ORDER NO. MD9306037C3

Service Manual

Portable Stereo Component CD System

Radio Cassette

RX-DT670

COMPACT disc DIGITAL AUDIO

MASH* multi-stage noise shaping

Colour

(K) ... Black Type

Area

Suffix for Model No.	Area	Colour
(GC)	Third Region	(K)

TAPE SECTION : Mechanism Series (SG20W)
CD SECTION : Traverse Deck Series (RAE0111Z)

■ SPECIFICATIONS

General:

Power Requirement:	AC; 110~127V/200~220V 230~250V, 50/60Hz Battery; 15V (Ten R20/LR20, UM-1 batteries) Memory Back-up Battery for Computer; 6V (Four R6/LR6, UM-3 batteries)
Power Consumption:	52W (AC only)
Power Output:	120W..... PMPO 30W..... RMS (max)
Speaker:	Woofer x 2 ; 12 cm (2.7 ~ 8Ω) Tweeter x 2 ; 8 cm (8 ~ 16Ω)
Jacks:	
Input:	MIC; 4mV (200Ω)
Outputs:	HEADPHONES; (32Ω,φ3.5) SPEAKER; Woofer 2.7~8Ω Tweeter 8~16Ω
Dimensions:	641(W) x 272(H) x 207(D) mm Main Unit; 300 x 272 x 207 mm Speaker Box;170 x 271 x 188 mm
Weight:	8.4 kg without batteries

Disc Player Section:

Sampling Frequency:	44.1 kHz
Decoding:	16-bit linear
D-A Conversion:	MASH (1 Bit DAC)
Beam Source:	Semiconductor laser (wavelength 780 nm)
No. of Channels:	2-Channel, stereo
Frequency Response:	20~20,000 Hz (0/-3 dB)
Dynamic Range:	86 dB
S/N Ratio:	75 dB (1 kHz)
Wow and Flutter:	Unmeasurable

Radio Section:

Frequency Range:	FM; 87.50~108.00 MHz MW;531~1602 kHz (9kHz step) 530~1600kHz (10kHz step) SW1; 3.2~7.3 MHz SW2; 9.5~21.85 MHz
Intermediate Frequency:	FM; 10.7 MHz AM; 450 kHz
Sensitivity:	FM; 9.0dB/50 mW output (-30 dB Limit Sens.) MW; 55dB/m/50 mW output SW1; 54dB/m/50 mW output SW2; 33dB/50 mW output

Tape Deck Section:

Frequency Response:	20~14,000 Hz (with normal tape)
Recording System:	AC bias, AC erase
Tape Speed:	4.8 cm/s (1⅞ips)
Monitor System:	Variable sound monitor
Track System:	4-track 2-channel stereo recording and playback

*** MASH**

- MASH (Multi-Stage Noise Shaping) is an effective oversampling D/A conversion technique which realizes a high S/N ratio and needs no highly complex manufacturing processes such as a laser trimming.
- MASH is a trademark of NTT (Nippon Telegraph and Telephone Corporation).

Notes:

1. Weights and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

Panasonic

■ CONTENTS

CAUTION:
THIS PRODUCT UTILIZES A LASER .
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCES OR PROCEDURES OTHER THAN THOSE SPECIFIED HERIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE .

■ PRECAUTION OF LASER DIODE

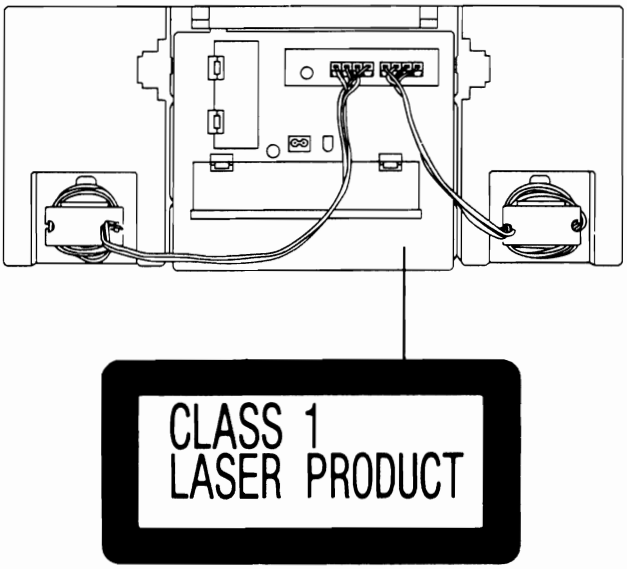
CAUTION:

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

Wave Length: 780 nm
Maximum output radiation power from pick up: 100 μW/VDE

Laser radiation from the pick up lens is within safety level ,but take precaution on 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 pickup unit .It has already been adjusted .
3. Do not look at the focus lens using optical instruments .
4. It is Not advisable to look at the pick up lens for a long period of time .

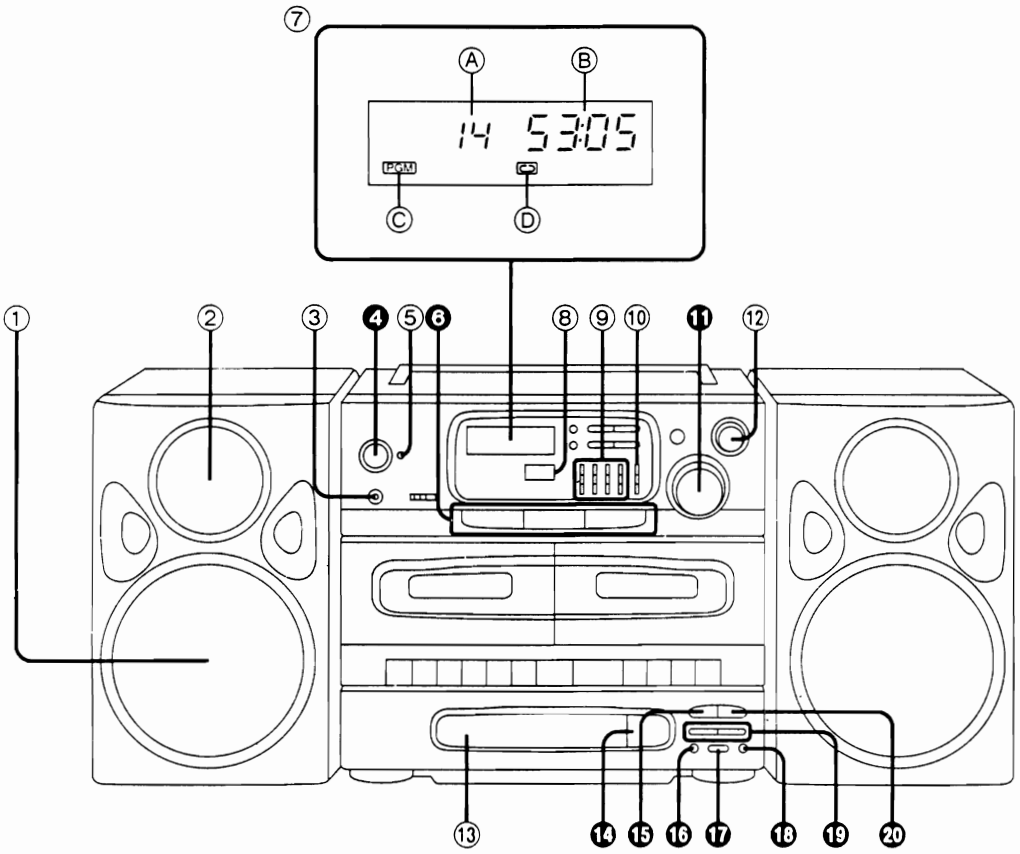


(Inside of product)

■ LOCATION OF CONTROLS

• CD/GENERAL CONTROLS

*The functions indicated by the numbers with black background (for example ❹) can be activated from the remote control transmitter.



① **Speakers (Woofer ,12cm ,2.7Ω)**

② **Speakers (Tweeter ,8cm ,8Ω)**

③ **Headphones Jack (PHONES)**

❹ **Operation Switch (OPERATION)**

⑤ **Operation/battery check/ AC connection indicator (OPR/BATT-STDBY ⏻)**

The indicator shows green when the unit is turned on.
When the AC power supply is used, it functions as an AC connection indicator. (The indicator colour changes to red when the unit is turned off.)
When the unit is operated on batteries, it functions as a battery check indicator.

❻ **Function Select Buttons (TAPE • TUNER • CD)**

Press one of these buttons to listen to tapes, radio broadcasts or compact discs.

⑦ **Display Section**

When using AC power or car battery cord, the backlight of the display will be on .

A: Track Display
B: Playing Time Display
C: Program Indicator (PGM)
D: Repeat Indicator (⮌)

⑧ **Remote Control Sensor (SENSOR)**

⑨ **Graphic Equalizer Controls (GRAPHIC EQUALIZER)**

⑩ **Balance Control (BALANCE)**

⓫ **Volume Control (VOLUME)**

⑫ **S-XBS level Control (S-XBS LEVEL)**

⑬ **Disc Tray**

⓮ **CD Open/Close Button (▲ OPEN / CLOSE)**

⓯ **Play/Pause Button (▶/ ❚❚ PLAY / PAUSE)**

Press this button to start the disc play or stop the disc play temporarily

⓰ **Repeat Button (REPEAT)**

⓱ **Memory/Recall Button (MEMORY / RECALL)**

Press this button to program the desired track(s) and to confirm the programmed content(s)

⓲ **Edit Pause Button (EDIT PAUSE)**

Press this button when recording a disc with edit pause function.

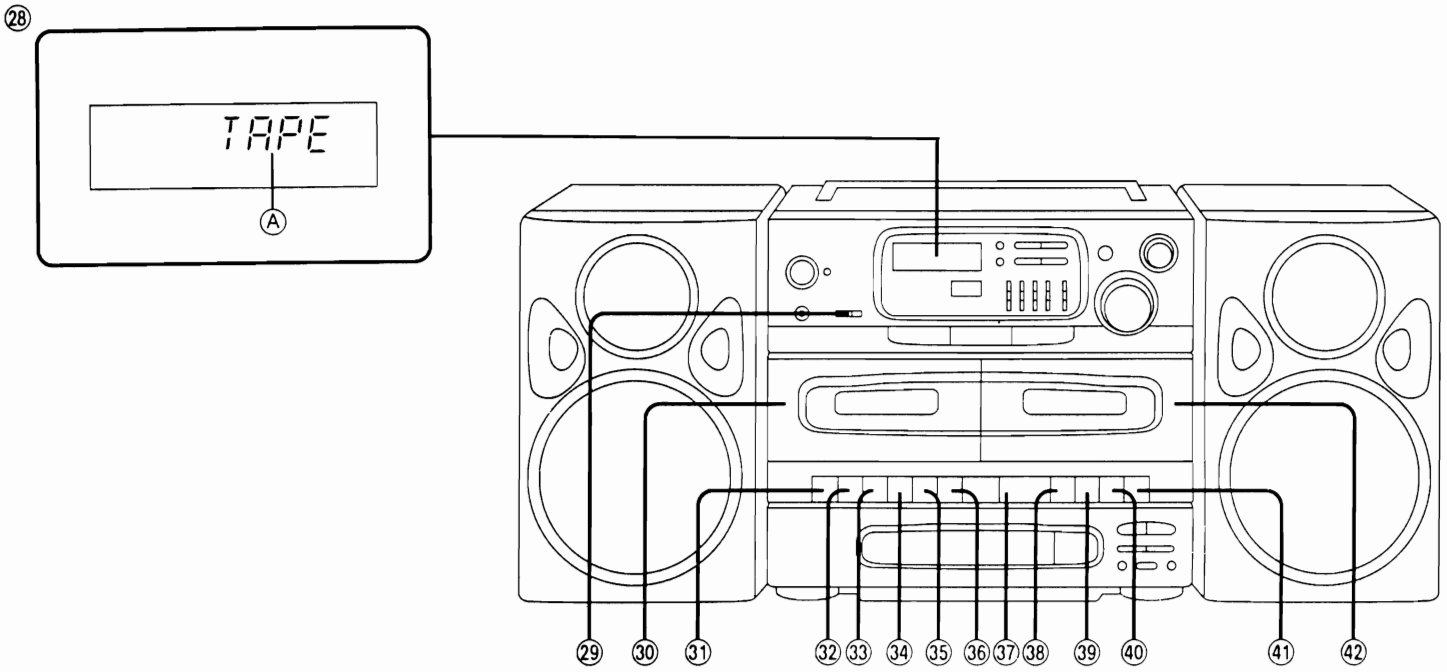
⓳ **Skip/Search Buttons (⏮/◀◀ • ▶▶/⏭)**

Press either button to skip (backward or forward) the tracks, or to search for (backward or forward) the desired portion of the disc.

⓴ **Stop/Clear Button (■ / CLEAR)**

Press this button to stop the disc play or to clear the programmed track(s) and sequence.

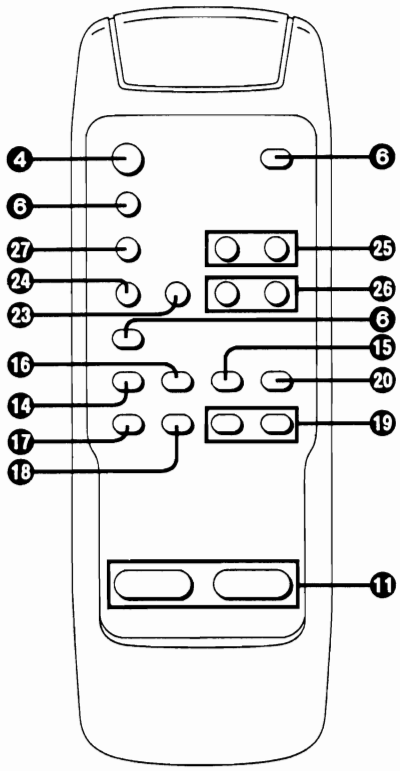
• TAPE DECK CONTROLS



㉘ Display Section

A: Tape mode indicator (TAPE)

• REMOTE CONTROL OPERATION



The functions of buttons ❹, ❻, ❼, ❽, ❾, ❿, ⓫, ⓬, ⓭, ⓮, ⓯, ⓰, ⓱, ⓲, ⓳, ⓴, ㉓, ㉔, ㉕, ㉖, and ㉗ are identical to those described in the Location of Controls.

㉙ Edit Recording Speed / Beat Proof Selector (EDIT MODE / BP)

NOR / ▮ : Normal speed

HIGH / ▮▮ : High speed

㉚ Deck 1 Cassette Compartment Cover

㉛ Record Button (● REC)

Press this button to record a tape.

㉜ Playback Button (► PLAY)

Press this button to playback a tape.

㉝ Rewind/Review Button (◄◄ / REV)

Press this button to rewind the tape during stop condition, or to search the desired portion (backward) during playback.

㉞ Fast Forward/Cue Button (►► / CUE)

Press this button to fast forward the tape during stop condition, or to search the desired portion (forward) during playback.

㉟ Stop/eject Button (⏏ STOP / EJECT)

Press this button to stop the tape during tape movement, and to open the cassette compartment cover during tape stop condition.

㊱ Pause Button (▮▮ PAUSE)

Press this button to stop the tape temporarily.

㊲ Playback Button (► / PLAY)

㊳ Rewind/Review button (◄◄ / REV)

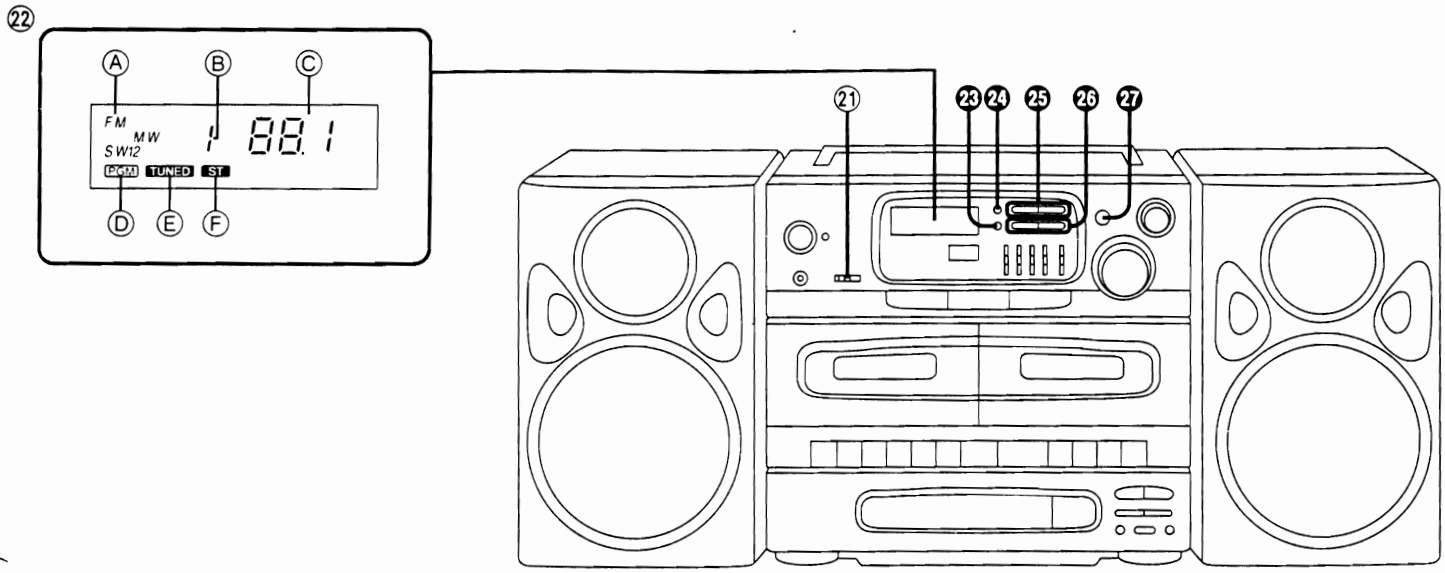
㊴ Fast Forward/Cue Button (CUE / ►►)

㊵ Stop/eject Button (⏏ STOP / EJECT)

㊶ Pause Button (▮▮ PAUSE)

㊷ Deck 2 Cassette Compartment Cover

• TUNER CONTROLS



21 Edit Recording Speed / Beat Proof Selector (EDIT MODE / BP)
Set the selector to reduce "Beat" signal.

22 Display section
A: Band Indicator (FM, MW, SW1, SW2)
B: Preset Channel Indicator
C: Frequency Display
D: Program Indicator (PGM)
E: Tuning Indicator (TUNED)
F: Stereo Indicator (ST)
This indicator does not appear when the FM mode button is pressed to monaural mode.

23 Memory Button (MEMORY)
Press this button to memorize a broadcast frequency into the preset memory.

24 FM Mode Button (FM MODE)
Press this button to select the stereo reception or manual reception.

25 Preset Memory Channel Buttons (PRESET)
If you memorize the broadcast station, you can select the preset channel by pressing one of these buttons.

26 Tuning Buttons (TUNING MANUAL)
These buttons are used to tune the radio to the desired broadcast frequency

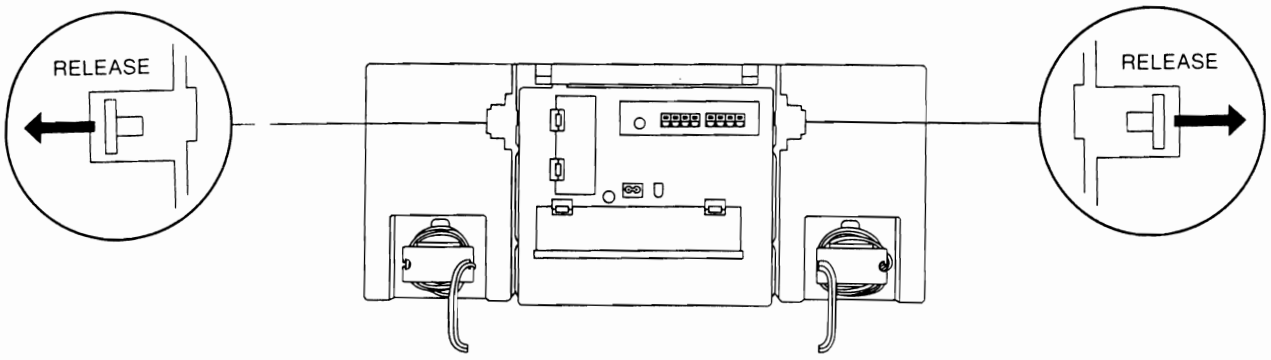
27 Band Button (BAND)
Press this button to select the desired radio band.

■ SPEAKER SYSTEM CONNECTIONS

This unit can be used as a one-piece portable stereo radio cassette recorder, or a three-piece component system, by attaching or detaching the speaker system.

Before attaching or detaching the speakers, be sure to disconnect the speaker cables from the speakers terminals. Be sure to press the operation switch to turn off the unit before connecting/disconnecting the speaker cables.

• Detaching the Speakers

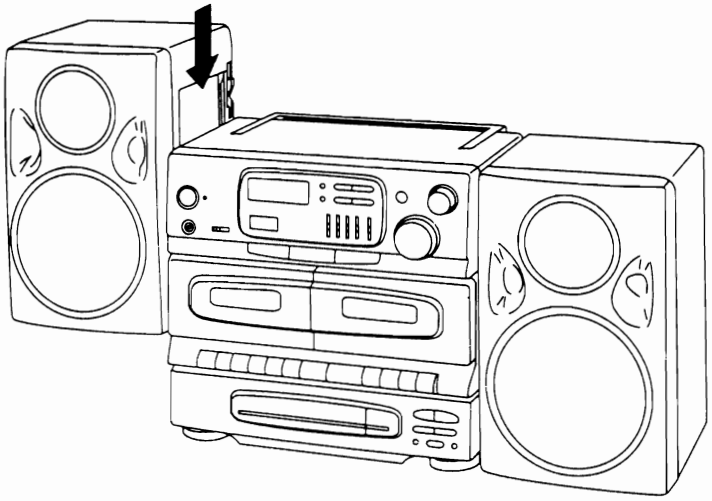


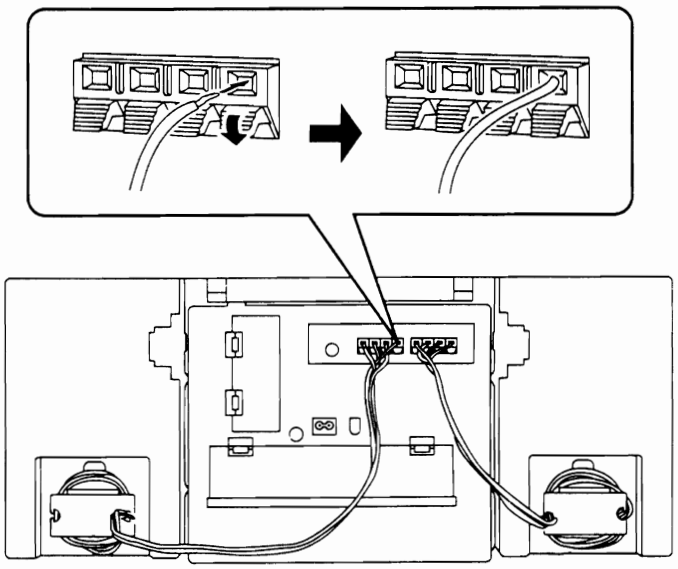
1. Unlock the speaker release levers by pulling them in the direction shown below, and slide up each speakers.

2. Connect the speaker cables to the speaker terminals.

• Attaching the Speakers

1. Align the speakers with the main unit as shown in the figure, interlock the grooves and press down .





2. Connect the colored speaker cables to the same colored speaker terminals.

3. When using the unit with the speakers attached, wind the speaker cables as shown.

Since a strong magnet is used for the speaker, keep magnetized commuter passes, tickets, personal credit cards, recorded tapes or watches, etc. away from the set. The speaker magnet in the set may damage them.

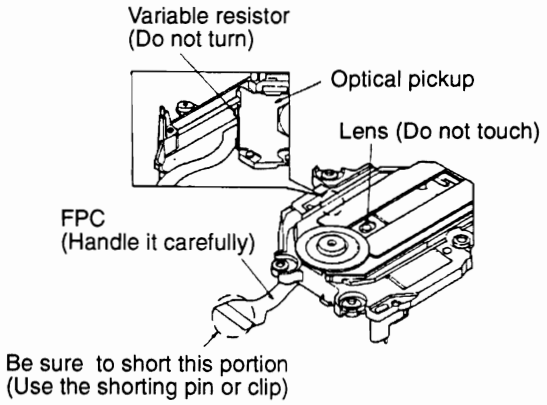
■ HANDLING PRECAUTIONS FOR TRAVERSE DECK

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. To prevent the breakdown of the laser diode , an anti-static shorting pin is inserted into the flexible board (FPC board). When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

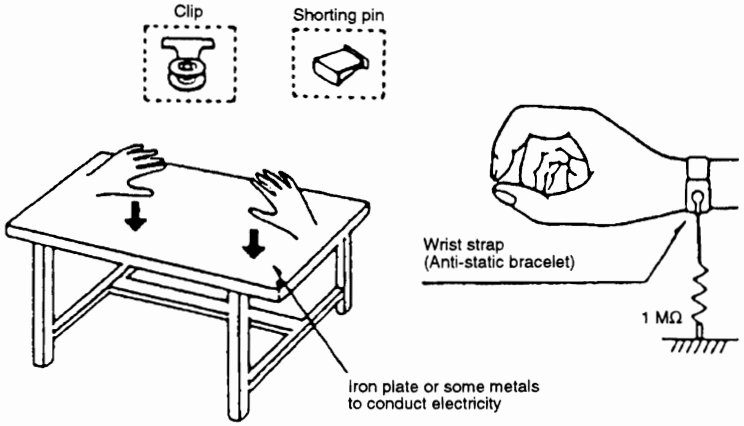


• Grounding for electrostatic breakdown prevention

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.

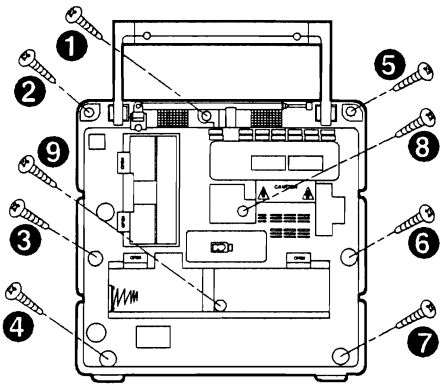
Caution :

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).

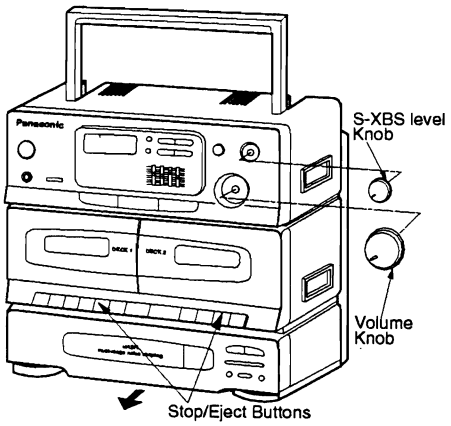


■ DISASSEMBLY INSTRUCTIONS

Ref. No 1	Removal of the Front Cabinet
Procedure 1	

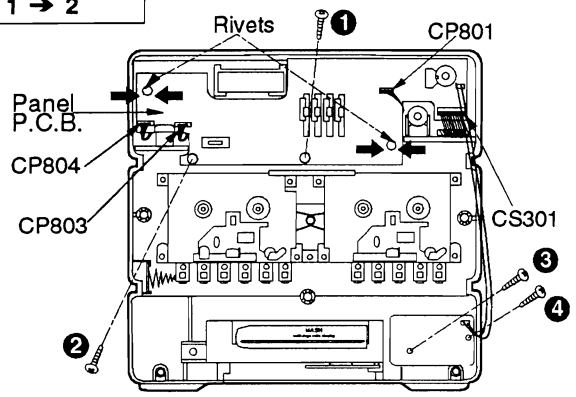


1. Remove the battery cover.
2. Remove the 9 screws (❶ ~ ❾).



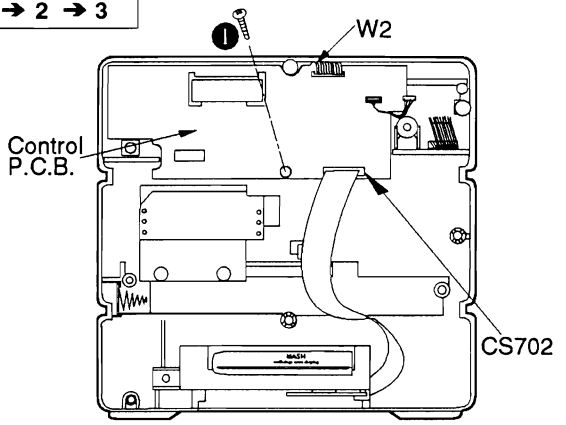
3. Pull out the S-XBS knob and Volume knob.
4. Press the Eject buttons on both tape deck 1 & 2.
5. Remove the front cabinet in the direction of arrow .

Ref. No 2	Removal of the Panel P.C.B.
Procedure 1 → 2	



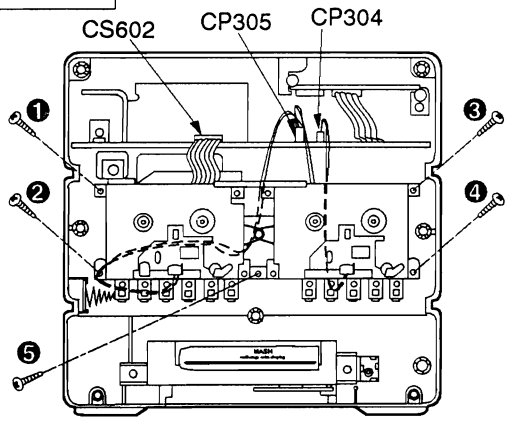
1. Remove 4 screws (❶ ~ ❹).
2. Release 3 connectors (CP801,CP803 ,CP804 & CS301) and 2 rivets in the direction of arrows.
3. Remove the 2 Panel P.C.B .

Ref. No 3	Removal of Control P.C.B.
Procedure 1 → 2 → 3	



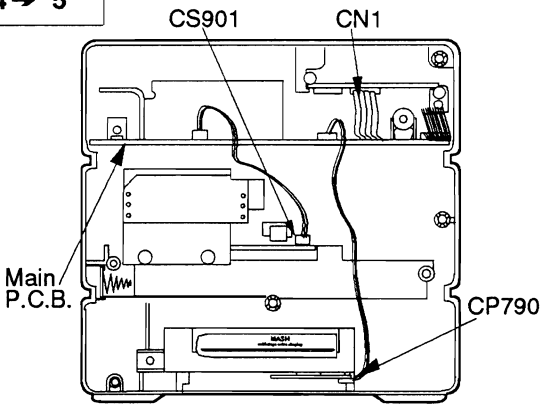
1. Remove 1 screw (❶).
2. Release 2 connectors (W2 & CS702) and remove the Control P.C.B.

Ref. No 4	Removal of Tape Mechanism
Procedure 1 → 2 → 3 → 4	



1. Remove 5 screws (❶~ ❺) .
2. Release 3 connectors (CP304, CP305 & CS602).

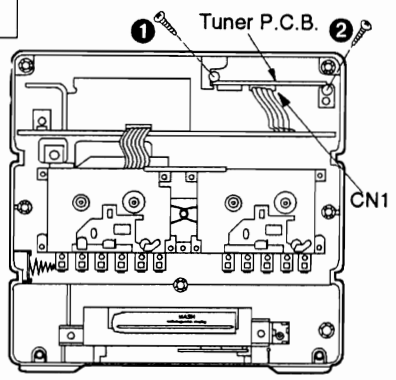
Ref. No 5	Removal of Main P.C.B.
Procedure 1 → 2 → 3 → 4 → 5	



1. Release 3 connectors (CN1, CS901 & CP790) and remove the Main P.C.B.

Ref. No 6	Removal of Tuner P.C.B

Procedure
1 → 2 → 3 → 4 → 5 → 6

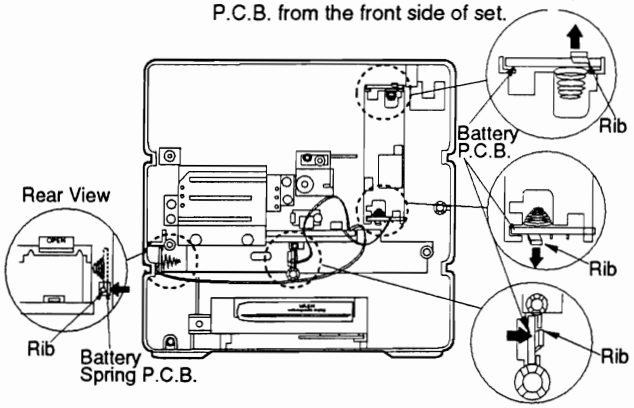


1. Release connector CN1.
2. Remove 2 screws (❶ ~ ❷).
3. Pull out the Tuner P.C.B.

Ref. No 7	Removal of Battery and Battery Spring P.C.B.

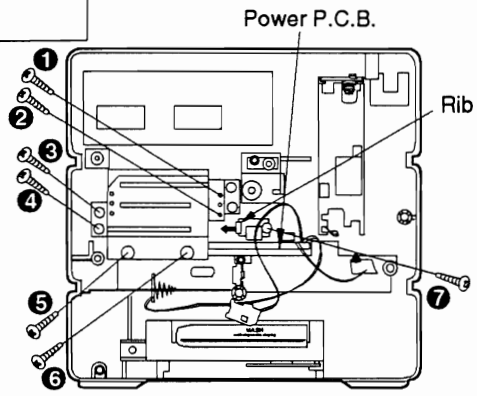
Procedure
1 → 2 → 3 → 4 → 5 → 6 → 7

1. Release the ribs in the direction of arrows and pull out the 3 Battery P.C.B.s .
2. Turn to the rear side of the set and use a screw driver to release the rib in the direction of arrow and pull out the Batttery Spring P.C.B. from the front side of set.



Ref. No 8	Removal of Power P.C.B.

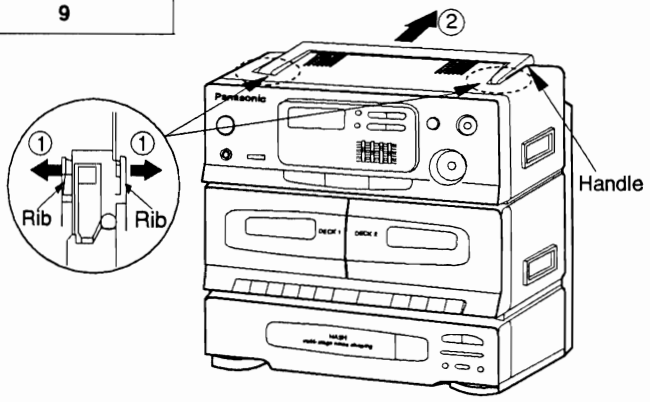
Procedure
1 → 2 → 3 → 4 → 5 → 6 → 7 → 8



1. Remove 7 screws from transformer (❶ ~ ❼).
2. Release the rib in the direction of arrow.

Ref. No 9	Removal of the Handle

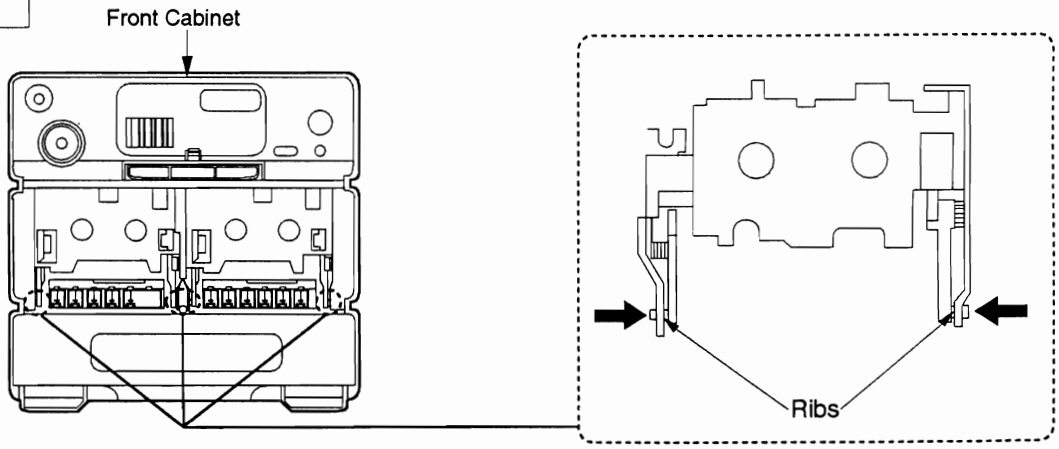
Procedure
9



1. Release 4 ribs in the direction of arrow ①.
2. Pull out the handle in the direction of arrow ② .

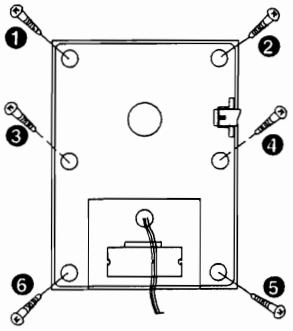
Ref. No 10	Removal of the Cassette Holder

Procedure
1 → 10



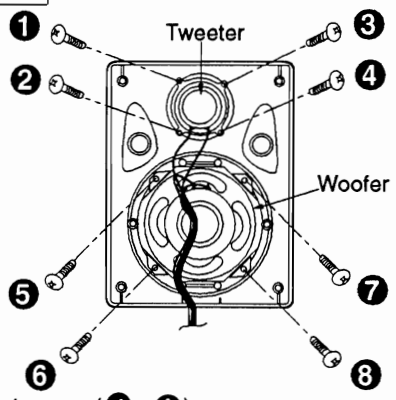
1. Release 2 Ribs in the direction of arrows for both the Left and Right Cassette holder.

Ref. No 11	Removal of the Speaker Front Cabinet
Procedure 11	



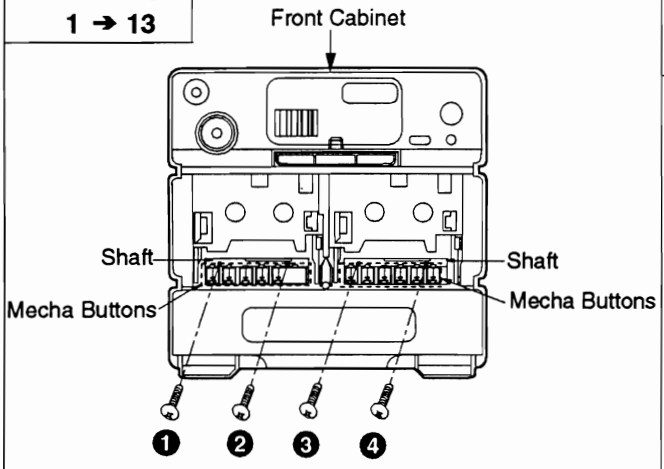
• Remove 6 screws (❶ ~ ❻).

Ref. No 12	Removal of the Woofer and Tweeter
Procedure 11 → 12	



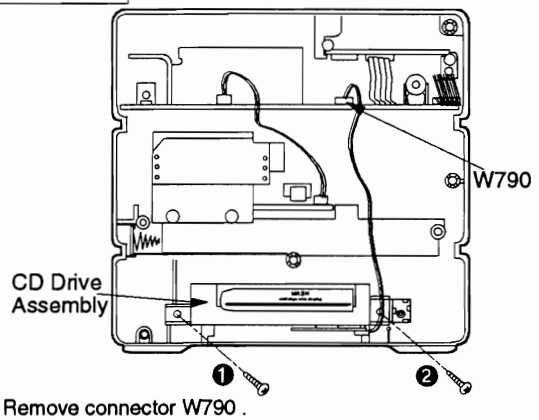
1. Remove 4 screws (❶ ~ ❹) .
2. Remove Solder point at Tweeter before removing the Woofer .

Ref. No 13	Removal of the Mechanism Buttons
Procedure 1 → 13	



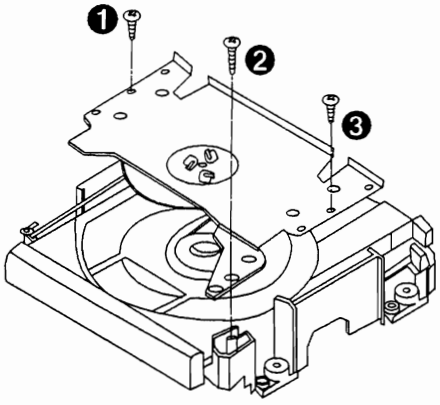
1. Remove 4 screws (❶ ~ ❹) and remove all Mechanism Button on both Tape Deck.

Ref. No 14	Removal of CD Drive Assembly
Procedure 1 → 2 → 3 → 4 → 14	

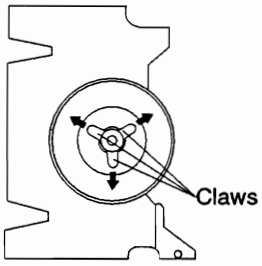


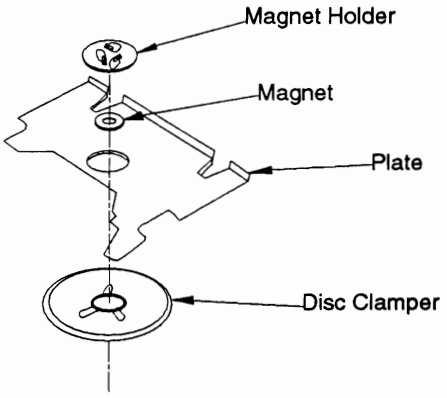
1. Remove connector W790 .
2. Remove 2 screws (❶ ~ ❷) and remove the CD Drive Assembly .

Ref. No 15	Removal of the Disc Clamper
Procedure 1 → 2 → 3 → 4 → 14 → 15	1. Remove 3 screws (❶ ~ ❸).



•Disassembly of the Disc Clamper

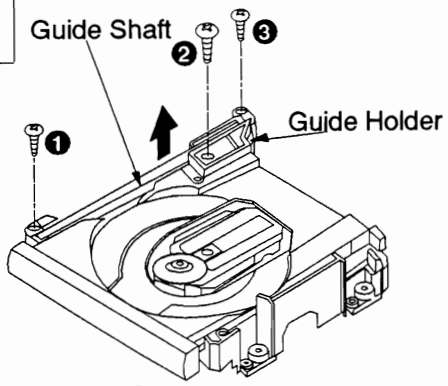




1. Release 3 claws in the direction of arrows.
2. Disassemble the Disc Clamper as shown above.

Ref. No 16	Removal of the Guide Shaft and Guide Shaft Holder

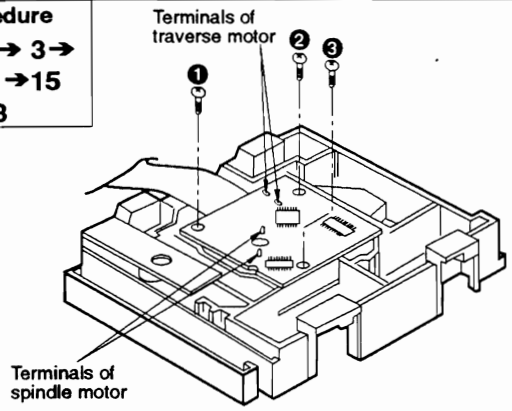
Procedure
1 → 2 → 3 → 4 → 14 → 15 → 16



1. Remove 3 screws (❶ ~ ❸).
2. Remove the guide shaft and guide shaft holder in the direction of arrow .

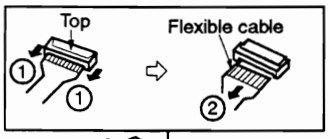
Ref. No 18	Removal of the CD P.C.B.

Procedure
1 → 2 → 3 → 4 → 14 → 15 → 18

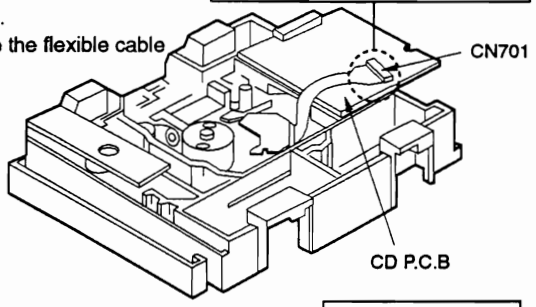


1. Remove 3 screws (❶ ~ ❸).
2. Desolder the 2 terminals at the spindle motor .
3. Desolder another 2 terminals at the traverse motor .

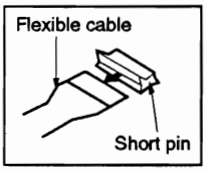
•Removal of the flexible cable
Push the top of the connector in the direction of arrow ①, and then pull out the flexible cable in the direction of arrow ② .



4. Remove the flexible cable (CN701) .

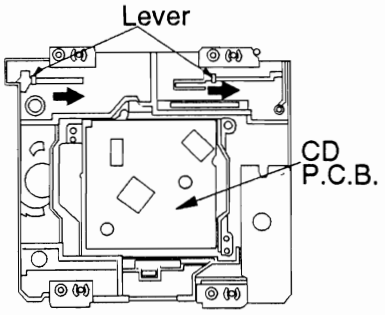


Note:
Insert a short pin into the flexible cable for traverse unit

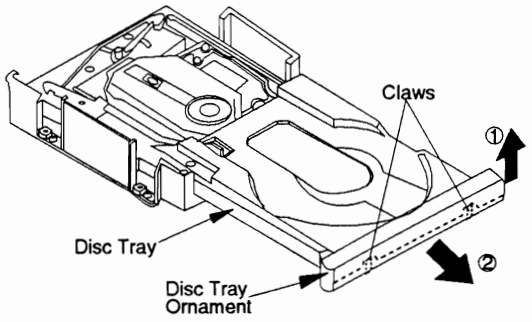


Ref. No 17	Removal of the Disc Tray

Procedure
1 → 2 → 3 → 4 → 14 → 15 → 16 → 17



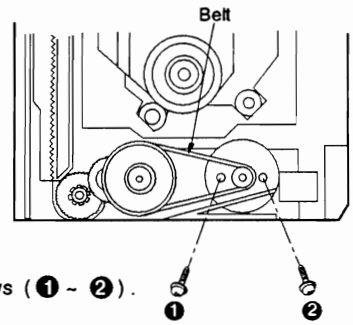
1. Slide the lever fully in the direction of arrows . (The Traverse Unit goes down)



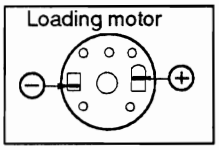
2. Release 2 claws and remove the Disc Tray Ornament in the direction of arrow ① .
3. Remove the Disc Tray in the direction of arrow ② .

Ref. No 19	Removal of the Loading Motor P.C.B. and Loading Motor

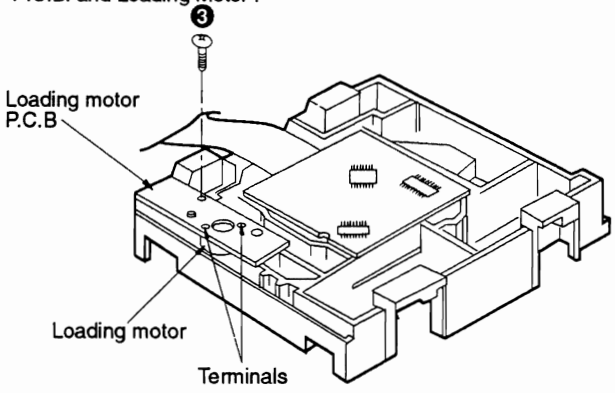
Procedure
1 → 2 → 3 → 4 → 14 → 15 → 16 → 17 → 19



1. Remove the belt .
2. Remove the 2 screws (❶ ~ ❷).



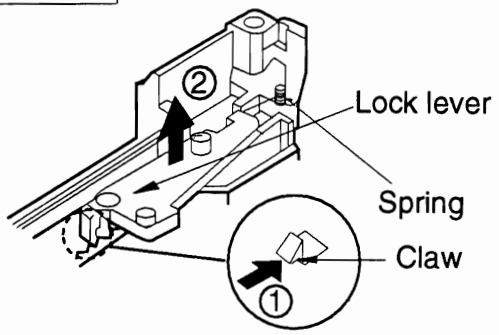
3. Remove 1 screw (❸).
4. Desolder the 2 terminals of the loading motor and remove the Loading Motor P.C.B. and Loading Motor .



Ref. No 20	Removal of the Lock Lever

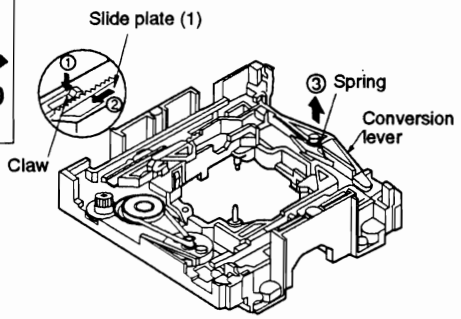
Procedure
1 → 2 → 3 → 4 → 14 → 15 → 16 → 17 → 20

1. Remove the spring .
2. Release the claw in the direction of the arrow ① , and then remove the lock lever in the direction of arrow ②.



Ref. No 22	Removal of the Conversion Lever

Procedure
1 → 2 → 3 → 4 → 14 → 15 → 16 → 17 → 20 → 22



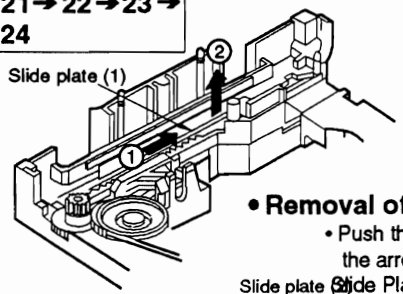
1. Remove the spring .
2. Push the claw in the direction of arrow ① and then move the slide plate (1) in the direction of arrow ② .
3. Remove the Conversion lever in the direction of arrow ③.

Ref. No 24	Removal of the Slide Plate (1) and Slide Plate (2)

Procedure
1 → 2 → 3 → 4 → 14 → 15 → 16 → 17 → 20 → 21 → 22 → 23 → 24

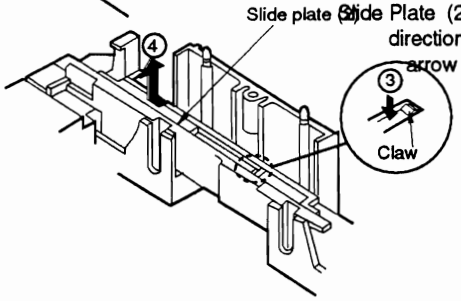
• Removal of the Slide Plate (1)

• Move the Slide Plate (1) in the direction of the arrow ① ,and remove the Slide Plate (1) in the direction of the arrow ②.



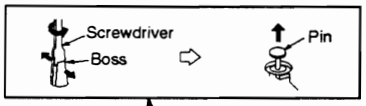
• Removal of the Slide Plate (2)

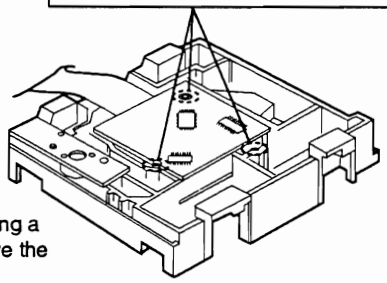
• Push the claw in the direction of the arrow ③ , and remove the Slide Plate (2) in the direction of the arrow ④ .



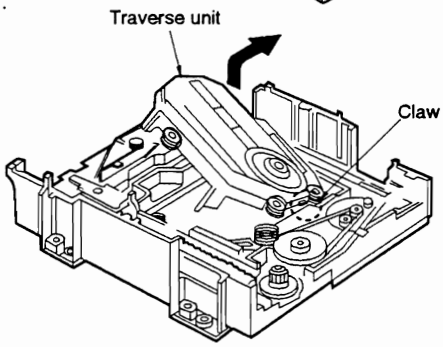
Ref. No 21	Removal of the Traverse Unit

Procedure
1 → 2 → 3 → 4 → 14 → 15 → 16 → 17 → 18 → 21





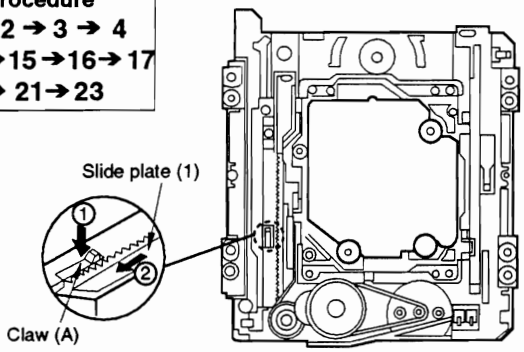
1. Widen 3 bosses by using a screwdriver and remove the 3 pins .



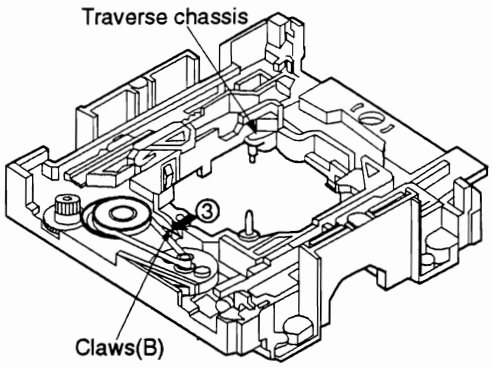
2. Release the claw and then remove the Traverse Unit in the direction of arrows

Ref. No 23	Removal of the Traverse Chassis

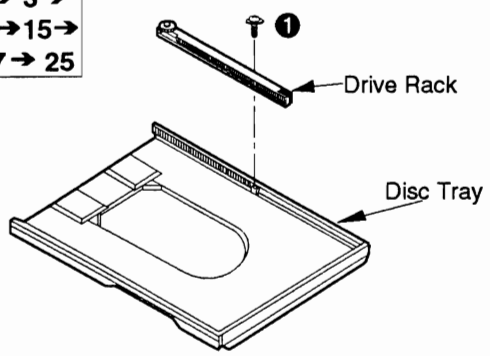
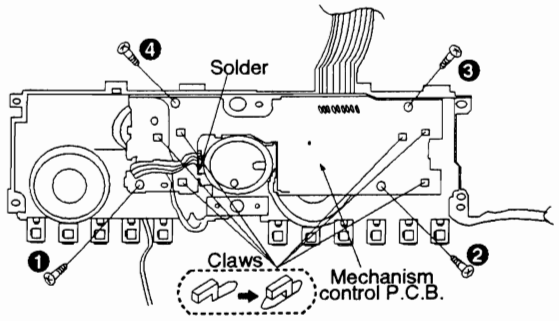
Procedure
1 → 2 → 3 → 4 → 14 → 15 → 16 → 17 → 18 → 21 → 23



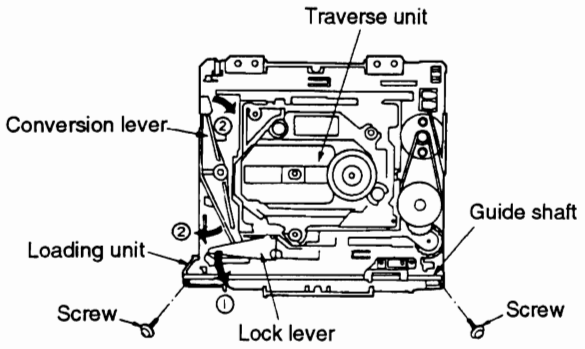
1. Push the claw (A) in the direction of arrow ① , and then move the slide plate (1) in the direction of arrow ② .



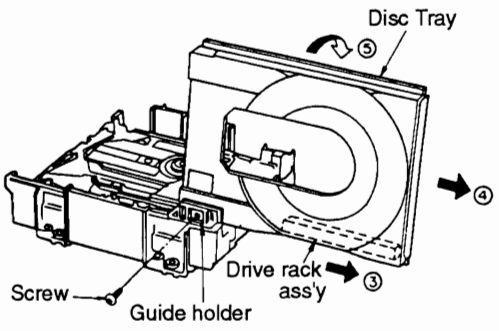
2. Push 2 claws (B) in the direction of arrow ③ , and then remove the Traverse Chassis .

Ref. No 25	Removal of the Drive Rack	Ref. No 26	Removal of the Mechanism P.C.B.
Procedure 1 → 2 → 3 → 4 → 14 → 15 → 16 → 17 → 25	 •Remove 1 screw (❶).	Procedure 1 → 2 → 3 → 4 → 26	1. Remove solder points on motor terminal . 2. Remove 4 screws. (❶ ~ ❹) . 3. Cut wire-tiie . 4. Release the 6 claws . 

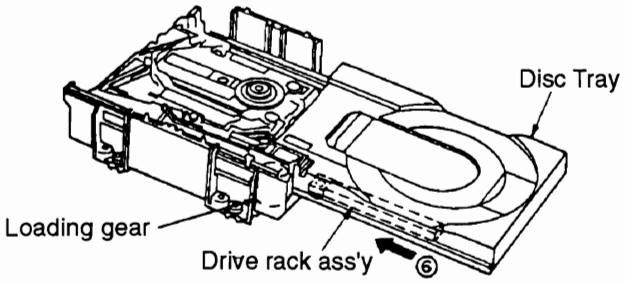
■ INSTALLING DISC TRAY



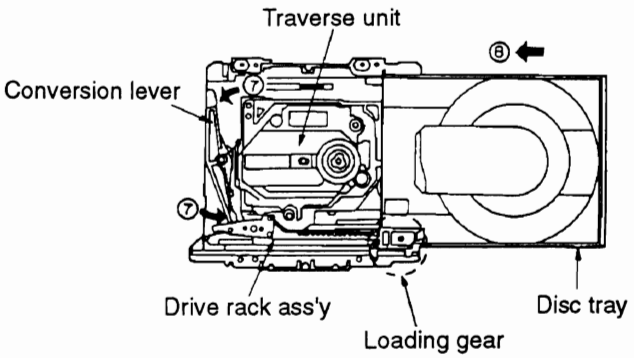
1. Move the Lock Lever in the direction of arrow ① and the Conversion Lever in the direction of arrow ② .
   (The Traverse Unit rises)
2. Install the guide shaft on the loading unit fixing the 2 screws.



3. Install the Disc Tray on the guide holder with the screw as shown above .
4. Slide the drive Rack Ass'y fully in the direction of arrow ③ .
5. Slide the Disc Tray fully in the direction of arrow ④ .
6. Lay the Disc Tray down in the direction of arrow ⑤ .

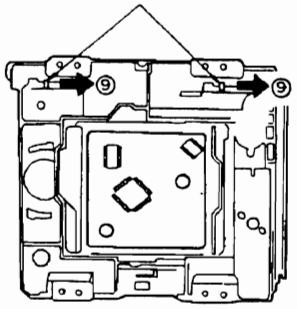


7. Slide the Drive Rack Ass'y in the direction of arrow ⑥ .
8. Hold the Disc Tray and slide the Drive Rack Ass'y fully in the direction of arrow ⑥ . (The Drive Rack Ass'y should not be able to slide at all and the loading gear is engaged with the Drive Rack Ass'y .)

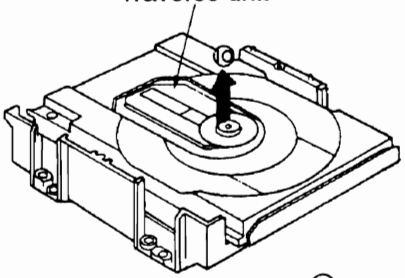


9. Locate the Conversion Lever fully in the direction of arrow ⑦ , and the Drive Rack Ass'y engages with the Loading Gear (1).
   (The Traverse Unit is lowered)
10. Slide the Disc Tray in the direction of arrow ⑧ .

Slide plate (2)

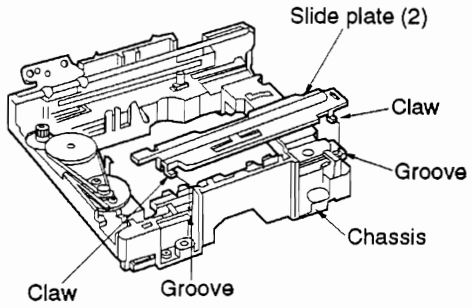


Traverse unit

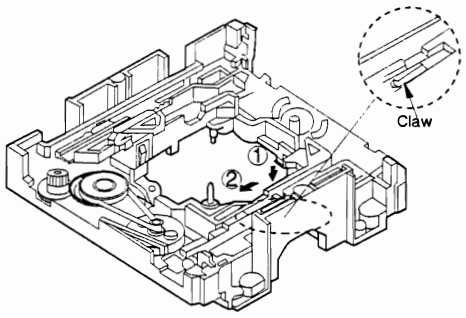


11. Slide the Slide Plate (2) in the direction of arrow ⑨ and check if the Traverse Unit rises in the direction of arrow ⑩ .

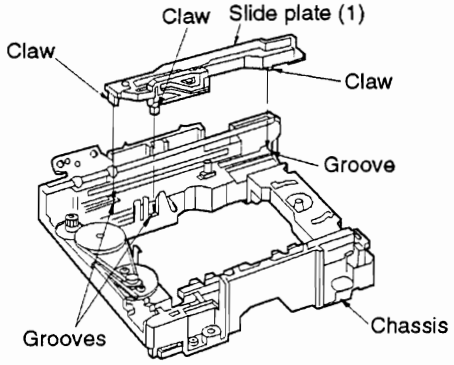
■ CD UNIT ASSEMBLY



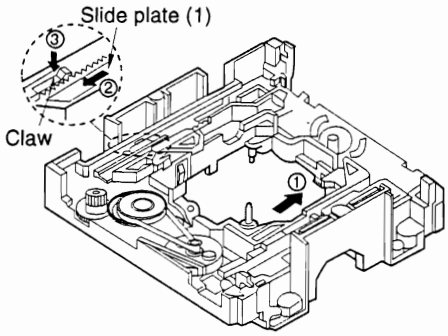
1. Install the Slide Plate (2) on the chassis by fitting the 2 claws of the Slide Plate (2) in the two grooves of the chassis .



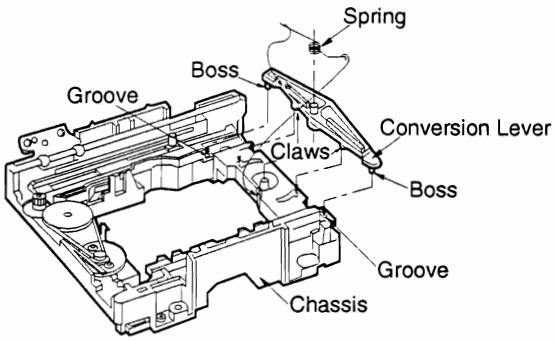
2. Slide the Slide Plate (2) in the direction of arrow ② while keeping it held down lightly in the direction of arrow ① .



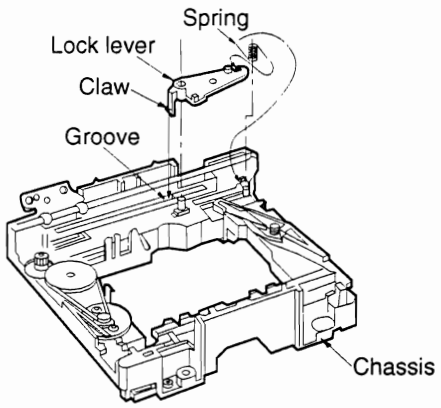
3. Install the Slide Plate (1) on the Chassis by fitting the 3 claws of the Slide Plate (1) in the 3 grooves of the Chassis as shown above .



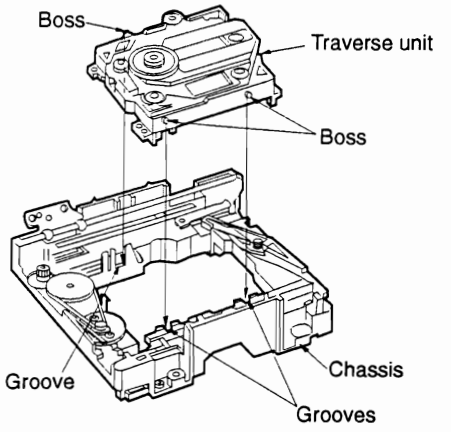
4. Slide the Slide Plate (2) fully in the direction of arrow ① .
5. Keep holding down the cllaw in the direction of arrow ③ and slide the Slide Plate (1) in the direction of arrow ② to stop. [The Slide Plate (1) is not able to slide]



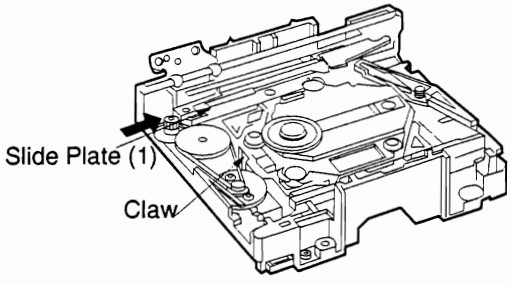
6. Install the Conversion Lever on the Chassis by fitting the 2 claws of the Conversion Lever in the 2 grooves of the Chassis and the 2 bosses in the 2 grooves as shown above .



7. Install the Lock Lever on the Chassis by fitting the claw of the Lock Lever in the groove of the chassis.
8. Install the spring on the Lock Lever and the Chassis .



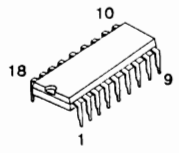
9. Install the Traverse Unit on the Chassis by fitting the 3 bosses of the Traverse Unit in the 3 grooves of the Chassis .



10. Ensure that the Traverse Unit is engaged to the 1 claw .
11. Slide the Slide Plate (1) in the direction of the arrow.
[The Slide Plate (1) is not able to slide only a little]

■ TERMINAL GUIDE OF IC'S, TRANSISTORS & DIODES

AN7273A



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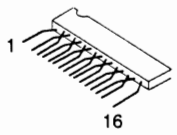

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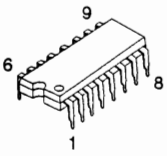

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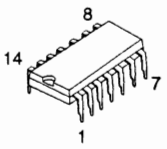

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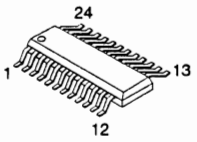

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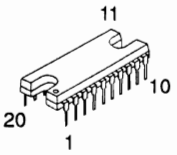

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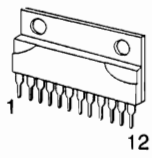

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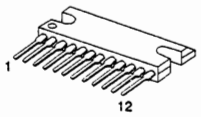

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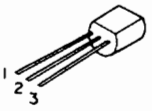

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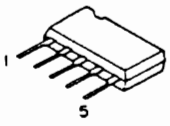

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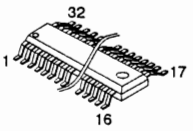

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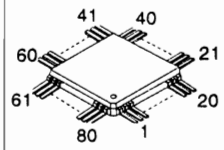

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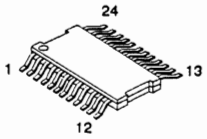

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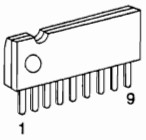

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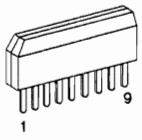

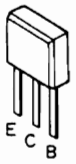

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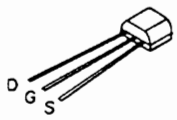

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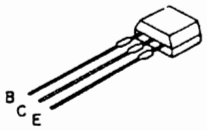
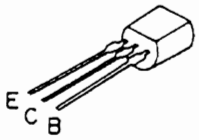
RVTDTC124EST
BA1A4MTA

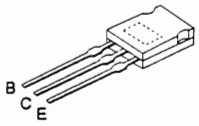


BN1A4MTA
2SD1020HTA
RVTDTC143XST
RVTDTA143XST
RVTDTC144EST

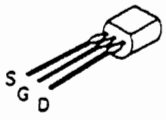


2SA564RTA
2SA564STA
2SC829CTA
2SC1684HRTA
2SC2001KTA
2SC1685RTA

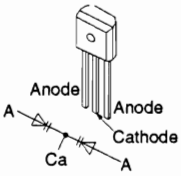
2SD2037ETA



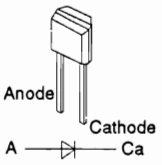
2SK301QTA

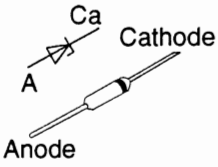


1SV147T4MATU



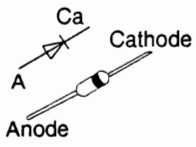
RVDSVC321



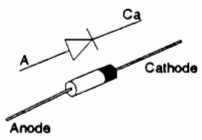


RVDMTZ5R1BTA
RVDMTZ5R6BTA
RVDMTZ6R8BTA
RVDMTZ11BTA
RVDMTZ18BTA
RVDMTZ8R2CTA
RVDMTZ7R5BTA

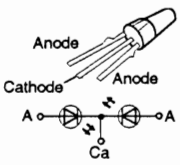
RVD1SS133TA



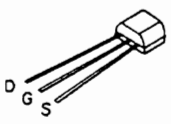
1N5402BM21



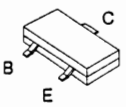
LN11WP23TDA



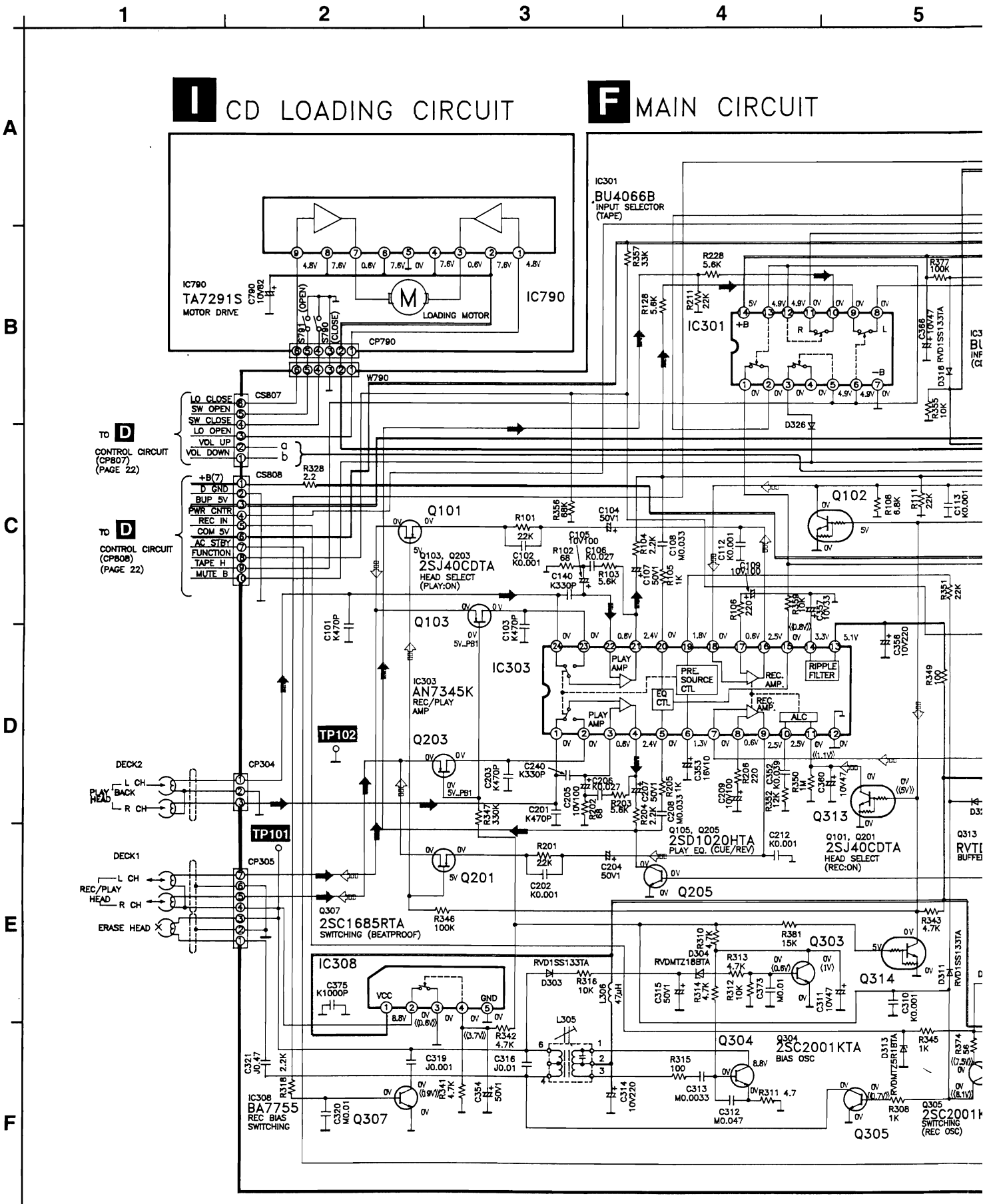
2SK544F-AC

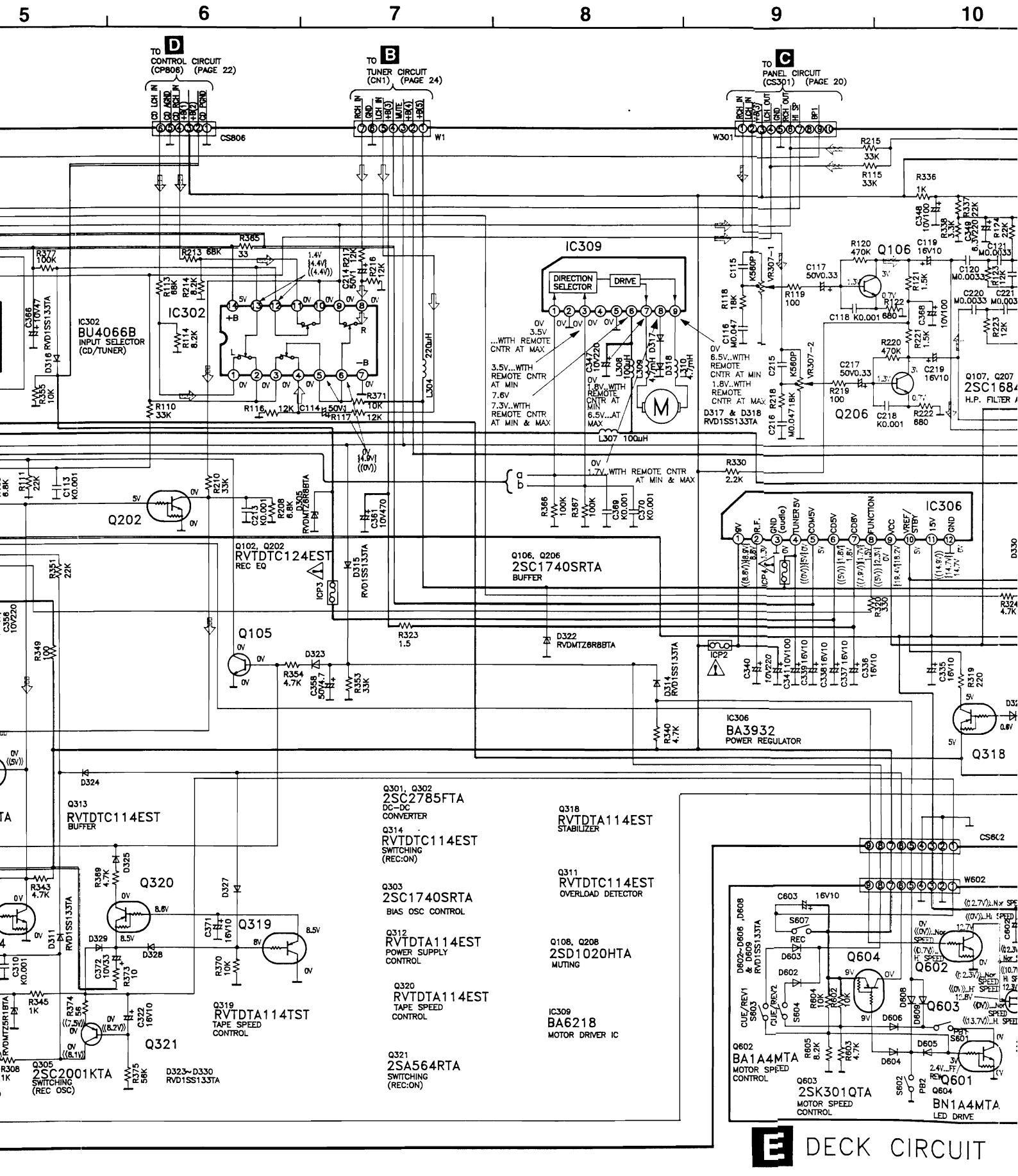


2SB709S



■ SCHEMATIC DIAGRAM




5
6
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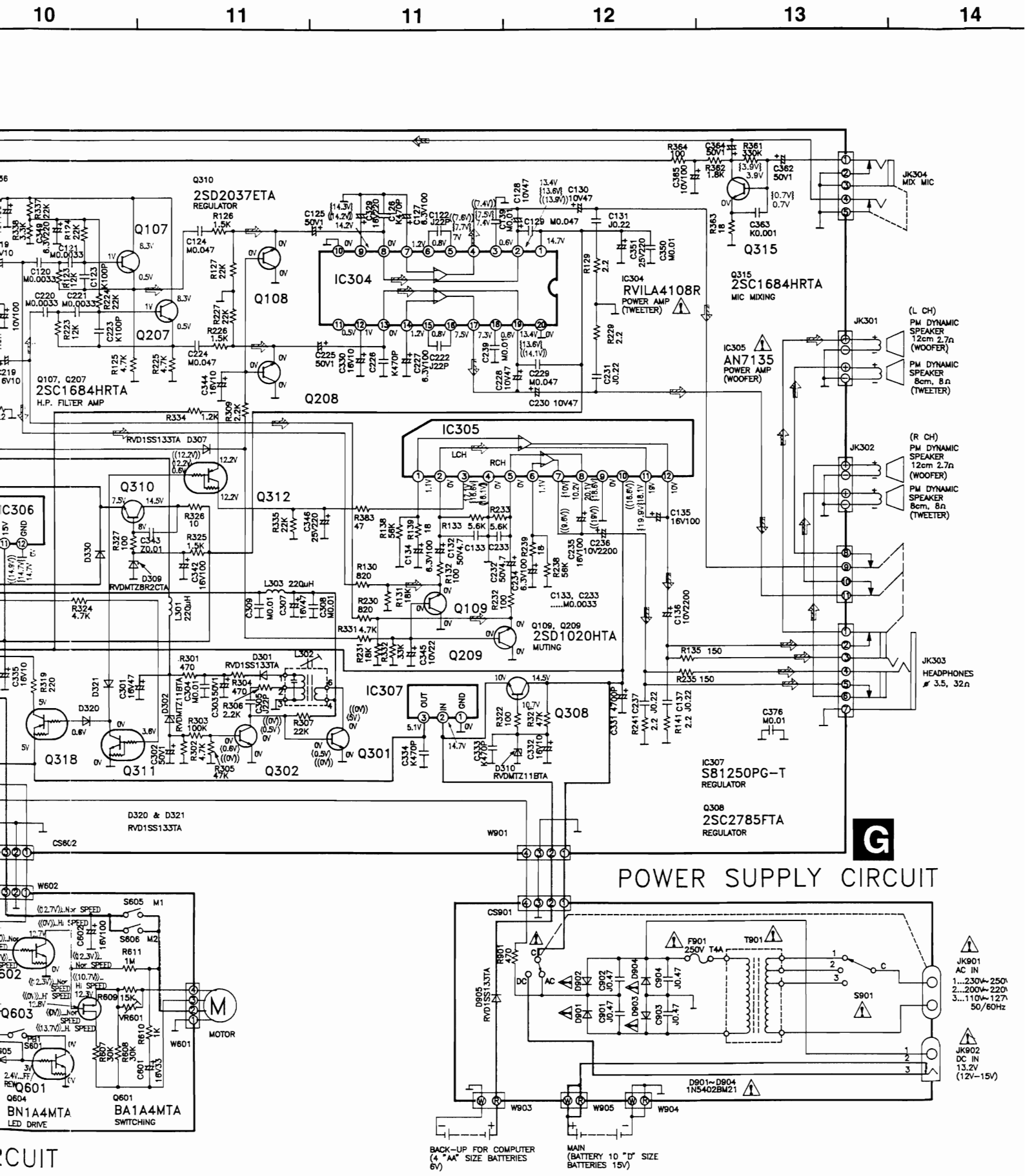
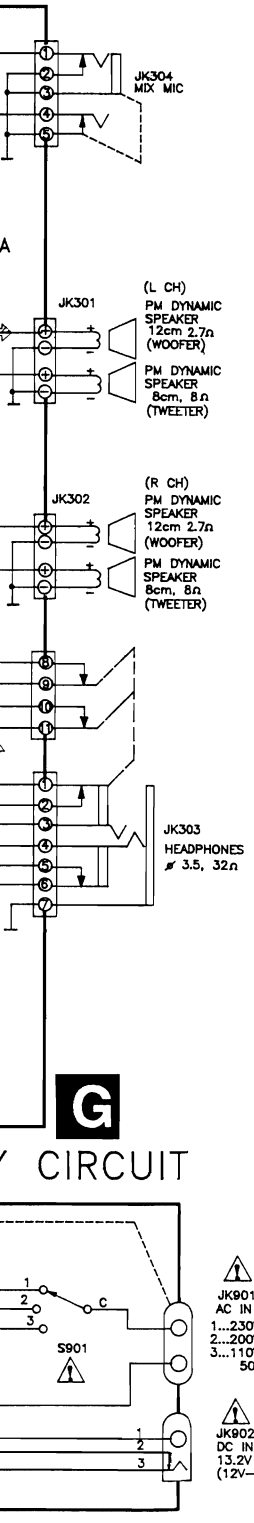
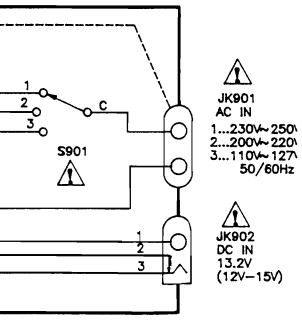
9
10
TO D CONTROL CIRCUIT (CP806) (PAGE 22)
TO B TUNER CIRCUIT (CN1) (PAGE 24)
TO C PANEL CIRCUIT (CS301) (PAGE 20)
CS806
W1
W301
IC302
BU4066B
INPUT SELECTOR
(CD/TUNER)
IC309
DIRECTION SELECTOR
DRIVE
...WITH REMOTE CNTR AT MAX
3.5V...WITH REMOTE CNTR AT MIN
7.6V
7.3V..WITH REMOTE CNTR AT MIN & MAX
1.8V..WITH REMOTE CNTR AT MIN
6.5V...AT MAX
6.5V..WITH REMOTE CNTR AT MIN
1.8V..WITH REMOTE CNTR AT MAX
D317 & D318
RVD1SS133TA
L307 100uH
Q106
Q206
Q107, Q207
2SC1684
H.P. FILTER
Q202
Q102, Q202
RVTDTC124EST
REC EQ
Q105
Q106, Q206
2SC1740SRTA
BUFFER
1.7V..WITH REMOTE CNTR AT MIN & MAX
IC306
D322
RVDMTZ6R8BTA
IC306
BA3932
POWER REGULATOR
Q318
Q313
RVTDTC114EST
BUFFER
Q320
Q319
Q321
Q301, Q302
2SC2785FTA
DC-DC CONVERTER
Q314
RVTDTC114EST
SWITCHING (REC:ON)
Q303
2SC1740SRTA
BIAS OSC CONTROL
Q312
RVTDTA114EST
POWER SUPPLY CONTROL
Q320
RVTDTA114EST
TAPE SPEED CONTROL
Q321
2SA564RTA
SWITCHING (REC:ON)
Q318
RVTDTA114EST
STABILIZER
Q311
RVTDTC114EST
OVERLOAD DETECTOR
Q108, Q208
2SD1020HTA
MUTING
IC309
BA6218
MOTOR DRIVER IC
Q319
RVTDTA114TST
TAPE SPEED CONTROL
Q305
2SC2001KTA
SWITCHING (REC OSC)
D323~D330
RVD1SS133TA
CS602
W602
Q604
Q602
Q603
Q601
Q602
BA1A4MTA
MOTOR SPEED CONTROL
Q603
2SK301QTA
MOTOR SPEED CONTROL
Q604
BN1A4MTA
LED DRIVE
E DECK CIRCUIT


10
11
11
12
13
14
Q310
2SD2037ETA
REGULATOR
Q107
Q207
Q107, Q207
2SC1684HRTA
H.P. FILTER AMP
Q108
Q208
IC304
RVILA4108R
POWER AMP
(TWEETER)
Q315
2SC1684HRTA
MIC MIXING
JK304
MIX MIC
IC305
AN7135
POWER AMP
(WOOFER)
JK301
(L CH)
PM DYNAMIC
SPEAKER
12cm 2.7Ω
(WOOFER)
PM DYNAMIC
SPEAKER
8cm, 8Ω
(TWEETER)
JK302
(R CH)
JK303
HEADPHONES
Ø 3.5, 32Ω
IC306
Q312
Q109
Q109, Q209
2SD1020HTA
MUTING
Q209
IC307
S81250PG-T
REGULATOR
Q308
2SC2785FTA
REGULATOR
Q318
Q311
Q302
Q301
D320 & D321
RVD1SS133TA
W901
CS602
W602
S605 M1
S606 M2
Q603
MOTOR
W601
Q601
BA1A4MTA
SWITCHING
Q604
BN1A4MTA
LED DRIVE
G
POWER SUPPLY CIRCUIT
CS901
F901
250V T4A
T901
S901
JK901
AC IN
1...230V~ 250
2...200V~ 220
3...110V~ 127
50/60Hz
JK902
DC IN
13.2V
(12V–15V)
D901~D904
1N5402BM21
W903
W905
W904
BACK-UP FOR COMPUTER
(4 "AA" SIZE BATTERIES
6V)
MAIN
(BATTERY 10 "D" SIZE
BATTERIES 15V)

14 15 16 17 18



G CIRCUIT



Notes :

- •S401 : Power switch. (POWER)
- •S402-1 : Edit switch in Nor. Speed position . (EDIT MODE)
- •S402-2 : Beat Proof switch in BPII position . (BP)
- •S403 : Band select switch. (BAND)
- •S404 : FM mode switch. (FM MODE)
- •S405 : Memory switch. (MEMORY)
- •S406 : Tuning down switch. (TUNING [-])
- •S407 : Tuning up switch. (TUNING [+])
- •S408 : Memory down switch. (PRESET∨)
- •S409 : Memory up switch. (PRESET∧)
- •S410 : CD function select switch. (CD)
- •S411 : Tuner function select switch. (TUNER)
- •S412 : Tape function select switch. (TAPE)
- •S413 : CD open/close switch. (⏏ OPEN/CLOSE)
- •S414 : CD Play/pause select switch. (▶ /II)
- •S415 : CD Stop/cancel select switch. (■ /CLEAR)
- •S416 : CD Edit/pause select switch. (REPEAT)
- •S417 : CD Skip/search switch. (▶▶I)
- •S418 : CD RevSkip/search switch. (I◀◀)
- •S419 : Edit pause switch. (EDIT PAUSE)
- •S420 : Memory/Recall switch. (MEMORY/RECALL)
- •S601 : Deck 1 Tape Playback switch.
- •S602 : Deck 2 Tape Playback switch.
- •S603 : Deck 1 Fastwind select switch.
- •S604 : Deck 2 Fastwind select switch.
- •S605 : Deck 1 Motor switch.
- •S606 : Deck 2 Motor switch.
- •S607 : Deck 1 Record select switch.
- •S701 : REST switch.
- •S790 : CD disc tray loading close detect switch.
- •S791 : CD disc tray loading open detect switch.
- •S901 : AC/DC select switch in "AC" position.
- •VR1 : Volume Control VR.
- •VR301-1,VR301-2 : Graphic Equalizer VR (330Hz).
- •VR302-1,VR302-2 : Graphic Equalizer VR (1KHz).
- •VR303-1,VR303-2 : Graphic Equalizer VR (3.3KHz).
- •VR304-1,VR304-2 : Graphic Equalizer VR (10KHz).
- •VR305 : Balance control VR.
- •VR306-1,VR306-2 : S-XBS control VR.
- •VR307-1,VR307-2 : Volume control motor VR.
- •VR601 : Tape speed adjustment VR.

DC voltage measurement are taken with electronic voltmeter.
The negative terminal of the battery provides negative meter connection point.

< Main/Control/Tuner/Power/Deck/Panel section >
No mark... TAPE PLAYBACK (DECK2) << >> ...TAPE RECORDING
(( )) .....CD < > ...FM ( ) ...AM { } ...TUNER

<Compact Disc section>
No Mark .....STOP ( ) .....Playback (Test Disc 1KHz, L+R 0dB)

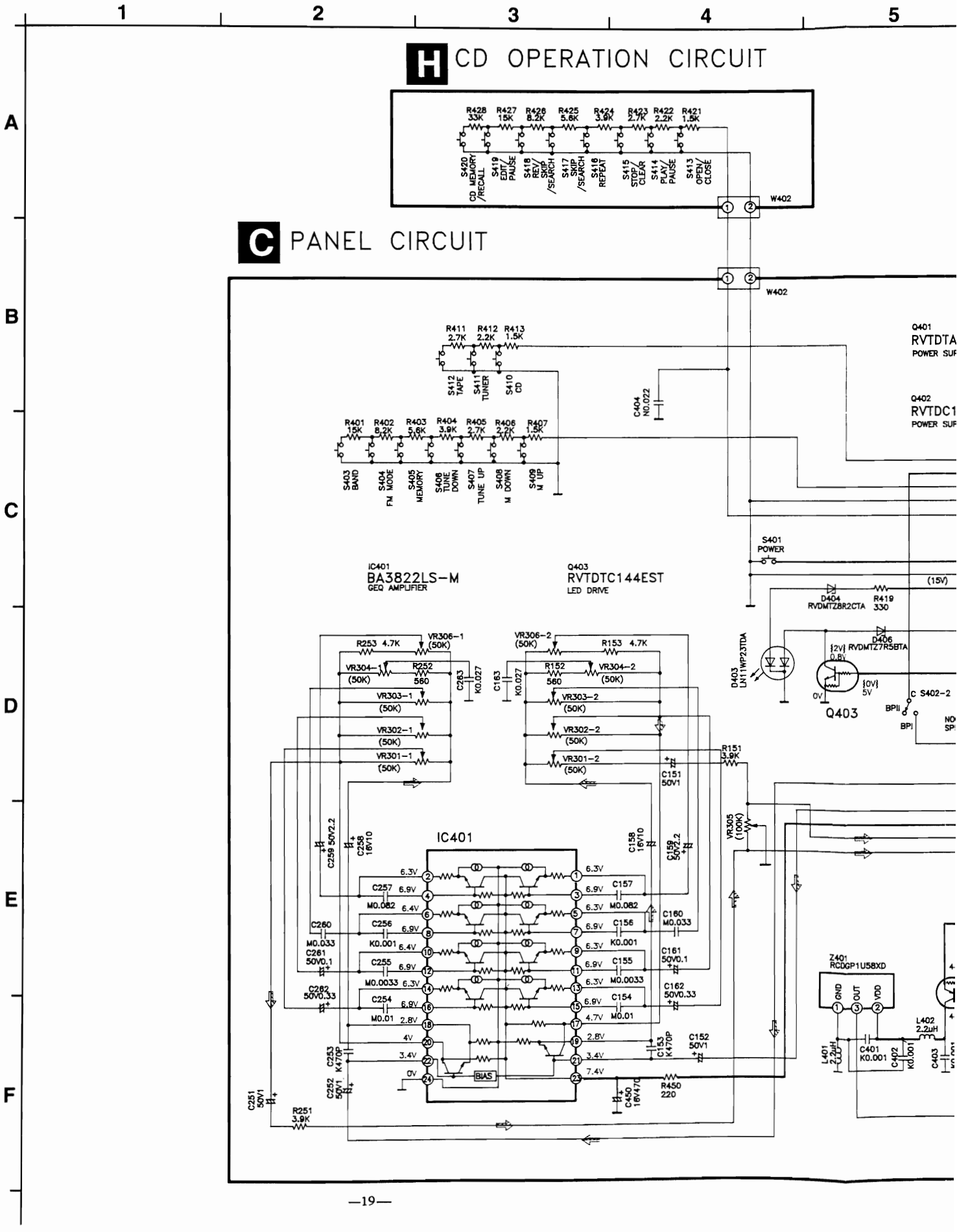
- Battery Current :

Vol.min	230mA	(FM/AM)	
	280mA	(PLAYBACK)	
	330mA	(RECORDING)	
	400mA	(CD)	
Vol.max	690mA	(FM/AM)	
	870mA	(PLAYBACK)	
	950mA	(RECORDING)	
	1.69A	(CD)	

Measurement instruction
(AM:74dB/m 30%Mod
FM: 60dB 30%Mod
TAPE: 315Hz, 0dB
CD: 1kHz, 0dB)

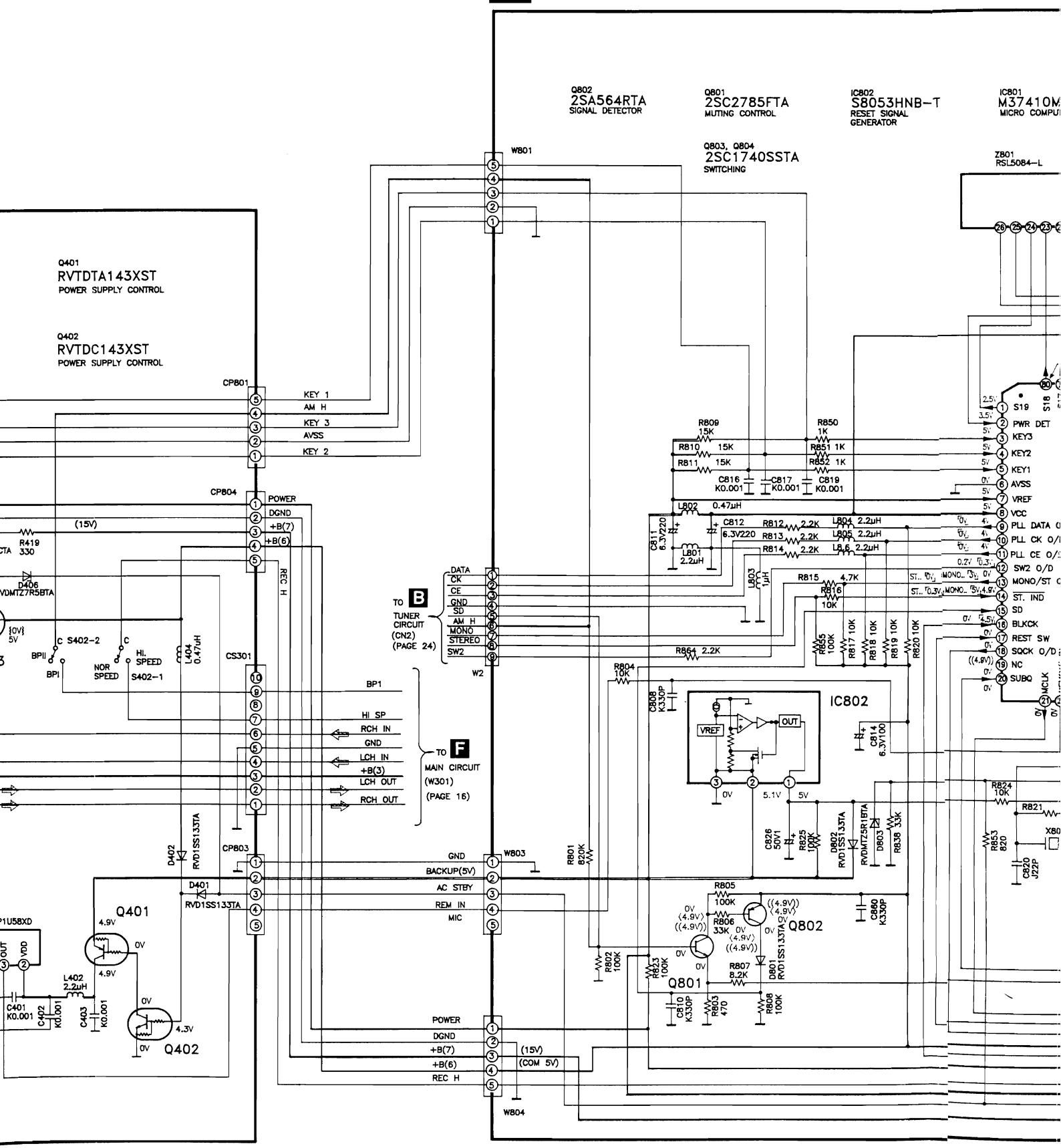
- Important Safety Notice:
  Component identified by ⚠ mark have special characteristics important for safety.
  When replacing any of these components ,use only manufacturer's specified parts.
- **This schematic diagram may be modified at any time with the development of new technology.**

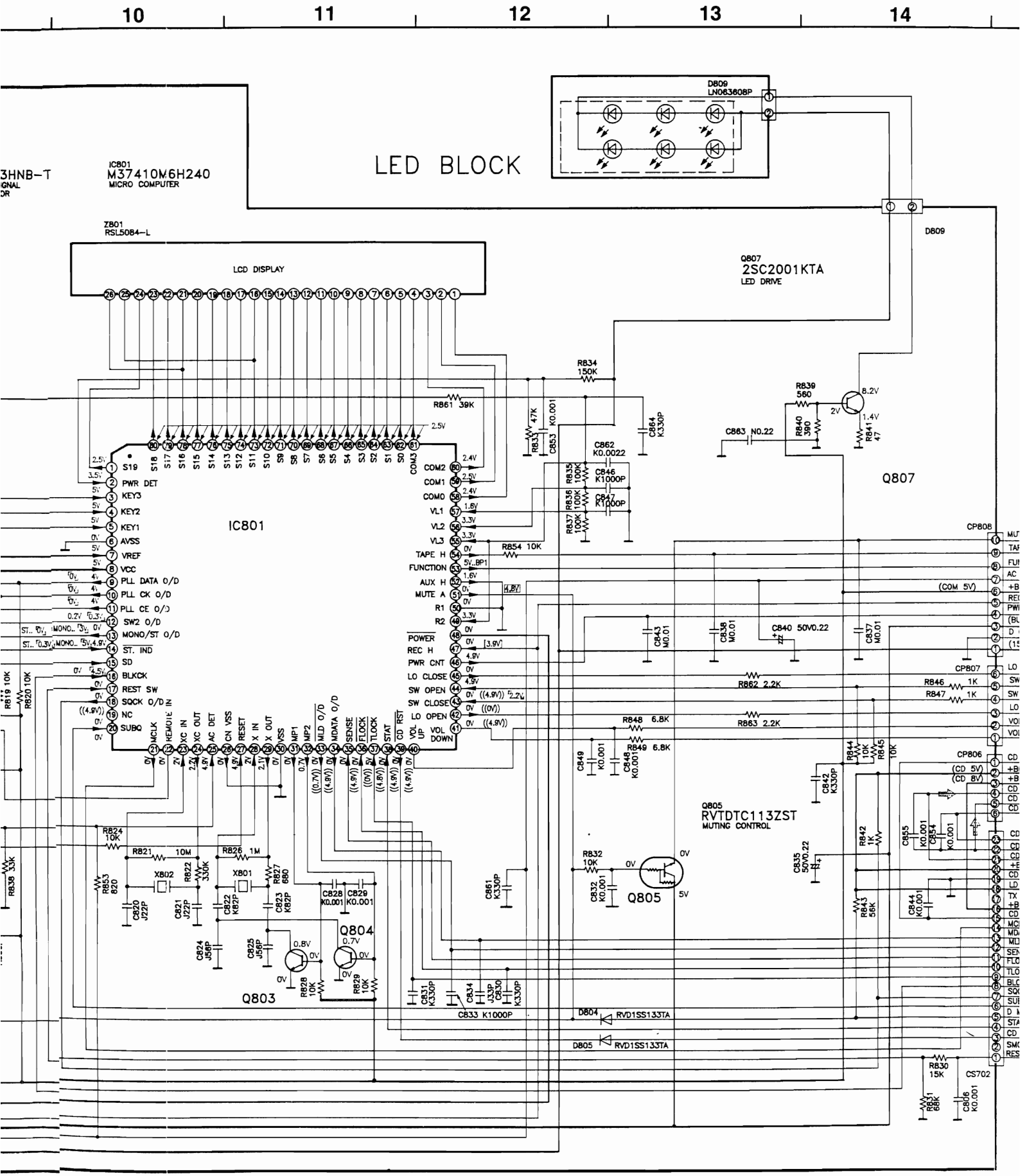
■ SCHEMATIC DIAGRAM



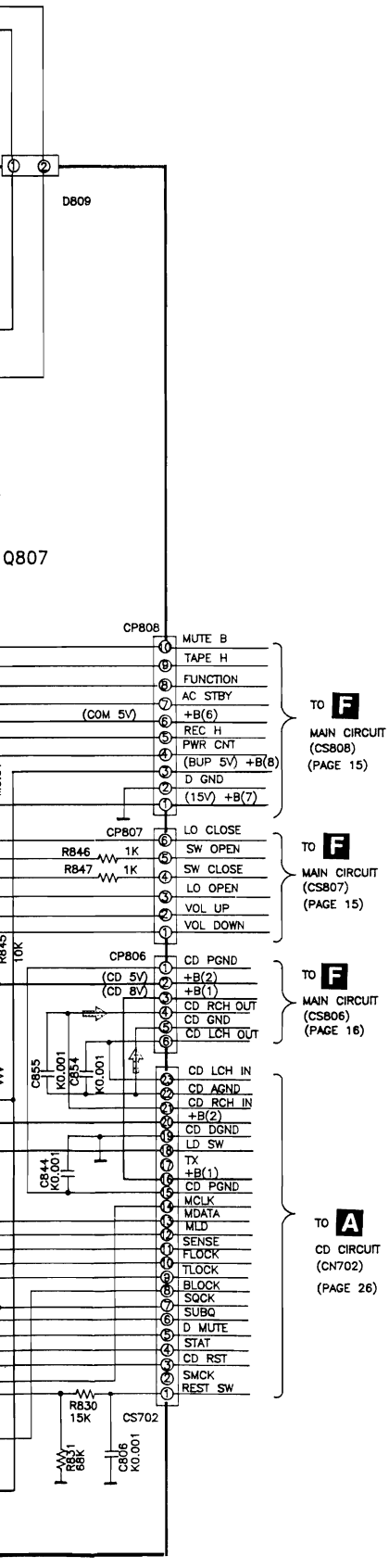
5 6 7 8 9 10

D CONTROL CIRCUIT



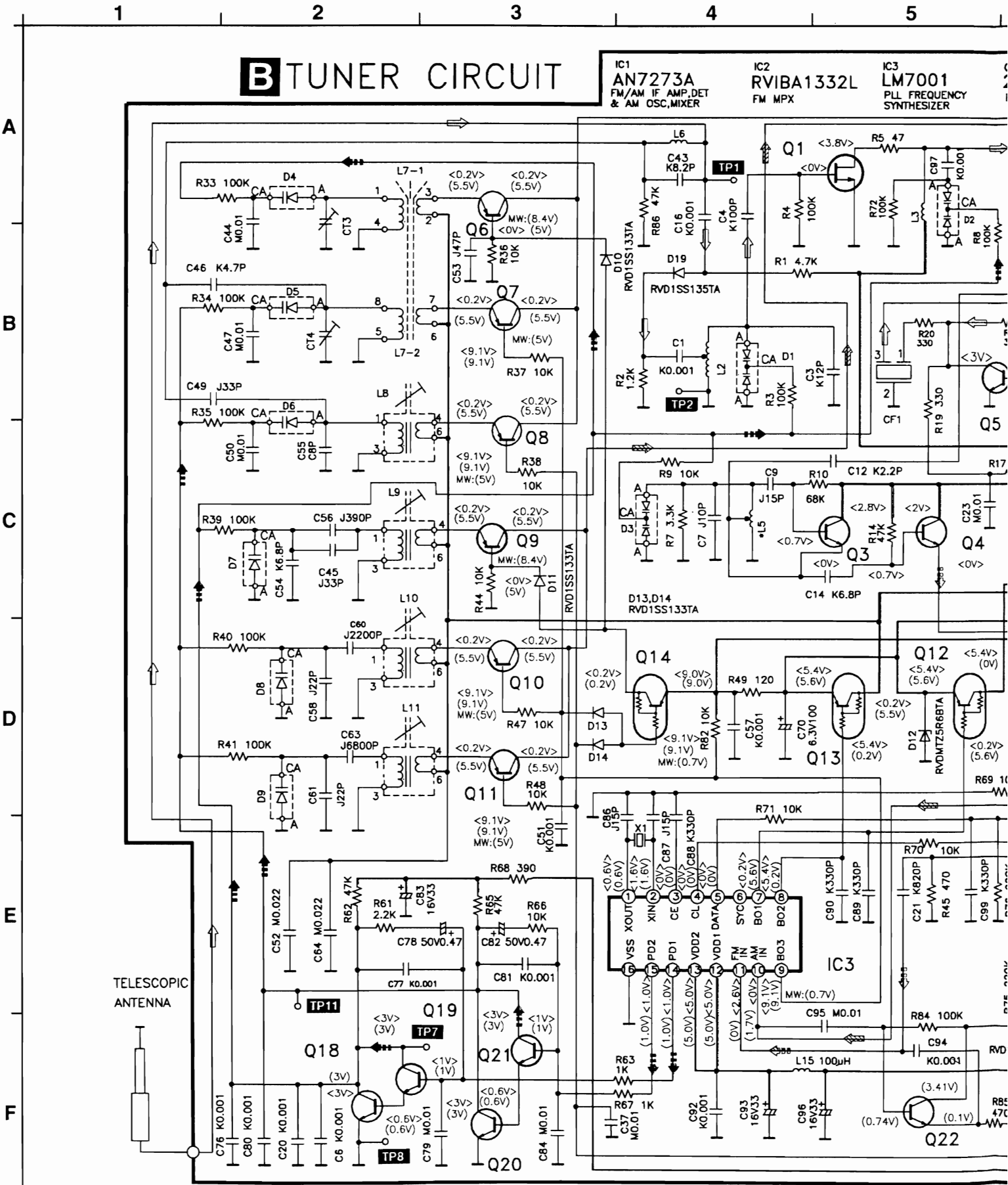

10
11
12
13
14
LED BLOCK
D809
LN083608P
IC801
M37410M6H240
MICRO COMPUTER
ZB01
RSL5084-L
LCD DISPLAY
Q807
2SC2001KTA
LED DRIVE
IC801
S19
PWR DET
KEY3
KEY2
KEY1
AVSS
VREF
VCC
PLL DATA O/D
PLL CK O/D
PLL CE O/D
SW2 O/D
MONO/ST O/D
ST. IND
SD
BLKCK
REST SW
SQCK O/D IN
NC
SUBQ
COM2
COM1
COM0
VL1
VL2
VL3
TAPE H
FUNCTION
AUX H
MUTE A
R1
R2
POWER
REC H
PWR CNT
LO CLOSE
SW OPEN
SW CLOSE
LO OPEN
VOL UP
VOL DOWN
Q803
Q804
Q805
RVTDTC113ZST
MUTING CONTROL
Q807
D804
RVD1SS133TA
D805
RVD1SS133TA
CP808
CP807
CP806
CS702

14 15 16 17 18 19



: Main Signal Line
: CD Signal Line
: Tape Playback Signal Line
: MIC Signal Line
: Recording Signal Line
: +B Line
: FM Signal Line
: FM/MW/SW1/SW2 Vcap Signal Line
: FM OSC Signal Line
: MW/SW1/SW2 OSC Signal Line

■ SCHEMATIC DIAGRAM



5 6 7 8 9 10

IC3 LM7001 PLL FREQUENCY SYNTHESIZER

Q1 2SK544F-AC FM RF AMP

Q2 2SC2786MTA FM MIXER

Q3 2SC2786MTA FM OSC

Q4 2SC2786MTA BUFFER AMP (FM OSC)

Q5 2SC829BTA FM IF AMP

Q6,Q7 2SA564STA MW/SW1 (ANT)

Q8 2SA564STA SW2 (ANT OSC)

Q9 2SA564RTA MW (ANT OSC)

Q10,Q11 2SA564RTA SW1/SW2 (OSC)

Q12 BN1L3NTA REGULATOR

Q13,Q14 BN1L3NTA POWER SUPPLY (SW1/SW2/MW)

Q15 2SC829CTA BUFFER AMP (AM OSC)

Q16 2SA564RTA BUFFER AMP

Q17 2SC2785FTA MUTING

Q18,Q19,Q20,Q21 2SC2784FTA FM/SW1/SW2/MW LOOP FILTER

Q22 2SC829CTA BUFFER AMP (AM/FM)

IC1 IC2

D15,D16,D18 RVD1SS133TA

D17 RVD1SS133TA

D20 RVD1SS133TA

D12 RVDMTZ5R6BTA

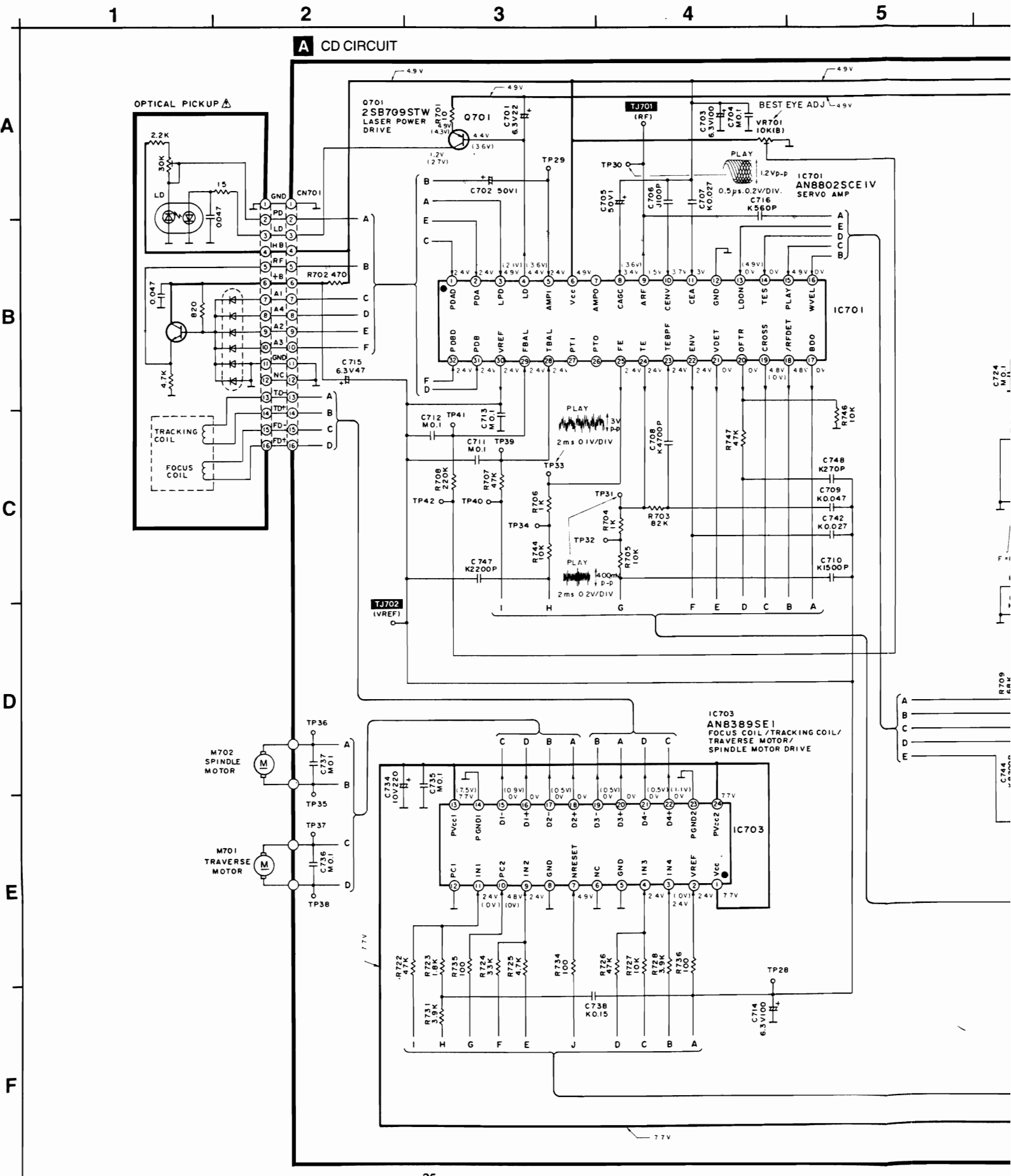
CN2 DATA CLK CE GND SD AM.H ST/MO ST IND SW2

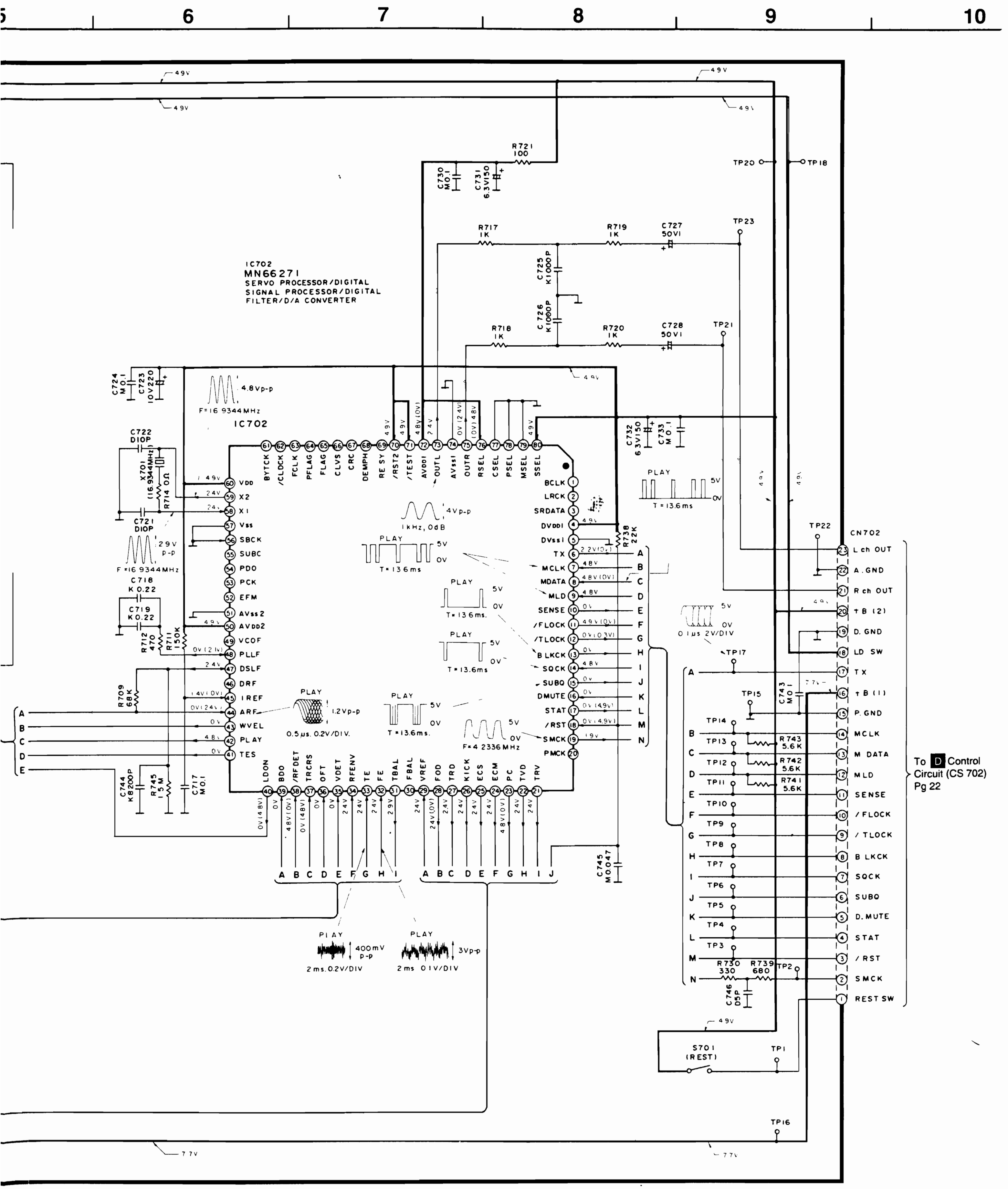
TO D CONTROL SYSTEM (W2) (PAGE 20)

CN1 RCH OUT GND LCH OUT +B(3) MUTE +B(4) +B(5)

TO B MAIN CIRCUIT (W1) (PAGE 16)

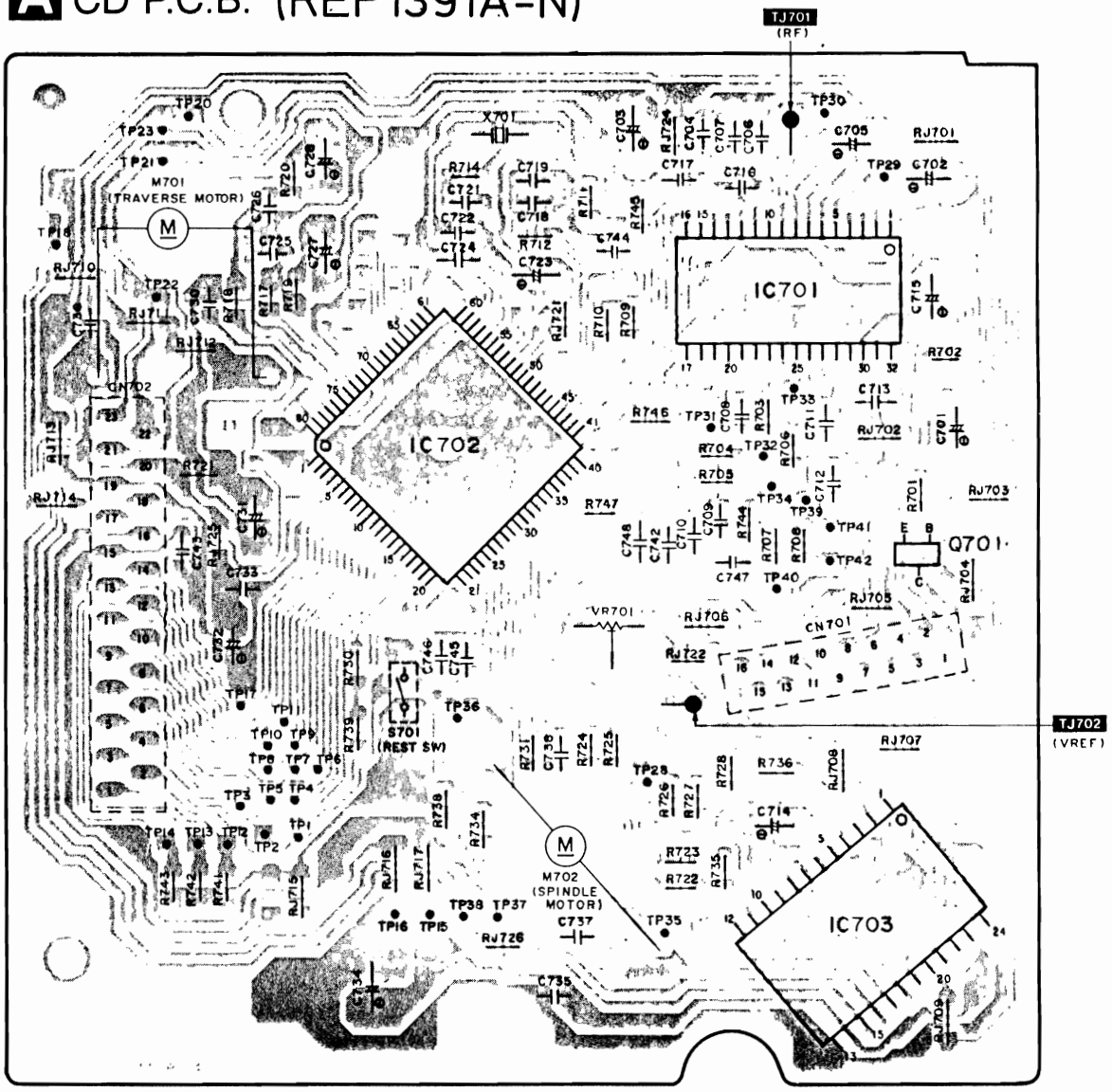
■ SCHEMATIC CIRCUIT



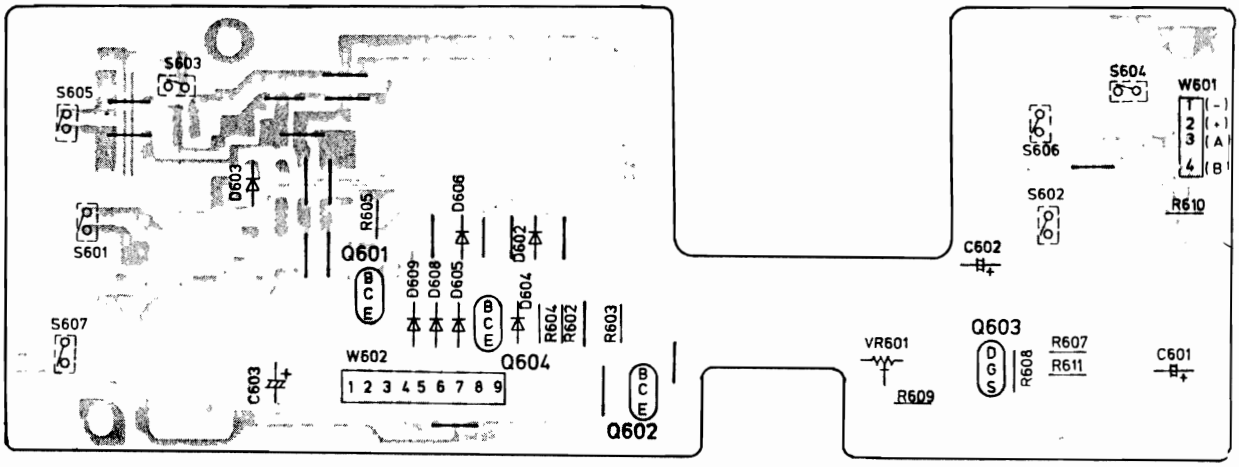

6
7
8
9
10
IC702
MN66271
SERVO PROCESSOR/DIGITAL
SIGNAL PROCESSOR/DIGITAL
FILTER/D/A CONVERTER
IC702
R721 100
C730 M0.1
C731 6.3V150
TP20
TP18
R717 1K
R719 1K
C727 50V1
TP23
C725 K1000P
C726 K1000P
R718 1K
R720 1K
C728 50V1
TP21
C724 M0.1
C723 10V220
4.8Vp-p
F=16.9344MHz
C722 D10P
X701 (16.9344MHz)
R714 0Ω
C721 D10P
2.9V p-p
F=16.9344MHz
C718 K0.22
C719 K0.22
R712 470
R711 150K
R709 68K
C744 K8200P
R745 1.5M
C717 M0.1
C732 6.3V150
C733 M0.1
R738 22K
C745 M0047
BYTCK
/CLDCK
FCLK
PFLAG
FLAG
CLVS
CRC
DEMPH
RESY
/RST2
/TEST
AVDD1
OUTL
AVss1
OUTR
RSEL
CSEL
PSEL
MSEL
SSEL
VDD
X2
X1
Vss
SBCK
SUBC
PDO
PCK
EFM
AVss2
AVDD2
VCOF
PLLF
DSLF
DRF
IREF
ARF
WVEL
PLAY
TES
BCLK
LRCK
SRDATA
DVDD1
DVss1
TX
MCLK
MDATA
MLD
SENSE
/FLOCK
/TLOCK
BLKCK
SQCK
SUBQ
DMUTE
STAT
/RST
SMCK
PMCK
LDON
BDO
/RFDET
TRCRS
OFT
VDET
RFENV
TE
FE
TBAL
FBAL
VREF
FOD
TRD
KICK
ECS
ECM
PC
TVD
TRV
PLAY
1kHz, 0dB
4Vp-p
T=13.6ms
F=4.2336MHz
0.5μs. 0.2V/DIV.
1.2Vp-p
0.1μs 2V/DIV
PLAY
400mV p-p
2ms. 0.2V/DIV
3Vp-p
2ms 0.1V/DIV
CN702
L ch OUT
A. GND
R ch OUT
+B (2)
D. GND
LD SW
TX
+B (1)
P. GND
MCLK
M DATA
MLD
SENSE
/FLOCK
/TLOCK
B LKCK
SQCK
SUBQ
D. MUTE
STAT
/RST
SMCK
REST SW
TP22
TP17
TP15
C743 M0.1
TP14
TP13
TP12
TP11
TP10
TP9
TP8
TP7
TP6
TP5
TP4
TP3
TP2
R743 5.6K
R742 5.6K
R741 5.6K
R730 330
R739 680
C746 D5P
S701 (REST)
TP1
TP16
4.9V
7.7V
To D Control Circuit (CS 702) Pg 22

■ PRINTED CIRCUIT BOARD DIAGRAM

A CD P.C.B. (REP1391A-N)

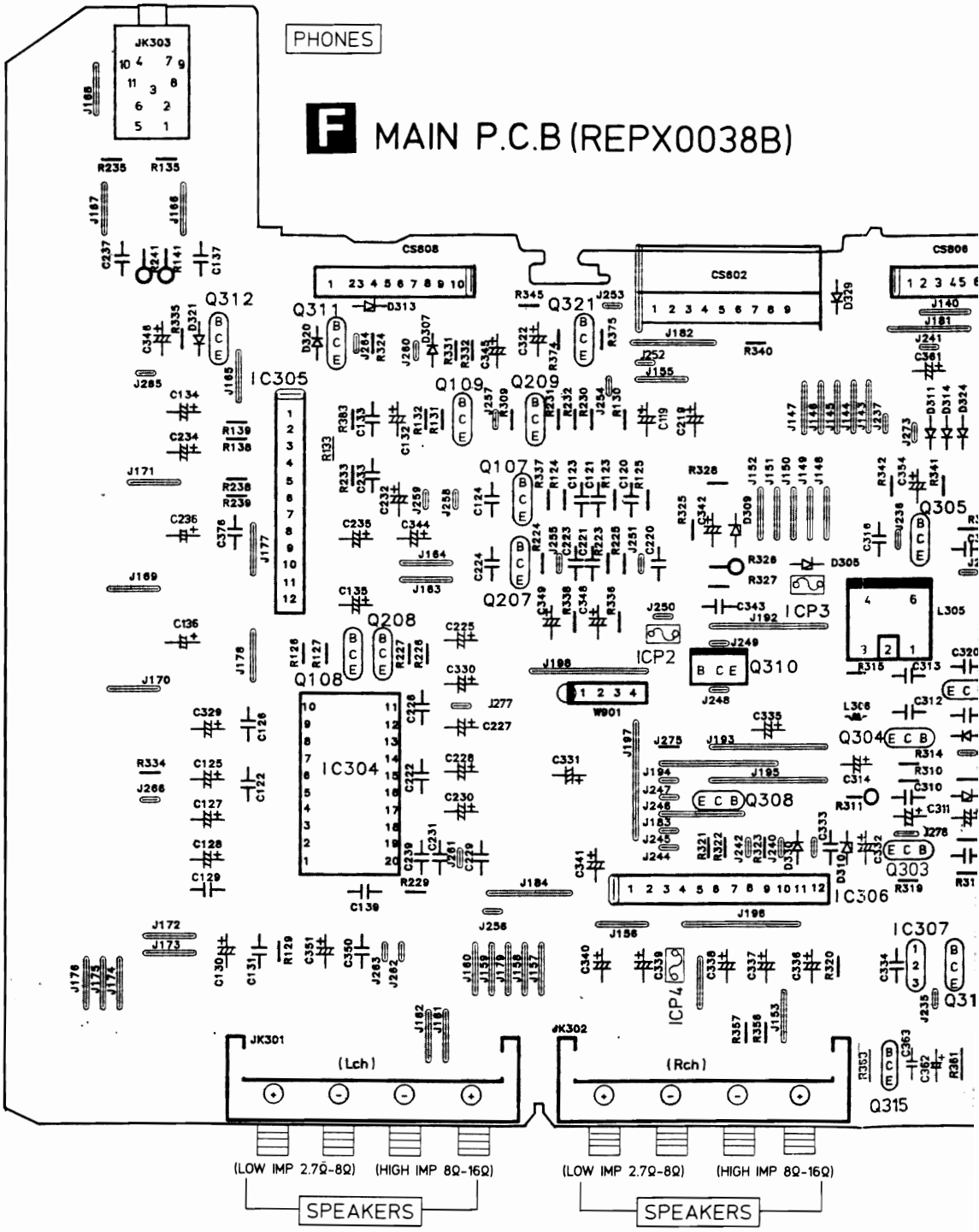


E DECK P.C.B. (REPX0040)

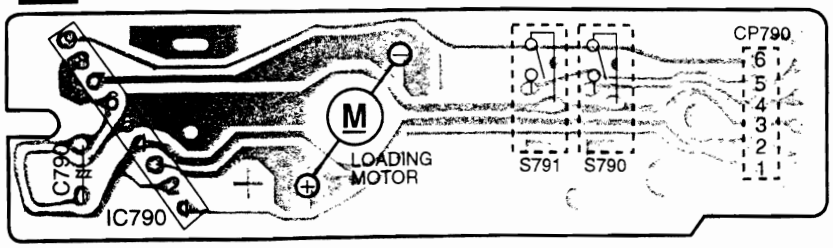


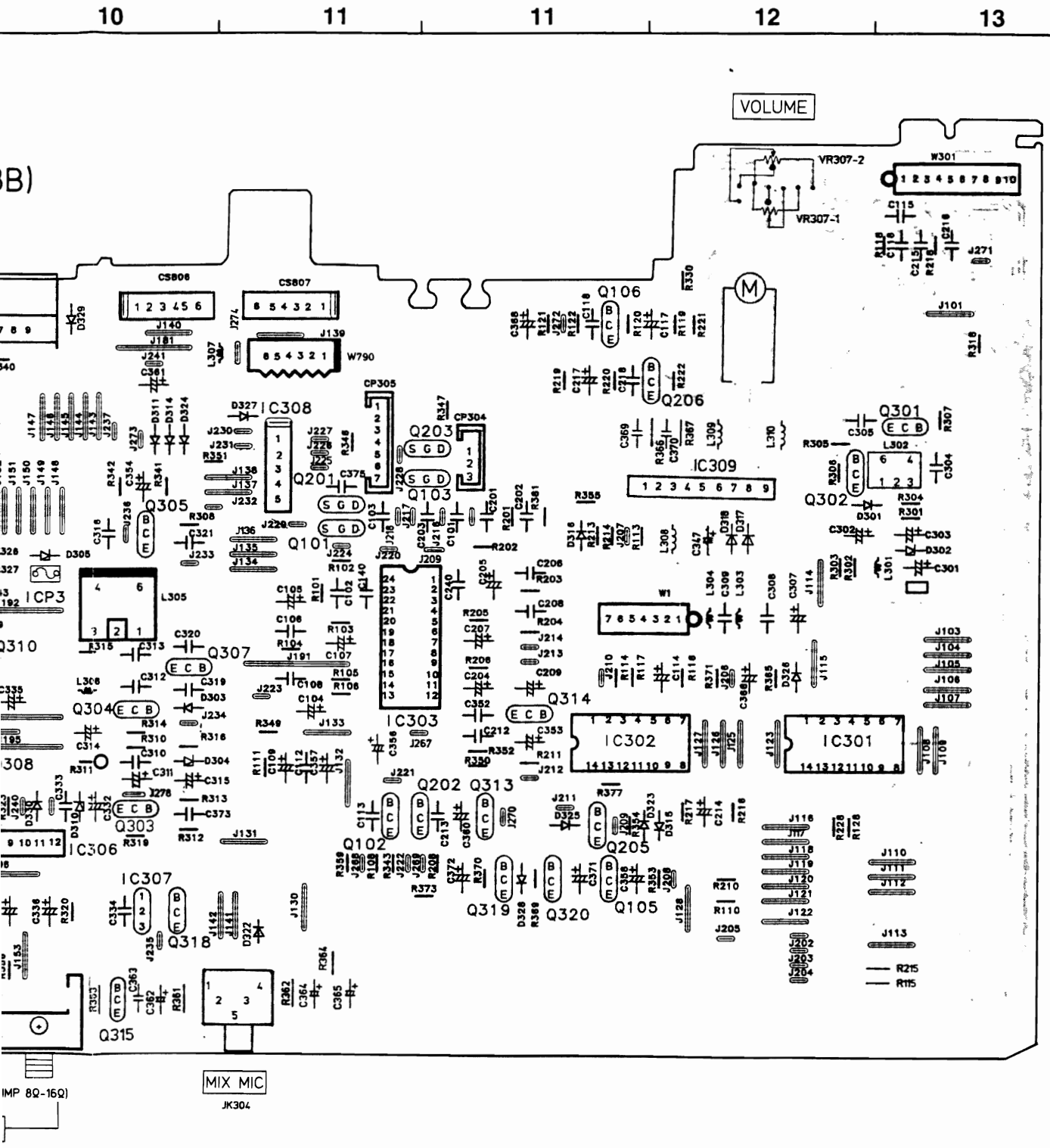
6 7 8 9 10

F MAIN P.C.B (REPX0038B)



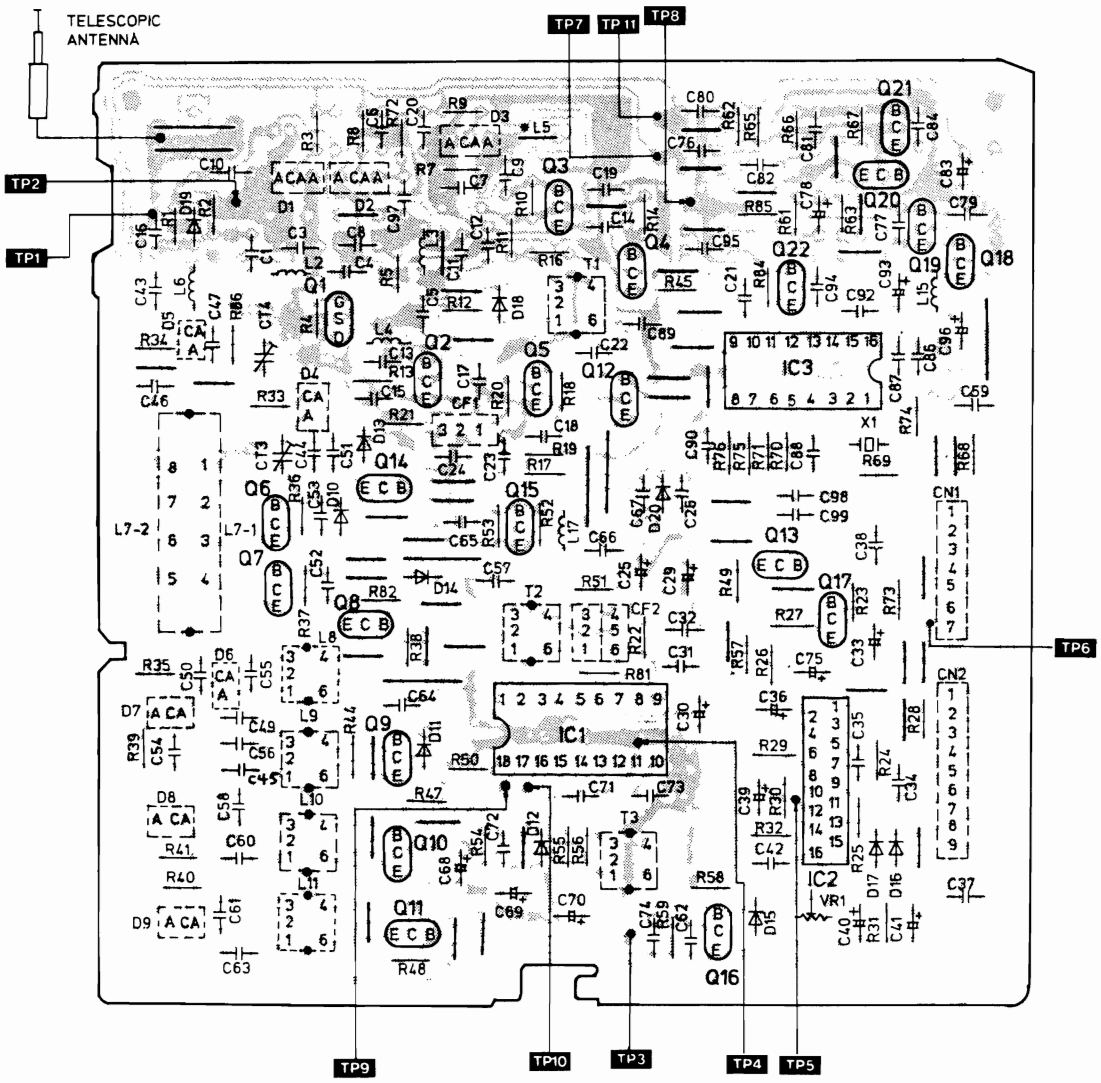
I CD LOADING (REP0767)

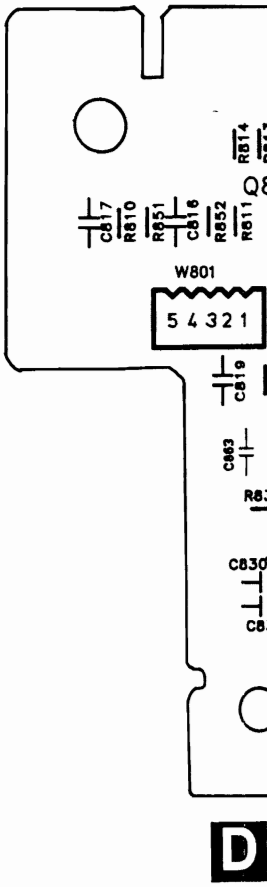



10
11
11
12
13
VOLUME
VR307-2
VR307-1
W301
CS806
CS807
W790
Q106
Q206
Q301
Q302
IC308
IC309
Q201
Q203
Q103
Q101
Q305
IC303
IC302
IC301
Q314
Q307
Q304
Q303
IC306
Q202
Q313
Q102
Q205
IC307
Q318
Q319
Q320
Q105
Q315
ICP3
W1
MIX MIC
JK304
IMP 8Ω-16Ω

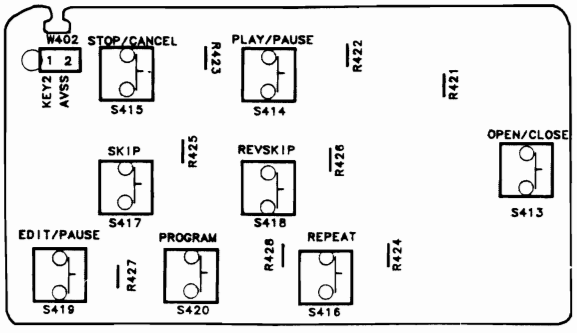
■ PRINTED CIRCUIT BOARD DIAGRAM

B TUNER P.C.B. (REP0930C)



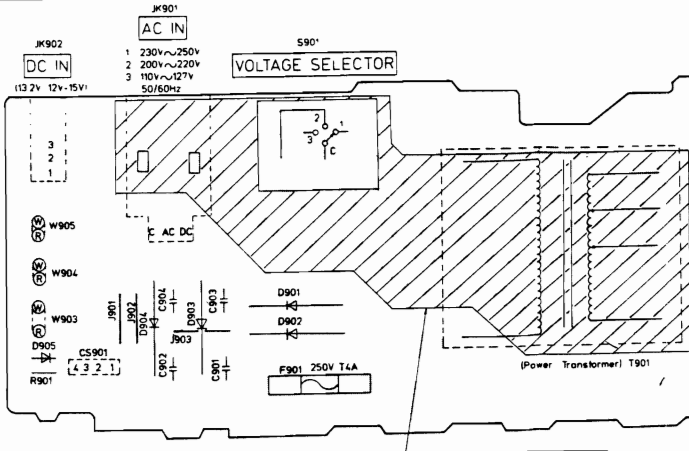


D



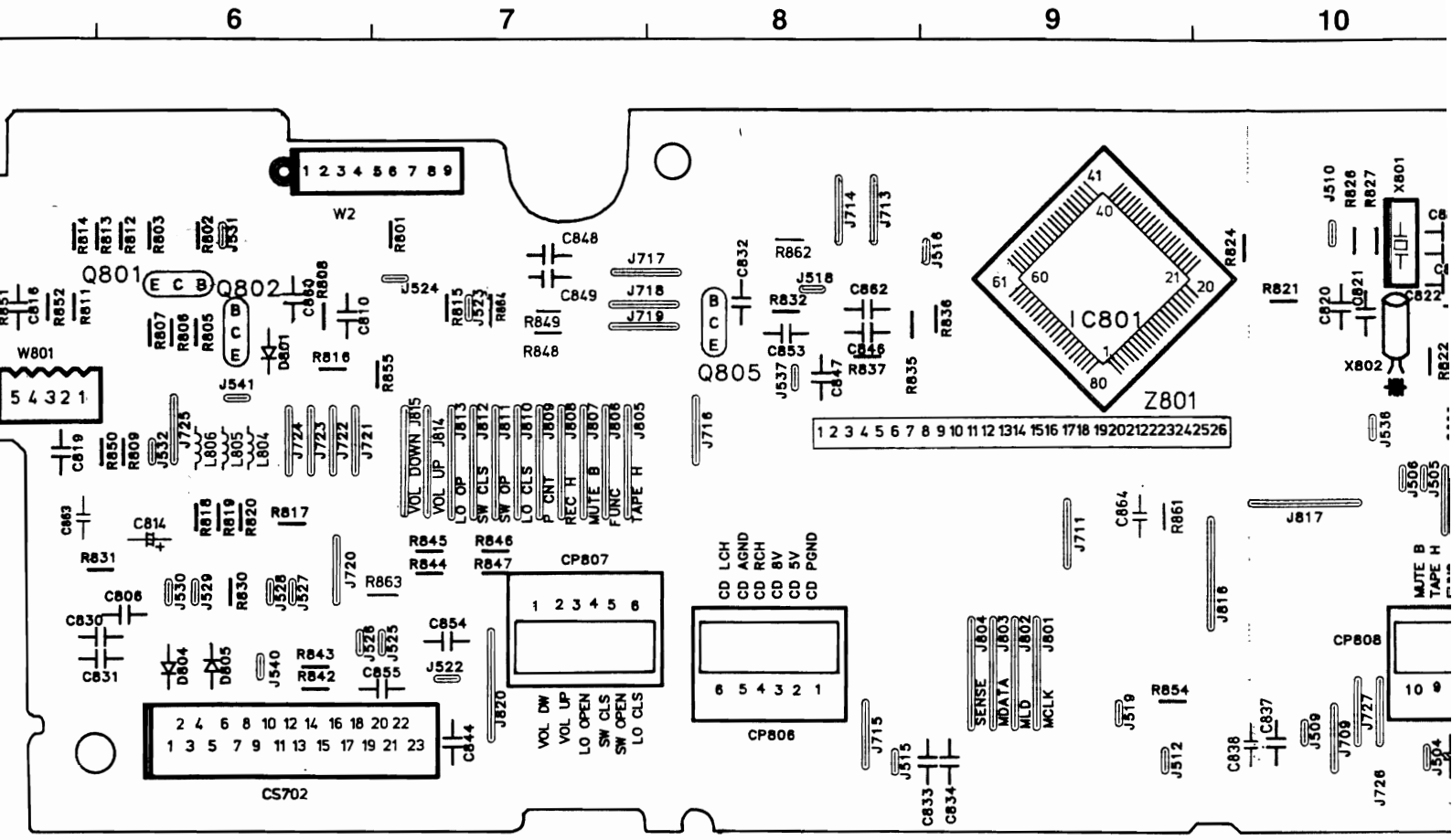
H CD OPERATION P.C.B (REPX0038B)

G POWER SUPPLY P.C.B.

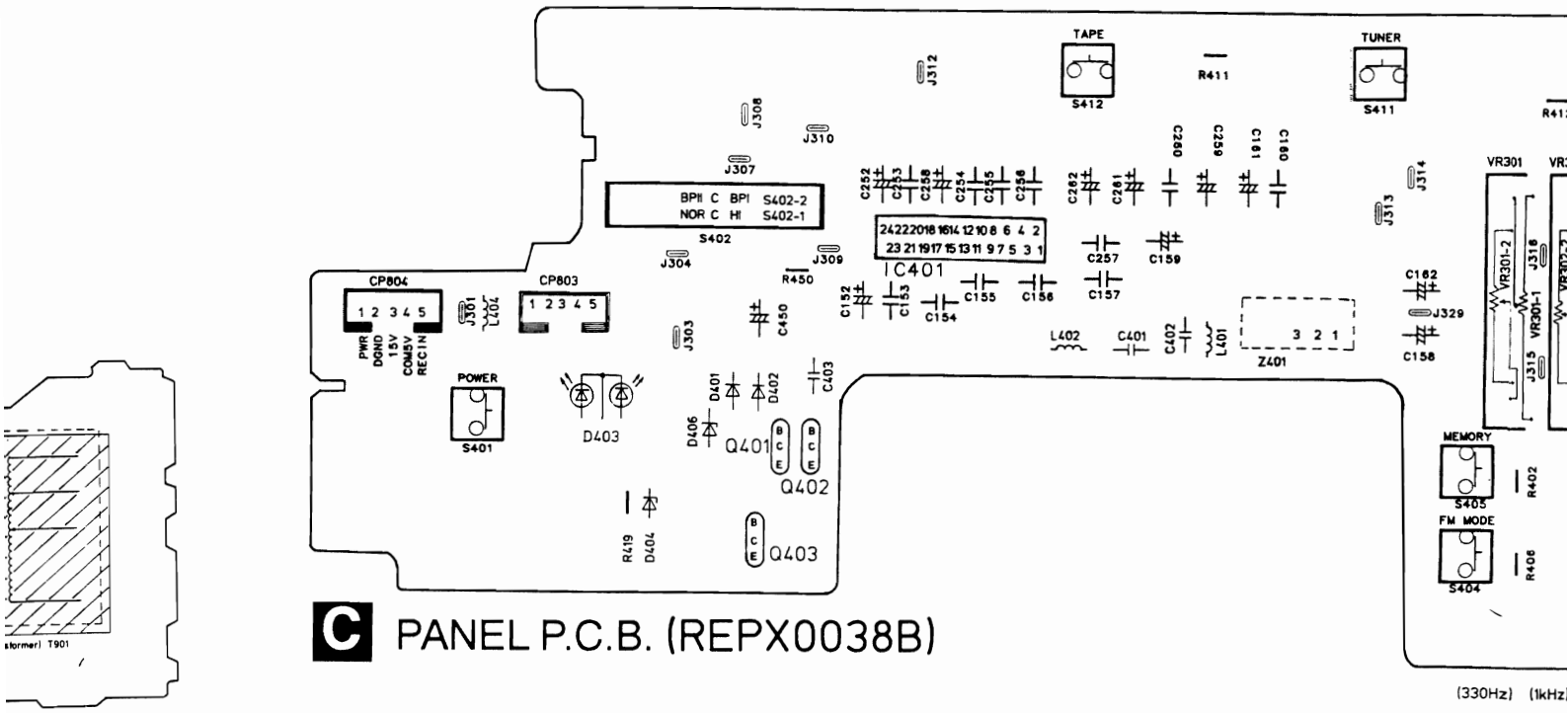


(REPX0019K)

CAUTION
RISK OF ELECTRIC SHOCK
AC voltage line Please do not touch this portion.

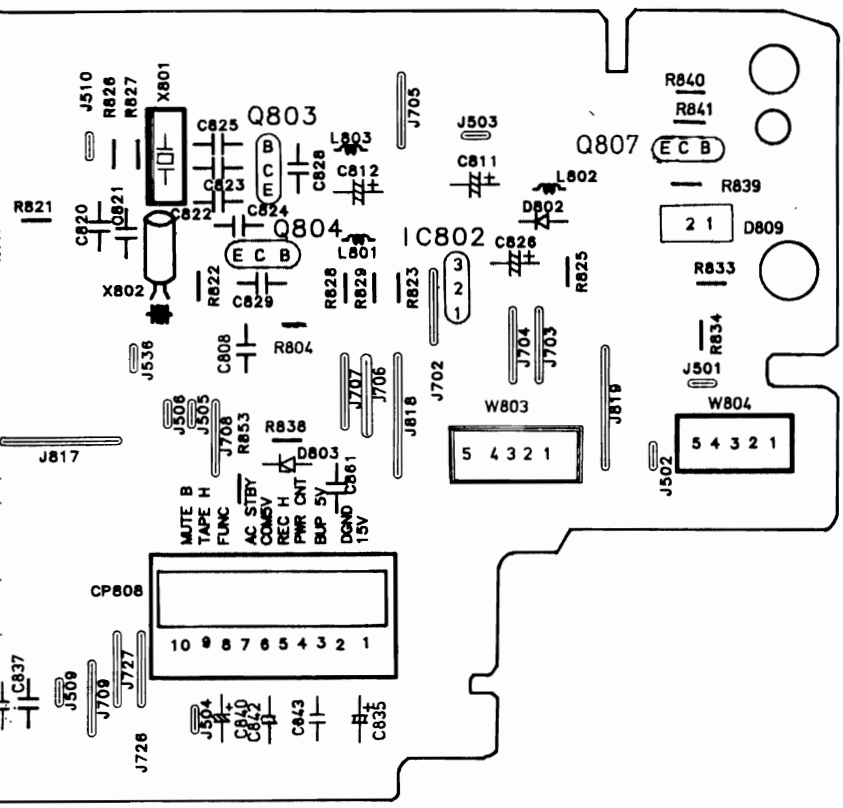


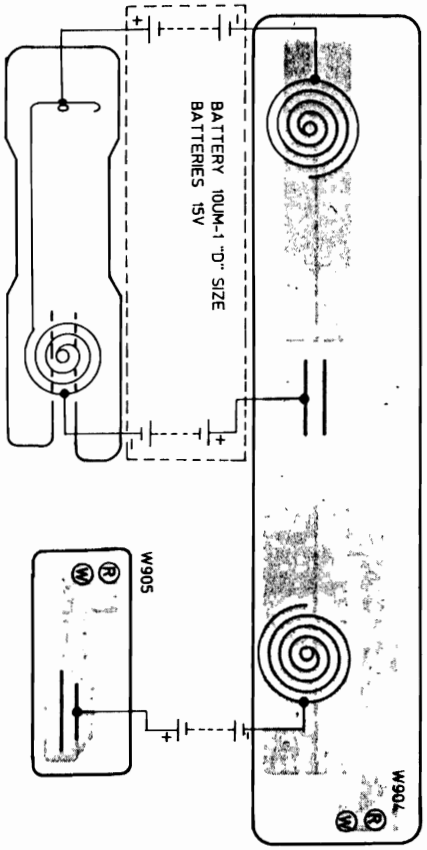
D CONTROL P.C.B (REPX0039B)

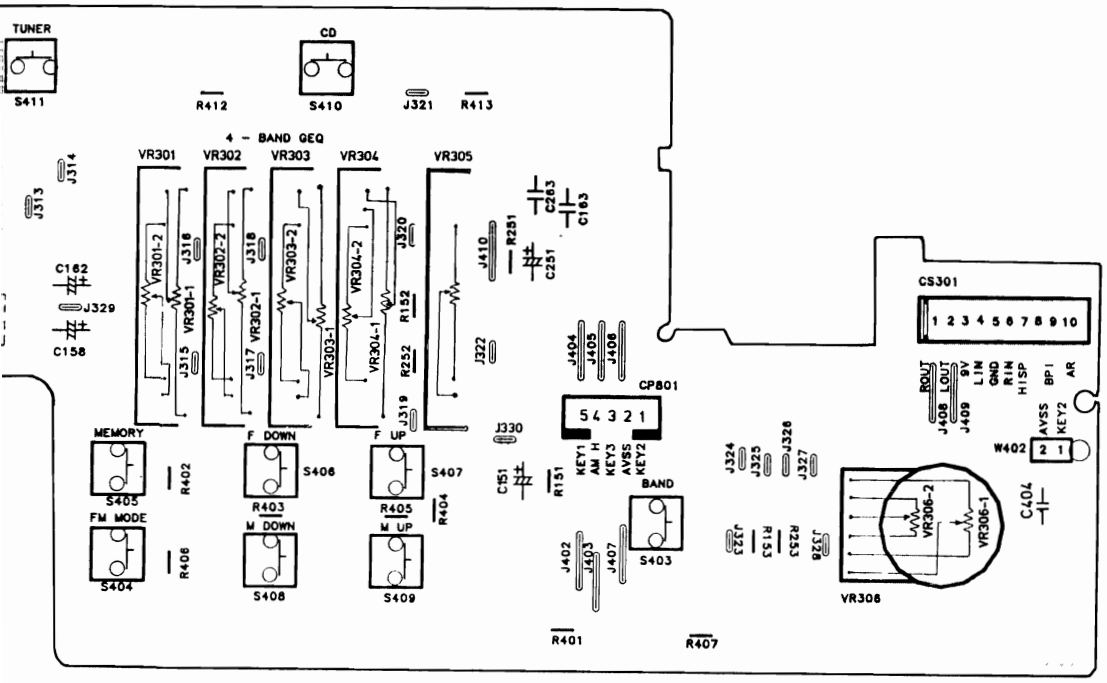


C PANEL P.C.B. (REPX0038B)

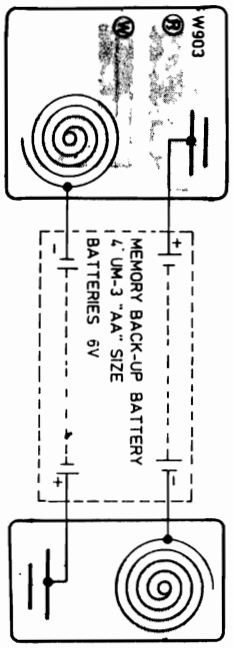
10 11 11 12 13 14







GRAPHIC EQUALIZER

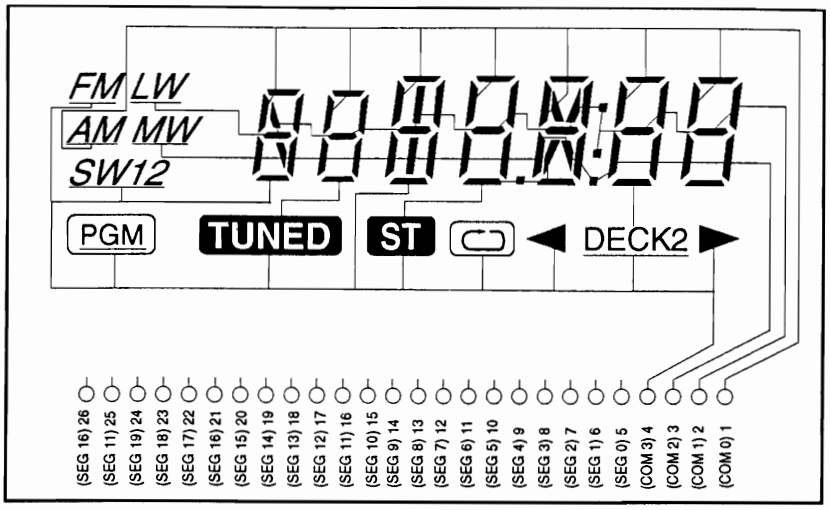


XBS

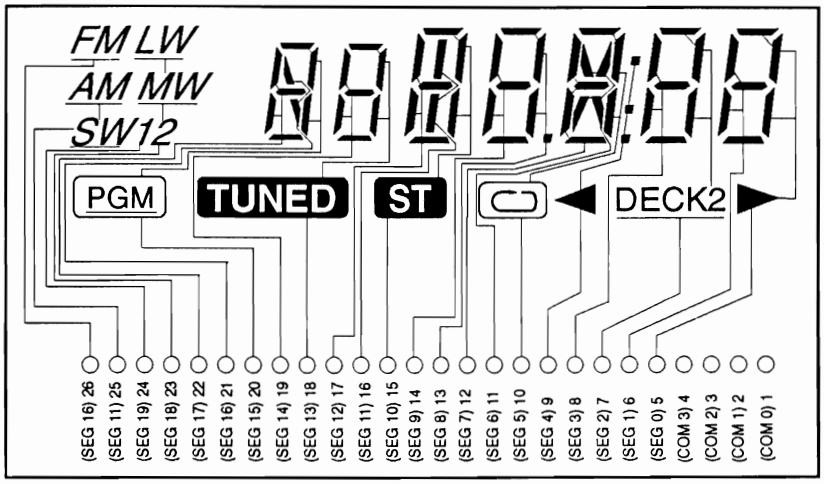
■INTERNAL CONNECTIONS OF LCD (Liquid Crystal Display)

(RSL5084-L)

(COMMON)



(SEGMENT)



■ FUNCTION OF IC TERMINALS

• IC703 (AN8389SE1)

Pin No.	Terminal Name	I/O	Function
1	Vcc	I	Power Supply
2	VREF	I	VREF input
3	IN4	I	Motor driver (4) input
4	IN3	I	Motor driver (3) input
5	GND	—	Ground connection
6	NC	—	No connection
7	NRESET	I	Reset input
8	GND	—	Ground connection
9	IN2	I	Motor driver (2) input
10	PC2	I	PC2 (power cut) input
11	IN1	I	Motor driver (1) input
12	PC1	I	PC1 (power cut) input (not used, open)

Pin No.	Terminal Name	I/O	Function
13	PVcc1	I	Power supply (1) for driver
14	PGND1	—	Ground connection (1) for driver
15	D1-	O	Motor driver (1) reverse-action output
16	D1+	O	Motor driver (1) forward-action output
17	D2-	O	Motor driver (2) reverse-action output
18	D2+	O	Motor driver (2) forward-action output
19	D3-	O	Motor driver (3) reverse-action output
20	D3+	O	Motor driver (3) forward-action output
21	D4-	O	Motor driver (4) reverse-action output
22	D4+	O	Motor driver (4) forward-action output
23	PGND2	—	Ground connection (2) for driver
24	PVcc2	I	Power supply (2) for driver

• IC701 (AN8802SCE1V)

Pin No.	Terminal Name	I/O	Function
1	PDAD	I	PD A channel signal input with delay
2	PDA	I	PD A channel signal input without delay
3	LPD	I	Laser PD connection
4	LD	O	Power supply for LD driving
5	AMPI	I	RF amplifier input
6	Vcc	I	Power supply connection
7	AMPO	O	RF amplifier output (not used, open)
8	CAGC	I	AGC loop filter connection
9	ARF	O	RF AGC output
10	CENV	I	Capacitor connection for RF detection
11	CEA	I	Capacitor connection for HPF amplifier
12	GND	—	Ground connection
13	LDON	I	ON/OFF input of LD APC ("H": ON, "L": OFF)
14	TES	I	Tracking error shunt signal input (" H ": shunt)
15	PLAY	I	Play signal input (" H ": PLAY)
16	WVEL	I	WVEL control
17	BDO	O	BDO output
18	/RFDET	O	NRFDET output
19	CROSS	O	CROSS output
20	OFTR	O	OFTR output
21	VDET	O	VDET output
22	ENV	O	ENV output
23	TEBPF	I	Vibration detection input
24	TE	O	Tracking error output
25	FE	O	Focus error output
26	PTO	O	Potentio amplifier output (not used, open)
27	PTI	I	Potentio amplifier inversion input (no use, open)
28	TBAL	I	Tracking balance input
29	FBAL	I	Focus balance input
30	VREF	O	VREF output
31	PDB	I	PD B channel signal input without delay
32	PDBD	I	PD B channel signal input with delay

• IC702 (MN66271RA)

Pin No.	Terminal Name	I/O	Function
1	BCLK	O	Bit clock output for serial data (not used, open)
2	LRCK	O	L/R identification signal output (Not used, open)
3	SRDATA	O	Serial data output (Not used, open)
4	$DV_{DD}1$	I	Power Supply Input (for digital circuit)
5	DVSS1	—	GND (for digital circuit)
6	TX	O	Digital audio interface signal output
7	MCLK	I	Microprocessor command clock signal input (Latches data at first transition)
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, POSAD, SFG)
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 (fBLKCK=75 Hz during normal playback)
14	SQCK	I	External clock signal input for sub-code Q register
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, FCLV, SQCK)
18	/RST	I	Reset input
19	SMCK	O	1/2-divided CLk signal of X'tal oscillating at MSEL="H" (fSMCK=8.4672MHz) 1/4-divided CLk signal of X'tal oscillating at MSEL="L" (fSMCK=4.2336MHz)
20	PMCK	O	1/192-divided CLK signal of X'tal oscillating (fPMCK=88.2 KHz) (Not used, open)
21	TRV	O	Traverse forced feed output
22	TVD	O	Traverse drive output
23	PC	O	Spindle motor ON signal output ("L":ON)
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	Kick pulse output
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output

Pin No.	Terminal Name	I/O	Function
29	VREF	I	D/A (Drive) output (TVD, ECS, TRD, FOD, FBAL, TBAL) Reference voltage input
30	FBAL	O	Focus balance adjustment output (Not used, open)
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	TES	O	Tracking error shunt signal output ("H": shunt)
42	PLAY	O	Play signal out ("H": PLAY)
43	WVEL	O	Double speed status signal output ("H": Double speed)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias (Not used, open)
47	DSLF	I/O	DSL loop filter
48	PLLF	I/O	PLL loop filter
49	VCOF	I/O	VCO loop filter (Not used, open)
50	AVDD2	I	Power supply input (for analog circuit)
51	AVSS2	—	GND (for analog circuit)
52	EFM	O	EFM signal output (Not used, open)
53	PCK	O	PLL extraction CLK output (fPCK=4.321 MHz during normal playback (Not used, open)
54	PDO	O	Phase comparison signal of EFM and PCK signal (Not used, open)
55	SUBC	O	Sub-code serial data output (Not used, open)
56	SBCK	I	CLK input for sub-code serial data (Not used, open)
57	VSS	—	GND
58	X1	I	X'tal oscillating cct input (f=16.9344MHz)
59	X2	O	X'tal oscillating cct output (f=16.9344MHz)
60	VDD	I	Power supply input (for oscillating cct)
61	BYTCK	O	Byte CLK output (Not used, open)

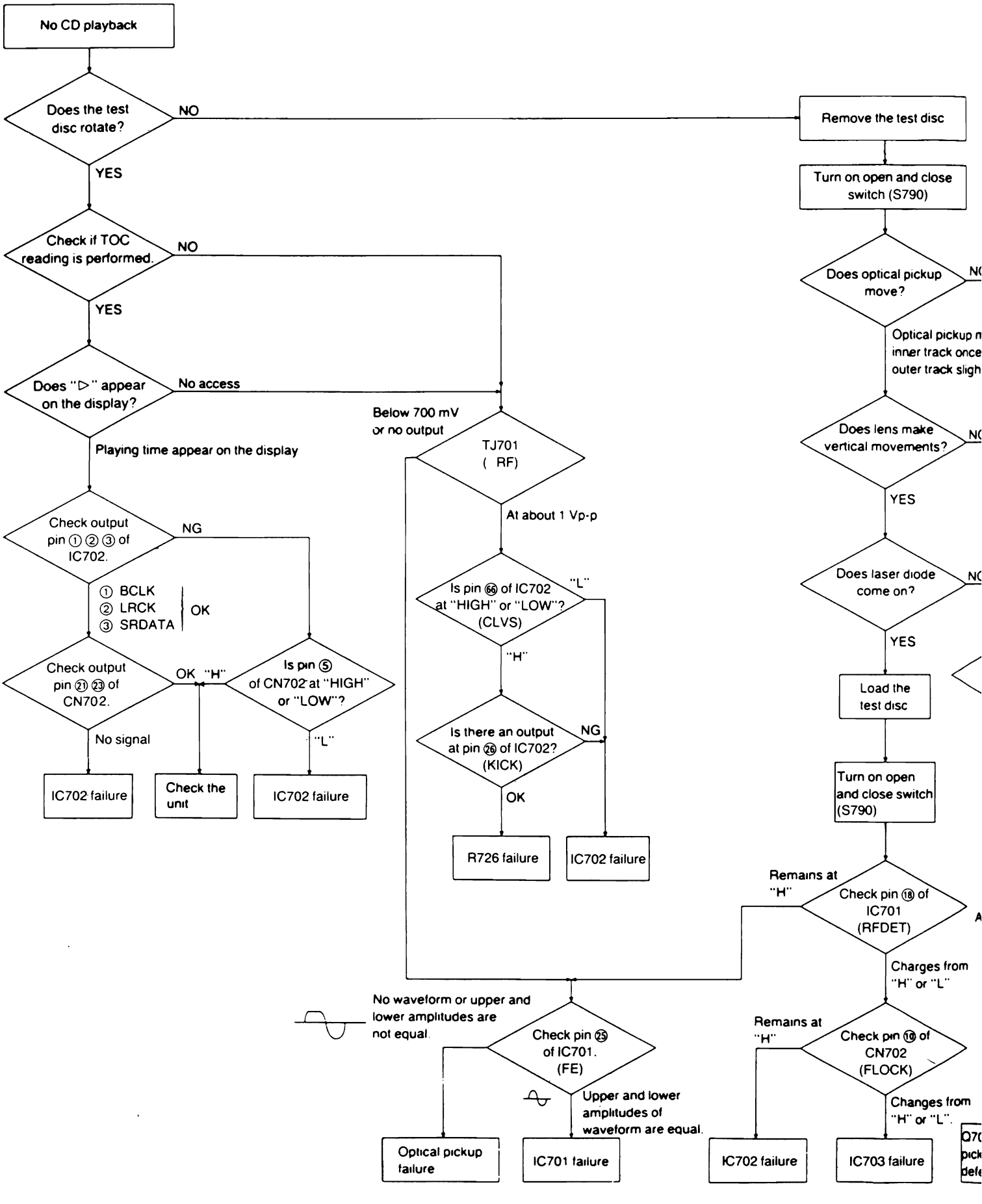
Pin No.	Terminal Name	I/O	Function
62	/CLDCK	O	Sub-code frame CLK signal output (fCLDCK=7.35kHz during normal playback
63	FCLK	O	X'tal frame CLK signal output (fFCLK=7.35kHz,double=14.7kHz)
64	PFLAG	O	Interpolation flag output ("H": Interpolation) (Not used, open)
65	FLAG	O	Flag output (Not used, open)
66	CLVS	O	Spindle servo phase synchronizing signal output ("H": CLV,"L": rough servo) (Not used, open)
67	CRC	O	Sub-code CRC checked output ("H": OK,"L": NG) (Not used, open)
68	DEMPH	O	De-emphasis ON signal output ("H":ON) (Not used)
69	RESY	O	Frame resynchronizing signal output (Not used, open)
70	/RST2	I	Reset input through MASH cct ("L":reset)
71	/TEST	I	Test input
72	AVDD1	I	Power supply input (for analog cct)
73	OUTL	O	Left channel audio signal output
74	AVSS1	—	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	CSEL	I	Crystal oscillating frequency designation input ("L": 16.9344MHz, "H": 33.8688MHz)
78	PSEL	I	Test input (normally, "L") (Not used, open)
79	MSEL	I	Output frequency switching for SMCK terminal "H": SMCK=8.4672MHz "L": SMCK=4.2336MHz (Not used, open)
80	SSEL	I	Output mode switching of SUBQ terminal ("H": Q code buffer mode)

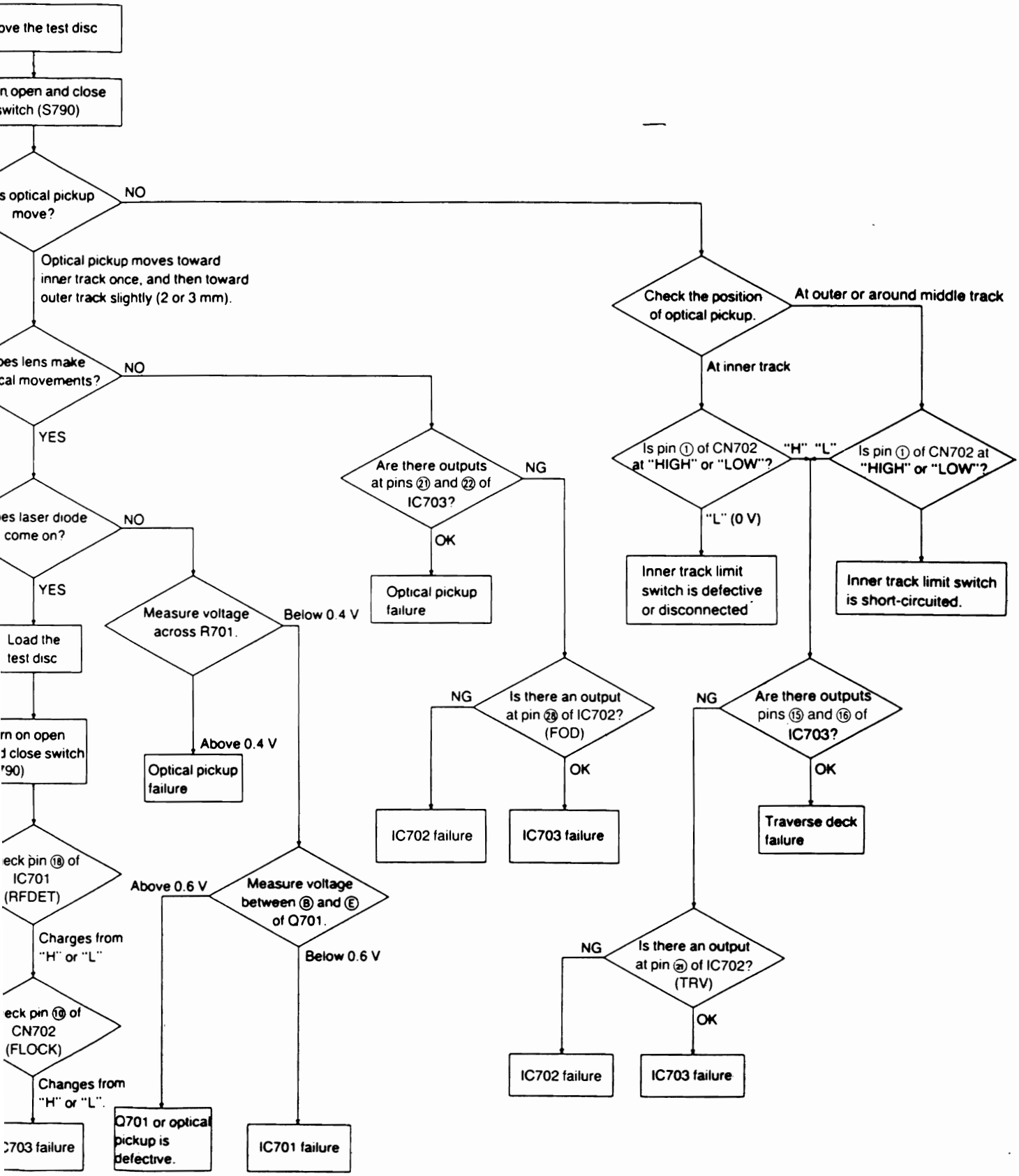
● IC801 (M37410M6H240)

Pin No.	Mark	Function
1	S19	LCD segment signal ouput
2	PWR DET	Power detect signal input
3 ~ 5	KEY3 ~ KEY1	Key source input
6	AVSS	GND
7	VREF	A/D converter reference voltage (GND)
8	VCC	Power supply (+5V)
9	PLL DATA	PLL tuner data signal output
10	PLL CK	PLL tuner clock signal output
11	PLL CE	PLL tuner strove signal output
12	$\overline{SW2}$	Tuner switch2 signal output
13	MONO/ST	Tuner stereo/mono select signal ouput
14	$\overline{ST.\ IND}$	Tuner stereo signal input
15	SD	Auto-stop signal detect input
16	BLKCK	CD subcode block clock signal input
17	REST SW	Reset switch (S701) signal input
18	SQCK	CD subcode clock output
19	NC	————
20	SUBQ	CD subcode data input
21	MCLK	CD signal process IC control signal output
22	REMOTE	CD reset signal input
23	XcIN	Clock input (32.7KHz)
24	XcOUT	Clock output (32.7KHz)
25	AC DET	Main switch control signal input
26	CNVSS	GND
27	RESET	Power on reset signal input
28	XIN	Clock input
29	XOUT	Clock output
30	VSS	GND
31	MP1	Microprocessor beat proof 1 output

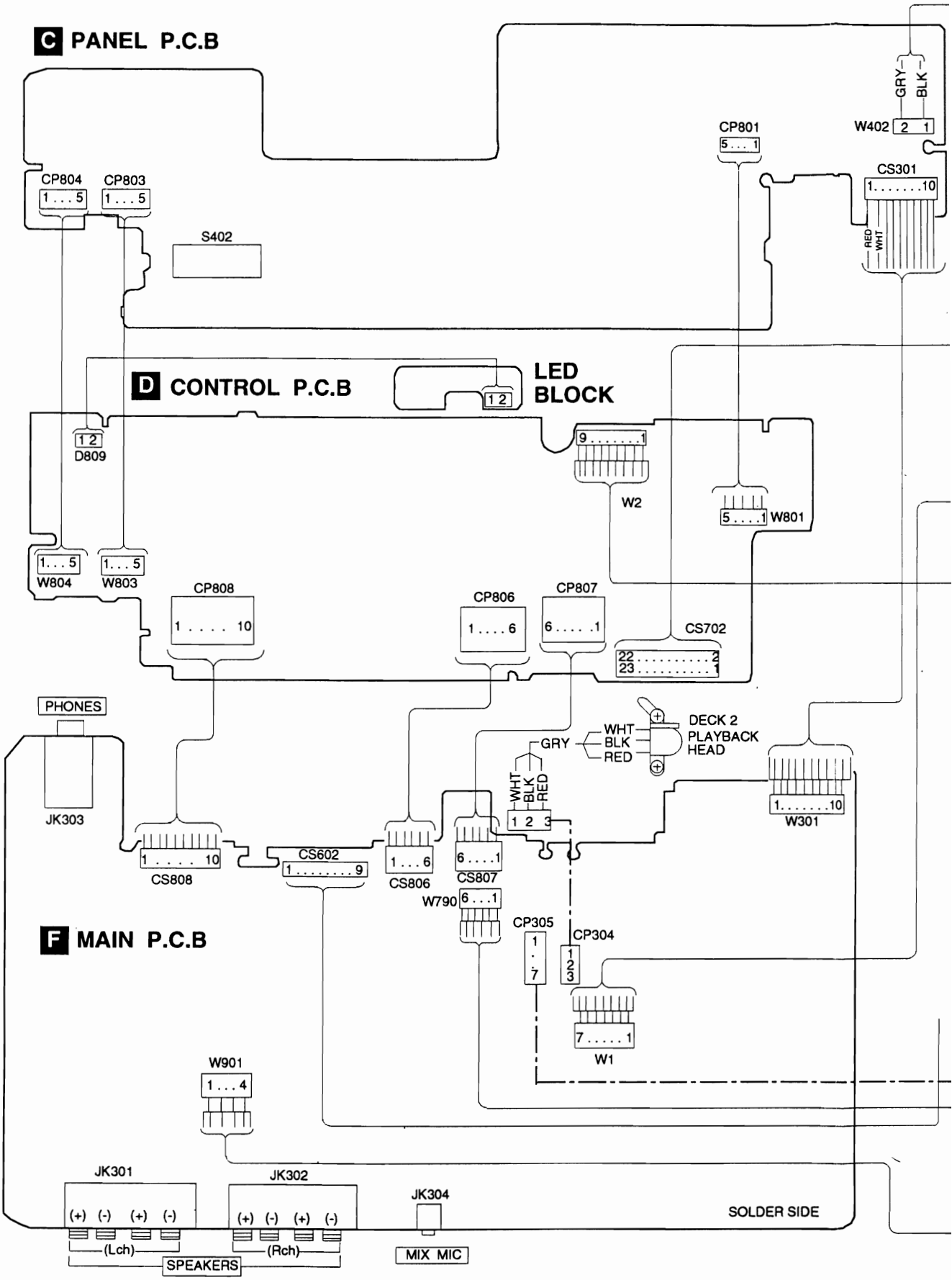
Pin No.	Mark	Function
32	MP2	Microprocessor beat proof 2 output
33	$\overline{MLD}$	CD signal process strove signal output
34	MDATA	CD signal process IC data output
35	SENSE	CD sense signal input
36	$\overline{FLOCK}$	CD focus lock signal input
37	$\overline{TLOCK}$	CD tracking signal input
38	STAT	CD status signal input
39	$\overline{CD\ RST}$	CD reset output
40	VOL UP	Volume control (+) output
41	VOL DOWN	Volume control (-) output
42	LO OPEN	CD disc tray loading open output
43	SW CLOSE	CD close detection switch signal input
44	SW OPEN	CD open detection switch signal input
45	LO CLOSE	CD disc tray loading close output
46	PWR CNT	Power Control signal output
47	REC H	REC detecting signal input
48	$\overline{POWER}$	Main Power signal input
49 ~ 50	R2 ~ R1	Region select signal input for Tuner Band select
51	MUTE A	AF muting signal output
52	AUX	Auxillary mode select output (Not used)
53	FUNCTION	Power supply control signal output (Mode select)
54	TAPE H	Input selector control signal output (TAPE)
55	VL3	LCD bias reference voltage V3
56	VL2	LCD bias reference voltage V2
57	VL1	LCD bias reference voltage V1
58 ~ 61	COM0 ~ COM3	LCD common signal output
62 ~ 80	S0 ~ S18	LCD segment signal output

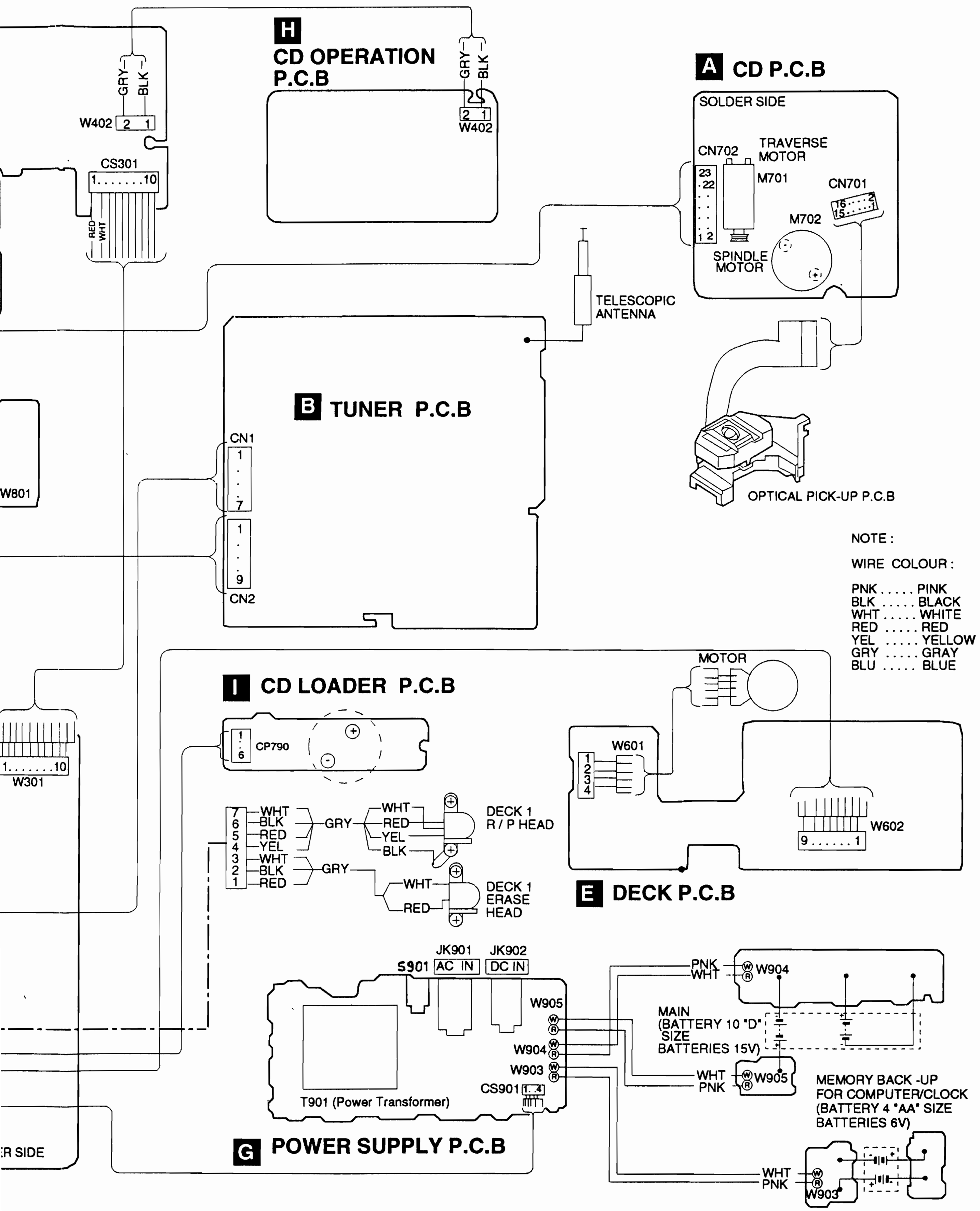
■ TROUBLESHOOTING GUIDE




ove the test disc
n open and close switch (S790)
s optical pickup move?
NO
Optical pickup moves toward inner track once, and then toward outer track slightly (2 or 3 mm).
oes lens make cal movements?
NO
YES
oes laser diode come on?
NO
YES
Load the test disc
rn on open d close switch '90)
eck pin ⑱ of IC701 (RFDET)
Charges from "H" or "L"
eck pin ⑩ of CN702 (FLOCK)
Changes from "H" or "L".
:703 failure
Measure voltage across R701.
Below 0.4 V
Above 0.4 V
Optical pickup failure
Above 0.6 V
Measure voltage between Ⓑ and Ⓔ of Q701.
Below 0.6 V
Q701 or optical pickup is defective.
IC701 failure
Are there outputs at pins ㉑ and ㉒ of IC703?
NG
OK
Optical pickup failure
Is there an output at pin ㉘ of IC702? (FOD)
NG
OK
IC702 failure
IC703 failure
Check the position of optical pickup.
At outer or around middle track
At inner track
Is pin ① of CN702 at "HIGH" or "LOW"?
"H" "L"
Is pin ① of CN702 at "HIGH" or "LOW"?
"L" (0 V)
Inner track limit switch is defective or disconnected
Inner track limit switch is short-circuited.
Are there outputs pins ⑮ and ⑯ of IC703?
NG
OK
Traverse deck failure
Is there an output at pin ㉑ of IC702? (TRV)
NG
OK
IC702 failure
IC703 failure

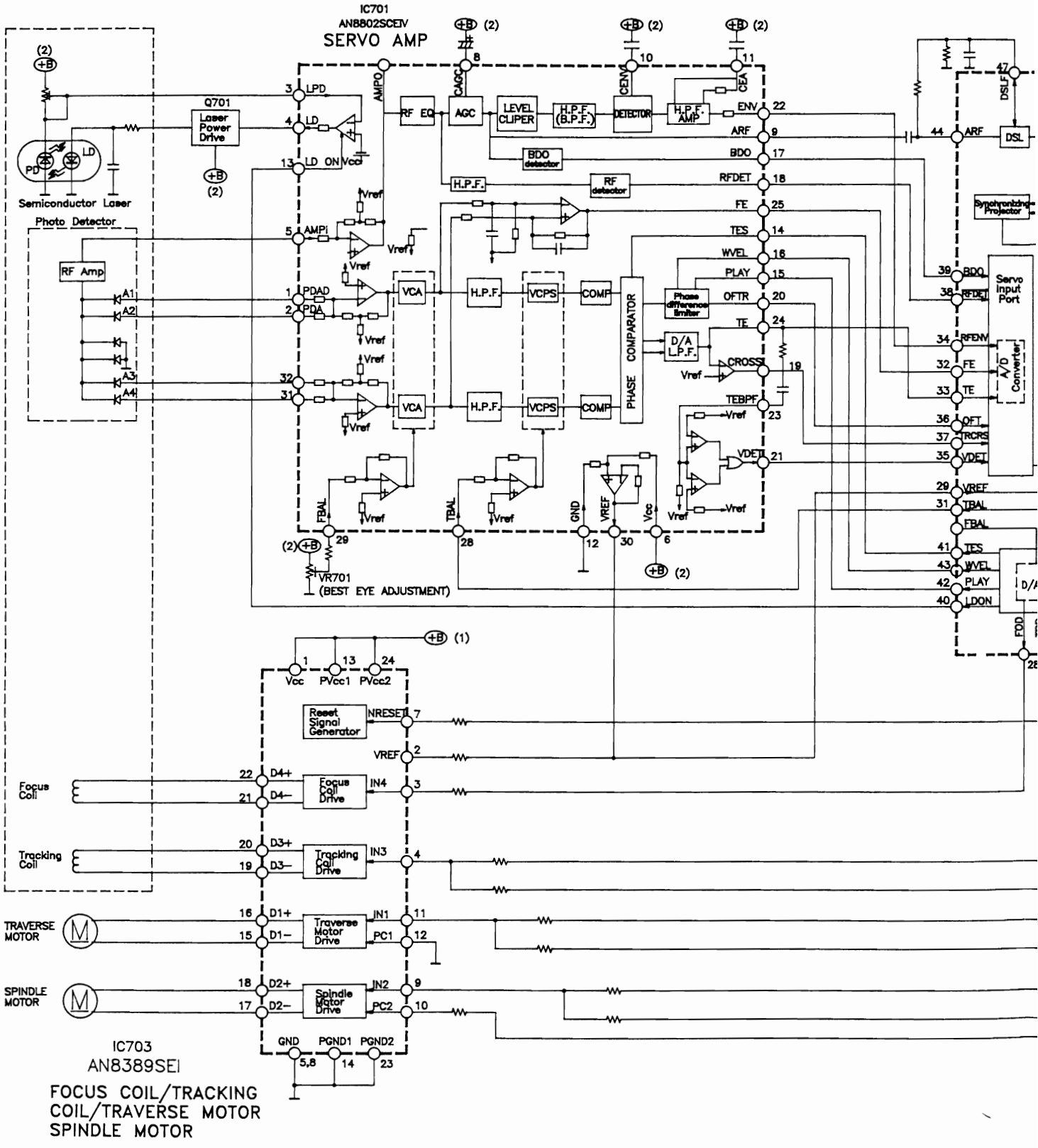
■ WIRING CONNECTION DIAGRAM

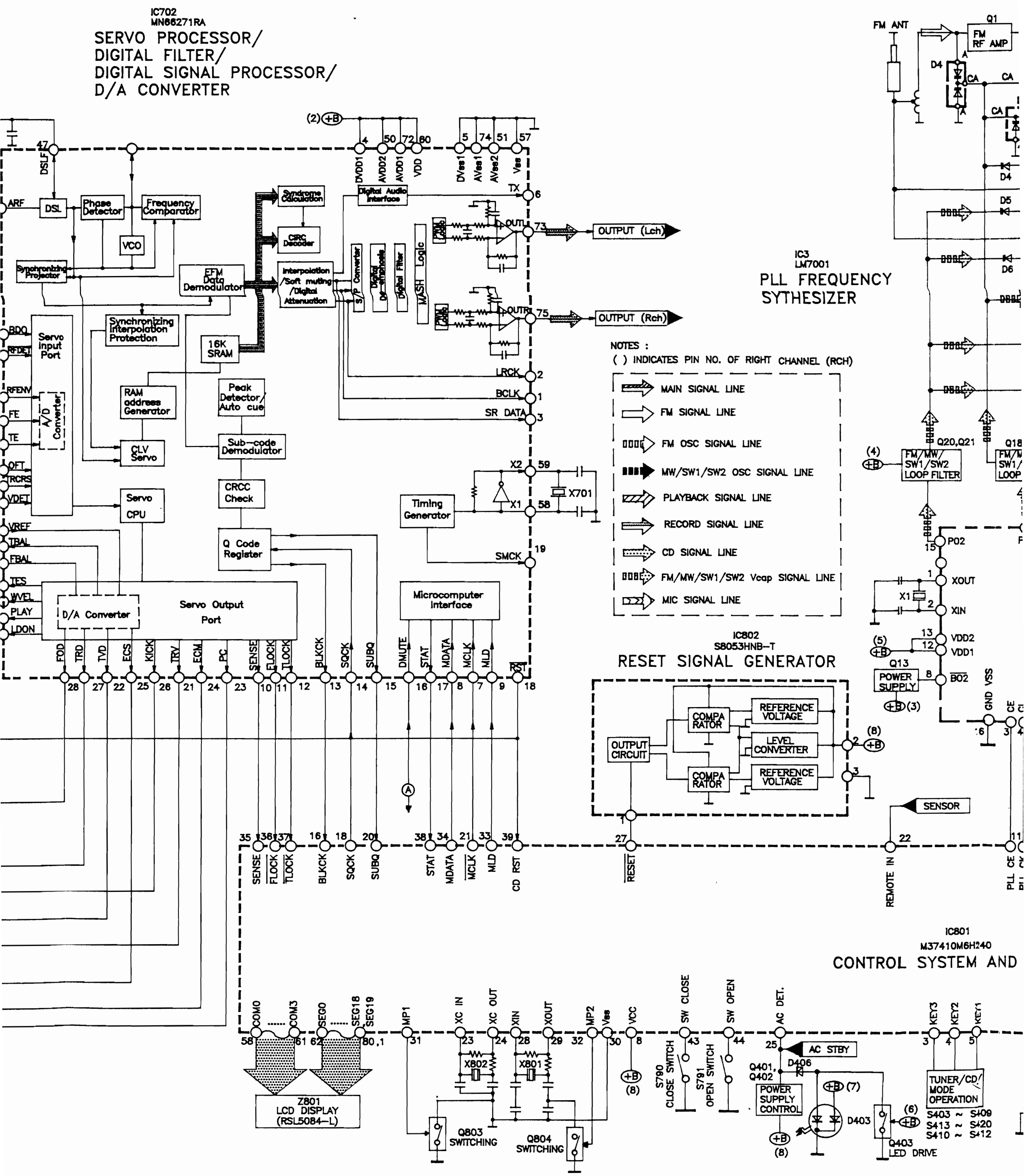


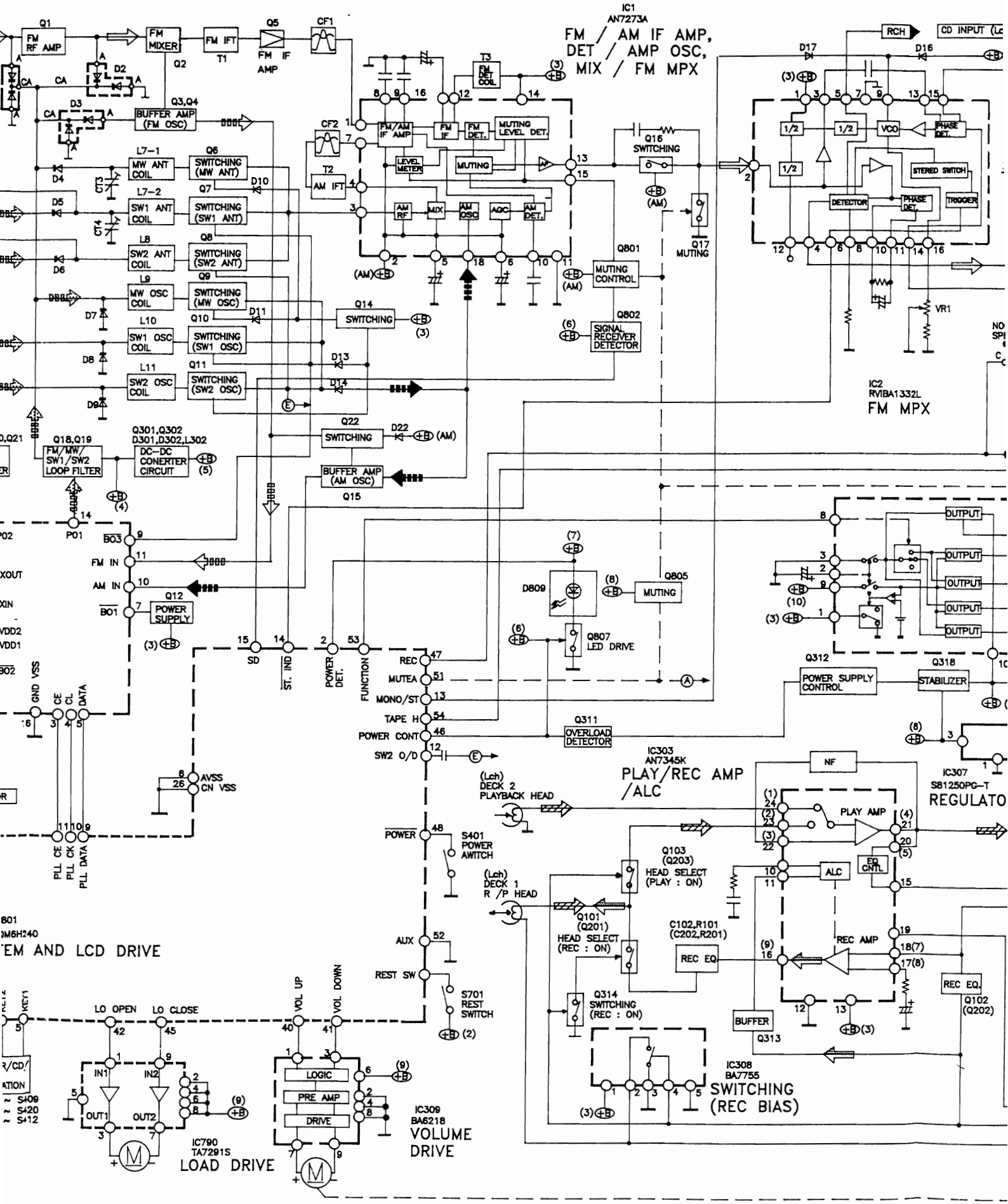


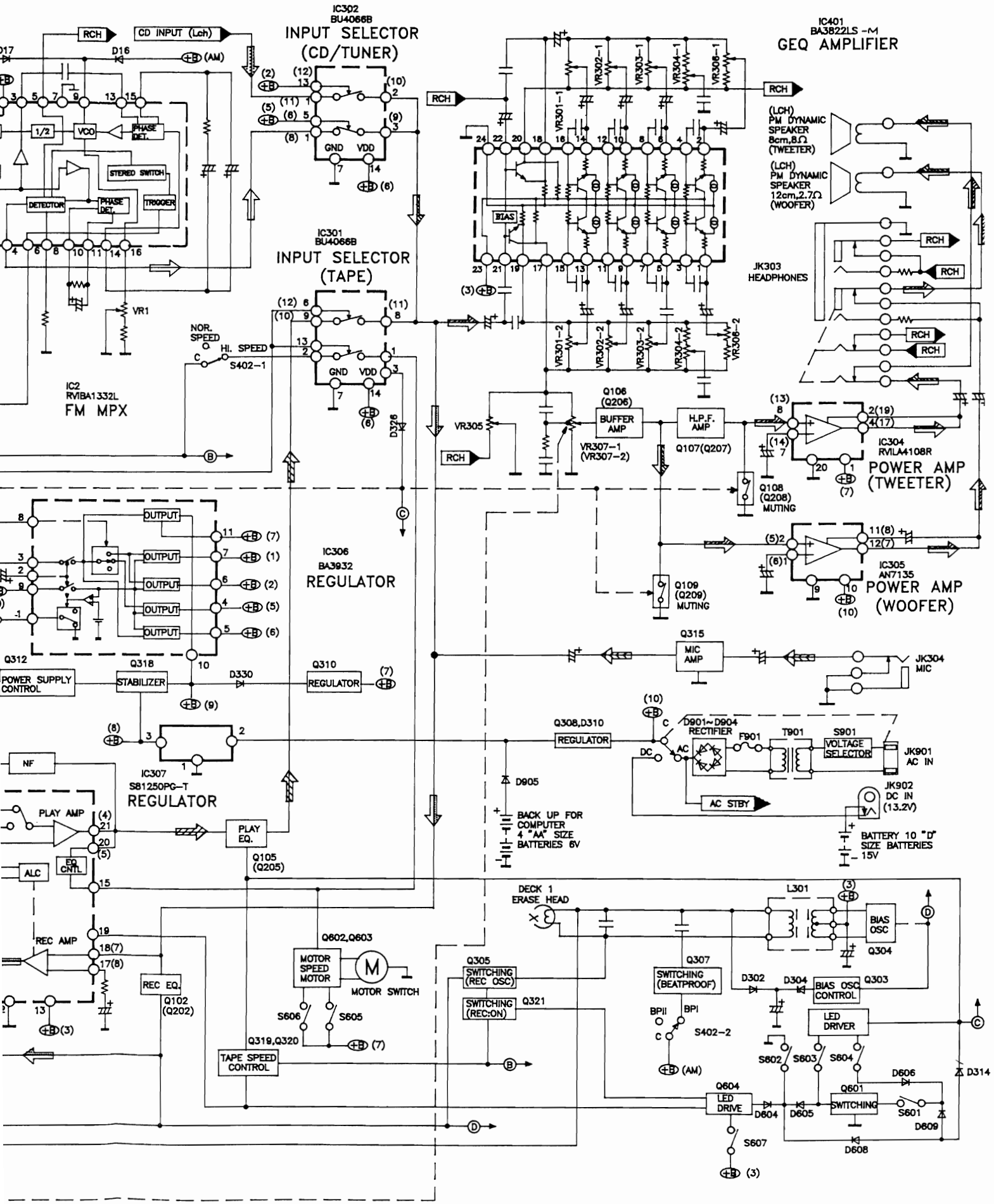
H CD OPERATION P.C.B
A CD P.C.B
SOLDER SIDE
CN702
TRAVERSE MOTOR
M701
CN701
M702
SPINDLE MOTOR
TELESCOPIC ANTENNA
OPTICAL PICK-UP P.C.B
B TUNER P.C.B
CN1
CN2
W402
CS301
W801
W301
GRY
BLK
RED
WHT
I CD LOADER P.C.B
CP790
DECK 1 R / P HEAD
DECK 1 ERASE HEAD
YEL
MOTOR
W601
W602
E DECK P.C.B
NOTE :
WIRE COLOUR :
PNK ..... PINK
BLK ..... BLACK
WHT ..... WHITE
RED ..... RED
YEL ..... YELLOW
GRY ..... GRAY
BLU ..... BLUE
JK901
JK902
S901
AC IN
DC IN
W905
W904
W903
CS901
T901 (Power Transformer)
G POWER SUPPLY P.C.B
PNK
MAIN (BATTERY 10 "D" SIZE BATTERIES 15V)
MEMORY BACK -UP FOR COMPUTER/CLOCK (BATTERY 4 "AA" SIZE BATTERIES 6V)
R SIDE

■ BLOCK DIAGRAM




IC702
MN66271RA
SERVO PROCESSOR/
DIGITAL FILTER/
DIGITAL SIGNAL PROCESSOR/
D/A CONVERTER
OUTPUT (Lch)
OUTPUT (Rch)
IC3
LM7001
PLL FREQUENCY SYTHESIZER
NOTES :
( ) INDICATES PIN NO. OF RIGHT CHANNEL (RCH)
MAIN SIGNAL LINE
FM SIGNAL LINE
FM OSC SIGNAL LINE
MW/SW1/SW2 OSC SIGNAL LINE
PLAYBACK SIGNAL LINE
RECORD SIGNAL LINE
CD SIGNAL LINE
FM/MW/SW1/SW2 Vcap SIGNAL LINE
MIC SIGNAL LINE
IC802
S8053HNB-T
RESET SIGNAL GENERATOR
IC801
M37410M6H240
CONTROL SYSTEM AND
Z801
LCD DISPLAY
(RSL5084-L)
Q803 SWITCHING
Q804 SWITCHING
POWER SUPPLY CONTROL
Q403 LED DRIVE
TUNER/CD/ MODE OPERATION
S403 ~ S409
S413 ~ S420
S410 ~ S412
FM ANT
FM RF AMP


IC1
AN7273A
FM / AM IF AMP,
DET / AMP OSC,
MIX / FM MPX
FM RF AMP
FM MIXER
FM IFT
FM IF AMP
BUFFER AMP (FM OSC)
MW ANT COIL
SW1 ANT COIL
SW2 ANT COIL
MW OSC COIL
SW1 OSC COIL
SW2 OSC COIL
SWITCHING (MW ANT)
SWITCHING (SW1 ANT)
SWITCHING (SW2 ANT)
SWITCHING (MW OSC)
SWITCHING (SW1 OSC)
SWITCHING (SW2 OSC)
FM/AM IF AMP
FM IF
FM DET.
MUTING LEVEL DET.
LEVEL METER
MUTING
AM RF
MIX
AM OSC
AGC
AM DET.
AM IFT
FM DET COIL
Q16 SWITCHING
Q17 MUTING
MUTING CONTROL
SIGNAL RECEIVER DETECTOR
Q14 SWITCHING
Q22 SWITCHING
BUFFER AMP (AM OSC)
Q15
FM/MW/SW1/SW2 LOOP FILTER
DC-DC CONERTER CIRCUIT
RCH
CD INPUT
VCO
PHASE DET.
STEREO SWITCH
DETECTOR
TRIGGER
VR1
IC2
RVIBA1332L
FM MPX
POWER SUPPLY
D809
Q805 MUTING
Q807 LED DRIVE
OUTPUT
Q312 POWER SUPPLY CONTROL
Q318 STABILIZER
Q311 OVERLOAD DETECTOR
IC303
AN7345K
PLAY/REC AMP /ALC
NF
PLAY AMP
ALC
EQ CNTL
REC AMP
REC EQ
BUFFER
Q313
Q314 SWITCHING (REC : ON)
Q103 (Q203) HEAD SELECT (PLAY : ON)
Q101 (Q201) HEAD SELECT (REC : ON)
C102,R101 (C202,R201)
REC EQ. Q102 (Q202)
(Lch) DECK 2 PLAYBACK HEAD
(Lch) DECK 1 R /P HEAD
IC308
BA7755
SWITCHING (REC BIAS)
IC307
S81250PG-T
REGULATO
S401 POWER AWITCH
S701 REST SWITCH
LO OPEN
LO CLOSE
VOL UP
VOL DOWN
IC790
TA7291S
LOAD DRIVE
IC309
BA6218
VOLUME DRIVE
LOGIC
PRE AMP
DRIVE
SD
ST. IND
POWER DET.
FUNCTION
REC
MUTEA
MONO/ST
TAPE H
POWER CONT
SW2 O/D
POWER
AUX
REST SW
PLL CE
PLL CK
PLL DATA
GND
CE
CL
DATA
AVSS
CN VSS
FM IN
AM IN
POWER SUPPLY
EM AND LCD DRIVE

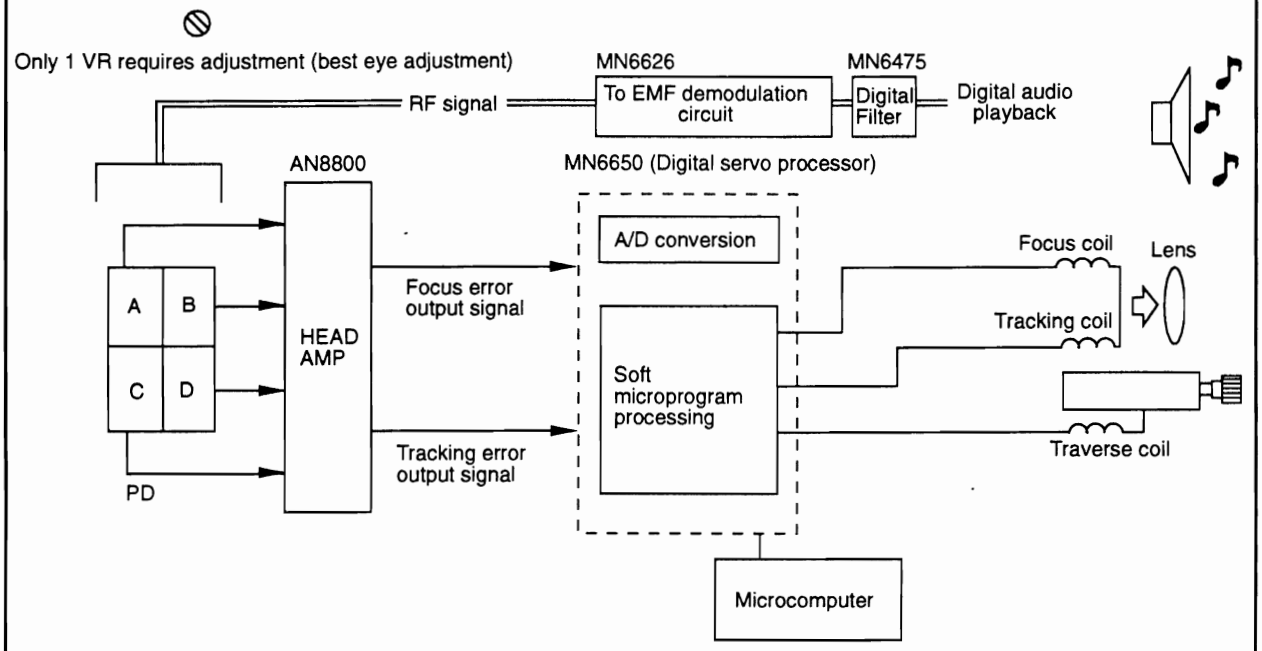

IC302
BU4066B
INPUT SELECTOR
(CD/TUNER)
IC401
BA3822LS-M
GEQ AMPLIFIER
RCH
CD INPUT (Lch)
(AM)
1/2
VCO
PHASE DET.
STEREO SWITCH
DETECTOR
PHASE DET.
TRIGGER
VR1
IC301
BU4066B
INPUT SELECTOR
(TAPE)
NOR. SPEED
HI. SPEED
S402-1
IC2
RVIBA1332L
FM MPX
BIAS
VR301-1
VR302-1
VR303-1
VR304-1
VR306-1
VR301-2
VR302-2
VR303-2
VR304-2
VR308-2
(LCH)
PM DYNAMIC
SPEAKER
8cm,8Ω
(TWEETER)
(LCH)
PM DYNAMIC
SPEAKER
12cm,2.7Ω
(WOOFER)
JK303
HEADPHONES
VR305
VR307-1
(VR307-2)
Q106
(Q206)
BUFFER AMP
H.P.F. AMP
Q107(Q207)
Q108
(Q208)
MUTING
IC304
RVILA4108R
POWER AMP
(TWEETER)
Q109
(Q209)
MUTING
IC305
AN7135
POWER AMP
(WOOFER)
IC306
BA3932
REGULATOR
OUTPUT
Q312
POWER SUPPLY CONTROL
Q318
STABILIZER
D330
Q310
REGULATOR
Q315
MIC AMP
JK304
MIC
IC307
S81250PG-T
REGULATOR
Q308,D310
REGULATOR
D901~D904
RECTIFIER
F901
T901
S901
VOLTAGE SELECTOR
JK901
AC IN
AC STBY
JK902
DC IN
(13.2V)
D905
BACK UP FOR COMPUTER
4 "AA" SIZE
BATTERIES 6V
BATTERY 10 "D"
SIZE BATTERIES
15V
NF
PLAY AMP
PLAY EQ.
Q105
(Q205)
EQ CNTL
ALC
REC AMP
REC EQ.
Q102
(Q202)
Q602,Q603
MOTOR SPEED MOTOR
MOTOR SWITCH
S606
S605
Q319,Q320
TAPE SPEED CONTROL
Q305
SWITCHING
(REC OSC)
SWITCHING
(REC:ON)
Q321
DECK 1
ERASE HEAD
L301
BIAS OSC
Q304
Q307
SWITCHING
(BEATPROOF)
BPII
BPI
S402-2
D302
D304
BIAS OSC CONTROL
Q303
LED DRIVER
S602
S603
S604
D606
D314
Q604
LED DRIVE
D604
D605
Q601
SWITCHING
S601
D609
D608
S607

■NEW DIGITAL SERVO CIRCUIT

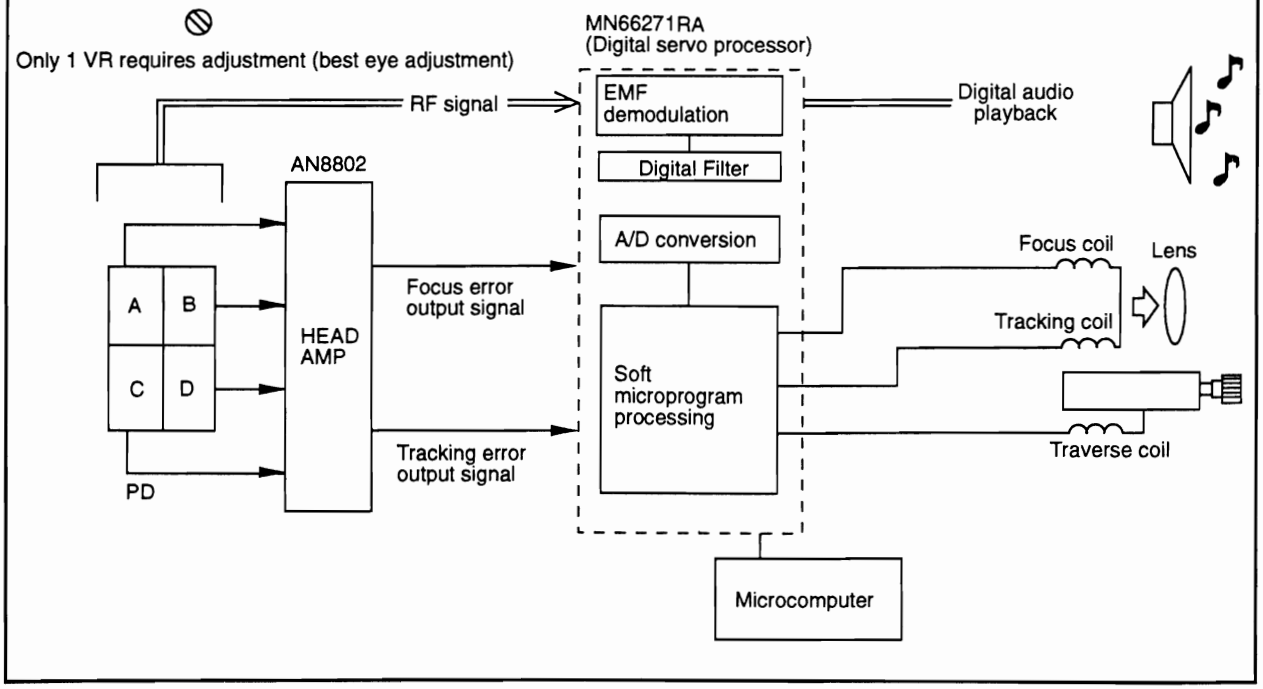
This model employs a new digital servo circuit. Compared to the old digital servo circuit, the following points have been improved.

1. **Reduced operated noise**
   Loading mechanism 2-level speed reducer
2. **Reduced access time**
   [(old) 2.9 seconds ➡(new) 1.9 seconds]
   Change of traverse gear
3. **Improved vibration resistance**
   Rubber and spring 2-level floating mechanism
   [fo=50 Hz (old) ➡20 Hz (new)]
4. **Reduced number of parts**
   Use of a single super IC chip
   3 chips (MN6626, MN6650, MN6475) are reduced to a single chip (MN66271RA)

DIGITAL SERVO SYSTEM (OLD)



DIGITAL SERVO SYSTEM (NEW)



5. The servo processor IC (MN66271RA) of the newly-developed digital servo circuit automatically performs the following adjustments which were originally adjusted manually in the conventional analog servo circuit:
(1) Focus offset, (2) Tracking offset, (3) Focus gain, (4) Tracking gain, and (5) Tracking balance. Therefore, you do not have to perform the above-mentioned electrical adjustments. The unit optimizes the servo for each loaded disc.
[You must perform the best eye (PD balance) adjustment manually.]

The following flow chart shows the sequence of automatic adjustments.

• Flow chart on automatic adjustment sequence

■ MEASUREMENT AND ADJUSTMENT <TUNER SECTION>

■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Set volume control to maximum.
2. Set S-XBS control to minimum.
3. Set function selector to TUNER/BAND or TAPE.
4. Set power source voltage to 15V DC.
5. Set band switch to MW/FM/SW1/SW2
6. Set graphic equalizer controls to center.
7. Set balance control to center.
8. Output of signal generator should be no higher than necessary to obtain an output reading.

■ MW-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	450 kHz 30% Mod. at 400Hz	Point of non-interference. (on/about 600 kHz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	T2 (MW IFT)	Adjust for maximum output.

■ MW-RF ALIGNMENT

"	531kHz	Tuning capacitor fully closed	TP3 ...(+) TP4 ...(–)	L9 (MW OSC Coil)	Adjust L9, for 1.1 ± 0.15V reading on DC voltmeter across TP7 & TP8 (Gnd).
	1602kHz	Tuning capacitor fully opened	"		Confirm the AM VCO Volatge to be in the range of 7.7V ± 0.8V range
"	603kHz	Tune to signal	"	(*1) L7-1 (MW ANT Coil)	Adjust for maximum output. Adjust L7-1 by moving coil along the ferrite core.
"	1,404kHz	Tune to signal	"	CT3 (MW ANT Trimmer)	Adjust for maximum output.
(*1) Fix antenna coil with wax after completing alignment.					

■ SW1-RF ALIGNMENT

Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	3.2 MHz	Tuning capacitor fully closed	TP3 ...(+) TP4 ...(–)	L10 (SW1 OSC Coil)	Adjust L10, for 2.0 ± 0.15V reading on DC voltmeter across TP11 & TP8.
"	7.3 MHz	Tuning capacitor fully opened	"	——	Confirm the AM VCO Volatge to be in the range of 7.0V ± 0.8V range
"	"	Tune to signal	"	(*2) L7-2 (SW1 ANT Coil)	Adjust for maximum output. Adjust L7-2 by moving coil along the ferrite core.
"	7.3 MHz	Tune to signal	"	CT4 (SW1 ANT Trimmer)	Adjust for maximum output.
(*2) Cement antenna ferrite coil with wax after completing alignment.					

■ SW2-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
Connect to test point TP1 through ceramic capacitor(0.001μF) Negative side to test point TP2.	9.5 MHz	Tuning capacitor fully closed	TP3 ...(+) TP4 ...(–)	L11 (SW2 OSC Coil)	Adjust L11, for 2.0 ± 0.15V reading on DC voltmeter across TP11 & TP8.
	21.85MHz	Tuning capacitor fully opened	"	——	Confirm the AM VCO Volatge to be in the range of 7.0V ± 0.8V range
	9.5 MHz	Tune to signal	"	L8 (SW2 ANT TRIMMER)	Adjust for maximum output.

■ FM-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Refer to Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
Connect to test point **TP1** through ceramic capacitor (0.001μF). Negative side to test point **TP2**.	10.7 MHz (SWEEP)	Point of interference. (on/about 90 MHz)	Connect vert. amp. scope to test point **TP3**. Negative side to test point **TP4**	T1 (FM 1st)	Wave form is shown in Fig. 3.

■ "ZERO VOLTAGE" ALIGNMENT

FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENTCONNECTION ELECTRONIC COUNTER	ADJUSTMENT (Refer to Fig. 1)	SPECIFICATION	REMARKS
98 MHz, 60 dB(CW) Connect to test point **TP1** through FM dummy antenna. Negative side to **TP2**	**TP9** ...(+) **TP10** ...(–)	T3	0 ± 30mV	Adjust T3, for 0 ± 30mV reading on DC voltmeter across TP9 & TP10.

■ HEAD AZIMUTH ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	REMARKS
QZZCFM (8kHz, -20dB)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	Azimuth screw (Shown in Fig. 4 & 5)	1. Playback the azimuth adjustment portion (8 kHz, -20 dB) of the test tape (QZZCFM) . Vary the azimuth adjusting screw until the outputs of the L-ch and R-ch are maximized and the lisajous waveform, as illustrated, approaches 0 degrees. Notes: When the adjusting positions are different with L-ch and R-ch ,find a position where the outputs of L-ch and R-ch are balanced, and then make the adjustment into the range " 0 ~ -0.5dB " from the peak.

■ TAPE SPEED ADJUSTMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	REMARKS
QZZCWAT (3 kHz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	VR601 (Shown in Fig. 6)	**Normal Speed Adjustment** 1. Insert a test tape (QZZCWAT) in Deck 2 and play it back. 2. Adjust **VR601** until the measured value becomes **3000 ±30Hz. (Adjustment Target Value)** (Standard Target Value: 3000 ± 90Hz) 3. Check Deck 1 in the same way to make sure it satisfies the specification. Deck 1 ... **±50 Hz (Adjustment Target Value)** of the speed of Deck 2. (Standard Target Value: ± 60Hz) If it doesn't ,repeat step 1 and 2 above. Note: This set uses one drive motor, so be sure to perform the adjustment in Deck 2. **High Speed Measurement** 4. Insert the playback tape into Deck 2 and the editing tape into Deck 1. 5. Set the Editing Mode Selector to the "HIGH" position. 6. Press the Deck 1 Pause button, then press the Record Button. 7. Press the Deck 2 Playback Button. * Editing is started by means of the Synchro-Start function. 8. Check to ensure that the measured speed is within **5100 Hz . (Adjustment Target Value)** (Standard Target Value: 5000Hz)

■ RECORD BIAS VOLTAGE & FREQUENCY CHECK

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT (Refer to Fig. 7)	SPECIFICATION	REMARKS
Use Normal tape	**TP101** ...(+) **TP102** ...(–)	———	16.0 ± 2.0mV	-Function selector in Tape position Record mode
Use Normal tape	**TP101** ...(+) **TP102** ...(–)	———	100 ± 10KHz	1. Function selector in Tape position Record mode 2. Confirm sine-wave appears without distortion/abnormal oscillation.

■ BEATPROOF CHECK

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT (Refer to Fig. 7)	SPECIFICATION	REMARKS
Use Normal tape	TP101 ...(+) TP102 ...(-)	———	Frequency Shift from B.P II–I (5 ±1.0kHz)	1. Set the function selector to Tuner position. 2. Switch edit switch to B.P II. 3. Confrim oscillating waveform to be sinusoidal without distortion /abnormal oscillation

■ ALIGNMENT POINT

• Please refer to Circuit Board and Wiring Connection Diagram for test point locations.

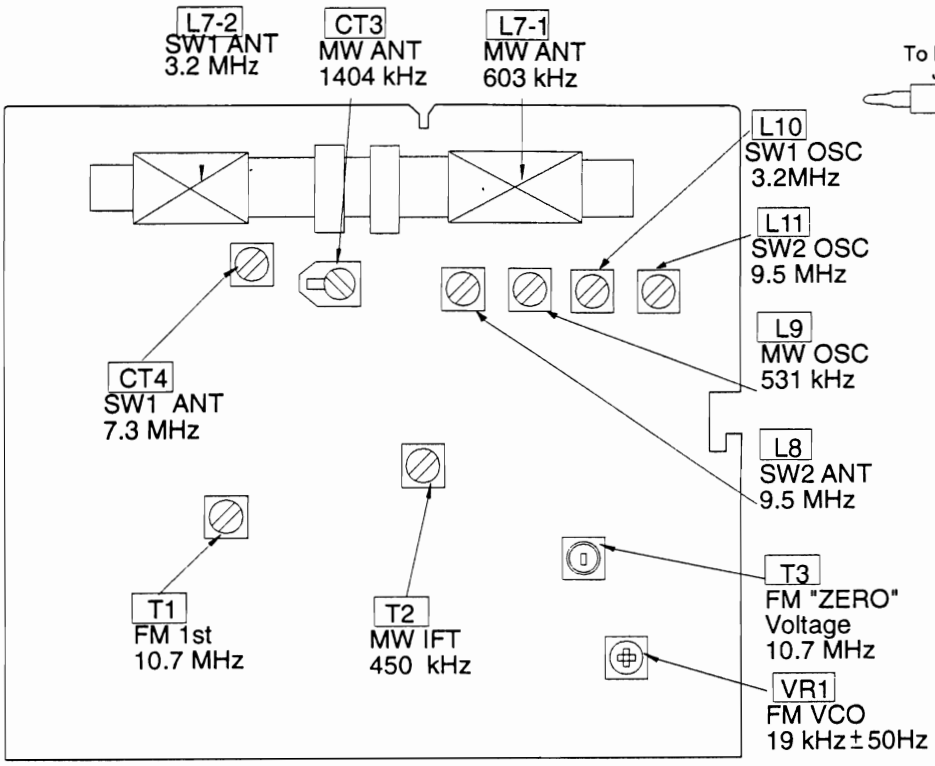


Fig. 1

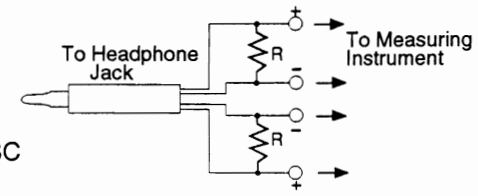


Fig. 2

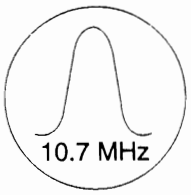


Fig. 3

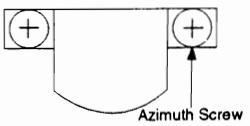


Fig. 4

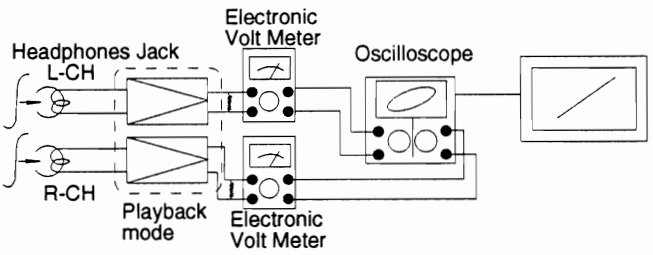


Fig. 5

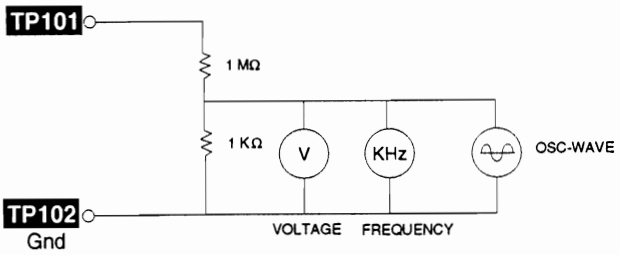


Fig. 7

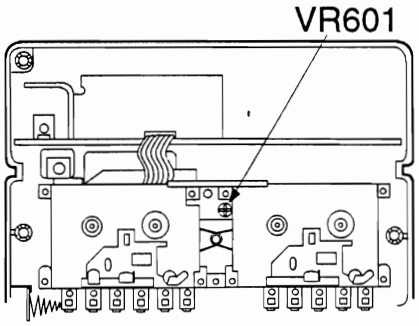


Fig. 6

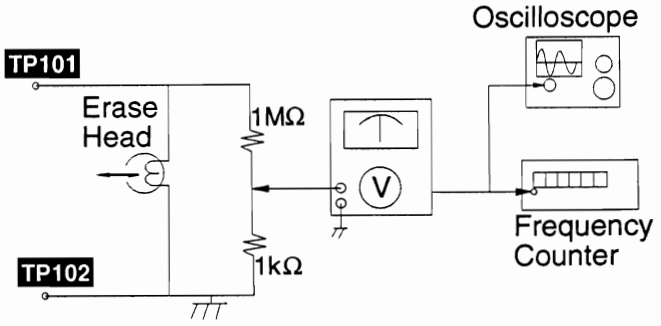


Fig. 8

■ < Compact Disc Player Section >

Warning : This product uses a laser diode. Refer to caution statements on page 2.

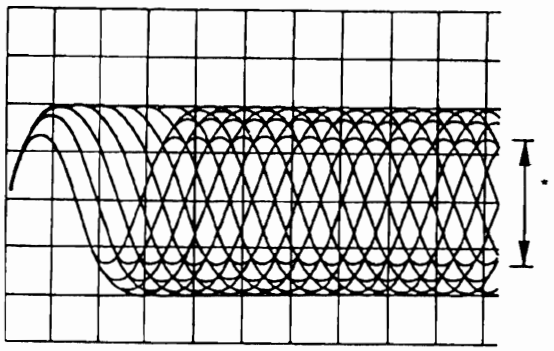
Measuring Instruments and Special Tools

* Test discs
  1. Playability test disc (SZZP1054C)
  2. Uneven test disc (SZZP1056C)
* Musical program disc (ordinary)
* Dual-beam oscilloscope with bandwidth of 30 MHz or better (with EXT. trigger and 1:1 probe).
* Allen wrench (M2.0) (SZZP1101C)
* Lock paint (RZZ0L01)

(1) MECHANICAL ADJUSTMENT

- When the traverse deck is replaced, making adjustments is not necessary. (The traverse deck ass'y is already adjusted.)
- Make adjustments to improve playability if the traverse deck has not been replaced.

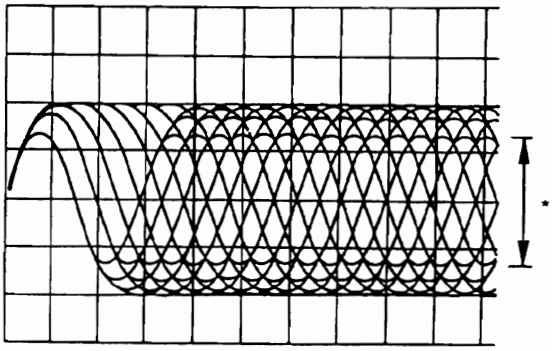
1. Connect the oscilloscope's CH. 1 probe across TJ701 (RF) (+) and TJ702 (VREF) (-) on the servo P.C.B.
   Oscilloscope setting :VOLT. 200mV
   SWEEP. . . . . .0.5ms.
   Input coupling. . . . . AC
2. Switch the player power **ON**, and play track **19** on the test disc (SZZP1056C).
   (Playing any other track will prevent the mechanical adjustment screws from being accessed.)
3. Leave the player in the play mode .
4. Alternately adjust the mechanical adjustment screws with the 2.0mm allen wrench (SZZP1101C) until the vertical fluctuation of RF signal is minimized and the eye pattern is most stretched.
   (Refer to Fig.2 on page 51)
5. After completing the adjustment, lock the mechanical adjustment screws with lock paint (RZZ0L01).



* Most stretched eye pattern

(2) BEST EYE (PD BALANCE) ADJUSTMENT

1. Connect the oscilloscope's CH. 1 probe across TJ701 (RF) (+) and TJ702 (VREF) (-) on the servo P.C.B.
   Oscilloscope setting VOLT. 200mV
   SWEEP. . . . . .0.5µs.
   Input coupling. . . . . AC
2. Switch the player power **ON**, and play the 1 kHz (track1) on the test disc (SZZP1054C).
3. Adjust **VR701** until the vertical fluctuation of RF signal is minimized and the eye pattern is most stretched.
   (Refer to Fig.1 on page 51)



* Most stretched eye pattern

(3) CHECKING OF PLAY OPERATION AFTER ADJUSTMENT

*** Checking Skip Search**

1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

*** Checking Manual Search**

1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).

*** Checking Playability**

1. Play the 0.7 mm black dot and the 0.7 mm wedge on the test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

• Adjustment points

<Compact disc player section>

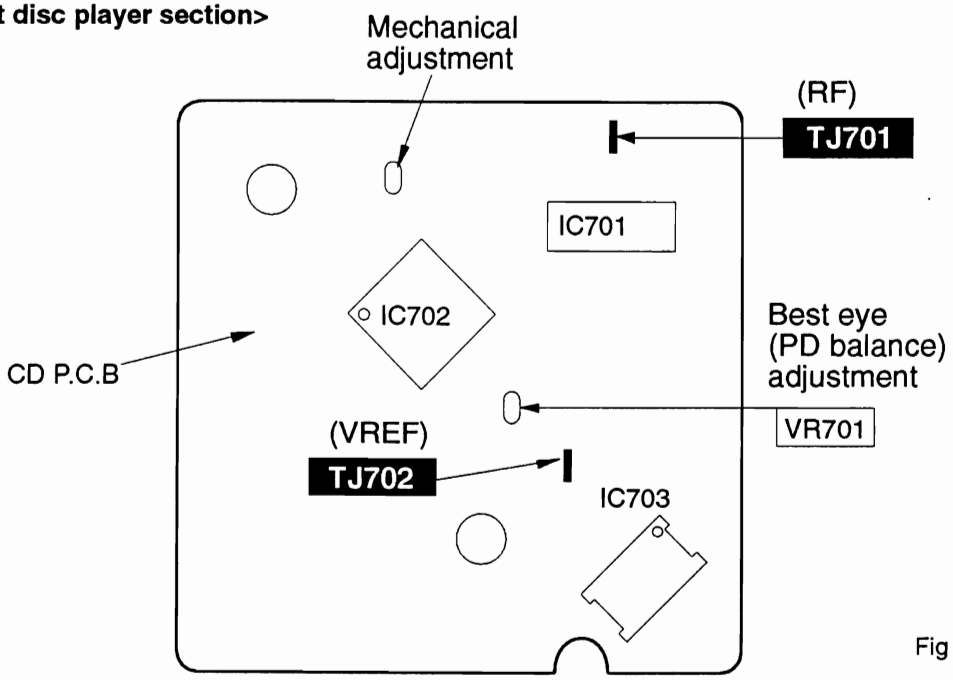


Fig .1

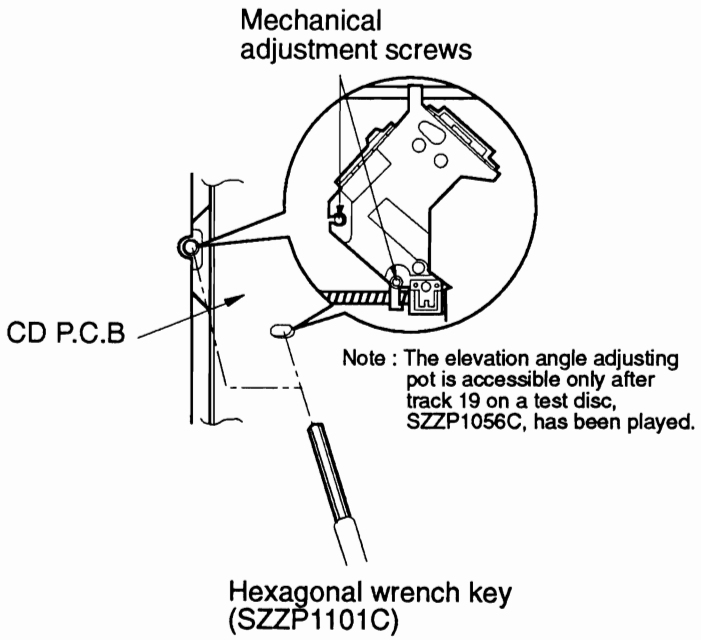


Fig .2

■ MECHANISM PARTS LIST

Notes: : [M] Indicates in Remarks columns are parts that are supplied by MESA.

Ref. No	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS LIST	
		DECK 1	
101	RDV0007	MAIN BELT	[M]
102	RJR0033	EARTH LUG	[M]
103	RMB0109-1	BRAKE SPRING	[M]
104	RML0116	BRAKE ANGLE	
105	RBR2CG002-S	E HEAD	[M]
106	RDG0057	IDLER GEAR	[M]
107	RDG0059	FF RELAY GEAR	[M]
108	RDK0005	CAM GEAR	[M]
109	RDV0006-1	RF BELT	[M]
110	RHW16009	CAPSTAN WASHER	[M]
111	RMA0109	BACK PLATE	[M]
112	RMB0043-1	ROD OPERATION SPRING	[M]
113	RMB0045	AS SPRING	[M]
114	RMB0046-1	LOCK PLATE SPRING	[M]
115	RMB0165	HEAD PANEL SPRING	[M]
116	RMB0048	IDLER LEVER SPRING	[M]
117	RMB0053	PAUSE LEVER SPRING	[M]
118	RMB0125	BACK TENSION SPRING	[M]
119	RMC0061	SPRING	[M]
120	RFKRCT090P-K	CHASSIS ASS'Y	[M]
121	RML0071	SWAY LEVER	[M]
122	RML0072	AS RELEASE LEVER	[M]
123	RML0073-1	AS PROTECT LEVER	[M]
124	RML0074	IDLER LEVER	[M]
125	RML0076	EJECT SELECTION LEVE	[M]
126	RML0077	LOCK PLATE	[M]
127	RML0078	FUNCTION PLATE	[M]
128	XTN2+6J	BACK PLATE SCREW	
129	RML0081-1	LEVER	[M]
130	RML0082	PAUSE LEVER	[M]
131	RMM0023	PLAY ROD	[M]
132	RMM0024	REW ROD	[M]
133	RMM0025	FF ROD	[M]
134	RMM0026	STOP ROD	[M]
135	RMM0027	PAUSE ROD	[M]
136	RMM0028	REC ROD	[M]
137	RMM0029	EJECT SLIDE LEVER	[M]
138	RMR0211	PAUSE BUSH	[M]
139	RMR0227	IDLER GEAR BUSH	[M]
140	RMS0055	REEL SHAFT	[M]
141	RXF0012	FLYWHEEL ASSY	[M]
141-1	RHW21008	WASHER	[M]
142	RMB0044	TRIGGER SPRING	[M]
143	RML0075	TRIGGER LEVER	[M]
144	RXP0014	RF CLUTCH ASSY	[M]
145	RXP0015	PINCH ROLLER ASSY	[M]
145-1	RMB0049	PINCH ARM SPRING	[M]
146	RBR4CM001-M	R/P HEAD	[M]
147	RHD20003	SCREW	[M]
149	RFKRGHM09LEK	HEAD BASE ASS'Y	[M]
150	RMB0059	SPRING	[M]
151	RMR0159	HEAD BASE	[M]
152	XTN2+4F	EARTH LUG SCREW	
153	XTN2+8F	SCREW	
154	RXR0004	TAKE UP REEL ASSY	[M]
155	RXR0005	SUPPLY REEL ASSY	[M]
156	XTN2+6J	SCREW	
157	XTW26+6L	SCREW	
158	RME0098-2	SPRING	[M]

■ MECHANISM PARTS LOCATION

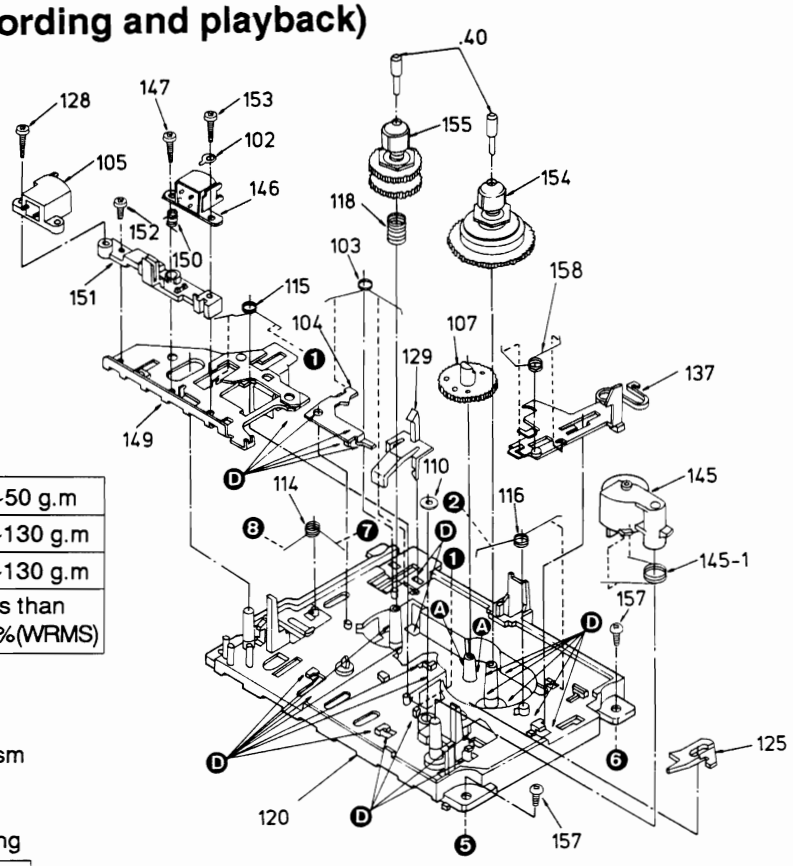
Notes : [M] Indicates in Remarks columns parts that are supplied by MESA.

Ref. No	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS LIST	
		DECK 2	
201	RDV0009	MAIN BELT B	[M]
202	RJR0033	EARTH LUG	[M]
203	RMB0109-1	BRAKE SPRING	[M]
204	RML0116	BRAKE	
206	RDG0057	IDLER GEAR	[M]
207	RDG0059	FF RELAY GEAR	[M]
208	RDK0005	CAM GEAR	[M]
209	RDV0006-1	RF BELT	[M]
210	RHW16009	CAPSTAN WASHER	[M]
211	RMA0109	BACK PLATE	[M]
212	RMB0043-1	ROD OPERATION SPRING	[M]
213	RMB0045	AS SPRING	[M]
214	RMB0046-1	LOCK PLATE SPRING	[M]
215	RMB0165	HEAD PANEL SPRING	[M]
216	RMB0048	IDLER LEVER SPRING	[M]
217	RMB0053	PAUSE LEVER SPRING	[M]
218	RMB0125	BACK TENSION SPRING	[M]
219	RMC0061	SPRING	[M]
220	RFKRCT090P-K	CHASSIS ASS'Y	[M]
221	RML0071	SWAY LEVER	[M]
222	RML0072	AS RELEASE LEVER	[M]
223	RML0073-1	AS PROTECT LEVER	[M]
224	RML0074	IDLER LEVER	[M]
225	RML0076	EJECT SELECTION LEVE	[M]
226	RML0077	LOCK PLATE	[M]
227	RML0078	FUNCTION PLATE	[M]
230	RML0082	PAUSE LEVER	[M]
231	RMM0023	PLAY ROD	[M]
232	RMM0024	REW ROD	[M]
233	RMM0025	FF ROD	[M]
234	RMM0026	STOP ROD	[M]
235	RMM0027	PAUSE ROD	[M]
237	RMM0029	EJECT SLIDE LEVER	[M]
238	RMR0211	PAUSE BUSH	[M]
239	RMR0227	IDLER GEAR BUSH	[M]
240	RMS0055	REEL SHAFT	[M]
241	RXF0012	FLYWHEEL ASSY	[M]
241-1	RHW21008	WASHER	[M]
242	RMB0044	TRIGGER SPRING	[M]
243	RML0075	TRIGGER LEVER	[M]
244	RXP0014	RF CLUTCH ASSY	[M]
245	RXP0015	PINCH ROLLER ASSY	[M]

Ref. No	Part No.	Part Name & Description	Remarks
245-1	RMB0049	PINCH ARM SPRING	[M]
246	RBR4CM001-M	R/P HEAD	[M]
247	RHD20003	SCREW	[M]
249	RFKRGHM09LEK	HEAD BASE ASS'Y	[M]
250	RMB0059	SPRING	[M]
251	RMR0159	HEAD BASE	[M]
252	XTN2+4F	EARTH LUG SCREW	
253	XTN2+8F	SCREW	
254	RXR0004	TAKE UP REEL ASSY	[M]
255	RXR0005	SUPPLY REEL ASSY	[M]
256	XTN2+6J	SCREW	
257	XTW26+6L	SCREW	
258	RME0098-2	SPRING	[M]
260	RFKPXDT610PK	DC MOTOR ASS'Y	[M]
261	RHD26002	SCREW	
262	RMA0122	ANGLE	
263	RMG0102	RUBBER SPACE	[M]
264	RMG0131	RUBBER SPACE	[M]
265	RMA0121	ANGLE	
266	RML0085	LEVER	[M]

■ MECHANISM PARTS LOCATION (RAA0910)

DECK 1 (For recording and playback)

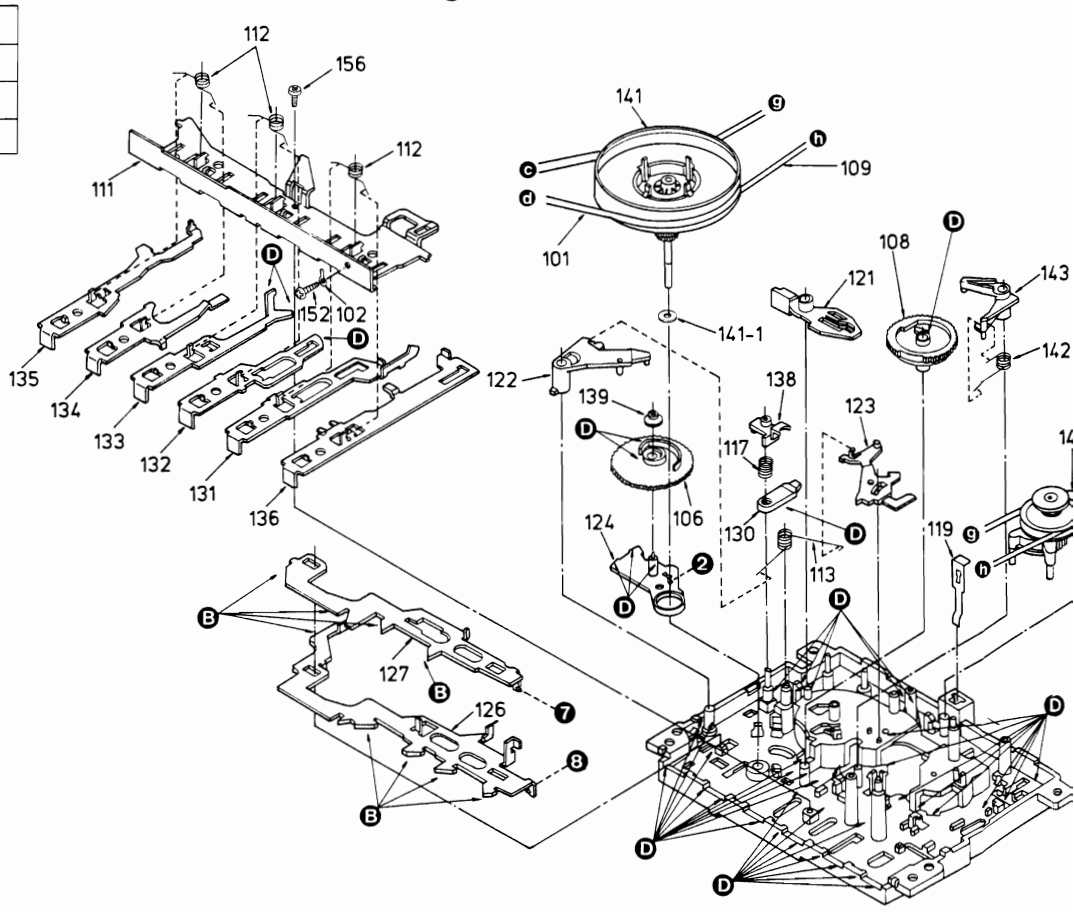


SPECIFICATION

Playback torque	25~50 g.m
Fast forward torque	65~130 g.m
Rewind torque	65~130 g.m
Wow and flutter	Less than 0.25%(WRMS)

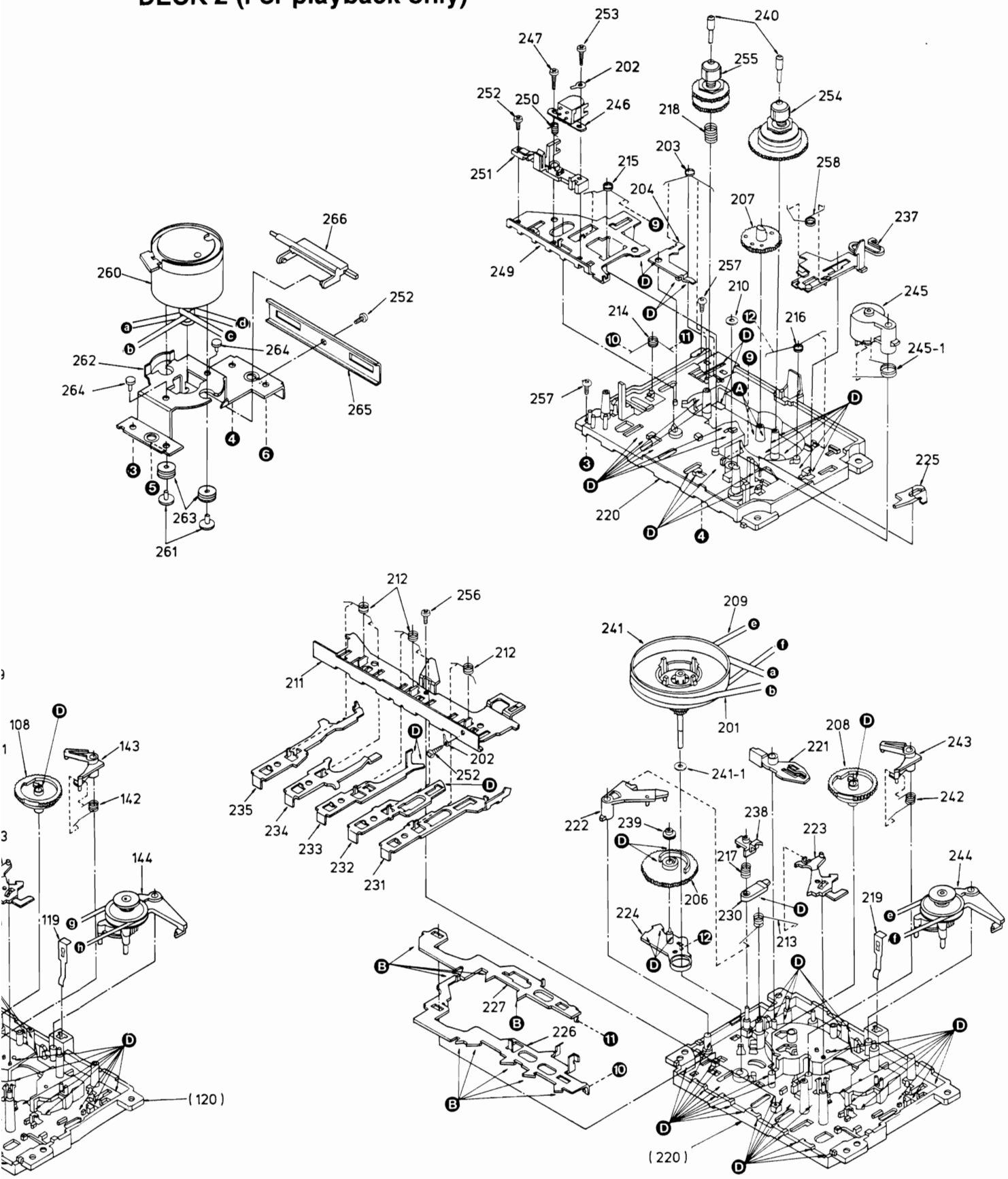
Note:
When changing mechanism parts, apply the specified grease to arrow indicated areas shown in the drawing

Ref No.	Part Name
Ⓐ	SZZ0L25
Ⓑ	SZZ0L06
Ⓓ	SZZ0L30

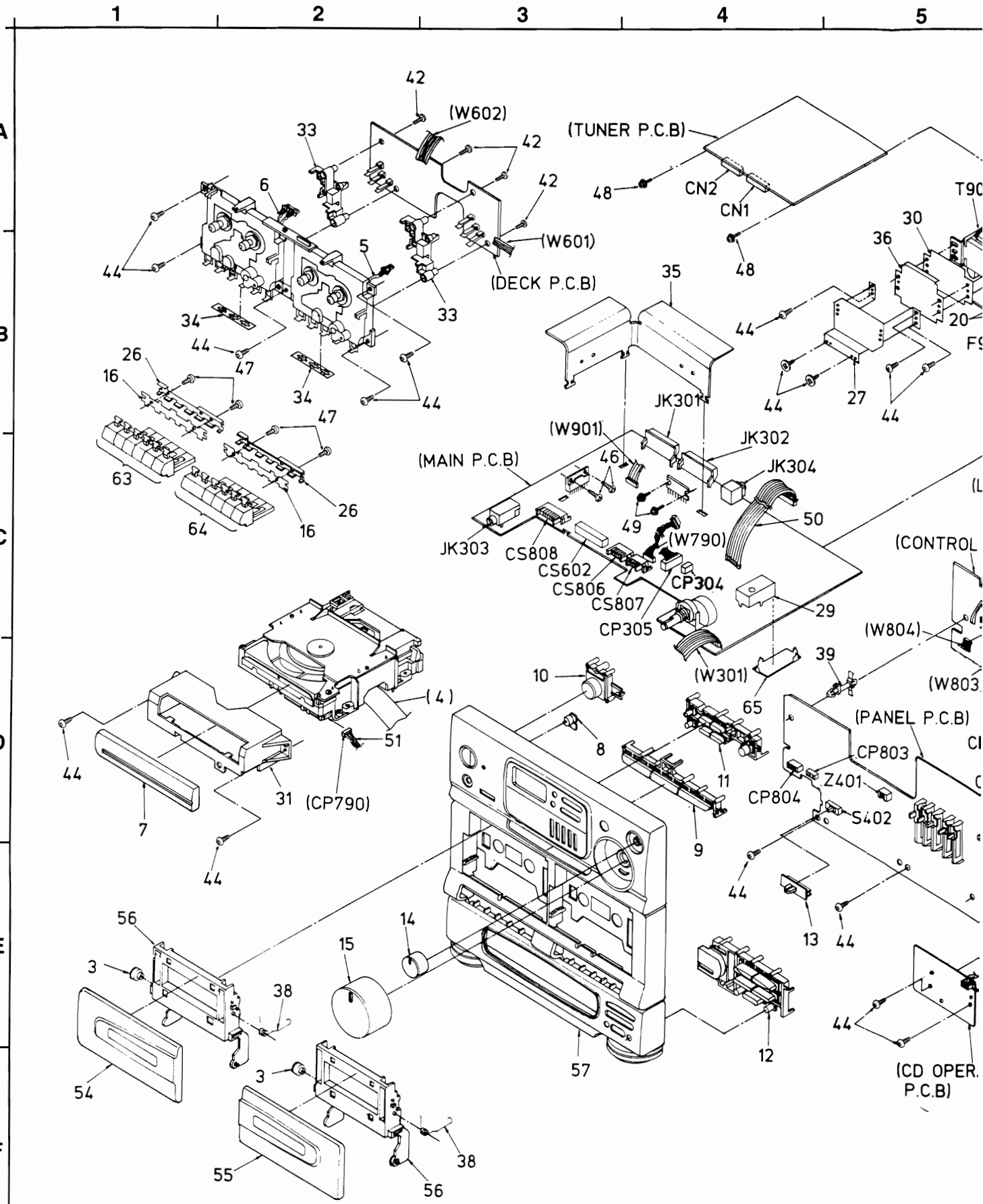


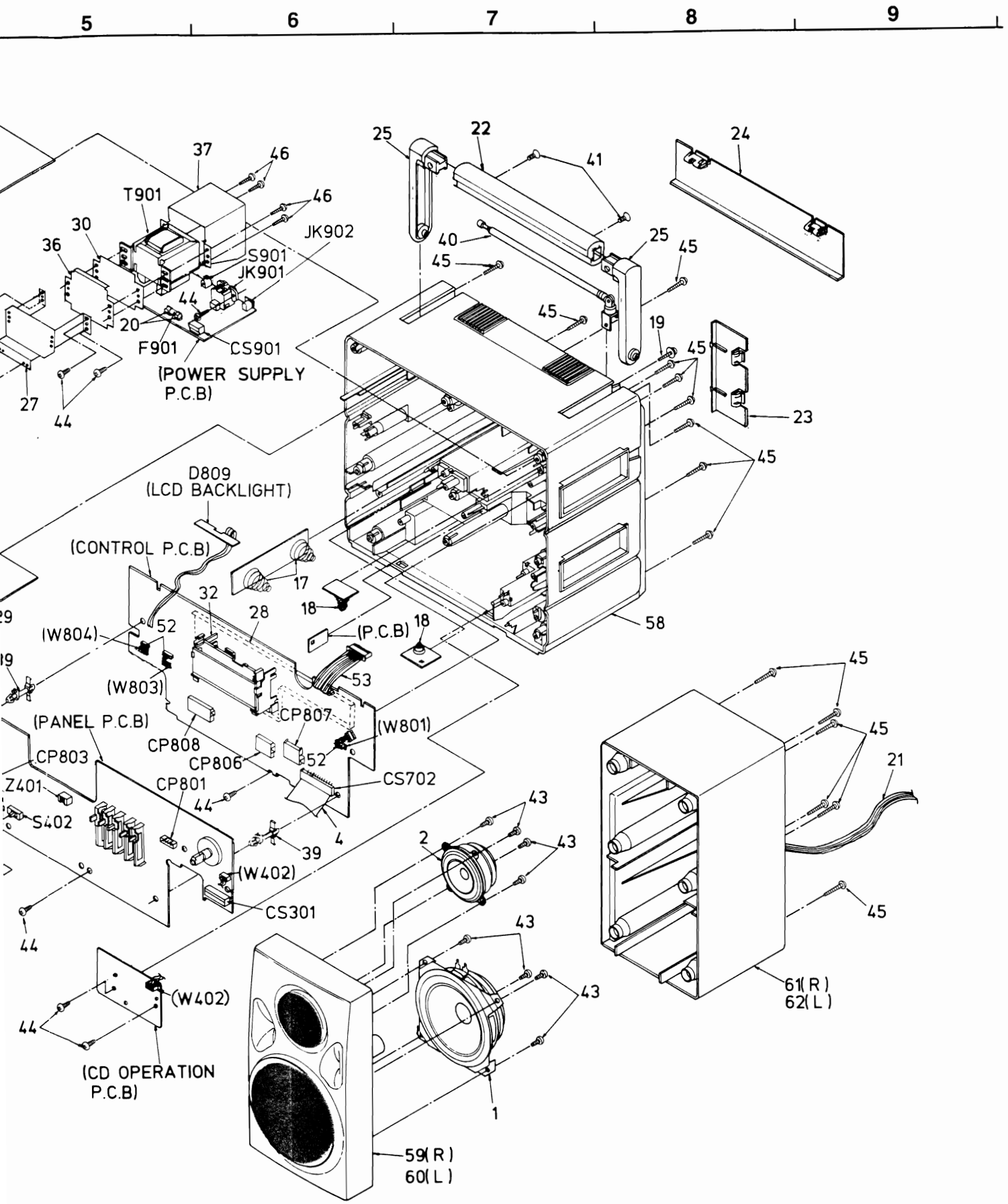
5 6 7 8 9

DECK 2 (For playback only)



■ CABINET PARTS LOCATION




5
6
7
8
9
37
46
T901
46
30
JK902
36
S901
JK901
44
20
F901
CS901
(POWER SUPPLY P.C.B)
27
44
25
22
41
24
40
25
45
45
45
19
45
23
45
D809
(LCD BACKLIGHT)
(CONTROL P.C.B)
17
18
32
28
(W804)
52
(P.C.B)
18
58
(W803)
53
CP807
(W801)
(PANEL P.C.B)
CP808
CP806
52
CP803
CS702
Z401
CP801
44
43
S402
4
39
2
43
(W402)
CS301
44
43
(W402)
44
43
(CD OPERATION P.C.B)
1
59(R)
60(L)
45
45
21
45
61(R)
62(L)

■ REPLACEMENT PARTS LIST

Notes: * Important safety notice:
Components identified by ⚠ 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.
Parts without these indications can be used for all areas.
* [M] Indicates in the Remarks columns indicates parts supplied by **MESA,** (SF) indicates Standard Replacement Parts.

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	EAS12P463A-G	WOOFER	[M]
2	EAS8PH63D-G	TWEETER	[M]
3	RDG5874ZB	DAMPER GEAR	[M]
4	REEX0012	FFC WIRE	[M]
5	REXX0029	DECK 2 TAPE HEAD WIRE	[M]
6	REXX0047-1	DECK 1 TAPE HEAD WIRE	[M]
7	RGKX0004-H	CD LID	[M]
8	RGLX0002-Q	LED DISPERSE CAP	[M]
9	RGUX0030-H	FUNCTION BUTTON	[M]
10	RGUX0031-K	POWER BUTTON	[M]
11	RGUX0032-K	TUNER / BAND BUTTON	[M]
12	RGUX0033-K	CD BUTTON	[M]
13	RGVX0009-K	EDITING KNOB	[M]
14	RGWX0010-H	XBS KNOB	[M]
15	RGWX0011-H	VOL. KNOB	[M]
16	RHRX0008	MECHA BUTTON SEAT	[M]
17	RJC511ZBS	UM-1 BATT SPRING	[M]
18	RJC70031YB	UM-3 BATT SPRING	[M]
19	XYN3+F8FY	R. ANT SCREW	
20	RJF28ZA	FUSE HOLDER	
21	RJL4W001W22	SPEAKER CORD	[M]
22	RKH0012-H	HANDLE BAR	[M]
23	RKK0035-H	BATTERY COVER (UM-3)	[M]
24	RKK347ZB-7	BATTERY COVER (UM-1)	[M]
25	RKX0021-H	HANDLE ARM	[M]
26	RMAX0006	ANGLE BAR	[M]
27	RMAX0008	TRANSFORMER SUPPORT	[M]
28	RMAX0010	SHIELD PLATE	[M]
29	RMC1227ZA	D - D CONVERTER SHIE	[M]
30	RMC1257ZA	TRANS SHIELD PLATE	[M]
31	RMKX0003-K	CD CHASSIS	[M]
32	RMNX0002-W	LCD HOLDER	[M]
33	RMR0368	CHASSIS	[M]
34	RMXX0004	SPACER	[M]
35	RMYX0005	HEAT SINK	[M]
36	RSC0094	TRANS SHIELD PLATE	[M]
37	RSC0163-2	TRANS SHIELD PLATE	[M]
38	RUS781ZA	OPEN SPRING	[M]
39	SHR9755	PCB SUPPORT	
40	XEARR175ED-Y	ROD ANTENNA	
41	XTC3+10CFN	HANDLE SCREW	
42	XTN2+14GF	SCREW FOR PCB	[M]
43	XTV3+10G	SP. SCREW	
44	XTV3+12G	MOUNTING SCREW	
45	XTV3+20G	CASING SCREW	
46	XTV3+8F	SCREW FOR IC/X.FORME	
47	XTV3+8G	MECHA BUTTON SCREW	
48	XTWS3+10Q	TUNER PCB SCREW	
49	XTW3+10F	SCREW FOR IC BA3932	
50	REXX0058-1	WIRE ASS'Y (7P)	[M]
51	REXX0040	WIRE ASS'Y (6P)	[M]
52	REXX0055	WIRE ASS'Y (5P)	[M]
53	REXX0048	WIRE ASS'Y(9P)	[M]
54	RFKLXDT670P1	CASS.LID ASS'Y(R)	[M]
55	RFKLXDT670P2	CASS.LID ASS'Y(L)	[M]
56	RFKLXDT670P3	CASS.HOLDER ASS'Y	[M]
57	RFKGXDT670GC	FRONT CABINET ASS'Y	[M]
58	RFKHXDT670GC	BACK CABINET ASS'Y	[M]
59	RFKGXDT670PA	SP.FRONT CAB.ASS'Y(R	[M]
60	RFKGXDT670PB	SP.FRONT CAB.ASS'Y(L	[M]
61	RFKHXDT670PA	SP.REAR CAB.ASS'Y(R)	[M]
62	RFKHXDT670PB	SP.REAR CAB.ASS'Y(L)	[M]
63	RGZX0007A-H	MECHA BUTTON BLOCK	[M]
64	RGZX0007B-H	MECHA BUTTON BLOCK	[M]
65	RMC1228ZA	D-D SHIELD PLATE	[M]
		INTEGRATED CIRCUITS	
IC1	AN7273A	IC, FM/AM IF	
IC2	RVIBA1332L	IC, FM MPX	
IC3	LM7001	IC, PLL	
IC301	BU4066B	IC, SIGNAL SW	
IC302	BU4066B	IC, SIGNAL SW	
IC303	AN7345K	IC, PRE/REC AMPLIFIER	[M]
IC304	RVILA4108R	IC, POWER AMPLIFIER	⚠
IC305	AN7135	IC, POWER AMPLIFIER	⚠
IC306	BA3932	IC, POWER REGULATOR	⚠
IC307	S81250PG-T	IC, 5V REGULATOR	[M]
IC308	BA7755	IC, HEAD SW	

Ref No.	Part No.	Part Name & Description	Remarks
IC309	BA6218	IC, MOTOR DRIVER	
IC401	BA3822LS-M	IC, G. EQUALIZER	[M]
IC801	M37410M6H240	IC, MICRO COMPUTER	[M]
IC802	S8053HNB-T	IC, RESET	
		IC PROTECTORS	
ICP2	SRUN10T	IC PROTECTOR	⚠
ICP3	SRUN20T	IC PROTECTOR	⚠
ICP4	SRUN5T	IC PROTECTOR	⚠
		TRANSISTORS	
Q1	2SK544F-AC	TRANSISTOR	
Q2	2SC2786MTA	TRANSISTOR	
Q3	2SC2786MTA	TRANSISTOR	
Q4	2SC2786MTA	TRANSISTOR	
Q5	2SC829BTA	TRANSISTOR	
Q6	2SA564STA	TRANSISTOR	[M]
Q7	2SA564STA	TRANSISTOR	[M]
Q8	2SA564STA	TRANSISTOR	[M]
Q9	2SA564RTA	TRANSISTOR	
Q10	2SA564RTA	TRANSISTOR	
Q11	2SA564RTA	TRANSISTOR	
Q12	BN1L3NTA	TRANSISTOR	[M]
Q13	BN1L3NTA	TRANSISTOR	[M]
Q14	BN1L3NTA	TRANSISTOR	[M]
Q15	2SC829CTA	TRANSISTOR	
Q16	2SA564RTA	TRANSISTOR	
Q17	2SC2785FTA	TRANSISTOR	
Q18	2SC2784FTA	TRANSISTOR	[M]
Q19	2SC2784FTA	TRANSISTOR	[M]
Q20	2SC2784FTA	TRANSISTOR	[M]
Q21	2SC2784FTA	TRANSISTOR	[M]
Q22	2SC829CTA	TRANSISTOR	
Q101	2SJ40CDTA	TRANSISTOR	
Q102	RVTDTC124EST	TRANSISTOR	[M]
Q103	2SJ40CDTA	TRANSISTOR	
Q105	2SD1020HTA	TRANSISTOR	[M]
Q106	2SC1740SRTA	TRANSISTOR	
Q107	2SC1684HRTA	TRANSISTOR	
Q108	2SD1020HTA	TRANSISTOR	[M]
Q109	2SD1020HTA	TRANSISTOR	[M]
Q201	2SJ40CDTA	TRANSISTOR	
Q202	RVTDTC124EST	TRANSISTOR	[M]
Q203	2SJ40CDTA	TRANSISTOR	
Q205	2SD1020HTA	TRANSISTOR	[M]

Ref No.	Part No.	Part Name & Description	Remarks
Q206	2SC1740SRTA	TRANSISTOR	
Q207	2SC1684HRTA	TRANSISTOR	
Q208	2SD1020HTA	TRANSISTOR	[M]
Q209	2SD1020HTA	TRANSISTOR	[M]
Q301	2SC2785FTA	TRANSISTOR	
Q302	2SC2785FTA	TRANSISTOR	
Q303	2SC1740SRTA	TRANSISTOR	
Q304	2SC2001KTA	TRANSISTOR	
Q305	2SC2001KTA	TRANSISTOR	
Q307	2SC1685RTA	TRANSISTOR	[M]
Q308	2SC2785FTA	TRANSISTOR	
Q310	2SD2037ETA	TRANSISTOR	[M]
Q311	RVTDTC114EST	TRANSISTOR	
Q312	RVTDTA114EST	TRANSISTOR	
Q313	RVTDTC114EST	TRANSISTOR	
Q314	RVTDTC114EST	TRANSISTOR	
Q315	2SC1684HRTA	TRANSISTOR	
Q318	RVTDTA114EST	TRANSISTOR	
Q319	RVTDTA114TST	TRANSISTOR	
Q320	RVTDTA114EST	TRANSISTOR	
Q321	2SA564RTA	TRANSISTOR	
Q401	RVTDTA143XST	TRANSISTOR	
Q402	RVTDTC143XST	TRANSISTOR	
Q403	RVTDTC144EST	TRANSISTOR	
Q601	BA1A4MTA	TRANSISTOR	[M]
Q602	BA1A4MTA	TRANSISTOR	[M]
Q603	2SK301QTA	TRANSISTOR	[M]
Q604	BN1A4MTA	TRANSISTOR	[M]
Q801	2SC2785FTA	TRANSISTOR	
Q802	2SA564RTA	TRANSISTOR	
Q803	2SC1740SSTA	TRANSISTOR	
Q804	2SC1740SSTA	TRANSISTOR	
Q805	RVTDTC113ZST	TRANSISTOR	
Q807	2SC2001KTA	TRANSISTOR	
		DIODES	
D1~3	1SV147T4MATU	DIODE	
D4~9	RVDSVC321	DIODE	
D10	RVD1SS133TA	DIODE	
D11	RVD1SS133TA	DIODE	
D12	RVDMTZ5R6BTA	DIODE	
D13~20	RVD1SS133TA	DIODE	
D301	RVD1SS133TA	DIODE	
D302	RVDMTZ11BTA	DIODE	
D303	RVD1SS133TA	DIODE	
D304	RVDMTZ18BTA	DIODE	[M]

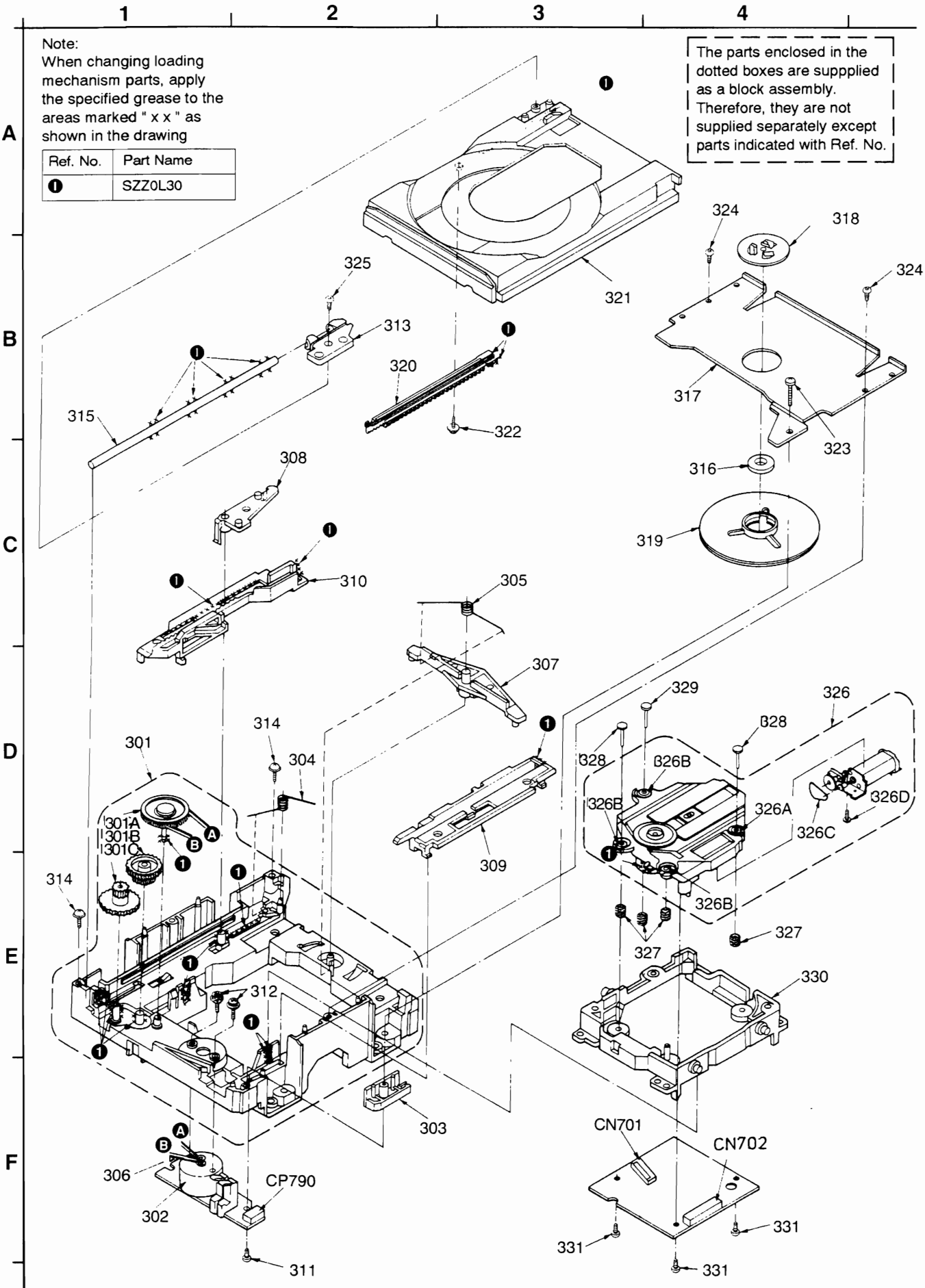
Ref No.	Part No.	Part Name & Description	Remarks
D305	RVDMTZ6R8BTA	DIODE	
D307	RVD1SS133TA	DIODE	
D309	RVDMTZ8R2CTA	DIODE	[M]
D310	RVDMTZ11BTA	DIODE	
D311	RVD1SS133TA	DIODE	
D313	RVDMTZ5R1BTA	DIODE	
D314~318	RVD1SS133TA	DIODE	
D320	RVD1SS133TA	DIODE	
D321	RVD1SS133TA	DIODE	
D322	RVDMTZ6R8BTA	DIODE	
D323~330	RVD1SS133TA	DIODE	
D401	RVD1SS133TA	DIODE	
D402	RVD1SS133TA	DIODE	
D403	LN11WP23TDA	DIODE	[M]
D404	RVDMTZ8R2CTA	DIODE	[M]
D406	RVDMTZ7R5BTA	DIODE	
D602~606	RVD1SS133TA	DIODE	
D608,609	RVD1SS133TA	DIODE	
D801,802	RVD1SS133TA	DIODE	
D803	RVDMTZ5R1BTA	DIODE	
D804	RVD1SS133TA	DIODE	
D805	RVD1SS133TA	DIODE	
D809	LN063608P	DIODE	[M]
D901~904	1N5402BM21	DIODE	⚠
D905	RVD1SS133TA	DIODE	⚠
		VARIABLE RESISTORS	
VR1	EVNDXAA00B14	VR, TRIMMER POT.	
VR301	EWAJQAW05G54	VR, G.EQ	[M]
VR302	EWAJQAW05G54	VR, G.EQ	[M]
VR303	EWAJQAW05G54	VR, G.EQ	[M]
VR304	EWAJQAW05G54	VR, G.EQ	[M]
VR305	EWAJUAW05G15	VR, BALANCE	[M]
VR306	EWC2UAF15C54	VR, XBS	[M]
VR307	EUWMQ0F25B54	VR, VOL WITH MOTOR	[M]
VR601	EVNDXAA00B24	VR, TRIMMER POT.	
		VARIABLE CAPACITORS	
CT3	RCV10AF1T-S	TRIMMER CAPACITOR	
CT4	ECRLA010A53R	TRIMMER CAPACITOR	
		SWITCHES	
S401	EVQ21405R	SW, POWER	
S402	RSS2B73ZA-H	SW, EDIT	

Ref No.	Part No.	Part Name & Description	Remarks
S403	EVQ21405R	SW, BAND	
S404	EVQ21405R	SW, FM MODE	
S405	EVQ21405R	SW, MEMORY	
S406	EVQ21405R	SW, TUNE DOWN(-)	
S407	EVQ21405R	SW, TUNE UP (+)	
S408	EVQ21405R	SW, PRESET DOWN (-)	
S409	EVQ21405R	SW, PRESET UP (+)	
S410	EVQ21405R	SW, CD	
S411	EVQ21405R	SW, TUNER	
S412	EVQ21405R	SW, TAPE	
S413	EVQ21405R	SW, CD OPEN/CLOSE	
S414	EVQ21405R	SW, CD PLAY/PAUSE	
S415	EVQ21405R	SW, CD STOP/CLEAR	
S416	EVQ21405R	SW, CD REPEAT	
S417	EVQ21405R	SW, CD SKIP/SEARCH	
S418	EVQ21405R	SW, REVSKIP/SEARCH	
S419	EVQ21405R	SW, CD EDIT/PAUSE	
S420	EVQ21405R	SW, CD MEMORY/RECALL	
S601	RSH1A004-1	SW, PB1	[M]
S602	RSH1A004-1	SW, PB2	[M]
S603	RSH1A004-1	SW, CUE/REV1	[M]
S604	RSH1A004-1	SW, CUE/REV2	[M]
S605	RSH1A013-J	SW, M1	[M]
S606	RSH1A013-J	SW, M2	[M]
S607	RSH1A004-1	SW, REC	[M]
S901	RSR3A01ZA-H	VOLTAGE SELECTOR	⚠
		CONNECTORS	
CN1	SJT3711	CONNECTOR (7P)	
CN2	SJT3909	CONNECTOR (9P)	
CP304	RJP3G18ZA	CONNECTOR(3P)	
CP305	RJP7G18ZA	CONNECTOR (7P)	
CP801	RJP5G18ZA	CONNECTOR (5P)	
CP803	RJP5G18ZA	CONNECTOR (5P)	
CP804	RJP5G18ZA	CONNECTOR (5P)	
CP806	RJT003K006M1	CONNECTOR (6P)	
CP807	RJT003K006M1	CONNECTOR (6P)	
CP808	RJT003K010M1	CONNECTOR (10P)	
CS901	RJS4T6ZA	CONNECTOR (4P)	
		COILS & TRANSFORMERS	
L2	RLA4Y001-E	COIL, FM ANT	[M]
L3	RLA4Y002-E	COIL, FM ANT	[M]
L4	RLQZP1R2KT-Y	COIL, RF CHOKE	
L6	RLQY30S1W	COIL, FM RF CHOKE	[M]

Ref No.	Part No.	Part Name & Description	Remarks
L7	RLV5C002-0	COIL, F. ANT	
L8	RL03B96-M	COIL, SW2 ANT	
L9	RL02B126-M	COIL, MW OSC	[M]
L10	RL03B97-M	COIL, SW 1 OSC	
L11	RL03B96-M	COIL, SW 2 OSC	
L15	RLQZP101KT-Y	COIL	
L17	RLQZP100KT-Y	COIL	
L301	RLQZP221KT-Y	COIL, RF CHOKE	
L302	RL09B007-M	COIL, DC-DC CONVERTER	
L303	RLQZP221KT-Y	COIL, RF CHOKE	
L304	RLQZP221KT-Y	COIL, RF CHOKE	
L305	RL08R001-T	COIL, BIAS OSC	[M]
L306	RLQZB470KT-D	COIL, RF CHOKE	
L307	RLQZB101KT-D	COIL, CHOKE	
L308	RLQZB101KT-D	COIL, CHOKE	
L309	RLQV472K-Z	COIL, RF CHOKE	
L310	RLQV472K-Z	COIL, RF CHOKE	
L401	RLQZP2R2KT-Y	COIL, RF CHOKE	
L402	RLQZP2R2KT-Y	COIL, RF CHOKE	
L404	RLQZPR47KT-Y	COIL	
L801	RLQZP2R2KT-Y	COIL, RF CHOKE	
L802	RLQZPR47KT-Y	COIL	
L803	RLQZP1R0KT-Y	COIL	
L804	RLQZP2R2KT-Y	COIL, RF CHOKE	
L805	RLQZP2R2KT-Y	COIL, RF CHOKE	
L806	RLQZP2R2KT-Y	COIL, RF CHOKE	
T1	RLI4B153-M	FM IFT	
T2	RLI2B153-M	AM IFT	
T3	SLI4B524-Z	FM DET COIL	
T901	RTP1M1E001-X	POWER TRANSFORMER	[M] ⚠
		COMPONENT COMBINATION	
Z401	RCDGP1U58XD	REMOTE CONTRL SENSOR	
Z801	RSL5084-L	LCD	[M]
		CERAMIC FILTERS	
CF1	RLFFETWNA01L	FM CF	
CF2	RVFSFZ450HL3	AM CF	[M]
		OSCILLATORS	
X1	SVQ49U722T-S	XTAL 7.2MHZ	
X801	RSXZ4M19M01T	CERAMIC RESONATOR(4)	
X802	RSXD32K7S02	X'TALL RESONATOR (3)	[M]

Ref No.	Part No.	Part Name & Description	Remarks
		FUSES	
F901	XBA2C40TB0	FUSE	⚠
		JACKS	
JK301	RJF1098YA-H	SPEAKER JACK	[M]
JK302	RJF1098YA-H	SPEAKER JACK	[M]
JK303	RJJ3BT01-1H	H.P. JACK	
JK304	RJJ1D25ZA-C	MIC JACK	
JK901	RJJ1SE01-H	AC JACK	⚠
JK902	RJJB3ZD-C	DC-1N JACK	⚠
		PACKING MATERIALS	
P1	RPGX0094	GIFT BOX	[M]
P2	RPH3SZA	MIRAMAT SHEET	[M]
P3	RPNX0013	POLYFOAM	[M]
		ACCESSORIES	
A1	RQT2017-G	INSTR. BOOK	[M]
A2	RJA0019-2K	AC CORD	(SF) ⚠
A3	EUR642160	REMO-CON UNIT	[M]
A4	SJP5213-2	AC CORD ADAPTOR	

■ LOADING UNIT PARTS LOCATION



■ CD REPLACEMENT PARTS LIST

Ref. No	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUITS	
IC701	AN8802SCE1V	I.C, SERVO AMP	
IC702	MN66271RA	I.C, SERVO PROCESSOR	
IC703	AN8389SE1	I.C, MOTOR DRIVE	
IC790	TA7291S	I.C, MOTOR DRIVE	
		TRANSISTORS	
Q701	2SB709S	TRANSISTOR	
		SWITCHES	
S701	RSM0006-P	SW, REST	
S790	RSH1A005	SW, LOAD CLOSE DETECT	
S791	RSH1A005	SW, LOAD OPEN DETECT	
		OSCILLATORS	
X701	RSXZ16M9M02T	CRYSTAL	
		VARIABLE RESISTORS	
VR701	EVNDXAA00B14	V.R, BEST EYE ADJ	
		CONNECTORS	
CN701	RJU035T016-1	SOCKET (16P)	
CN702	RJS1A6723-1Q	SOCKET (23P)	
CP790	RJP6G17ZA	CONNECTOR (6P)	
CS702	RJS1A6723-Q	SOCKET (23P)	
		CHIP JUMPERS	
RJ701-717	ERJ8GEY0R00A	1/10W 0	
RJ721-726	ERJ8GEY0R00A	1/10W 0	
		TEST JUMPERS	
TJ701	RRJ8GET001H	TEST JUMPER	
TJ702	RRJ8GET001H	TEST JUMPER	

Ref. No	Part No.	Part Name & Description	Remarks
		LOADING PARTS	
301	RFKJLPG440BK	CHASSIS ASS'Y	
301A	RDG0142	LOADING GEAR	
301B	RDG0193	LOADING GEAR	
301C	RDP0041	PULLEY	
302	REM0019	MOTOR PULLEY	
303	RMA0339	HOLDER	
304	RME0063	LOCK LEVER SPRING	
305	RME0087	SPRING	
306	RMG0158	BELT	
307	RML0177	CONVERSION LEVER	
308	RML0178-1	LOCK LEVER	
309	RMM0059-1	SLIDE PLATE(2)	
310	RMM0079	SLIDE PLATE(1)	
311	XTN26+6G	SCREW	
312	XYN2+F6FZ	SCREW	
313	RDB0036	GUIDE HOLDER	
314	RHD20010	SCREW	
315	RMU0046	GUIDE SHAFT	
316	RHM245ZA	MAGNET	
317	RMA0327-1	DISK CLAMPER	
318	RMR0334	MAGNET HOLDER	
319	RXQ0123	DISK HOLDER	
320	RFKNLPG440-K	DRIVE RACK ASS'Y	
321	RGQ0088-K	DISC TRAY	
322	RHD20009-1	SCREW	
323	XTB3+25GFZ	SCREW	
324	XTN26+6G	SCREW	
325	XTN3+8JFZ	SCREW	
326	RAE0111Z	TRAVERSE UNIT ASS'Y	
326A	SHGD112	RUBBER(A)	
326B	SHGD113-1	RUBBER(B)	
326C	RDV0023	BELT	
326D	SNSD38	SCREW	
327	RME0109	SPRING	
328	RMS0123-1	PIN(A)	
329	RMS0350	PIN(B)	
330	RMR0533-K	TRAVERSE CHASSIS	
331	XTV2+6G	SCREW	

■ RESISTORS & CAPACITORS

Notes: * Capacitance values are in microfarads(μF) unless specified otherwise,P=Pico-farads(pF) F=Farads(F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM), 1M=1,000K(OHM)

Ref.No.	Part No.	Values & Remarks	
	RESISTORS		
R1	ERDS2TJ472T	4.7K	1/4W
R2	ERDS2TJ122T	1.2K	1/4W
R3,4	ERDS2TJ104T	100K	1/4W
R5	ERDS2TJ470T	47	1/4W
R7	ERDS2TJ332T	3.3K	1/4W
R8	ERDS2TJ104T	100K	1/4W
R9	ERDS2TJ103T	10K	1/4W
R10	ERDS2TJ683T	68K	1/4W
R11	ERDS2TJ471T	470	1/4W
R12	ERDS2TJ224T	220K	1/4W
R13	ERDS2TJ471T	470	1/4W
R14	ERDS2TJ473T	47K	1/4W
R16	ERDS2TJ101T	100	1/4W
R17	ERDS2TJ332T	3.3K	1/4W
R18	ERDS2TJ334T	330K	1/4W
R19~21	ERDS2TJ331T	330	1/4W
R22	ERDS2TJ103T	10K	1/4W
R23	ERDS2TJ151T	150	1/4W
R24	ERDS2TJ562T	5.6K	1/4W
R25	ERDS2TJ332T	3.3K	1/4W
R26	ERDS2TJ102T	1K	1/4W
R27	ERDS2TJ104T	100K	1/4W
R28	ERDS2TJ562T	5.6K	1/4W
R29	ERDS2TJ681T	680	1/4W
R30	ERDS2TJ683T	68K	1/4W
R31	ERDS2TJ102T	1K	1/4W
R32	ERDS2TJ682T	6.8K	1/4W
R33~35	ERDS2TJ104T	100K	1/4W
R36,37	ERDS2TJ103T	10K	1/4W
R38	ERDS2TJ103T	10K	1/4W
R39~41	ERDS2TJ104T	100K	1/4W
R44	ERDS2TJ103T	10K	1/4W
R45	ERDS2TJ471T	470	1/4W
R47	ERDS2TJ103T	10K	1/4W
R48	ERDS2TJ103T	10K	1/4W
R49	ERDS2TJ121T	120	1/4W
R50	ERDS2TJ122T	1.2K	1/4W
R51	ERDS2TJ222T	2.2K	1/4W
R52	ERDS2TJ471T	470	1/4W
R53	ERDS2TJ224T	220K	1/4W
R54	ERDS2TJ153T	15K	1/4W
R55	ERDS2TJ561T	560	1/4W
R56	ERDS2TJ222T	2.2K	1/4W
R57	ERDS2TJ472T	4.7K	1/4W
R58	ERDS2TJ103T	10K	1/4W
R59,61	ERDS2TJ222T	2.2K	1/4W
R62	ERDS2TJ473T	47K	1/4W
R63	ERDS2TJ102T	1K	1/4W
R65	ERDS2TJ473T	47K	1/4W
R66	ERDS2TJ103T	10K	1/4W
R67	ERDS2TJ102T	1K	1/4W
R68	ERDS2TJ391T	390	1/4W
R69~71	ERDS2TJ103T	10K	1/4W
R72	ERDS2TJ104T	100K	1/4W
R73	ERDS2TJ103T	10K	1/4W
R74~76	ERDS2TJ224T	220K	1/4W
R81	ERDS2TJ102T	1K	1/4W
R82	ERDS2TJ103T	10K	1/4W
R84	ERDS2TJ104T	100K	1/4W
R85	ERDS2TJ471T	470	1/4W
R86	ERDS2TJ473T	47K	1/4W
R101	ERDS2TJ223T	22K	1/4W
R102	ERDS2TJ680T	68	1/4W
R103	ERDS2TJ562T	5.6K	1/4W
R104	ERDS2TJ222T	2.2K	1/4W
R105	ERDS2TJ102T	1K	1/4W
R106	ERDS2TJ221T	220	1/4W
R108	ERDS2TJ682T	6.8K	1/4W
R110	ERDS2TJ333T	33K	1/4W
R111	ERDS2TJ223T	22K	1/4W
R113	ERDS2TJ683T	68K	1/4W
R114	ERDS2TJ822T	8.2K	1/4W
R115	ERDS2TJ333T	33K	1/4W
R116	ERDS2TJ123T	12K	1/4W
R117	ERDS2TJ123T	12K	1/4W
R118	ERDS2TJ183T	18K	1/4W
R119	ERDS2TJ101T	100	1/4W
R120	ERDS2TJ474T	470K	1/4W
R121	ERDS2TJ152T	1.5K	1/4W
R122	ERDS2TJ681T	680	1/4W
R123	ERDS2TJ123T	12K	1/4W
R124	ERDS2TJ223T	22K	1/4W
R125	ERDS2TJ472T	4.7K	1/4W
R126	ERDS2TJ152T	1.5K	1/4W
R127	ERDS2TJ223T	22K	1/4W
R128	ERDS2TJ562T	5.6K	1/4W
R129	ERDS2TJ2R2T	2.2	1/4W
R130	ERDS2TJ821T	820	1/4W
R131	ERDS2TJ183T	18K	1/4W
R132	ERDS2TJ101T	100	1/4W
R133	ERDS2TJ562T	5.6K	1/4W
R135	ERDS2TJ151T	150	1/4W
R138	ERDS2TJ563T	56K	1/4W
R139	ERDS2TJ180T	18	1/4W
R141	ERDS1FVJ2R2T	2.2	1/2W
R151	ERDS2TJ392T	3.9K	1/4W
R152	ERDS2TJ561T	560	1/4W
R153	ERDS2TJ472T	4.7K	1/4W
R201	ERDS2TJ223T	22K	1/4W
R202	ERDS2TJ680T	68	1/4W
R203	ERDS2TJ562T	5.6K	1/4W
R204	ERDS2TJ222T	2.2K	1/4W
R205	ERDS2TJ102T	1K	1/4W
R206	ERDS2TJ221T	220	1/4W
R208	ERDS2TJ682T	6.8K	1/4W
R210	ERDS2TJ333T	33K	1/4W
R211	ERDS2TJ223T	22K	1/4W
R213	ERDS2TJ683T	68K	1/4W
R214	ERDS2TJ822T	8.2K	1/4W
R215	ERDS2TJ333T	33K	1/4W
R216	ERDS2TJ123T	12K	1/4W
R217	ERDS2TJ123T	12K	1/4W
R218	ERDS2TJ183T	18K	1/4W
R219	ERDS2TJ101T	100	1/4W
R220	ERDS2TJ474T	470K	1/4W
R221	ERDS2TJ152T	1.5K	1/4W
R222	ERDS2TJ681T	680	1/4W
R223	ERDS2TJ123T	12K	1/4W
R224	ERDS2TJ223T	22K	1/4W
R225	ERDS2TJ472T	4.7K	1/4W
R226	ERDS2TJ152T	1.5K	1/4W
R227	ERDS2TJ223T	22K	1/4W
R228	ERDS2TJ562T	5.6K	1/4W
R229	ERDS2TJ2R2T	2.2	1/4W
R230	ERDS2TJ821T	820	1/4W
R231	ERDS2TJ183T	18K	1/4W
R232	ERDS2TJ101T	100	1/4W
R233	ERDS2TJ562T	5.6K	1/4W
R235	ERDS2TJ151T	150	1/4W

Ref.No.	Part No.	Values & Remarks	
R238	ERDS2TJ563T	56K	1/4W
R239	ERDS2TJ180T	18	1/4W
R241	ERDS1FVJ2R2T	2.2	1/2W
R251	ERDS2TJ392T	3.9K	1/4W
R252	ERDS2TJ561T	560	1/4W
R253	ERDS2TJ472T	4.7K	1/4W
R301	ERDS2TJ471T	470	1/4W
R302	ERDS2TJ472T	4.7K	1/4W
R303	ERDS2TJ104T	100K	1/4W
R304	ERDS2TJ471T	470	1/4W
R305	ERDS2TJ473T	47K	1/4W
R306	ERDS2TJ222T	2.2K	1/4W
R307	ERDS2TJ223T	22K	1/4W
R308	ERDS2TJ102T	1K	1/4W
R309	ERDS2TJ222T	2.2K	1/4W
R310	ERDS2TJ472T	4.7K	1/4W
R311	ERD2FCVJ4R7T	4.7	1/4W
R312	ERDS2TJ103T	10K	1/4W
R313	ERDS2TJ472T	4.7K	1/4W
R314	ERDS2TJ472T	4.7K	1/4W
R315	ERDS2TJ101T	100	1/4W
R316	ERDS2TJ103T	10K	1/4W
R318	ERDS2TJ222T	2.2K	1/4W
R319	ERDS2TJ221T	220	1/4W
R320	ERDS2TJ331T	330	1/4W
R321	ERDS2TJ473T	47K	1/4W
R322	ERDS2TJ101T	100	1/4W
R323	ERDS2TJ1R5T	1.5	1/4W
R324	ERDS2TJ472T	4.7K	1/4W
R325	ERDS2TJ152T	1.5K	1/4W
R326	ERG1SJ100E	10	1W
R327	ERDS2TJ101T	100	1/4W
R328	ERDS2TJ2R2T	2.2	1/4W
R330	ERDS2TJ222T	2.2K	1/4W
R331	ERDS2TJ472T	4.7K	1/4W
R332	ERDS2TJ333T	33K	1/4W
R334	ERDS2TJ122T	1.2K	1/4W
R335	ERDS2TJ223T	22K	1/4W
R336	ERDS2TJ102T	1K	1/4W
R337	ERDS2TJ223T	22K	1/4W
R338	ERDS2TJ332T	3.3K	1/4W
R340	ERDS2TJ472T	4.7K	1/4W
R341	ERDS2TJ472T	4.7K	1/4W
R342	ERDS2TJ472T	4.7K	1/4W
R343	ERDS2TJ472T	4.7K	1/4W
R345	ERDS2TJ102T	1K	1/4W
R346	ERDS2TJ104T	100K	1/4W
R347	ERDS2TJ334T	330K	1/4W

Ref.No.	Part No.	Values & Remarks	
R349	ERDS2TJ101T	100	1/4W
R350	ERDS2TJ105T	1M	1/4W
R351	ERDS2TJ223T	22K	1/4W
R352	ERDS2TJ123T	12K	1/4W
R353	ERDS2TJ333T	33K	1/4W
R354	ERDS2TJ472T	4.7K	1/4W
R355	ERDS2TJ103T	10K	1/4W
R356	ERDS2TJ683T	68K	1/4W
R357	ERDS2TJ333T	33K	1/4W
R359	ERDS2TJ103T	10K	1/4W
R361	ERDS2TJ334T	330K	1/4W
R362	ERDS2TJ182T	1.8K	1/4W
R363	ERDS2TJ180T	18	1/4W
R364	ERDS2TJ101T	100	1/4W
R365	ERDS2TJ330T	33	1/4W
R366	ERDS2TJ104T	100K	1/4W
R367	ERDS2TJ104T	100K	1/4W
R369	ERDS2TJ472T	4.7K	1/4W
R370	ERDS2TJ103T	10K	1/4W
R371	ERDS2TJ103T	10K	1/4W
R373	ERDS2TJ100T	10	1/4W
R374	ERDS2TJ560T	56	1/4W
R375	ERDS2TJ563T	56K	1/4W
R377	ERDS2TJ104T	100K	1/4W
R381	ERDS2TJ153T	15K	1/4W
R383	ERDS2TJ470T	47	1/4W
R401	ERDS2TJ153T	15K	1/4W
R402	ERDS2TJ822T	8.2K	1/4W
R403	ERDS2TJ562T	5.6K	1/4W
R404	ERDS2TJ392T	3.9K	1/4W
R405	ERDS2TJ272T	2.7K	1/4W
R406	ERDS2TJ222T	2.2K	1/4W
R407	ERDS2TJ152T	1.5K	1/4W
R411	ERDS2TJ272T	2.7K	1/4W
R412	ERDS2TJ222T	2.2K	1/4W
R413	ERDS2TJ152T	1.5K	1/4W
R419	ERDS2TJ331T	330	1/4W
R421	ERDS2TJ152T	1.5K	1/4W
R422	ERDS2TJ222T	2.2K	1/4W
R423	ERDS2TJ272T	2.7K	1/4W
R424	ERDS2TJ392T	3.9K	1/4W
R425	ERDS2TJ562T	5.6K	1/4W
R426	ERDS2TJ822T	8.2K	1/4W
R427	ERDS2TJ153T	15K	1/4W
R428	ERDS2TJ333T	33K	1/4W
R450	ERDS2TJ221T	220	1/4W
R602	ERDS2TJ103T	10K	1/4W
R603	ERDS2TJ472T	4.7K	1/4W

Ref.No.	Part No.	Values & Remarks	
R604	ERDS2TJ103T	10K	1/4W
R605	ERDS2TJ822T	8.2K	1/4W
R607	ERDS2TJ303T	30K	1/4W
R608	ERDS2TJ303T	30K	1/4W
R609	ERDS2TJ153T	15K	1/4W
R610	ERDS2TJ102T	1K	1/4W
R611	ERDS2TJ105T	1M	1/4W
R801	ERDS2TJ824T	820K	1/4W
R802	ERDS2TJ104T	100K	1/4W
R803	ERDS2TJ471T	470	1/4W
R804	ERDS2TJ103T	10K	1/4W
R805	ERDS2TJ104T	100K	1/4W
R806	ERDS2TJ333T	33K	1/4W
R807	ERDS2TJ822T	8.2K	1/4W
R808	ERDS2TJ104T	100K	1/4W
R809	ERDS2TJ153T	15K	1/4W
R810	ERDS2TJ153T	15K	1/4W
R811	ERDS2TJ153T	15K	1/4W
R812	ERDS2TJ222T	2.2K	1/4W
R813	ERDS2TJ222T	2.2K	1/4W
R814	ERDS2TJ222T	2.2K	1/4W
R815	ERDS2TJ472T	4.7K	1/4W
R816	ERDS2TJ103T	10K	1/4W
R817	ERDS2TJ103T	10K	1/4W
R818	ERDS2TJ103T	10K	1/4W
R819	ERDS2TJ103T	10K	1/4W
R820	ERDS2TJ103T	10K	1/4W
R821	ERDS2TJ106T	10M	1/4W
R822	ERDS2TJ334T	330K	1/4W
R823	ERDS2TJ104T	100K	1/4W
R824	ERDS2TJ103T	10K	1/4W
R825	ERDS2TJ104T	100K	1/4W
R826	ERDS2TJ105T	1M	1/4W
R827	ERDS2TJ681T	680	1/4W
R828	ERDS2TJ103T	10K	1/4W
R829	ERDS2TJ103T	10K	1/4W
R830	ERDS2TJ153T	15K	1/4W
R831	ERDS2TJ683T	68K	1/4W
R832	ERDS2TJ103T	10K	1/4W
R833	ERDS2TJ473T	47K	1/4W
R834	ERDS2TJ154T	150K	1/4W
R835	ERDS2TJ104T	100K	1/4W
R836	ERDS2TJ104T	100K	1/4W
R837	ERDS2TJ104T	100K	1/4W
R838	ERDS2TJ333T	33K	1/4W
R839	ERDS2TJ561T	560	1/4W
R840	ERDS2TJ391T	390	1/4W
R841	ERDS2TJ470T	47	1/4W

Ref.No.	Part No.	Values & Remarks	
R842	ERDS2TJ102T	1K	1/4W
R843	ERDS2TJ563T	56K	1/4W
R844	ERDS2TJ103T	10K	1/4W
R845	ERDS2TJ103T	10K	1/4W
R846	ERDS2TJ102T	1K	1/4W
R847	ERDS2TJ102T	1K	1/4W
R848	ERDS2TJ682T	6.8K	1/4W
R849	ERDS2TJ682T	6.8K	1/4W
R850	ERDS2TJ102T	1K	1/4W
R851	ERDS2TJ102T	1K	1/4W
R852	ERDS2TJ102T	1K	1/4W
R853	ERDS2TJ821T	820	1/4W
R854	ERDS2TJ103T	10K	1/4W
R855	ERDS2TJ104T	100K	1/4W
R861	ERDS2TJ393T	39K	1/4W
R862	ERDS2TJ222T	2.2K	1/4W
R863	ERDS2TJ222T	2.2K	1/4W
R864	ERDS2TJ222T	2.2K	1/4W
R901	ERDS2TJ471T	470	1/4W
	CAPACITORS		
C1	ECBT1H102KB5	1000P	50V
C3	ECCR1H120KC5	12P	50V
C4	ECBT1H101KB5	100P	50V
C5,6	ECBT1H102KB5	1000P	50V
C7	ECBT1H100JC5	10P	50V
C8	ECBT1H3R9KC5	3.9P	50V
C9	ECBT1H150JC5	15P	50V
C10	ECBT1H102KB5	1000P	50V
C11	ECBT1H3R3KC5	3.3P	50V
C12	ECBT1H2R2KC5	2.2P	50V
C13	ECBT1H181KB5	180P	50V
C14	ECBT1H100JC5	10P	50V
C15,16	ECBT1H102KB5	1000P	50V
C17,18	ECBT1C103MS5	0.01	16V
C19,20	ECBT1H102KB5	1000P	50V
C21	ECBT1H821KB5	820P	50V
C22	ECBT1H181KB5	180P	50V
C23	ECBT1C103MS5	0.01	16V
C24	ECBT1H102KB5	1000P	50V
C25	ECEA1CU100B	10	16V
C26	ECBT1H102KB5	1000P	50V
C29	ECEA0JU101B	100	6.3V
C30	ECEA1EU4R7B	4.7	25V
C31,32	ECFR1C223MR	0.022	16V
C33	ECEA1AU101B	100	10V
C34	ECFR1C153MR	0.015	16V

Ref.No.	Part No.	Values & Remarks	
C35	ECBT1C103MS5	0.01	16V
C36	ECEA1HU2R2B	2.2	50V
C37	ECBT1C103MS5	0.01	16V
C38	ECFR1C153MR	0.015	16V
C39	ECEA1HU010B	1	50V
C40,41	ECEA1HUR47B	0.47	50V
C42	ECQP1102JZT	1000P	100V
C43	ECBT1H8R2KC5	8.2P	50V
C44	ECBT1C103MS5	0.01	16V
C45	ECBT1H330J5	33P	50V
C46	ECBT1H4R7KC5	4.7P	50V
C47	ECBT1C103MS5	0.01	16V
C49	ECBT1H330J5	33P	50V
C50	ECBT1C103MS5	0.01	16V
C51	ECBT1H102KB5	1000P	50V
C52	ECFR1C223MR	0.022	16V
C53	ECBT1H470J5	47P	50V
C54	ECBT1H6R8KC5	6.8P	50V
C55	ECCR1H080CC5	8P	50V
C56	ECQP1391JZT	390P	100V[M]
C57	ECBT1H102KB5	1000P	50V
C58	ECBT1H220JC5	22P	50V
C59	ECBT1H102KB5	1000P	50V
C60	ECQP1222JZ	2200P	100V
C61	ECBT1H220JC5	22P	50V
C62	ECBT1H101KB5	100P	50V
C63	ECQP1682JZ	6800P	100V
C64	ECFR1C223MR	0.022	16V
C65	ECBT1H100JC5	10P	50V
C66,67	ECBT1C103MS5	0.01	16V
C68	ECEA1HU010B	1	50V
C69	ECEA1HUR47B	0.47	50V
C70	ECEA0JU101B	100	6.3V
C71	ECKR1H103MD5	0.01	50V
C72	ECBT1H101KB5	100P	50V
C73	ECKR1H103MD5	0.01	50V
C74	ECBT0J153MS5	0.015	6.3V
C75	ECEA1HU2R2B	2.2	50V
C76,77	ECBT1H102KB5	1000P	50V
C78	ECEA1HNR47SB	0.47	50V
C79	ECBT1C103MS5	0.01	16V
C80,81	ECBT1H102KB5	1000P	50V
C82	ECQV1H474JZW	0.47	50V
C83	ECEA1CU330B	33	16V
C84	ECBT1C103MS5	0.01	16V
C86,87	ECBT1H150JC5	15P	50V
C88~90	ECBT1H331KB5	330P	50V
C92	ECBT1H102KB5	1000P	50V

Ref.No.	Part No.	Values & Remarks	
C93	ECEA1CU330B	33	16V
C94	ECBT1H102KB5	1000P	50V
C95	ECBT1C103MS5	0.01	16V
C96	ECEA1CU330B	33	16V
C97	ECBT1H102KB5	1000P	50V
C98	ECBT1H101KB5	100P	50V
C99	ECBT1H331KB5	330P	50V
C101	ECBT1H471KB5	470P	50V
C102	ECBT1H102KB5	1000P	50V
C103	ECBT1H471KB5	470P	50V
C104	ECEA1HU010B	1	50V
C105	ECEA1AU101B	100	10V
C106	ECFR1C273KR	0.027	16V
C107	ECEA1HU010B	1	50V
C108	ECFR1C333MR	0.033	16V
C109	ECEA1AU101B	100	10V
C112	ECBT1H102KB5	1000P	50V
C113	ECBT1H102KB5	1000P	50V
C114	ECEA1HU010B	1	50V
C115	ECBT1H561KB5	560P	50V
C116	ECFR1C473MR	0.047	16V
C117	ECEA1HUR33B	0.33	50V
C118	ECBT1H102KB5	1000P	50V
C119	ECEA1CU100B	10	16V
C120	ECBT1C332MR5	3300P	16V
C121	ECBT1C332MR5	3300P	16V
C122	ECBT1H220JC5	22P	50V
C123	ECBT1H101KB5	100P	50V
C124	ECFR1C473MR	0.047	16V
C125	ECEA1HU010B	1	50V
C126	ECBT1H471KB5	470P	50V
C127	ECEA0JU101B	100	6.3V
C128	ECEA1AU470B	47	10V
C129	ECFR1C473MR	0.047	16V
C130	ECEA1AU470B	47	10V
C131	ECQV1H224JZ3	0.22	50V
C132	ECEA1HU4R7B	4.7	50V
C133	ECBT1C332MR5	3300P	16V
C134	ECEA0JU101B	100	6.3V
C135	ECEA1CU101B	100	16V
C136	ECEA1AU222B	2200	10V
C137	ECQV1H224JZ3	0.22	50V
C139	ECBT1C103MS5	0.01	16V
C140	ECBT1H331KB5	330P	50V
C151	ECEA1HU010B	1	50V
C152	ECEA1HU010B	1	50V
C153	ECBT1H471KB5	470P	50V
C154	ECBT1C103MS5	0.01	16V

Ref.No.	Part No.	Values & Remarks	
C155	ECBT1C332MR5	3300P	16V
C156	ECBT1H102KB5	1000P	50V
C157	ECFR1C823MR	0.082	16V
C158	ECEA1CU100B	10	16V
C159	ECEA1HU2R2B	2.2	50V
C160	ECFR1C333MR	0.033	16V
C161	ECEA1HU0R1B	0.1	50V
C162	ECEA1HUR33B	0.33	50V
C163	ECFR1C273KR	0.027	16V
C201	ECBT1H471KB5	470P	50V
C202	ECBT1H102KB5	1000P	50V
C203	ECBT1H471KB5	470P	50V
C204	ECEA1HU010B	1	50V
C205	ECEA1AU101B	100	10V
C206	ECFR1C273KR	0.027	16V
C207	ECEA1HU010B	1	50V
C208	ECFR1C333MR	0.033	16V
C209	ECEA1AU101B	100	10V
C212	ECBT1H102KB5	1000P	50V
C213	ECBT1H102KB5	1000P	50V
C214	ECEA1HU010B	1	50V
C215	ECBT1H561KB5	560P	50V
C216	ECFR1C473MR	0.047	16V
C217	ECEA1HUR33B	0.33	50V
C218	ECBT1H102KB5	1000P	50V
C219	ECEA1CU100B	10	16V
C220	ECBT1C332MR5	3300P	16V
C221	ECBT1C332MR5	3300P	16V
C222	ECBT1H220JC5	22P	50V
C223	ECBT1H101KB5	100P	50V
C224	ECFR1C473MR	0.047	16V
C225	ECEA1HU010B	1	50V
C226	ECBT1H471KB5	470P	50V
C227	ECEA0JU101B	100	6.3V
C228	ECEA1AU470B	47	10V
C229	ECFR1C473MR	0.047	16V
C230	ECEA1AU470B	47	10V
C231	ECQV1H224JZ3	0.22	50V
C232	ECEA1HU4R7B	4.7	50V
C233	ECBT1C332MR5	3300P	16V
C234	ECEA0JU101B	100	6.3V
C235	ECEA1CU101B	100	16V
C236	ECEA1AU222B	2200	10V
C237	ECQV1H224JZ3	0.22	50V
C239	ECBT1C103MS5	0.01	16V
C240	ECBT1H331KB5	330P	50V
C251	ECEA1HU010B	1	50V
C252	ECEA1HU010B	1	50V
C253	ECBT1H471KB5	470P	50V
C254	ECBT1C103MS5	0.01	16V
C255	ECBT1C332MR5	3300P	16V
C256	ECBT1H102KB5	1000P	50V
C257	ECFR1C823MR	0.082	16V
C258	ECEA1CU100B	10	16V
C259	ECEA1HU2R2B	2.2	50V
C260	ECFR1C333MR	0.033	16V
C261	ECEA1HU0R1B	0.1	50V
C262	ECEA1HUR33B	0.33	50V
C263	ECFR1C273KR	0.027	16V
C301	ECEA1CU470B	47	16V
C302	ECEA1HU010B	1	50V
C303	ECEA1HU010B	1	50V
C304	ECBT1C103MS5	0.01	16V
C305	ECBT1H220JC5	22P	50V
C307	ECEA1CU470B	47	16V
C308	ECBT1C103MS5	0.01	16V
C309	ECBT1C103MS5	0.01	16V
C310	ECBT1H102KB5	1000P	50V
C311	ECEA1AU470B	47	10V
C312	ECFR1C473MR	0.047	16V
C313	ECBT1C332MR5	3300P	16V
C314	ECEA1AU221B	220	10V
C315	ECEA1HU010B	1	50V
C316	ECQP1103JZ	0.01	100V
C319	ECQP1102JZT	1000P	100V
C320	ECBT1C103MS5	0.01	16V
C321	ECQV1H474JZ3	0.47	50V
C322	ECEA1CU100B	10	16V
C329	ECEA1CU221B	220	16V
C330	ECEA1CU100B	10	16V
C331	ECEA1EU472	4700P	25V
C332	ECEA1CU100B	10	16V
C333	ECBT1H471KB5	470P	50V
C334	ECBT1H471KB5	470P	50V
C335	ECEA1CU100B	10	16V
C336	ECEA1CU100B	10	16V
C337	ECEA1CU100B	10	16V
C338	ECEA1CU100B	10	16V
C339	ECEA1CU100B	10	16V
C340	ECEA1AU221B	220	10V
C341	ECEA1AU101B	100	10V
C342	ECEA1CU101B	100	16V
C343	ECKR1H103ZF5	0.01	50V
C344	ECEA1CU100B	10	16V
C345	ECEA1AU220B	22	10V
C346	ECEA1EU221B	220	25V
C347	ECEA1AU221B	220	10V
C348	ECEA1AU101B	100	10V
C349	ECEA0JU221B	220	6.3V
C350	ECBT1C103MS5	0.01	16V
C351	ECEA1EU221B	220	25V
C352	ECFR1C393KR	0.039	16V
C353	ECEA1CU100B	10	16V
C354	ECEA1HU010B	1	50V
C356	ECEA1AU221B	220	10V
C357	ECEA1AU330B	33	10V
C358	ECEA1HU4R7B	4.7	50V
C360	ECEA1AU470B	47	10V
C361	ECEA1AU471B	470	10V
C362	ECEA1HU010B	1	50V
C363	ECBT1H102KB5	1000P	50V
C364	ECEA1HU010B	1	50V
C365	ECEA1AU101B	100	10V
C366	ECEA1AU470B	47	10V
C368	ECEA1AU101B	100	10V
C369	ECBT1H102KB5	1000P	50V
C370	ECBT1H102KB5	1000P	50V
C371	ECEA1CU100B	10	16V
C372	ECEA1AU330B	33	10V
C373	ECBT1C103MS5	0.01	16V
C375	ECBT1H102KB5	1000P	50V
C376	ECBT1C103MS5	0.01	16V
C401	ECBT1H102KB5	1000P	50V
C402	ECBT1H102KB5	1000P	50V
C403	ECBT1H102KB5	1000P	50V
C404	ECBT0J223NS5	0.022	6.3V
C450	ECEA1CU471B	470	16V
C601	ECEA1CU330B	33	16V
C602	ECEA1CU101B	100	16V
C603	ECEA1CU100B	10	16V
C806	ECBT1H102KB5	1000P	50V
C808	ECBT1H331KB5	330P	50V
C810	ECBT1H331KB5	330P	50V
C811	ECEA0JK221B	220	6.3V
C812	ECEA0JK221B	220	6.3V
C814	ECEA0JK101B	100	6.3V
C816	ECBT1H102KB5	1000P	50V
C817	ECBT1H102KB5	1000P	50V
C819	ECBT1H102KB5	1000P	50V
C820	ECBT1H220JC5	22P	50V
C821	ECBT1H220JC5	22P	50V
C822	ECBT1H820KB5	82P	50V
C823	ECBT1H820KB5	82P	50V
C824	ECBT1H560J5	56P	50V

Ref.No.	Part No.	Values & Remarks	
C825	ECBT1H560J5	56P	50V
C826	ECEA1HKA010B	1	50V
C826	ECEA1HK010B	1	50V
C828	ECBT1H102KB5	1000P	50V
C829	ECBT1H102KB5	1000P	50V
C830	ECBT1H331KB5	330P	50V
C831	ECBT1H331KB5	330P	50V
C832	ECBT1H102KB5	1000P	50V
C833	ECBT1H102KB5	1000P	50V
C834	ECBT1H330J5	33P	50V
C835	ECEA1HKR22B	0.22	50V
C837	ECBT1C103MS5	0.01	16V
C838	ECBT1C103MS5	0.01	16V
C840	ECEA1HKR22B	0.22	50V
C842	ECBT1H331KB5	330P	50V
C843	ECBT1C103MS5	0.01	16V
C844	ECBT1H102KB5	1000P	50V
C846	ECBT1H102KB5	1000P	50V
C847	ECBT1H102KB5	1000P	50V
C848	ECBT1H102KB5	1000P	50V
C849	ECBT1H102KB5	1000P	50V
C853	ECBT1H102KB5	1000P	50V
C854	ECBT1H102KB5	1000P	50V
C855	ECBT1H102KB5	1000P	50V
C860	ECBT1H331KB5	330P	50V
C861	ECBT1H331KB5	330P	50V
C862	ECBT1C222KR5	2200P	16V
C863	ECBT0J223NS5	0.022	6.3V
C864	ECBT1H331KB5	330P	50V
C901	ECQV1H473JZ3	0.047	50V
C902	ECQV1H473JZ3	0.047	50V
C903	ECQV1H473JZ3	0.047	50V
C904	ECQV1H473JZ3	0.047	50V
	SERVO P.C.B.		
	RESISTORS		
R701	ERJ6GEYJ100	1/10W	10
R702	ERJ6GEYJ471V	1/10W	470
R703	ERJ6GEYJ823	1/10W	82K
R704	ERJ6GEYJ102A	1/10W	1K

Ref.No.	Part No.	Values & Remarks	
R705	ERJ6GEYJ103V	1/10W	10K
R706	ERJ6GEYJ102A	1/10W	1K
R707	ERJ6GEYJ473V	1/10W	47K
R708	ERJ6GEYJ224V	1/10W	220K
R709	ERJ6GEYJ683V	1/10W	68K
R711	ERJ6GEYJ154V	1/10W	150K
R712	ERJ6GEYJ471V	1/10W	470
R714	ERJ6GEY0R00A	1/10W	0.00
R717	ERJ6GEYJ102A	1/10W	1K
R718	ERJ6GEYJ102A	1/10W	1K
R719	ERJ6GEYJ102A	1/10W	1K
R720	ERJ6GEYJ102A	1/10W	1K
R721	ERJ8GEYJ101V	1/10W	100
R722	ERJ6GEYJ473V	1/10W	47K
R723	ERJ6GEYJ182V	1/10W	1.8K
R724	ERJ6GEYJ333V	1/10W	33K
R725	ERJ6GEYJ472V	1/10W	4.7K
R726	ERJ6GEYJ473V	1/10W	47K
R727	ERJ6GEYJ103V	1/10W	10K
R728	ERJ6GEYJ392V	1/10W	3.9K
R730	ERJ6GEYJ331V	1/10W	330K
R731	ERJ6GEYJ392V	1/10W	3.9K
R734	ERJ6GEYJ101V	1/10W	100
R735	ERJ6GEYJ101V	1/10W	100
R736	ERJ6GEYJ101V	1/10W	100
R738	ERJ6GEYJ223V	1/10W	22K
R739	ERJ6GEYJ681V	1/10W	680
R741	ERJ6GEYJ562V	1/10W	5.6K
R742	ERJ6GEYJ562V	1/10W	5.6K
R743	ERJ6GEYJ562V	1/10W	5.6K
R744	ERJ6GEYJ103V	1/10W	10K
R745	ERJ6GEYJ155V	1/10W	1.5M
R746	ERJ8GEYJ103V	1/8W	10K
R747	ERJ6GEYJ473V	1/10W	47K
	CAPACITORS		
C701	ECEA0JKA220	6.3V	22
C702	ECEA1HKA010I	50V	1
C703	ECEA0JKA101I	6.3V	100
C704	ECUZ1E104MBN	25V	0.1

Ref.No.	Part No.	Values & Remarks	
C705	ECEA1HKA010I	50V	1
C706	ECUE1H101JCN	50V	100P
C708	ECUE1H472KBN	50V	4700P
C709	ECUE1C473KBN	16V	0.047
C710	ECUE1H152KBN	50V	1500P
C711	ECUZ1E104MBN	25V	0.1
C712	ECUZ1E104MBN	25V	0.1
C713	ECUV1C104MBM	16V	0.1
C714	ECEA0JKA101I	6.3V	100
C715	ECEA0JKA470I	6.3V	47
C716	ECUE1H561KBN	50V	560P
C717	ECUZ1E104MBN	25V	0.1
C718	ECUV1C224KBM	16V	0.22
C719	ECUV1C224KBM	16V	0.22
C721	ECUE1H100DCN	50V	10P
C722	ECUE1H100DCN	50V	10P
C723	ECEA1AKA221I	10V	220
C724	ECUV1C104MBM	16V	0.1
C725	ECUE1H102KBN	50V	1000P
C726	ECUE1H102KBN	50V	1000P
C727	ECEA1HKA010I	50V	1
C728	ECEA1HKA010I	50V	1
C730	ECUZ1E104MBN	25V	0.1
C731	ECA05SD151I	6.3V	150
C732	ECA05SD151I	6.3V	150
C733	ECUZ1E104MBN	25V	0.1
C734	ECEA1AKA221I	10V	220
C735	ECUZNE104MBN	25V	0.1
C736	ECUZNE104MBN	25V	0.1
C737	ECUZNE104MBN	25V	0.1
C738	ECUV1C154KBN	16V	0.15
C742	ECUV1E273KBN	25V	0.027
C743	ECUZNE104MBN	25V	0.1
C744	ECUE1E822KBN	25V	8200P
C745	ECUE1C473MBN	16V	0.047
C746	ECUE1H050DCN	50V	5P
C747	ECUE1H222KBN	50V	2200P
C748	ECUV1H271KBM	50V	270P
C790	ECA1AKF820E	10V	82

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