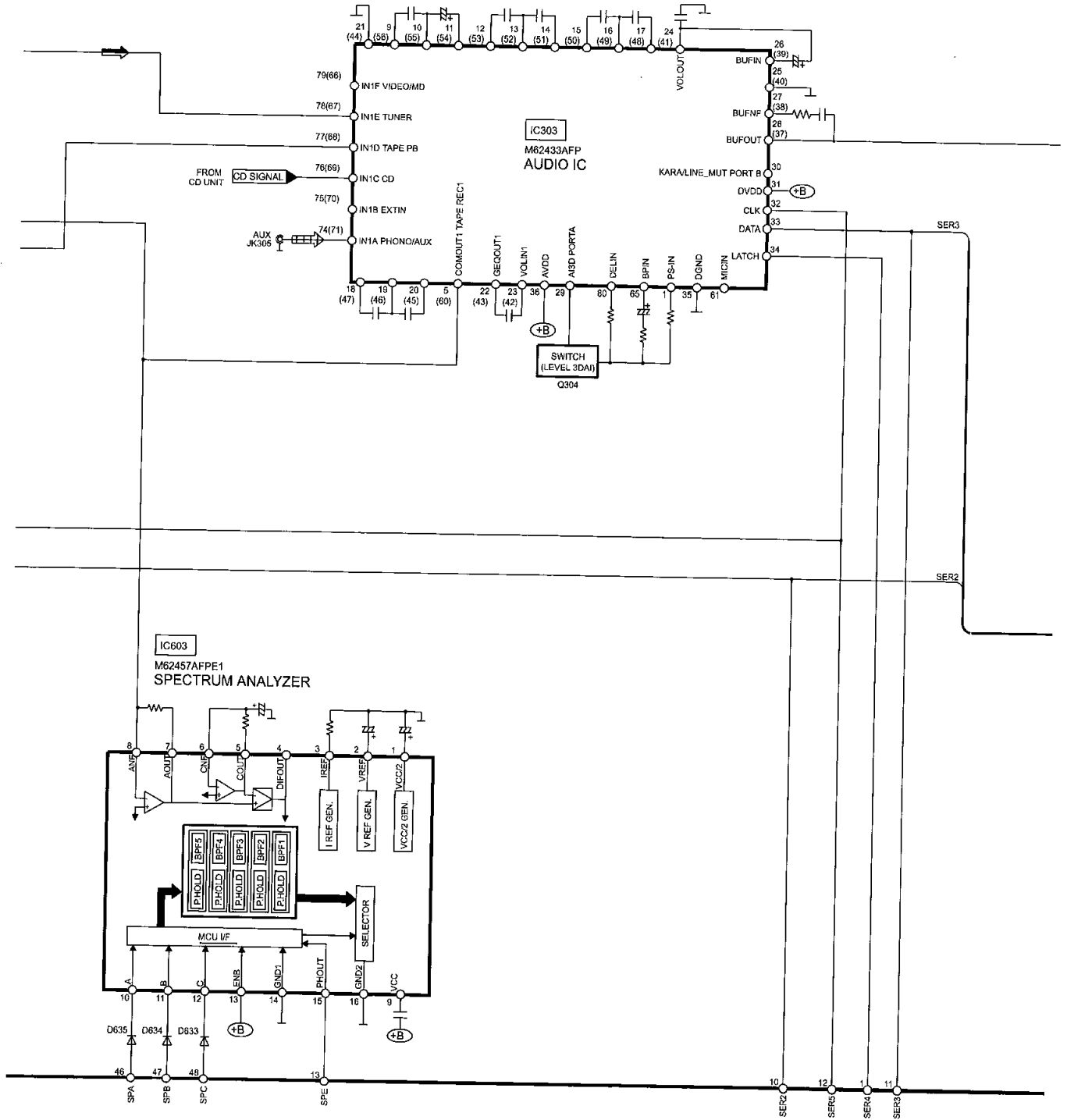
15 Block Diagram



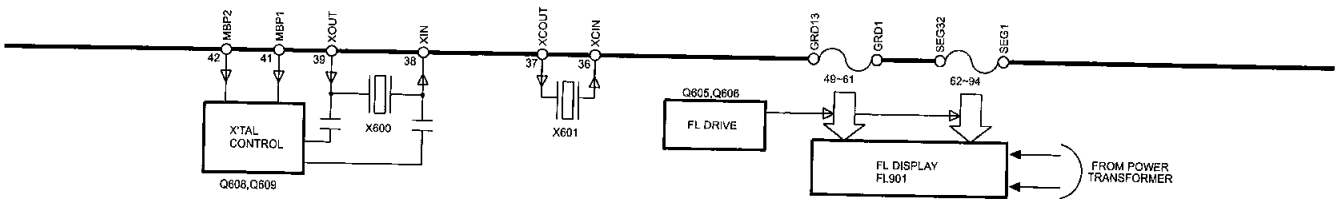


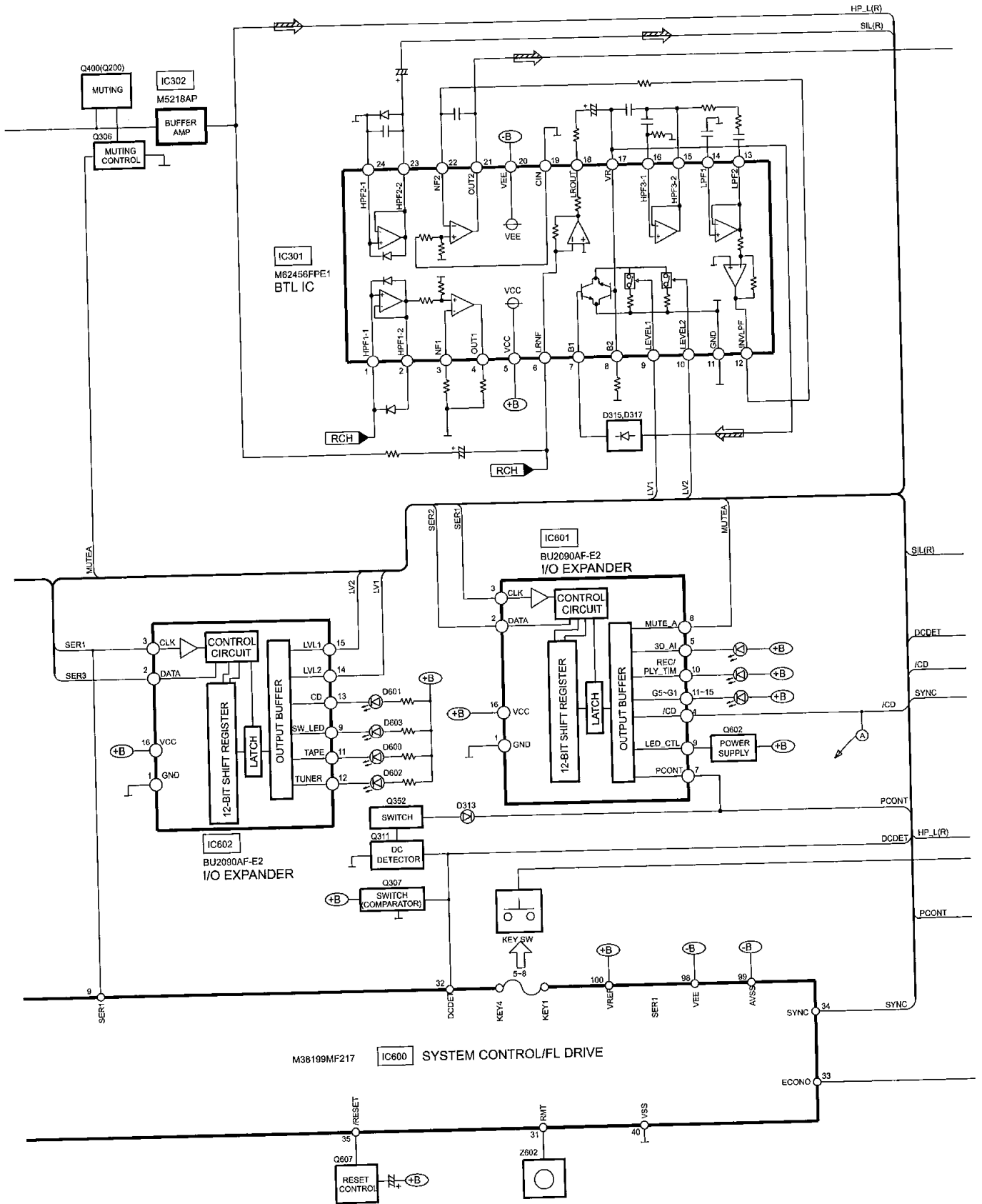


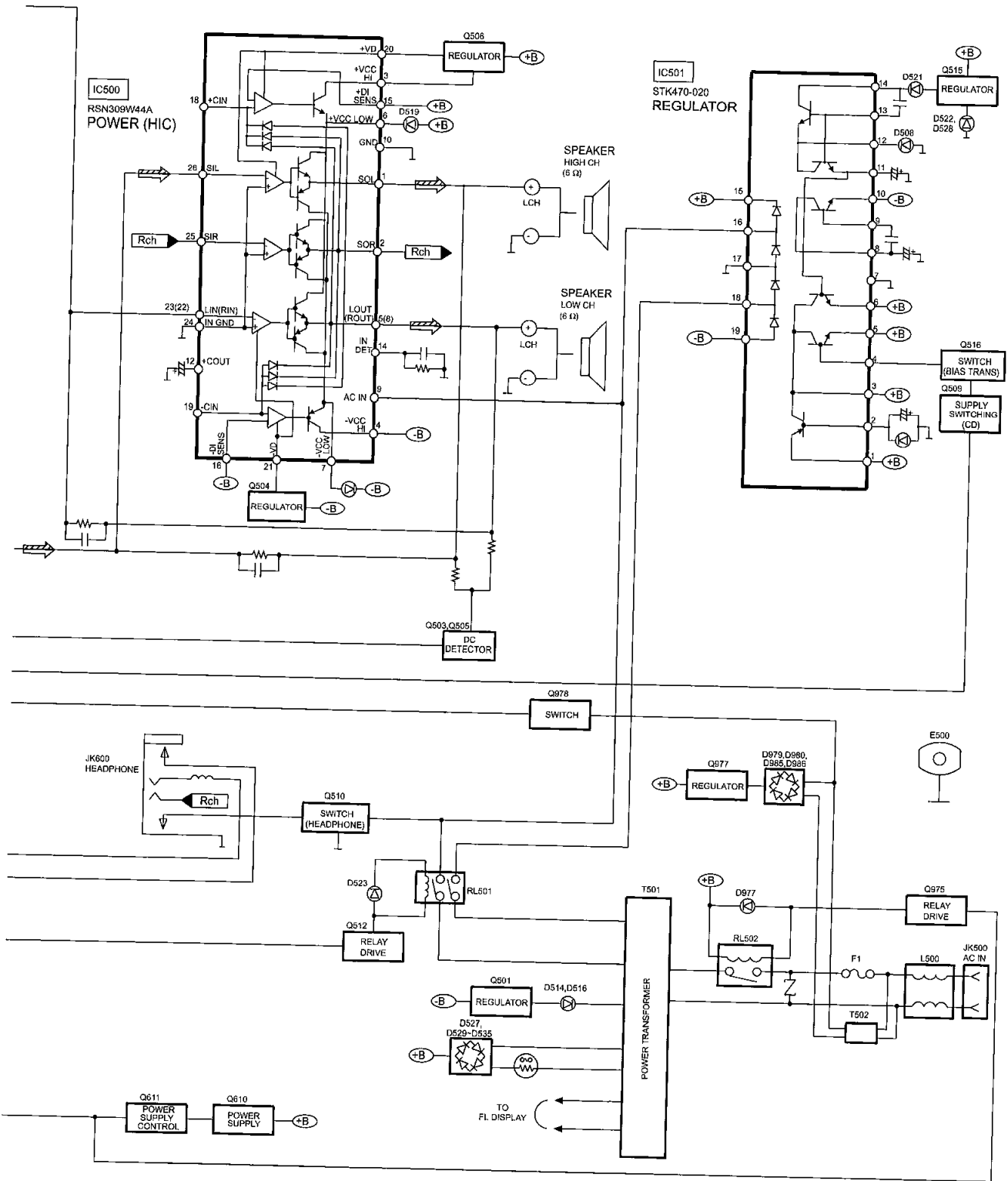




M38199MF227 **IC600** SYSTEM CONTROL/FL DRIVE







SIGNAL LINES

	MAIN SIGNAL LINE		CD SIGNAL LINE		AM SIGNAL LINE		PLAYBACK SIGNAL LINE
	FM OSC SIGNAL LINE		AM OSC SIGNAL LINE		FM & AM SIGNALS LINE		RECORD SIGNAL LINE
	FM SIGNAL LINE		AUX SIGNAL LINE				

() indicates Pin No. Right Channel

16 Schematic Diagram

(All schematic diagrams may be modified at any time with the development of the new technology)

Note:

S602	: AUX select switch
S603	: Deck 1 eject switch
S604	: CD Manager switch
S605	: Band/Tuner select switch
S606	: Tape Edit switch
S607	: Disc 5 eject switch
S608	: CD select switch
S609	: Rec/Stop select switch
S610	: Disc 5 select switch
S611	: Tape/Deck select switch
S612	: Reverse Mode select switch
S613	: Disc 4 eject switch
S614	: EQ adjust down switch
S615	: Super Woofer switch
S616	: Deck 2 eject switch
S617	: Disc 4 select switch
S618	: EQ adjust left switch
S619	: Display, Demonstration switch
S620	: Reverse play, Tune/time adjust down switch
S621	: Clock, Timer select switch
S622	: EQ adjust up switch
S623	: Disc 3 eject switch
S625	: Play timer/Rec timer select switch
S626	: EQ adjust right switch
S627	: Disc 3 select switch
S628	: Economy Mode switch
S629	: Stop,Tune Mode select switch
S630	: Disc 2 eject switch
S631	: Random play switch
S632	: FWD, Memory set switch
S633	: Disc 2 select switch
S634	: FWD play/pause, Tune/Time adjust up switch
S635	: Disc 1 eject switch
S636	: Disc 1 select switch
S637	: REW, FM Mode/BP select switch
S638	: Power switch
S639	: 3D AI EQ switch
S701	: Reset switch
S951	: Deck 1 Mode detect switch
S952	: Deck 1 Tape detect switch
S953	: Deck 1 CrO2 detect switch
S971	: Deck 2 Mode detect switch
S972	: Deck 2 Tape detect switch
S973	: Deck 2 CrO2 detect switch
S974	: Deck 2 Record detect switch
S975	: Deck 2 Record detect switch
SW1, SW2	: Tray position switch
SW3	: Tray open switch
SW4	: CD offset detect switch
SW5	: Spindle bottom position detect switch
SW600	: Sound Equalizer select switch
VR600	: Volume control

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high

impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark	: Playback	<< >>	: Rec	< >	: FM
(())	: CD	()	: AM	[]	: AUX

• Importance safety notice :

Components identified by Δ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

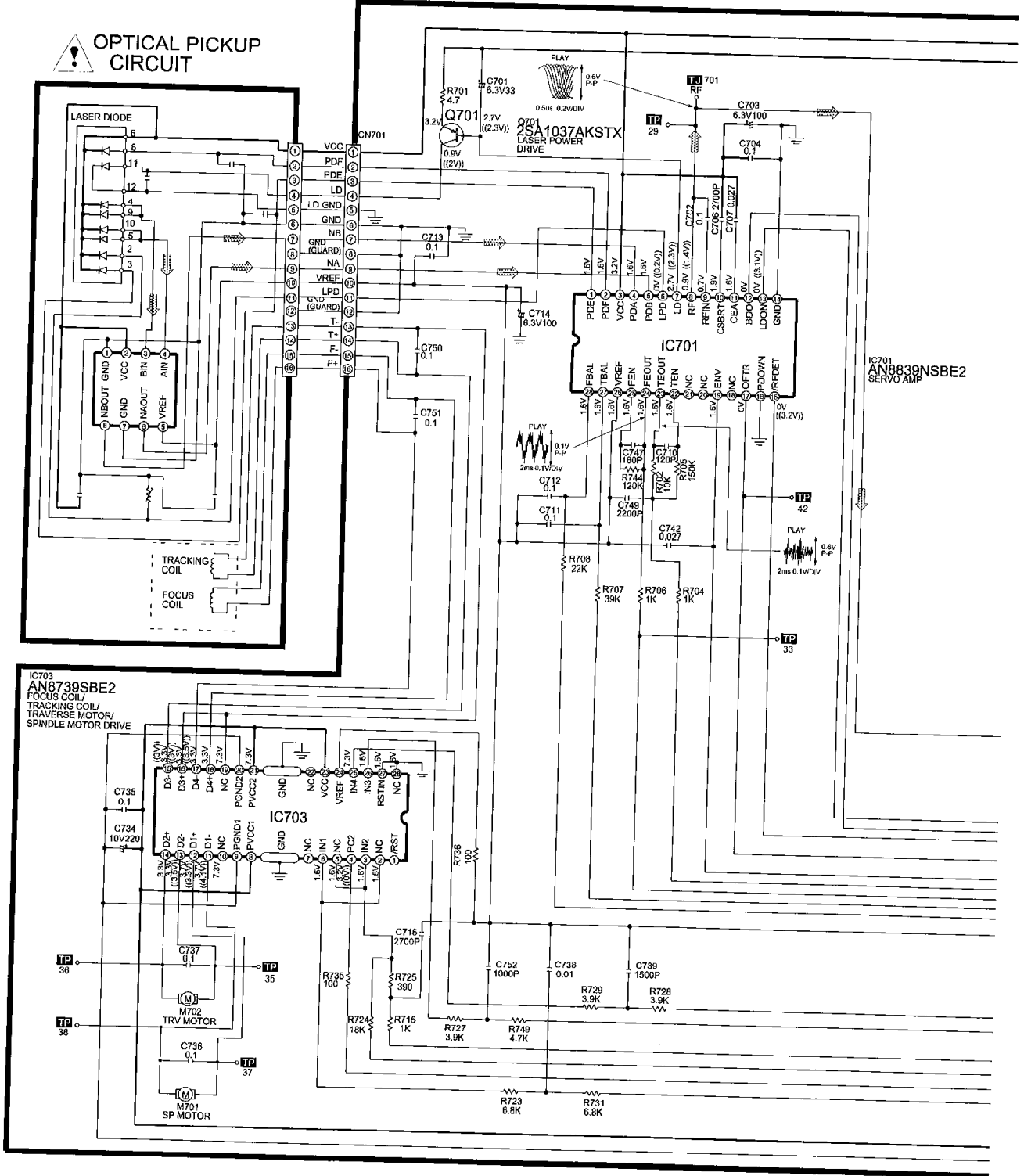
- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

SCHEMATIC DIAGRAM-1

— : + B Line ⇨ : CD Signal Line

A CD SERVO CIRCUIT

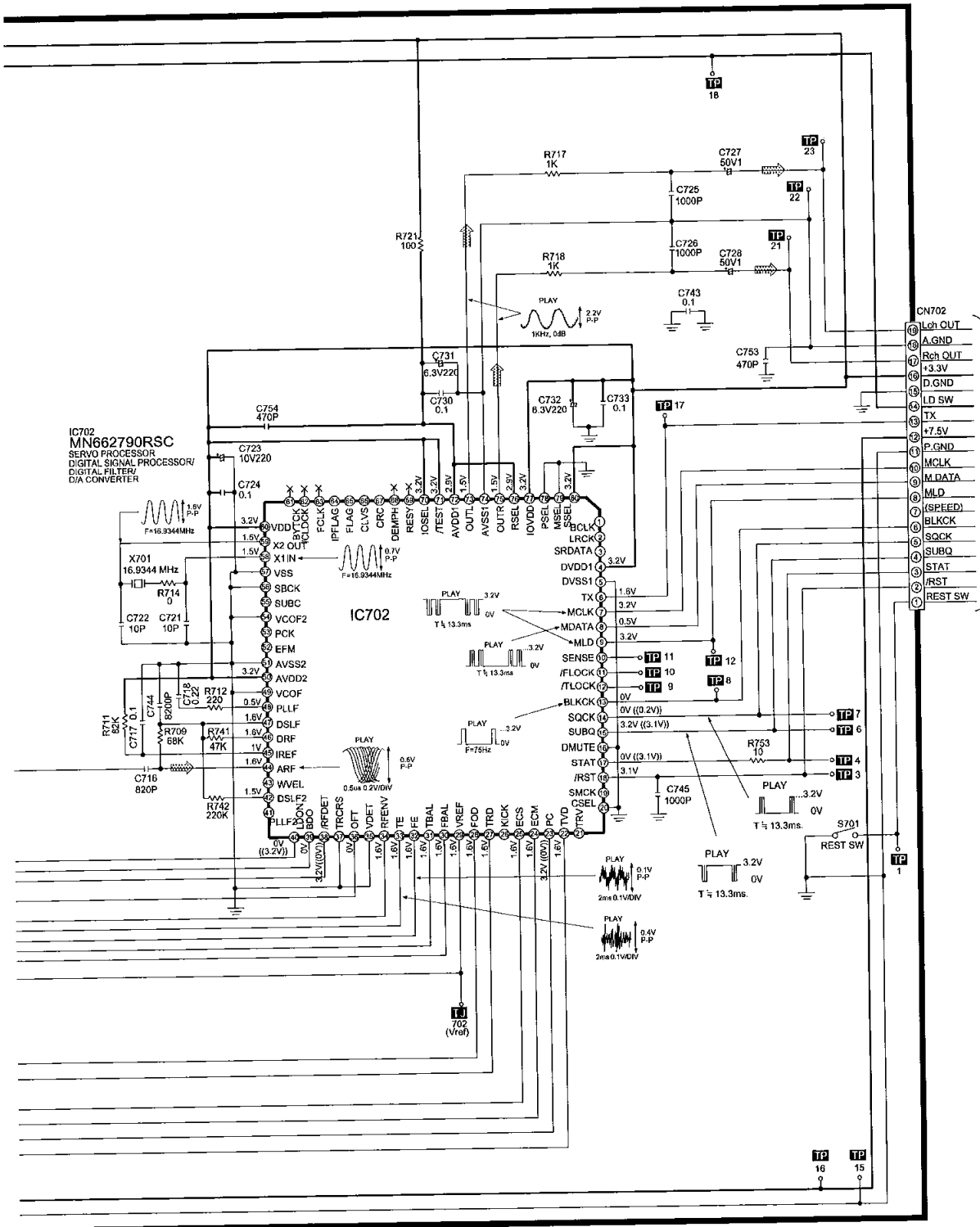
! OPTICAL PICKUP CIRCUIT



SCHEMATIC DIAGRAM-2

— : + B Line

⊞ : CD Signal Line



TO PANEL CIRCUIT (CP806) ON SCHEMATIC DIAGRAM-6

SCHEMATIC DIAGRAM - 3

— : +B Line

⇨ : FM/AM Signal Line

⇨ : FM Signal Line

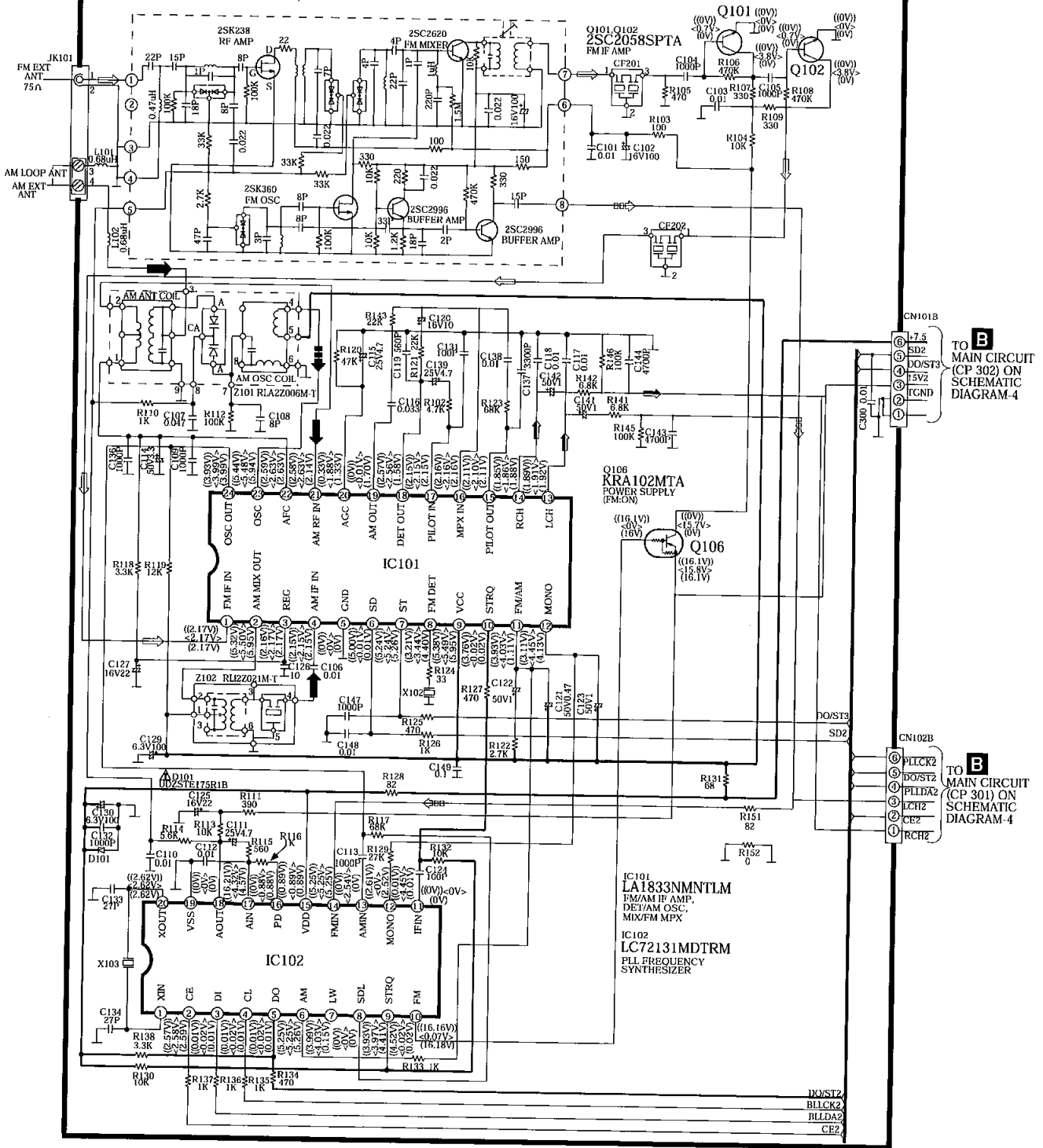
⇨ : FM OSC Signal Line

⇨ : AM Signal Line

⇨ : AM OSC Signal Line

TUNER CIRCUIT

J TUNER PACK CIRCUIT
Z120 (ENV17290CY)



B
TO MAIN CIRCUIT
(CP 302) ON
SCHEMATIC
DIAGRAM-4

B
TO MAIN CIRCUIT
(CP 301) ON
SCHEMATIC
DIAGRAM-4

SCHEMATIC DIAGRAM-4

— : +B Line ⇨ : Main Signal Line ⇨ : Playback Signal Line ⇨ : FM/AM Signal Line
 - - - : -B Line ⇨ : AUX Signal Line ⇨ : CD Signal Line ⇨ : Record Signal Line

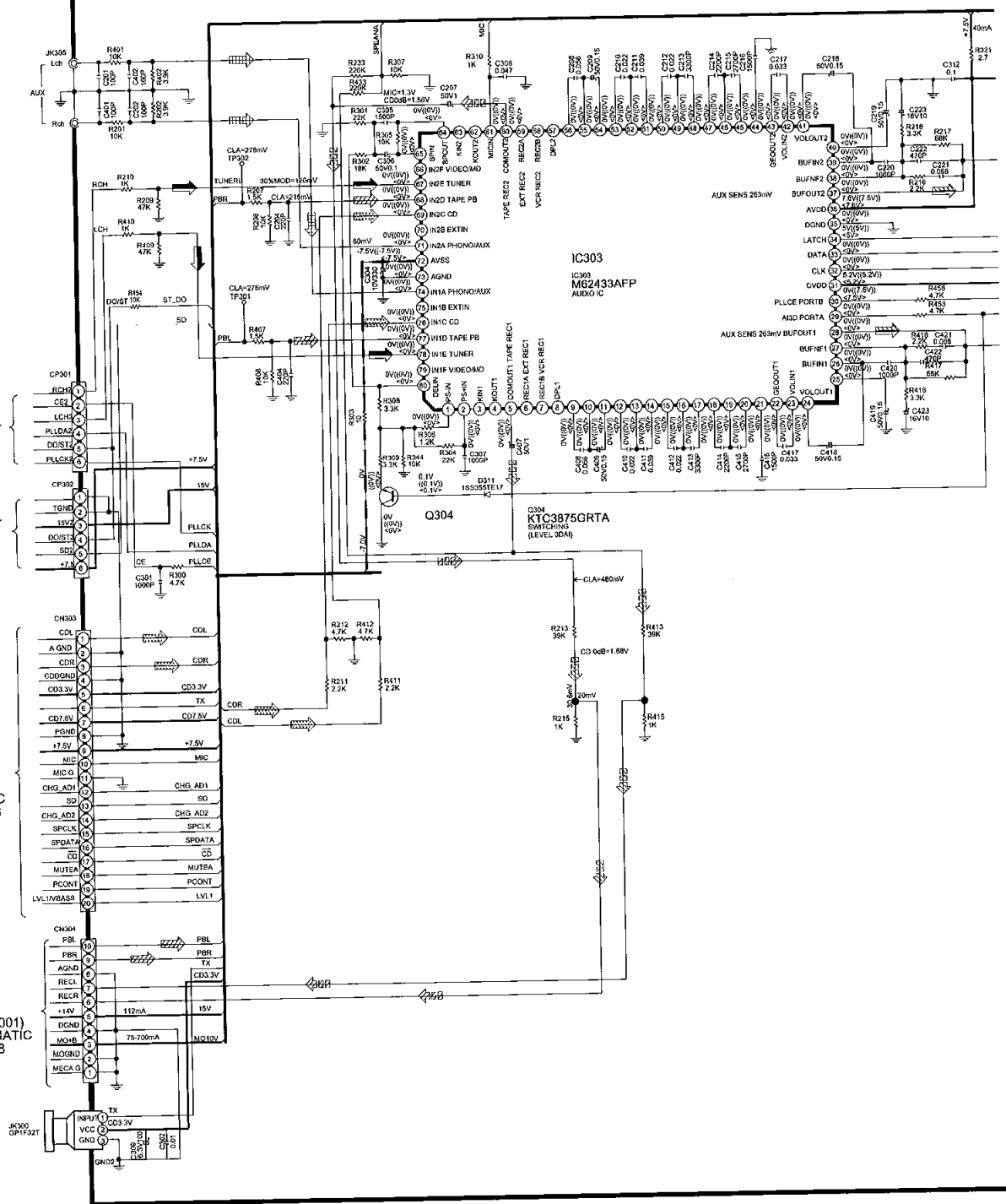
B MAIN CIRCUIT

O
 TO TUNER CIRCUIT
 (CN102B) ON
 SCHEMATIC
 DIAGRAM-3

O
 TO TUNER CIRCUIT
 (CN101B) ON
 SCHEMATIC
 DIAGRAM-3

C
 TO PANEL
 CIRCUIT
 (CP605) ON
 SCHEMATIC
 DIAGRAM-6

K
 TO DECK
 CIRCUIT
 (H1001/W1001)
 ON SCHEMATIC
 DIAGRAM-8



SCHEMATIC DIAGRAM - 6

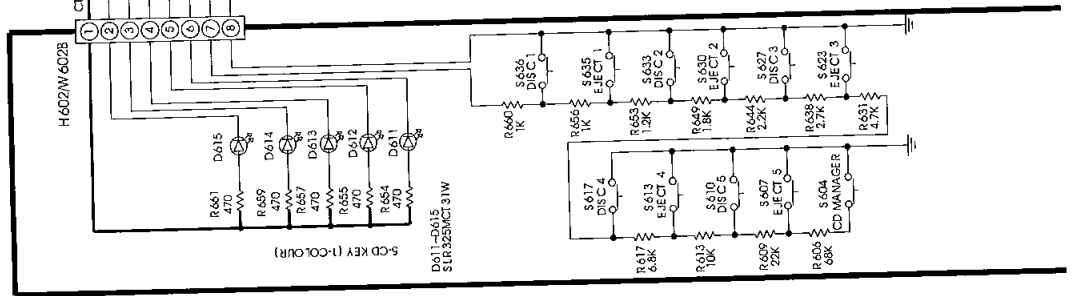
--- : +B Line

--- : -B Line

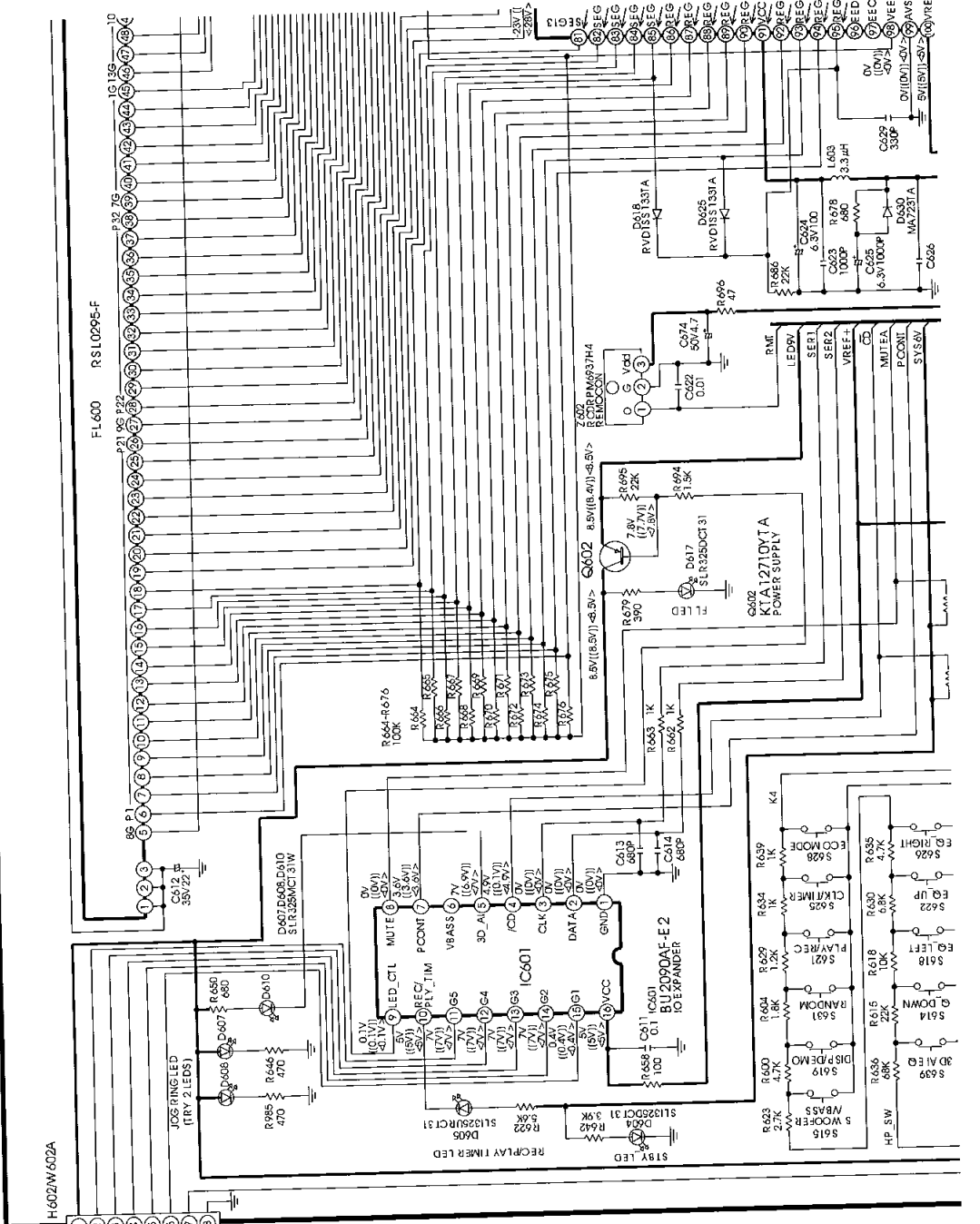
⇒ : MAIN Signal Line

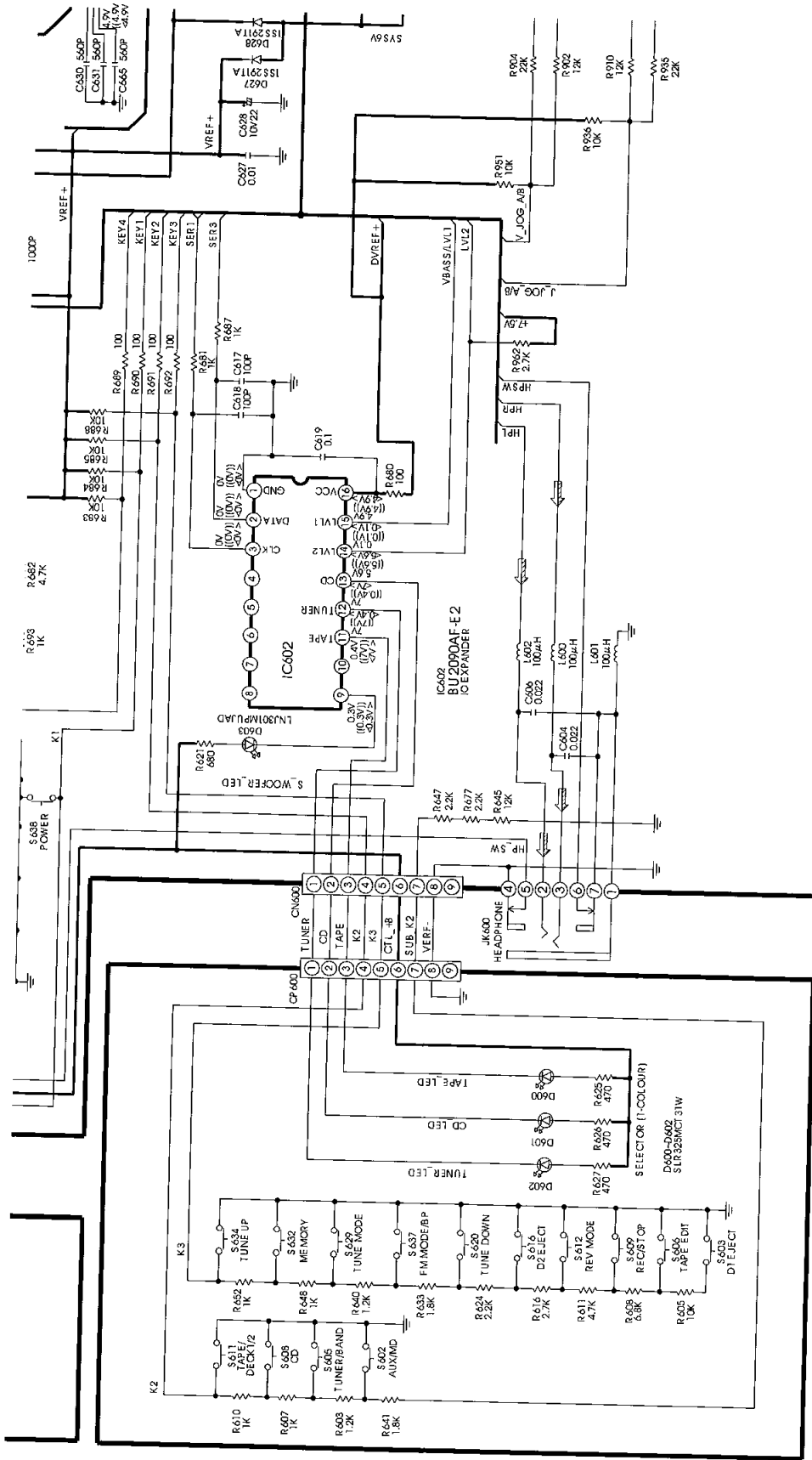
⇒ : CD Signal Line

P TACT SWITCH (1) CIRCUIT

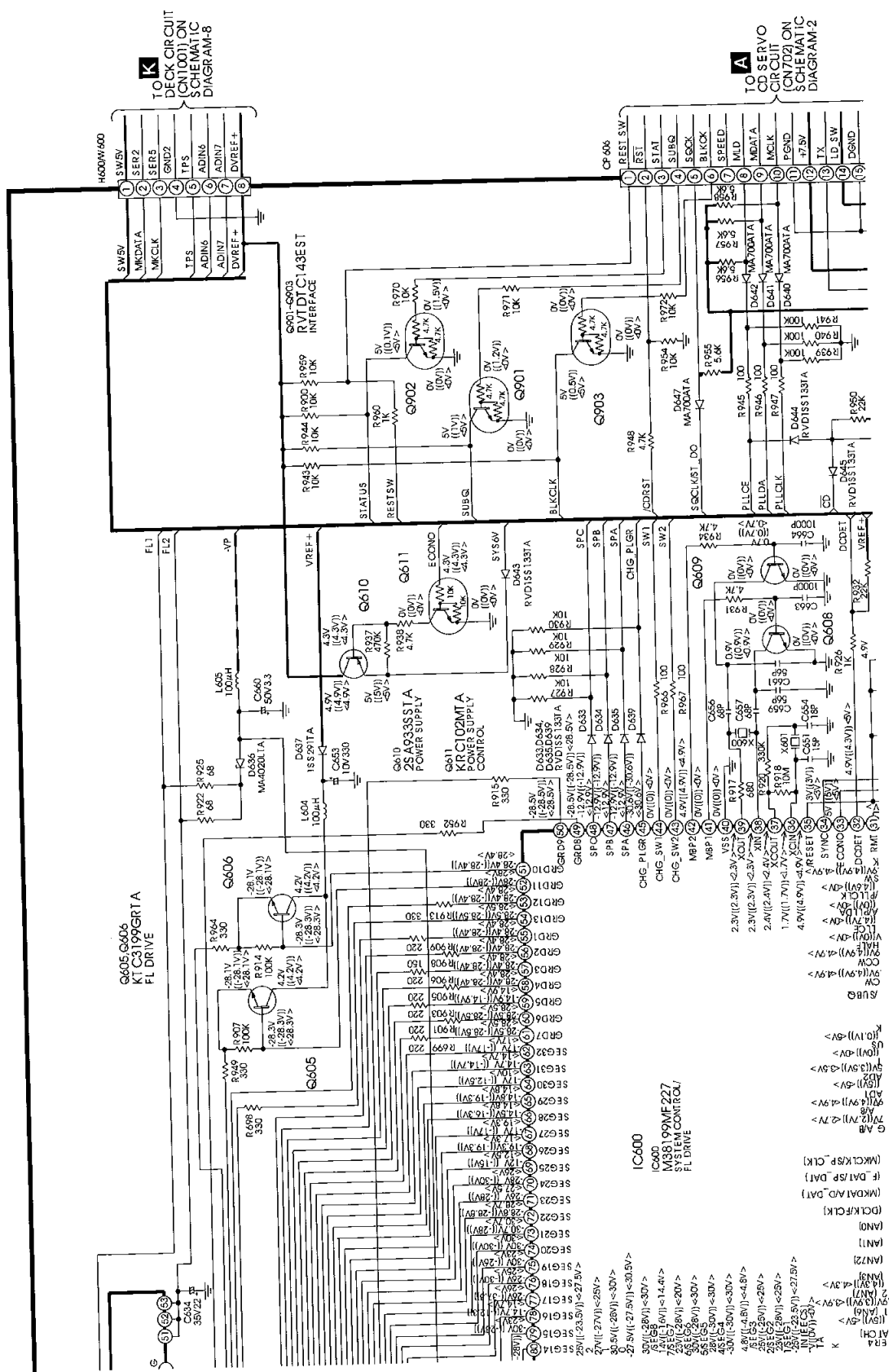


C PANEL CIRCUIT



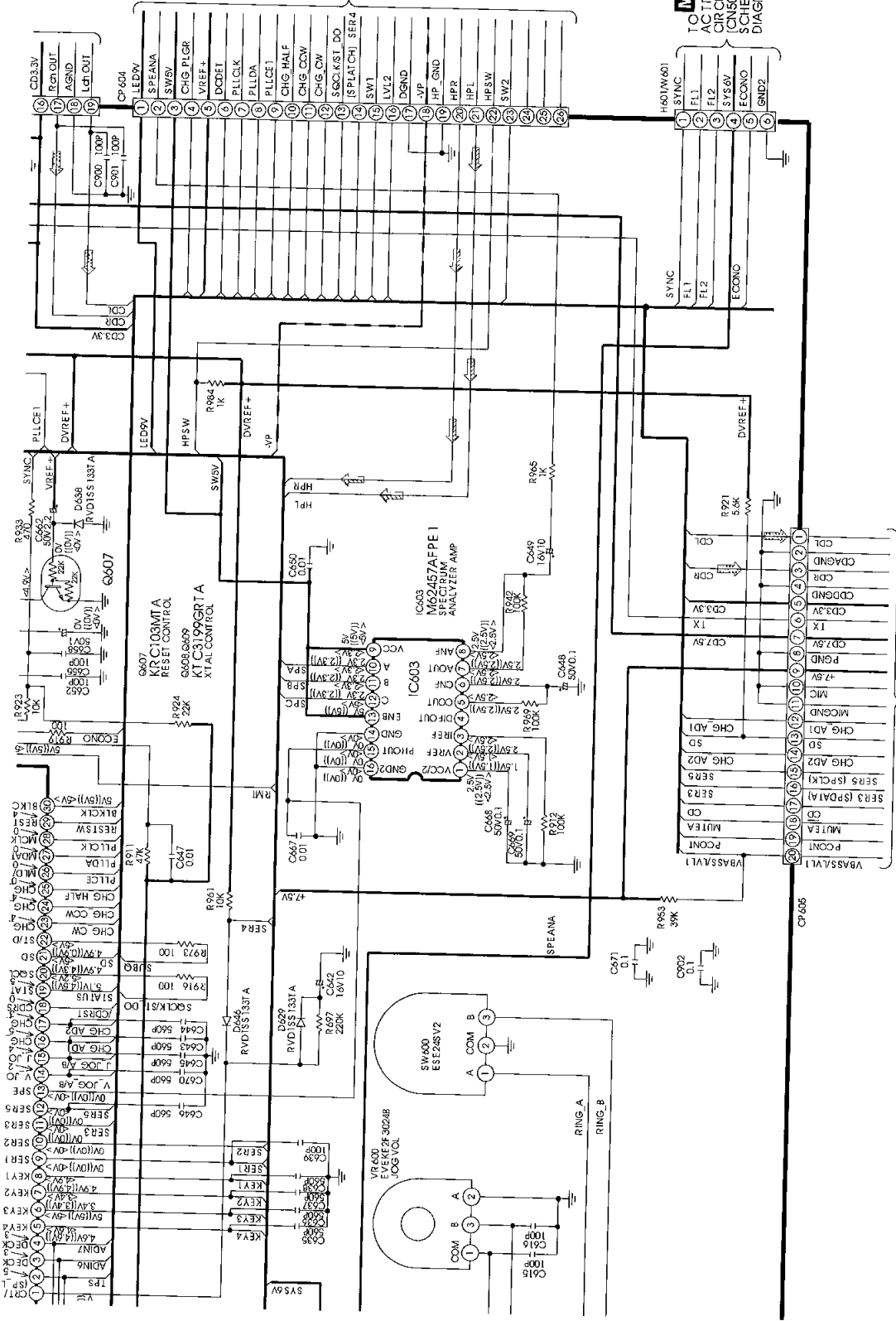


D TACT SWITCH (2)
CIRCUIT



B
TO
MAIN CIRCUIT
(CN302) ON
SCHEMATIC
DIAGRAM-5

M
TO
AC TRANS
CIRCUIT
(CN302) ON
SCHEMATIC
DIAGRAM-9



B
TO
MAIN CIRCUIT
(CN303) ON
SCHEMATIC
DIAGRAM-4

SCHEMATIC DIAGRAM - 7

— : +B Line - - - - : -B Line

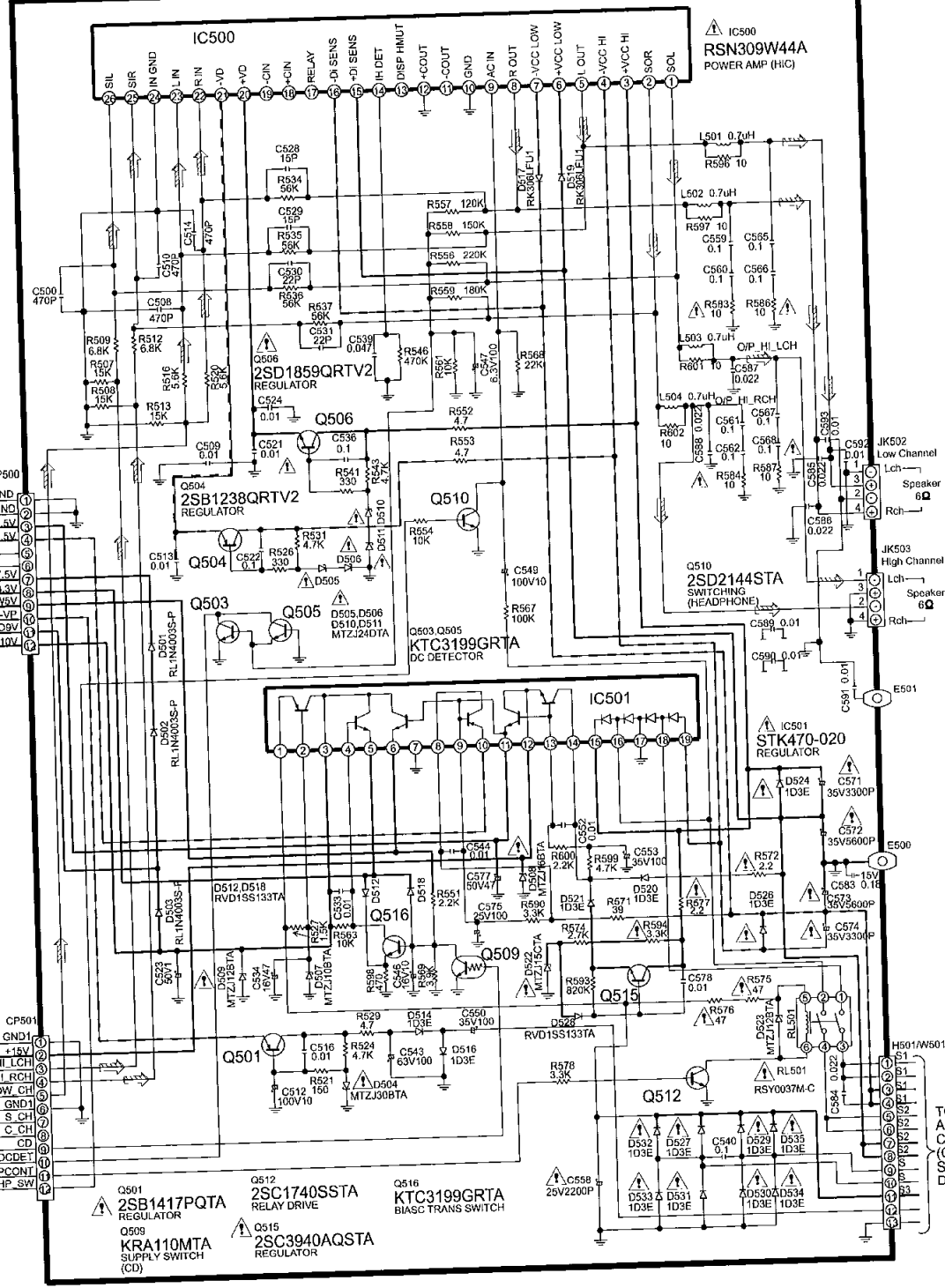
⇨ : MAIN Signal Line

L POWER CIRCUIT

B
TO MAIN CIRCUIT
(CN301) ON
SCHEMATIC
DIAGRAM-5

B
TO MAIN CIRCUIT
(CN300) ON
SCHEMATIC
DIAGRAM-5

M
TO AC TRANS
CIRCUIT
(CN501) ON
SCHEMATIC
DIAGRAM-9



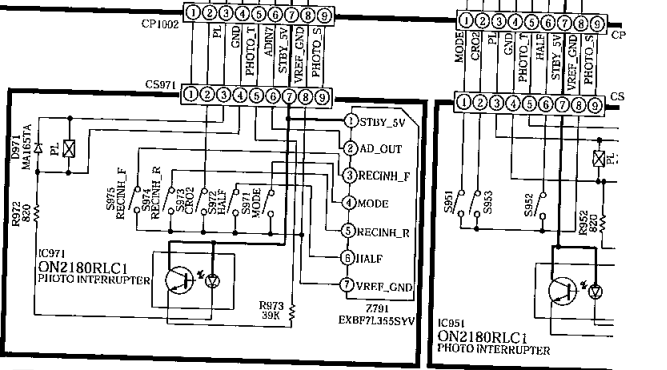
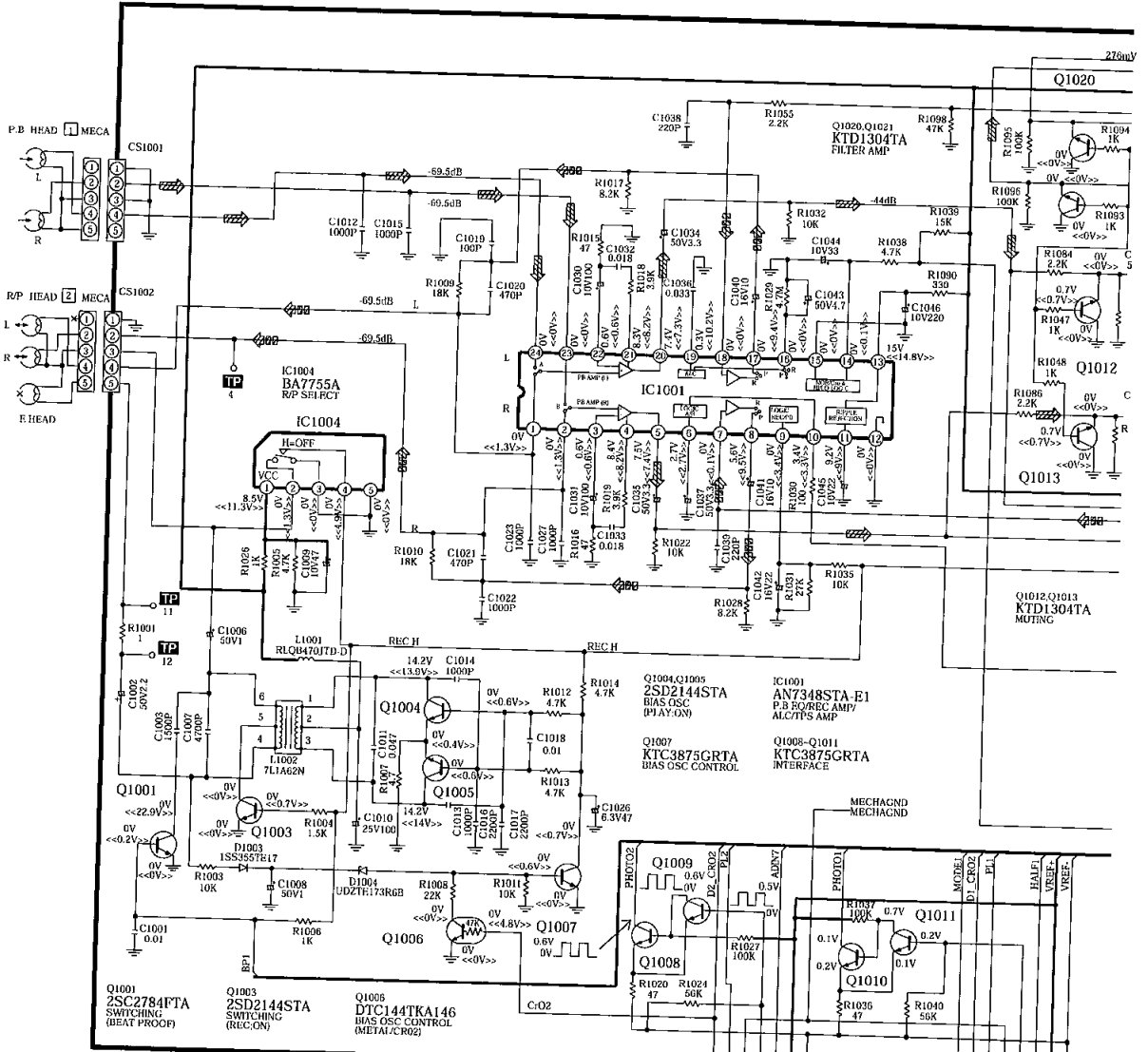
SCHEMATIC DIAGRAM-8

K DECK CIRCUIT

: +B Line

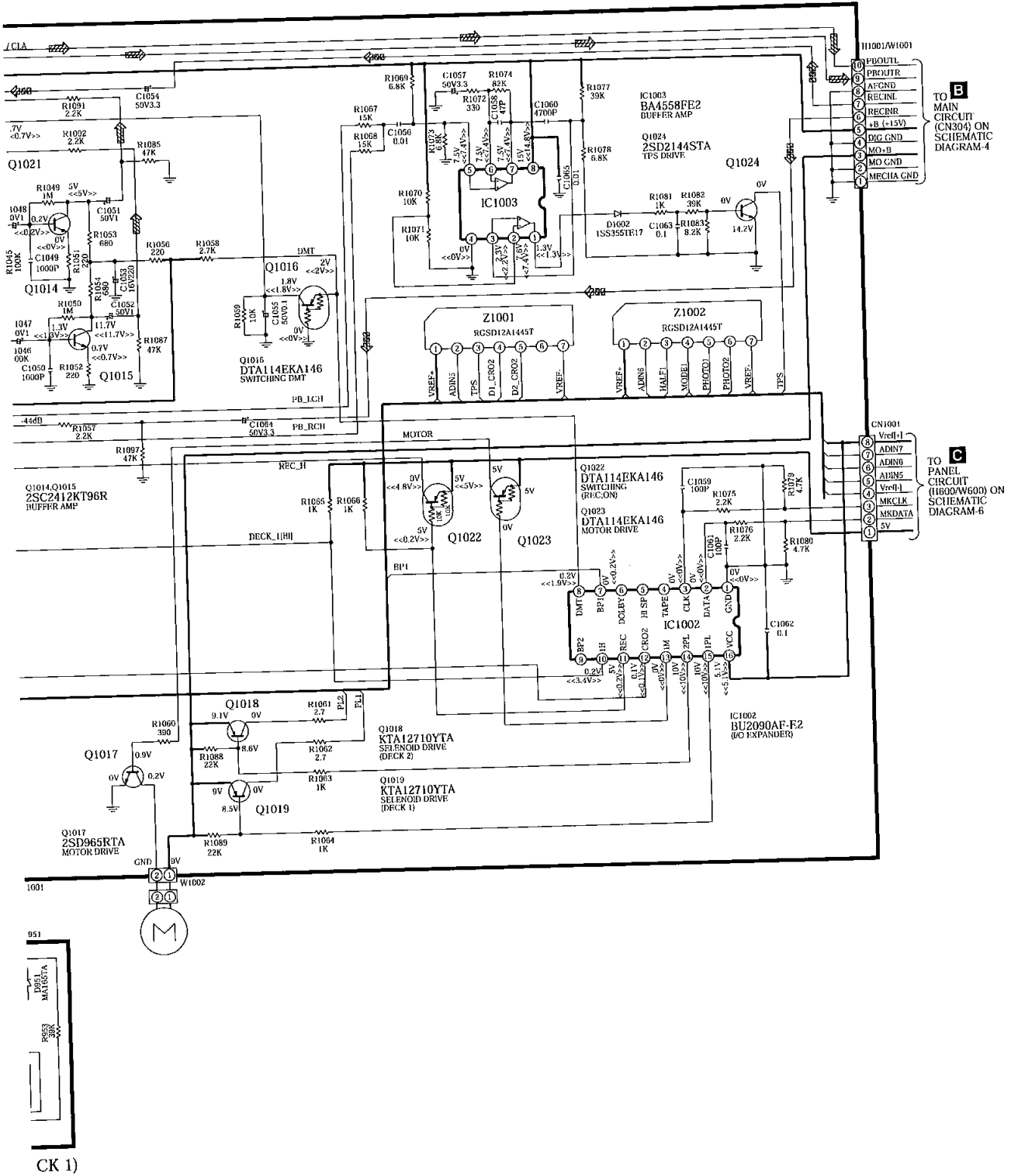
: Playback Signal Line

: Record Signal Line



F MECHANISM (DECK 2) CIRCUIT

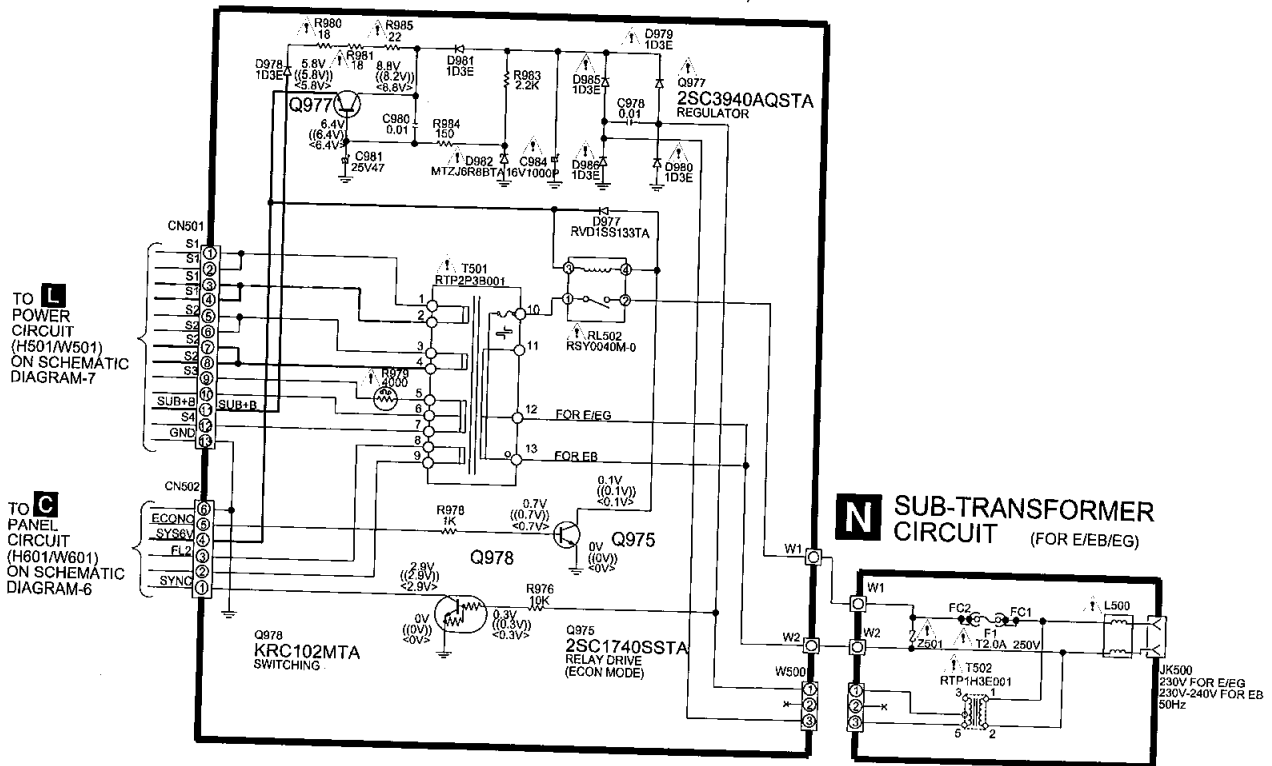
E MECHANISM (DECK 1) CIRCUIT



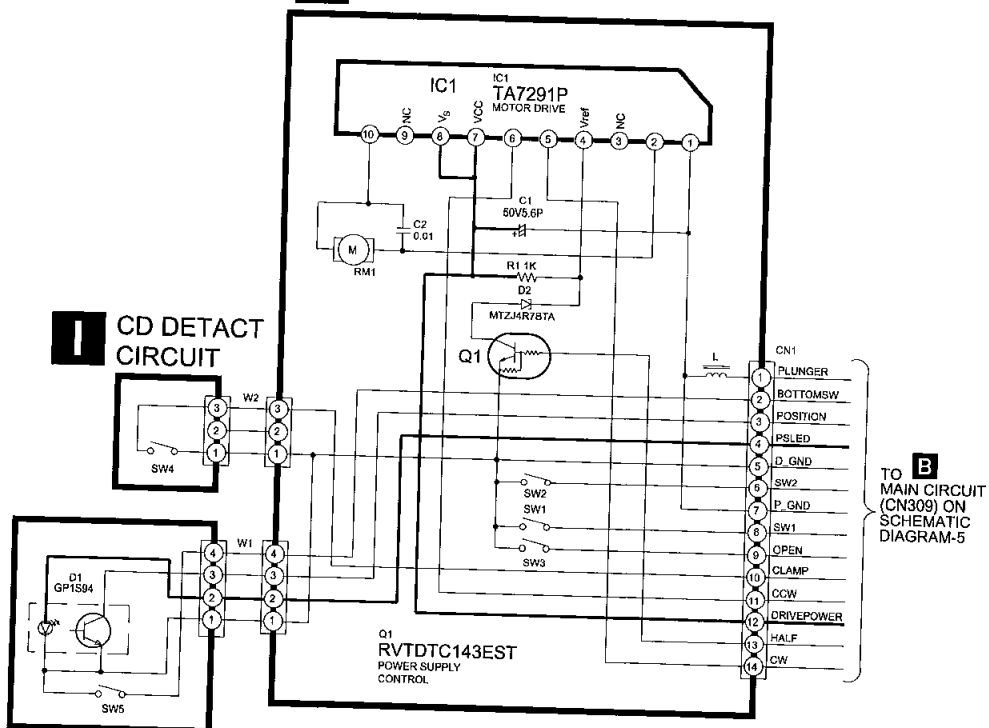
SCHEMATIC DIAGRAM - 9

— : +B Line - - - : -B Line

M AC TRANSFORMER CIRCUIT (FOR E/EB/EG)

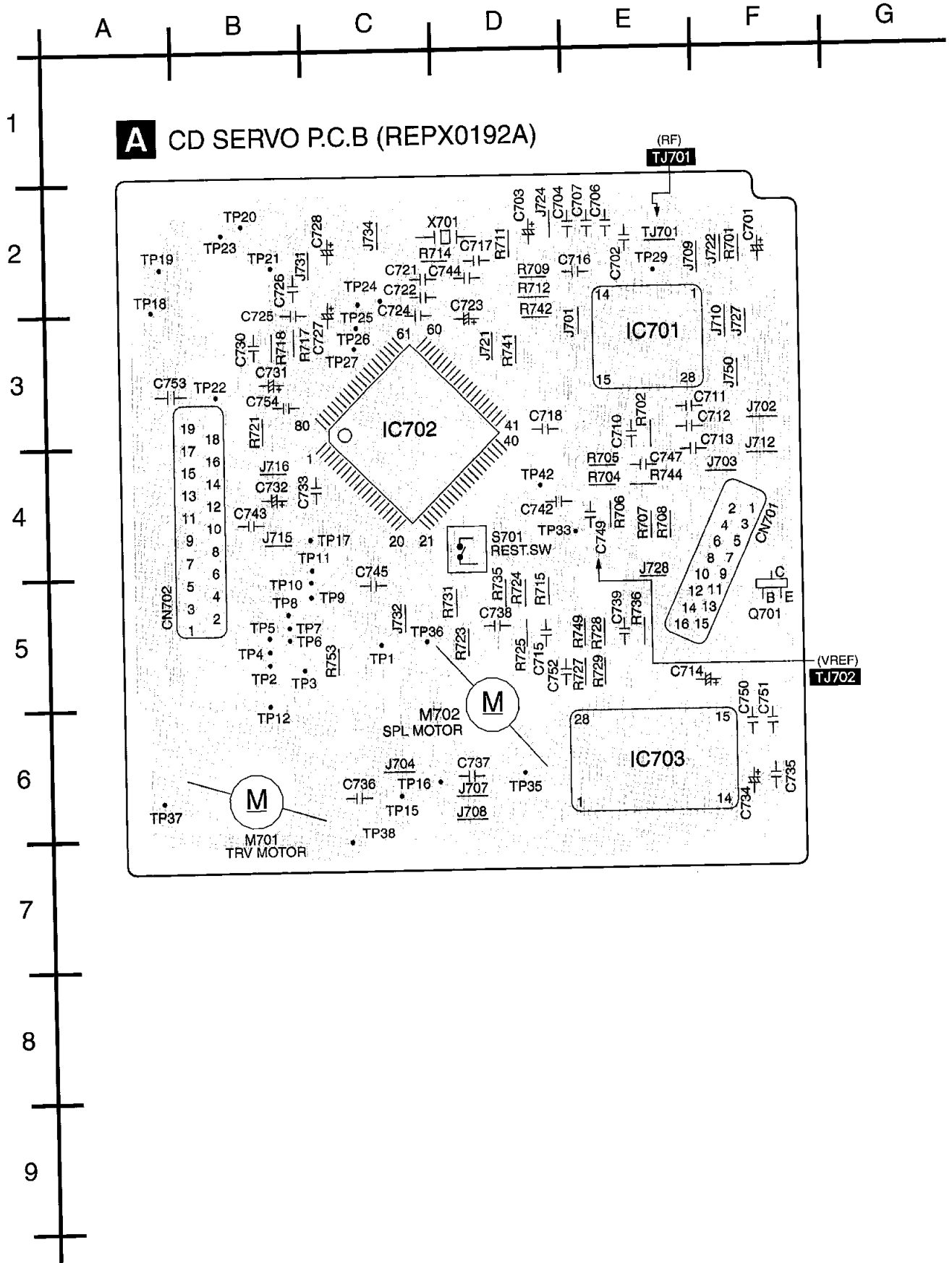


G MOTOR CIRCUIT



17 Printed Circuit Board

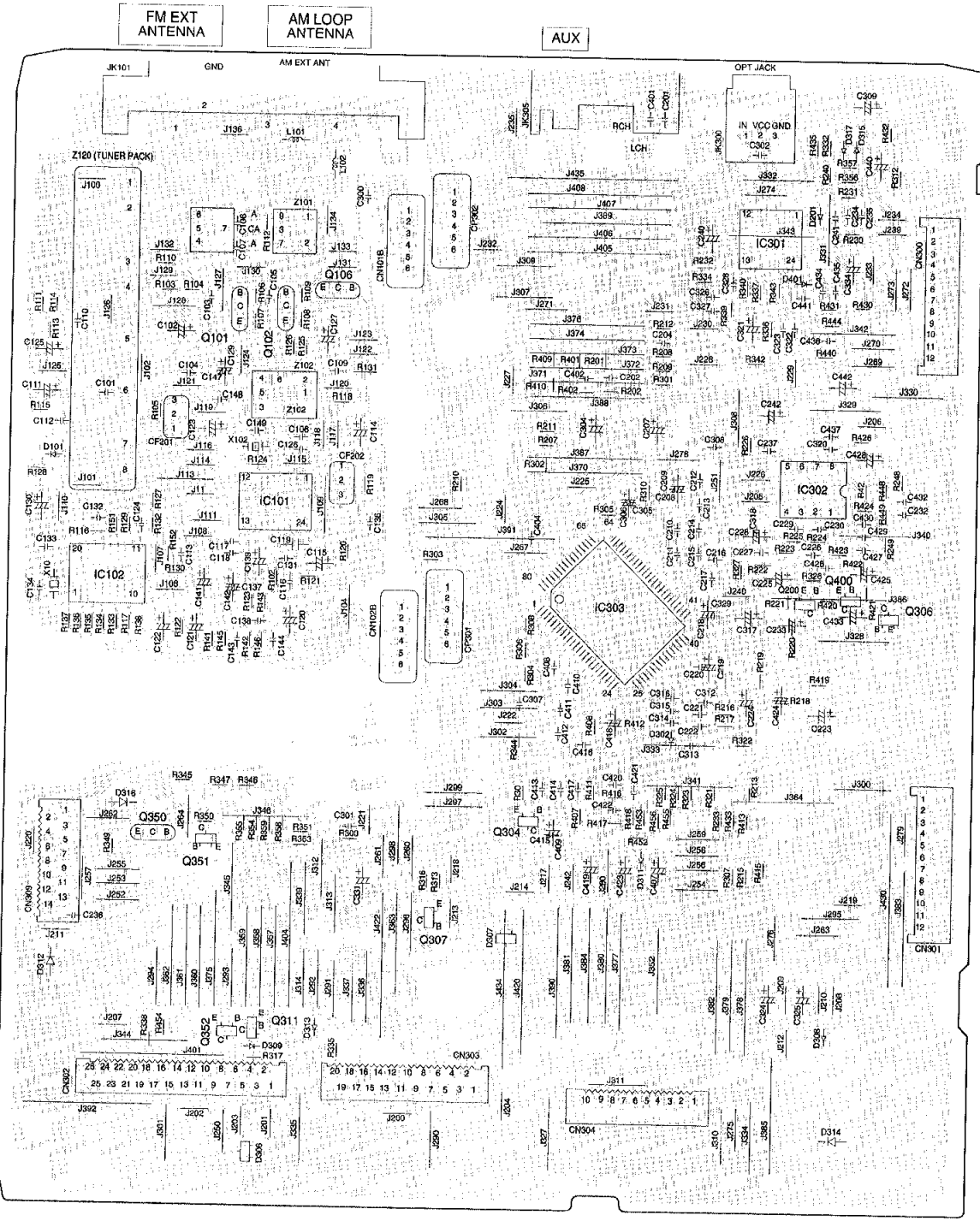
Note: Circuit board diagrams may be modified at any time with the development of new technology.



A B C D E F G

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O TUNER P.C.B. (REPX0215A) **B** MAIN P.C.B. (REPX0200F)



A B C D E F G

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C PANEL P.C.B. (REPX0197H)

2



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R804 R829

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SENSOR

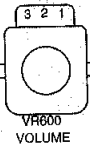
5

R600

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R623 J907



VH600 VOLUME

7



S639 3D_AIEQ

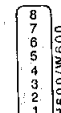


S622



S614

8



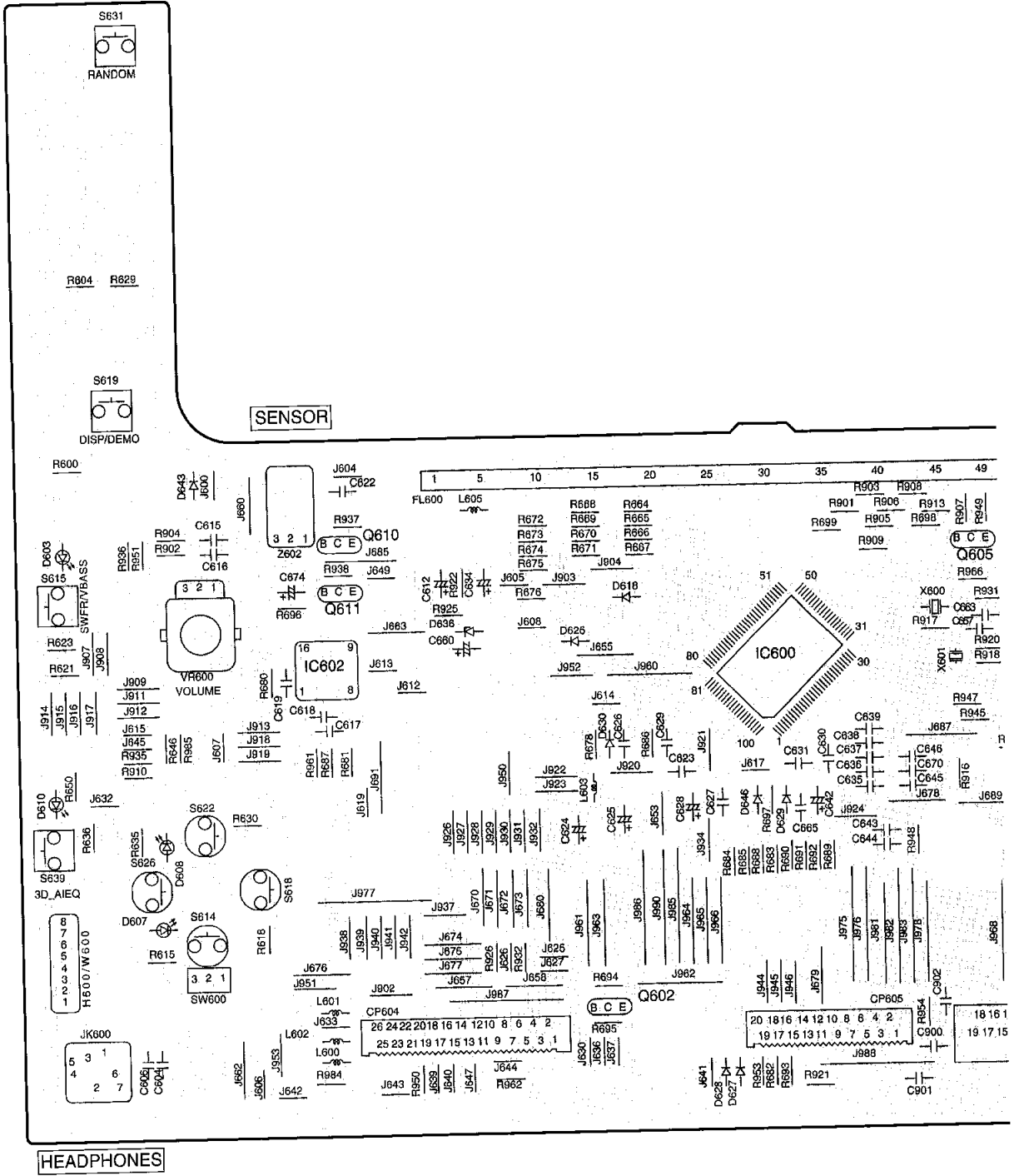
H600/W600



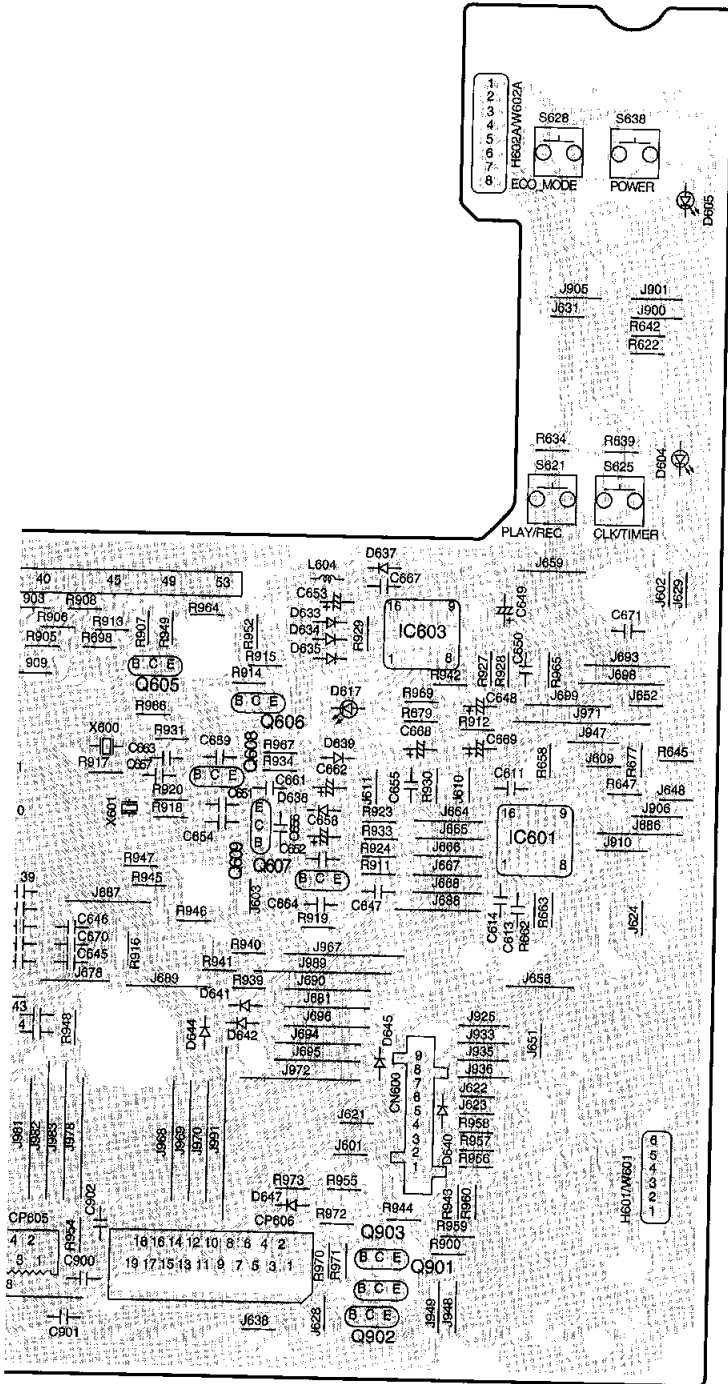
SW600

9

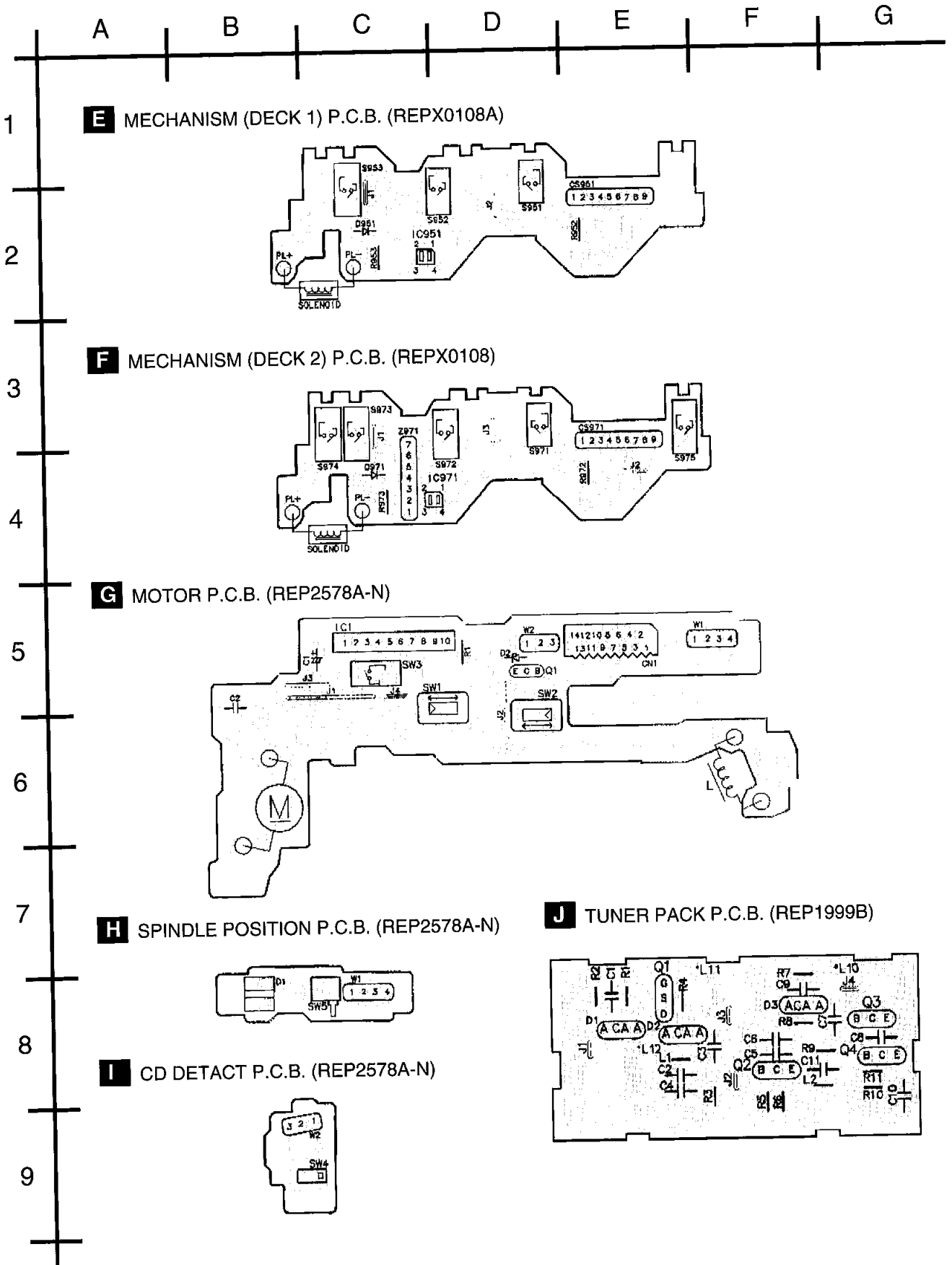
HEADPHONES



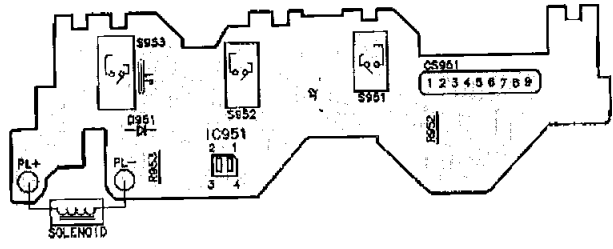
G H I J K L M



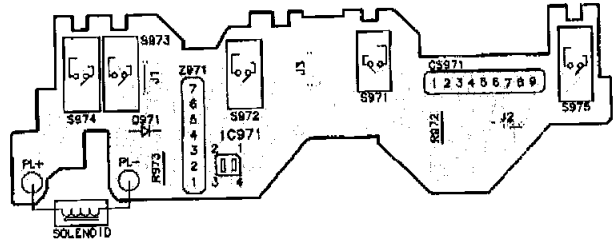
Ref. No.	Loc. No.	Ref.No.	Loc.No.
D604	K4	Q602	E8
D605	K2	Q605	H5
D610	A7	Q606	I5
D617	I5	Q607	I6
D627	F9	Q608	H6
D628	F9	Q609	H6
D629	G7	Q610	D5
D633	I5	Q611	D5
D634	I5	Q901	I9
D635	I5	Q902	I9
D636	D6	Q903	I8
D637	I4	X600	H5
D638	I6	X601	H6
D639	I5	Z602	C5
D641	H7		
D642	H7		
D643	B4		
D644	H7		
D646	G7		
IC600	G6		
IC601	J6		
IC603	I5		
JK600	B9		
L600	C9		
L601	C8		
L602	C8		
L603	E7		
L604	I4		



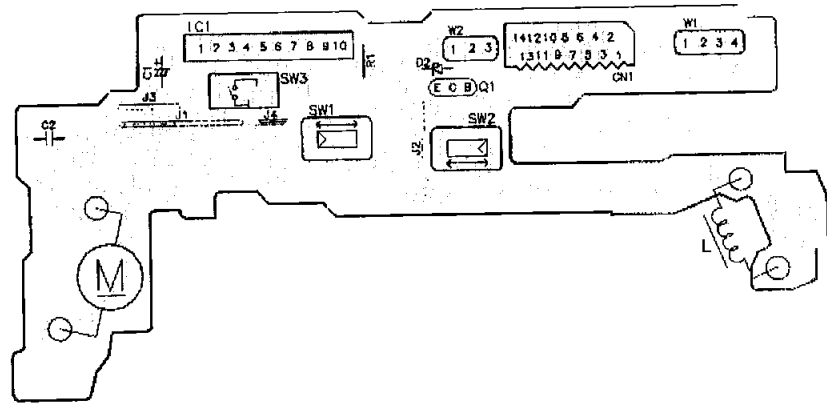
E MECHANISM (DECK 1) P.C.B. (REPX0108A)



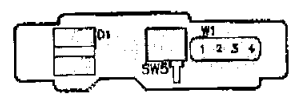
F MECHANISM (DECK 2) P.C.B. (REPX0108)



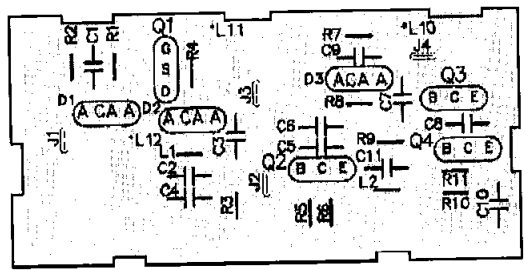
G MOTOR P.C.B. (REP2578A-N)



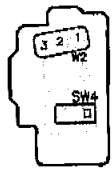
H SPINDLE POSITION P.C.B. (REP2578A-N)



J TUNER PACK P.C.B. (REP1999B)



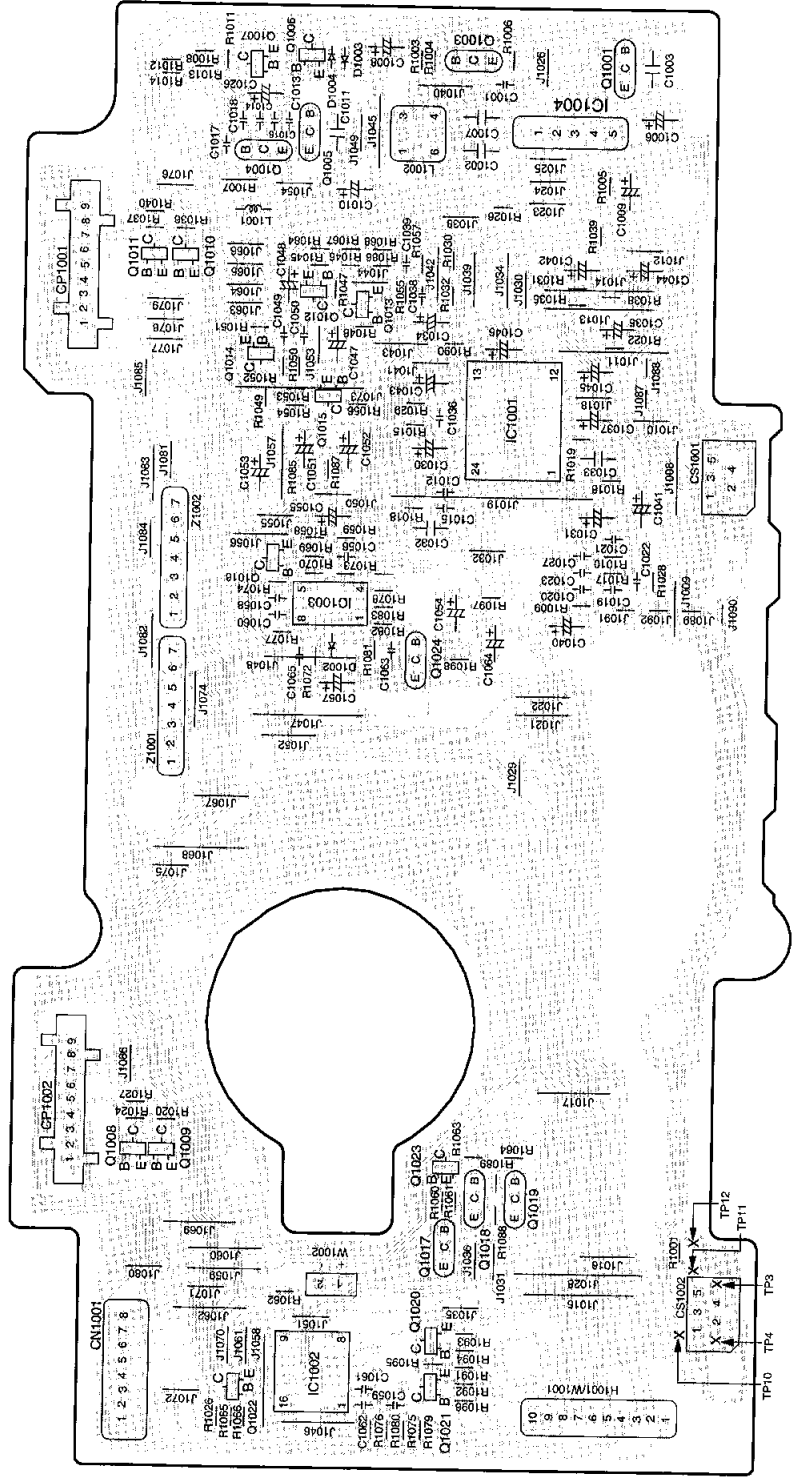
I CD DETACT P.C.B. (REP2578A-N)



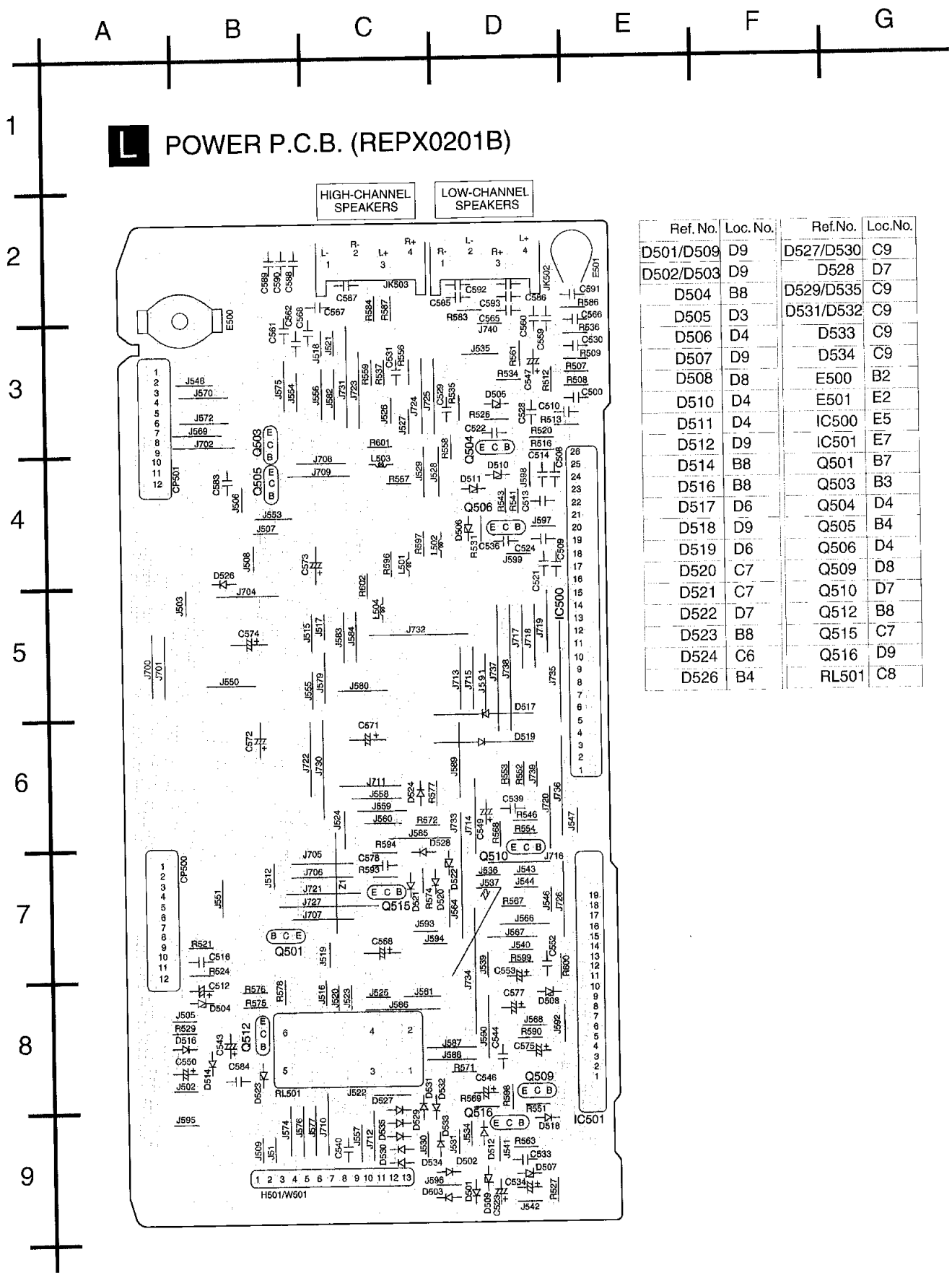
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K DECK P.C.B (REPX0198A)



Ref. No.	Loc. No.
Q1001	D2
Q1003	C2
Q1004	B2
Q1005	C2
Q1006	C2
Q1007	B1
Q1008	B7
Q1009	B7
Q1010	B3
Q1011	B3
Q1012	C3
Q1013	C3
Q1014	B3
Q1015	C3
Q1016	B4
Q1017	C8
Q1018	D8
Q1019	D8
Q1020	C9
Q1021	C9
Q1022	B9
Q1023	D7
Q1024	C5
IC1001	D4
IC1002	C9
IC1003	B5
Z1001	B5
Z1002	B4

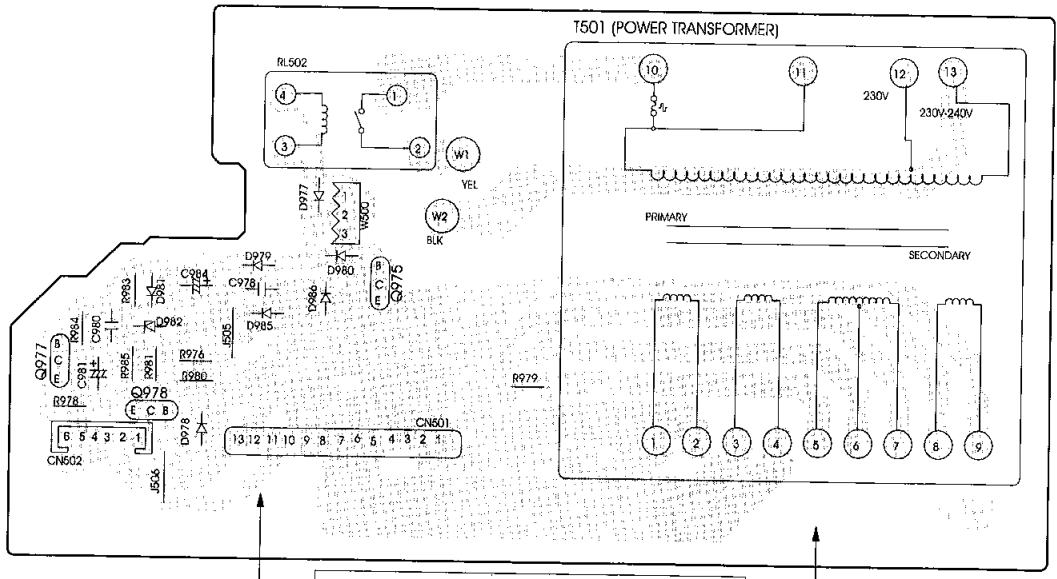


Ref. No.	Loc. No.	Ref. No.	Loc. No.
D501/D509	D9	D527/D530	C9
D502/D503	D9	D528	D7
D504	B8	D529/D535	C9
D505	D3	D531/D532	C9
D506	D4	D533	C9
D507	D9	D534	C9
D508	D8	E500	B2
D510	D4	E501	E2
D511	D4	IC500	E5
D512	D9	IC501	E7
D514	B8	Q501	B7
D516	B8	Q503	B3
D517	D6	Q504	D4
D518	D9	Q505	B4
D519	D6	Q506	D4
D520	C7	Q509	D8
D521	C7	Q510	D7
D522	D7	Q512	B8
D523	B8	Q515	C7
D524	C6	Q516	D9
D526	B4	RL501	C8

A B C D E F G

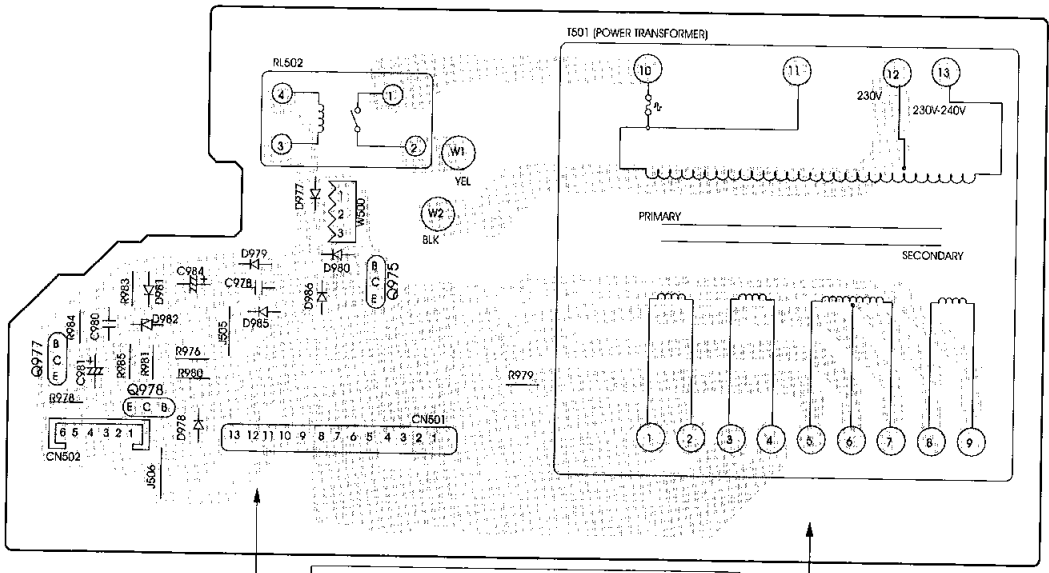
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M AC TRANSFORMER P.C.B. (REPX0203D...EB)

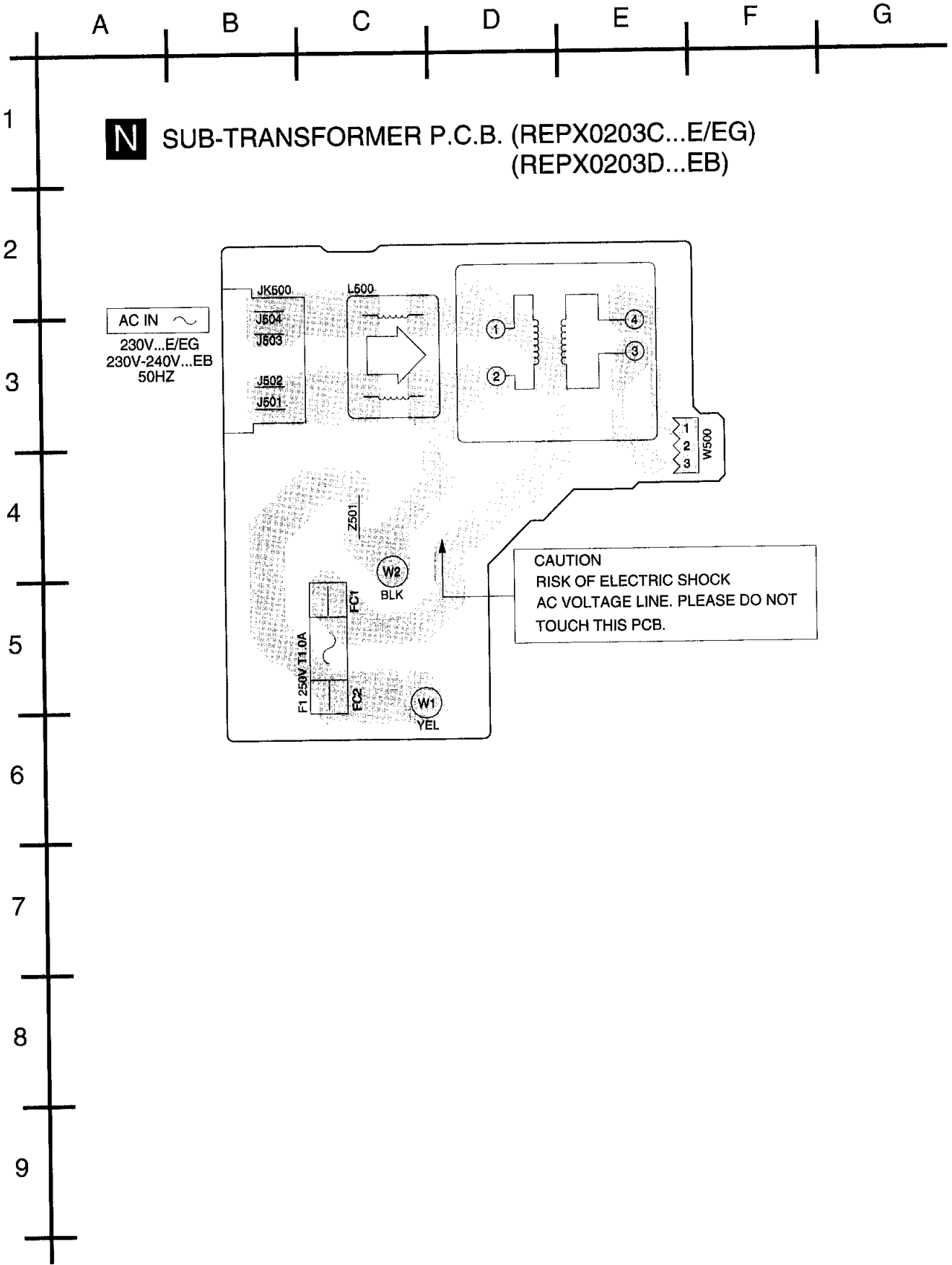


CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE. PLEASE DO NOT
TOUCH THIS PCB.

M AC TRANSFORMER P.C.B. (REPX0203C...E/EG)



CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE. PLEASE DO NOT
TOUCH THIS PCB.



A B C D E F G

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P TACT SWITCH (1) P.C.B. (REPX0197H)

D TACT SWITCH (2) P.C.B. (REPX0197H)

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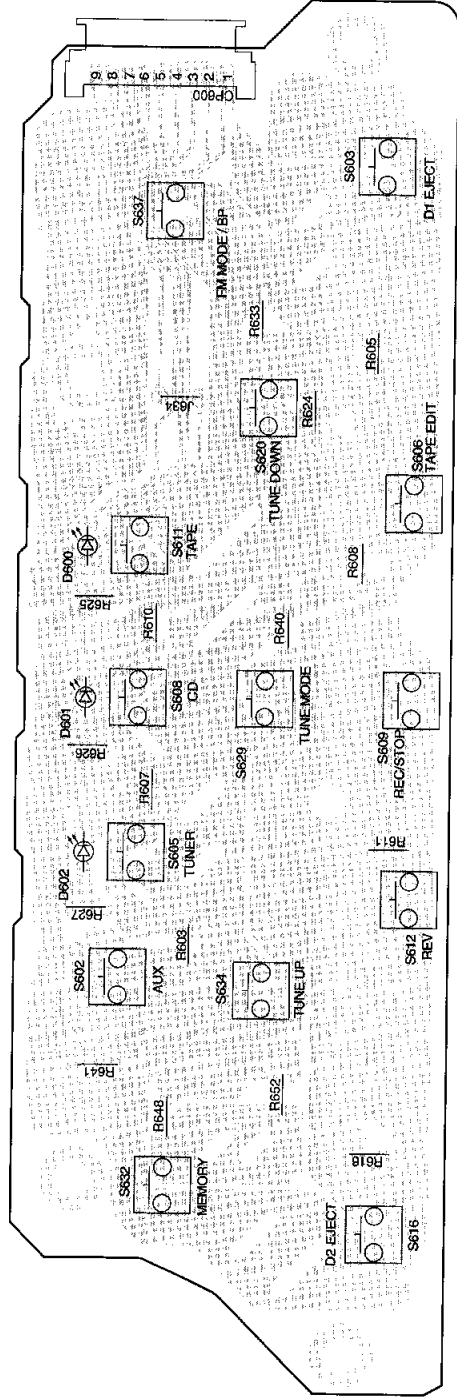
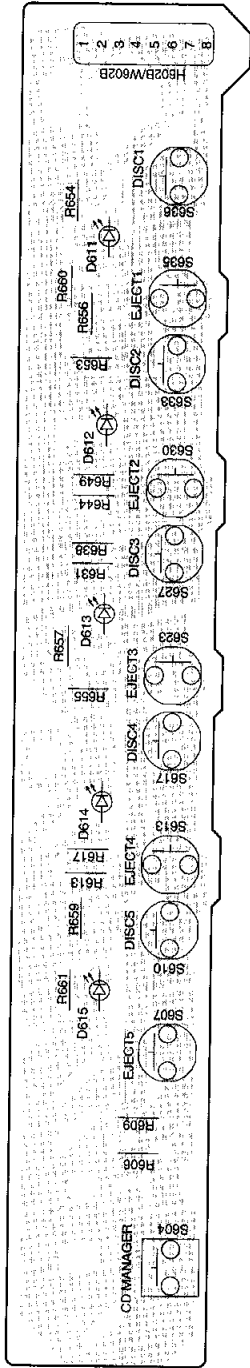
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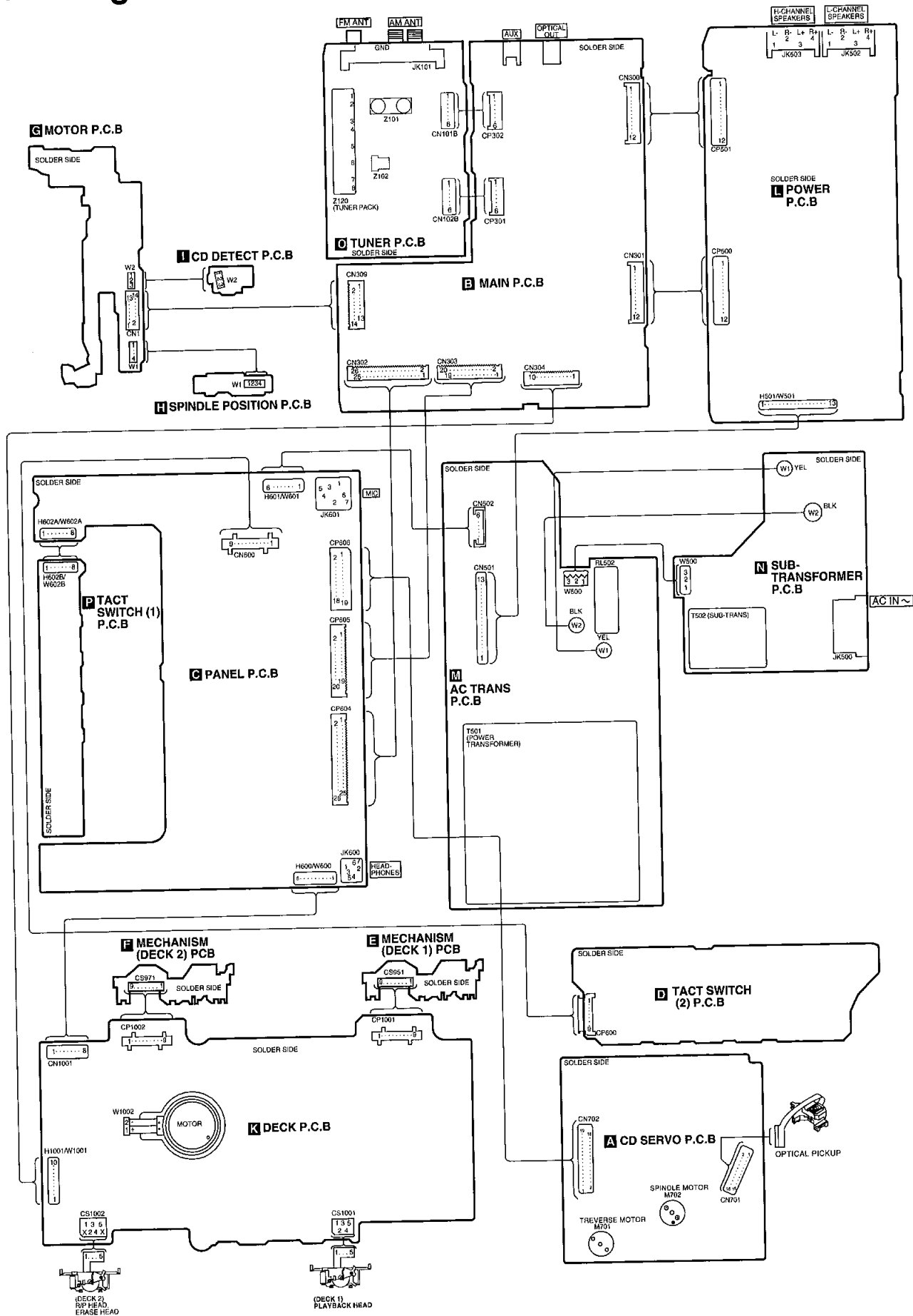
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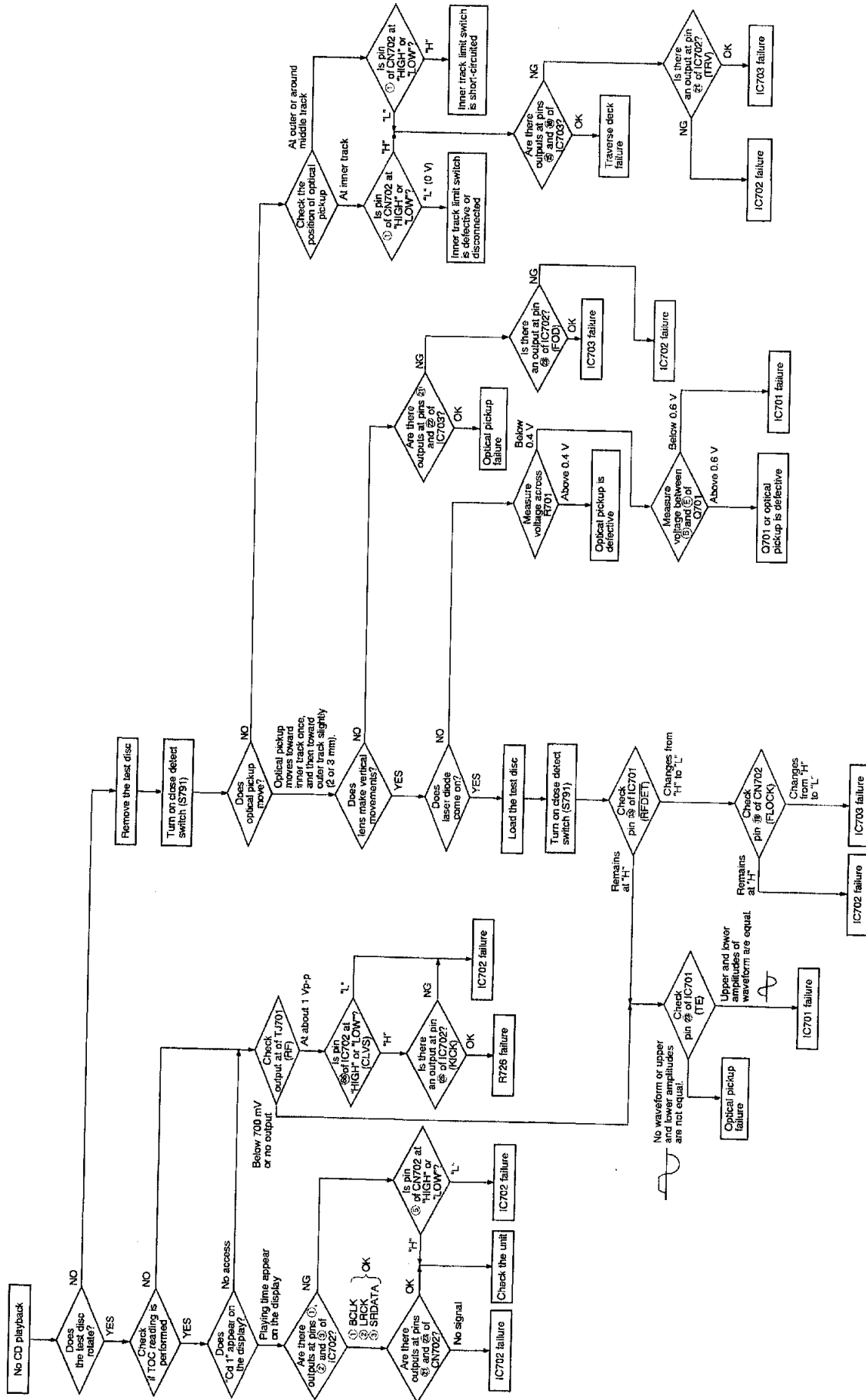
9



18 Wiring Connection Diagram



19 Troubleshooting Guide



20 Parts Location and Replacement Parts List

Notes:

- Important safety notice:

Components identified by Δ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.

When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.

- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to teh cover page for area or colour)
Parts without these indications can be used for all areas.
- Warning: This product uses a laser diode. Refer to caution statements on "Precaution of Laser Diode".

ACHTUNG:

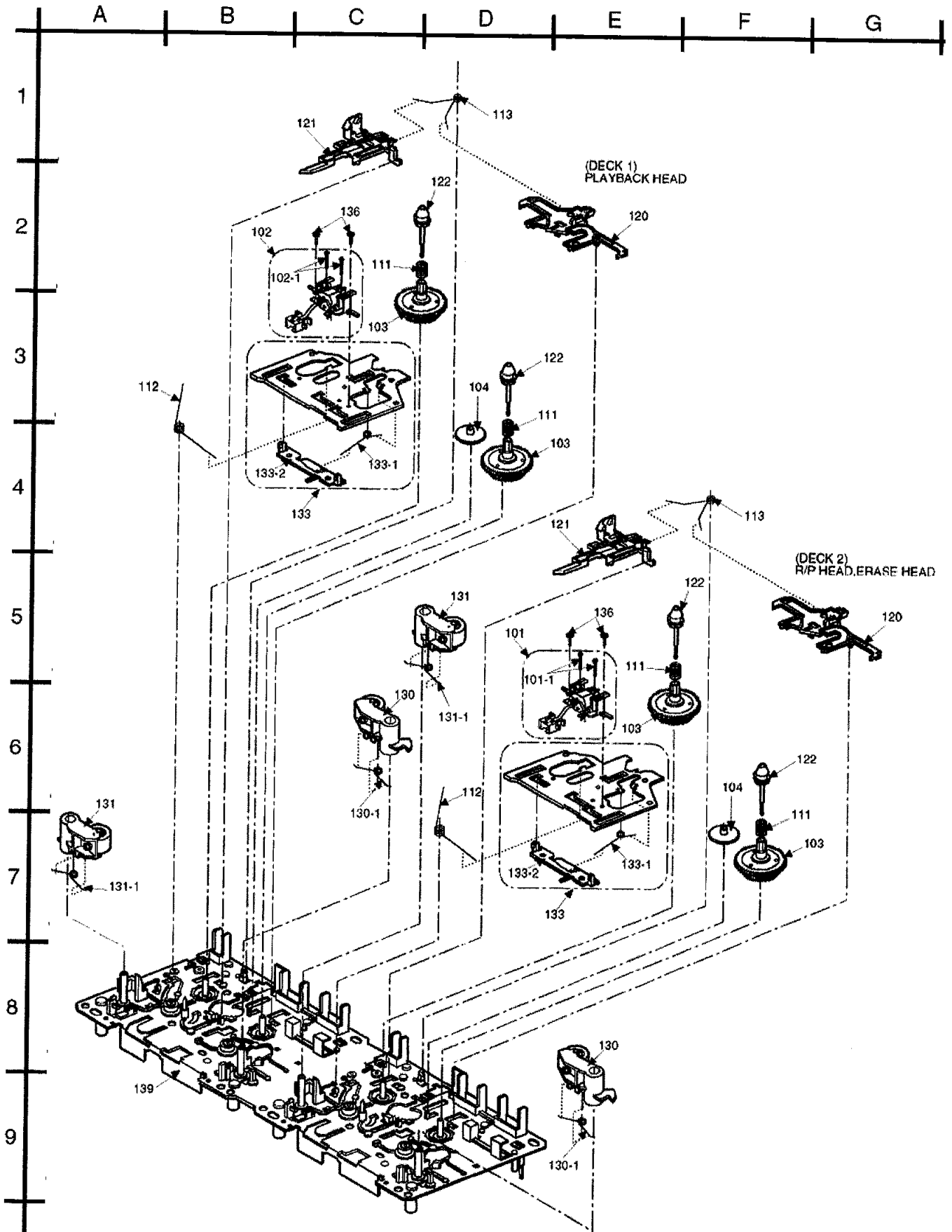
- Die Lasereinheit nicht zerlegen.
- Die Lasereinheit darf nur gegen eine vom Hersteller spezifizierte Einheit ausgetauscht werden.

- Capacitor values are in microfarads (μF) unless specified otherwise, P= Pico-farads (pF), F= Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
- The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
- [M] Indicates in the Remarks columns indicates parts supplied by **MESA**.
- The "(SF)" mark denotes the standard part.
- Remote Control Unit: Supply period for three years from terminal of production.
- Reference for O/I book languages are as follows:

Ar :	Arabic	Du :	Dutch	It :	Italian	Sp :	Spanish
Cf :	Canadian French	En :	English	Ko :	Korean	Sw :	Swedish
Cz :	Czech	Fr :	French	Po :	Polish	Co :	Traditional Chinese
Da :	Danish	Ge :	German	Ru :	Russian	Cn :	Simplified Chinese

20.1. Deck Mechanism (RAA3410-S)

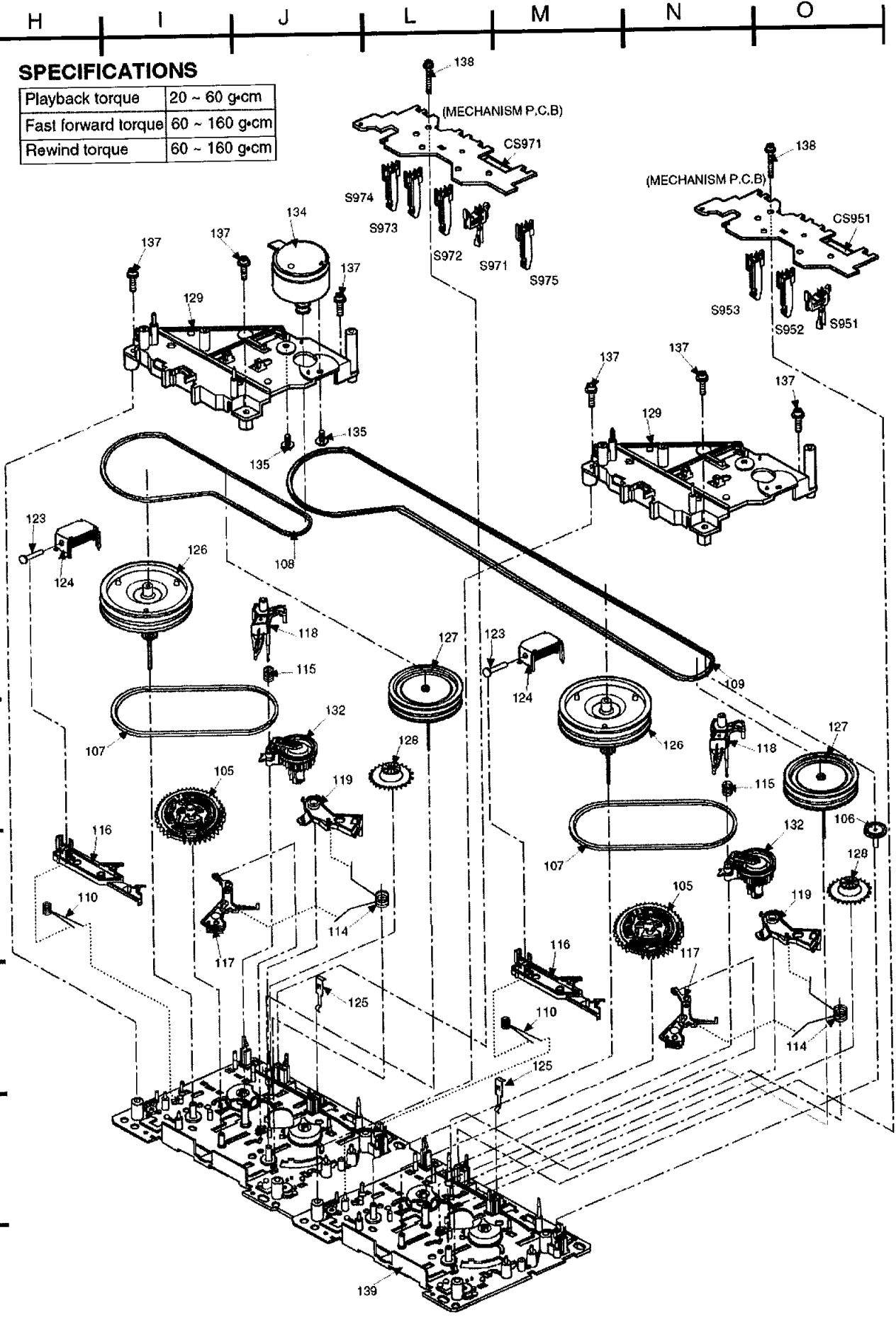
20.1.1. Deck Mechanism Parts Location



SPECIFICATIONS

Playback torque	20 ~ 60 g·cm
Fast forward torque	60 ~ 160 g·cm
Rewind torque	60 ~ 160 g·cm

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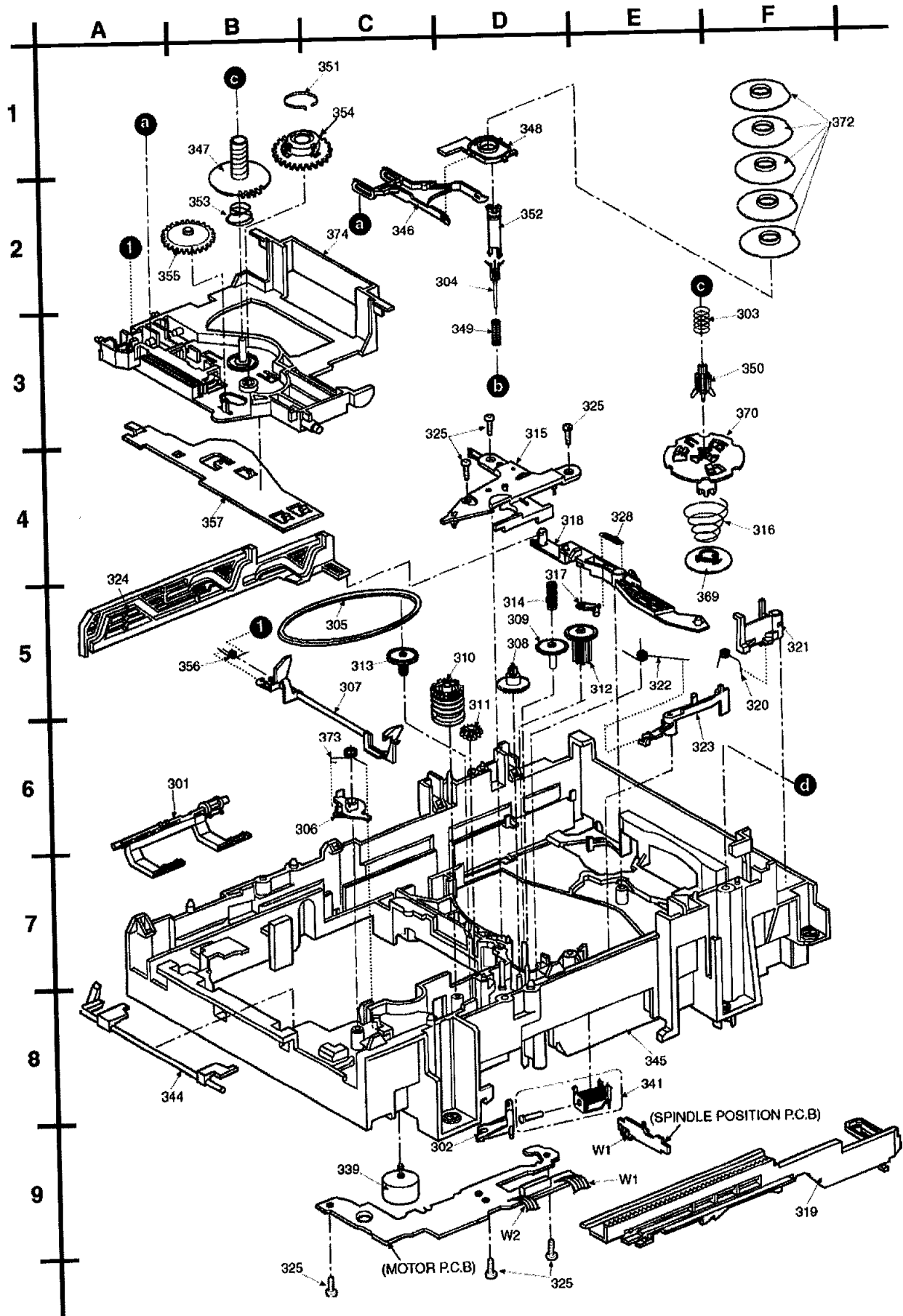


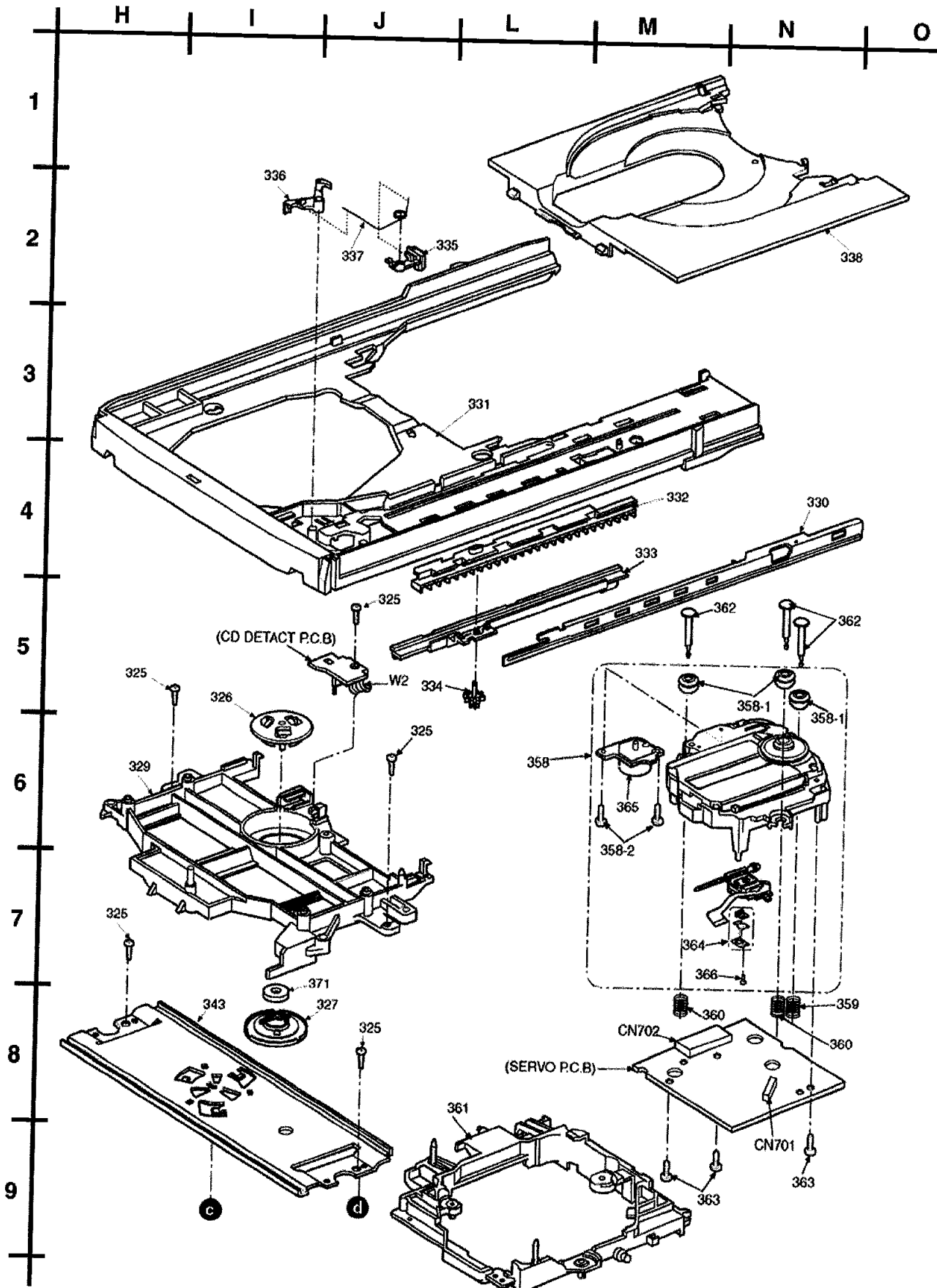
20.1.2. Deck Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	RED0063	P/B HEAD BLOCK UNIT	[M]
101-1	RHE5152ZB	SCREW	[M]
102	RED0064	R/P HEAD BLOCK UNIT	[M]
102-1	RHE5152ZB	SCREW	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026	MAIN GEAR	[M]
106	RDR0029	RELAY PULLEY	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0034-1	CAPSTAN BELT 'A'	[M]
109	RDV0057	MAIN BELT B	[M]
110	RMB0312	TRIGGER LEVER SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAD PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406	FR LEVER SP	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372	WINDING LEVER	[M]
119	RML0374	EJECT LEVER	[M]
120	RMM0131	BRAKE ROD	[M]
121	RMM0133-1	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RSJ0003	PLUNGER ASS'Y	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0049	FLYWHEEL 'F' ASS'Y	[M]
127	RXF0050	FLYWHEEL 'R' ASS'Y	[M]
128	RXG0040	FF RELAY GEAR ASS'Y	[M]
129	RMK0283A-J	SUB CHASSIS	[M]
130	RXL0124	PINCH ROLLER 'F' ASS	[M]
130-1	RMB0401	PINCH ARM SPRING 'F'	[M]
131	RXL0125	PINCH ROLLER 'R' ASS	[M]
131-1	RMB0402	PINCH ARM SPRING 'R'	[M]
132	RXL0126	WINDING ARM ASS'Y	[M]
133	RXQ0412	HEAD PANEL ASS'Y	[M]
133-1	RMB0405	FR ROD SPRING	[M]
133-2	RMM0132	FR ROD	[M]
134	REM0070	CAP MOTOR ASS'Y	[M]
135	RHD26022	MOTOR SCREW	[M]
136	XTW2+5L	HEAD BLOCK UNIT SCRE	[M]
137	XTW26+10S	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17	PCB EARTH SCREW	[M]
139	RFKJXD70-K	CHASSIS ASS'Y	[M]

20.2. CD Loading Mechanism (RD-DAC026-S)

20.2.1. CD Loading Mechanism Parts Location





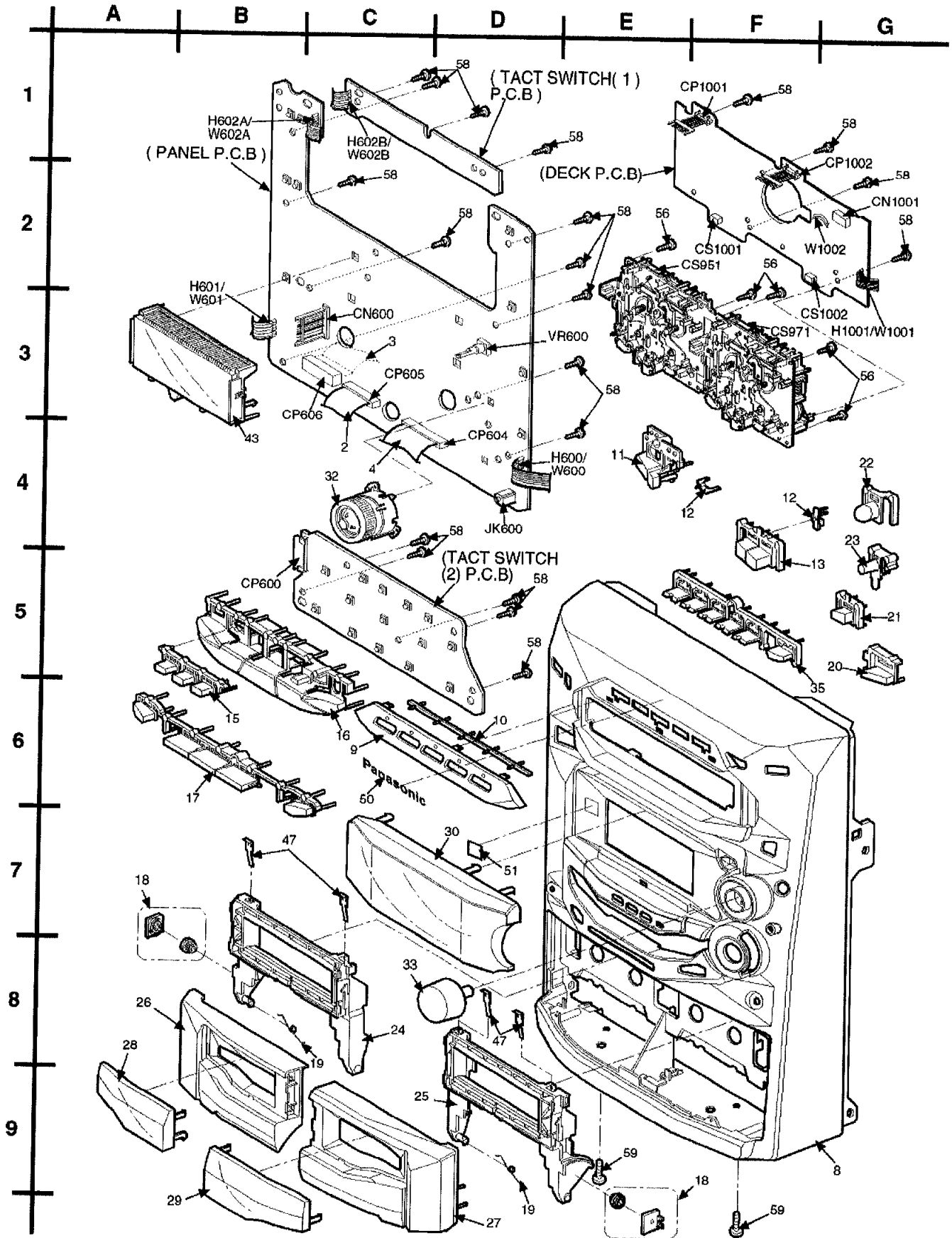
20.2.2. CD Loading Mechanism Parts List

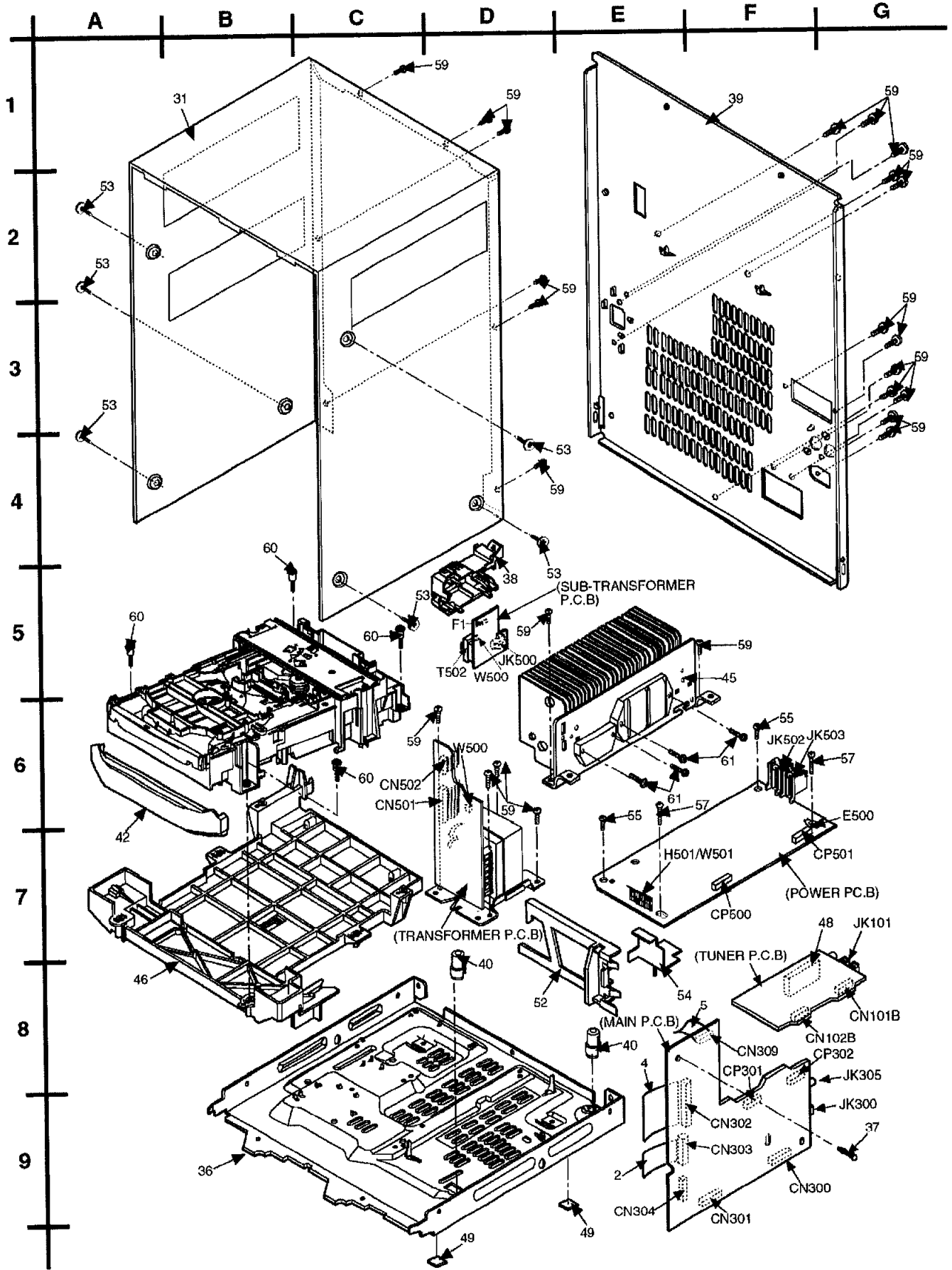
Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RML0517	TIMING LEVER	[M]
302	RML0516	PLUNGER LEVER	[M]
303	RMB0551	UPPER SPINDLE SPRING	[M]
304	RMQ0744	LOWER HOOK	[M]
305	RDV0056	BELT	[M]
306	RML0525	FRONT LOCK LEVER	[M]
307	RML0526	DISC LEVER	[M]
308	RDG0424	DRIVE GEAR	[M]
309	RDG0425	CHANGE GEAR	[M]
310	RDG0427	TRAVERSE CAM GEAR	[M]
311	RDG0428	TRAVERSE RELAY GEAR	[M]
312	RDG0426	UP/DOWN GEAR	[M]
313	RDG0429	PULLEY GEAR	[M]
314	RMB0549-1	CHANGE GEAR SPRING	[M]
315	RMQ0748	PITCH PLATE	[M]
316	RMB0553	PUSH SPRING	[M]
317	RML0530	ASSIST LEVER	[M]
318	RML0518	CONNECTION LEVER	[M]
319	RMM0201	SLIDE PLATE 1	[M]
320	RME0258	REAR LOCK SPRING	[M]
321	RML0521	REAR LOCK	[M]
322	RME0257	TRAY LOCK LEVER SPRI	[M]
323	RML0520	TRAY LOCK	[M]
324	RMM0202	SLIDE PLATE 2	[M]
325	XTB3+10J	SCREW	[M]
326	RMR0334	FIXED PLATE	[M]
327	RMR0624-W2	CLAMPER	[M]
328	RMB0561	ASSIST LEVER SPRING	[M]
329	RMR1121-K	MECHA COVER	[M]
330	RMA1110-2	TRAY ANGLE	[M]
331	RMR1122-H1	TRAY BASE	[M]
332	RMM0204	CARRIER	[M]
333	RMM0203	DRIVE RACK	[M]
334	RDG0432	SPEED UP GEAR	[M]
335	RML0524	SLIDE LOCK	[M]
336	RML0523	CARRIER LOCK	[M]
337	RME0260-1	SLIDE LOCK SPRING	[M]
338	RMR1123-H	TRAY	[M]
339	RXQ0595	MOTOR SUB ASS'Y	[M]
341	RSJ0003	SOLENOID ASS'Y	[M]
343	RMA1106	UPPER PLATE	[M]
344	RML0519	8CD LEVER	[M]
345	RFKNAAK27GCS	MECHA BASE ASS'Y	[M]
346	RML0522	TURNING STOPPER	[M]
347	RMQ0745	LOWER SPINDLE	[M]
348	RMQ0746	UP/DOWN BASE	[M]
349	RMB0550	LOWER SPINDLE SPRING	[M]
350	RMQ0747	UPPER HOOK	[M]
351	RME0263	CLICK SPRING	[M]
352	RMQ0743	SPINDLE SHAFT	[M]
353	RMB0552	CUSHION SPRING	[M]
354	RDG0430	RELAY GEAR 'A'	[M]
355	RDG0431	RELAY GEAR 'B'	[M]
356	RME0262	DISK LEVER SP.	[M]
357	RMA1105	SUPPORT PLATE	[M]
358	RAE0152Z-3	TRAVERSE	[M]
358-1	SHGD113-1	FLOATING CUSHION	[M]
358-2	SNSD38	TRV MOTOR ASS'Y SCRE	[M]
359	RME0142	FLOATING SPRING A	[M]
360	RME0109	FLOATING SPRING B	[M]
361	RMR1124-K1	TRAVERSE CHASSIS	[M]
362	RMS0632	TRAVERSE PIN	[M]
363	XTN2+6G	SCREW	[M]
364	RXQ0304-1	NUT PLATE ASS'Y	[M]
365	RXQ0339	TRAVERSE MOTOR ASS'Y	[M]
366	XQN17+CG5	NUT PLATE ASS'Y SCRE	[M]
369	RMX0141	PUSH SPACER	[M]
370	RMQ0749	UPPER SPINDLE	[M]
371	RHM0001	MAGNET	[M]
372	RMX0140	DISC SPACER	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
373	RME0261	FRONT LOCK SPRING	[M]
374	RMQ0742	SPINDLE BASE	[M]

20.3. Cabinet

20.3.1. Cabinet Parts Location





20.3.2. Cabinet Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
2	REEX0065	20P FFC	[M]
3	REEX0081	19P FFC WIRE	[M]
4	REEX0082	26P FFC	[M]
5	REEX0083	14P FFC WIRE	[M]
8	RGPX0032C-S	FRONT PANEL	[MAVD]
9	RGK1198-K	CD ORNAMENT	[M]
10	RGL0467-Q	DISC SEL LIGHT	[M]
11	RGUX0346-S	POWER BUTTON	[M]
12	RGL0466-QJ	LIGHTING CHIP	[M]
13	RGUX0348-S	DISPLAY BTN	[M]
15	RGUX0338-Q	FUNCTION BTN	[M]
16	RGUX0336-S	CONTROL BTN	[M]
17	RGUX0337-S	DECK BTN	[M]
18	RXG0049	DAMPER GEAR UNIT	[M]
19	RMB0474	CASS. OPEN SPRING	[M]
20	RGUX0340-S	RANDOM BTN	[M]
21	RGUX0347-S	DEMO BUTTON	[M]
22	RGU1805-Q	V.BASS BUTTON	[M]
23	RGUX0339-Q	3D AI EQ BTN	[M]
24	RKF0585-K	CASS. HOLDER (L)	[M]
25	RKF0586-K	CASS. HOLDER (R)	[M]
26	RKFX0078-S	CASS LID (L)	[M]
27	RKFX0079-S	CASS LID (R)	[M]
28	RKWX0138-Q	CASS WIN (L)	[M]
29	RKWX0139-Q	CASS WIN (R)	[M]
30	RKW0593-V	FL WINDOW	[M]
31	RKMX0045D-S	TOP CABINET (BENT)	[MAVD]

Ref. No.	Part No.	Part Name & Description	Remarks
32	RYQ0271-S	JOY JOG UNIT	[M]
33	RGW0330A-S	VOLUME KNOB	[M]
35	RGU1800-S	DISC BUTTON	[M]
36	RMKX0039	BOTTOM CHASSIS	[MAVD]
37	RMNX0019	PCB SPACER	[M]
38	RMNX0029-4	SUB-TRANS HOLDER	[M]
39	RGRX0016L-A	REAR PANEL	[MAVD]EG E
39	RGRX0016L-B	REAR PANEL	[MAVD]EB
40	SHE187-4	SPACER (TRANS)	[M]
42	RGK1199-S	CD LID	[M]
43	RMNX0030	FL HOLDER	[M]
45	RXXX0017-2	HEAT SINK UNIT	[M]
46	RMKX0040	CD CHASSIS	[MAVD]
47	RUS757ZAA	CASSETTE HALF SPRING	[M]
48	RSC0027-2	TUNER PACK	[M]
49	RKA0059-K	LEG RUBBER	[M]
50	RGB0113-N	PANA BADGE (HOOK TYP	[M]
51	RGKX0055-Q	3D AI SHEET	[M]
52	RMRX0030	HEAT SINK SUPPORT	[M]
53	RHD30002-H	SCREW	[M]
54	RMRX0029	HEAT SINK SUPPORT	[M]
55	XTB3+10J	SCREW	[M]
56	XTB3+10JFZ	SCREW	[M]
57	XTB3+20J1	SCREW	[M]
58	XTBS26+10J	SCREW	[M]
59	XTBS3+8JFZ1	SCREW	[M]
60	XTW3+12T	SCREW	[M]
61	XTW3+15T	SCREW	[M]

20.4. Electrical Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		P.C.B.	
	REP1999B	TUNER PACK UNIT	[M] RTL
	REP2578A-N	PCB ASS'Y	[M] RTL
	REPX0108	R/P PCB UNIT	[M] RTL
	REPX0108A	P/B PCB UNIT	[M] RTL
	REPX0192A	CD SERVO PCB	[M] RTL
	REPX0197H	PANEL BLOCK	[MAVD]RTL
	REPX0198A	DECK UNIT	[M] RTL
	REPX0200F	MAIN PCB BLOCK	[MAVD]RTL
	REPX0201B	POWER UNIT	[MAVD]RTL
	REPX0203C	AC TRANS HI UNIT	[MAVD]RTL
	REPX0203D	TRANSFORMER UNIT	[MAVD]RTL
	REPX0215A	TUNER PCB UNIT	[MAVD]RTL
		INTEGRATED CIRCUITS	
IC1	TA7291P	IC DRIVE	[M]
IC101	LA1833NMN1LM	IC IF & MPX	[M]
IC102	LC72131MDTRM	IC PLL	[M]
IC301	M62456FPE1	IC BTL	[M]
IC302	M5218AP	IC BUFFER AMP	[M]
IC303	M62433AFP	IC AUDIO	[M]
IC500	RSN309W44A	IC HIC	[M] Δ
IC501	STR470-020A	IC REGULATOR	[M] Δ
IC600	M38199MF227	IC MICRO PROCESSOR	[M]
IC601	BU2090AF-E2	IC I/O EXPANDER	[M]
IC602	BU2090AF-E2	IC I/O EXPANDER	[M]
IC603	M62457AFPE1	IC SPEANA	[M]
IC701	AN8839NSBE2	IC, RF HEAD AMP	[M]
IC702	MN662790RSC	IC, LSI	[M]
IC703	AN8739SBE2	IC, 4CH DRIVER	[M]
IC951	0N2180RLC1	IC, PHOTO INTERRUPTOR	[M]
IC971	0N2180RLC1	IC, PHOTO INTERRUPTOR	[M]
IC1001	AN7348STA-E1	IC TAPE PB	[M]
IC1002	BU2090AF-E2	IC I/O EXPANDER	[M]
IC1003	BA4558FE2	IC	[M]
IC1004	BA7755A	IC SW	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		TRANSISTORS	
Q1	2SK544F-AC	TRANSISTOR	[M]
Q1	RVTDTTC143EST	TRANSISTOR	[M]
Q2	2SC2786MTA	TRANSISTOR	[M]
Q3	2SC2787FL1TA	TRANSISTOR	[M]
Q4	2SC2787FL1TA	TRANSISTOR	[M]
Q101	2SC2058SPTA	TRANSISTOR	[M]
Q102	2SC2058SPTA	TRANSISTOR	[M]
Q106	KRA102MTA	TRANSISTOR	[M]
Q200	KTD1304TA	TRANSISTOR	[M]
Q304	KTC3875GRTA	TRANSISTOR	[M]
Q306	KRA102STA	TRANSISTOR	[M]
Q307	KRC111STA	TRANSISTOR	[M]
Q311	KRC111STA	TRANSISTOR	[M]
Q350	2SB621ARSTA	TRANSISTOR	[M]
Q351	KRC102STA	TRANSISTOR	[M]
Q352	KRA102STA	TRANSISTOR	[M]
Q400	KTD1304TA	TRANSISTOR	[M]
Q501	2SB1417PQTA	TRANSISTOR	[M] Δ
Q503	KTC3199GRTA	TRANSISTOR	[M]
Q504	2SB1238QRTV2	TRANSISTOR	[M]
Q505	KTC3199GRTA	TRANSISTOR	[M]
Q506	2SD1859QRTV2	TRANSISTOR	[M] Δ
Q509	KRC110MTA	TRANSISTOR	[M]
Q510	2SD2144STA	TRANSISTOR	[M]
Q512	2SC1740SSTA	TRANSISTOR	[M]
Q515	2SC3940AQSTA	TRANSISTOR	[M] Δ
Q516	KTC3199GRTA	TRANSISTOR	[M]
Q602	KTA12710YTA	TRANSISTOR	[M]
Q605	KTC3199GRTA	TRANSISTOR	[M]
Q606	KTC3199GRTA	TRANSISTOR	[M]
Q607	KRC103MTA	TRANSISTOR	[M]
Q608	KTC3199GRTA	TRANSISTOR	[M]
Q609	KTC3199GRTA	TRANSISTOR	[M]
Q610	2SA933SSTA	TRANSISTOR	[M]
Q611	KRC102MTA	TRANSISTOR	[M]
Q701	2SA1037AKSTX	TRANSISTOR	[M]
Q901	RVTDTTC143EST	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q902	RVTDTTC143EST	TRANSISTOR	[M]
Q903	RVTDTTC143EST	TRANSISTOR	[M]
Q975	2SC1740SSTA	TRANSISTOR	[M]
Q977	2SC3940AQSTA	TRANSISTOR	[M] △
Q978	KRC102MTA	TRANSISTOR	[M]
Q1001	2SC2784FTA	TRANSISTOR	[M]
Q1003	2SD2144STA	TRANSISTOR	[M]
Q1004	2SD2144STA	TRANSISTOR	[M]
Q1005	2SD2144STA	TRANSISTOR	[M]
Q1006	DTC144TKA146	TRANSISTOR	[M]
Q1007	KTC3875GRTA	TRANSISTOR	[M]
Q1008	KTC3875GRTA	TRANSISTOR	[M]
Q1009	KTC3875GRTA	TRANSISTOR	[M]
Q1010	KTC3875GRTA	TRANSISTOR	[M]
Q1011	KTC3875GRTA	TRANSISTOR	[M]
Q1012	KTD1304TA	TRANSISTOR	[M]
Q1013	KTD1304TA	TRANSISTOR	[M]
Q1014	2SC2412KT96R	TRANSISTOR	[M]
Q1015	2SC2412KT96R	TRANSISTOR	[M]
Q1016	DTA114EKA146	TRANSISTOR	[M]
Q1017	2SD965RTA	TRANSISTOR	[M]
Q1018	KTA12710YTA	TRANSISTOR	[M]
Q1019	KTA12710YTA	TRANSISTOR	[M]
Q1020	KTD1304TA	TRANSISTOR	[M]
Q1021	KTD1304TA	TRANSISTOR	[M]
Q1022	DTA114EKA146	TRANSISTOR	[M]
Q1023	DTA114EKA146	TRANSISTOR	[M]
Q1024	2SD2144STA	TRANSISTOR	[M]
		DIODES	
D1	GP1S94	DIODE	[M]
D1	SVC211SPA-AL	DIODE	[M]
D2	MTZJ4R7BTA	DIODE	[M]
D2	SVC211SPA-AL	DIODE	[M]
D3	SVC211SPA-AL	DIODE	[M]
D101	UDZSTE175R1B	DIODE	[M] △
D201	1SS355TE17	DIODE	[M]
D302	UDZSTE175R1B	DIODE	[M] △
D306	DAP202KT146	DIODE	[M]
D307	DAP202KT146	DIODE	[M]
D308	1SS355TE17	DIODE	[M]
D309	1SS355TE17	DIODE	[M]
D311	1SS355TE17	DIODE	[M]
D312	RL1N4003S-P	DIODE	[M]
D313	1SS355TE17	DIODE	[M]
D314	RL1N4003S-P	DIODE	[M]
D315	1SS355TE17	DIODE	[M]
D316	RL1N4003S-P	DIODE	[M]
D317	1SS355TE17	DIODE	[M]
D401	1SS355TE17	DIODE	[M]
D501	RL1N4003S-P	DIODE	[M]
D502	RL1N4003S-P	DIODE	[M]
D503	RL1N4003S-P	DIODE	[M]
D504	MTZJ30BTA	DIODE	[M] △
D505	MTZJ24DTA	DIODE	[M] △
D506	MTZJ24DTA	DIODE	[M] △
D507	MTZJ10BTA	DIODE	[M]
D508	MTZJ16BTA	DIODE	[M] △
D509	MTZJ12BTA	DIODE	[M] △
D510	MTZJ24DTA	DIODE	[M] △
D511	MTZJ24DTA	DIODE	[M] △
D512	RVD1SS133TA	DIODE	[M]
D514	1D3E	DIODE	[M]
D516	1D3E	DIODE	[M]
D517	RK306LFU1	DIODE	[M]
D518	RVD1SS133TA	DIODE	[M]
D519	RK306LFU1	DIODE	[M]
D520	1D3E	DIODE	[M]
D521	1D3E	DIODE	[M]
D522	MTZJ15CTA	DIODE	[M] △
D523	MTZJ12BTA	DIODE	[M]
D524	1D3E	DIODE	[M] △
D526	1D3E	DIODE	[M] △

Ref. No.	Part No.	Part Name & Description	Remarks
D527	1D3E	DIODE	[M] △
D528	RVD1SS133TA	DIODE	[M]
D529	1D3E	DIODE	[M] △
D530	1D3E	DIODE	[M] △
D531	1D3E	DIODE	[M] △
D532	1D3E	DIODE	[M] △
D533	1D3E	DIODE	[M] △
D534	1D3E	DIODE	[M] △
D535	1D3E	DIODE	[M] △
D600	SLR325MCT31W	DIODE	[M]
D601	SLR325MCT31W	DIODE	[M]
D602	SLR325MCT31W	DIODE	[M]
D603	LNJ301MPUJAD	DIODE	[M]
D604	SLI325DCT31	DIODE	[M]
D605	SLI325URCT31	DIODE	[M]
D607	SLR325MCT31W	DIODE	[M]
D608	SLR325MCT31W	DIODE	[M]
D610	SLR325MCT31W	DIODE	[M]
D611	SLR325MCT31W	DIODE	[M]
D612	SLR325MCT31W	DIODE	[M]
D613	SLR325MCT31W	DIODE	[M]
D614	SLR325MCT31W	DIODE	[M]
D615	SLR325MCT31W	DIODE	[M]
D617	SLR505DCT31	DIODE	[M]
D618	RVD1SS133TA	DIODE	[M]
D625	RVD1SS133TA	DIODE	[M]
D627	1SS291TA	DIODE	[M]
D628	1SS291TA	DIODE	[M]
D629	RVD1SS133TA	DIODE	[M]
D630	MA723TA	DIODE	[M]
D633	RVD1SS133TA	DIODE	[M]
D634	RVD1SS133TA	DIODE	[M]
D635	RVD1SS133TA	DIODE	[M]
D636	MA4020LTA	DIODE	[M]
D637	1SS291TA	DIODE	[M]
D638	RVD1SS133TA	DIODE	[M]
D639	RVD1SS133TA	DIODE	[M]
D640	MA700ATA	DIODE	[M]
D641	MA700ATA	DIODE	[M]
D642	MA700ATA	DIODE	[M]
D643	RVD1SS133TA	DIODE	[M]
D644	RVD1SS133TA	DIODE	[M]
D645	RVD1SS133TA	DIODE	[M]
D646	RVD1SS133TA	DIODE	[M]
D647	MA700ATA	DIODE	[M]
D951	MA165TA	DIODE	[M]
D971	MA165TA	DIODE	[M]
D977	RVD1SS133TA	DIODE	[M]
D978	1D3E	DIODE	[M]
D979	1D3E	DIODE	[M] △
D980	1D3E	DIODE	[M] △
D981	1D3E	DIODE	[M]
D982	MTZJ6R8BTA	DIODE	[M] △
D985	1D3E	DIODE	[M] △
D986	1D3E	DIODE	[M] △
D1002	1SS355TE17	DIODE	[M]
D1003	1SS355TE17	DIODE	[M]
D1004	UDZTE173R6B	DIODE	[M]
		VARIABLE RESISTORS	
VR600	EVEKE2F3024B	VR VOL. JOG	[M]
		SWITCHES	
S602	EVQ21405R	SW AUX	[M]
S603	EVQ21405R	SW DECK 1 EJECT	[M]
S604	EVQ21405R	SW CD MANAGER	[M]
S605	EVQ21405R	SW TUNER	[M]
S606	EVQ21405R	SW TAPE EDIT	[M]
S607	EVQ11G05R	SW EJECT 5	[M]
S608	EVQ21405R	SW CD	[M]
S609	EVQ21405R	SW REC/STOP	[M]
S610	EVQ11G05R	SW DISC 5	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
S611	EVQ21405R	SW TAPE	[M]
S612	EVQ21405R	SW REV	[M]
S613	EVQ11G05R	SW EJECT 4	[M]
S614	EVQ11G07K	SW SOUND EQ DOWN	[M]
S615	EVQ21405R	SW S.WOOFER	[M]
S616	EVQ21405R	SW DECK 2 EJECT	[M]
S617	EVQ11G05R	SW DISC 4	[M]
S618	EVQ11G07K	SW SOUND EQ LEFT	[M]
S619	EVQ21405R	SW DISPLAY/DEMO	[M]
S620	EVQ21405R	SW TUNE DOWN	[M]
S621	EVQ21405R	SW CLOCK/TIMER	[M]
S622	EVQ11G07K	SW SOUND EQ UP	[M]
S623	EVQ11G05R	SW EJECT 3	[M]
S625	EVQ21405R	SW PLAY/REC	[M]
S626	EVQ11G07K	SW SOUND EQ RIGHT	[M]
S627	EVQ11G05R	SW DISC 3	[M]
S628	EVQ21405R	SW ECO MODE	[M]
S629	EVQ21405R	SW TUNE MODE	[M]
S630	EVQ11G05R	SW EJECT 2	[M]
S631	EVQ21405R	SW RANDOM	[M]
S632	EVQ21405R	SW MEMORY	[M]
S633	EVQ11G05R	SW DISC 2	[M]
S634	EVQ21405R	SW TUNE UP	[M]
S635	EVQ11G05R	SW EJECT 1	[M]
S636	EVQ11G05R	SW DISC 1	[M]
S637	EVQ21405R	SW FM MODE/BP	[M]
S638	EVQ21405R	SW POWER	[M]
S639	EVQ21405R	SW 3D AI EQ	[M]
S701	RSH1A043-U	REST SWITCH	[M]
S951	RSH1A018-3U	SW, LEAF	[M]
S952	RSH1A019-2U	SW, LEAF	[M]
S953	RSH1A019-2U	SW, LEAF	[M]
S971	RSH1A018-3U	SW, LEAF	[M]
S972	RSH1A019-2U	SW, LEAF	[M]
S973	RSH1A019-2U	SW, LEAF	[M]
S974	RSH1A019-2U	SW, LEAF	[M]
S975	RSH1A019-2U	SW, LEAF	[M]
SW1	RSH1A032-U	SW, SLIDE	[M]
SW2	RSH1A032-U	SW, SLIDE	[M]
SW3	RSH1A005-1U	SW	[M]
SW4	RSH1A912A-A	SW CD	[M]
SW5	RSP1A017-A	SW LOCK	[M]
SW600	ESE24SV2	SW JOY JOG	[M]
		CONNECTORS	
CN1	RJS1A9414	FF CONNECTOR	[M]
CN101B	RJU100H06	6P B/B CONNECTOR	[MAVD]
CN102B	RJU100H06	6P B/B CONNECTOR	[MAVD]
CN300	RJU057G12	12P P2 MQ CONNECTOR	[M]
CN301	RJU057G12	12P P2 MQ CONNECTOR	[M]
CN302	RJS1A9426-1	26P FFC CONNECTOR	[M]
CN303	RJS1A9420	20P FFC CONNECTOR	[M]
CN304	RJS1A5210	10P WIRE HOLDER	[M]
CN309	RJS1A9414-1	14P CONNECTOR	[M]
CN501	RJT119W13V	13P CONNECTOR	[M]
CN502	RJP6G182A	SOCKET	[M]
CN600	RJT071K09	9P P2 BTOB CONNECTOR	[M]
CN701	RJS2A6016	16P FFC CONNECTOR	[M]
CN702	RJS1A6719-1Q	19P FFC CONNECTOR	[M]
CN1001	RJS8T72A	8P MOLEX	[M]
CP301	RJT100W06	6P B/B CONNECTOR	[MAVD]
CP302	RJT100W06	6P B/B CONNECTOR	[MAVD]
CP500	RJT057G12	12P P2 MQ CONNECTOR	[M]
CP501	RJT057G12	12P P2 MQ CONNECTOR	[M]
CP600	RJU071H09M	CONNECTOR	[M]
CP604	RJS1A9426-1	26P FFC CONNECTOR	[M]
CP605	RJS1A9420	20P FFC CONNECTOR	[M]
CP606	RJS1A6219-1	19P FFC CONNECTOR	[M]
CP1001	RJT071K09A	9P B/B CONNECTOR	[M]
CP1002	RJT071K09A	9P B/B CONNECTOR	[M]
CS951	RJU071H09M1	CONNECTOR	[M]
CS971	RJU071H09M1	CONNECTOR	[M]
CS1001	RJS1A6805-J	5P CONNECTOR SOCKET	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
CS1002	RJS1A6805-J	5P CONNECTOR SOCKET	[M]
		COILS & TRANSFORMERS	
L1	RLQZF1R2KT-Y	COIL	[M]
L2	RLQZFR47KT-Y	COIL	[M]
L101	RLQBR39KT-1Y	COIL	[M]
L102	RLQBR39KT-1Y	COIL	[M]
L500	RLQZ271M	COIL	[M] Δ
L501	RLQZR73MT-T	CHOKE COIL	[M]
L502	RLQZR73MT-T	CHOKE COIL	[M]
L503	RLQZR73MT-T	CHOKE COIL	[M]
L504	RLQZR73MT-T	CHOKE COIL	[M]
L600	RLQB101JTD-D	INDUCTOR	[M]
L601	RLQB100JTD-D	INDUCTOR	[M]
L602	RLQB101JTD-D	INDUCTOR	[M]
L603	RLQZF3R3KT-Y	AXIAL COIL	[M]
L604	RLQZF101KT-Y	AXIAL COIL	[M]
L605	RLQZF101KT-Y	AXIAL COIL	[M]
L1001	RLQB470JTD-D	RF CHOKE COIL	[M]
L1002	7L1A62N	BIAS OSC COIL	[M]
T501	RTP2P3B001	MAIN TRANSFORMER	[M] Δ
T502	RTP1H3E001	BACKUP TRANSFORMER	[M] Δ
		COMPONENT COMBINATION	
Z101	RLA2Z006M-T	ANT COIL BLOCK	[M]
Z102	RLI2Z021M-T	AM IF BLOCK	[M]
Z501	ERZV10V511CS	ZNR	[M] Δ
Z602	RCDRPM6937H4	REMOTE CTRL SENSOR	[M]
Z971	EXBF7L3558YV	RADA RESISTOR	[M]
Z1001	RGSD12A1445T	SENSOR	[M]
Z1002	RGSD12A1445T	SENSOR	[M]
		CERAMIC FILTERS	
CF201	RLFFETNGD01L	CERAMIC FILTER	[M]
CF202	RLFFETMGD01L	CERAMIC FILTER	[M]
		RELAY	
RL501	RSY0037M-C	RELAY	[M] Δ
RL502	RSY0040M-0	PRIMARY RELAY	[M] Δ
		OSCILLATORS	
X102	RLFDF222DD	DISCRIMINATOR	[M]
X103	RSXC7M20S05T	CRYSTAL OSCILLATOR	[M]
X600	RSXZ8M00D01T	CERAMIC RESONATOR	[M]
X601	RSXD32K7S02	32.768KHZ X'TAL	[M]
X701	RSXZ16M9M01T	CERAMIC OSC	[M]
		DISPLAY TUBE	
FL600	RSL0295-F	FL DISPLAY	[M]
		FUSES	
F1	XBA2C20TB0L	FUSE 100	[M] Δ
		FUSE HOLDERS	
FC1	EYF52BC	FUSE HOLDER	[M]
FC2	EYF52BC	FUSE HOLDER	[M]
		HOLDERS	
H501	RJS1A5513	13 PIN WIRE HOLDER	[M]
H600	RMR0317	8P CABLE HOLDER	[M]
H601	RMR0315	6P CABLE HOLDER	[M]
H602A	RMR0317	8P CABLE HOLDER	[M]
H602B	RMR0317	8P CABLE HOLDER	[M]
H1001	RMR0319	10P CABLE HOLDER	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		JACKS	
JK101	RJH8304N	JK ANTENNA	[M]
JK300	GP1F32T	JK OPT TERMINAL	[M]
JK305	RJH2206	JK RCA	[M]
JK500	SJS89236-1	JK SOCKET	[M]
JK502	RJR0054B-J	JK SPEAKER	[M]
JK503	RJR0054C-J	JK SPEAKER	[M]
JK600	RJJ37TK07-X	JK HP/MIC	[M]
		EARTH TERMINAL	
E500	SNE1004-2	EARTH TERMINAL	[M]
E501	RSQX0001-1	EARTH PLATE	[M]
		WIRES	
W1	REEX0089	PRIMARY WIRE (YELLOW)	[M]
W1	REZ1023-1	4P WIRE	[M]
W2	REEX0032	PRI WIRE (BLACK)	[M]
W2	REZ1024	3P WIRE	[M]
W500	REXX0202	2P TRANSFORMER WIRE	[M]
W501	REXX0224	13P WIRE	[M]
W600	RWJ0208155RX	WIRE 8P PANEL TO DEC	[M]
W601	REXX0223	6P WIRE	[M]
W602	RWJ1108080RR	8P WIRE	[M]
W1001	RWJ8010160RX	10P WIRE	[M]
W1002	RWJ0102065CK	WIRE	[M]
		RESISTORS	
R1	ERDS2TJ102T	1K 1/4W	[M]
R1	ERDS2TJ104T	100K 1/4W	[M]
R2	ERDS2TJ104T	100K 1/4W	[M]
R3	ERDS2TJ221T	220 1/4W	[M]
R4	ERDS2TJ104T	100K 1/4W	[M]
R5	ERDS2TJ564T	560K 1/4W	[M]
R6	ERDS2TJ391T	390 1/4W	[M]
R7	ERDS2TJ272T	2.7K 1/4W	[M]
R8	ERDS2TJ684T	680K 1/4W	[M]
R9	ERDS2TJ391T	390 1/4W	[M]
R10	ERDS2TJ391T	390 1/4W	[M]
R11	ERDS2TJ684T	680K 1/4W	[M]
R102	ERJ6GEYJ472V	4.7K 1/10W	[M]
R103	ERJ6GEYJ101V	100 1/10W	[M]
R104	ERJ6GEYJ103V	10K 1/10W	[M]
R105	ERJ6GEYJ471V	470 1/10W	[M]
R106	ERJ6GEYJ474V	470K 1/10W	[M]
R107	ERJ6GEYJ331V	330 1/10W	[M]
R108	ERJ6GEYJ474V	470K 1/10W	[M]
R109	ERJ6GEYJ331V	330 1/10W	[M]
R110	ERJ6GEYJ102V	1K 1/10W	[M]
R111	ERJ6GEYJ391V	390 1/10W	[M]
R112	ERJ6GEYJ104V	100K 1/10W	[M]
R113	ERJ6GEYJ103V	10K 1/10W	[M]
R114	ERJ6GEYJ562V	5.6K 1/10W	[M]
R115	ERJ6GEYJ561V	560 1/10W	[M]
R116	ERJ6GEYJ102V	1K 1/10W	[M]
R117	ERJ6GEYJ683V	68K 1/10W	[M]
R118	ERJ6GEYJ332V	3.3K 1/10W	[M]
R119	ERJ6GEYJ123V	12K 1/10W	[M]
R120	ERJ6GEYJ473V	47K 1/10W	[M]
R121	ERJ6GEYJ223V	22K 1/10W	[M]
R122	ERJ6GEYJ272V	2.7K 1/10W	[M]
R123	ERJ6GEYJ683V	68K 1/10W	[M]
R124	ERJ6GEYJ330V	33 1/10W	[M]
R125	ERJ6GEYJ471V	470 1/10W	[M]
R126	ERJ6GEYJ102V	1K 1/10W	[M]
R127	ERJ6GEYJ471V	470 1/10W	[M]
R128	ERJ6GEYJ820V	82 1/10W	[M]
R129	ERJ6GEYJ273V	27K 1/10W	[M]
R130	ERJ6GEYJ103V	10K 1/10W	[M]
R131	ERJ8GEYJ680V	68 1/8W	[M]
R132	ERJ6GEYJ103V	10K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R133	ERJ6GEYJ102V	1K 1/10W	[M]
R134	ERJ6GEYJ471V	470 1/10W	[M]
R135	ERJ6GEYJ102V	1K 1/10W	[M]
R136	ERJ6GEYJ102V	1K 1/10W	[M]
R137	ERJ6GEYJ102V	1K 1/10W	[M]
R138	ERJ6GEYJ332V	3.3K 1/10W	[M]
R141	ERJ6GEYJ682V	6.8K 1/10W	[M]
R142	ERJ6GEYJ682V	6.8K 1/10W	[M]
R143	ERJ6GEYJ223V	22K 1/10W	[M]
R145	ERJ6GEYJ104V	100K 1/10W	[M]
R146	ERJ6GEYJ104V	100K 1/10W	[M]
R151	ERJ6GEYJ820V	82 1/10W	[M]
R152	ERJ6GEYJ000A	0 1/10W	[M]
R201	ERJ6GEYJ103V	10K 1/10W	[M]
R202	ERJ6GEYJ392V	3.9K 1/10W	[M]
R207	ERJ6GEYJ152V	1.5K 1/10W	[M]
R208	ERJ6GEYJ103V	10K 1/10W	[M]
R209	ERJ6GEYJ473V	47K 1/10W	[M]
R210	ERJ6GEYJ102V	1K 1/10W	[M]
R211	ERJ6GEYJ222V	2.2K 1/10W	[M]
R212	ERJ6GEYJ472V	4.7K 1/10W	[M]
R213	ERJ6GEYJ393V	39K 1/10W	[M]
R215	ERJ6GEYJ102V	1K 1/10W	[M]
R216	ERJ6GEYJ222V	2.2K 1/10W	[M]
R217	ERJ6GEYJ683V	68K 1/10W	[M]
R218	ERJ6GEYJ332V	3.3K 1/10W	[M]
R219	ERJ6GEYJ472V	4.7K 1/10W	[M]
R220	ERJ6GEYJ104V	100K 1/10W	[M]
R221	ERJ6GEYJ102V	1K 1/10W	[M]
R222	ERJ6GEYJ123V	12K 1/10W	[M]
R223	ERJ6GEYJ473V	47K 1/10W	[M]
R224	ERJ6GEYJ183V	18K 1/10W	[M]
R225	ERJ6GEYJ362V	3.6K 1/10W	[M]
R226	ERJ6GEYJ101V	100 1/10W	[M]
R230	ERJ6GEYJ473V	47K 1/10W	[M]
R231	ERJ6GEYJ183V	18K 1/10W	[M]
R232	ERJ6GEYJ473V	47K 1/10W	[M]
R233	ERJ6GEYJ224V	220K 1/10W	[M]
R240	ERJ6GEYJ393V	39K 1/10W	[M]
R248	ERJ6GEYJ390V	39 1/10W	[M]
R249	ERJ6GEYJ390V	39 1/10W	[M]
R300	ERJ6GEYJ472V	4.7K 1/10W	[M]
R301	ERJ6GEYJ223V	22K 1/10W	[M]
R302	ERJ6GEYJ183V	18K 1/10W	[M]
R303	ERJ6GEYJ100V	10 1/10W	[M]
R304	ERJ6GEYJ223V	22K 1/10W	[M]
R305	ERJ6GEYJ103V	10K 1/10W	[M]
R306	ERJ6GEYJ122V	1.2K 1/10W	[M]
R307	ERJ6GEYJ103V	10K 1/10W	[M]
R308	ERJ6GEYJ332V	3.3K 1/10W	[M]
R309	ERJ6GEYJ332V	3.3K 1/10W	[M]
R310	ERJ6GEYJ102V	1K 1/10W	[M]
R312	ERJ6GEYJ2R2V	2.2 1/10W	[M]
R313	ERJ6GEYJ393V	39K 1/10W	[M]
R316	ERJ6GEYJ153V	15K 1/10W	[M]
R317	ERJ6GEYJ102V	1K 1/10W	[M]
R321	ERJ6GEYJ2R7V	2.7 1/10W	[M]
R322	ERJ6GEYJ271V	270 1/10W	[M]
R323	ERJ6GEYJ222V	2.2K 1/10W	[M]
R324	ERJ6GEYJ222V	2.2K 1/10W	[M]
R325	ERJ6GEYJ222V	2.2K 1/10W	[M]
R326	ERJ6GEYJ683V	68K 1/10W	[M]
R327	ERJ6GEYJ154V	150K 1/10W	[M]
R332	ERJ6GEYJ824V	820K 1/10W	[M]
R334	ERJ6GEYJ274V	270K 1/10W	[M]
R335	ERJ6GEYJ472V	4.7K 1/10W	[M]
R336	ERJ6GEYJ153V	15K 1/10W	[M]
R337	ERJ6GEYJ822V	8.2K 1/10W	[M]
R338	ERJ6GEYJ472V	4.7K 1/10W	[M]
R339	ERJ6GEYJ823V	82K 1/10W	[M]
R340	ERJ6GEYJ823V	82K 1/10W	[M]
R342	ERJ6GEYJ103V	10K 1/10W	[M]
R343	ERJ6GEYJ392V	3.9K 1/10W	[M]
R344	ERJ6GEYJ103V	10K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R345	ERJ6GEYJ221V	220 1/10W	[M]
R346	ERJ6GEYJ223V	22K 1/10W	[M]
R347	ERJ6GEYJ123V	12K 1/10W	[M]
R349	ERJ6GEYJ103V	10K 1/10W	[M]
R350	ERJ6GEYJ102V	1K 1/10W	[M]
R351	ERJ6GEYJ103V	10K 1/10W	[M]
R353	ERJ6GEYJ103V	10K 1/10W	[M]
R354	ERJ6GEYJ123V	12K 1/10W	[M]
R355	ERJ6GEYJ223V	22K 1/10W	[M]
R356	ERJ6GEYJ153V	15K 1/10W	[M]
R357	ERJ6GEYJ104V	100K 1/10W	[M]
R358	ERJ6GEYJ473V	47K 1/10W	[M]
R359	ERJ6GEYJ473V	47K 1/10W	[M]
R401	ERJ6GEYJ103V	10K 1/10W	[M]
R402	ERJ6GEYJ392V	3.9K 1/10W	[M]
R407	ERJ6GEYJ152V	1.5K 1/10W	[M]
R408	ERJ6GEYJ103V	10K 1/10W	[M]
R409	ERJ6GEYJ473V	47K 1/10W	[M]
R410	ERJ6GEYJ102V	1K 1/10W	[M]
R411	ERJ6GEYJ222V	2.2K 1/10W	[M]
R412	ERJ6GEYJ472V	4.7K 1/10W	[M]
R413	ERJ6GEYJ393V	39K 1/10W	[M]
R415	ERJ6GEYJ102V	1K 1/10W	[M]
R416	ERJ6GEYJ222V	2.2K 1/10W	[M]
R417	ERJ6GEYJ683V	68K 1/10W	[M]
R418	ERJ6GEYJ332V	3.3K 1/10W	[M]
R419	ERJ6GEYJ472V	4.7K 1/10W	[M]
R420	ERJ6GEYJ104V	100K 1/10W	[M]
R421	ERJ6GEYJ102V	1K 1/10W	[M]
R422	ERJ6GEYJ123V	12K 1/10W	[M]
R423	ERJ6GEYJ473V	47K 1/10W	[M]
R424	ERJ6GEYJ183V	18K 1/10W	[M]
R425	ERJ6GEYJ362V	3.6K 1/10W	[M]
R426	ERJ6GEYJ101V	100 1/10W	[M]
R430	ERJ6GEYJ473V	47K 1/10W	[M]
R431	ERJ6GEYJ183V	18K 1/10W	[M]
R432	ERJ6GEYJ473V	47K 1/10W	[M]
R433	ERJ6GEYJ224V	220K 1/10W	[M]
R435	ERJ6GEYJ273V	27K 1/10W	[M]
R440	ERJ6GEYJ393V	39K 1/10W	[M]
R444	ERJ6GEYJ333V	33K 1/10W	[M]
R448	ERJ6GEYJ390V	39 1/10W	[M]
R449	ERJ6GEYJ390V	39 1/10W	[M]
R452	ERJ6GEYJ103V	10K 1/10W	[M]
R453	ERJ6GEYJ472V	4.7K 1/10W	[M]
R454	ERJ6GEYJ103V	10K 1/10W	[M]
R455	ERJ6GEYJ103V	10K 1/10W	[M]
R456	ERJ6GEYJ472V	4.7K 1/10W	[M]
R507	ERDS2TJ153T	15K 1/4W	[M]
R508	ERDS2TJ153T	15K 1/4W	[M]
R509	ERDS2TJ682T	6.8K 1/4W	[M]
R512	ERDS2TJ682T	6.8K 1/4W	[M]
R513	ERDS2TJ153T	15K 1/4W	[M]
R516	ERDS2TJ562T	5.6K 1/4W	[M]
R520	ERDS2TJ562T	5.6K 1/4W	[M]
R521	ERDS2TJ151T	150 1/4W	[M]
R524	ERDS2TJ472T	4.7K 1/4W	[M]
R526	ERD25FVJ331T	330 1/4W	[M]
R527	ERDS2TJ152T	1.5K 1/4W	[M]
R529	ERD2FCVJ4R7T	4.7 1/4W	[M]
R531	ERDS2TJ472T	4.7K 1/4W	[M]
R534	ERDS2TJ563T	56K 1/4W	[M]
R535	ERDS2TJ563T	56K 1/4W	[M]
R536	ERDS2TJ563T	56K 1/4W	[M]
R537	ERDS2TJ563T	56K 1/4W	[M]
R541	ERD25FVJ331T	330 1/4W	[M]
R543	ERDS2TJ472T	4.7K 1/4W	[M]
R546	ERDS2TJ474T	470K 1/4W	[M]
R551	ERDS2TJ222T	2.2K 1/4W	[M]
R552	ERD2FCVJ4R7T	4.7 1/4W	[M]
R553	ERD2FCVJ4R7T	4.7 1/4W	[M]
R554	ERDS2TJ103T	10K 1/4W	[M]
R556	ERDS2TJ224T	220K 1/4W	[M]
R557	ERDS2TJ124T	120K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R558	ERDS2TJ154T	150K 1/4W	[M]
R559	ERDS2TJ184T	180K 1/4W	[M]
R561	ERDS2TJ103T	10K 1/4W	[M]
R563	ERDS2TJ103T	10K 1/4W	[M]
R567	ERDS2TJ104T	100K 1/4W	[M]
R568	ERDS2TJ223T	22K 1/4W	[M]
R569	ERDS2TJ392T	3.9K 1/4W	[M]
R571	ERD2FCVJ390T	39 1/4W	[M]
R572	ERDS1FVJ2R2T	2.2 1/2W	[M] △
R574	ERDS1FVJ272T	2.7K 1/2W	[M]
R575	ERDS1FVJ470T	47 1/2W	[M] △
R576	ERDS1FVJ470T	47 1/2W	[M] △
R577	ERDS1FVJ2R2T	2.2 1/2W	[M] △
R578	ERDS2TJ332T	3.3K 1/4W	[M]
R583	ERDS1FVJ100T	10 1/2W	[M] △
R584	ERDS1FVJ100T	10 1/2W	[M]
R586	ERDS1FVJ100T	10 1/2W	[M]
R587	ERDS1FVJ100T	10 1/2W	[M]
R590	ERDS2TJ332T	3.3K 1/4W	[M]
R593	ERDS2TJ824T	820K 1/4W	[M]
R594	ERDS1FVJ332T	3.3K 1/2W	[M] △
R596	ERDS2TJ100T	10 1/4W	[M]
R597	ERDS2TJ100T	10 1/4W	[M]
R598	ERDS2TJ471T	470 1/4W	[M]
R599	ERDS2TJ472T	4.7K 1/4W	[M]
R600	ERDS2TJ222T	2.2K 1/4W	[M]
R600	ERDS2TJ472T	4.7K 1/4W	[M]
R601	ERDS2TJ100T	10 1/4W	[M]
R602	ERDS2TJ100T	10 1/4W	[M]
R603	ERDS2TJ122T	1.2K 1/4W	[M]
R604	ERDS2TJ182T	1.8K 1/4W	[M]
R605	ERDS2TJ103T	10K 1/4W	[M]
R606	ERDS2TJ683T	68K 1/4W	[M]
R607	ERDS2TJ102T	1K 1/4W	[M]
R608	ERDS2TJ682T	6.8K 1/4W	[M]
R609	ERDS2TJ223T	22K 1/4W	[M]
R610	ERDS2TJ102T	1K 1/4W	[M]
R611	ERDS2TJ472T	4.7K 1/4W	[M]
R613	ERDS2TJ103T	10K 1/4W	[M]
R615	ERDS2TJ223T	22K 1/4W	[M]
R616	ERDS2TJ272T	2.7K 1/4W	[M]
R617	ERDS2TJ682T	6.8K 1/4W	[M]
R618	ERDS2TJ103T	10K 1/4W	[M]
R621	ERDS2TJ681T	680 1/4W	[M]
R622	ERDS2TJ562T	5.6K 1/4W	[M]
R623	ERDS2TJ272T	2.7K 1/4W	[M]
R624	ERDS2TJ222T	2.2K 1/4W	[M]
R625	ERDS2TJ471T	470 1/4W	[M]
R626	ERDS2TJ471T	470 1/4W	[M]
R627	ERDS2TJ471T	470 1/4W	[M]
R629	ERDS2TJ122T	1.2K 1/4W	[M]
R630	ERDS2TJ682T	6.8K 1/4W	[M]
R631	ERDS2TJ472T	4.7K 1/4W	[M]
R633	ERDS2TJ182T	1.8K 1/4W	[M]
R634	ERDS2TJ102T	1K 1/4W	[M]
R635	ERDS2TJ472T	4.7K 1/4W	[M]
R636	ERDS2TJ683T	68K 1/4W	[M]
R638	ERDS2TJ272T	2.7K 1/4W	[M]
R639	ERDS2TJ102T	1K 1/4W	[M]
R640	ERDS2TJ122T	1.2K 1/4W	[M]
R641	ERDS2TJ182T	1.8K 1/4W	[M]
R642	ERDS2TJ392T	3.9K 1/4W	[M]
R644	ERDS2TJ222T	2.2K 1/4W	[M]
R645	ERDS2TJ123T	12K 1/4W	[M]
R646	ERDS2TJ471T	470 1/4W	[M]
R647	ERDS2TJ222T	2.2K 1/4W	[M]
R648	ERDS2TJ102T	1K 1/4W	[M]
R649	ERDS2TJ182T	1.8K 1/4W	[M]
R650	ERDS2TJ681T	680 1/4W	[M]
R652	ERDS2TJ102T	1K 1/4W	[M]
R653	ERDS2TJ122T	1.2K 1/4W	[M]
R654	ERDS2TJ471T	470 1/4W	[M]
R655	ERDS2TJ471T	470 1/4W	[M]
R656	ERDS2TJ102T	1K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R657	ERDS2TJ471T	470 1/4W	[M]
R658	ERDS2TJ101T	100 1/4W	[M]
R659	ERDS2TJ471T	470 1/4W	[M]
R660	ERDS2TJ102T	1K 1/4W	[M]
R661	ERDS2TJ471T	470 1/4W	[M]
R662	ERDS2TJ102T	1K 1/4W	[M]
R663	ERDS2TJ102T	1K 1/4W	[M]
R664	ERDS2TJ104T	100K 1/4W	[M]
R665	ERDS2TJ104T	100K 1/4W	[M]
R666	ERDS2TJ104T	100K 1/4W	[M]
R667	ERDS2TJ104T	100K 1/4W	[M]
R668	ERDS2TJ104T	100K 1/4W	[M]
R669	ERDS2TJ104T	100K 1/4W	[M]
R670	ERDS2TJ104T	100K 1/4W	[M]
R671	ERDS2TJ104T	100K 1/4W	[M]
R672	ERDS2TJ104T	100K 1/4W	[M]
R673	ERDS2TJ104T	100K 1/4W	[M]
R674	ERDS2TJ104T	100K 1/4W	[M]
R675	ERDS2TJ104T	100K 1/4W	[M]
R676	ERDS2TJ104T	100K 1/4W	[M]
R677	ERDS2TJ222T	2.2K 1/4W	[M]
R678	ERDS2TJ681T	680 1/4W	[M]
R679	ERDS2TJ391T	390 1/4W	[M]
R680	ERDS2TJ101T	100 1/4W	[M]
R681	ERDS2TJ102T	1K 1/4W	[M]
R682	ERDS2TJ472T	4.7K 1/4W	[M]
R683	ERDS2TJ103T	10K 1/4W	[M]
R684	ERDS2TJ103T	10K 1/4W	[M]
R685	ERDS2TJ103T	10K 1/4W	[M]
R686	ERDS2TJ223T	22K 1/4W	[M]
R687	ERDS2TJ102T	1K 1/4W	[M]
R688	ERDS2TJ103T	10K 1/4W	[M]
R689	ERDS2TJ101T	100 1/4W	[M]
R690	ERDS2TJ101T	100 1/4W	[M]
R691	ERDS2TJ101T	100 1/4W	[M]
R692	ERDS2TJ101T	100 1/4W	[M]
R693	ERDS2TJ102T	1K 1/4W	[M]
R694	ERDS2TJ152T	1.5K 1/4W	[M]
R695	ERDS2TJ223T	22K 1/4W	[M]
R696	ERDS2TJ470T	47 1/4W	[M]
R697	ERDS2TJ224T	220K 1/4W	[M]
R698	ERDS2TJ331T	330 1/4W	[M]
R699	ERDS2TJ221T	220 1/4W	[M]
R701	ERJ6GEYJ4R7A	4.7 1/10W	[M]
R702	ERJ6GEYJ103A	10K 1/10W	[M]
R704	ERJ6GEYJ102A	1K 1/10W	[M]
R705	ERJ6GEYJ154A	150K 1/10W	[M]
R706	ERJ6GEYJ102A	1K 1/10W	[M]
R707	ERJ6GEYJ393V	39K 1/10W	[M]
R708	ERJ6GEYJ223A	22K 1/10W	[M]
R709	ERJ6GEYJ683A	68K 1/10W	[M]
R711	ERJ6GEYJ823A	82K 1/10W	[M]
R712	ERJ8GEYJ221A	220 1/8W	[M]
R714	ERJ6GEYJ0R00A	0 1/10W	[M]
R715	ERJ6GEYJ102A	1K 1/10W	[M]
R717	ERJ6GEYJ102A	1K 1/10W	[M]
R718	ERJ6GEYJ102A	1K 1/10W	[M]
R721	ERJ6GEYJ101A	100 1/10W	[M]
R723	ERJ6GEYJ682A	6.8K 1/10W	[M]
R724	ERJ6GEYJ183A	18K 1/10W	[M]
R725	ERJ6GEYJ391A	390 1/10W	[M]
R727	ERJ6GEYJ392A	3.9K 1/10W	[M]
R728	ERJ6GEYJ392A	3.9K 1/10W	[M]
R729	ERJ6GEYJ392A	3.9K 1/10W	[M]
R731	ERJ6GEYJ682A	6.8K 1/10W	[M]
R735	ERJ6GEYJ101A	100 1/10W	[M]
R736	ERJ6GEYJ101A	100 1/10W	[M]
R741	ERJ6GEYJ473A	47K 1/10W	[M]
R742	ERJ6GEYJ224A	220K 1/10W	[M]
R744	ERJ6GEYJ124A	120K 1/10W	[M]
R749	ERJ6GEYJ472A	4.7K 1/10W	[M]
R753	ERJ6GEYJ100V	10 1/10W	[M]
R900	ERDS2TJ103T	10K 1/4W	[M]
R901	ERDS2TJ221T	220 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R902	ERDS2TJ123T	12K 1/4W	[M]
R903	ERDS2TJ221T	220 1/4W	[M]
R904	ERDS2TJ223T	22K 1/4W	[M]
R905	ERDS2TJ221T	220 1/4W	[M]
R906	ERDS2TJ221T	220 1/4W	[M]
R907	ERDS2TJ104T	100K 1/4W	[M]
R908	ERDS2TJ151T	150 1/4W	[M]
R909	ERDS2TJ221T	220 1/4W	[M]
R910	ERDS2TJ123T	12K 1/4W	[M]
R911	ERDS2TJ473T	47K 1/4W	[M]
R912	ERDS2TJ104T	100K 1/4W	[M]
R913	ERDS2TJ331T	330 1/4W	[M]
R914	ERDS2TJ104T	100K 1/4W	[M]
R915	ERDS2TJ331T	330 1/4W	[M]
R916	ERDS2TJ101T	100 1/4W	[M]
R917	ERDS2TJ681T	680 1/4W	[M]
R918	ERDS2TJ106T	10M 1/4W	[M]
R919	ERDS2TJ101T	100 1/4W	[M]
R920	ERDS2TJ334T	330K 1/4W	[M]
R921	ERDS2TJ562T	5.6K 1/4W	[M]
R922	ERDS2TJ680T	68 1/4W	[M]
R923	ERDS2TJ103T	10K 1/4W	[M]
R924	ERDS2TJ223T	22K 1/4W	[M]
R925	ERDS2TJ680T	68 1/4W	[M]
R926	ERDS2TJ102T	1K 1/4W	[M]
R927	ERDS2TJ103T	10K 1/4W	[M]
R928	ERDS2TJ103T	10K 1/4W	[M]
R929	ERDS2TJ103T	10K 1/4W	[M]
R930	ERDS2TJ103T	10K 1/4W	[M]
R931	ERDS2TJ472T	4.7K 1/4W	[M]
R932	ERDS2TJ223T	22K 1/4W	[M]
R933	ERDS2TJ471T	470 1/4W	[M]
R934	ERDS2TJ472T	4.7K 1/4W	[M]
R935	ERDS2TJ223T	22K 1/4W	[M]
R936	ERDS2TJ103T	10K 1/4W	[M]
R937	ERDS2TJ474T	470K 1/4W	[M]
R938	ERDS2TJ472T	4.7K 1/4W	[M]
R939	ERDS2TJ104T	100K 1/4W	[M]
R940	ERDS2TJ104T	100K 1/4W	[M]
R941	ERDS2TJ104T	100K 1/4W	[M]
R942	ERDS2TJ104T	100K 1/4W	[M]
R943	ERDS2TJ103T	10K 1/4W	[M]
R944	ERDS2TJ103T	10K 1/4W	[M]
R945	ERDS2TJ101T	100 1/4W	[M]
R946	ERDS2TJ101T	100 1/4W	[M]
R947	ERDS2TJ101T	100 1/4W	[M]
R948	ERDS2TJ472T	4.7K 1/4W	[M]
R949	ERDS2TJ331T	330 1/4W	[M]
R950	ERDS2TJ223T	22K 1/4W	[M]
R951	ERDS2TJ103T	10K 1/4W	[M]
R952	ERDS2TJ331T	330 1/4W	[M]
R952	ERDS2TJ821T	820 1/4W	[M]
R953	ERDS2TJ272T	2.7K 1/4W	[M]
R953	ERDS2TJ393T	39K 1/4W	[M]
R954	ERDS2TJ103T	10K 1/4W	[M]
R955	ERDS2TJ562T	5.6K 1/4W	[M]
R956	ERDS2TJ562T	5.6K 1/4W	[M]
R957	ERDS2TJ562T	5.6K 1/4W	[M]
R958	ERDS2TJ562T	5.6K 1/4W	[M]
R959	ERDS2TJ103T	10K 1/4W	[M]
R960	ERDS2TJ102T	1K 1/4W	[M]
R961	ERDS2TJ103T	10K 1/4W	[M]
R962	ERDS2TJ272T	2.7K 1/4W	[M]
R964	ERDS2TJ331T	330 1/4W	[M]
R965	ERDS2TJ102T	1K 1/4W	[M]
R966	ERDS2TJ101T	100 1/4W	[M]
R967	ERDS2TJ101T	100 1/4W	[M]
R969	ERDS2TJ104T	100K 1/4W	[M]
R970	ERDS2TJ103T	10K 1/4W	[M]
R971	ERDS2TJ103T	10K 1/4W	[M]
R972	ERDS2TJ103T	10K 1/4W	[M]
R972	ERDS2TJ821T	820 1/4W	[M]
R973	ERDS2TJ101T	100 1/4W	[M]
R973	ERDS2TJ393T	39K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R976	ERDS2TJ103T	10K 1/4W	[M]
R978	ERDS2TJ102T	1K 1/4W	[M]
R979	RSFMB40KT-L	FUSE PROTECTOR	[M] △
R980	ERDS1FVJ180T	18 1/2W	[M] △
R981	ERDS1FVJ180T	18 1/2W	[M] △
R983	ERDS2TJ222T	2.2K 1/4W	[M]
R984	ERDS2TJ102T	1K 1/4W	[M]
R984	ERDS2TJ151T	150 1/4W	[M]
R985	ERDS1FVJ220T	22 1/2W	[M] △
R985	ERDS2TJ471T	470 1/4W	[M]
R1001	ERJ6GEYJ1R0A	1 1/10W	[M]
R1003	ERJ6GEYJ103V	10K 1/10W	[M]
R1004	ERJ6GEYJ152V	1.5K 1/10W	[M]
R1005	ERJ6GEYJ472V	4.7K 1/10W	[M]
R1006	ERJ6GEYJ102V	1K 1/10W	[M]
R1007	ERD25FVJ4R7T	4.7 1/4W	[M]
R1008	ERJ6GEYJ223V	22K 1/10W	[M]
R1009	ERJ6GEYJ183V	18K 1/10W	[M]
R1010	ERJ6GEYJ183V	18K 1/10W	[M]
R1011	ERJ6GEYJ103V	10K 1/10W	[M]
R1012	ERJ6GEYJ472V	4.7K 1/10W	[M]
R1013	ERJ6GEYJ472V	4.7K 1/10W	[M]
R1014	ERJ6GEYJ472V	4.7K 1/10W	[M]
R1015	ERJ6GEYJ470V	47 1/10W	[M]
R1016	ERJ6GEYJ470V	47 1/10W	[M]
R1017	ERJ6GEYJ822V	8.2K 1/10W	[M]
R1018	ERJ6GEYJ392V	3.9K 1/10W	[M]
R1019	ERJ6GEYJ392V	3.9K 1/10W	[M]
R1020	ERJ6GEYJ470V	47 1/10W	[M]
R1022	ERJ6GEYJ103V	10K 1/10W	[M]
R1024	ERJ6GEYJ563V	56K 1/10W	[M]
R1026	ERJ6GEYJ102V	1K 1/10W	[M]
R1027	ERJ6GEYJ104V	100K 1/10W	[M]
R1028	ERJ6GEYJ822V	8.2K 1/10W	[M]
R1029	ERJ6GEYJ475V	4.7M 1/10W	[M]
R1030	ERJ6GEYJ101V	100 1/10W	[M]
R1031	ERJ6GEYJ273V	27K 1/10W	[M]
R1032	ERJ6GEYJ103V	10K 1/10W	[M]
R1035	ERJ6GEYJ103V	10K 1/10W	[M]
R1036	ERJ6GEYJ470V	47 1/10W	[M]
R1037	ERJ6GEYJ104V	100K 1/10W	[M]
R1038	ERJ6GEYJ472V	4.7K 1/10W	[M]
R1039	ERJ6GEYJ153V	15K 1/10W	[M]
R1040	ERJ6GEYJ563V	56K 1/10W	[M]
R1045	ERJ6GEYJ104V	100K 1/10W	[M]
R1046	ERJ6GEYJ104V	100K 1/10W	[M]
R1047	ERJ6GEYJ102V	1K 1/10W	[M]
R1048	ERJ6GEYJ102V	1K 1/10W	[M]
R1049	ERJ6GEYJ105V	1M 1/10W	[M]
R1050	ERJ6GEYJ105V	1M 1/10W	[M]
R1051	ERJ6GEYJ221V	220 1/10W	[M]
R1052	ERJ6GEYJ221V	220 1/10W	[M]
R1053	ERJ6GEYJ681V	680 1/10W	[M]
R1054	ERJ6GEYJ681V	680 1/10W	[M]
R1055	ERJ6GEYJ222V	2.2K 1/10W	[M]
R1056	ERJ6GEYJ221V	220 1/10W	[M]
R1057	ERJ6GEYJ222V	2.2K 1/10W	[M]
R1058	ERJ6GEYJ272V	2.7K 1/10W	[M]
R1059	ERJ6GEYJ103V	10K 1/10W	[M]
R1060	ERJ6GEYJ391V	390 1/10W	[M]
R1061	ERJ6GEYJ2R7V	2.7 1/10W	[M]
R1062	ERJ6GEYJ2R7V	2.7 1/10W	[M]
R1063	ERJ6GEYJ102V	1K 1/10W	[M]
R1064	ERJ6GEYJ102V	1K 1/10W	[M]
R1065	ERJ6GEYJ102V	1K 1/10W	[M]
R1066	ERJ6GEYJ102V	1K 1/10W	[M]
R1067	ERJ6GEYJ153V	15K 1/10W	[M]
R1068	ERJ6GEYJ153V	15K 1/10W	[M]
R1069	ERJ6GEYJ682V	6.8K 1/10W	[M]
R1070	ERJ6GEYJ103V	10K 1/10W	[M]
R1071	ERJ6GEYJ103V	10K 1/10W	[M]
R1072	ERJ6GEYJ331V	330 1/10W	[M]
R1073	ERJ6GEYJ682V	6.8K 1/10W	[M]
R1074	ERJ6GEYJ823V	82K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R1075	ERJ6GEYJ222V	2.2K 1/10W	[M]
R1076	ERJ6GEYJ222V	2.2K 1/10W	[M]
R1077	ERJ6GEYJ393V	39K 1/10W	[M]
R1078	ERJ6GEYJ682V	6.8K 1/10W	[M]
R1079	ERJ6GEYJ472V	4.7K 1/10W	[M]
R1080	ERJ6GEYJ472V	4.7K 1/10W	[M]
R1081	ERJ6GEYJ102V	1K 1/10W	[M]
R1082	ERJ6GEYJ393V	39K 1/10W	[M]
R1083	ERJ6GEYJ822V	8.2K 1/10W	[M]
R1084	ERJ6GEYJ222V	2.2K 1/10W	[M]
R1085	ERJ6GEYJ473V	47K 1/10W	[M]
R1086	ERJ6GEYJ222V	2.2K 1/10W	[M]
R1087	ERJ6GEYJ473V	47K 1/10W	[M]
R1088	ERJ6GEYJ223V	22K 1/10W	[M]
R1089	ERJ6GEYJ223V	22K 1/10W	[M]
R1090	ERJ6GEYJ331V	330 1/10W	[M]
R1091	ERJ6GEYJ222V	2.2K 1/10W	[M]
R1092	ERJ6GEYJ222V	2.2K 1/10W	[M]
R1093	ERJ6GEYJ102V	1K 1/10W	[M]
R1094	ERJ6GEYJ102V	1K 1/10W	[M]
R1095	ERJ6GEYJ104V	100K 1/10W	[M]
R1096	ERJ6GEYJ104V	100K 1/10W	[M]
R1097	ERJ6GEYJ473V	47K 1/10W	[M]
R1098	ERJ6GEYJ473V	47K 1/10W	[M]
		CAPACITORS	
C1	ECBT1H5R6KC5	5.6P 50V	[M]
C1	ECEA1CKA101B	100 16V	[M]
C2	ECBT1E103ZF5	0.01 25V	[M]
C2	RCBS1H102KBY	1000P 50V	[M]
C3	ECBT1H2R2KC5	2.2P 50V	[M]
C4	ECBT1H181KB5	180P 50V	[M]
C5	ECBT1H5R6KC5	5.6P 50V	[M]
C6	ECBT1H3R3KC5	3.3P 50V	[M]
C7	ECBT1H4R7KC5	4.7P 50V	[M]
C8	ECBT1H3R3KC5	3.3P 50V	[M]
C9	ECBT1H2R2KC5	2.2P 50V	[M]
C10	ECBT1H180JCS	18P 50V	[M]
C11	RCBS1H102KBY	1000P 50V	[M]
C101	ECUV1H103KBN	0.01 50V	[M]
C102	ECEA1CKA101B	100 16V	[M]
C103	ECUV1H103KBN	0.01 50V	[M]
C104	ECUV1H102KBN	1000P 50V	[M]
C105	ECUV1H102KBN	1000P 50V	[M]
C106	ECUV1H103KBN	0.01 50V	[M]
C107	ECUV1E473ZFN	0.047 25V	[M]
C108	ECUV1H080DCN	8P 50V	[M]
C109	ECUV1H102KBN	1000P 50V	[M]
C110	ECUV1H103KBN	0.01 50V	[M]
C111	ECEA1EKA4R7B	4.7 25V	[M]
C112	ECUV1H103KBN	0.01 50V	[M]
C113	ECUV1H102KBN	1000P 50V	[M]
C114	ECEA1HKA3R3B	3.3 50V	[M]
C115	ECEA1EKA4R7B	4.7 25V	[M]
C116	ECUVNE333KBN	0.033 25V	[M]
C117	ECUV1H103KBN	0.01 50V	[M]
C118	ECUV1H103KBN	0.01 50V	[M]
C119	ECQP2A561JZT	560P 100V	[M]
C120	ECEA1CKA100B	10 16V	[M]
C121	ECEA1HKAR47B	0.47 50V	[M]
C122	ECEA1HKA010B	1 50V	[M]
C123	ECEA1HKA010B	1 50V	[M]
C124	ECUV1H101KCN	100P 50V	[M]
C125	ECEA1CKA220B	22 16V	[M]
C126	ECUVNC105ZFN	10 16V	[M]
C127	ECEA1CKA220B	22 16V	[M]
C129	ECEA0JKA101B	100 6.3V	[M]
C130	ECEA0JKA101B	100 6.3V	[M]
C131	ECUV1H101KCN	100P 50V	[M]
C132	ECUV1H102KBN	1000P 50V	[M]
C133	ECUV1H270JCN	27P 50V	[M]
C134	ECUV1H270JCN	27P 50V	[M]
C136	ECUV1H102KBN	1000P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C137	ECUV1H332KBN	3300P 50V	[M]
C138	ECUV1H103KBN	0.01 50V	[M]
C139	ECEA1EKA4R7B	4.7 25V	[M]
C141	ECEA1HKA010B	1 50V	[M]
C142	ECEA1HKA010B	1 50V	[M]
C143	ECUV1H472KBN	4700P 50V	[M]
C144	ECUV1H472KBN	4700P 50V	[M]
C147	ECUV1H102KBN	1000P 50V	[M]
C148	ECUV1H103KBN	0.01 50V	[M]
C149	ECUV1E104ZFN	0.1 25V	[M]
C201	ECUZ1H101JCN	100P 50V	[M]
C202	ECUZ1H101JCN	100P 50V	[M]
C204	ECUV1H221KBN	220P 50V	[M]
C207	ECEA1HKA010B	1 50V	[M]
C208	ECUZ1E563KBN	0.056 25V	[M]
C209	ECEA1HKAR15B	0.15 50V	[M]
C210	ECUZ1E223KBN	0.022 25V	[M]
C211	ECUZNC393KBN	0.039 16V	[M]
C212	ECUZ1E223KBN	0.022 25V	[M]
C213	ECUZ1H332KBN	3300P 50V	[M]
C214	ECUZ1H222KBN	2200P 50V	[M]
C215	ECUZ1H272KBN	2700P 50V	[M]
C216	ECUZ1H152KBN	1500P 50V	[M]
C217	ECUZ1C333KBN	0.033 16V	[M]
C218	ECEA1HKAR15B	0.15 50V	[M]
C219	ECEA1HKAR15B	0.15 50V	[M]
C220	ECUZ1H102KBN	1000P 50V	[M]
C221	ECUZNC683KBN	0.068 16V	[M]
C222	ECUZ1H471KBN	470P 50V	[M]
C223	ECEA1CKA100B	10 16V	[M]
C224	ECEA1HKA3R3B	3.3 50V	[M]
C225	ECEA1HKA3R3B	3.3 50V	[M]
C226	ECUZ1E104MBN	0.1 25V	[M]
C227	ECUV1H681KBV	680P 50V	[M]
C228	ECEA1CKA100B	10 16V	[M]
C229	ECUZ1H101JCN	100P 50V	[M]
C230	ECUZ1H470JCN	47P 50V	[M]
C232	ECUV1H332KBN	3300P 50V	[M]
C233	ECEA1CKA100B	10 16V	[M]
C234	ECUZNC683KBN	0.068 16V	[M]
C235	ECUZ1E183KBN	0.018 25V	[M]
C236	ECUZ1C474ZFN	0.47 16V	[M]
C237	ECUZ1H102KBN	1000P 50V	[M]
C240	ECEA1HKA010B	1 50V	[M]
C241	ECUZ1H101JCN	100P 50V	[M]
C242	ECEA1HKA3R3B	3.3 50V	[M]
C300	ECUZ1C103KBN	0.01 16V	[M]
C301	ECUZ1H102KBN	1000P 50V	[M]
C302	ECUZ1C103KBN	0.01 16V	[M]
C304	ECEA1AM331B	330 10V	[M]
C305	ECUZ1H152KBN	1500P 50V	[M]
C306	ECEA1HKA0R1B	0.1 50V	[M]
C307	ECUZ1H102KBN	1000P 50V	[M]
C308	ECUZ1E473ZFN	0.047 25V	[M]
C309	ECEA0JKA101B	100 6.3V	[M]
C312	ECUZ1E104ZFN	0.1 25V	[M]
C313	ECUZ1E104ZFN	0.1 25V	[M]
C314	ECUV1H151KCN	150P 50V	[M]
C315	ECUV1H151KCN	150P 50V	[M]
C316	ECUV1H151KCN	150P 50V	[M]
C317	ECEA1HKA010B	1 50V	[M]
C318	ECUZ1C103KBN	0.01 16V	[M]
C320	ECUZ1C103KBN	0.01 16V	[M]
C321	ECEA1AKA330B	33 10V	[M]
C322	ECUZNC683KBN	0.068 16V	[M]
C323	ECUZ1E473ZFN	0.047 25V	[M]
C324	ECEA1AKA470B	47 10V	[M]
C325	ECEA1AKA470B	47 10V	[M]
C326	ECUV1H472KBN	4700P 50V	[M]
C327	ECUZ1C154KBN	0.15 16V	[M]
C328	ECUZNC683KBN	0.068 16V	[M]
C329	ECUZ1E104ZFN	0.1 25V	[M]
C331	ECEA1HKA4R7B	4.7 50V	[M]
C334	ECEA1HKA3R3B	3.3 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C401	ECUZ1H101JCN	100P 50V	[M]
C402	ECUZ1H101JCN	100P 50V	[M]
C404	ECUV1H221KBN	220P 50V	[M]
C407	ECEA1HKA010B	1 50V	[M]
C408	ECUZ1E563KBN	0.056 25V	[M]
C409	ECEA1HKAR15B	0.15 50V	[M]
C410	ECUZ1E223KBN	0.022 25V	[M]
C411	ECUZNC393KBN	0.039 16V	[M]
C412	ECUZ1E223KBN	0.022 25V	[M]
C413	ECUV1H332KBN	3300P 50V	[M]
C414	ECUZ1H222KBN	2200P 50V	[M]
C415	ECUZ1H272KBN	2700P 50V	[M]
C416	ECUZ1H152KBN	1500P 50V	[M]
C417	ECUZ1C333KBN	0.033 16V	[M]
C418	ECEA1HKAR15B	0.15 50V	[M]
C419	ECEA1HKAR15B	0.15 50V	[M]
C420	ECUZ1H102KBN	1000P 50V	[M]
C421	ECUZNC683KBN	0.068 16V	[M]
C422	ECUZ1H471KBN	470P 50V	[M]
C423	ECEA1CKA100B	10 16V	[M]
C424	ECEA1HKA3R3B	3.3 50V	[M]
C425	ECEA1HKA3R3B	3.3 50V	[M]
C426	ECUZ1E104MBN	0.1 25V	[M]
C427	ECUV1H681KBV	680P 50V	[M]
C428	ECEA1CKA100B	10 16V	[M]
C429	ECUZ1H101JCN	100P 50V	[M]
C430	ECUZ1H470JCN	47P 50V	[M]
C432	ECUV1H332KBN	3300P 50V	[M]
C433	ECEA1CKA100B	10 16V	[M]
C434	ECUZNC683KBN	0.068 16V	[M]
C435	ECUZ1E183KBN	0.018 25V	[M]
C436	ECUZ1H101JCN	100P 50V	[M]
C437	ECUZ1H102KBN	1000P 50V	[M]
C440	ECEA1HKA010B	1 50V	[M]
C441	ECUZ1H101JCN	100P 50V	[M]
C442	ECEA1HKA3R3B	3.3 50V	[M]
C500	ECBT1H471KB5	470P 50V	[M]
C508	ECBT1H471KB5	470P 50V	[M]
C509	ECBT1E103ZF5	0.01 25V	[M]
C510	ECBT1H471KB5	470P 50V	[M]
C512	ECEA2AM100B	10 100V	[M]
C513	ECKR1H103ZF5	0.01 50V	[M]
C514	ECBT1H471KB5	470P 50V	[M]
C516	ECKR1H103ZF5	0.01 50V	[M]
C521	ECKR1H103ZF5	0.01 50V	[M] △
C522	ECBT1H104ZF5	0.1 50V	[M]
C523	ECEA1HKA010B	1 50V	[M]
C524	ECKR1H103ZF5	0.01 50V	[M]
C528	ECBT1H150JC5	15P 50V	[M]
C529	ECBT1H150JC5	15P 50V	[M]
C530	ECBT1H220JC5	22P 50V	[M]
C531	ECBT1H220JC5	22P 50V	[M]
C533	ECKR1H103ZF5	0.01 50V	[M]
C534	ECEA1CKA470B	47 16V	[M]
C536	ECBT1H104ZF5	0.1 50V	[M]
C539	ECBT1H473ZF5	0.047 50V	[M]
C540	ECQV1H104JZ3	0.1 50V	[M]
C543	ECEA1JM101B	100 63V	[M]
C544	ECKR1H103ZF5	0.01 50V	[M]
C546	ECEA1CKA100B	10 16V	[M]
C547	ECEA0JKA101B	100 6.3V	[M]
C549	ECEA2AU100B	10 100V	[M]
C550	ECEA1VM101B	100 35V	[M]
C552	ECKR1H103ZF5	0.01 50V	[M]
C553	ECEA1VM101B	100 35V	[M]
C558	ECEA1E222B-S	2200P 25V	[M] △
C559	ECBT1H104ZF5	0.1 50V	[M]
C560	ECBT1H104ZF5	0.1 50V	[M]
C561	ECBT1H104ZF5	0.1 50V	[M]
C562	ECBT1H104ZF5	0.1 50V	[M]
C565	ECBT1H104ZF5	0.1 50V	[M]
C566	ECBT1H104ZF5	0.1 50V	[M]
C567	ECBT1H104ZF5	0.1 50V	[M]
C568	ECBT1H104ZF5	0.1 50V	[M]

20.6. Packaging

