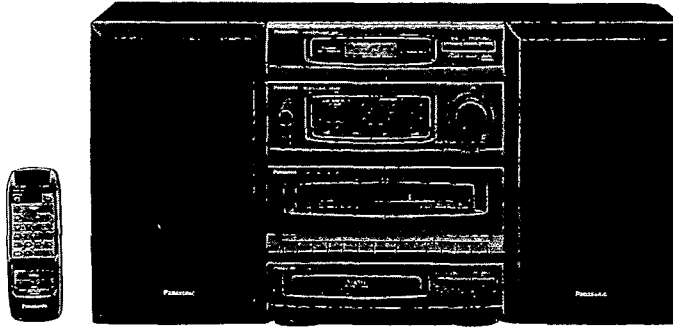


Service Manual

COMPACT
disc
DIGITAL AUDIO

MASH*
multi-stage noise shaping

Compact Audio System
SA-DH30



SB-DH30

SA-DH30

SB-DH30

Colour

(K) Black Type

Area

Suffix for Model No.	Area	Colour
(EB)	Great Britain	(K)

System Name	Unit	
SC-DH30 (EB)	SA-DH30 (EB)	Music Center
	SB-DH30 (E)	Speaker (Made in PAES)

TAPE DECK : MECHANISM SERIES (SG-20W)
TRAVERSE DECK : NEW MECHANISM SERIES (RAE011Z)

■ SPECIFICATIONS

■ AMPLIFIER SECTION

Frequency response	
AUX	25 Hz ~ 15 kHz (-3dB)
Input sensitivity and impedance	
AUX	250 mV/33.8 kΩ
Graphic equalizer	+10 dB (100 Hz, 330 Hz, 1 kHz, 3.3 kHz, 10 kHz)
Load impedance	4Ω

■ FM TUNER SECTION

Frequency range	87.50 ~ 108.00 MHz
Sensitivity	23.3 dBf (4.0 μV, IHF 58)
Total harmonic distortion	
MONO	0.6 %
STEREO	0.7 %
S/N	
MONO	60 dB (65 dB, IHF)
Frequency response	50 Hz ~ 15 kHz, +0.5 dB, -2 dB
Image rejection at 98 MHz	35 dB
Stereo separation at 1 kHz	35 dB
Antenna terminal(s)	75Ω (unbalanced)

■ AM TUNER SECTION

Frequency range	
MW	522 ~ 1611 kHz
LW	144 ~ 288 kHz
Sensitivity (for 50 mW)	
MW (at 999 kHz)	141 μV/m
LW (at 216 kHz)	178 μV/m

Notes :

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

■ CASSETTE DECK SECTION

Track system	4 track, 2 channel
Heads	
Playback	Solid permalloy head
Record/playback	Solid permalloy head
Erase	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias, 100 kHz
Erase system	AC erase, 100 kHz
Tape speed	4.8 cm/sec. (1 7/8 ips)
Frequency response	
NORMAL	50 Hz ~ 14 kHz, +1, -6 dB
Wow and flutter	0.15 % (WRMS)
Fast forward and rewind time	Approx. 120 seconds with C-60 cassette tape

■ CD SECTION

Sampling frequency	44.1 kHz
Decoding	16 Bit linear
Beam source/ wavelength	Semiconductor laser/ 780 nm
Number of channels	2 CH, STEREO
Frequency response	20 Hz ~ 20 kHz (+1, -2 dB)
S/N	90 dB (A curve filter)
Dynamic range	85dB
Wow and flutter	Unmeasurable
Digital filter	4 time over sampling
D/A converter	Multi-stage noise shaping

- * • Technics (or Panasonic) developed the world's first MASH type DAC and ADC. MASH technology was invented by NTT (LSI labs).
• MASH is a trademark of NTT.

Panasonic

■ SPEAKER SYSTEM

Type	2 way 2 speakers
Speaker(s)	
Woofer	12 cm cone type
Tweeter	Piezo type
Impedance	4 Ω
Input power	6 W (music) 3 W (DIN)
Output sound pressure level	88 dB/W (1.0 m)
Cross over frequency	10 kHz

Frequency range
Dimensions (W x H x D)
Weight

65 Hz ~ 20 kHz (-16 dB)
200 x 345 x 196 mm
2.7 kg

■ GENERAL

Power consumption
Power supply
Dimensions (W x H x D)
Weight

40 W
AC 230 ~240V, 50 Hz
270 x 345 x 214 mm
4.5kg

■ CONTENTS

	PAGE		PAGE
• PRECAUTION OF LASER DIODE.....	2	• MEASUREMENTS AND ADJUSTMENTS.....	40 ~ 45
• HANDLING PRECAUTIONS FOR TRAVERSE DECK.....	3	• CD LOADING UNIT PARTS LOCATION.....	46
• FRONT PANEL CONTROLS AND FUNCTIONS.....	4 ~ 6	• TROUBLESHOOTING GUIDE.....	47 & 48
• REMOTE CONTROL UNIT CONTROLS AND FUNCTIONS.....	7 & 8	• WIRE CONNECTION DIAGRAM.....	49 & 50
• DISASSEMBLY INSTRUCTIONS.....	8 ~ 15	• BLOCK DIAGRAM.....	51 ~ 54
• TERMINAL GUIDE OF IC'S ,TRANSISTORS & DIODES.....	16	• CD LOADING UNIT PARTS LIST.....	55
• SCHEMATIC DIAGRAM.....	17 ~ 27	• MECHANISM PARTS LIST.....	56 & 57
• PRINTED CIRCUIT BOARD	28 ~ 33	• MECHANISM PARTS LOCATION.....	58 & 59
• FUNCTION OF IC TERMINALS.....	34 ~ 37	• CABINET PARTS LOCATION.....	60 & 61
• INTERNAL CONNECTIONS OF LCD.....	37	• REPLACEMENT PARTS LIST.....	62 ~ 66
• DIGITAL SERVO SYSTEM.....	38 & 39	• RESISTORS & CAPACITORS.....	67 ~ 70

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 .
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

■ 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:

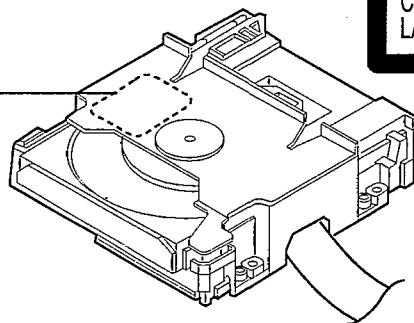
1. Do not disassemble the optical pick up unit ,since radiation from exposed laser diode is dangerous .
2. Do not adjust the variable resistor on the pickup unit .It has already been adjusted .
3. Do not look at the focus lens using optical instruments .
4. It is Not advisable to look at the pick up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

RQLS0021

ADVARSEL:USYNLIG LASERSTRÅLING
VED ÅBNING, NÅR SIKKERHEDSAF-
BRYDERE ER UDE AF FUNKTION.
UNDGÅ UDSÆTTELSE FOR STRÅLING

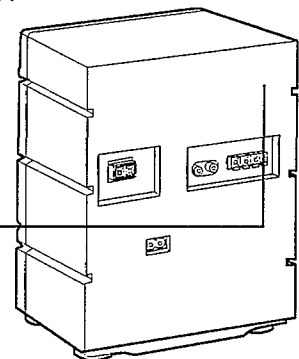
VORSICHT- Unsichtbare
Laserstrahlung, wenn
Abdeckung geöffnet.
Nicht dem Strahl
aussetzen. RQLS0021

DANGER- invisible
laser radiation when
open.
AVOID DIRECT EX-
POSURE TO BEAM.



RQT4389ZAA

CLASS 1
LASER PRODUCT
RQT4389ZAA



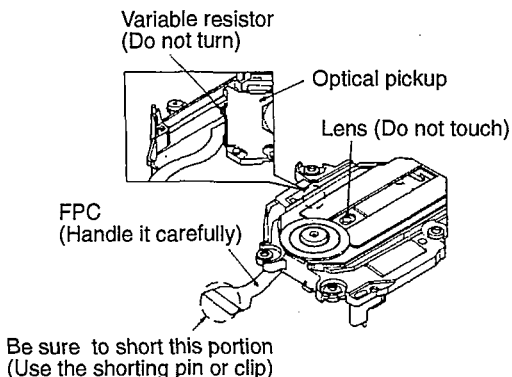
HANDLING PRECAUTIONS FOR TRAVERSE DECK

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 antistatic 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.

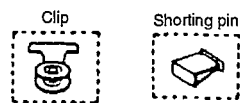
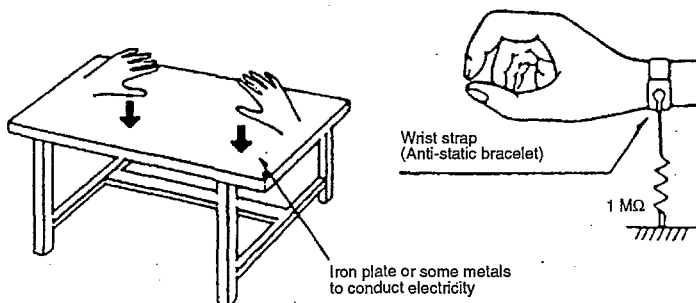


• Grounding for electrostatic breakdown prevention

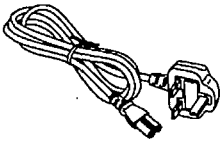
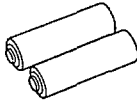
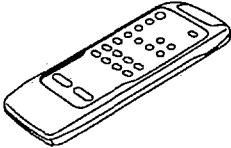
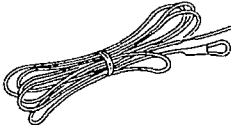
1. Human body grounding
Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

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).

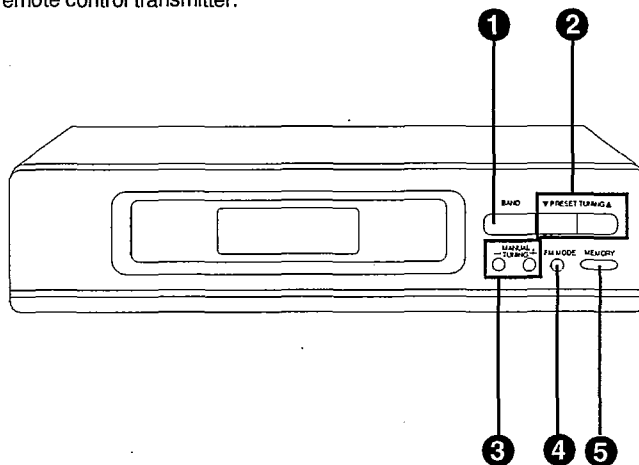
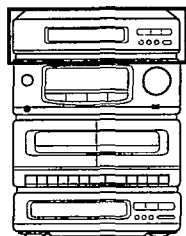


ACCESSORIES

 AC power supply cord..... 1 pc	 Remote control batteries..... 2 pcs
 Remote control transmitter..... 1 pc	 FM indoor antenna..... 1 pc

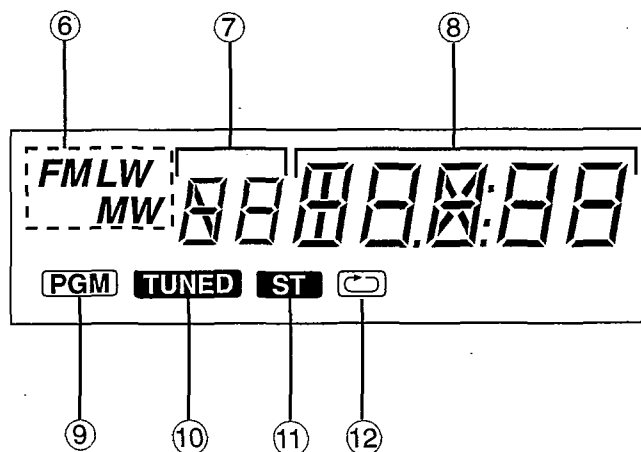
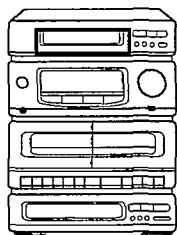
FRONT PANEL CONTROLS AND FUNCTIONS

The functions indicated by the numbers with black background (for example ①) can also be activated from the remote control transmitter. (See pages 7 & 8)



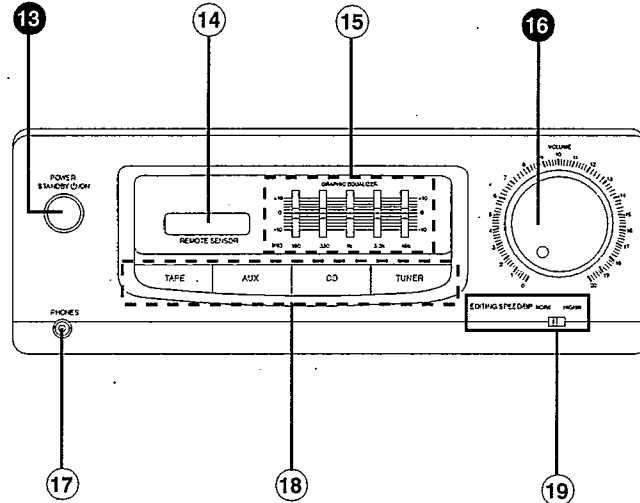
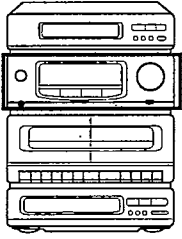
Tuner section

- ① **Band select button (BAND)**
Press to select the LW, MW or FM radio band.
- ② **Preset-tuning buttons (▼ PRESET TUNING ▲)**
Press to program broadcast frequencies into the unit's memory, and also to recall the programmed stations.
- ③ **Tuning up and down buttons (- MANUAL TUNING +)**
Press to tune to the desired station.
- ④ **FM mode button (FM MODE)**
Press to select the FM listening mode (stereo or monaural) during FM broadcasts.
- ⑤ **Memory button (MEMORY)**
Press to program a broadcasting station into the units' memory.



Display section

- ⑥ **Band indicator (FM, LW, MW)**
Lights to show which band was selected.
- ⑦ **Multi display**
Shows the track number, total number of tracks and preset channels, etc.
- ⑧ **Alpha-numeric display**
Shows the selected source, total playing time of compact discs and broadcast frequencies, etc.
- ⑨ **Program indicator (PGM)**
Lights during the program play mode of compact discs and memory presetting of broadcast station.
- ⑩ **Tuned indicator (TUNED)**
Lights when a broadcast station is tuned in precisely.
- ⑪ **FM stereo indicator (ST)**
Lights when you receive an FM stereo broadcast. It will not light if you are using the FM mode button to select monaural mode.
- ⑫ **Repeat play indicator (repeat symbol)**
Lights during the repeat play mode of compact discs.



Amplifier section

13 Power "STANDBY/ON" switch

This switch switches On and OFF the secondary circuit power only. The unit is in the "standby" condition when this switch is set to the STANDBY position. Regardless of the switch setting, the primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

14 Remote control signal sensor (REMOTE SENSOR)

Receives the signal from the remote control.

15 Equalizer controls (GRAPHIC EQUALIZER)

Use to adjust the equalization level. These controls are for compensation of tonal quality. By sliding the controls at each of the indicated frequencies in the "+" direction, the tonal quality is increased, and by sliding them in the "-" direction, the tonal quality is decreased.

16 Volume level control (VOLUME)

Turn to adjust the volume level. Note that "0" is the lowest volume setting and "20" is the highest.

17 Headphones jack (PHONES)

Plug headphones cord into this jack.

18 Input select buttons (TAPE, AUX, CD, TUNER)

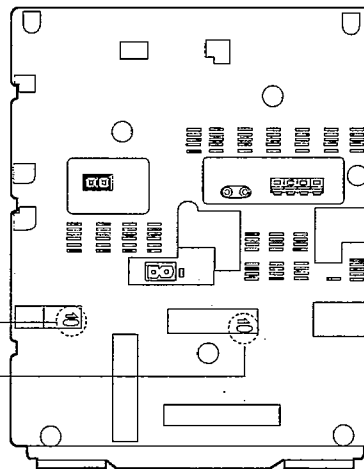
Press to select the sound source.

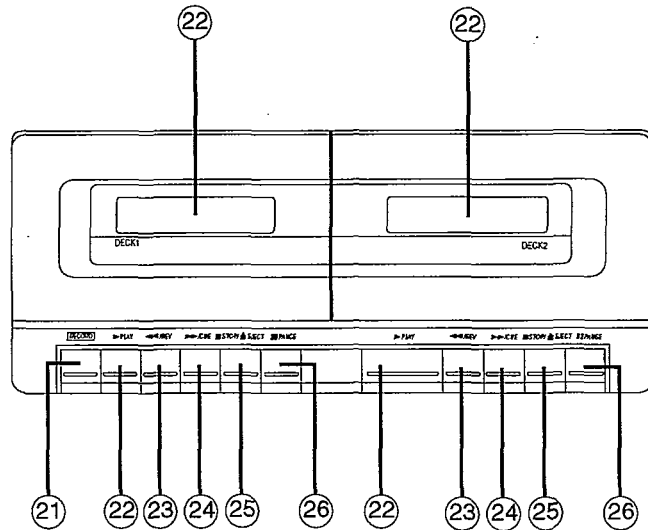
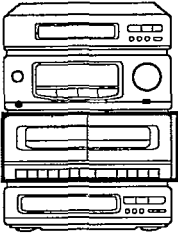
19 Tape-to-tape recording speed/beat proof selector (EDITING SPEED / BP)

Use to select the recording speed when a tape-to-tape recording is made. Use to reduce the unwanted beat signals (whistle) during recording of an LW/MW broadcast.

• What to do when the tape is entangled.

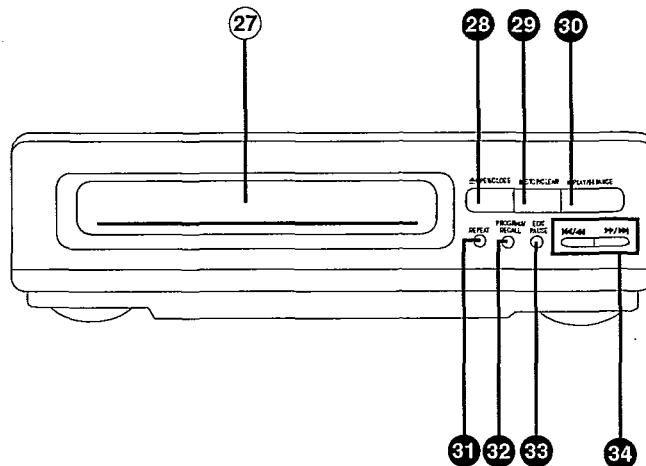
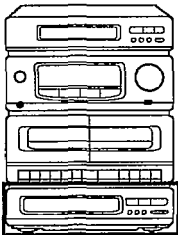
When the tape is caught in the pinch roller, etc. Release the tape by turning the flywheel on the motor with the screwdriver in the direction of the arrow.





Cassette deck section

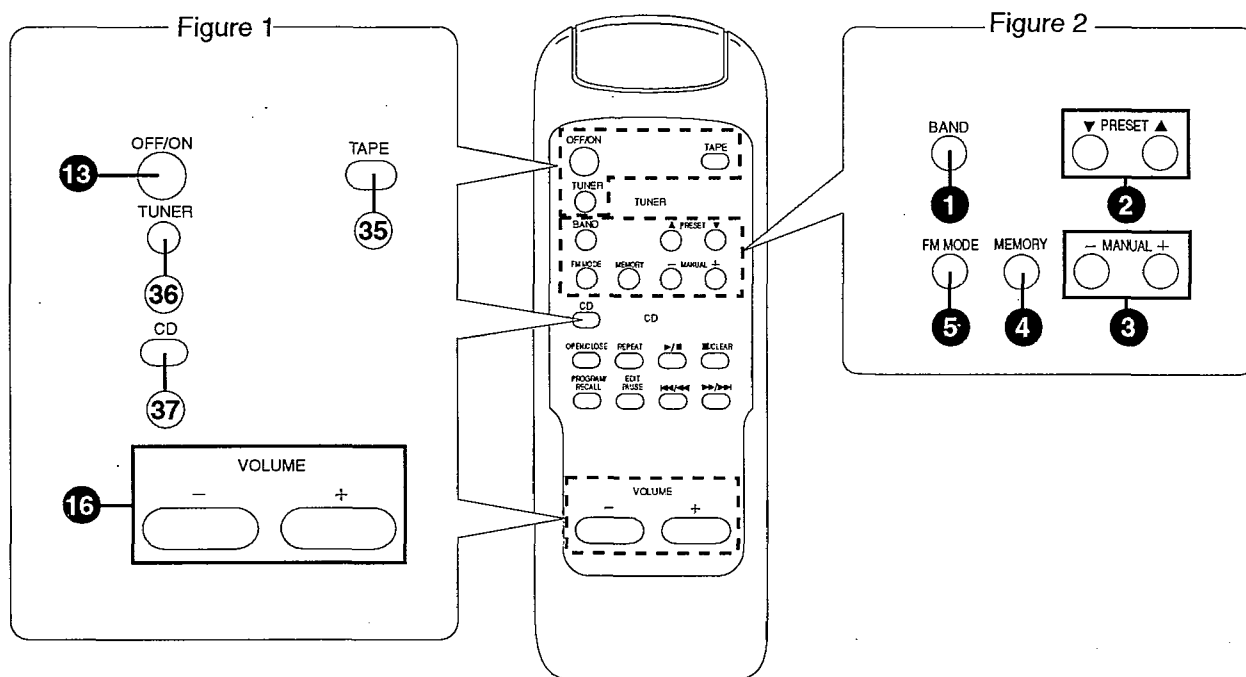
- 20** **Cassette holders**
- 21** **Record button (RECORD)**
Press to make a recording (tape deck1 only).
- 22** **Playback buttons (▶PLAY)**
Press to play a tape.
- 23** **Rewind / review buttons (◀◀/REV)**
Press to rewind the tape.
Press and hold during playback to review the contents at high speed.
- 24** **Fast forward/cue buttons (▶▶/CUE)**
Press to advance the tape.
Press and hold during playback to cue the contents at high speed.
- 25** **Stop/eject buttons (■STOP/▲EJECT)**
Press to make a recording (tape deck1 only).
- 26** **Pause buttons (||PAUSE)**
Press to temporarily stop the tape playback or recording (deck 1 only).



Compact disc player section

- 27** **Disc tray**
- 28** **Disc tray open/close button (▲OPEN/CLOSE)**
Press to open or close the disc tray.
- 29** **Stop/clear button (■STOP/CLEAR)**
Press to stop the disc tray and to clear the programmed tracks.
- 30** **Play/pause button (▶PLAY/||PAUSE)**
Press to start the disc play and to stop the disc play temporarily.
- 31** **Repeat button (REPEAT)**
Press to activate the repeat mode.
- 32** **Program/recall button (PROGRAM/RECALL)**
Press to activate the program play mode and to confirm the programmed sequence. You can enter specific tracks using the skip/search buttons.
- 33** **Edit pause button (EDIT PAUSE)**
Press to activate the edit-recording from compact discs.
- 34** **Skip/search buttons (◀◀/▶▶)**
Press either button to skip (backward or forward) the tracks, or to search (backward or forward) the desired portion of compact discs.

REMOTE CONTROL UNIT CONTROLS AND FUNCTIONS



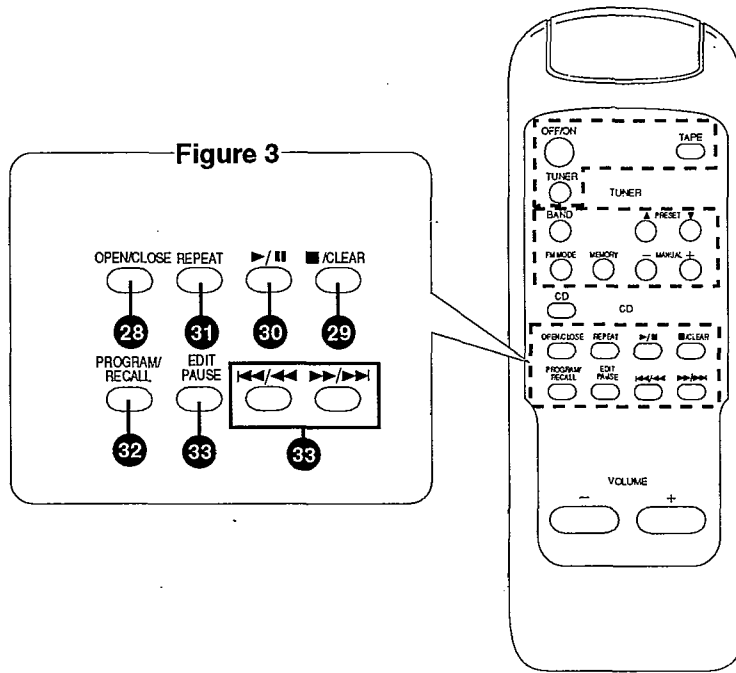
Common operation controls (Figure 1)

The functions of button **13** and **16** are identical to those described under "Amplifier section" on page 5

- 35** **Tape input select button (TAPE)**
Press to enjoy listening to cassette tapes.
- 36** **Tuner input select button (TUNER)**
Press to enjoy listening to radio broadcasts.
- 37** **CD input select button (CD)**
Press to rewind the tape.
Press and hold during playback to review the contents at high speed.

Tuner controls (Figure 2)

The functions of buttons **1**, **2**, **3**, **4** and **5** are identical to those described under "Tuner section" on page 4.



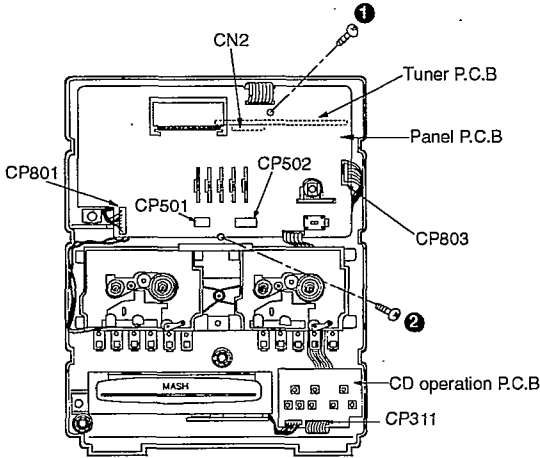
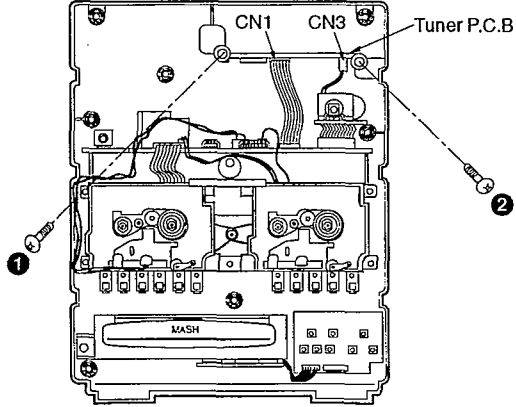
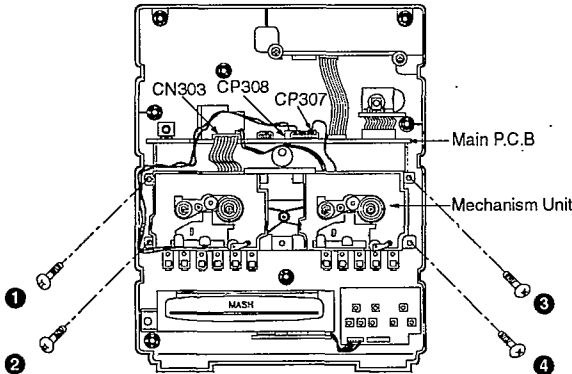
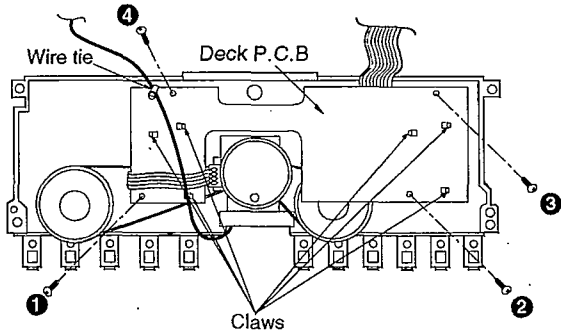
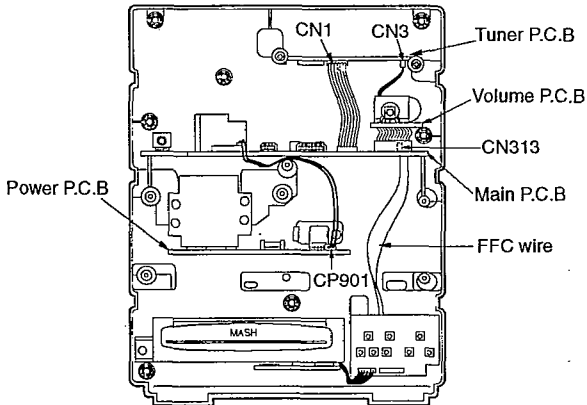
Compact disc controls (Figure 3)

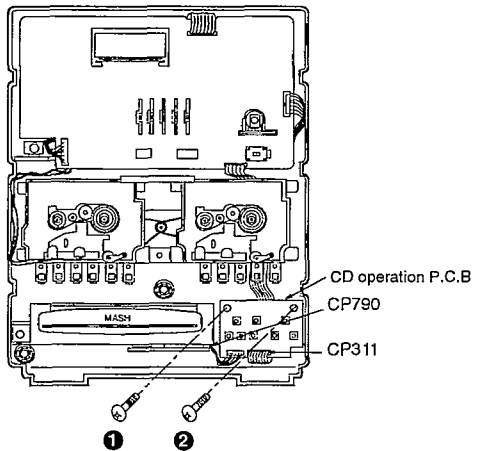
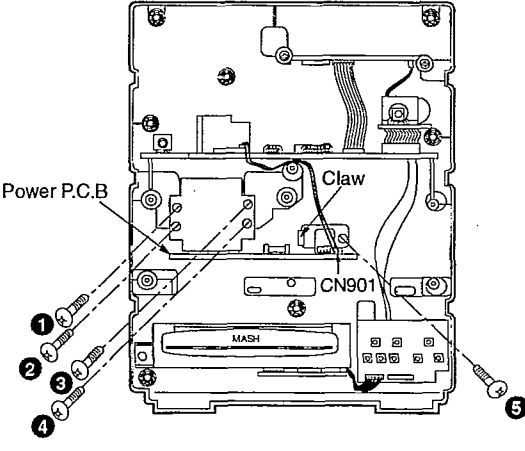
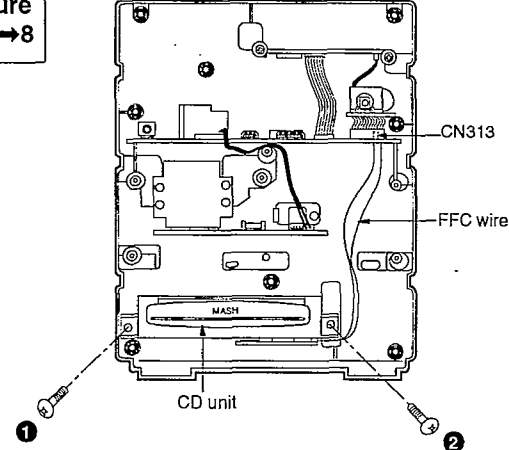
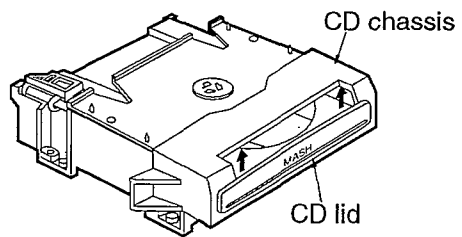
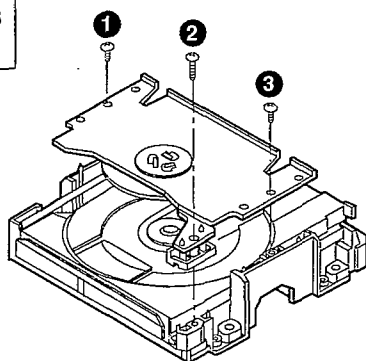
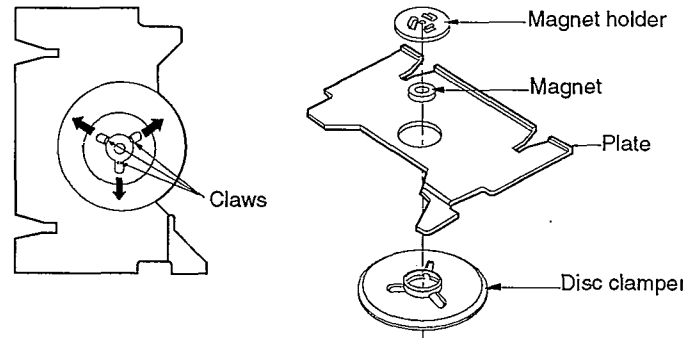
The functions of buttons 28, 29, 30, 31, 32, 33 and 34 are identical to those described under "Compact disc player section" on page 6.

DISASSEMBLY INSTRUCTIONS

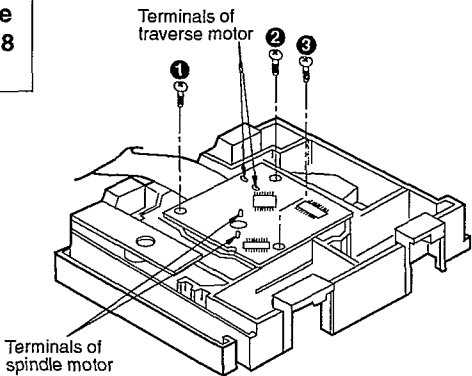
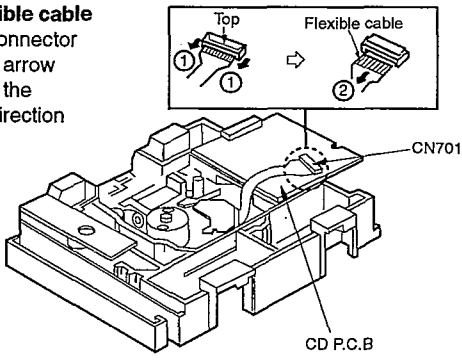
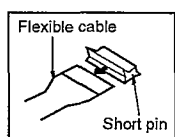
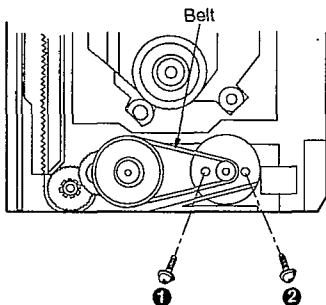
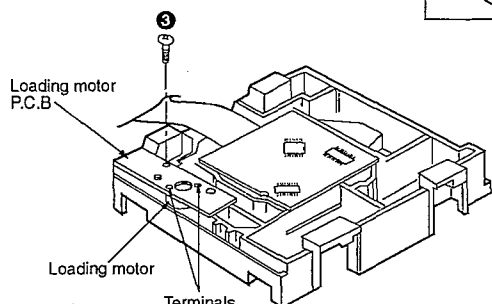
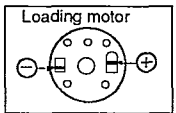
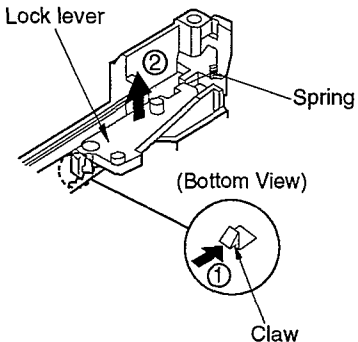
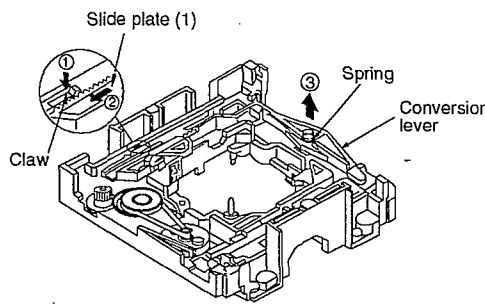
Warning : This product uses a laser diode. Refer to caution statements on page 2.

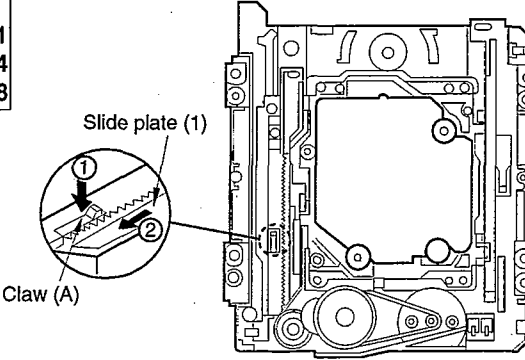
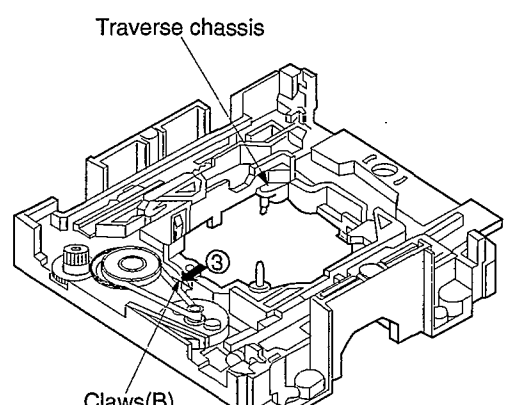
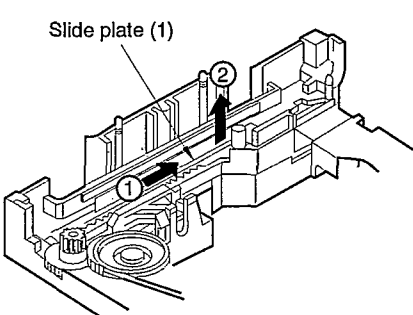
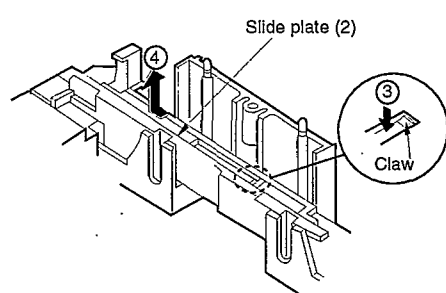
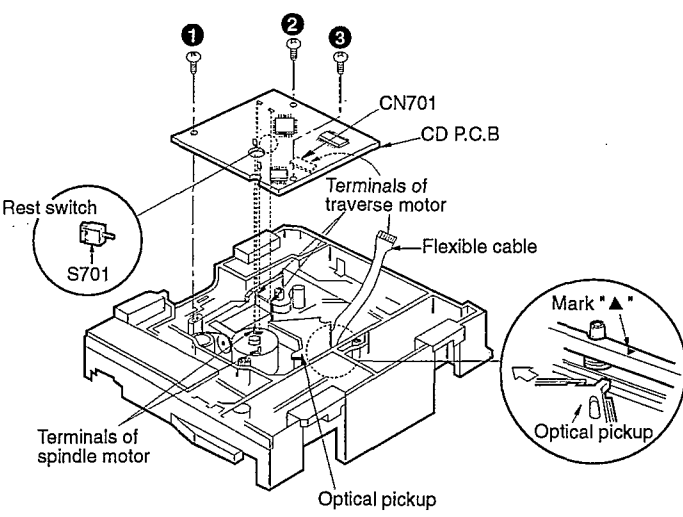
<p>Ref. No. 1</p>	<p>Removal of the Front Cabinet</p>
<p>Procedure 1</p>	<ol style="list-style-type: none"> 1. Remove 9 screws (1 ~ 9). 2. Remove the volume knob and nut. 3. Press the stop/eject buttons on both deck 1 and 2. 4. Remove the front cabinet in the direction of arrow.

<p>Ref. No. 2</p>	<p>Removal of the Panel P.C.B</p>	<p>Ref. No. 3</p>	<p>Removal of the Tuner P.C.B</p>
<p>Procedure 1 → 2</p>	<ol style="list-style-type: none"> 1. Remove 2 screws (① & ②) 2. Remove 4 connectors (CP501, CP502, CP801 & CP803) on the panel P.C.B. 3. Remove 1 connector (CN2) on the tuner P.C.B. and 1 connector (CP311) on the CD operation P.C.B. 4. Remove the panel P.C.B. 	<p>Procedure 1 → 2 → 3</p> <ol style="list-style-type: none"> 1. Remove 2 screws (① & ②). 2. Remove 2 connectors (CN3 & CN1). 3. Pull out the tuner P.C.B. 	
<p>Ref. No. 4</p>	<p>Removal of the Mechanism Unit and Deck P.C.B</p>		
<p>Procedure 1 → 2 → 4</p>	<ol style="list-style-type: none"> 1. Remove 4 screws (①~④). 2. Remove 3 connectors (CN303, CP307 & CP308) on the main P.C.B 	<ol style="list-style-type: none"> 3. Remove solder points on the motor terminal. 4. Remove 4 screws (①~④). 5. Cut wire tie. 4. Release 6 claws. 	
<p>Ref. No. 5</p>	<p>Removal of the Main and Volume P.C.B</p>		
<p>Procedure 1 → 2 → 4 → 5</p>	<ol style="list-style-type: none"> 1. Remove the FFC wire from the connector (CN313). 2. Remove 2 connector (CN1 & CN3) on the tuner P.C.B. 3. Remove 1 connector (CP901) on the power P.C.B. 4. Pull out the main and volume P.C.B. 		

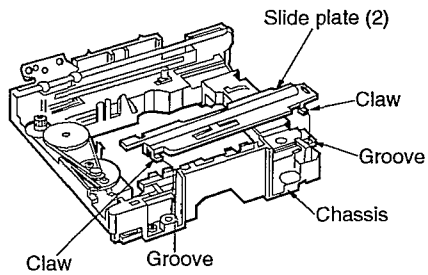
<p>Ref. No. 6</p>	<p>Removal of the CD Operation P.C.B</p>	<p>Ref. No. 7</p>	<p>Removal of the Power P.C.B</p>
<p>Procedure 1 → 6</p>	<p>1. Remove 2 screws (① & ②). 2. Remove 2 connectors (CP311 & CP790).</p>  <p>CD operation P.C.B CP790 CP311</p>	<p>Procedure 1→2→4→7</p>	<p>1. Release 1 connector (CN901). 2. Remove 5 screws (① ~ ⑤). 3. Release 1 claw.</p>  <p>Power P.C.B Claw CN901</p>
<p>Ref. No. 8</p>	<p>Removal of the CD Unit</p>	<p>Ref. No. 9</p>	<p>Removal of the CD Lid & Chassis</p>
<p>Procedure 1→2→6→8</p>	 <p>CN313 FFC wire CD unit</p> <p>1. Remove 2 screws (① & ②). 2. Remove FFC wire from connector (CN313). 3. Remove the CD unit.</p>	<p>Procedure 1→2→6→8 →9</p>	 <p>CD chassis CD lid</p> <p>1. Remove the CD lid in the direction of arrow. 2. Remove the CD chassis.</p>
<p>Ref. No. 10</p>	<p>Removal of the Disc Clamper</p>	<p>• Disassembly of the disc clamper</p>	
<p>Procedure 1→2→6→8 →9→10</p>	 <p>• Remove 3 screws (① ~ ③)</p>	 <p>Magnet holder Magnet Plate Claws Disc clamper</p> <p>1. Release 3 claws in the direction of arrows. 2. Disassemble the disc clamper as shown above</p>	

<p>Ref. No. 11</p>	<p>Removal of the Guide Shaft and Guide Shaft Holder</p>
<p>Procedure 1→2→6→8 →9→10→11</p>	<div data-bbox="885 241 1388 627"> </div> <p>1. Remove 3 screws (① ~ ③).</p> <p>2. Remove the guide shaft and guide shaft holder in the direction of arrow.</p>
<p>Ref. No. 12</p>	<p>Removal of the Disc Tray</p>
<p>Procedure 1→2→6→8 →9→10→11 →12</p>	<div data-bbox="359 828 718 1142"> </div> <div data-bbox="917 873 1404 1187"> </div> <p>1. Push the 2 levers in the direction of arrow ① until the traverse unit goes down and the disc tray slightly in the direction of arrow ②.</p> <p>2. Remove the disc tray in the direction of arrow ③.</p>
<p>Ref. No. 13</p>	<p>Removal of the Traverse Deck Ass'y</p>
<p>Procedure 1→2→6→8 →9→10→11 →12→13</p>	<div data-bbox="351 1478 734 1590"> </div> <div data-bbox="311 1590 718 1904"> </div> <div data-bbox="933 1523 1356 1836"> </div> <p>1. Widen 3 bosses by using a screwdriver and remove 3 pins.</p> <p>2. Release the claw and then remove the traverse unit in the direction of arrow.</p>

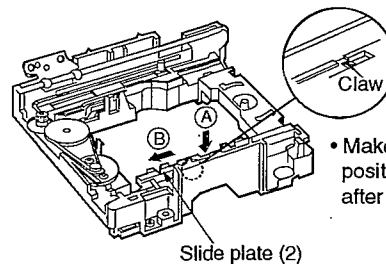
<p>Ref. No. 14</p>	<p>Removal of the CD P.C.B.</p>	
<p>Procedure 1→2→6→8 →14</p>	 <p>Terminals of traverse motor</p> <p>Terminals of spindle motor</p> <ol style="list-style-type: none"> 1. Remove 3 screws (1~3). 2. Desolder the 2 terminals of spindle motor. 3. Desolder the 2 terminals of traverse motor. 	<p>• Removal of the flexible cable Push the top of the connector in the direction of the arrow ①, and then pull out the flexible cable in the direction of the arrow ②.</p>   <ol style="list-style-type: none"> 4. Remove the flexible cable (CN701). Note : Insert a short pin into the flexible cable for traverse unit.
<p>Ref. No. 15</p>	<p>Removal of the Loading Motor P.C.B and Loading Motor</p>	
<p>Procedure 1→2→6→8 →9→10→11 →12→15</p>	 <ol style="list-style-type: none"> 1. Remove the belt. 2. Remove 2 screws (1 & 2). 	  <ol style="list-style-type: none"> 3. Remove 1 screw (3). 4. Desolder the 2 terminals of loading motor.
<p>Ref. No. 16</p>	<p>Removal of the Lock Lever</p>	<p>Ref. No. 17</p> <p>Removal of the Conversion Lever</p>
<p>Procedure 1→2→6→8 →9→10→11 →12→16</p>	 <ol style="list-style-type: none"> 1. Remove the spring. 2. Release the claw in the direction of arrow ①, and then remove the lock lever in the direction of arrow ②. 	<p>Procedure 1→2→6→8 →9→10→11 →12→13→14 →16→17</p>  <ol style="list-style-type: none"> 1. Remove the spring. 2. Push the claw(A) 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. 18	Removal of the Traverse Chassis Ass'y	
Procedure 1→2→6→8 →9→10→11 →12→13→14 →16→17→18	 <p>1. Push the claw(A) in the direction of arrow ①, and then move the slide plate(1) in the direction of arrow ②.</p>	 <p>2. Push 1 claw(B) in the direction of arrow ③, and then remove the traverse chassis ass'y.</p>
Ref. No. 19	Removal of the Slide Plate (1) and Slide Plate (2)	
Procedure 1→2→6→8 →9→10→11 →12→13→14 →16→17→18 →19	 <p>■ Removal of the slide plate (1)</p> <ul style="list-style-type: none"> • Move the slide plate(1) in the direction of arrow ①, and lift up the slide plate(1) in the direction of arrow ②. 	 <p>■ Removal of the slide plate (2)</p> <ul style="list-style-type: none"> • Push the claw in the direction of arrow ③, and remove the slide plate(2) in the direction of arrow ④.
■ INSTALLING CD P.C.B.		
<ol style="list-style-type: none"> 1. Before installing the CD P.C.B., move the optical pickup toward the outer edge from the mark "▲". (Otherwise, the rest switch (S701) mounted on the CD P.C.B may be damaged.) 2. Connect the flexible cable to the connector (CN701). 3. Install the servo P.C.B. in the traverse deck ass'y with the 3 screws (①-③). 4. Solder the 2 terminals of the traverse motor and the 2 terminals of the spindle motor. <p>Note : Connect the flexible cable to the connector (CN701) firmly. Tighten the screws before soldering the terminals.</p> 		

CD UNIT ASSEMBLY

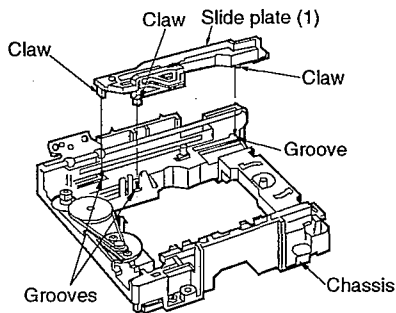


1. Install the slide plate (2) on the chassis by fitting 2 claws of slide plate (2) in the 2 grooves of the chassis.

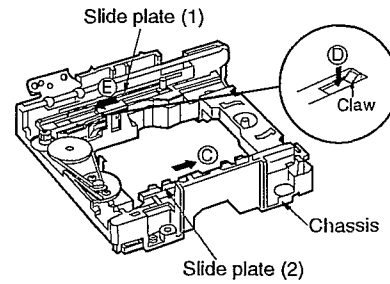


- Make sure that the claw is positioned as shown above after installing slide plate(2).

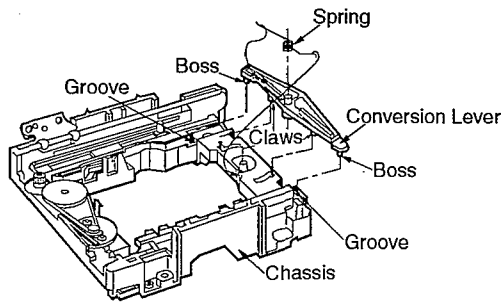
2. Slide the slide plate(2) in the direction of arrow (B) while keeping it held down lightly in the direction of arrow (A).



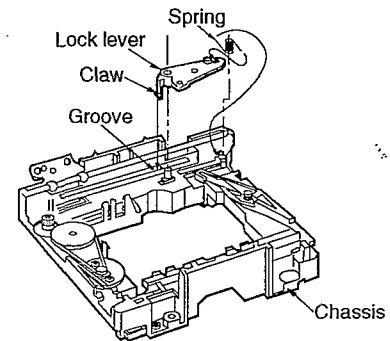
3. Install the slide plate (1) on the chassis by fitting 3 claws of slide plate (1) in the 3 grooves of the chassis as shown above.



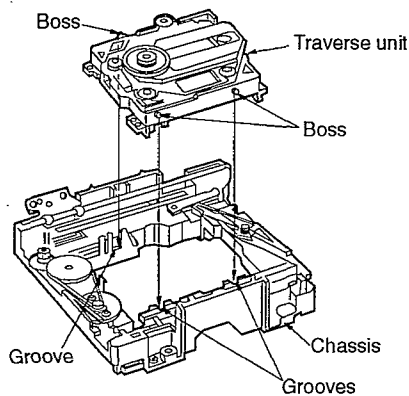
4. Slide the slide plate(2) fully in the direction of arrow (C).
5. Keep holding down the claw in the direction of arrow (D) and slide the slide plate(1) fully in the direction of arrow (E) (The slide plate(1) will not be able to move)



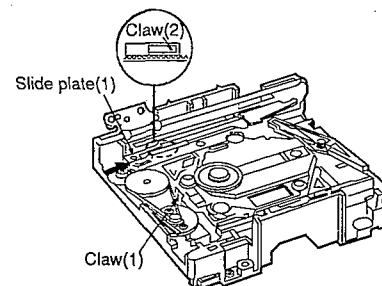
6. Install the conversion lever on the chassis by fitting 2 claws of the conversion lever in the 2 grooves of the chassis and then follow by 2 bosses in the 2 grooves as shown above.



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.



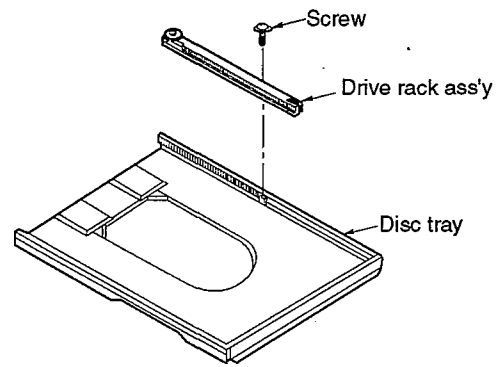
9. Install the traverse unit on the chassis by fitting the 3 bosses of the traverse unit in the 3 grooves of the chassis.



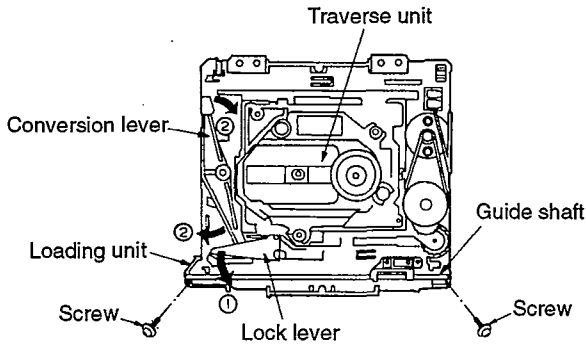
10. Make sure that the traverse unit is engaged with the claw(1).
11. Slide the slide plate(1) in the direction of the arrow. Be sure to check if claw(2) is set as shown above. (The slide plate(1) will not be able to move.)

■ INSTALLING DISC TRAY UNIT

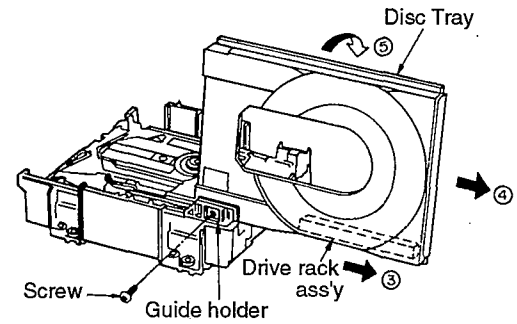
- Install the drive rack ass'y on the disc tray with a screw.



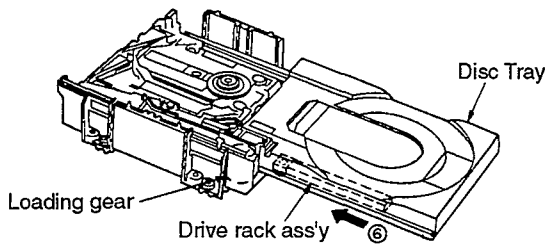
■ INSTALLING DISC TRAY



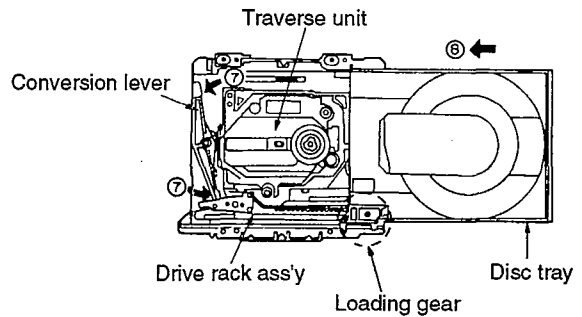
1. Move the lock lever in the direction of arrow ① and the conversion lever in the direction of arrow ②.
(The traverse unit rises.)
2. Install the guide shaft on the loading unit with 2 screws.



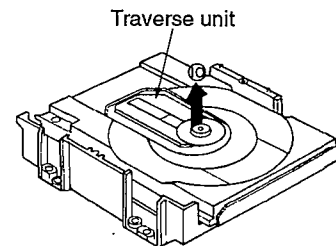
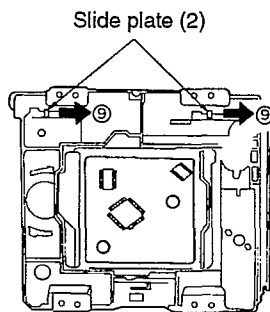
3. Install the disc tray on the guide holder with a screw as shown above.
4. Slide the drive rack ass'y fully in the direction of arrow ③.
5. Slide the disc tray fully in the direction of arrow ④.
6. Lay the disc tray down in the direction of arrow ⑤.



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 will not be able to move and the loading gear is engaged with the drive rack ass'y)



9. Rotate the conversion lever fully in the direction of arrow ⑦, and the drive rack ass'y will engage with the loading gear (1). (The traverse unit is lowered.)
10. Slide the disc tray in the direction of arrow ⑧.

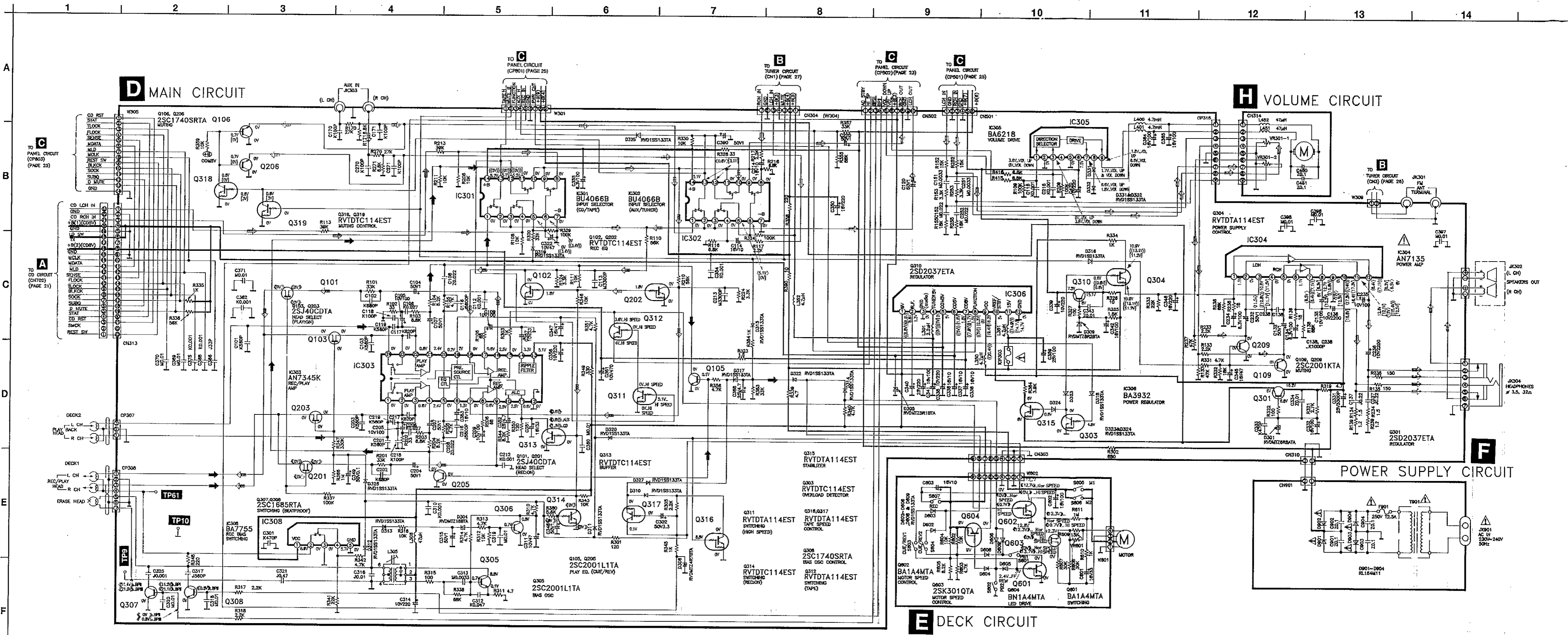


11. Slide the slide plate (2) in the direction of arrow 9 and check if the traverse unit rises in the direction of arrow ⑩.

■ TERMINAL GUIDE OF ICs, TRANSISTORS & DIODES

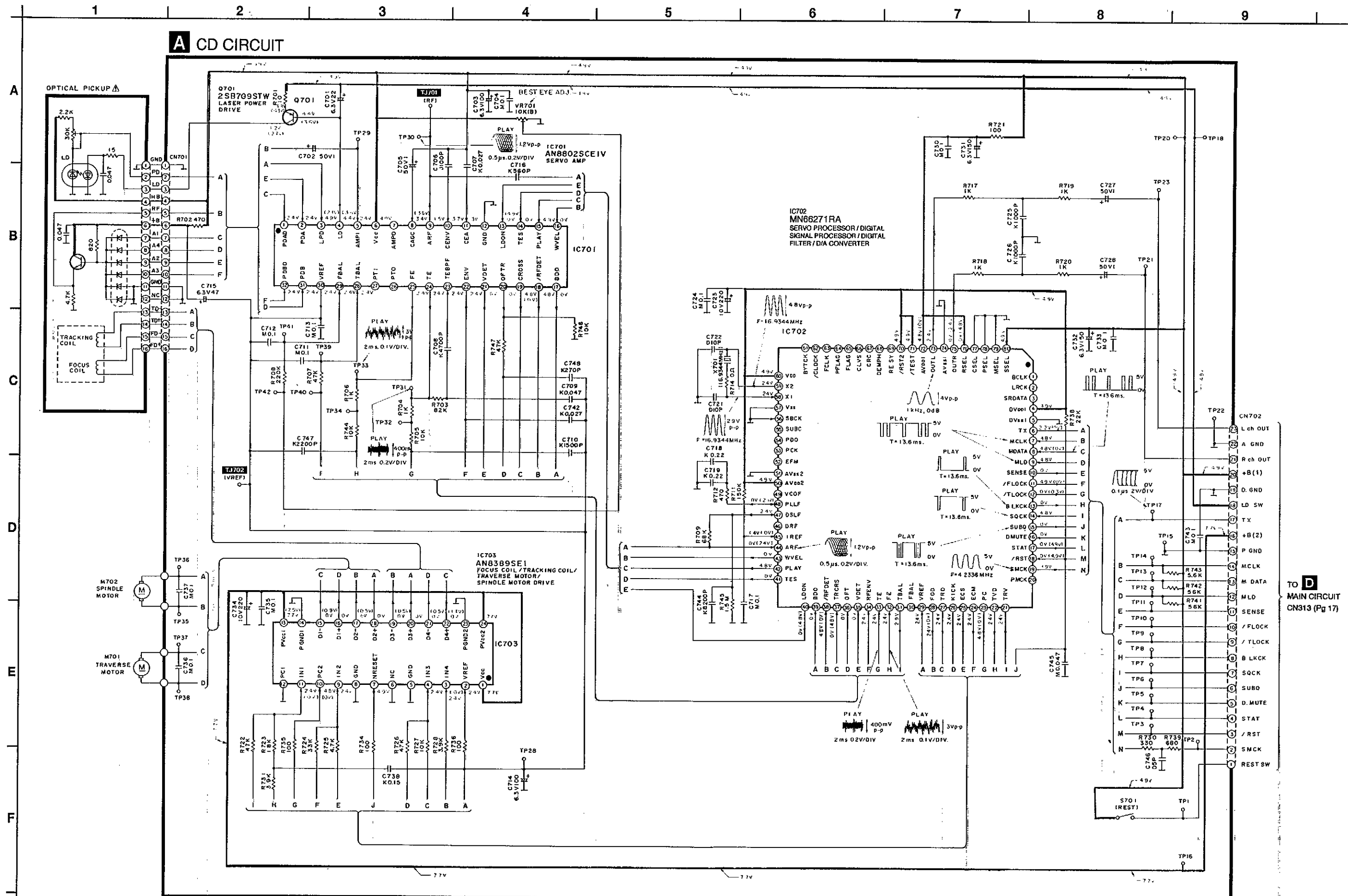
<p>AN7273A</p>	<p>RVIBA1332L</p>	<p>LM7001</p>	<p>BU4066B</p>	<p>AN7345K</p>	<p>AN7135</p>
<p>BA6218</p>	<p>BA3932</p>	<p>BA7755</p>	<p>M5226P</p>	<p>TA7291S</p>	<p>M37410M6H240 MN66271RA 80 Pin</p>
<p>S8054HN-T</p>	<p>AN8802SCE1V 32 Pin</p>	<p>AN8389SE1</p>	<p>2SB709S</p>	<p>BA1A4MTA BN1L3NTA 2SA1175FTA 2SC2784FTA 2SC2785FTA 2SC2786MTA BN1A4MTA</p>	
<p>2SK544F-AC</p>	<p>2SK301QTA</p>	<p>2SJ40CDTA</p>		<p>2SA564RTA 2SC2001L1TA 2SC2001KTA 2SC2001K1TA 2SC829BTA 2SC1685RTA</p> <p>2SC829CTA 2SA720STA 2SC1675KTA</p>	
	<p>RVTDT series: RVTDTTC113ZST RVTDTTC114EST RVTDTA114EST 2SC1740SRTA 2SC1740SSTA 2SC1740SQSTA</p>	<p>2SD2037ETA</p>	<p>RVDSVC321</p>	<p>RVD series: RVDMTZ4R7BTA RVDMTZ5R1BTA RVDMTZ5R6BTA RVDMTZ6R8BTA RVDMTZ8R2BTA RVDMTZ18BTA RVDMTZ6R2BTA</p>	
<p>RL154M11</p>	<p>RVD series: RVD1SS133TA 1SS291TA MA700TA</p>	<p>1SV147T4MATU</p>	<p>SLR33VC160</p>		

SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM

NOTES:



- S301 : CD program/recall select switch. (PROGRAM/RECALL)
- S302 : CD edit/pause select switch. (EDIT PAUSE)
- S303 : CD reverse skip switch. (◀◀/▶▶)
- S304 : CD skip switch. (▶▶/▶▶)
- S305 : CD repeat switch. (REPEAT)
- S306 : CD stop/cancel select switch. (■ STOP/CLEAR)
- S307 : CD play/pause select switch. (▶ PLAY/|| PAUSE)
- S308 : CD open/close switch. (▲ OPEN/CLOSE)
- 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 : Record switch.
- S701 : Rest switch.
- S790 : CD disc tray loading close detect switch.
- S791 : CD disc tray loading open detect switch.
- S801 : Power switch (POWER)
- S802 : Tape function select switch.
- S803 : Tuner function select switch.
- S804 : CD function select switch.
- S805 : Aux function select switch.
- S806 : Preset tuning up switch. (PRESET TUNING ▲)
- S807 : Preset tuning down switch. (PRESET TUNING ▼)
- S808 : Tuning up switch. (TUNING +)
- S809 : Tuning down switch. (TUNING -)
- S810 : Memory switch. (MEMORY)
- S811 : FM mode select switch. (FM MODE)
- S812 : Band select switch. (BAND)
- SW801-1 : Editing speed select switch. (HS...HIGHSPEED, NS...NORMAL SPEED)
- SW801-2 : Beatproof select switch. (BPI...Beatproof 1, BP1II...Beatproof 2, BP1III...Beatproof3)
- VR1 : FM VCO VR.
- VR301-1 ~ VR301-2 : Volume control VR.
- VR551-1 ~ VR551-2 : Graphic Equalizer VR. (100Hz)
- VR552-1 ~ VR552-2 : Graphic Equalizer VR. (330Hz)
- VR553-1 ~ VR553-2 : Graphic Equalizer VR. (1kHz)
- VR554-1 ~ VR554-2 : Graphic Equalizer VR. (3.3kHz)
- VR555-1 ~ VR555-2 : Graphic Equalizer VR. (10kHz)
- VR601-1 ~ VR601-2 : Tape speed adjustment VR.

Current consumption:

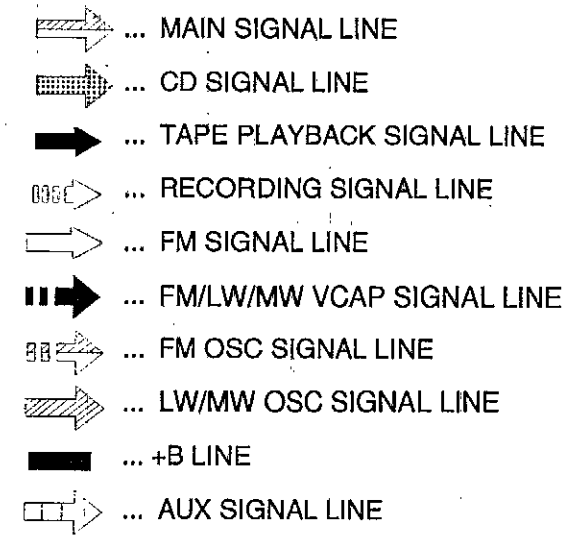
Vol. min.....	61.3mA (FM)
	61.3mA (AM)
	68.8mA (Tape, Playback)
Vol. max.....	105.1mA (FM)
	114.2mA (AM)
	156.8mA (Tape, Playback)
	156.4mA (Tape, Recording-Norm speed)
	150.0mA (Tape, Recording-High speed)

Measurement condition:
 Radio : FM 60 dB, 30%mod
 AM 74 dB/m, 30%mod
 Tape : 315 Hz, 0dB

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.
- <Main/Panel/Tuner/Power supply/Cassette deck section>
 - No mark ... Tape Playback
 - () ... AM
 - () ... AM/FM
- <Compact disc player section>
 - No mark ... STOP
 - () ... Playback (Test disc 1kHz, L+R 0 dB)

Important Safety Notice:
 Component identified by Δ have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

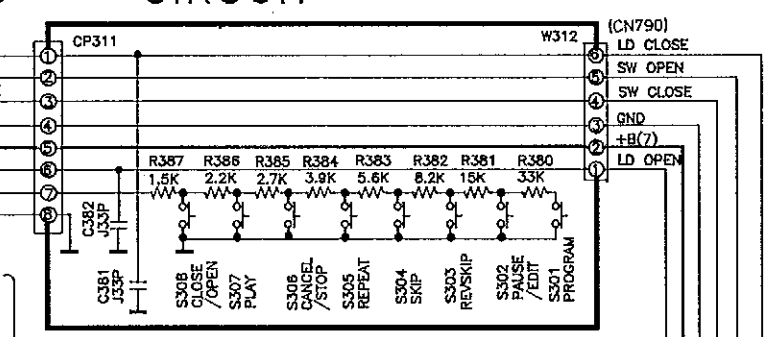
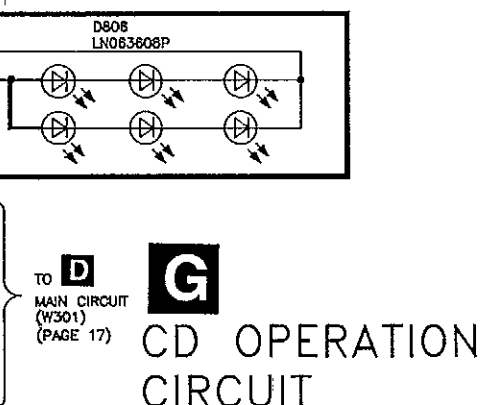
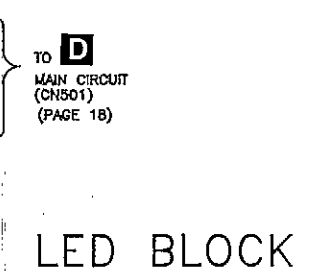
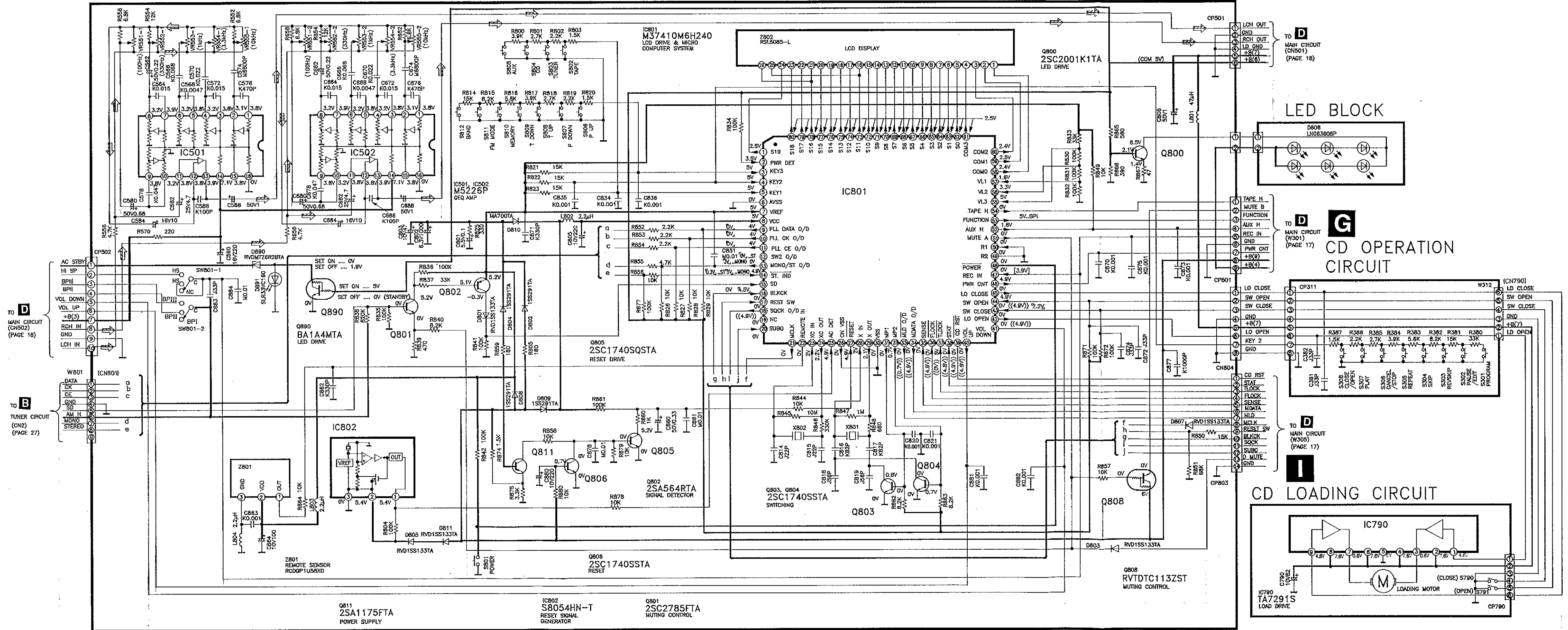
This schematic diagram may be modified at anytime with the development of new technology.



SCHEMATIC DIAGRAM

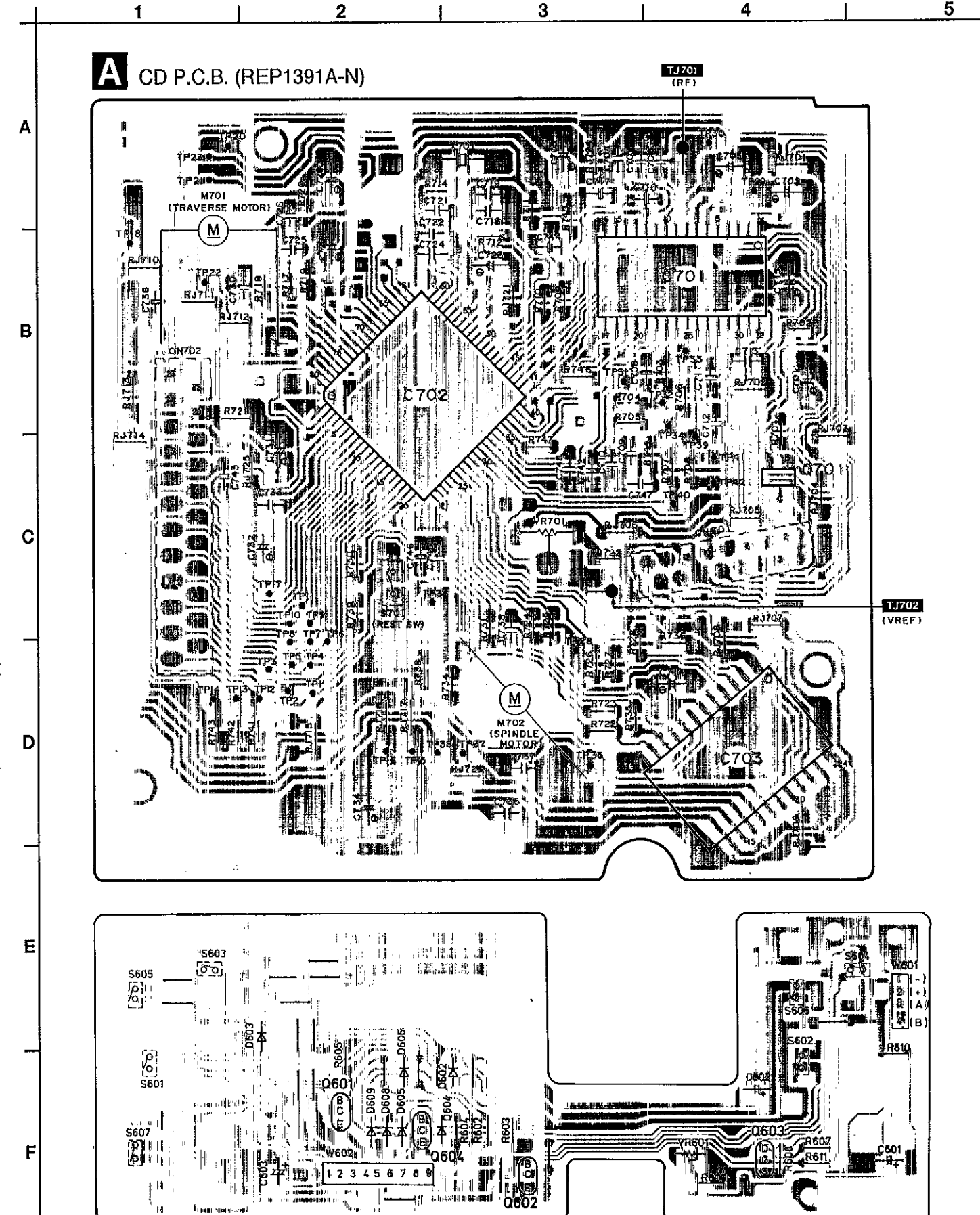
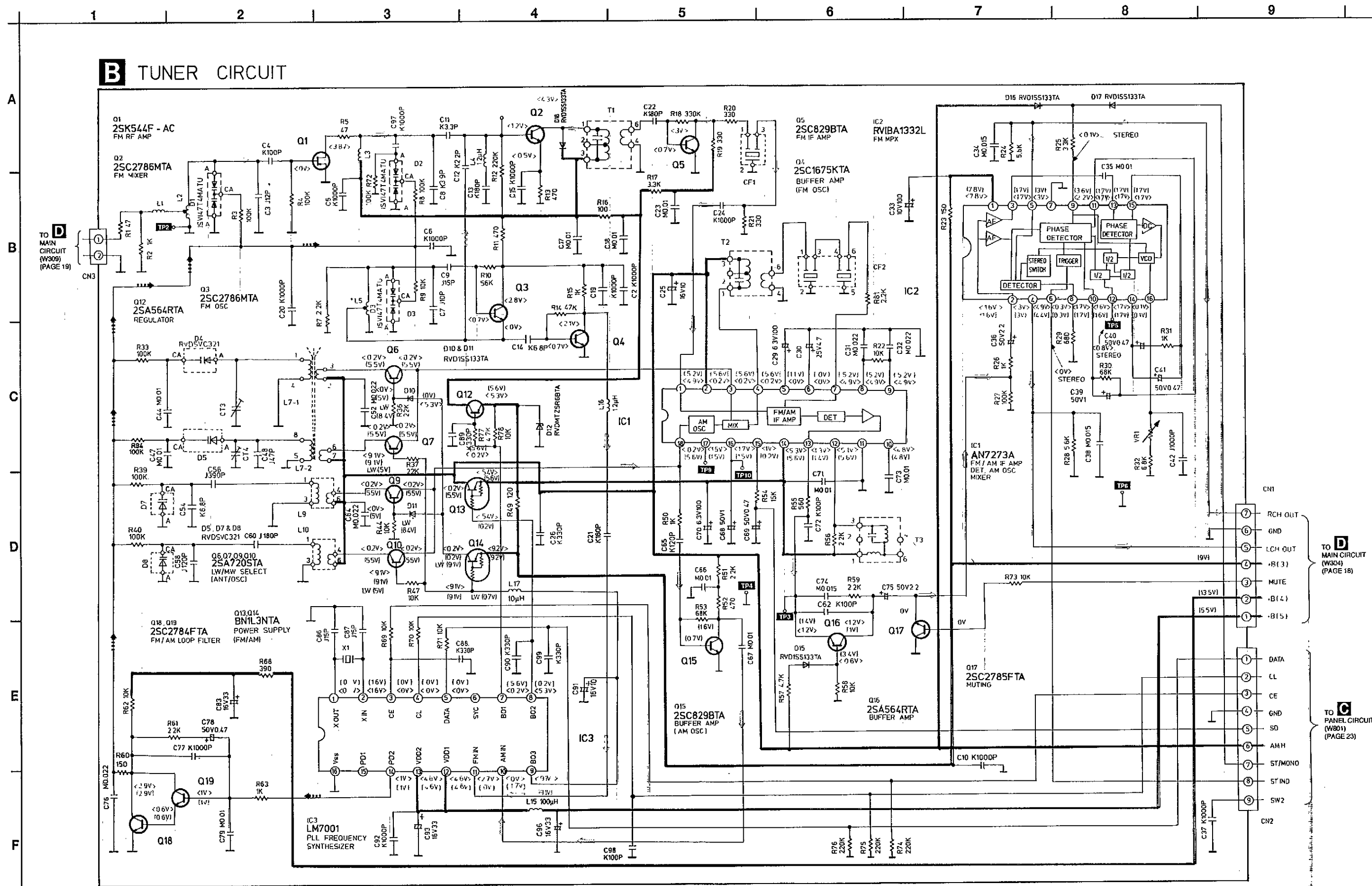
1 2 3 4 5 6 7 8 9 10 11 12 13 14

C PANEL CIRCUIT



SCHEMATIC DIAGRAM

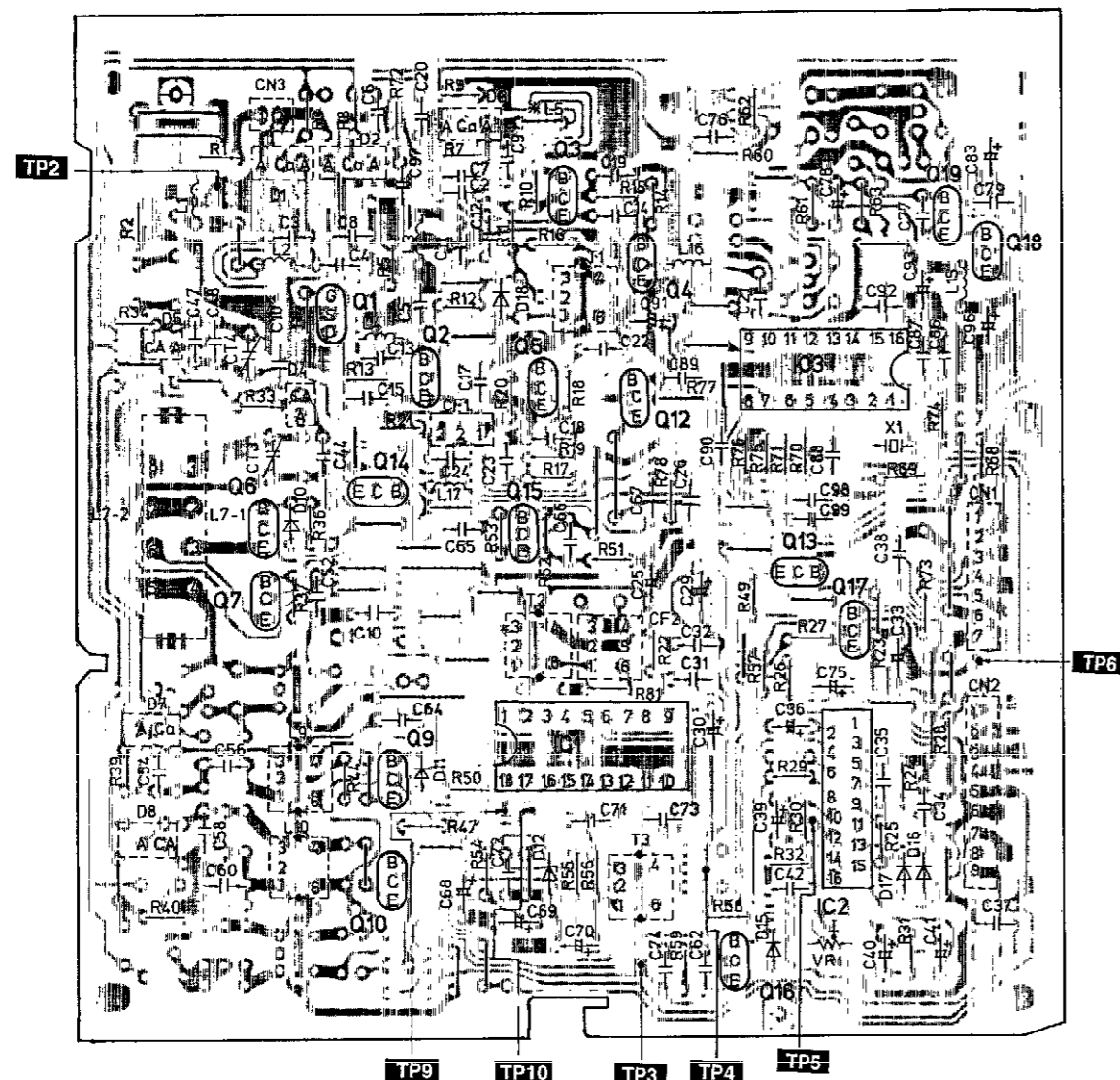
PRINTED CIRCUIT BOARD



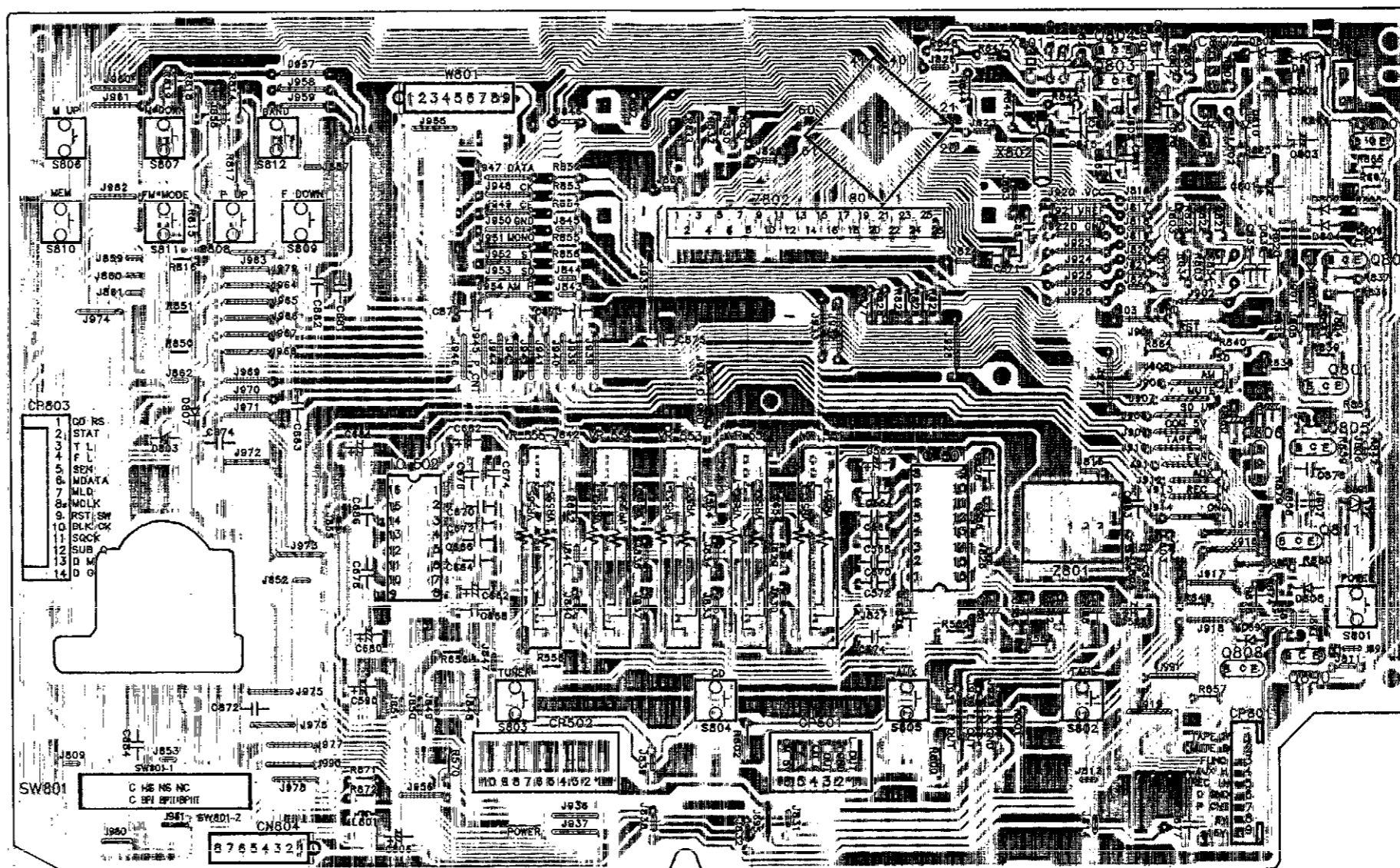
PRINTED CIRCUIT BOARD

1 2 3 4 5 6 7 8 9 10 11 12 13 14

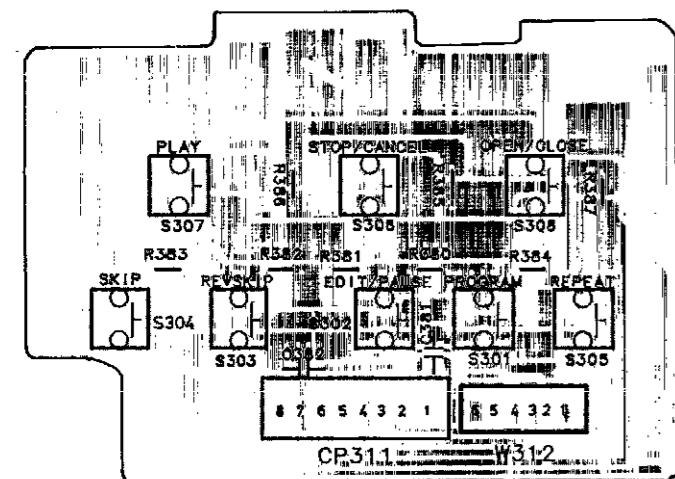
B TUNER P.C.B. (REP0930B)



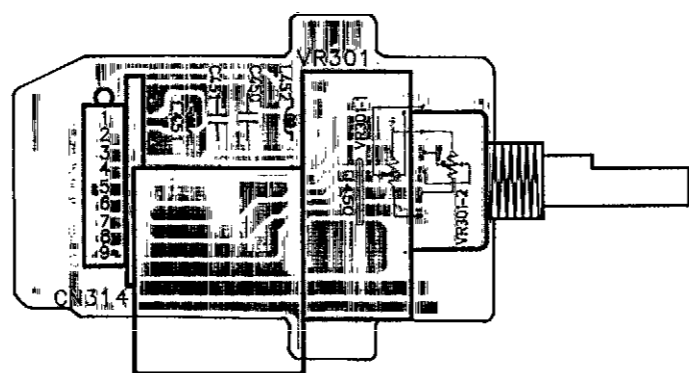
C PANEL P.C.B. (REPX0045C)



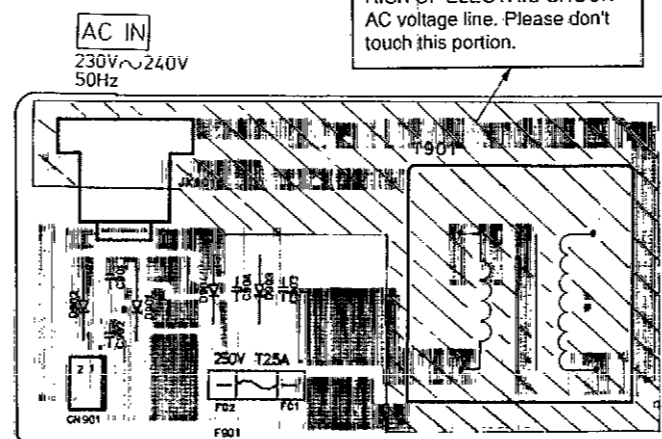
G CD OPERATION P.C.B. (REPX0044C)



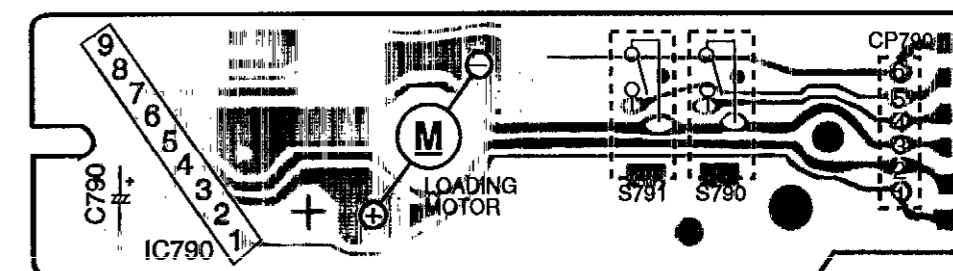
H VOLUME P.C.B. (REPX0044C)



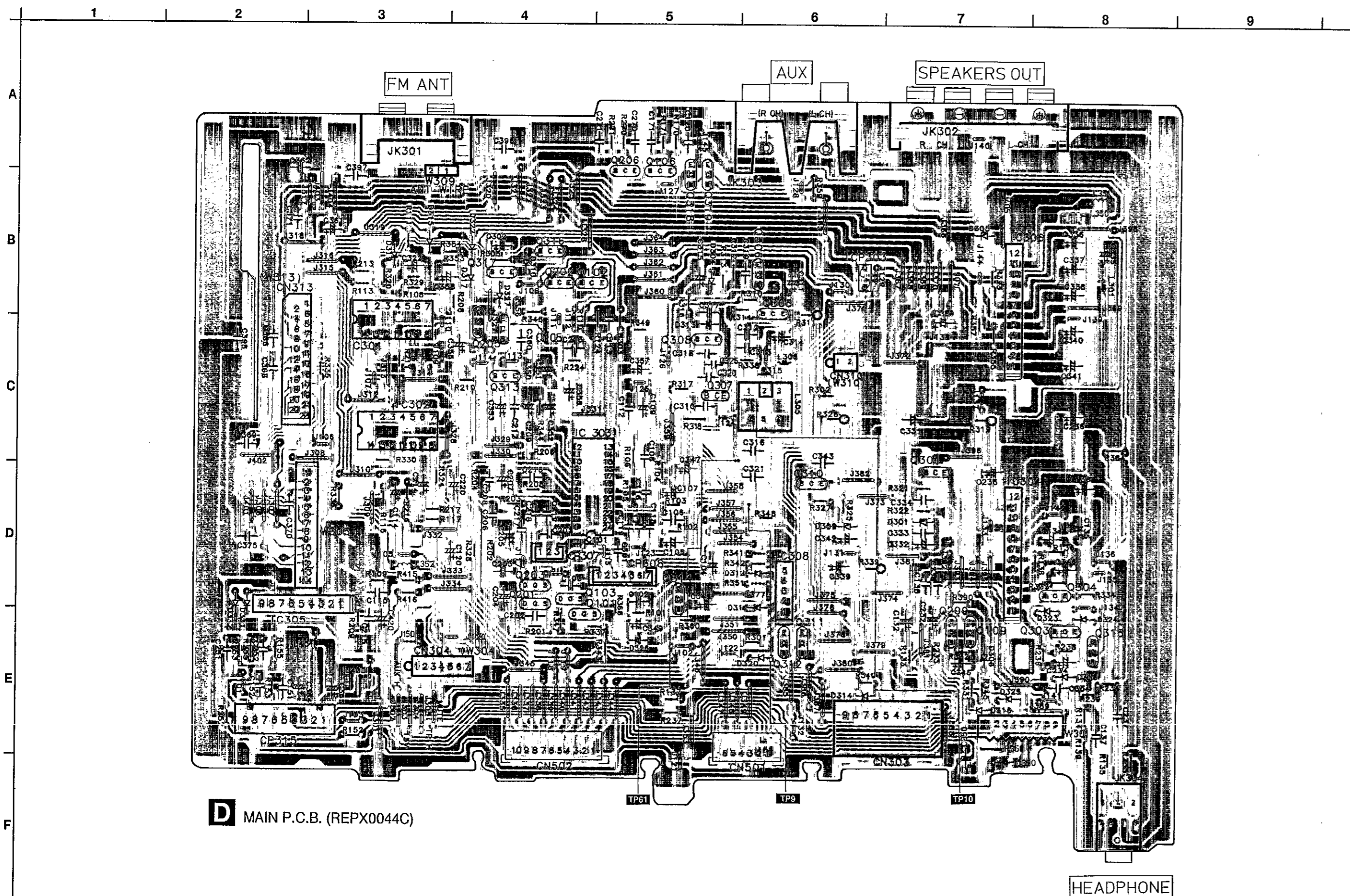
F POWER SUPPLY P.C.B. (REPX0046C)



I CD LOADING P.C.B. (REP0767)



PRINTED CIRCUIT BOARD



D MAIN P.C.B. (REPX0044C)

FUNCTION OF IC TERMINALS

• 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	Potentiometer output (not used, open)
27	PTI	I	Potentiometer inversion input (not used, 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	DVDD1	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	DSLFB	I/O	DSL loop filter
48	PLLFB	I/O	PLL loop filter
49	VCOFB	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 output
2	PWR DET	Power detect signal input
3	KEY3	Key source input
5	KEY1	
6	AVSS	GND
7	VREF	A/D converter reference voltage (GND)
8	VCC	Power supply (+5V)
9	PLL DATA O/D	PLL tuner data signal output
10	PLL CK O/D	PLL tuner clock signal output
11	PLL CE O/D	PLL tuner strove signal output
12	SW2 O/D	Not used
13	MONO/ST O/D	Tuner stereo/mono select signal output
14	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 O/D	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 output
23	XC IN	Clock input (32.7KHz)
24	XC OUT	Clock output (32.7KHz)
25	AC DET	Main switch control signal input
26	CN VSS	GND
27	RESET	Power on reset signal input
28	X IN	Clock input
29	X OUT	Clock output
30	VSS	GND
31	MP1	Microprocessor beat proof 1

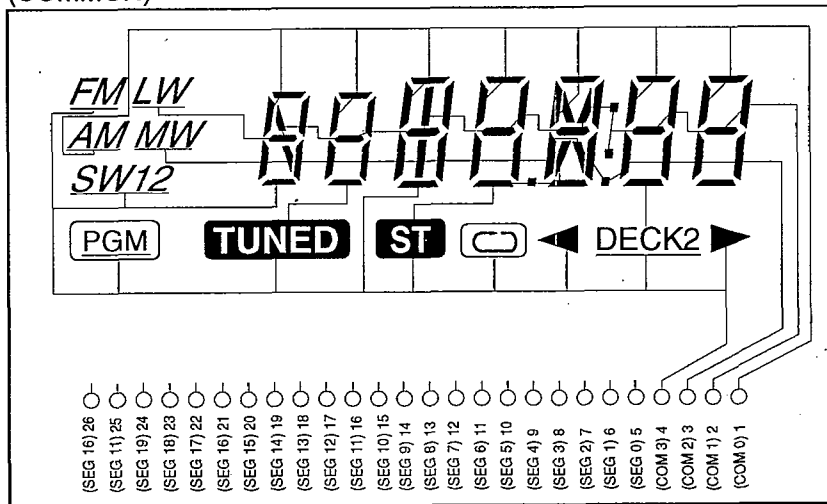
Pin No.	Mark	Function
32	MP2	Microprocessor beat proof 2
33	MLD O/D	CD signal process strove signal output
34	MDATA O/D	CD signal process IC data output
35	SENSE	CD sense signal input
36	FLOCK	CD focus lock signal input
37	TLOCK	CD tracking signal input
38	STAT	CD status signal input
39	CD RST	CD reset output
40	VOL UP	Remote control volume up signal output
41	VOL DOWN	Remote control volume down signal output
42	LD 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	LD CLOSE	CD disc tray loading close output
46	PWR CNT	Power Control signal output
47	REC IN	REC detecting signal input
48	POWER	Main Power signal input
49	R2	Region select signal input for Tuner Band select
50	R1	
51	MUTE A	AF muting signal output
52	AUX H	Auxillary mode select input (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	COM0	LCD common signal output
61	COM3	
62	S0	LCD segment signal output
80	S18	

• IC703 (AN8389SE1)

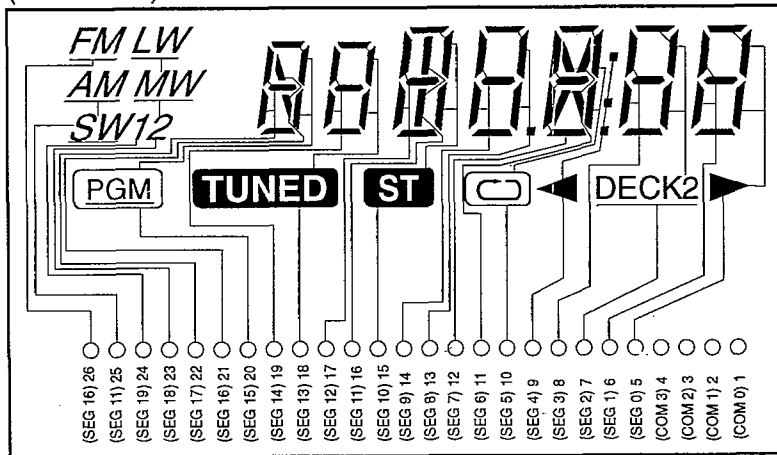
Pin No.	Terminal Name	I/O	Function	Pin No.	Terminal Name	I/O	Function
1	Vcc	I	Power Supply	13	PVcc1	I	Power supply (1) for driver
2	VREF	I	VREF input	14	PGND1	—	Ground connection (1) for driver
3	IN4	I	Motor driver (4) input	15	D1-	O	Motor driver (1) reverse-action output
4	IN3	I	Motor driver (3) input	16	D1+	O	Motor driver (1) forward-action output
5	GND	—	Ground connection	17	D2-	O	Motor driver (2) reverse-action output
6	NC	—	No connection	18	D2+	O	Motor driver (2) forward-action output
7	NRESET	I	Reset input	19	D3-	O	Motor driver (3) reverse-action output
8	GND	—	Ground connection	20	D3+	O	Motor driver (3) forward-action output
9	IN2	I	Motor driver (2) input	21	D4-	O	Motor driver (4) reverse-action output
10	PC2	I	PC2 (power cut) input	22	D4+	O	Motor driver (4) forward-action output
11	IN1	I	Motor driver (1) input	23	PGND2	—	Ground connection (2) for driver
12	PC1	I	PC1 (power cut) input (not used, open)	24	PVcc2	I	Power supply (2) for driver

■ INTERNAL CONNECTIONS OF LCD (Liquid Crystal Display)
(Z802 : RSL5085-L)

(COMMON)



(SEGMENT)



■ 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

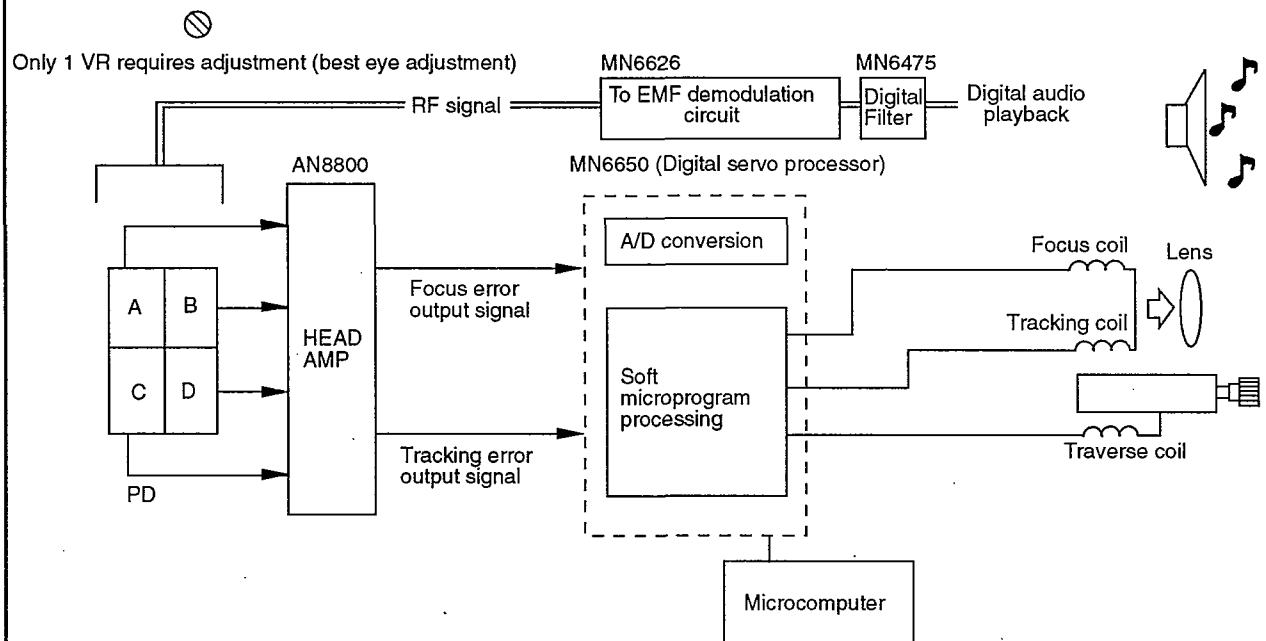
[$f_0=50$ Hz (old) → 20 Hz (new)]

4. Reduced number of parts

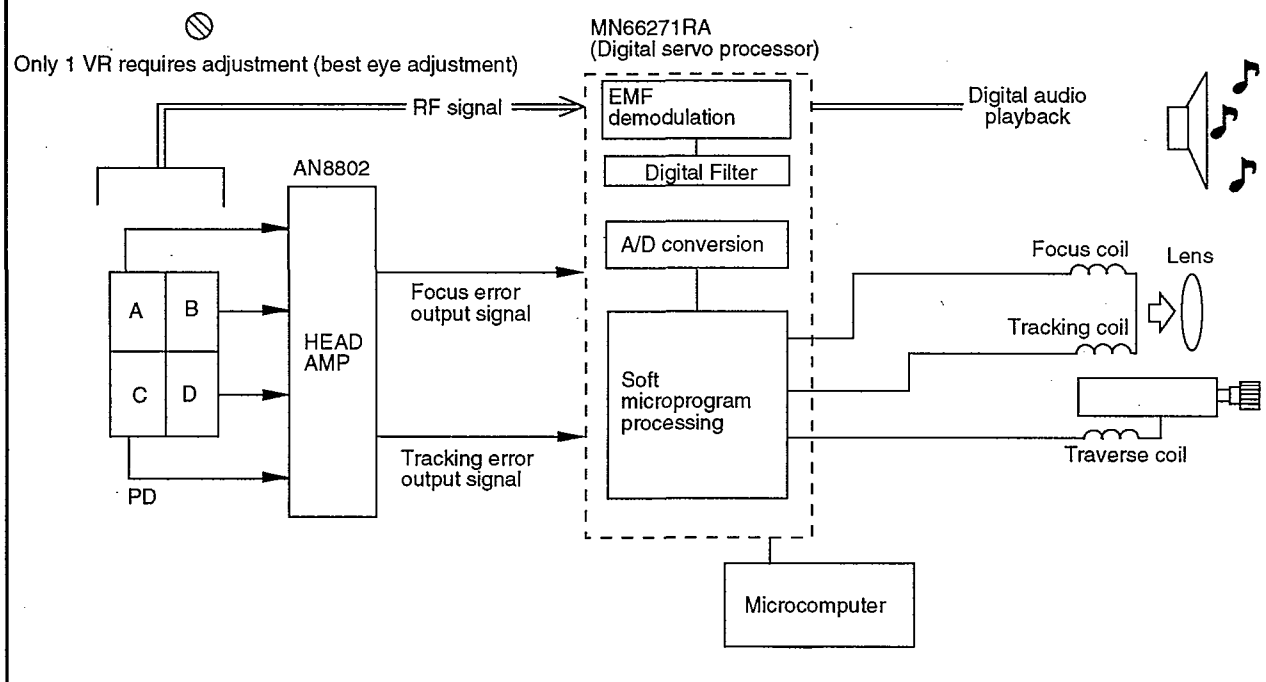
Use of a single super IC chip

3 chips (MN6626, MN6650, MN6475) are reduced to a single chip (MN66271RA)

DIGITAL SERVO SYSTEM (OLD)



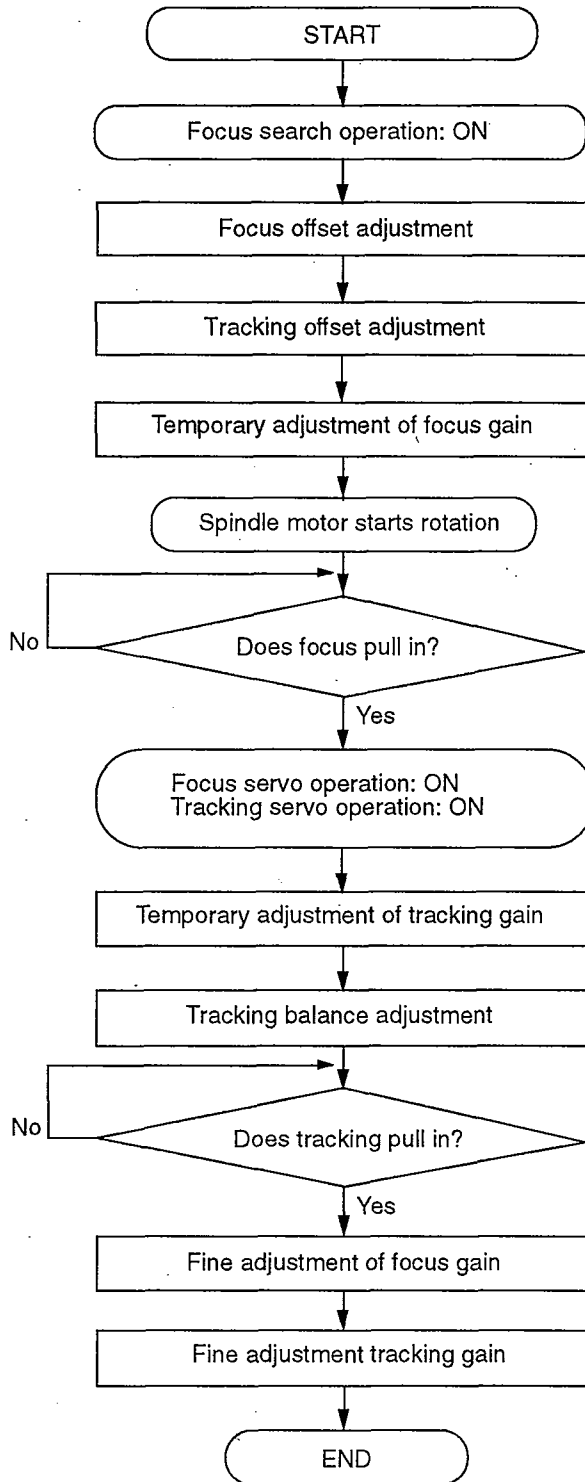
DIGITAL SERVO SYSTEM (NEW)



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



* Because the microcomputer precisely performs automatic adjustments as shown in the flow chart, it will take approx. 5 seconds to finish reading TOC data if a used disc is eccentric one or its surface is warped.

Approx. 2.5 sec.

MEASUREMENTS AND ADJUSTMENTS

Tuner section

ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set power source voltage to 230-240 V AC.
- Set power switch to ON
- Set function switch to TUNER
- Set volume control to maximum
- Set editing speed /BP switch to NOR/I
- Set graphic equalizer to centre
- Output of signal generator should be no higher than necessary to obtain an output reading.

AM-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.	459 kHz 30 % Mod. at 400 Hz	Point of non-interference.(on/ about 600kHz)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	T2(AM IFT)	Adjust for maximum output.

MW-RF ALIGNMENT

"	522 kHz	Tuning capacitor fully closed	"	L9 (MW OSC Coil)	Adjust for maximum output.
"	603 kHz	Tune to signal	"	[*1] L7-2 (MW ANT Coil)	Adjust for maximum output. Adjust L7-2 by moving coil bobbin along ferrite core.
"	1404 kHz	"	"	CT3 (MW ANT Trimmer)	Adjust for maximum output.

[*1] Fix antenna coil with wax after completing alignment.

LW-RF ALIGNMENT

"	144 kHz	Tuning capacitor fully closed	"	L10 (LW OSC Coil)	Adjust for maximum output.
"	162 kHz	Tune to signal	"	[*2] L7-1 (LW ANT Coil)	Adjust for maximum output. Adjust L7-1 by moving coil bobbin along ferrite core.
"	270 kHz	"	"	CT4 (LW ANT Trimmer)	Adjust for maximum output.

[*2] Fix antenna coil with wax after completing alignment.

FM-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown IN Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
Connect to transistor Q2-base pin through ceramic capacitor. Negative side to test point TP2 .	10.7 MHz (Sweep)	Point of non-interference.(on/ about 90 MHz)	Connect vert. amp. of scope to test point TP3 . Negative side to test point TP4 .	T1(FM IFT)	Waveform is shown in Fig. 3

Control positions and equipment used

- FM signal generator (AM and FM-SG)
- Oscilloscope
- L.P.F (19 kHz)
- Coil (100 μ H)
- Distortion analyzer

- Dummy antenna (75 Ω unbalanced)
- AC and DC electronic voltmeter (EVM)
- Digital frequency counter
- Capacitor (50V 1 μ F)
- Resistor (330 k Ω)

Measurement condition

- Volume control. maximum
- Equalizer control. center

Please refer to Fig. 1 for the adjustment points.

When doing Tuner section adjustment, please refer to Tuner circuit & P.C.B for testpoints.

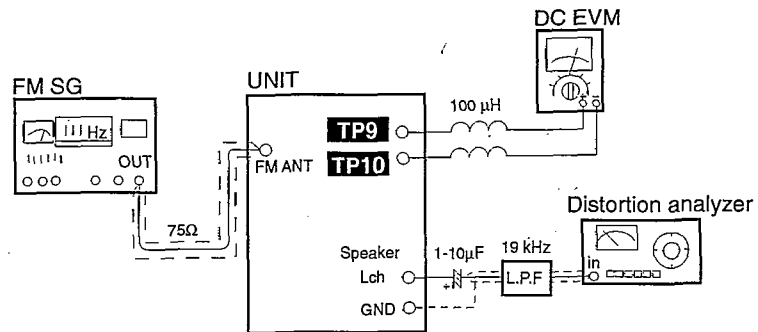
• FM ZERO VOLTAGE ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM MODE".
3. Set the radio frequency display and signal generator to 100.10 MHz.
4. Adjust the core of T3 so that voltage measured in signal mode is 0 mV (0 ± 30 mV) in 300 mV range.

FM SIGNAL GENERATOR CONDITION

Modulation. 100%
Modulation frequency. 1kHz
Output level.66dB

Note : The adjusting screwdriver used should be made of resin.

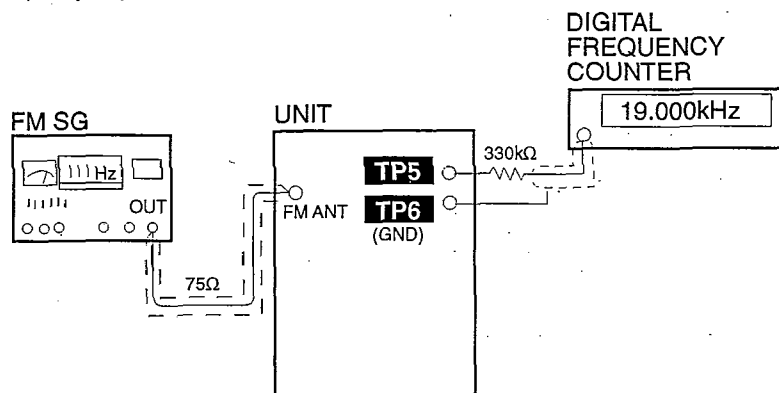


• FM STEREO ADJUSTMENT (FREE RUN)

1. Test equipment connection is shown in figure.
2. Set the unit to "FM STEREO" position.
3. Set the radio frequency display and signal generator to 98MHz.
4. Adjust VR1 for 19 kHz \pm 50 Hz on frequency counter reading.
5. Tune a stereo broadcast and confirm the frequency stays at 19 kHz.

FM SIGNAL GENERATOR CONDITION

Modulation. 30%
Modulation frequency. 400Hz
Output level.66dB



■ Cassette Deck section

Measuring Instruments

- Electronic voltmeter (AC EVM)
- Oscilloscope
- Digital frequency counter
- Resistor (1 k Ω , 1M Ω)

Measurement condition

- Make sure the heads are clean.
- Make sure the capstan and pressure roller are clean.
- Tape-to-tape recording speed selector : NORMAL

When doing Cassette deck section adjustment, please refer to Main circuit & P.C.B for testpoints.

Test tapes

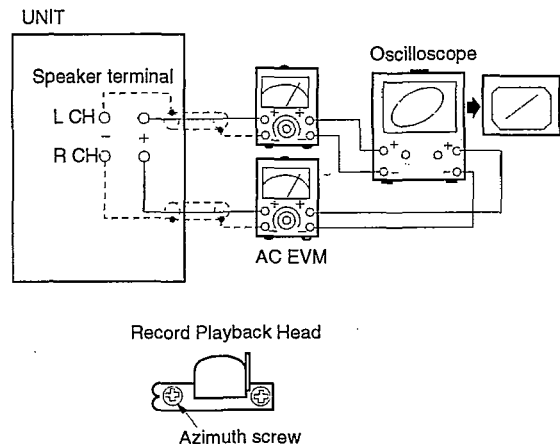
- Head azimuth adjustment (8 kHz, -20 dB) : QZZCFM
- Tape speed adjustment (3 kHz, -10 dB) : QZZCWAT
- Normal reference blank tape : QZZCRA

• HEAD AZIMUTH ADJUSTMENT (DECK 1, 2)

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 lisajous waveform, as illustrated, approaches 0 degrees.

Note :

- If L-ch and R-ch are not maximized at the same point, adjust to the point where the levels of each channels are maximized and equal.
2. Perform the same adjustment in the play mode.
 3. After the adjustment, apply screwlock to the azimuth adjusting screw.



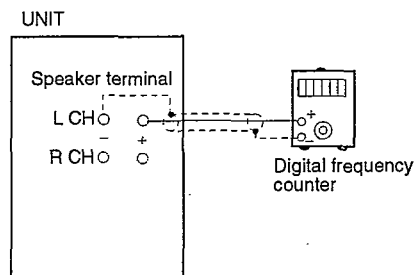
• TAPE SPEED ADJUSTMENT (DECK 1, 2)

Normal speed (Standard Value : ± 90 Hz ... Deck 2)
(Standard Value : Deck 2 ± 50 Hz ... Deck 1)
High speed (Standard Value : 5100 Hz ~)

1. Test equipment connection is shown in figure.
2. Set the unit to "TAPE" position.
3. Playback the middle part of the test tape (QZZCWAT) in deck 2.
4. Adjust VR601 for the output value shown below.
5. Playback the middle part of the test tape (QZZCWAT) in deck 1.
6. Repeat step 4.
5. Set the unit to "HIGH" speed position.
6. Place the cassette deck into the REC mode (DECK 1) and the PLAY mode (DECK 2).
7. Repeat step 4.

Note :

The normal speed adjustment must be done before the high speed adjustment.

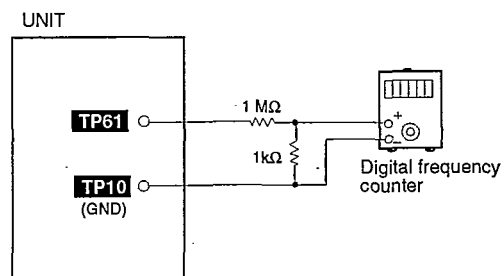


Adjustment Target : ± 90 Hz	... Normal speed (Deck 2)
Adjustment Target : Deck 2 ± 50 Hz	... Normal speed (Deck 1)
Adjustment Target : 5100 Hz ~	... High speed

• BIAS FREQUENCY ADJUSTMENT (DECK 1)

1. Test equipment connection is shown in figure.
2. Set the unit to "TAPE" position.
3. Place cassette deck into REC mode.
4. Make sure that the output is within the standard value.

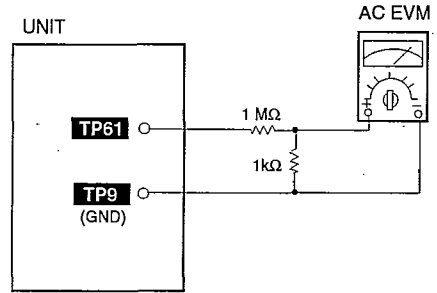
STANDARD VALUE : 100 ± 10 kHz



• BIAS AND ERASE VOLTAGE ADJUSTMENT (DECK 1)

1. Test equipment connection is shown in figure.
2. Set the unit to "TAPE" position.
3. Place cassette deck into REC mode.
4. Make sure that the output is within the standard value.

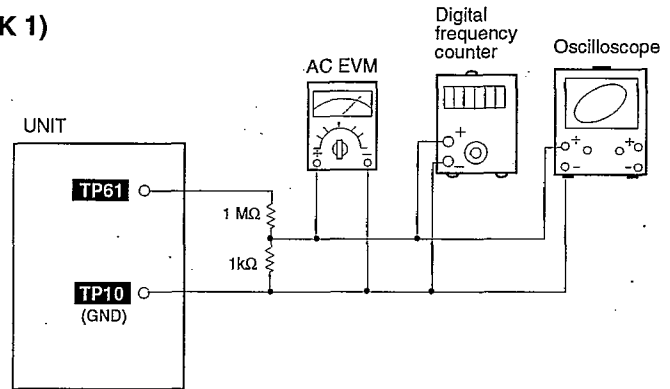
STANDARD VALUE : 16.0 ± 2 mV



• BEAT PROOF EFFECT ADJUSTMENT (DECK 1)

1. Test equipment connection is shown in figure.
2. Set the unit to "TUNER" position.
3. Set the edit switch to "BPII"
4. Place cassette deck into REC mode.
5. Make sure that the OSC-wave to be sinewave without distortion and abnormal oscillation.
5. Make sure that the output frequency change from BPII to BPI and from BPII to BPIII are within the standard value.

STANDARD VALUE : 2.5 ± 1 kHz...BPII to BPI
 2.0 ± 1 kHz...BPII to BPIII



■ Adjustment points

<Tuner section>

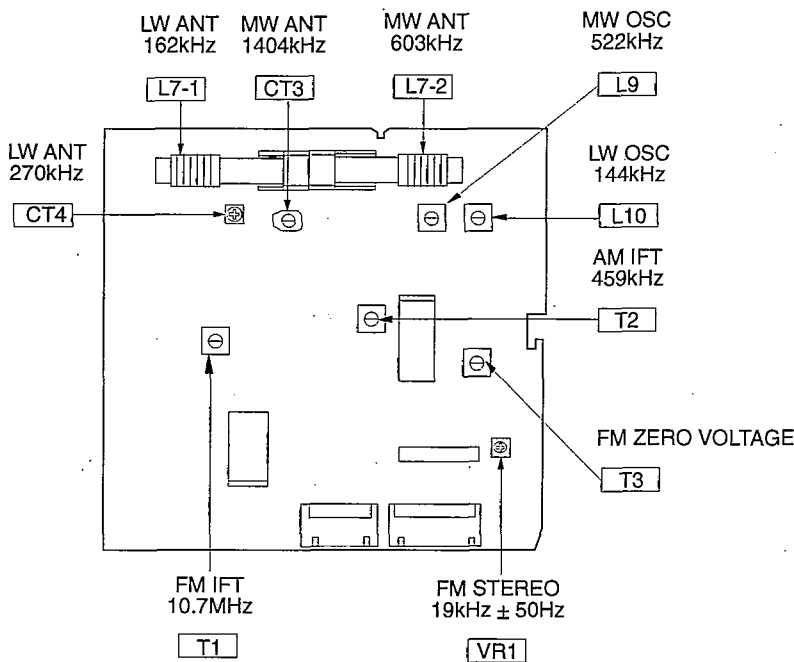


Fig. 1

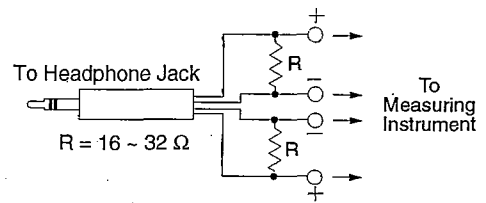


Fig.2

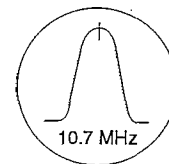


Fig. 3

■ Compact disc player section

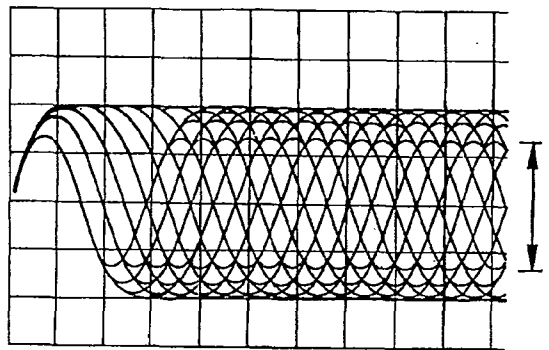
Warning : This product uses a laser diode. Refer to caution statements on page 2.

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

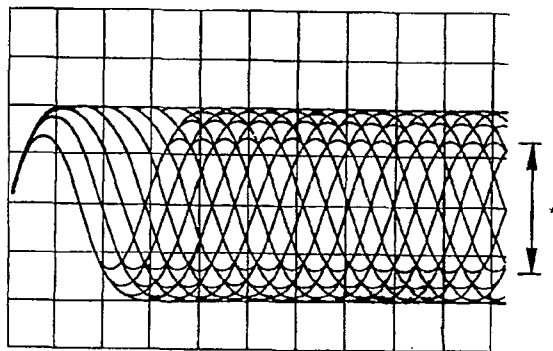
- When the traverse deck is replaced, making adjustments is not necessary. (The traverse deck ass'y is already adjusted.)
 - Make adjustments to improve playability if the traverse deck has not been replaced.
1. Connect the oscilloscope's CH. 1 probe across **TJ701** (RF) (+) and **TJ702** (VREF) (-) 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)
 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. 0.5 μ s.
 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).



* Most stretched eye pattern

(3) CHECK 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.

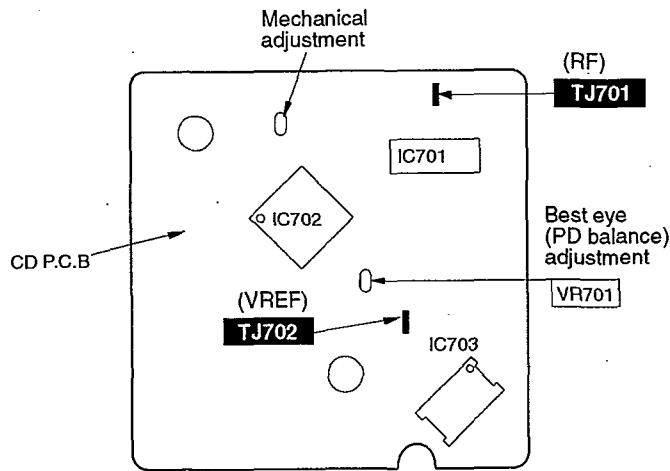
■ Adjustment points**<Compact disc player section>**

Fig. 1

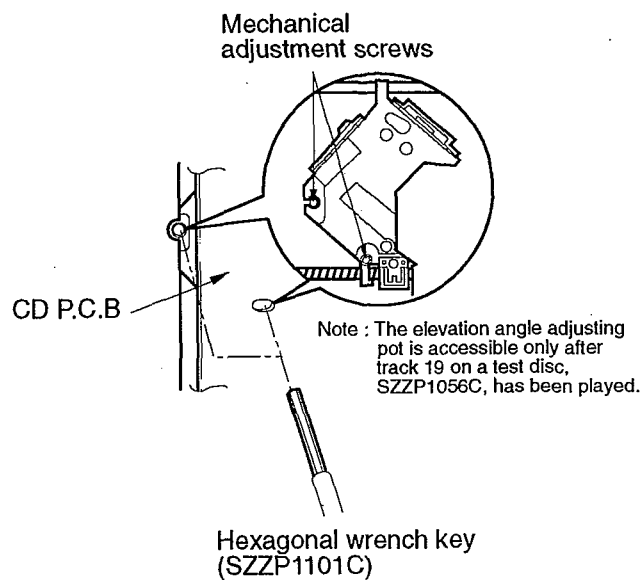


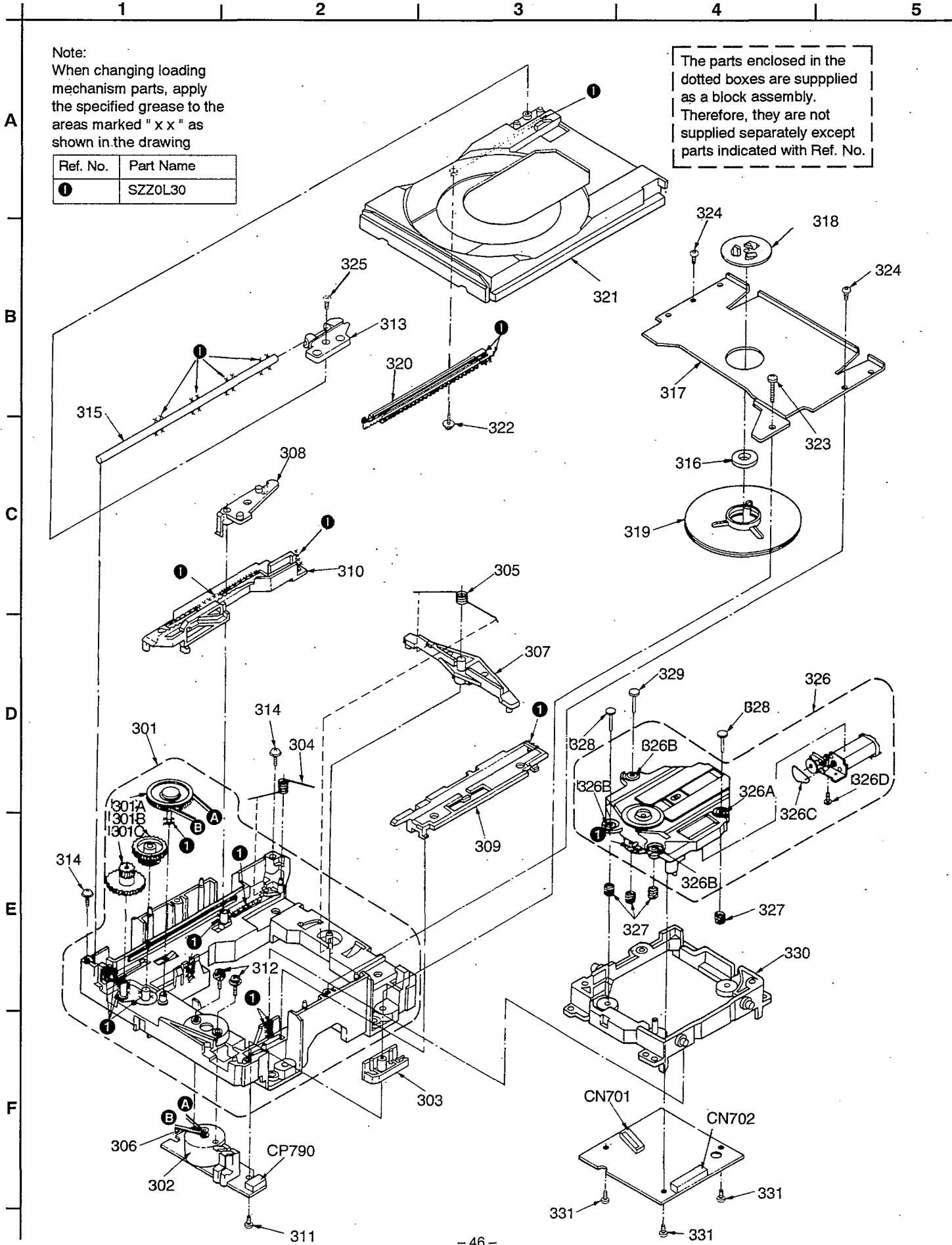
Fig. 2

CD LOADING UNIT PARTS LOCATION

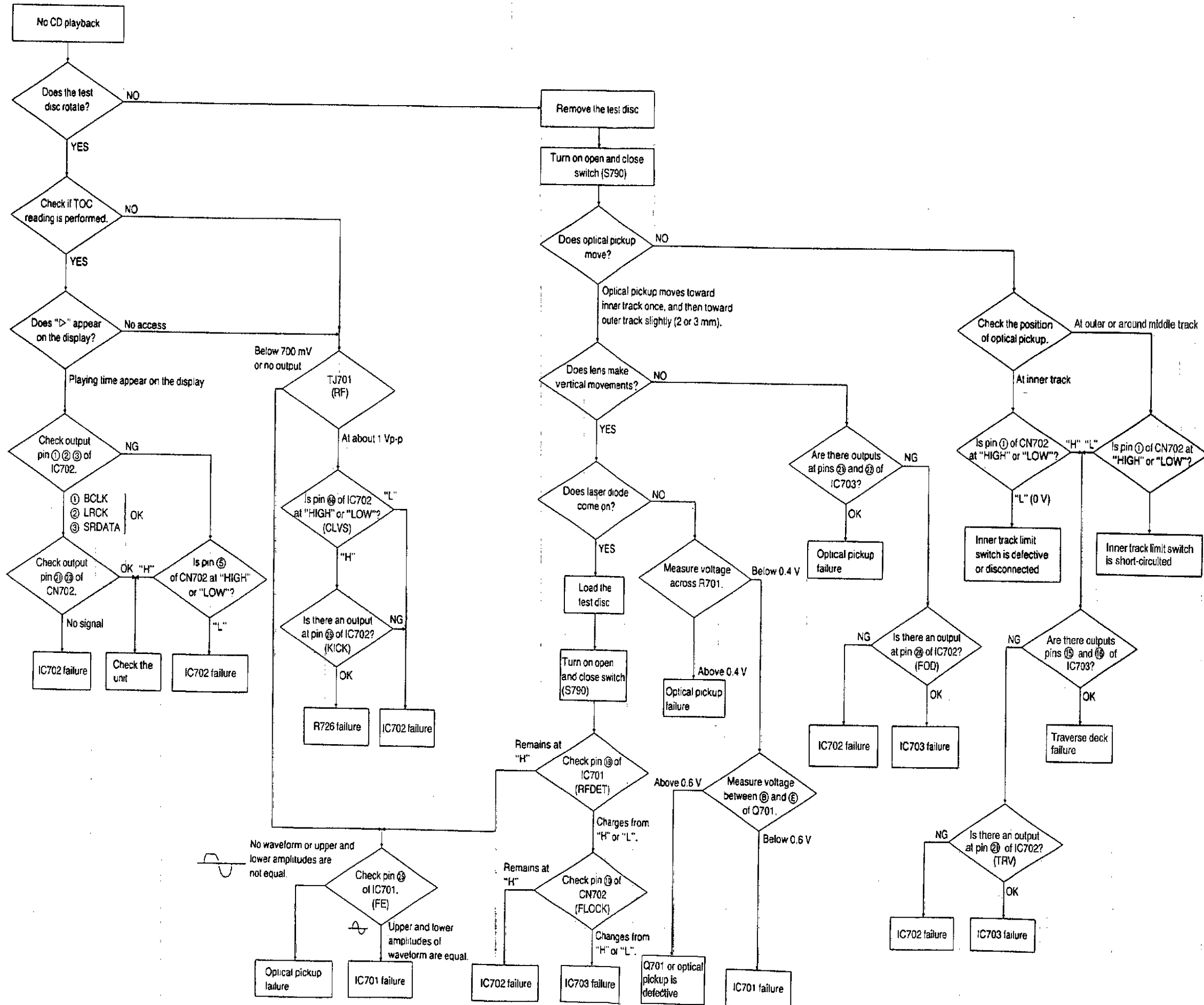
Note:
When changing loading mechanism parts, apply the specified grease to the areas marked "x x" as shown in the drawing

Ref. No.	Part Name
①	SZZ0L30

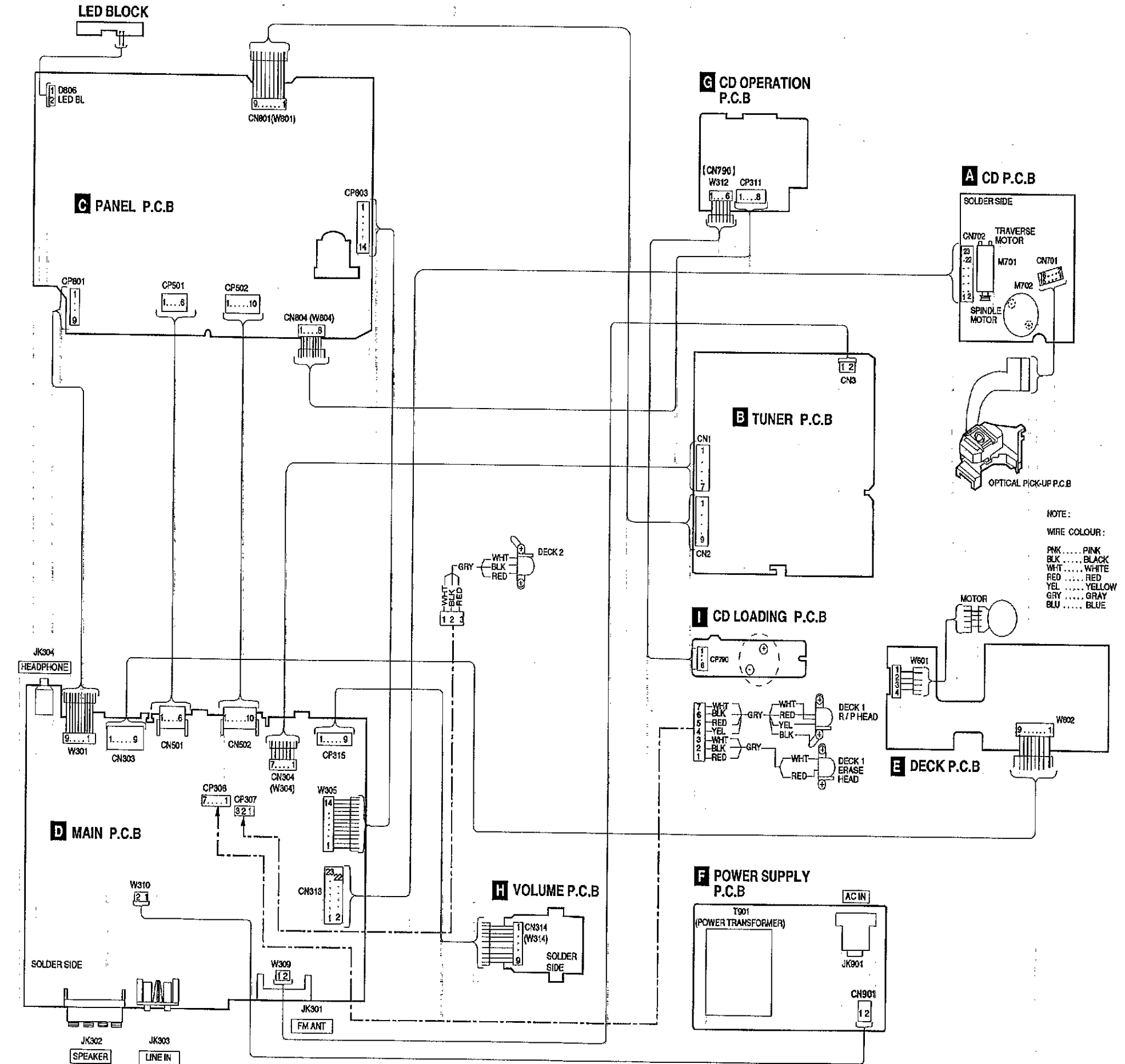
The parts enclosed in the dotted boxes are supplied as a block assembly. Therefore, they are not supplied separately except parts indicated with Ref. No.



■ TROUBLESHOOTING GUIDE



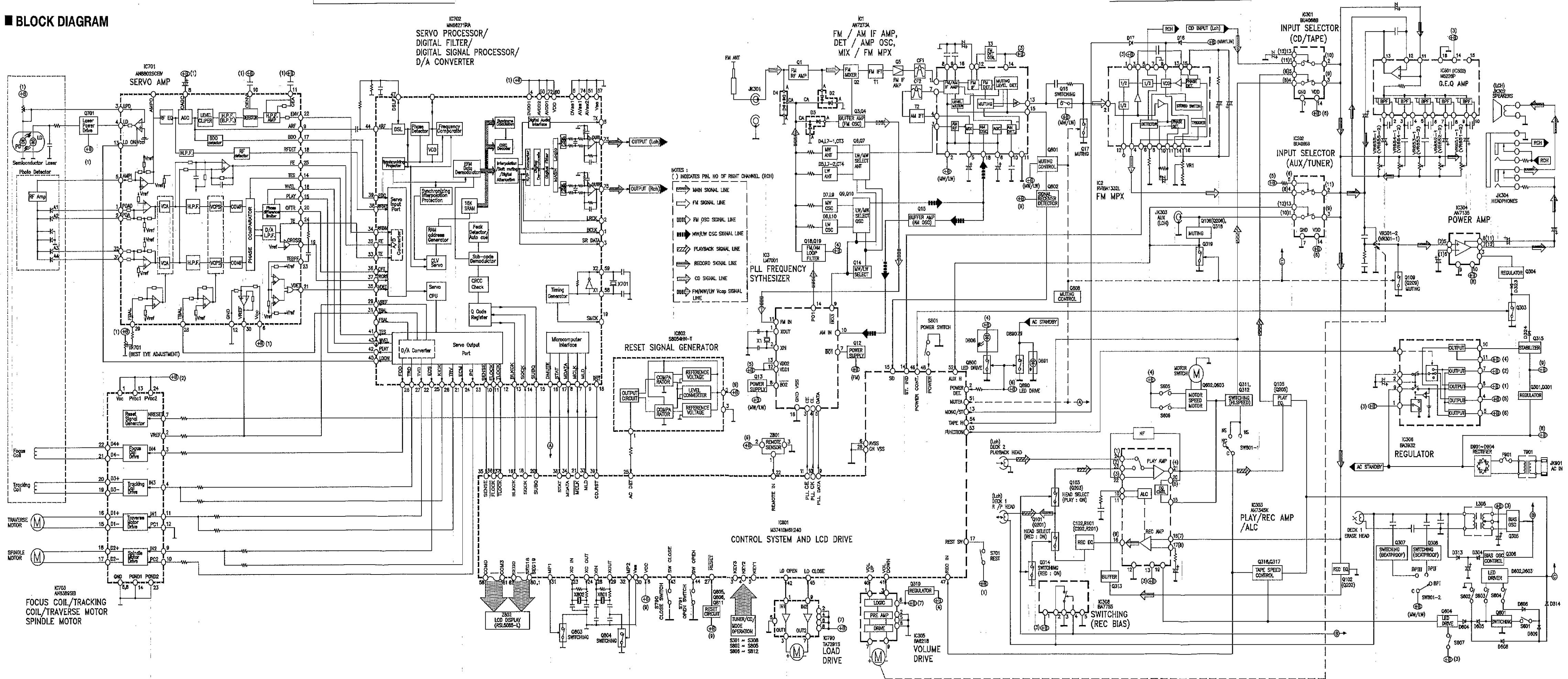
■ WIRING CONNECTION DIAGRAM



■ BLOCK DIAGRAM

SA-DH30 SA-DH30

SA-DH30 SA-DH30



CD LOADING UNIT PARTS LIST

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		CD LOADING UNIT					
301	RFKJLPG440BK	CHASSIS ASS'Y					
301A	RDG0142	LOADING GEAR					
301B	RDG0193	LOADING GEAR					
301C	RDP0041	PULLEY					
302	REM0019	LOADING MOTOR ASS'Y					
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					

MECHANISM PARTS LIST

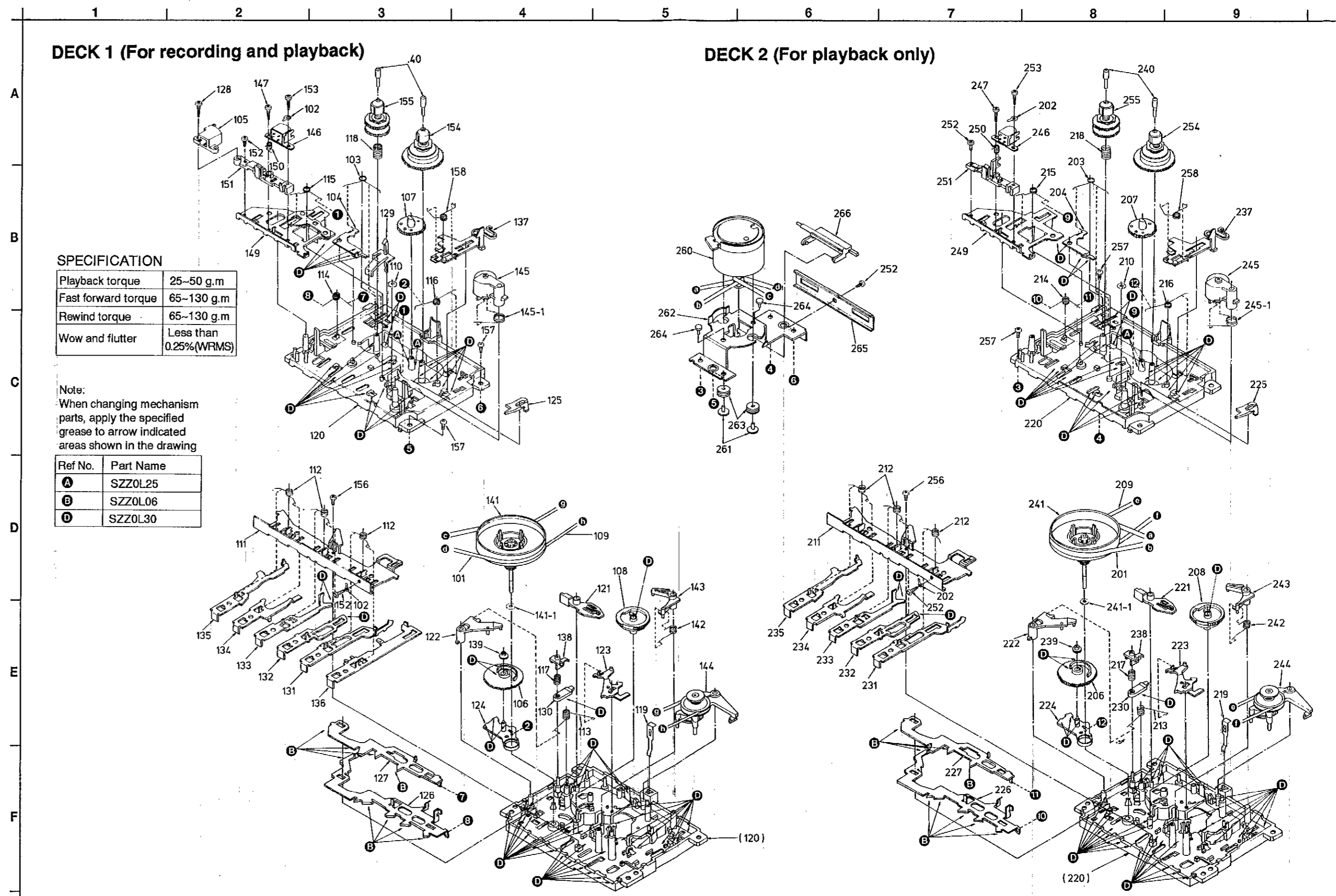
Notes : [M] indicates in Remarks column indicates parts supplied by MESA

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		CASSETTE MECHANISM		144	RXP0014	RF CLUTCH ASS'Y	[M]
				145	RXP0015	PINCH ROLLER ASS'Y	[M]
		(DECK 1)		145-1	RMB0049	PINCH ARM SPRING	[M]
101	RDV0007	MAIN BELT	[M]	146	RBR4CM001-M	R/P HEAD	[M]
102	RJR0033	EARTH LUG	[M]	147	RHD20003	SCREW	[M]
103	RMB0109-1	BRAKE SPRING	[M]	149	RFKRGHM09LEK	HEAD BASE ASS'Y	[M]
104	RML0116	BRAKE		150	RMB0059	SPRING	[M]
105	RBR2CG002-S	E HEAD	[M]	151	RMR0159	HEAD BASE	[M]
106	RDG0057	IDLER GEAR	[M]	152	XTN2+4F	EARTH LUG SCREW	
107	RDG0059	FF RELAY GEAR	[M]	153	XTN2+8F	SCREW	
108	RDK0005	CAM GEAR	[M]	154	RXR0004	TAKE UP REEL ASS'Y	[M]
109	RDV0006-1	RF BELT	[M]	155	RXR0005	SUPPLY REEL ASS'Y	[M]
110	RHW16009	CAPSTAN WASHER	[M]	156	XTN2+6J	SCREW	
111	RMA0109	BACK PLATE	[M]	157	XTW26+6L	SCREW	
112	RMB0043-1	ROD OPERATION SPRING	[M]	158	RME0098-2	SPRING	[M]
113	RMB0045	AS SPRING	[M]				
114	RMB0046-1	LOCK PLATE SPRING	[M]				
115	RMB0165	HEAD PANFL 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 LEVER	[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 ASS'Y	[M]				
141-1	RHW21008	WASHER	[M]				
142	RMB0044	TRIGGER SPRING	[M]				
143	RML0075	TRIGGER LEVER	[M]				

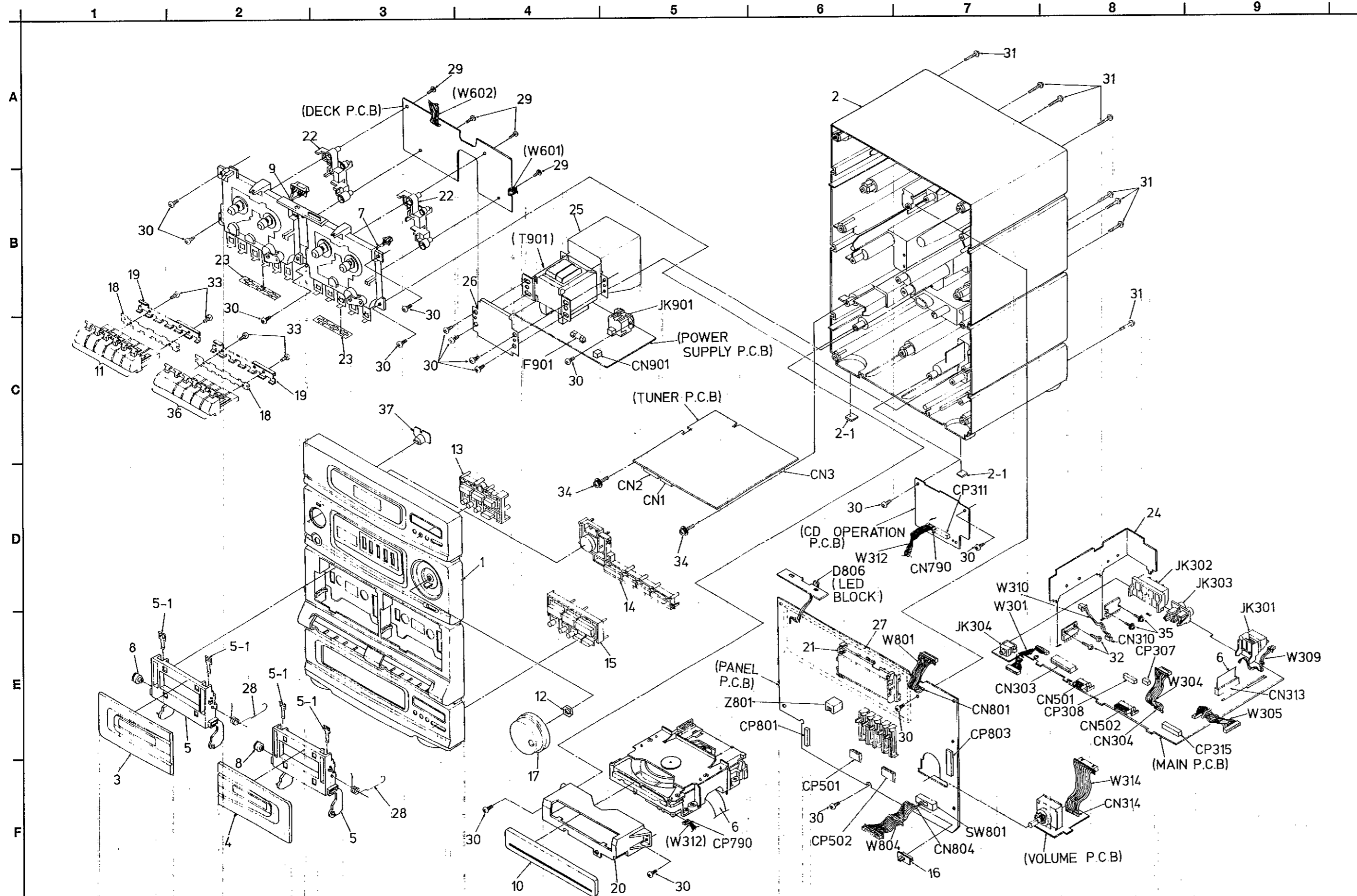
Ref No.	Part No.	Part Name & Description	Remarks
		(DECK 2)	
201	RDV0009	MAIN BELT B	[M]
202	RJR0033	EARTH LUG	[M]
203	RMB0109-1	BRAKE SPRING	[M]
204	RML0116	BRAKE	
206	RDG0057	IDLER GEAR	[M]
207	RDG0059	FF RELAY GEAR	[M]
208	RDK0005	CAM GEAR	[M]
209	RDV0006-1	RF BELT	[M]
210	RHW16009	CAPSTAN WASHER	[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	RFKRC090P-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 ASS'Y	[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]
245-1	RMB0049	PINCH ARM SPRING	[M]
246	RBR4CM001-M	RP HEAD	[M]
247	RHD20003	SCREW	[M]
249	RFKRGHM09LEK	HEAD BASE ASS'Y	[M]

Ref No.	Part No.	Part Name & Description	Remarks
250	RMB0059	SPRING	[M]
251	RMR0159	HEAD BASE	[M]
252	XTN2+4F	EARTH LUG SCREW	
253	XTN2+8F	SCREW	
254	RXR0004	TAKE UP REEL ASS'Y	[M]
255	RXR0005	SUPPLY REEL ASS'Y	[M]
256	XTN2+6J	SCREW	
257	XTW26+6L	SCREW	
258	RME0098-2	SPRING	[M]
260	RFKPxDT1610PK	DC MOTOR ASS'Y	[M]
261	RHD26002	SCREW	
262	RMA0122	ANGLE	[M]
263	RMG0102	RUBBER SPACE	[M]
264	RMG0131	RUBBER SPACE	[M]
265	RMA0121	ANGLE	[M]
266	RML0085	LEVER	[M]

MECHANISM PARTS LOCATION (RAA0910)



■ CABINET PARTS LOCATION



■ REPLACEMENT PARTS LIST

Notes: * Important safety notice:
 Components identified by Δ mark have special characteristics important for safety.
 Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
 When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.
 * The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area)
 Parts without these indications can be used for all areas.
 * Remote Control Unit:
 Supply period for three years from terminal of production.
 * Warning: This product uses a laser diode. Refer to caution statements on page 2.
 * [M] Indicates in the Remarks columns indicates parts supplied by MESA.

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
CABINET AND CHASSIS							
1	RFKADH30EBK	FRONT CABINET ASS'Y	[M]	INTEGRATED CIRCUITS			
2	RFKHADH30EBK	BACK CABINET ASS'Y	[M]	IC1	AN7273A	IC, FM/AM IF	
2-1	SHG1654-S	CUSHION RUBBER	[M]	IC2	RV1BA1332L	IC, FM MPX	
3	RFKLSADH30P1	CASS. LID ASS'Y (L)	[M]	IC3	LM7001	IC, PLL	
4	RFKLSADH30P2	CASS. LID ASS'Y (R)	[M]	IC301	BU4066B	IC, ANALOG SW	
5	RFKLXDT670P3	CASS. HOLDER ASS'Y	[M]	IC302	BU4066B	IC, ANALOG SW	
5-1	RUS757ZAA	CASS. HALF SPRING	[M]	IC303	AN7345K	IC, REC/PLAY	[M]
6	REEX0010	FFC WIRE	[M]	IC304	AN7135	IC, POWER AMP	Δ
7	REXX0029	WIRE ASS'Y, DK2 HEAD	[M]	IC305	BA6218	IC, MOTOR DRIVER	
8	RDG5874ZB	DAMPER GEAR	[M]	IC306	BA3932	IC, REGULATOR	
9	REXX0060	WIRE ASS'Y, DK1 HEAD	[M]	IC308	BA7755	IC, ANALOG SW	
10	RGKX0005-H	CD LID	[M]	IC501	M5226P	IC, GEQ	
11	RGZX0007A-H	BUTTON ASS'Y, DK1	[M]	IC502	M5226P	IC, GEQ	
12	XNS8D	NUT		IC790	TA7291S	IC, MOTOR DRIVE	
13	RGUX0041-H	BUTTON, TUNING	[M]	IC801	M37410M6H240	IC, MICOM	[M]
14	RGUX0044-H	BUTTON, FUNCTION	[M]	IC802	S8054HN-T	IC, RESET	
15	RGUX0045-H	BUTTON, CD FUNCTION	[M]	IC PROTECTOR			
16	RGVX0007-K	KNOB, EDIT	[M]	ICP303	SRUN10T	IC PROTECTOR	Δ
17	RGWX0013-H	KNOB, VOLUME	[M]	TRANSISTORS			
18	RHR3390YA	SPACER	[M]	Q1	2SK544F-AC	TRANSISTOR	
19	RMAX0006	MECHA BRACKET	[M]	Q2	2SC2786MTA	TRANSISTOR	
20	RMKX0003-K	CD CHASSIS	[M]	Q3	2SC2786MTA	TRANSISTOR	
21	RMNX0003	LCD HOLDER	[M]	Q4	2SC1675KTA	TRANSISTOR	[M]
22	RMR0368	CHASSIS	[M]	Q5	2SC829BTA	TRANSISTOR	
23	RMXX0004	SPACER	[M]	Q6	2SA720STA	TRANSISTOR	[M]
24	RMXX0006	HEAT SINK	[M]	Q7	2SA720STA	TRANSISTOR	[M]
25	RSCX0014	SHIELD PLATE	[M]	Q9	2SA720STA	TRANSISTOR	[M]
26	RSCX0015	SHIELD PLATE	[M]	Q10	2SA720STA	TRANSISTOR	[M]
27	RSCX0016	SHIELD PLATE	[M]	Q12	2SA564RTA	TRANSISTOR	
28	RUS781ZA	CASS. SPRING	[M]	Q13	BN1L3NTA	TRANSISTOR	[M]
29	XTN2+14GF	SCREW (PCB)	[M]	Q14	BN1L3NTA	TRANSISTOR	[M]
30	XTV3+12G	SCREW (MOUNTING)		Q15	2SC829CTA	TRANSISTOR	
31	XTV3+20G	SCREW (CASING)		Q16	2SA564RTA	TRANSISTOR	
32	XTV3+8F	SCREW (PWR IC)		Q17	2SC2785FTA	TRANSISTOR	
33	XTV3+8G	SCREW (MECHA BUTTON)		Q18	2SC2784FTA	TRANSISTOR	[M]
34	XTW3+10Q	SCREW (TUNER)					
35	XTW3+10F	SCREW (REG IC)					
36	RGZX0007B-H	BUTTON ASS'Y, DK2	[M]				
37	RGL0097-Q	LED PANEL	[M]				

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
Q19	2SC2784FTA	TRANSISTOR	[M]	D3	1SV147T4MATU	DIODE	
Q101	2SJ40CDTA	TRANSISTOR		D4	RVDSVC321	DIODE	
Q102	RVTDTTC114EST	TRANSISTOR		D5	RVDSVC321	DIODE	
Q103	2SJ40CDTA	TRANSISTOR		D7	RVDSVC321	DIODE	
Q105	2SC2001L1TA	TRANSISTOR		D8	RVDSVC321	DIODE	
Q106	2SC1740SRTA	TRANSISTOR		D10	RVD1SS133TA	DIODE	
Q109	2SC2001KTA	TRANSISTOR		D11	RVD1SS133TA	DIODE	
Q201	2SJ40CDTA	TRANSISTOR		D12	RVDMTZ5R6BTA	DIODE	
Q202	RVTDTTC114EST	TRANSISTOR		D15	RVD1SS133TA	DIODE	
Q203	2SJ40CDTA	TRANSISTOR		D16	RVD1SS133TA	DIODE	
Q205	2SC2001L1TA	TRANSISTOR		D17	RVD1SS133TA	DIODE	
Q206	2SC1740SRTA	TRANSISTOR		D18	RVD1SS133TA	DIODE	
Q209	2SC2001KTA	TRANSISTOR		D301	RVDMTZ6R8ATA	DIODE	[M]
Q301	2SD2037ETA	TRANSISTOR	[M]	D304	RVDMTZ18BTA	DIODE	[M]
Q303	RVTDTTC114EST	TRANSISTOR		D305	RVDMTZ5R1BTA	DIODE	
Q304	RVTDTA114EST	TRANSISTOR		D306	RVDMTZ4R7BTA	DIODE	
Q305	2SC2001L1TA	TRANSISTOR		D309	RVDMTZ8R2BTA	DIODE	
Q306	2SC1740SRTA	TRANSISTOR		D310	RVD1SS133TA	DIODE	
Q307	2SC1685RTA	TRANSISTOR	[M]	D311	RVD1SS133TA	DIODE	
Q308	2SC1685RTA	TRANSISTOR	[M]	D312	RVD1SS133TA	DIODE	
Q310	2SD2037ETA	TRANSISTOR	[M]	D313	RVD1SS133TA	DIODE	
Q311	RVTDTTC114EST	TRANSISTOR		D314	RVD1SS133TA	DIODE	
Q312	RVTDTA114EST	TRANSISTOR		D315	RVD1SS133TA	DIODE	
Q313	RVTDTTC114EST	TRANSISTOR		D316	RVD1SS133TA	DIODE	
Q314	RVTDTTC114EST	TRANSISTOR		D317	RVD1SS133TA	DIODE	
Q315	RVTDTA114EST	TRANSISTOR		D318	RVD1SS133TA	DIODE	
Q316	RVTDTTC114EST	TRANSISTOR		D319	RVD1SS133TA	DIODE	
Q317	RVTDTTC114EST	TRANSISTOR		D320	RVD1SS133TA	DIODE	
Q318	RVTDTTC114EST	TRANSISTOR		D322	RVD1SS133TA	DIODE	
Q319	RVTDTTC114EST	TRANSISTOR		D323	RVD1SS133TA	DIODE	
Q601	BA1A4MTA	TRANSISTOR	[M]	D324	RVD1SS133TA	DIODE	
Q602	BA1A4MTA	TRANSISTOR	[M]	D325	RVD1SS133TA	DIODE	
Q603	2SK301QTA	TRANSISTOR	[M]	D326	RVD1SS133TA	DIODE	
Q604	BN1A4MTA	TRANSISTOR	[M]	D327	RVD1SS133TA	DIODE	
Q800	2SC2001K1TA	TRANSISTOR		D331	RVD1SS133TA	DIODE	
Q801	2SC2785FTA	TRANSISTOR		D332	RVD1SS133TA	DIODE	
Q802	2SA564RTA	TRANSISTOR		D602	RVD1SS133TA	DIODE	
Q803	2SC1740SSTA	TRANSISTOR		D603	RVD1SS133TA	DIODE	
Q804	2SC1740SSTA	TRANSISTOR		D604	RVD1SS133TA	DIODE	
Q805	2SC1740SQSTA	TRANSISTOR		D605	RVD1SS133TA	DIODE	
Q806	2SC1740SSTA	TRANSISTOR		D606	RVD1SS133TA	DIODE	
Q808	RVTDTTC113ZST	TRANSISTOR		D608	RVD1SS133TA	DIODE	
Q811	2SA1175FTA	TRANSISTOR	[M]	D609	RVD1SS133TA	DIODE	
Q890	BA1A4MTA	TRANSISTOR	[M]	D801	RVD1SS133TA	DIODE	
				D802	ISS291TA	DIODE	
		DIODES		D803	RVD1SS133TA	DIODE	
				D804	ISS291TA	DIODE	
D1	1SV147T4MATU	DIODE		D805	RVD1SS133TA	DIODE	
D2	1SV147T4MATU	DIODE		D806	LN063608P	DIODE	[M]

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
D807	RVD1SS133TA	DIODE		S803	EVQ21405R	SW, TUNER	
D808	1SS291TA	DIODE		S804	EVQ21405R	SW, CD	
D809	1SS291TA	DIODE		S805	EVQ21405R	SW, AUX	
D810	MA700TA	DIODE		S806	EVQ21405R	SW, PRESET UP	
D811	RVD1SS133TA	DIODE		S807	EVQ21405R	SW, PRESET DOWN	
D890	RVDMTZ6R2BTA	DIODE		S808	EVQ21405R	SW, TUNING UP	
D891	SLR33VC160	DIODE	[M]	S809	EVQ21405R	SW, TUNING DOWN	
D901	RL154M11	DIODE	[M] Δ	S810	EVQ21405R	SW, MEMORY	
D902	RL154M11	DIODE	[M] Δ	S811	EVQ21405R	SW, FM MODE	
D903	RL154M11	DIODE	[M] Δ	S812	EVQ21405R	SW, BAND	
D904	RL154M11	DIODE	[M] Δ	SW801	RSS3B47ZA-H	SW, HI-SPD	
		VARIABLE RESISTORS				CONNECTORS	
VR1	EVNDXAA00B14	VR, VCO		CN1	SJT3711	CONNECTOR (7P)	
VR301	EUWMQ0F25B54	VR, MOTORISE VOL	[M]	CN2	SJT3909	CONNECTOR (9P)	
VR551	EWAJQAW05G54	VR, GEQ (100Hz)	[M]	CN3	RJP2G18ZA	CONNECTOR (2P)	
VR552	EWAJQAW05G54	VR, GEQ (330Hz)	[M]	CN303	RJS9T6ZA	CONNECTOR (9P)	
VR553	EWAJQAW05G54	VR, GEQ (1kHz)	[M]	CN304	RHR194ZA	WIRE HOLDER (7P)	
VR554	EWAJQAW05G54	VR, GEQ (3.3kHz)	[M]	CN310	RJS2A0402	WIRE HOLDER (2P)	[M]
VR555	EWAJQAW05G54	VR, GEQ (10kHz)	[M]	CN313	RJS1A6823	FFC CONNECTOR (23P)	
VR601	EVNDXAA00B24	VR, TRIMMER POT.		CN314	RHR196ZA	WIRE HOLDER (9P)	
				CN501	RJU003K006M1	CONNECTOR (6P)	
		VARIABLE CAPACITORS		CN502	RJU003K010M1	CONNECTOR (10P)	
				CN790	RJP6G17ZA	CONNECTOR (6P)	
CT3	RCV10AF1T-S	TRIMMER		CN801	RHR196ZA	WIRE HOLDER (9P)	
CT4	ECRLA030E53R	TRIMMER		CN804	RHR195ZA	WIRE HOLDER (8P)	
				CN901	RJP2G9YA	PLUG (2P)	
		SWITCHES		CP307	RJP3G18ZA	PLUG (3P)	
				CP308	RJP7G18ZA	PLUG (7P)	
S301	EVQ21405R	SW, CD PROGRAM		CP311	RJP8G4YA	PLUG (8P)	
S302	EVQ21405R	SW, CD EDIT/PAUSE		CP315	RJP9G4YA	PLUG (9P)	
S303	EVQ21405R	SW, CD REV SKIP		CP501	RJT003K006M1	CONNECTOR (6P)	
S304	EVQ21405R	SW, CD SKIP		CP502	RJT003K010M1	CONNECTOR (10P)	
S305	EVQ21405R	SW, CD REPEAT		CP790	RJP6G17ZA	CONNECTOR (6P)	
S306	EVQ21405R	SW, CD STOP/CANCEL		CP801	RJP9G18ZA	PLUG (9P)	
S307	EVQ21405R	SW, CD PLAY		CP803	RJP14G17ZA	PLUG (13P)	
S308	EVQ21405R	SW, CD OPEN/CLOSE					
S601	RSH1A004-1	SW, DECK 1 PB	[M]			COILS & TRANSFORMERS	
S602	RSH1A004-1	SW, DECK 2.PB	[M]				
S603	RSH1A004-1	SW, DECK 1 CUE/REV	[M]	L1	RLQY30S4W	COIL, FM RF CHOKE	[M]
S604	RSH1A004-1	SW, DECK 2 CUE/REV	[M]	L2	RLA4Y001-E	COIL, FM ANT	[M]
S605	RSH1A013-J	SW, DECK 1 MOTOR	[M]	L3	RLA4Y002-E	COIL, FM ANT	[M]
S606	RSH1A013-J	SW, DECK 2 MOTOR	[M]	L4	RLQZP1R2KT-Y	COIL	
S607	RSH1A004-1	SW, REC	[M]	L7	RLV6C004-0	COIL, F. ANT	[M]
S790	RSH1A005	SW, DISC TRAY CLOSE		L9	RL02B126-M	COIL, AM OSC	[M]
S791	RSH1A005	SW, DISC TRAY OPEN		L10	RL01B15-M	COIL, LW OSC	[M]
S801	EVQ21405R	SW, POWER		L15	RLQZP101KT-Y	COIL	
S802	EVQ21405R	SW, TAPE		L16	RLQZP1R2JT-Y	COIL	[M]

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
L17	RLQZP100KT-Y	COIL				JACKS	
L301	RLQZP2R2KT-Y	COIL					
L305	RL08R001-T	COIL, AC BIAS	[M]	JK301	RJH5202	JACK, FM ANT	[M]
L306	RLQZB470KT-D	COIL		JK302	RJF1098ZA-H	JACK, SPEAKER	[M]
L350	RLQZB4R7KT-D	COIL	[M]	JK303	RJF1099ZA	JACK, LINE IN	
L351	RLQZB4R7KT-D	COIL	[M]	JK304	RJJD7S2YA-C	JACK, HEAD PHONE	
L352	RLQZB4R7KT-D	COIL	[M]	JK901	RJJ1SE01-H	JACK, AC IN	△
L400	RLQV472K-Z	COIL				WIRES	
L401	RLQV472K-Z	COIL					
L451	RLQZB470KT-D	COIL		W301	REXX0041	WIRE, MAIN TO PANEL	[M]
L452	RLQZB470KT-D	COIL		W304	REXX0043	WIRE, MAIN TO TUNER	[M]
L801	RLQZB470KT-D	COIL		W305	REXX0042	WIRE, MAIN TO PANEL	[M]
L802	RLQZP2R2KT-Y	COIL		W309	REXX0059	WIRE, MAIN TO TUNER	[M]
L803	RLQZP2R2KT-Y	COIL		W310	REXX0052	WIRE, MAIN TO POWER	[M]
L804	RLQZP2R2KT-Y	COIL		W312	REXX0044	IRE ASS'Y, CD MECHA	[M]
T1	RLI4B153-M	FM IFT		W314	REXX0054	WIRE, MAIN TO VOL	[M]
T2	RLI2B153-M	AM IFT		W801	REXX0045	WIRE, PANEL TO TUNER	[M]
T3	SLI4B524-Z	FM DET COIL		W804	REXX0053	WIRE, PANEL TO CD	[M]
T901	RTP1U3B001-X	POWER TRANSFORMER	[M]△			PACKING MATERIALS	
		COMPONENT COMBINATION					
Z801	RCDGP1U58XD	REMOTE-CON SENSOR		P1	RPF0084	BAG (SET)	[M]
		DISPLAY		P2	RPGX0097	GIFT BOX	[M]
				P3	RPNX0018	POLYFOAM	[M]
Z802	RSL5085-L	LCD	[M]	P4	SPB1061	VINLY BAG	
		CERAMIC FILTERS		P5	SPSD152	ACCESSORY CASE	
						ACCESSORIES	
CF1	RLFFETWNA01L	FM CF		A1	EUR642165	REMOTE CONTROL UNIT	[M]
CF2	RVFSFZ459HL3	AM CF	[M]	A2	RQCB0169	SERVICE CENTRE LIST	
		OSCILLATORS		A3	RQT2065-1B	INSTRUCTION MANUAL	[M]
X1	SVQ49U722T-S	XTAL 7.2MHZ		A4	RJA0038-U	AC CORD	[M] △
X801	RSXZAM19M01T	CERAMIC RESONATOR		A5	SSA272	FM ANT	[M]
X802	RSXD32K7S02	CRYSTAL	[M]				
		FUSE					
F901	XBA2C25TB0	FUSE	△				
		FUSE CLIPS					
FC1	EYF52BC	FUSE CLIP					
FC2	EYF52BC	FUSE CLIP					

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		< CD >					
		INTEGRATED CIRCUITS					
IC701	AN8802SCE1V	I.C, SERVO AMP		RJ724	ERJ6GEY0R00A	1/10W 0	
IC702	MN66271RA	I.C, SERVO PROCESSOR		RJ725	ERJ6GEY0R00A	1/10W 0	
IC703	AN8389SE1	I.C, MOTOR DRIVE		RJ726	ERJ6GEY0R00A	1/10W 0	
		TRANSISTOR					
Q701	2SB709S	TRANSISTOR					
		VARIABLE RESISTOR					
VR701	EVNDXAA00B14	V.R, BEST EYE ADJ					
		SWITCH					
S701	RSM0006-P	SW, REST					
		CONNECTORS					
CN701	RJU035T016-1	SOCKET (16P)					
CN702	RJS1A6723-1Q	SOCKET (23P)					
		OSCILLATOR					
X701	RSXZ16M9M02T	CRYSTAL					
		CHIP JUMPERS					
RJ701	ERJ8GEY0R00A	1/10W 0					
RJ702	ERJ8GEY0R00A	1/10W 0					
RJ703	ERJ8GEY0R00A	1/10W 0					
RJ704	ERJ8GEY0R00A	1/10W 0					
RJ705	ERJ8GEY0R00A	1/10W 0					
RJ706	ERJ8GEY0R00A	1/10W 0					
RJ707	ERJ8GEY0R00A	1/10W 0					
RJ708	ERJ8GEY0R00A	1/10W 0					
RJ709	ERJ8GEY0R00A	1/10W 0					
RJ710	ERJ8GEY0R00A	1/10W 0					
RJ711	ERJ8GEY0R00A	1/10W 0					
RJ712	ERJ8GEY0R00A	1/10W 0					
RJ713	ERJ8GEY0R00A	1/10W 0					
RJ714	ERJ8GEY0R00A	1/10W 0					
RJ715	ERJ8GEY0R00A	1/10W 0					
RJ716	ERJ8GEY0R00A	1/10W 0					
RJ717	ERJ8GEY0R00A	1/10W 0					
RJ721	ERJ6GEY0R00A	1/10W 0					
RJ722	ERJ6GEY0R00A	1/10W 0					

RESISTORS & CAPACITORS

Notes :

- * Capacitor values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads
- * Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
- * Bracketed indications in Ref. No. columns specify the area (Refer to the first page for area).
- Parts without these indications can be used for all areas.
- * [M] Indicates in the values & remarks column indicates parts supplied by MESA

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS						
R1	ERDS2TJ470T	47 1/4W	R55	ERDS2TJ561T	560 1/4W	R201	ERDS2TJ333T	33K 1/4W
R2	ERDS2TJ102T	1K 1/4W	R56	ERDS2TJ272T	2.7K 1/4W	R202	ERDS2TJ330T	33 1/4W
R3	ERDS2TJ104T	100K 1/4W	R57	ERDS2TJ472T	4.7K 1/4W	R203	ERDS2TJ682T	6.8K 1/4W
R4	ERDS2TJ104T	100K 1/4W	R58	ERDS2TJ103T	10K 1/4W	R204	ERDS2TJ822T	8.2K 1/4W
R5	ERDS2TJ470T	47 1/4W	R59	ERDS2TJ222T	2.2K 1/4W	R205	ERDS2TJ472T	4.7K 1/4W
R7	ERDS2TJ222T	2.2K 1/4W	R60	ERDS2TJ151T	150 1/4W	R206	ERDS2TJ680T	68 1/4W
R8	ERDS2TJ104T	100K 1/4W	R61	ERDS2TJ222T	2.2K 1/4W	R208	ERDS2TJ103T	10K 1/4W
R9	ERDS2TJ103T	10K 1/4W	R62	ERDS2TJ103T	10K 1/4W	R209	ERDS2TJ104T	100K 1/4W
R10	ERDS2TJ563T	56K 1/4W	R63	ERDS2TJ102T	1K 1/4W	R210	ERDS2TJ563T	56K 1/4W
R11	ERDS2TJ471T	470 1/4W	R68	ERDS2TJ391T	390 1/4W	R211	ERDS2TJ103T	10K 1/4W
R12	ERDS2TJ224T	220K 1/4W	R69	ERDS2TJ103T	10K 1/4W	R213	ERDS2TJ393T	39K 1/4W
R13	ERDS2TJ471T	470 1/4W	R70	ERDS2TJ103T	10K 1/4W	R216	ERDS2TJ682T	6.8K 1/4W
R14	ERDS2TJ473T	47K 1/4W	R71	ERDS2TJ103T	10K 1/4W	R217	ERDS2TJ222T	2.2K 1/4W
R15	ERDS2TJ102T	1K 1/4W	R72	ERDS2TJ104T	100K 1/4W	R224	ERDS2TJ332T	3.3K 1/4W
R16	ERDS2TJ101T	100 1/4W	R73	ERDS2TJ103T	10K 1/4W	R233	ERDS2TJ222T	2.2K 1/4W
R17	ERDS2TJ332T	3.3K 1/4W	R74	ERDS2TJ224T	220K 1/4W	R234	ERDS2TJ1R5T	1.5 1/4W
R18	ERDS2TJ334T	330K 1/4W	R75	ERDS2TJ224T	220K 1/4W	R235	ERDS2TJ151T	150 1/4W
R19	ERDS2TJ331T	330 1/4W	R76	ERDS2TJ224T	220K 1/4W	R236	ERDS2TJ180T	18 1/4W
R20	ERDS2TJ331T	330 1/4W	R77	ERDS2TJ472T	4.7K 1/4W	R237	ERDS2TJ473T	47K 1/4W
R21	ERDS2TJ331T	330 1/4W	R78	ERDS2TJ103T	10K 1/4W	R238	ERDS2TJ683T	68K 1/4W
R22	ERDS2TJ103T	10K 1/4W	R81	ERDS2TJ222T	2.2K 1/4W	R239	ERDS2TJ1R2T	1.2 1/4W
R23	ERDS2TJ151T	150 1/4W	R101	ERDS2TJ333T	33K 1/4W	R252	ERDS2TJ153T	15K 1/4W
R24	ERDS2TJ562T	5.6K 1/4W	R102	ERDS2TJ330T	33 1/4W	R253	ERDS2TJ332T	3.3K 1/4W
R25	ERDS2TJ332T	3.3K 1/4W	R103	ERDS2TJ682T	6.8K 1/4W	R255	ERDS2TJ183T	18K 1/4W
R26	ERDS2TJ102T	1K 1/4W	R104	ERDS2TJ822T	8.2K 1/4W	R270	ERDS2TJ273T	27K 1/4W
R27	ERDS2TJ104T	100K 1/4W	R105	ERDS2TJ472T	4.7K 1/4W	R271	ERDS2TJ682T	6.8K 1/4W
R28	ERDS2TJ562T	5.6K 1/4W	R106	ERDS2TJ680T	68 1/4W	R301	ERDS2TJ121T	120 1/4W
R29	ERDS2TJ681T	680 1/4W	R108	ERDS2TJ103T	10K 1/4W	R302	ERDS2TJ681T	680 1/4W
R30	ERDS2TJ683T	68K 1/4W	R109	ERDS2TJ104T	100K 1/4W	R303	ERDS2TJ102T	1K 1/4W
R31	ERDS2TJ102T	1K 1/4W	R110	ERDS2TJ563T	56K 1/4W	R305	ERDS2TJ222T	2.2K 1/4W
R32	ERDS2TJ682T	6.8K 1/4W	R111	ERDS2TJ103T	10K 1/4W	R310	ERDS2TJ472T	4.7K 1/4W
R33	ERDS2TJ104T	100K 1/4W	R113	ERDS2TJ393T	39K 1/4W	R311	ERD2FCVJ4R7T	4.7 1/4W
R34	ERDS2TJ104T	100K 1/4W	R116	ERDS2TJ682T	6.8K 1/4W	R312	ERDS2TJ103T	10K 1/4W
R36	ERDS2TJ223T	22K 1/4W	R117	ERDS2TJ222T	2.2K 1/4W	R313	ERDS2TJ472T	4.7K 1/4W
R37	ERDS2TJ223T	22K 1/4W	R124	ERDS2TJ332T	3.3K 1/4W	R314	ERDS2TJ472T	4.7K 1/4W
R39	ERDS2TJ104T	100K 1/4W	R133	ERDS2TJ222T	2.2K 1/4W	R315	ERDS2TJ101T	100 1/4W
R40	ERDS2TJ104T	100K 1/4W	R134	ERDS2TJ1R5T	1.5 1/4W	R316	ERDS2TJ103T	10K 1/4W
R44	ERDS2TJ103T	10K 1/4W	R135	ERDS2TJ151T	150 1/4W	R317	ERDS2TJ222T	2.2K 1/4W
R47	ERDS2TJ103T	10K 1/4W	R136	ERDS2TJ180T	18 1/4W	R318	ERDS2TJ222T	2.2K 1/4W
R49	ERDS2TJ121T	120 1/4W	R137	ERDS2TJ473T	47K 1/4W	R319	ERD2FCVJ4R7T	4.7 1/4W
R50	ERDS2TJ102T	1K 1/4W	R138	ERDS2TJ683T	68K 1/4W	R320	ERDS2TJ333T	33K 1/4W
R51	ERDS2TJ222T	2.2K 1/4W	R139	ERDS2TJ1R2T	1.2 1/4W	R321	ERDS2TJ272T	2.7K 1/4W
R52	ERDS2TJ471T	470 1/4W	R152	ERDS2TJ153T	15K 1/4W	R322	ERDS2TJ101T	100 1/4W
R53	ERDS2TJ683T	68K 1/4W	R153	ERDS2TJ332T	3.3K 1/4W	R323	ERDS2TJ1R5T	1.5 1/4W
R54	ERDS2TJ153T	15K 1/4W	R155	ERDS2TJ183T	18K 1/4W	R324	ERDS2TJ104T	100K 1/4W
			R170	ERDS2TJ273T	27K 1/4W	R325	ERDS2TJ152T	1.5K 1/4W
			R171	ERDS2TJ682T	6.8K 1/4W	R326	ERDS1FVJ100T	10 1/2W

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R327	ERDS2TJ101T	100 1/4W	R605	ERDS2TJ822T	8.2K 1/4W	R854	ERDS2TJ222T	2.2K 1/4W
R328	ERDS2TJ330T	33 1/4W	R607	ERDS2TJ303T	30K 1/4W [M]	R855	ERDS2TJ472T	4.7K 1/4W
R329	ERDS2TJ104T	100K 1/4W	R608	ERDS2TJ303T	30K 1/4W [M]	R856	ERDS2TJ103T	10K 1/4W
R330	ERDS2TJ103T	10K 1/4W	R609	ERDS2TJ153T	15K 1/4W	R857	ERDS2TJ103T	10K 1/4W
R331	ERDS2TJ472T	4.7K 1/4W	R610	ERDS2TJ102T	1K 1/4W	R858	ERDS2TJ103T	10K 1/4W
R332	ERDS2TJ183T	18K 1/4W	R611	ERDS2TJ105T	1M 1/4W	R859	ERDS2TJ181T	180 1/4W
R333	ERDS2TJ223T	22K 1/4W	R652	ERDS2TJ682T	6.8K 1/4W	R860	ERDS2TJ102T	1K 1/4W
R334	ERDS2TJ102T	1K 1/4W	R654	ERDS2TJ123T	12K 1/4W	R861	ERDS2TJ104T	100K 1/4W
R335	ERDS2TJ102T	1K 1/4W	R656	ERDS2TJ472T	4.7K 1/4W	R862	ERDS2TJ822T	8.2K 1/4W
R336	ERDS2TJ563T	56K 1/4W	R658	ERDS2TJ682T	6.8K 1/4W	R863	ERDS2TJ822T	8.2K 1/4W
R337	ERDS2TJ104T	100K 1/4W	R800	ERDS2TJ392T	3.9K 1/4W	R864	ERDS2TJ103T	10K 1/4W
R338	ERDS2TJ683T	68K 1/4W	R801	ERDS2TJ272T	2.7K 1/4W	R865	ERDS2TJ561T	560 1/4W
R339	ERDS1FVJ4R7T	4.7 1/2W	R802	ERDS2TJ222T	2.2K 1/4W	R866	ERDS2TJ391T	390 1/4W
R340	ERDS2TJ472T	4.7K 1/4W	R803	ERDS2TJ152T	1.5K 1/4W	R867	ERDS2TJ470T	47 1/4W
R341	ERDS2TJ223T	22K 1/4W	R804	ERDS2TJ104T	100K 1/4W	R871	ERDS2TJ104T	100K 1/4W
R342	ERDS2TJ472T	4.7K 1/4W	R805	ERDS2TJ181T	180 1/4W	R872	ERDS2TJ104T	100K 1/4W
R343	ERDS2TJ103T	10K 1/4W	R814	ERDS2TJ153T	15K 1/4W	R874	ERDS2TJ152T	1.5K 1/4W
R344	ERDS2TJ822T	8.2K 1/4W	R815	ERDS2TJ822T	8.2K 1/4W	R875	ERDS2TJ332T	3.3K 1/4W
R345	ERDS2TJ102T	1K 1/4W	R816	ERDS2TJ562T	5.6K 1/4W	R877	ERDS2TJ104T	100K 1/4W
R346	ERDS2TJ103T	10K 1/4W	R817	ERDS2TJ392T	3.9K 1/4W	R878	ERDS2TJ103T	10K 1/4W
R347	ERDS2TJ334T	330K 1/4W	R818	ERDS2TJ272T	2.7K 1/4W	R879	ERDS2TJ103T	10K 1/4W
R348	ERDS2TJ221T	220 1/4W	R819	ERDS2TJ222T	2.2K 1/4W	R880	ERDS2TJ103T	10K 1/4W
R349	ERDS2TJ331T	330 1/4W	R820	ERDS2TJ152T	1.5K 1/4W			
R350	ERDS2TJ124T	120K 1/4W	R821	ERDS2TJ153T	15K 1/4W			CAPACITORS
R351	ERDS2TJ472T	4.7K 1/4W	R822	ERDS2TJ153T	15K 1/4W	C2	ECBT1H102KB5	1000P 50V
R353	ERDS2TJ333T	33K 1/4W	R823	ERDS2TJ153T	15K 1/4W	C3	ECCR1H120J5	12P 50V
R354	ERDS2TJ102T	1K 1/4W	R825	ERDS2TJ331T	330 1/4W	C4	ECBT1H101KB5	100P 50V
R355	ERDS2TJ683T	68K 1/4W	R826	ERDS2TJ103T	10K 1/4W	C5	ECBT1H102KB5	1000P 50V
R356	ERDS2TJ472T	4.7K 1/4W	R827	ERDS2TJ103T	10K 1/4W	C6	ECBT1H102KB5	1000P 50V
R357	ERDS2TJ333T	33K 1/4W	R828	ERDS2TJ103T	10K 1/4W	C7	ECBT1H100JC5	10P 50V
R358	ERDS2TJ221T	220 1/4W	R829	ERDS2TJ103T	10K 1/4W	C8	ECBT1H3R9KC5	3.9P 50V
R359	ERDS2TJ103T	10K 1/4W	R830	ERDS2TJ104T	100K 1/4W	C9	ECBT1H150JC5	15P 50V
R360	ERDS2TJ562T	5.6K 1/4W	R831	ERDS2TJ104T	100K 1/4W	C10	ECBT1H102KB5	1000P 50V
R364	ERDS2TJ392T	3.9K 1/4W	R832	ERDS2TJ104T	100K 1/4W	C11	ECBT1H3R3KC5	3.3P 50V
R366	ERDS2TJ105T	1M 1/4W	R833	ERDS2TJ333T	33K 1/4W	C12	ECBT1H2R2KC5	2.2P 50V
R380	ERDS2TJ333T	33K 1/4W	R834	ERDS2TJ104T	100K 1/4W	C13	ECBT1H181KB5	180P 50V
R381	ERDS2TJ153T	15K 1/4W	R835	ERDS2TJ104T	100K 1/4W	C14	ECBT1H6R8KC5	6.8P 50V
R382	ERDS2TJ822T	8.2K 1/4W	R836	ERDS2TJ104T	100K 1/4W	C15	ECBT1H102KB5	1000P 50V
R383	ERDS2TJ562T	5.6K 1/4W	R837	ERDS2TJ333T	33K 1/4W	C17	ECBT1C103MS5	0.01 16V
R384	ERDS2TJ392T	3.9K 1/4W	R838	ERDS2TJ824T	820K 1/4W	C18	ECBT1C103MS5	0.01 16V
R385	ERDS2TJ272T	2.7K 1/4W	R839	ERDS2TJ471T	470 1/4W	C19	ECBT1H102KB5	1000P 50V
R386	ERDS2TJ222T	2.2K 1/4W	R840	ERDS2TJ822T	8.2K 1/4W	C20	ECBT1H102KB5	1000P 50V
R387	ERDS2TJ152T	1.5K 1/4W	R841	ERDS2TJ104T	100K 1/4W	C21	ECBT1H181KB5	180P 50V
R390	ERDS2TJ100T	10 1/4W	R842	ERDS2TJ104T	100K 1/4W	C22	ECBT1H181KB5	180P 50V
R415	ERDS2TJ682T	6.8K 1/4W	R844	ERDS2TJ103T	10K 1/4W	C23	ECBT1C103MS5	0.01 16V
R416	ERDS2TJ682T	6.8K 1/4W	R845	ERDS2TJ106T	10M 1/4W	C24	ECBT1H102KB5	1000P 50V
R552	ERDS2TJ682T	6.8K 1/4W	R846	ERDS2TJ334T	330K 1/4W	C25	ECEA1CU100B	10 16V
R554	ERDS2TJ123T	12K 1/4W	R847	ERDS2TJ105T	1M 1/4W	C26	ECBT1H331KB5	330P 50V
R556	ERDS2TJ472T	4.7K 1/4W	R848	ERDS2TJ681T	680 1/4W	C29	ECEA0JU101B	100 6.3V
R558	ERDS2TJ682T	6.8K 1/4W	R849	ERDS2TJ103T	10K 1/4W	C30	ECEA1EU4R7B	4.7 25V
R570	ERDS2TJ221T	220 1/4W	R850	ERDS2TJ153T	15K 1/4W	C31	ECFR1C223MR	0.022 16V
R602	ERDS2TJ103T	10K 1/4W	R851	ERDS2TJ683T	68K 1/4W	C32	ECFR1C223MR	0.022 16V
R603	ERDS2TJ472T	4.7K 1/4W	R852	ERDS2TJ222T	2.2K 1/4W	C33	ECEA1AU101B	100 10V
R604	ERDS2TJ103T	10K 1/4W	R853	ERDS2TJ222T	2.2K 1/4W			

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C34	ECFR1C153MR	0.015 16V	C108	ECBT1E223ZF5	0.022 25V	C313	ECBT1C332MR5	3300P 16V
C35	ECBT1C103MS5	0.01 16V	C109	ECEA1AU101B	100 10V	C314	ECEA1AU221B	220 10V
C36	ECEA1HU2R2B	2.2 50V	C112	ECBT1H102KB5	1000P 50V	C315	ECEA1HU010B	1 50V
C37	ECBT1H102KB5	1000P 50V	C113	ECBT1C332MR5	3300P 16V	C316	ECQP1103JZ	0.01 100V
C38	ECFR1C153MR	0.015 16V	C114	ECEA1CU100B	10 16V	C317	ECQP1561JZ	560P 100V
C39	ECEA1HU010B	1 50V	C115	ECBT1H102KB5	1000P 50V	C318	ECBT1C103MS5	0.01 16V
C40	ECEA1HUR47B	0.47 50V	C116	ECFR1C562JR	5600P 16V	C319	ECBT1C103MS5	0.01 16V
C41	ECEA1HUR47B	0.47 50V	C117	ECBT1H821KB5	820P 50V	C320	ECBT1C103MS5	0.01 16V
C42	ECQP2A102JZT	1000P 100V	C118	ECBT1H101KB5	100P 50V	C321	ECQV1H474JZ3	0.47 50V
C44	ECBT1C103MS5	0.01 16V	C119	ECBT1H561KB5	560P 50V	C322	ECEA1AU470B	47 10V
C47	ECBT1C103MS5	0.01 16V	C120	ECEA1HU010B	1 50V	C325	ECQP2A102JZT	1000P 100V
C48	ECBT1H470J5	47P 50V	C132	ECEA1HU010B	1 50V	C331	ECA1EM332EV	3300P 25V [M]
C52	ECFR1C223MR	0.022 16V	C134	ECEA0JU101B	100 6.3V	C332	ECEA1CU101B	100 16V
C54	ECBT1H6R8KC5	6.8P 50V	C135	ECEA1AU101B	100 10V	C333	ECBT1H471KB5	470P 50V
C56	ECQP2A391JZT	390P 100V	C136	ECEA1AU222B	2200 10V	C334	ECBT1E103ZF5	0.01 25V
C58	ECQP2A121JZT	120P 100V	C137	ECQV1H224JZ3	0.22 50V	C335	ECEA1AU221B	220 10V
C60	ECQP2A181JZT	180P 100V	C138	ECBT1H102KB5	1000P 50V	C336	ECEA1CU100B	10 16V
C62	ECBT1H101KB5	100P 50V	C151	ECBT1C332MR5	3300P 16V	C337	ECEA1CU100B	10 16V
C64	ECFR1C223MR	0.022 16V	C152	ECFR1C223MR	0.022 16V	C338	ECEA1CU100B	10 16V
C65	ECBT1H121KB5	120P 50V	C170	ECBT1H101KB5	100P 50V	C339	ECEA1AU221B	220 10V
C66	ECBT1C103MS5	0.01 16V	C171	ECBT1H101KB5	100P 50V	C340	ECEA1EU221B	220 25V
C67	ECBT1C103MS5	0.01 16V	C201	ECBT1H561KB5	560P 50V	C341	ECEA1CU101B	100 16V
C68	ECEA1HU010B	1 50V	C202	ECBT1H681KB5	680P 50V	C342	ECEA1CU101B	100 16V
C69	ECEA1HUR47B	0.47 50V	C203	ECBT1H561KB5	560P 50V	C343	ECKR1H103ZF5	0.01 50V
C70	ECEA0JU101B	100 6.3V	C204	ECEA1HU010B	1 50V	C345	ECEA1CU470B	47 16V
C71	ECKR1H103MD5	0.01 50V	C205	ECEA1AU101B	100 10V	C346	ECEA1CU221B	220 16V
C72	ECBT1H101KB5	100P 50V	C206	ECFR1C273KR	0.027 16V	C347	ECEA1CU470B	47 16V
C73	ECKR1H103MD5	0.01 50V	C207	ECEA1HU010B	1 50V	C348	ECEA1HU010B	1 50V
C74	ECBT0J153MS5	0.015 6.3V	C208	ECBT1E223ZF5	0.022 25V	C349	ECEA1HU0R1B	0.1 50V
C75	ECEA1HU2R2B	2.2 50V	C209	ECEA1AU101B	100 10V	C350	ECEA1CU221B	220 16V
C76	ECFW1C223MDY	0.022 16V	C212	ECBT1H102KB5	1000P 50V	C351	ECEA1CU330B	33 16V
C77	ECBT1H102KB5	1000P 50V	C213	ECBT1C332MR5	3300P 16V	C352	ECEA1EU4R7B	4.7 25V
C78	ECEA1HNR47SB	0.47 50V	C214	ECEA1CU100B	10 16V	C353	ECEA1CU100B	10 16V
C79	ECBT1C103MS5	0.01 16V	C215	ECBT1H102KB5	1000P 50V	C354	ECBT1H102KB5	1000P 50V
C83	ECEA1CU330B	33 16V	C216	ECFR1C562JR	5600P 16V	C355	ECEA0JU101B	100 6.3V
C86	ECBT1H150JC5	15P 50V	C217	ECBT1H821KB5	820P 50V	C356	ECEA1AU221B	220 10V
C87	ECBT1H150JC5	15P 50V	C218	ECBT1H101KB5	100P 50V	C357	ECEA1AU330B	33 10V
C88	ECBT1H331KB5	330P 50V	C219	ECBT1H561KB5	560P 50V	C358	ECEA1EU4R7B	4.7 25V
C89	ECBT1H331KB5	330P 50V	C220	ECEA1HU010B	1 50V	C359	ECEA1EU101B	100 25V
C90	ECBT1H331KB5	330P 50V	C232	ECEA1HU010B	1 50V	C360	ECBT1C103MS5	0.01 16V
C91	ECEA1CU100B	10 16V	C234	ECEA0JU101B	100 6.3V	C361	ECEA1AU471B	470 10V
C92	ECBT1H102KB5	1000P 50V	C235	ECEA1AU101B	100 10V	C362	ECBT1H102KB5	1000P 50V
C93	ECEA1CU330B	33 16V	C236	ECEA1AU222B	2200 10V	C364	ECEA1CU101B	100 16V
C96	ECEA1CU330B	33 16V	C237	ECQV1H224JZ3	0.22 50V	C365	ECEA1CU101B	100 16V
C97	ECBT1H102KB5	1000P 50V	C238	ECBT1H102KB5	1000P 50V	C366	ECBT1H330J5	33P 50V
C98	ECBT1H101KB5	100P 50V	C251	ECBT1C332MR5	3300P 16V	C368	ECBT1H102KB5	1000P 50V
C99	ECBT1H331KB5	330P 50V	C252	ECFR1C223MR	0.022 16V	C369	ECBT1C103MS5	0.01 16V
C101	ECBT1H561KB5	560P 50V	C270	ECBT1H101KB5	100P 50V	C370	ECBT1C103MS5	0.01 16V
C102	ECBT1H681KB5	680P 50V	C271	ECBT1H101KB5	100P 50V	C371	ECBT1C103MS5	0.01 16V
C103	ECBT1H561KB5	560P 50V	C301	ECBT1H471KB5	470P 50V	C375	ECBT1H102KB5	1000P 50V
C104	ECEA1HU010B	1 50V	C302	ECEA1HU3R3B	3.3 50V	C381	ECBT1H330J5	33P 50V
C105	ECEA1AU101B	100 10V	C310	ECBT1H102KB5	1000P 50V	C382	ECBT1H330J5	33P 50V
C106	ECFR1C273KR	0.027 16V	C311	ECEA1AU470B	47 10V	C390	ECEA1HU010B	1 50V
C107	ECEA1HU010B	1 50V	C312	ECFR1C473KR	0.047 16V	C396	ECBT1C103MS5	0.01 16V

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C397	ECBT1C103MS5	0.01 16V	C851	ECBT1C103MS5	0.01 16V	R736	ERJ6GEYJ101V	1/10W 100
C398	ECBT1C103MS5	0.01 16V	C860	ECEA1HUR33B	0.33 50V	R738	ERJ6GEYJ223V	1/10W 22K
C420	ECEA1AU221B	220 10V	C861	ECBT1C103MS5	0.01 16V	R739	ERJ6GEYJ681V	1/10W 680
C450	ECBT1H104ZF5	0.1 50V	C862	ECBT1H331KB5	330P 50V	R741	ERJ6GEYJ562V	1/10W 5.6K
C451	ECBT1H104ZF5	0.1 50V	C863	ECBT1H102KB5	1000P 50V	R742	ERJ6GEYJ562V	1/10W 5.6K
C562	ECEA1HUR22B	0.22 50V	C864	ECEA1AU101B	100 10V	R743	ERJ6GEYJ562V	1/10W 5.6K
C564	ECFR1C153KR	0.015 16V	C870	ECBT1H102KB5	1000P 50V	R744	ERJ6GEYJ103V	1/10W 10K
C566	ECFR1C683KR	0.068 16V	C871	ECBT1H331KB5	330P 50V	R745	ERJ6GEYJ155V	1/10W 1.5M
C568	ECBT1C472KR5	4700P 16V	C872	ECBT1H330J5	33P 50V	R746	ERJ8GEYJ103V	1/8W 10K
C570	ECFR1C223KR	0.022 16V	C873	ECBT1H102KB5	1000P 50V	R747	ERJ6GEYJ473V	1/10W 47K
C572	ECBT1C152KR5	1500P 16V	C874	ECBT1H330J5	33P 50V			
C574	ECBT1C682MR5	6800P 16V	C875	ECBT1H102KB5	1000P 50V			CAPACITORS
C576	ECBT1H471KB5	470P 50V	C877	ECBT1H102KB5	1000P 50V	C701	ECEA0JKA220	6.3V 22
C578	ECFR1C473KR	0.047 16V	C878	ECBT1C103MS5	0.01 16V	C702	ECEA1HKA010I	50V 1
C580	ECEA1HUR68	0.68 50V	C880	ECEA1AU221B	220 10V	C703	ECEA0JKA101I	6.3V 100
C582	ECEA1EU4R7B	4.7 25V	C881	ECBT1H102KB5	1000P 50V	C704	ECUZ1E104MBN	25V 0.1
C584	ECEA1CU100B	10 16V	C882	ECBT1H102KB5	1000P 50V	C705	ECEA1HKA010I	50V 1
C586	ECBT1H101KB5	100P 50V	C883	ECBT1H330J5	33P 50V	C706	ECUE1H101JCN	50V 100P
C588	ECEA1HU010B	1 50V	C884	ECBT1C103MS5	0.01 16V	C708	ECUE1H472KBN	50V 4700P
C590	ECEA1CU221B	220 16V	C901	ECQV1H104JZ3	0.1 50V	C709	ECUE1C473KBN	16V 0.047
C601	ECEA1CU330B	33 16V	C902	ECQV1H104JZ3	0.1 50V	C710	ECUE1H152KBN	50V 1500P
C602	ECEA1CU101B	100 16V	C903	ECQV1H104JZ3	0.1 50V	C711	ECUZ1E104MBN	25V 0.1
C603	ECEA1CU100B	10 16V	C904	ECQV1H104JZ3	0.1 50V	C712	ECUZ1E104MBN	25V 0.1
C662	ECEA1HUR22B	0.22 50V				C713	ECUV1C104MBM	16V 0.1
C664	ECFR1C153KR	0.015 16V			< CD >	C714	ECEA0JKA101I	6.3V 100
C666	ECFR1C683KR	0.068 16V			RESISTORS	C715	ECEA0JKA470I	6.3V 47
C668	ECBT1C472KR5	4700P 16V	R701	ERJ6GEYJ100	1/10W 10	C716	ECUE1H561KBN	50V 560P
C670	ECFR1C223KR	0.022 16V	R702	ERJ6GEYJ471V	1/10W 470	C717	ECUZ1E104MBN	25V 0.1
C672	ECBT1C152KR5	1500P 16V	R703	ERJ6GEYJ823	1/10W 82K	C718	ECUV1C224KBM	16V 0.22
C674	ECBT1C682MR5	6800P 16V	R704	ERJ6GEYJ102A	1/10W 1K	C719	ECUV1C224KBM	16V 0.22
C676	ECBT1H471KB5	470P 50V	R705	ERJ6GEYJ103V	1/10W 10K	C721	ECUE1H100DCN	50V 10P
C678	ECFR1C473KR	0.047 16V	R706	ERJ6GEYJ102A	1/10W 1K	C722	ECUE1H100DCN	50V 10P
C680	ECEA1HUR68	0.68 50V	R707	ERJ6GEYJ473V	1/10W 47K	C723	ECEA1AKA221I	10V 220
C682	ECEA1EU4R7B	4.7 25V	R708	ERJ6GEYJ224V	1/10W 220K	C724	ECUV1C104MBM	16V 0.1
C684	ECEA1CU100B	10 16V	R709	ERJ6GEYJ683V	1/10W 68K	C725	ECUE1H102KBN	50V 1000P
C686	ECBT1H101KB5	100P 50V	R711	ERJ6GEYJ154V	1/10W 150K	C726	ECUE1H102KBN	50V 1000P
C688	ECEA1HU010B	1 50V	R712	ERJ6GEYJ471V	1/10W 470	C727	ECEA1HKA010I	50V 1
C790	ECA1AKF820	82 10V	R714	ERJ6GEY0R00A	1/10W 0.00	C728	ECEA1HKA010I	50V 1
C801	EECSSR5T104	0.1 5.5V [M]	R717	ERJ6GEYJ102A	1/10W 1K	C730	ECUZ1E104MBN	25V 0.1
C802	ECEA0JU102B	1000 6.3V	R718	ERJ6GEYJ102A	1/10W 1K	C731	ECA05SD151I	6.3V 150
C803	ECEA1AF470B	47 10V [M]	R719	ERJ6GEYJ102A	1/10W 1K	C732	ECA05SD151I	6.3V 150
C805	ECEA1AU221B	220 10V	R720	ERJ6GEYJ102A	1/10W 1K	C733	ECUZ1E104MBN	25V 0.1
C806	ECEA1HU010B	1 50V	R721	ERJ8GEYJ101V	1/10W 100	C734	ECEA1AKA221I	10V 220
C814	ECBT1H220JC5	22P 50V	R722	ERJ6GEYJ473V	1/10W 47K	C735	ECUZNE104MBN	25V 0.1
C815	ECBT1H220JC5	22P 50V	R723	ERJ6GEYJ182V	1/10W 1.8K	C736	ECUZNE104MBN	25V 0.1
C816	ECBT1H820KB5	82P 50V	R724	ERJ6GEYJ333V	1/10W 33K	C737	ECUZNE104MBN	25V 0.1
C817	ECBT1H820KB5	82P 50V	R725	ERJ6GEYJ472V	1/10W 4.7K	C738	ECUV1C154KBN	16V 0.15
C818	ECBT1H560J5	56P 50V	R726	ERJ6GEYJ473V	1/10W 47K	C742	ECUV1E273KBN	25V 0.027
C819	ECBT1H560J5	56P 50V	R727	ERJ6GEYJ103V	1/10W 10K	C743	ECUZNE104MBN	25V 0.1
C820	ECBT1H102KB5	1000P 50V	R728	ERJ6GEYJ392V	1/10W 3.9K	C744	ECUE1E822KBN	25V 8200P
C821	ECBT1H102KB5	1000P 50V	R730	ERJ6GEYJ331V	1/10W 330K	C745	ECUE1C473MBN	16V 0.047
C834	ECBT1H102KB5	1000P 50V	R731	ERJ6GEYJ392V	1/10W 3.9K	C746	ECUE1H050DCN	50V 5P
C835	ECBT1H102KB5	1000P 50V	R734	ERJ6GEYJ101V	1/10W 100	C747	ECUE1H222KBN	50V 2200P
C836	ECBT1H102KB5	1000P 50V	R735	ERJ6GEYJ101V	1/10W 100	C748	ECUV1H271KBM	50V 270P