ORDER NO. MDS9202002

Service Manual

Portable Stereo Component CD System

Radio Cassette

RX-DT680

COMPACT disc DIGITAL AUDIO

MASH* multi-stage noise shaping

Color

(K)	Black Type

Areas

Country Code	Area	Color
(E)	Continental Europe	(K)
(EB)	Great Britain	
(EG)	F.R. Germany & Italy	

TAPE DECK: RX-FD55 MECHANISM SERIES (AR300)
TRAVERSE DECK: RX-DT55 MECHANISM SERIES (S0DD110)

■ SPECIFICATIONS

General:

Power Requirement:	AC; 230~240 V, 50 Hz Battery; 15 V (10 UM-1, R20/LR20 batteries) Memory Back-up for Computer/Clock; 6 V (4 UM-3, R6/LR6 batteries)
Power Consumption:	57 W (AC only)
Power Output:	Woofer; 60 W (30 W×2)...PMPO Tweeter; 20 W (10 W×2)...PMPO
Speaker:	Woofer; 12 cm×2 PM Dynamic speaker (2.7Ω) Tweeter; 8 cm×2 PM Dynamic speaker (8Ω)
Input:	MIX MIC; 5 mV/200~600Ω, ∅3.5 DC IN; 13.2 V (12~15 V)
Outputs:	HEADPHONES; 32Ω, ∅3.5 SPEAKER; LOW; 2.7~8Ω HIGH; 8~16Ω CD OUT
Dimensions:	641 (W)×267 (H)×232 (D) mm Main unit; 313 (W)×267 (H)×232 (D) mm Speaker box; 174 (W)×254 (H)×188 (D) mm
Weight:	8.7 kg without batteries

Disc Player Section:

Sampling Frequency:	44.1 kHz
D-A Conversion:	16-bit linear
Beam Source:	Semiconductor laser (wavelength 780 nm)
No. of Channels:	2 channels, stereo
Frequency Range:	20~20,000 Hz (+1/−2 dB)
Dynamic Range:	86 dB
S/N Ratio:	95 dB
Wow and Flutter:	Unmeasurable

Radio Section:

Frequency Range:	FM; 87.5~108 MHz LW; 144~288 kHz MW; 522~1611 kHz
Intermediate Frequency:	FM; 10.7 MHz AM; 459 kHz
Sensitivity:	FM; 2.0 μV/50 mW output (−3 dB Limit Sens.) LW; 160 μV/m/50 mW output MW; 140 μV/m/50 mW output

Tape Deck Section:

Frequency Range:	20~16,000 Hz (with normal tape) 20~17,000 Hz (with CrO_2 tape)
Recording System:	AC bias, AC erase
Tape Speed:	4.8 cm/s
Monitor System:	Variable sound monitor
Track System:	4-track 2-channel stereo recording and playback

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

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

Panasonic

■ CONTENTS

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

PRECAUTION OF LASER DIODE

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

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

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

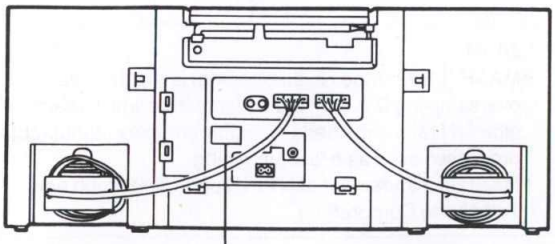
1. Do not disassemble the optical pick up unit, since radiation from exposed laserd diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

ACHTUNG: Dieses produkt enthält eine laserdiode. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit abgestrahlt.

Wellenlänge: 780 nm
Maximale strehlungsleistung der lasereinheit: 100 μW/VDE

Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdiode gefährlich ist.
2. Den werksseitig justierten einstellregler der lasereinreit nicht verstellen.
3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
4. Nicht über längere zeit in die fokussierlinse blicken.



DANGER-Invisible laser radiation when open and interlock defeated. AVOID DIRECT EXPOSURE TO BEAM.
(Inside of product)

VORSICHT-Unsichtbare Laserstrahlung, wenn Abdeckung geöffnet und Sicherheitsverriegelung überbrückt. Nicht dem Strahl aussetzen.
(Im Inneren des Gerätes)

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

CLASS 1
LASER PRODUCT

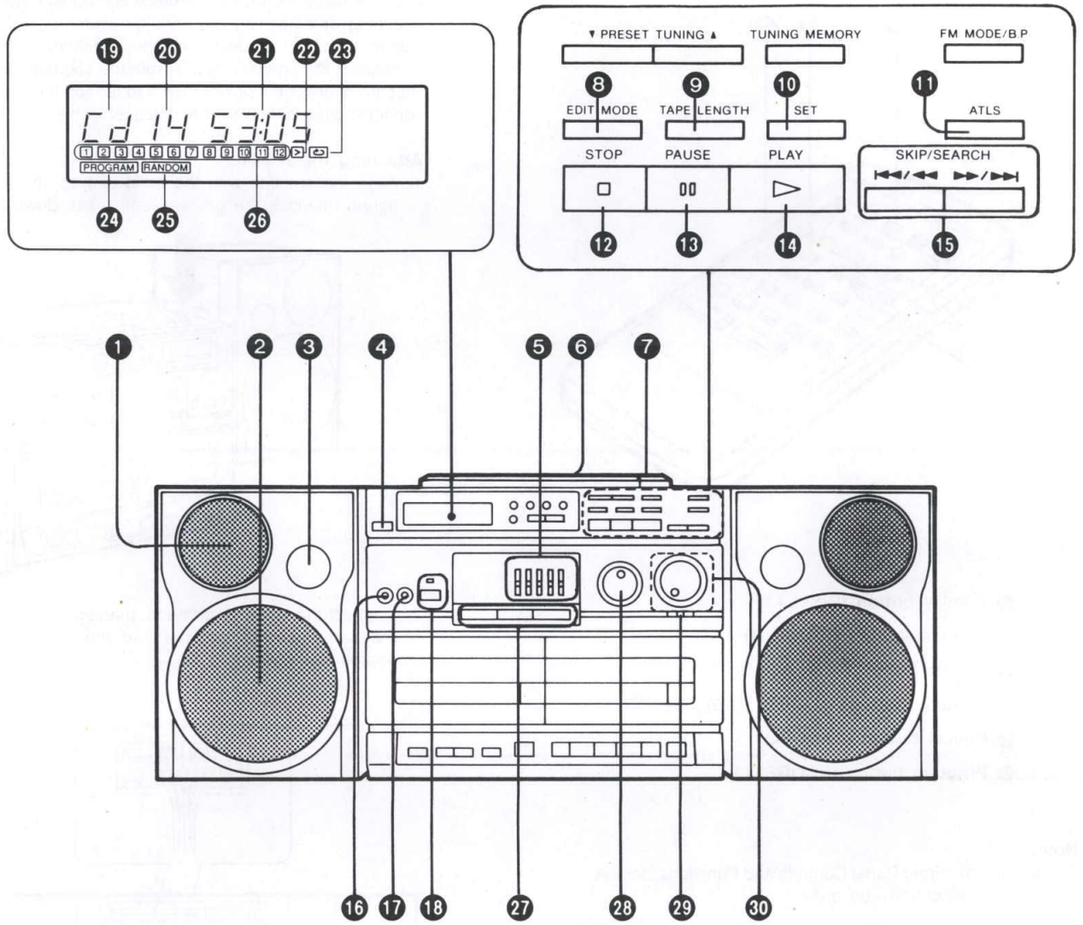
LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
(Indersiden at apparatet)

VARNING! Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

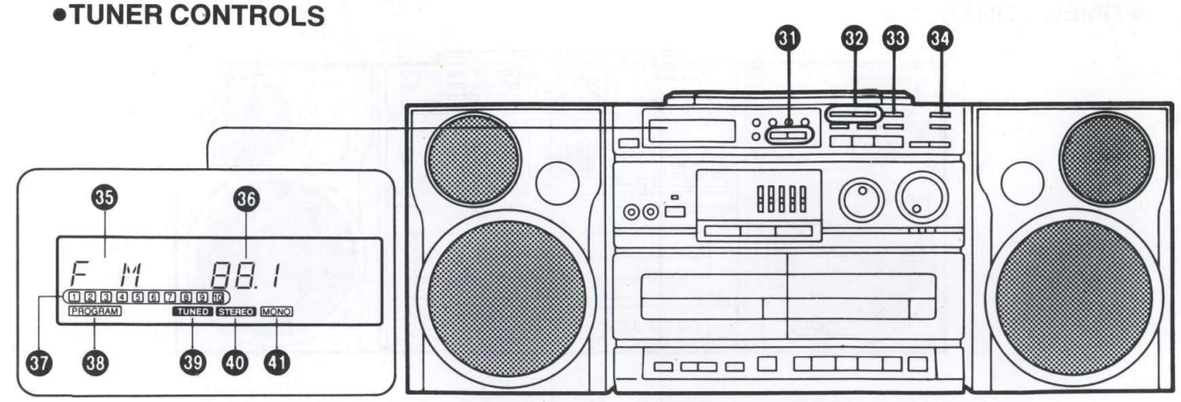
■ LOCATION OF CONTROLS

•CD/GENERAL CONTROLS



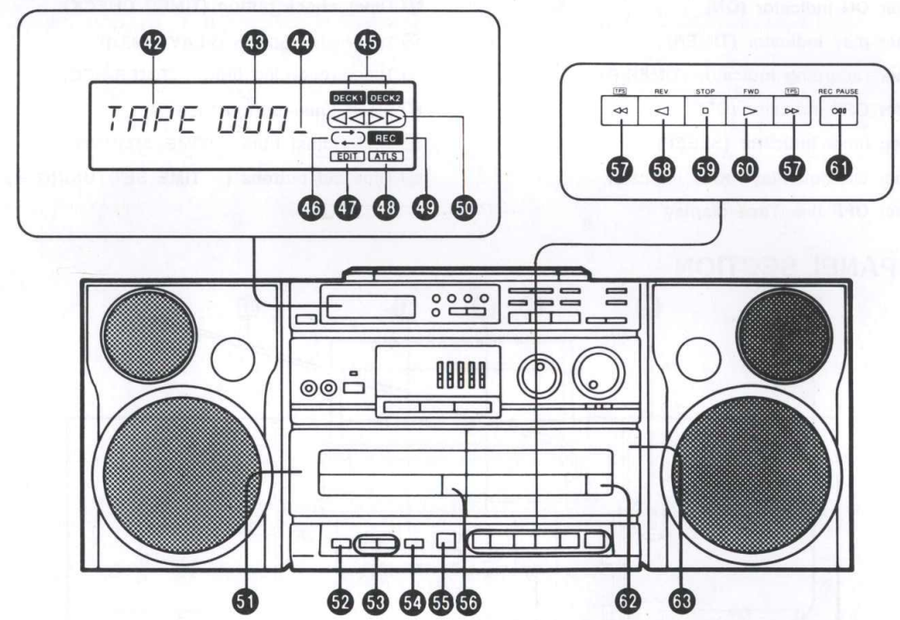
1. Speakers (Tweeter) (8 cm, 8Ω)
2. Speakers (Woofer) (12 cm, 2.7Ω)
3. Bass reflex ports
4. Remote control sensor
5. Graphic equalizer controls (GRAPHIC EQUALIZER)
6. Disc holder
7. CD eject button (≜CD EJECT)
8. Edit recording mode select button (EDIT MODE)
9. Tape length select button (TAPE LENGTH)
10. Set button (SET)
11. Automatic tape level setting button (ATLS)
12. Stop button (STOP)
13. Pause button (PAUSE)
14. Play button (PLAY)
15. Skip/search buttons (SKIP/SEARCH)
16. Headphones jack (PHONES) (∅3.5, 32Ω)
17. Mixing microphone jack (MIXING MIC) (∅3.5, 200~600Ω)
18. Operation switch and operation/battery check AC connection indicator (OPERATION)
19. CD mode indicator (CD)
20. Track display
21. Playing time display
22. Over mark indicator (▷)
23. Repeat indicator (⟲)
24. Program indicator (PROGRAM)
25. Random indicator (RANDOM)
26. Music matrix
27. Mode select buttons (TAPE•TUNER/BAND•CD)
28. Super extra bass system control (S-XBS LEVEL)
29. Balance control (BALALNCE)
30. Volume control and indicators (VOLUME)

•TUNER CONTROLS



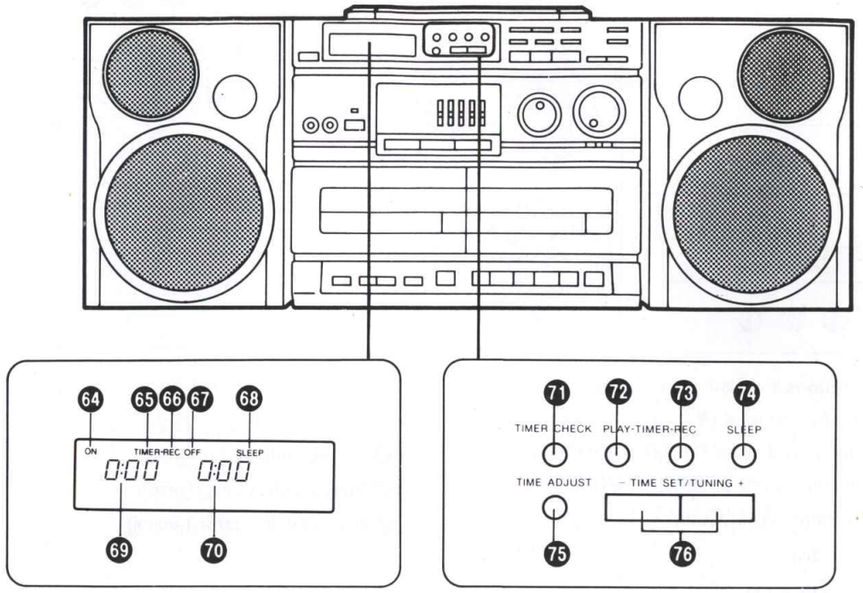
31. Tuning buttons (– TIME SET/TUNING +)
32. Preset tuning buttons (▼ PRESET TUNING ▲)
33. Tuning memory button (TUNING MEMORY)
34. FM mode/beat proof button (FM MODE/B.P)
35. Band indicator (FM/MW/LW)
36. Frequency display
37. Preset channel indicators
38. Program indicator (PROGRAM)
39. Tuning indicator (TUNED)
40. Stereo indicator (STEREO)
41. Monaural indicator (MONO)

•DECK CONTROLS



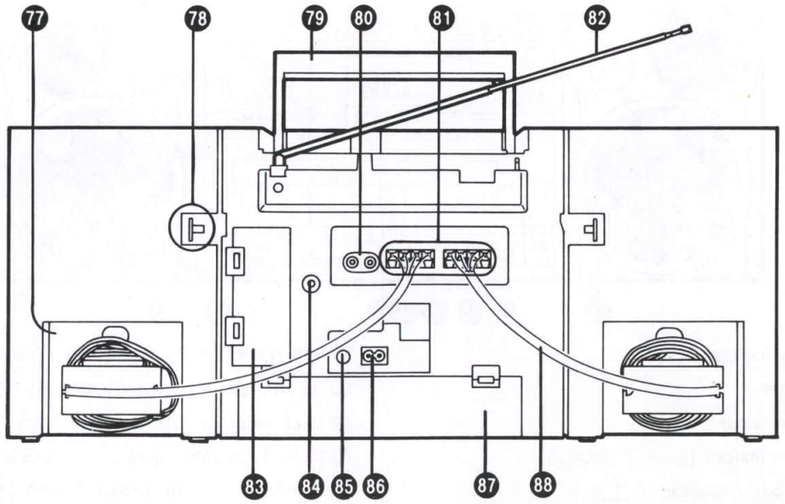
42. Tape mode indicator (TAPE)
43. Tape counter
44. Running indicator
45. Deck 1/2 indicators (DECK 1 DECK 2)
46. Reverse mode indicator (⟲)
47. Edit indicator (EDIT)
48. Automatic tape level setting indicator (ATLS)
49. Recording indicator (REC)
50. Tape direction indicator
51. Deck 1 cassette compartment cover
52. Reverse mode select button (REVERSE MODE)
53. Edit recording buttons (ONE TOUCH EDIT)
54. Counter reset button (COUNTER RESET)
55. Deck selector (DECK SELECTOR)
56. Deck 1 cassette eject button (≜EJECT)
57. Fast/tape program sensor button (◀◀ TPS ▶▶)
58. Reverse side playback button (REV)
59. Stop button (STOP)
60. Forward side playback button (FWD)
61. Rec-pause button (● ❚❚ REC PAUSE)
62. Deck 2 cassette eject button (≜EJECT)
63. Deck 2 cassette compartment cover

•TIMER CONTROLS



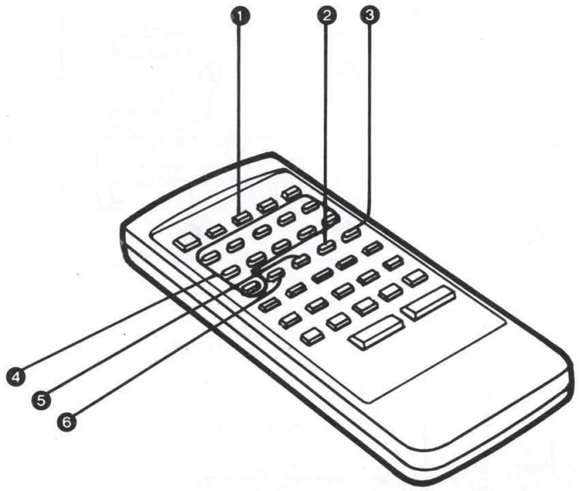
- 64 Timer ON indicator (ON)
- 65 Timer play indicator (TIMER)
- 66 Timer recording indicator (TIMER-REC)
- 67 Timer OFF indicator (OFF)
- 68 Sleep timer indicator (SLEEP)
- 69 Timer ON time/Play mode indicator
- 70 Timer OFF time/Time display
- 71 Timer check button (TIMER CHECK)
- 72 Timer play button (PLAY-TIMER)
- 73 Timer recording button (TIMER-REC)
- 74 Sleep timer button (SLEEP)
- 75 Time adjust button (TIME ADJUST)
- 76 Time set buttons (– TIME SET/TUNING +)

•REAR PANEL SECTION



- 77 Speaker cable compartments
- 78 Speaker release levers (RELEASE)
- 79 Handle
- 80 CD output jacks (CD OUT)
- 81 Speaker terminals (SPEAKERS) (LOW: 2.7~8Ω / HIGH: 8~16Ω)
- 82 Telescopic antenna
- 83 Memory back-up battery compartment cover
- 84 FM antenna terminal (FM ANT)
- 85 DC input jack (DC IN 13.2 V)
- 86 AC socket (AC IN~)
- 87 Battery compartment cover
- 88 Speaker cables

•REMOTE CONTROL OPERATION

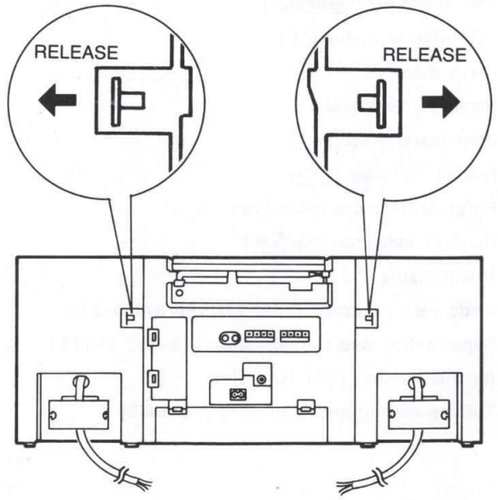


- 1 Display button (DISPLAY)
- 2 Random button (RANDOM)
- 3 Repeat button (REPEAT)
- 4 Numeric buttons (1–10/0, +10)
- 5 Cancel button (CANCEL)
- 6 Program button (PROGRAM)

Note:
Please refer to "Front Panel Controls and Functions" for the controls not described above.

Detaching the speakers

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



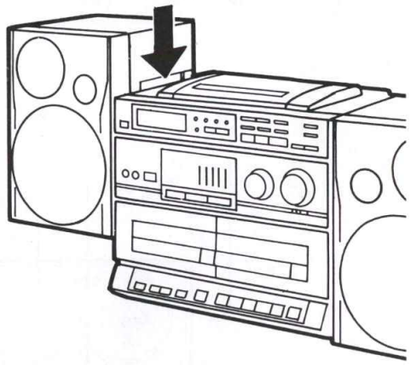
2. Connect the speaker cables to the speaker terminals.

Speaker system connection

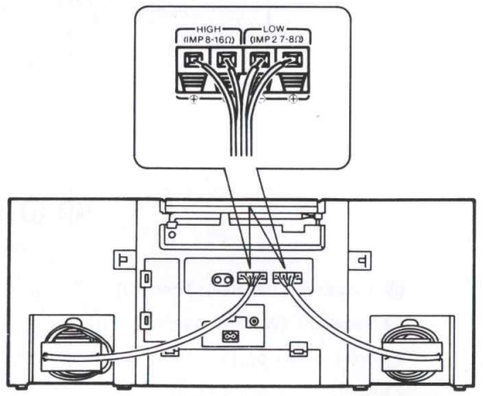
This unit can be used as a one-piece portable stereo radio cassette recorder, or a three-piece component system, by attaching or detaching the speaker system.
Before attaching or detaching the speakers, be sure to disconnect the speaker cables from the speaker terminals. Be sure to press the power switch to turn off the unit before connecting/disconnecting the speaker cables.

Attaching the speakers

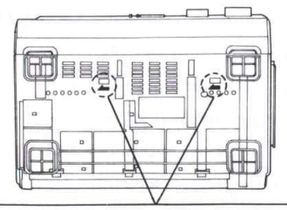
1. Align the speaker with the main unit as shown in the figure, interlock the grooves and press down.



2. Connect the speaker cord end, marked by a colored, to the same colored terminal and then in turn to the appropriate speaker.



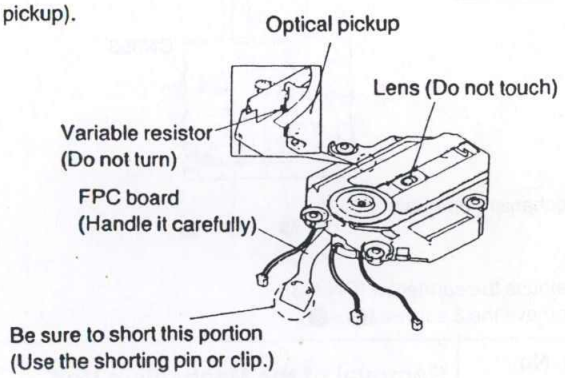
3. When using the unit with the speakers attached, wind the speaker cables as shown.
Since a strong magnet is used for the speaker, keep magnetized commuter passes, tickets or personal credit cards, recorded tapes, watches, etc. away from the set. The speaker magnet in the set may damage them.



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

■ HANDLING PRECAUTIONS FOR TRAVERSE DECK

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).



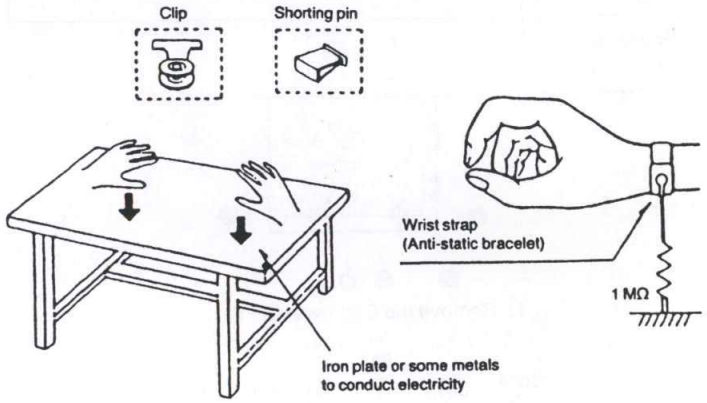
•Handling of traverse deck (optical pickup)

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

•Grounding for electrostatic breakdown prevention

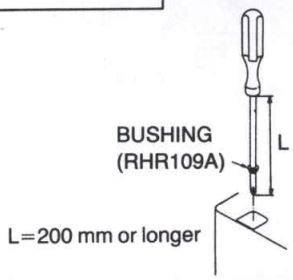
1. Human body grounding
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
   Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

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

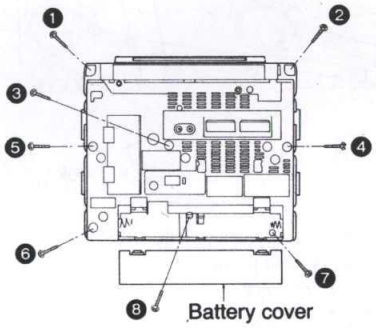


■ DISASSEMBLY INSTRUCTIONS

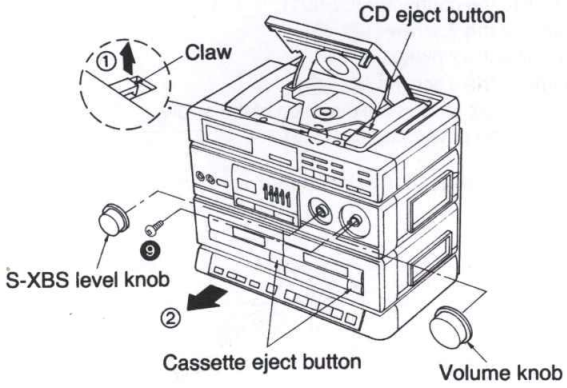
Ref. No. 1	Removal of the Front Cabinet
Procedure 1	[Removal of Screws] •Use a screwdriver similar to the one in the figure.



•If you attach a bushing (part number: RHR109A) to the tip of the screwdriver as shown in the figure, the screwdriver tip will easily fit in the screw heads and you will be able to remove the screws with ease.

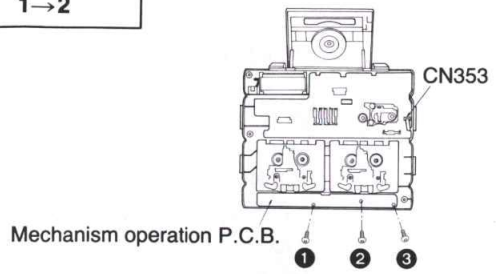


1. Remove the battery cover.
2. Remove the 8 screws (❶~❽).



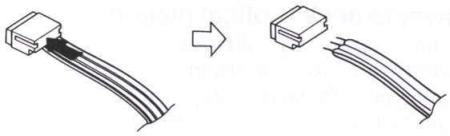
3. Pull out the S-XBS knob and volume knob.
4. Remove the 1 screw (❾).
5. Press the 2 cassette eject buttons and then open the cassette covers.
6. Press the CD eject button and then open the CD cover.
7. Release the claw in the direction of the arrow ①.
8. Remove the front cabinet in the direction of the arrow ②.

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

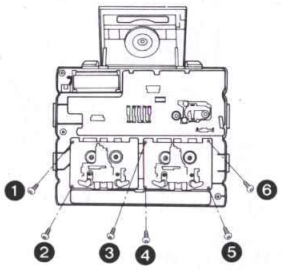


1. Release the connector (CN353).
2. Remove the 3 screws (❶~❸).

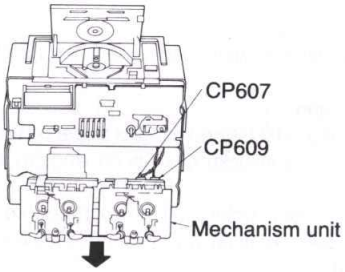
Removal of the Connector



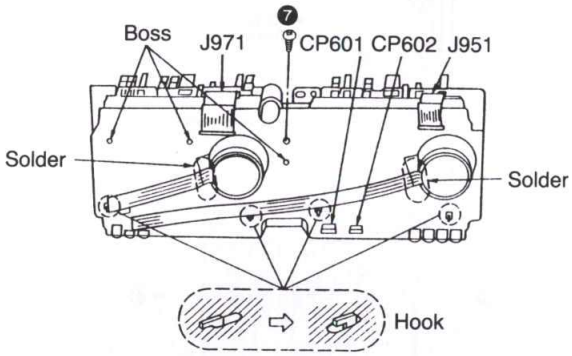
Ref. No. 3	Removal of the Mechanism Unit
Procedure 1→2→3	



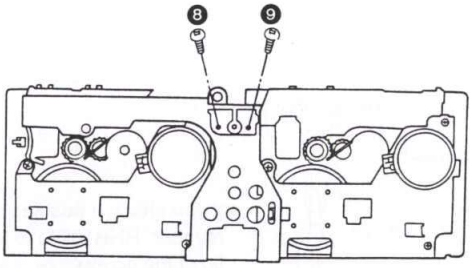
1. Remove the 6 screws (❶~❻).



2. Pull out the mechanism unit.
3. Release the 2 connectors (CP607, CP609).

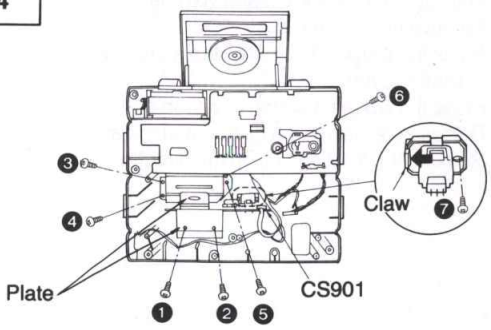


4. Release the 4 connectors (CP601, CP602, J951, J971).
5. Remove the 2 solder points.
6. Remove the 1 screw (❼).
7. Release the 3 bosses.
8. Release the 4 hooks.
9. Remove the mechanism control P.C.B.



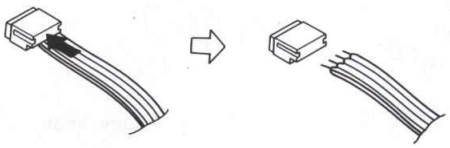
10. Remove the 2 screws (❽, ❾).

Ref. No. 4	Removal of the Power Supply P.C.B.
Procedure 1→2→3→4	

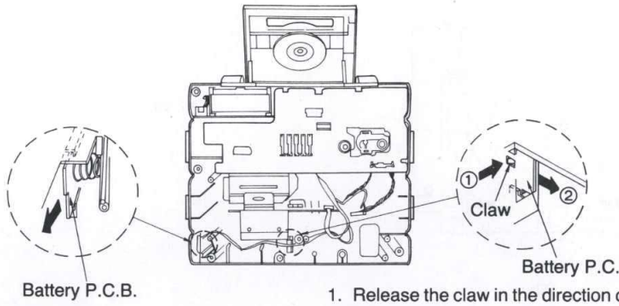


1. Release the connector (CS901).
2. Remove the 2 screws (❶, ❷).
3. Remove the 2 plates.
4. Remove the 5 screws (❸~❼).
5. Release the claw in the direction of the arrow.
6. Pull out the power supply P.C.B.

Removal of the Connector



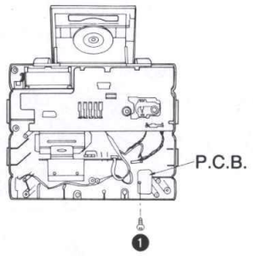
Ref. No. 5	Removal of the Battery P.C.B.
Procedure 1→2→3→5	

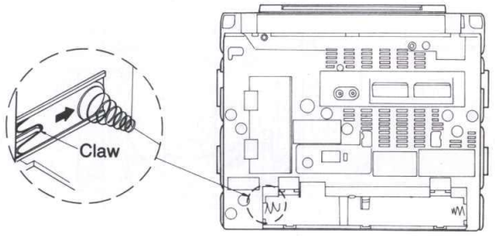


●Pull out the battery P.C.B.

1. Release the claw in the direction of the arrow ①.
2. Remove the battery P.C.B. in the direction of the arrow ②.

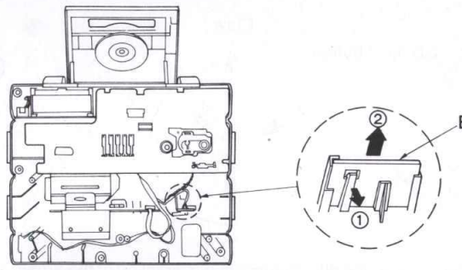
Ref. No. 6	Removal of the Battery Spring
Procedure 1→2→3→6	





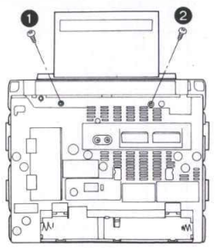
1. Remove the screw (❶).
2. Remove the P.C.B.
3. Release the claw and then remove the battery spring in the direction of the arrow.

Ref. No. 7	Removal of the Back-up Battery P.C.B.
Procedure 1→2→3→7	

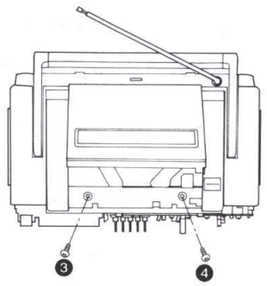


●Release the claw in the direction of arrow ① and then remove the back-up battery P.C.B. in the direction of arrow ②.

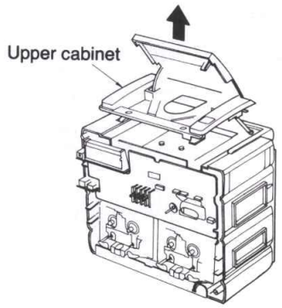
Ref. No. 8	Removal of the Upper Cabinet
Procedure 1→8	



1. Remove the 2 screws (❶, ❷).

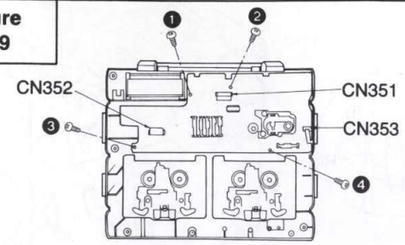


2. Remove the 2 screws (❸, ❹).



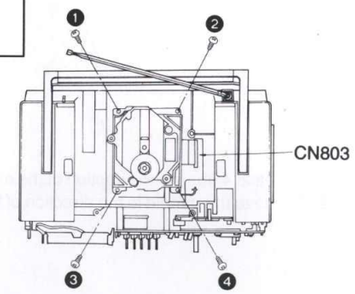
3. Remove the upper cabinet.

Ref. No. 9	Removal of the G. Equalizer P.C.B.
Procedure 1→8→9	



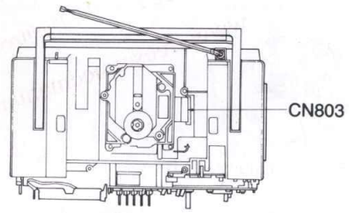
1. Remove the connector (CN353).
2. Remove the 4 screws (❶~❹).
3. Remove the G. equalizer P.C.B.
4. Remove the connectors (CN351, CN352).

Ref. No. 10	Removal of the Traverse Unit
Procedure 1→8→10	

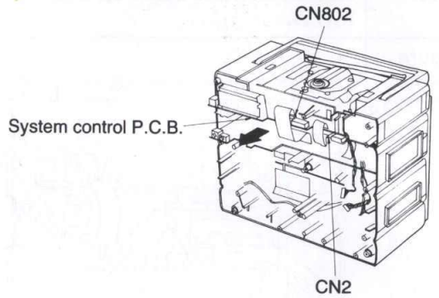


1. Remove the 4 screws (❶~❹).
2. Release the connector (CN803).

Ref. No. 11	Removal of the System Control P.C.B.
Procedure 1→2→3→8→9→11	



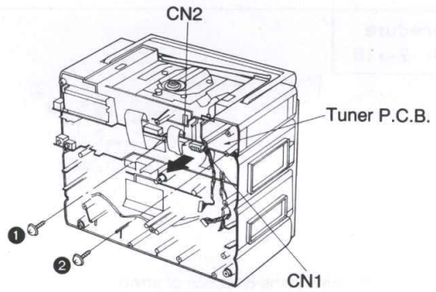
1. Remove the connector (CN803).



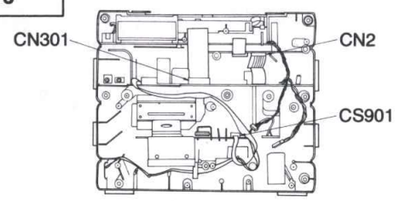
2. Release the 2 connectors (CN2, CN802).
3. Remove the system control P.C.B. in the direction of the arrow.

Ref. No. 12	Removal of the Tuner P.C.B.
Procedure 1→2→3→8→10→12	

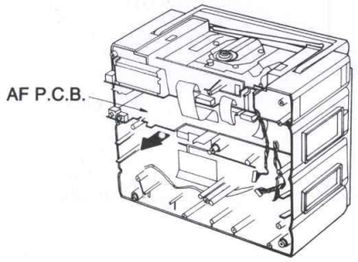
1. Remove the 2 screws (❶, ❷).
2. Release the 2 connectors (CN1, CN2).
3. Remove the Tuner P.C.B. in the direction of arrow.



Ref. No. 13	Removal of the AF P.C.B.
Procedure 1→2→3→8→10→13	

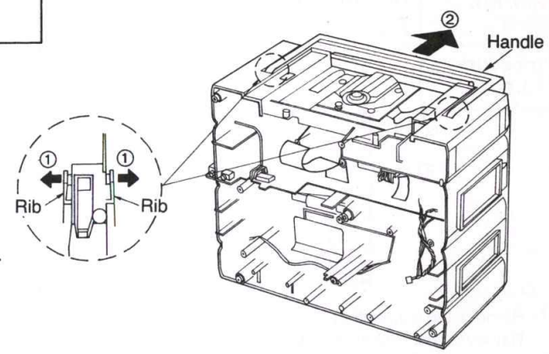


1. Release the 3 connectors (CN2, CN301, CS901).



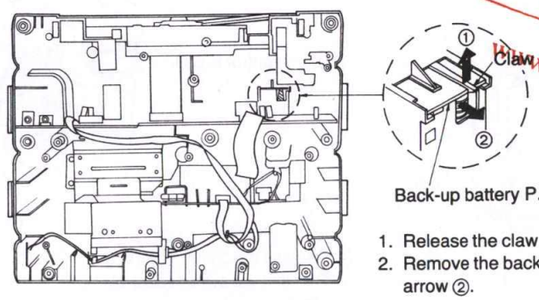
2. Remove the AF P.C.B. in the direction of the arrow.

Ref. No. 14	Removal of the Handle
Procedure 1→2→3→8→10→11→14	



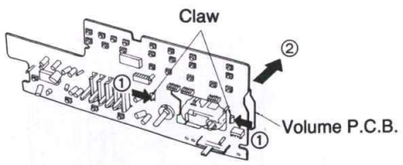
1. Release 4 ribs in the direction of the arrow ①.
2. Remove the handle in the direction of the arrow ②.

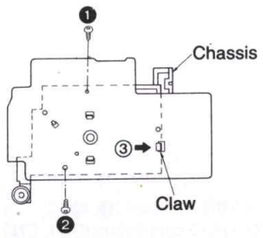
Ref. No. 15	Removal of the Back-up Battery P.C.B.
Procedure 1→2→3→8→10→11→12→15	



1. Release the claw in the direction of the arrow ①.
2. Remove the back-up battery P.C.B. in the direction of the arrow ②.

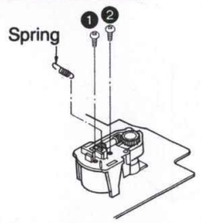
Ref. No. 16	Removal of the Volume P.C.B.
Procedure 1→8→9→16	

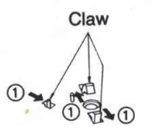


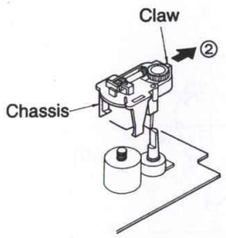


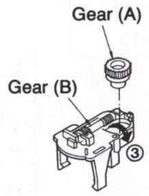
1. Release the claw in the direction of arrow ①.
2. Remove the volume P.C.B. in the direction of the arrow ②.
3. Remove the 2 screws (❶, ❷).
4. Release the claw in the direction of the arrow ③.
5. Remove the chassis.

Ref. No. 17	Removal of the Volume Chassis
Procedure 1→8→9→16→17	



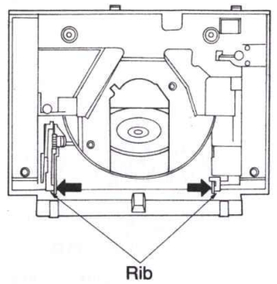






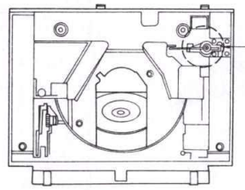
1. Remove the spring.
2. Remove the 2 screws (❶, ❷).
3. Release the 3 claws in the direction of arrows ①.
4. Lift up the chassis.
5. Release the claw in the direction of arrow ②.
6. Remove the gear (A).
7. Remove the gear (B) in the direction of the arrow ③.

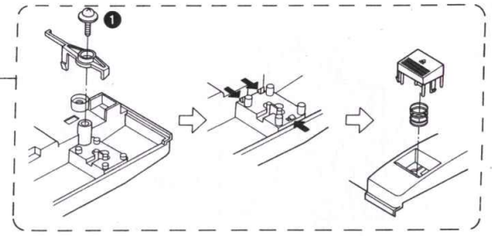
Ref. No. 18	Removal of the CD cover
Procedure 1→8→18	



●Release 2 ribs in the direction of the arrow.

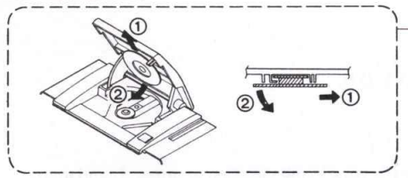
Ref. No. 19	Removal of the CD Eject Button
Procedure 1→8→19	



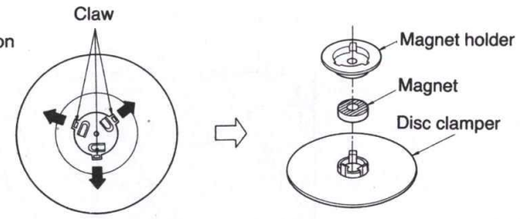


1. Remove the screw (❶).
2. Release 3 claws in the direction of arrow.
3. Remove the CD eject button.

Ref. No. 20	Removal of the Disc Clamper
Procedure 20	

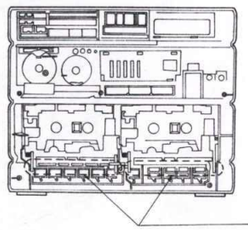


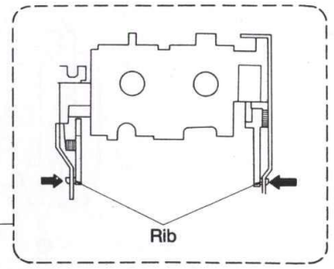
Removal of the Magnet



1. Press the CD eject button and then open the CD cover.
2. Slide the disc clamper in the direction of the arrow ① and then remove the disc clamper in the direction of the arrow ②.

Ref. No. 21	Removal of the Cassette Holder
Procedure 1→21	





●Release 2 ribs in the direction of the arrow.

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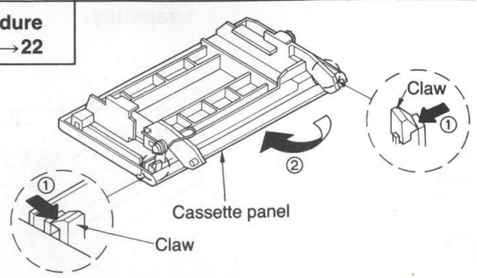
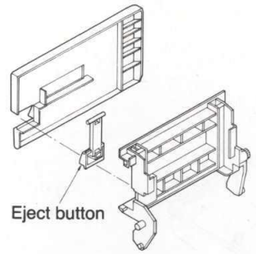
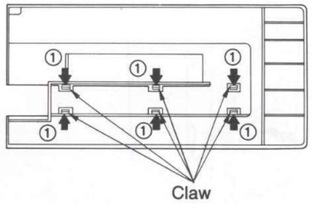
Ref. No. 22	Removal of the Cassette Panel and Eject Button (DECK 1)
Procedure 1→21→22	

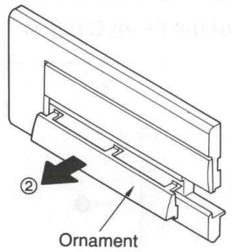




1. Release 2 claws in the direction of arrow ①.
2. Remove the panel in the direction of arrow ②.

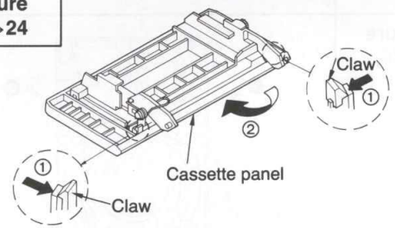
Ref. No. 23	Removal of the Cassette Ornament (DECK 1)
Procedure 1→21→22→23	

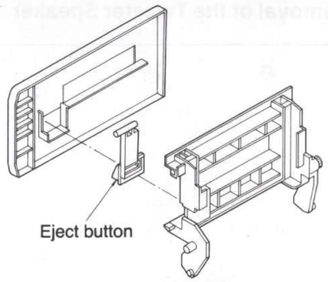




1. Release 6 claws in the direction of arrow ①.
2. Remove the ornament in the direction of arrow ②.

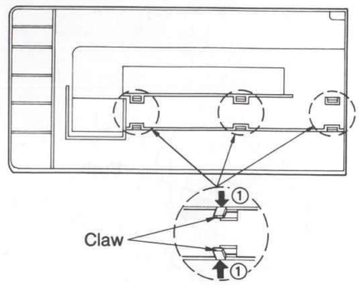
Ref. No. 24	Removal of the Cassette Panel and Eject Button (DECK 2)
Procedure 1→21→24	

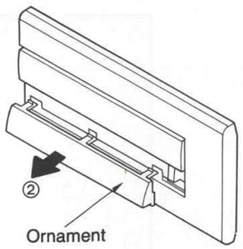




1. Release 2 claws in the direction of arrow ①.
2. Remove the panel in the direction of arrow ②.

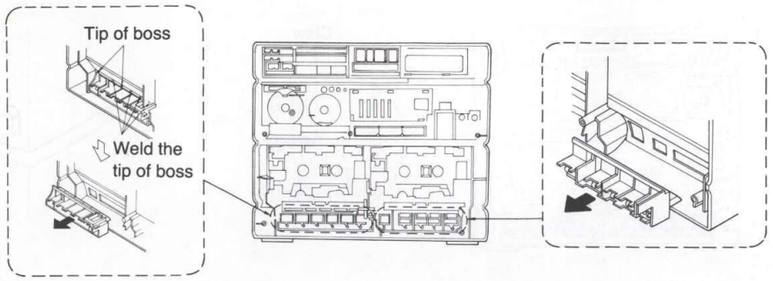
Ref. No. 25	Removal of the Cassette Ornament (DECK 2)
Procedure 1→21→25	





1. Release 6 claws in the direction of arrow ①.
2. Remove the ornament in the direction of arrow ②.

Ref. No. 26	Removal of the Deck Operation Button
Procedure 1→21→26	

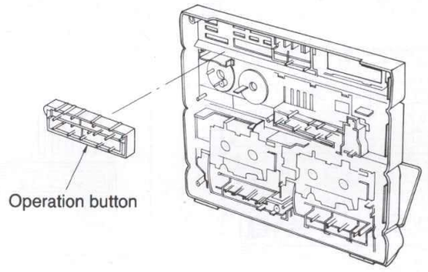


1. Cut the tip of boss.
2. Remove the button.

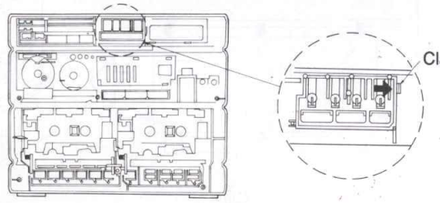
●Remove the button.

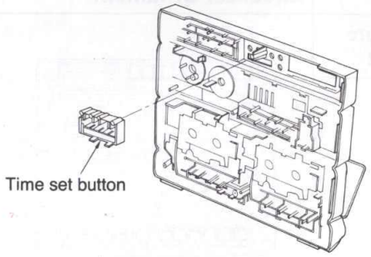
Ref. No. 27	Removal of the Operation Button
Procedure 1→27	

●Pull out the operation button.



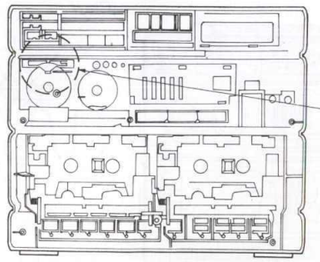
Ref. No. 28	Removal of the Time Set Button
Procedure 1→28	

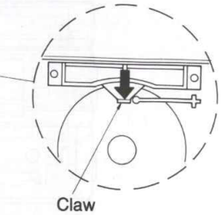




1. Release the claw in the direction of arrow.
2. Remove the time set button.

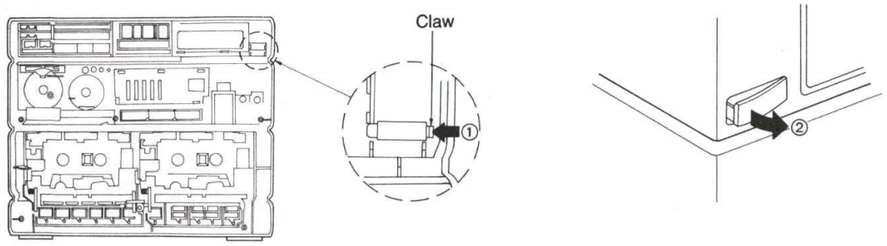
Ref. No. 29	Removal of the Volume LED Lens
Procedure 1→29	





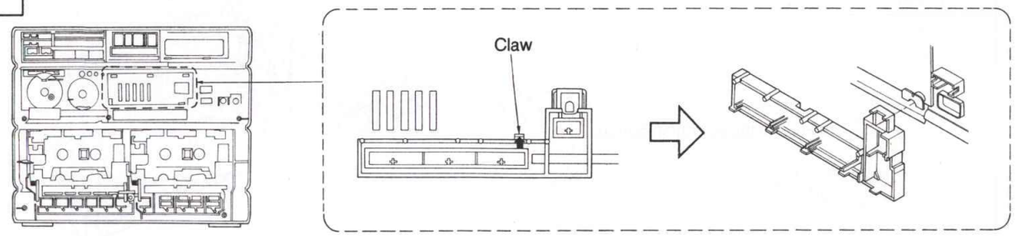
1. Release the claw in the direction of arrow.
2. Remove the volume LED lens.

Ref. No. 30	Removal of the Sensor Cover
Procedure 1→30	



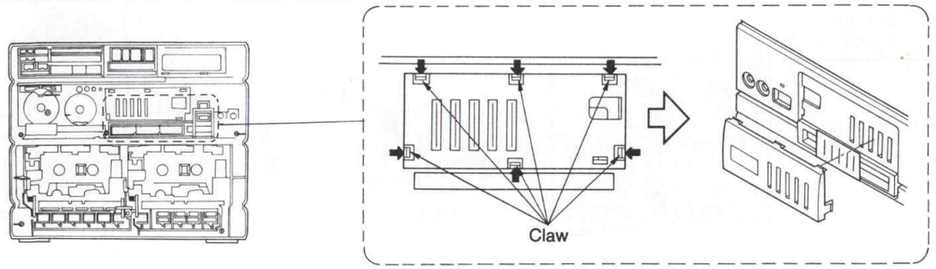
1. Release the claw in the direction of arrow ①.
2. Remove the sensor cover in the direction of arrow ②.

Ref. No. 31	Removal of the Function Select Button
Procedure 1→31	



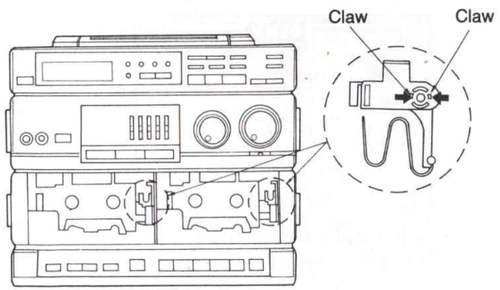
●Release the claw in the direction of arrow.

Ref. No. 32	Removal of the Graphic Equalizer Ornament
Procedure 1→32	



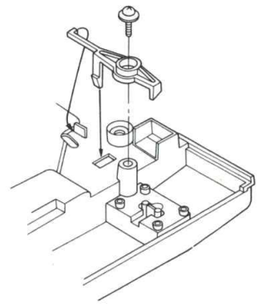
●Release 6 claws in the direction of arrow.

Ref. No. 33	Removal of the Eject Lever
Procedure 1→21→33	

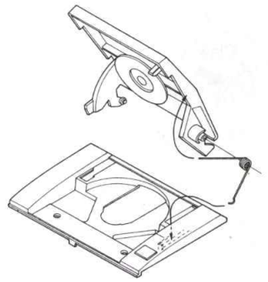


●Release 2 claws in the direction of arrow.

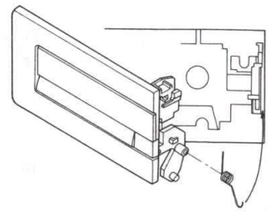
●CD eject lever assembly



●CD cover assembly

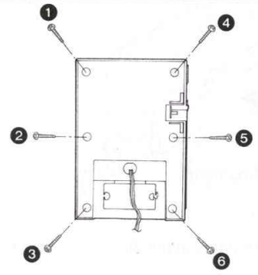


●Cassette holder assembly

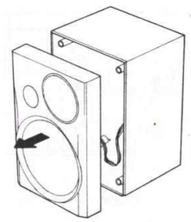


●SPEAKER SECTION

Ref. No. 34	Removal of the Front Cabinet
Procedure 34	

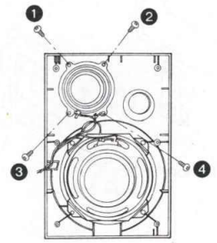


1. Remove 6 screws (❶~❻).



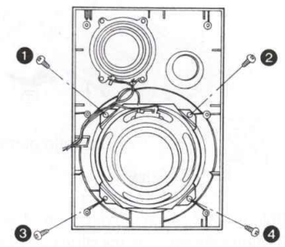
2. Remove the front cabinet in the direction of arrow.

Ref. No. 35	Removal of the Tweeter Speaker
Procedure 34→35	



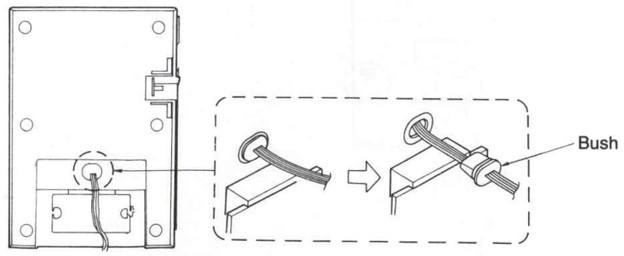
●Remove 4 screws (❶~❹).

Ref. No. 36	Removal of the Woofer Speaker
Procedure 34→36	



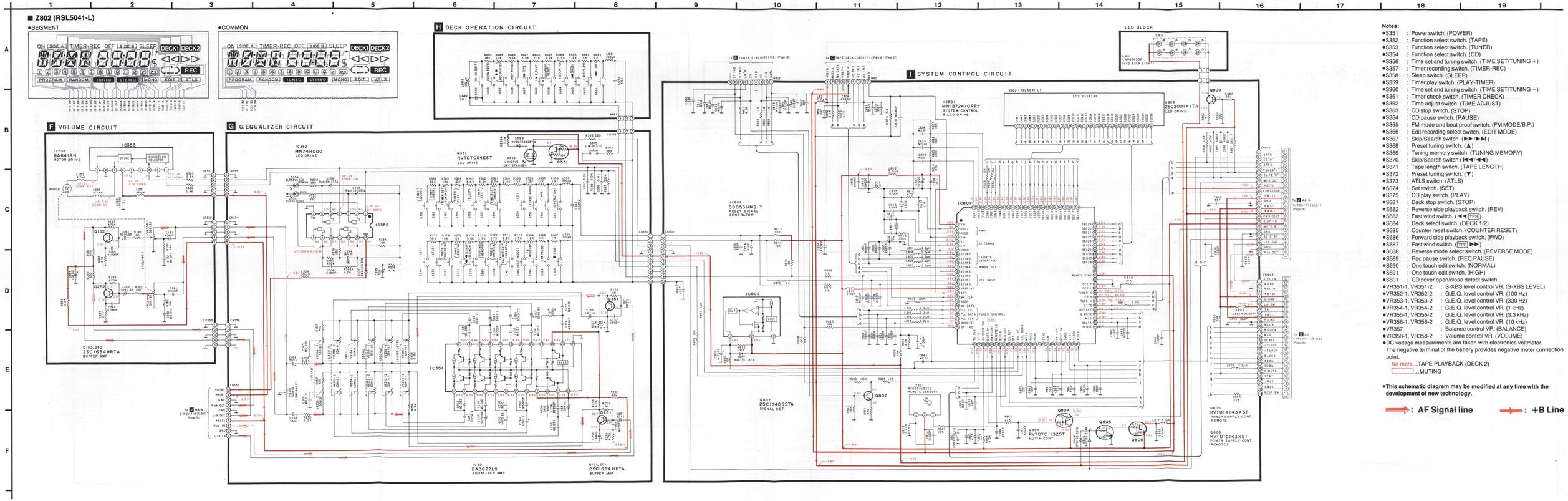
●Remove 4 screws (❶~❹).

Ref. No. 37	Removal of the Bush
Procedure 34→37	



●Pull out the bush.

■ SCHEMATIC DIAGRAM •VOLUME, GRAPHIC EQUALIZER, DECK OPERATION AND SYSTEM CONTROL CIRCUIT (Parts list on pages 63~70.)



Notes:

- •S351 : Power switch. (POWER)
- •S352 : Function select switch. (TAPE)
- •S353 : Function select switch. (TUNER)
- •S354 : Function select switch. (CD)
- •S356 : Time set and tuning switch. (TIME SET/TUNING +)
- •S357 : Timer recording switch. (TIMER-REC)
- •S358 : Sleep switch. (SLEEP)
- •S359 : Timer play switch. (PLAY-TIMER)
- •S360 : Time set and tuning switch. (TIME SET/TUNING –)
- •S361 : Timer check switch. (TIMER CHECK)
- •S362 : Time adjust switch. (TIME ADJUST)
- •S363 : CD stop switch. (STOP)
- •S364 : CD pause switch. (PAUSE)
- •S365 : FM mode and beat proof switch. (FM MODE/B.P.)
- •S366 : Edit recording select switch. (EDIT MODE)
- •S367 : Skip/Search switch. (▶▶/▶▶I)
- •S368 : Preset tuning switch. (▲)
- •S369 : Tuning memory switch. (TUNING MEMORY)
- •S370 : Skip/Search switch (I◀◀/◀◀)
- •S371 : Tape length switch. (TAPE LENGTH)
- •S372 : Preset tuning switch. (▼)
- •S373 : ATLS switch. (ATLS)
- •S374 : Set switch. (SET)
- •S375 : CD play switch. (PLAY)
- •S681 : Deck stop switch. (STOP)
- •S682 : Reverse side playback switch. (REV)
- •S683 : Fast wind switch. (I◀◀ TPS)
- •S684 : Deck select switch. (DECK 1/2)
- •S685 : Counter reset switch. (COUNTER RESET)
- •S686 : Forward side playback switch. (FWD)
- •S687 : Fast wind switch. (TPS ▶▶I)
- •S688 : Reverse mode select switch. (REVERSE MODE)
- •S689 : Rec pause switch. (REC PAUSE)
- •S690 : One touch edit switch. (NORMAL)
- •S691 : One touch edit switch. (HIGH)
- •S801 : CD cover open/close detect switch.
- •VR351-1, VR351-2 : S-XBS level control VR. (S-XBS LEVEL)
- •VR352-1, VR352-2 : G.E.Q. level control VR. (100 Hz)
- •VR353-1, VR353-2 : G.E.Q. level control VR. (330 Hz)
- •VR354-1, VR354-2 : G.E.Q. level control VR. (1 kHz)
- •VR355-1, VR355-2 : G.E.Q. level control VR. (3.3 kHz)
- •VR356-1, VR356-2 : G.E.Q. level control VR. (10 kHz)
- •VR357 : Balance control VR. (BALANCE)
- •VR358-1, VR358-2 : Volume control VR. (VOLUME)
- •DC voltage measurements are taken with electronics voltmeter. The negative terminal of the battery provides negative meter connection point.
  - No mark...TAPE PLAYBACK (DECK 2)
  - ☐...MUTING

•This schematic diagram may be modified at any time with the development of new technology.

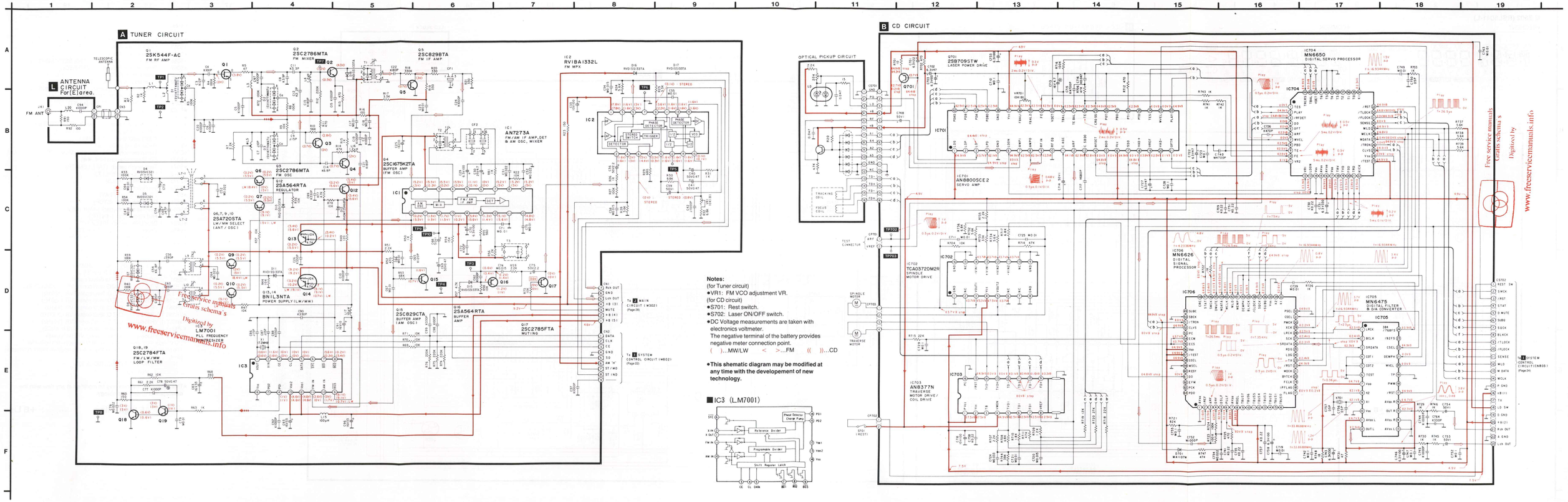
: AF Signal line : +B Line

RX-DT680 RX-DT680

■ SCHEMATIC DIAGRAM

•TUNER AND CD CIRCUIT (Parts list on pages 63~70.)

: CD Signal Line : FM Signal Line : FM OSC Signal Line : LW/MW OSC Signal Line : FM/LW/MW Vcap Control Signal Line : +B Line

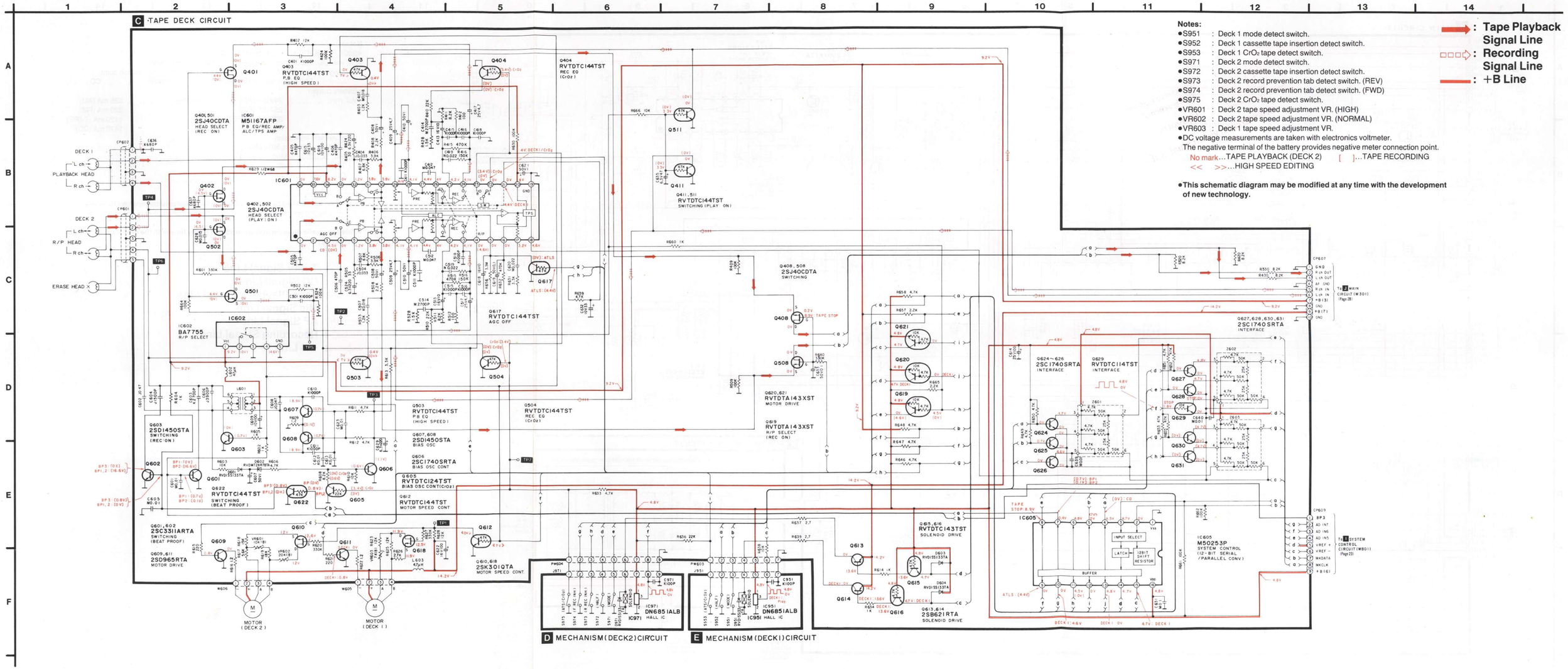


Notes:
(for Tuner circuit)
●VR1: FM VCO adjustment VR.
(for CD circuit)
●S701: Rest switch.
●S702: Laser ON/OFF switch.
●DC Voltage measurements are taken with electronics voltmeter.
The negative terminal of the battery provides negative meter connection point.
( )...MW/LW < >...FM (( ))...CD

●This shematic diagram may be modified at any time with the developement of new technology.

■IC3 (LM7001)

■ SCHEMATIC DIAGRAM •TAPE DECK AND MECHANISM CIRCUIT (Parts list pages 63~70.)



Notes:

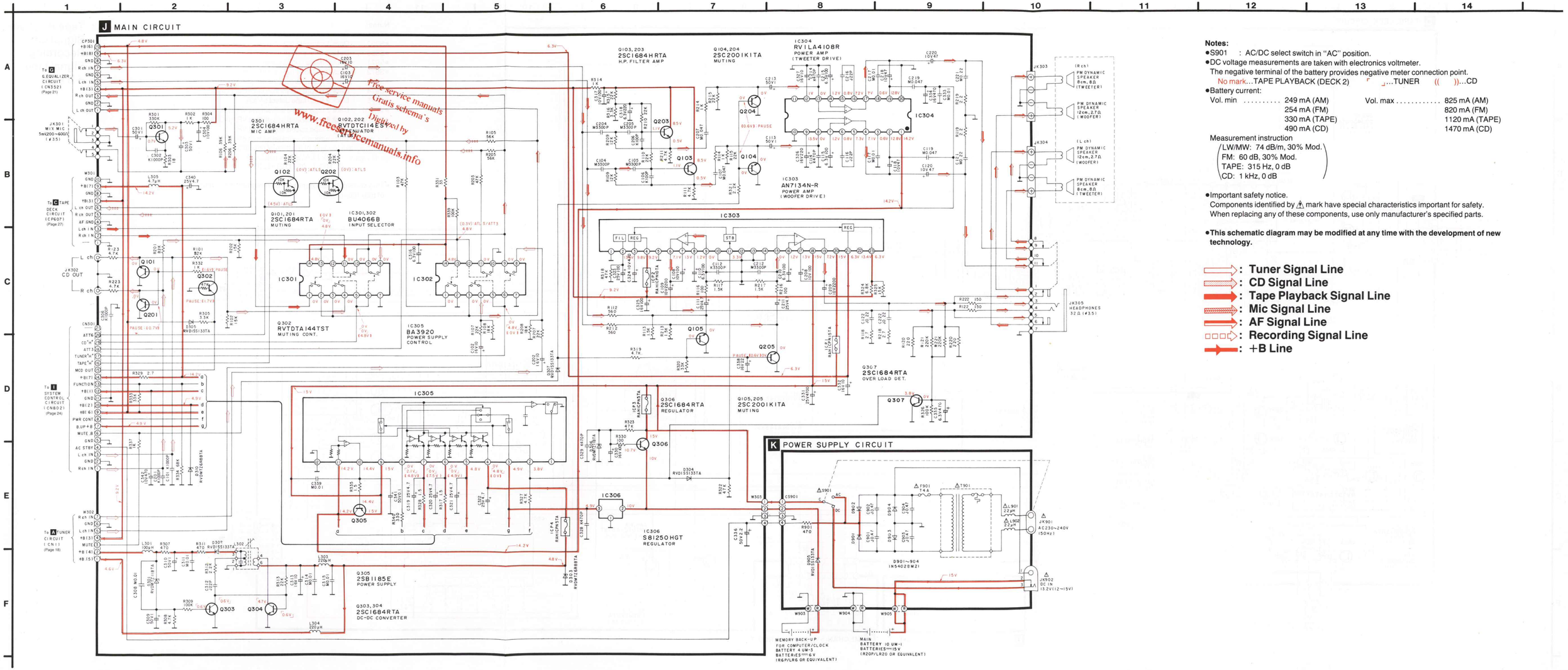
- •S951 : Deck 1 mode detect switch.
- •S952 : Deck 1 cassette tape insertion detect switch.
- •S953 : Deck 1 CrO_2 tape detect switch.
- •S971 : Deck 2 mode detect switch.
- •S972 : Deck 2 cassette tape insertion detect switch.
- •S973 : Deck 2 record prevention tab detect switch. (REV)
- •S974 : Deck 2 record prevention tab detect switch. (FWD)
- •S975 : Deck 2 CrO_2 tape detect switch.
- •VR601 : Deck 2 tape speed adjustment VR. (HIGH)
- •VR602 : Deck 2 tape speed adjustment VR. (NORMAL)
- •VR603 : Deck 1 tape speed adjustment VR.
- •DC voltage measurements are taken with electronics voltmeter. The negative terminal of the battery provides negative meter connection point.

No mark...TAPE PLAYBACK (DECK 2) [ ]...TAPE RECORDING
<< >>...HIGH SPEED EDITING

•This schematic diagram may be modified at any time with the development of new technology.

: Tape Playback Signal Line
: Recording Signal Line
: +B Line

■ SCHEMATIC DIAGRAM •MAIN AND POWER SUPPLY CIRCUIT (Parts list on pages 63~70.)



Notes:

- S901 : AC/DC select switch in "AC" position.
- DC voltage measurements are taken with electronics voltmeter.
  The negative terminal of the battery provides negative meter connection point.
  No mark...TAPE PLAYBACK (DECK 2) ⌜ ⌟...TUNER (( ))...CD
- Battery current:

Vol. min	249 mA (AM)	Vol. max	825 mA (AM)
	254 mA (FM)		820 mA (FM)
	330 mA (TAPE)		1120 mA (TAPE)
	490 mA (CD)		1470 mA (CD)

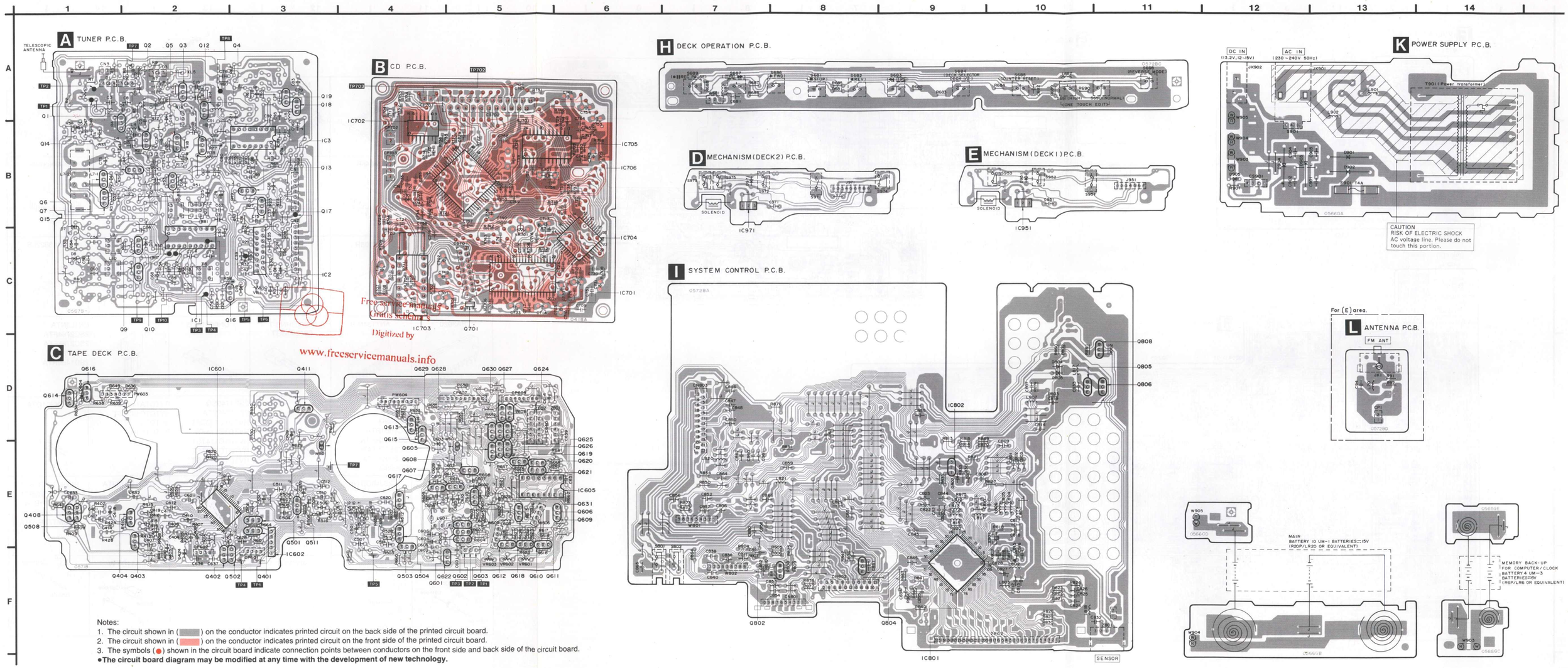
Measurement instruction
(LW/MW: 74 dB/m, 30% Mod.
FM: 60 dB, 30% Mod.
TAPE: 315 Hz, 0 dB
CD: 1 kHz, 0 dB)

- Important safety notice.
  Components identified by ⚠ mark have special characteristics important for safety.
  When replacing any of these components, use only manufacturer's specified parts.

- **This schematic diagram may be modified at any time with the development of new technology.**

: Tuner Signal Line
: CD Signal Line
: Tape Playback Signal Line
: Mic Signal Line
: AF Signal Line
: Recording Signal Line
: +B Line

■ CIRCUIT BOARD DIAGRAM

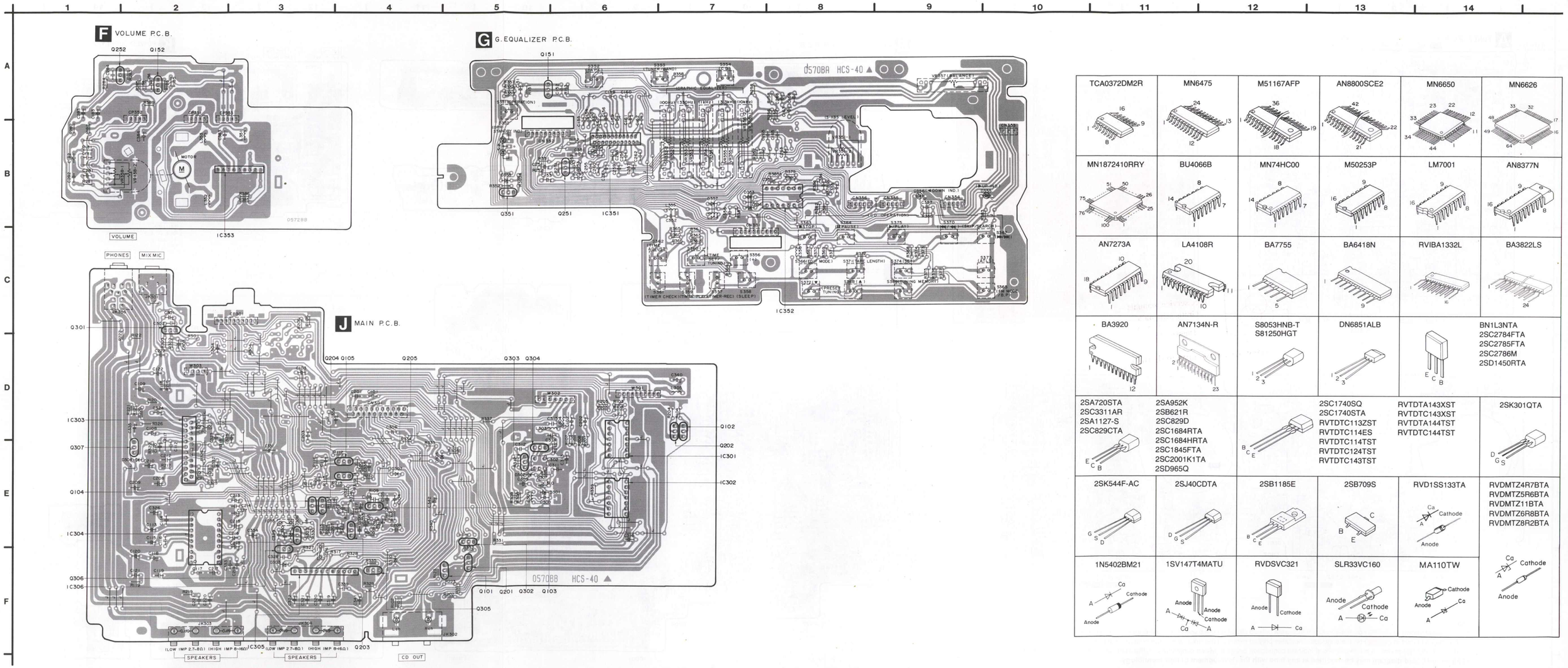


Notes:

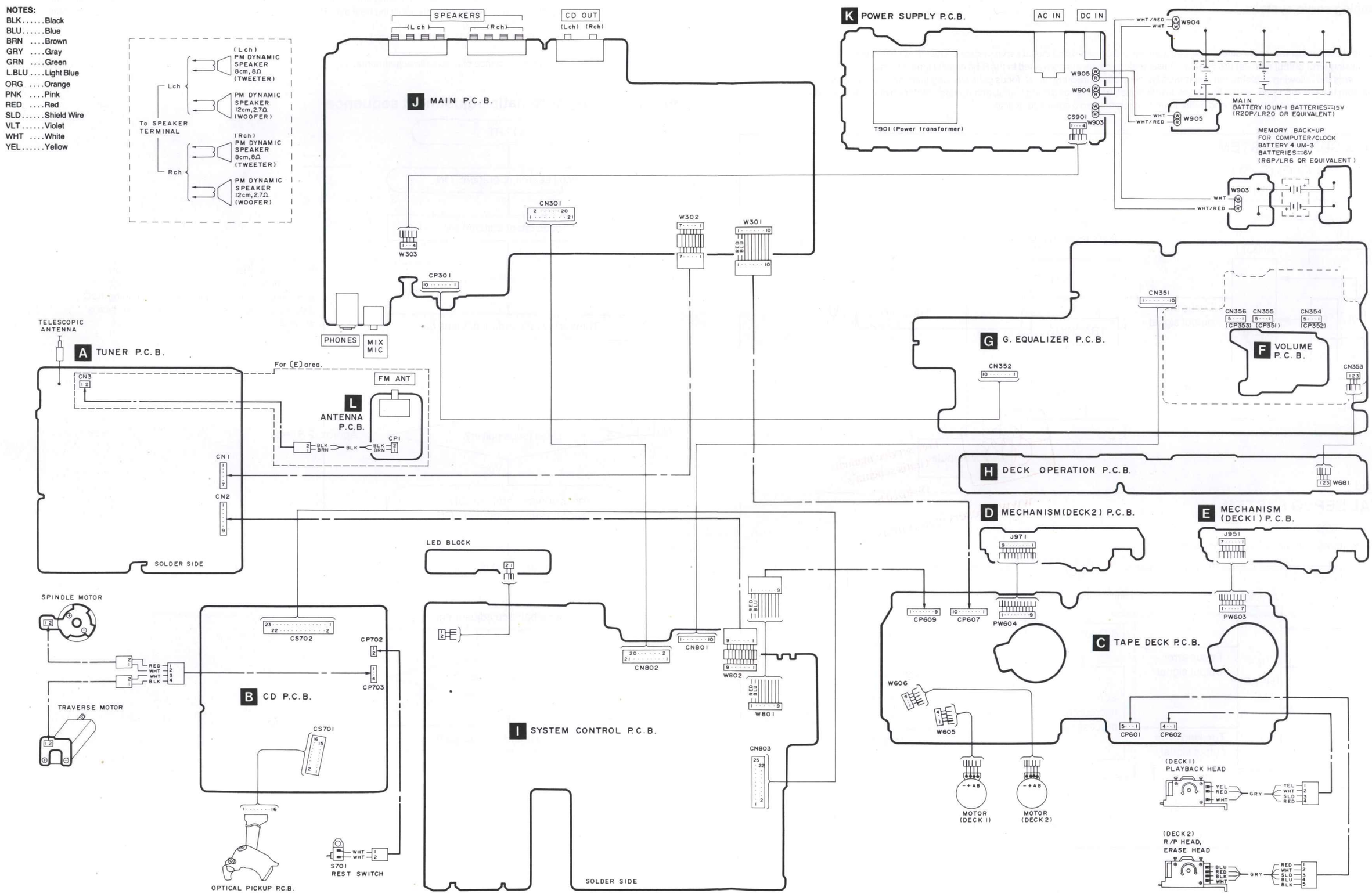
1. The circuit shown in ( ) on the conductor indicates printed circuit on the back side of the printed circuit board.
2. The circuit shown in ( ) on the conductor indicates printed circuit on the front side of the printed circuit board.
3. The symbols (●) shown in the circuit board indicate connection points between conductors on the front side and back side of the circuit board.

●The circuit board diagram may be modified at any time with the development of new technology.

■ CIRCUIT BOARD DIAGRAM



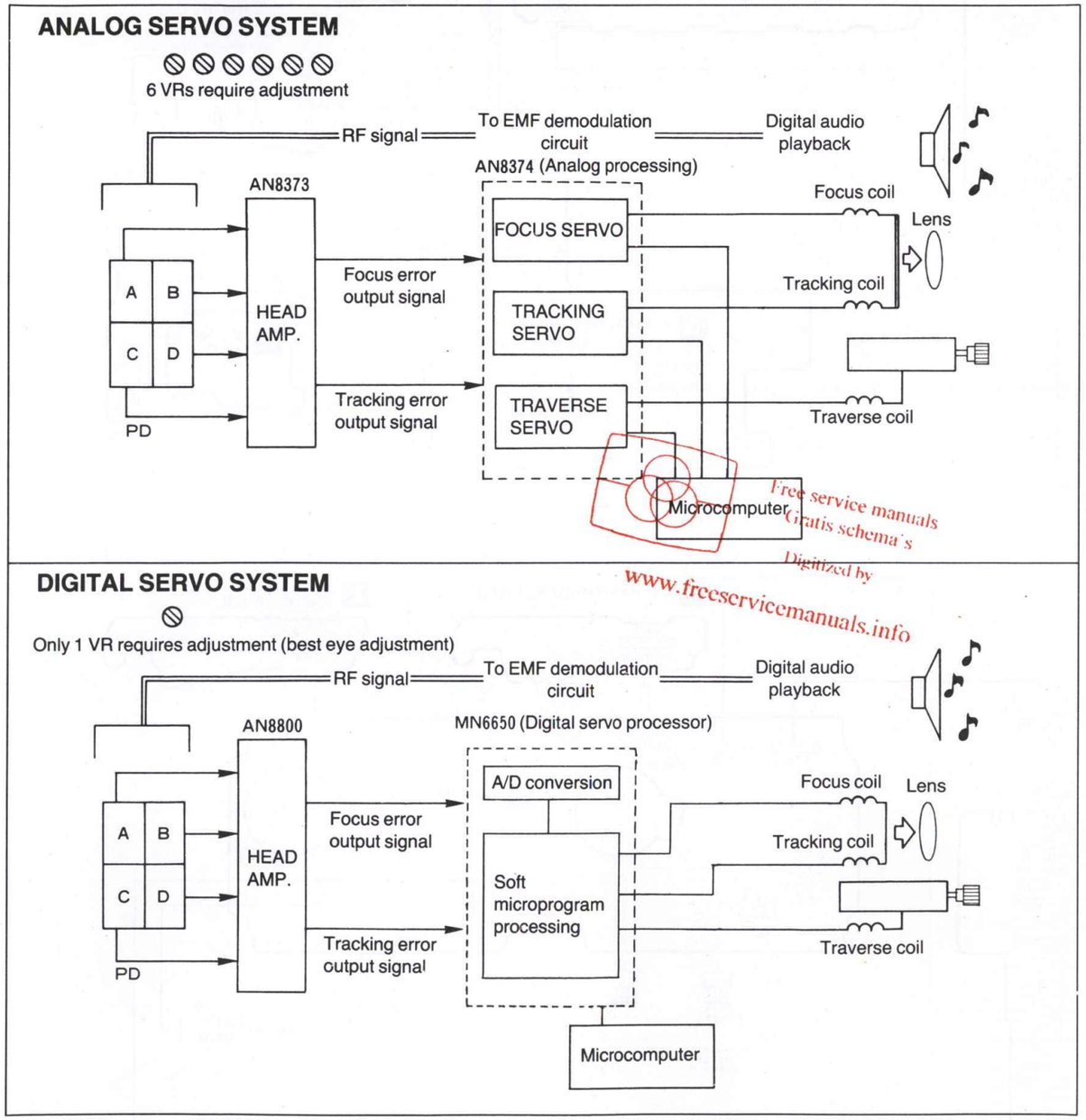
■ WIRING CONNECTION DIAGRAM



■ DIGITAL SERVO SYSTEM

The newly-developed digital servo system is adopted in the servo circuit of the unit's CD player instead of the ordinary analog servo system.

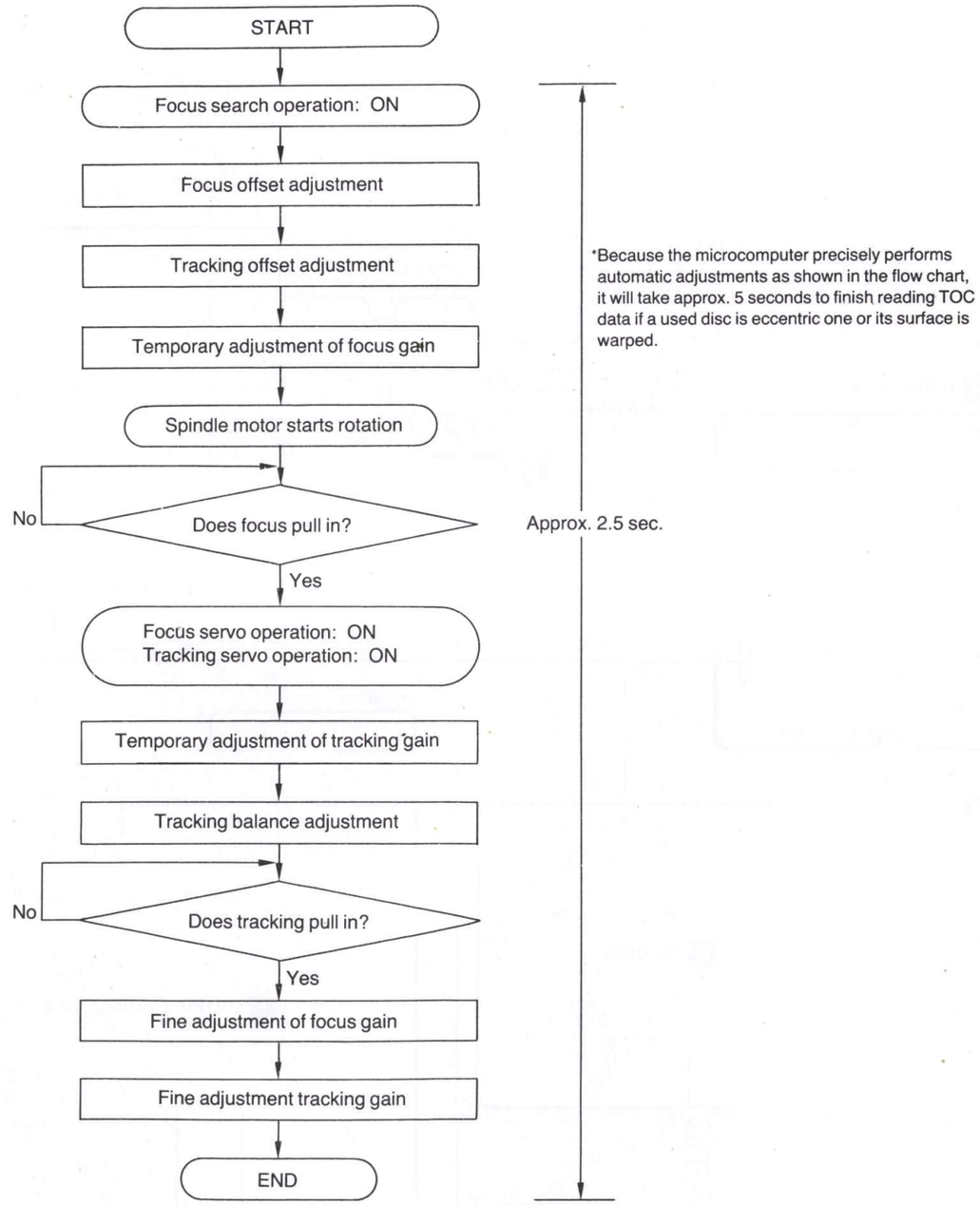
1. The diagrams shown below represent differences between the analog servo and digital servo systems. The HEAD AMP. output signals (i.e., focus error and tracksing error output signals) are analog. These analog signals are converted to the 8-bit digital signals through the MN6650. The MN6650 performs the following adjustments automatically; focus offset, tracking offset, focus gain, tracking gain, and tracking balance adjustments. The outputs from the MN6650 such as the focus coil driving signal, tracking coil driving signal, and traverse motor driving signal are converted to analog signals again and sent to the coils and motor to perform proper servo control for a disc.



2. The servo processor IC MN6650 of the newly-developed digital servo circuit automatically performs the following adjustments which were originally adjusted 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 not the above-mentioned electrical adjustments manually. Only the best eye (PD balance) needs to be adjusted adjustment. You can obtain an optimum servo control for a disc to be played.
[You must perform the best eye (PD balance) adjustment manually.]

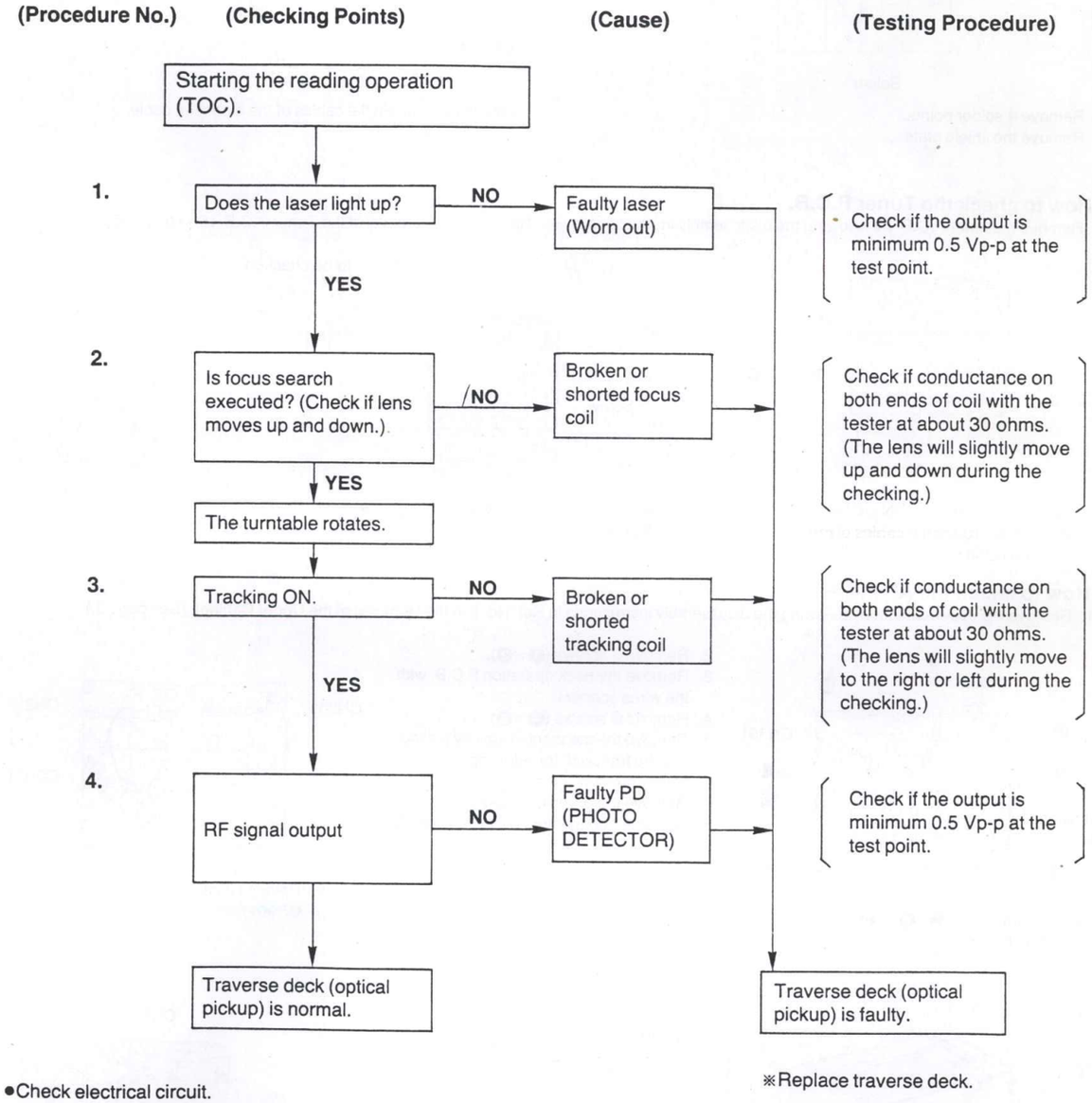
The following flow chart shows the sequence of automatic adjustments.

●Flow chart on automatic adjustment sequence



■ CHECKING THE OPERATION PROBLEMS ON THE TRAVERSE DECK (OPTICAL PICKUP)

Make sure to follow the procedures below to check the operation problems of the traverse deck (optical pickup) before replacing it. Replace the traverse deck only after the problem is identified.



- Check electrical circuit.
- CD is not adjusted properly. Adjust CD again.
  (1) Mechanical adjustment.
  (2) Focus balance adjustment (PD balance)
  } Refer to pages 45~47
- Check for flaws on disc or if it is warped or not centered.

※Checking Operations of Replaced Traverse Deck (New Traverse Deck)

a) Check the operations described below on the traverse deck after replacing it.

∗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 Using Defect Disc.
1. Play the 0.7 mm black dot and the 0.7 mm wedge on the defect 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.

b) If the operations are normal, CD adjustment are not required when the traverse deck is replaced.

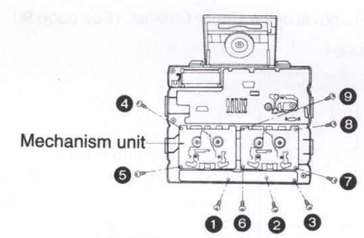
Note: CD adjustments are required in the cases below. (Mechanical adjustments are not necessary.) (See pages 45~47.)
- If audio is not played back continuously or noises occur after step (a) is excuted.
- If the adjustment VR (VR701) were rotated before the traverse deck was replaced.

Caution:
- It is very dangerous to look at or touch the laser beam. (Laser radiation is invisible.)
  With the unit turned "on", laser radiation is emitted from the pickup lens.
  Avoid exposure to the laser beam, especially when performing adjustments.

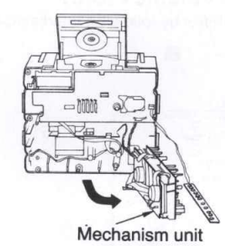
■ HOW TO CHECK THE P.C.B.

•How to check the Tape Deck P.C.B.

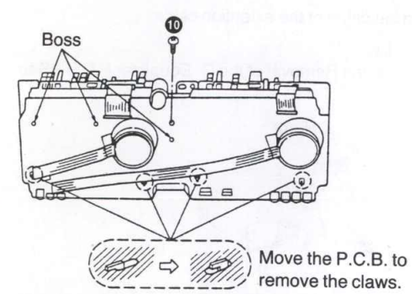
1. Remove the front cabinet by following the disassembly instructions in Ref. No. 1 in the Removal of the Front Cabinet. (See page 7.)



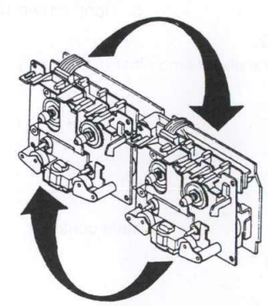
2. Remove 3 screws (❶~❸).
3. Remove the deck operation P.C.B. with the wire connected.
4. Remove 6 screws (❹~❾).



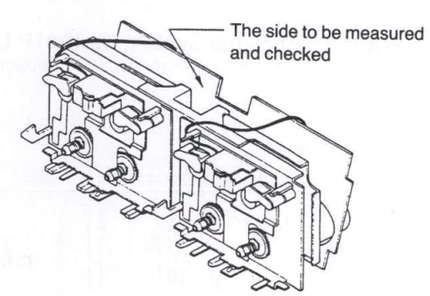
5. Remove the tape deck unit by pulling it to the front with the wires connected.



6. Remove one screw ❿.
7. Remove 3 bosses.
8. Remove 4 claws by moving the P.C.B.



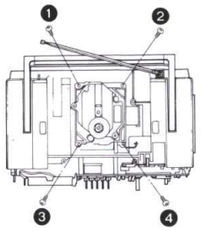
9. Turn the tape deck unit upside down.



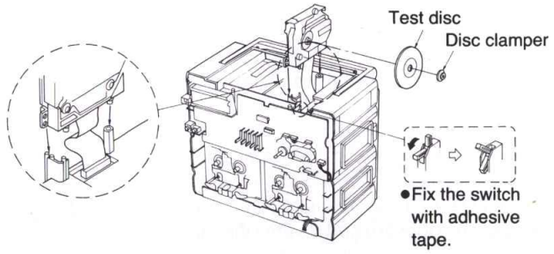
10. Detach the mechanism and tape deck P.C.B. as shown in the figure.

•How to check the CD P.C.B.

1. Remove the upper cabinet by following the disassembly instructions in Ref. No. 8 in the Removal of the Upper Cabinet. (See page 9.)



2. Remove 4 screws (❶~❹).
3. Remove the CD unit.

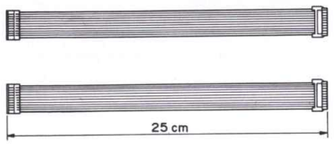


4. Remove the disc clamper by following the disassembly instructions in Ref. No. 20 in the Removal of the Disc Clamper. (See page 12.)
5. Fix the test disc with the disc clamper.

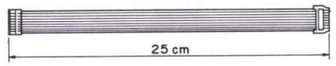
•The optional extension cable kit composed of two 10-pin flat cable and a 8-pin flat cable should be used to perform check of the volume P.C.B., system control P.C.B., tuner P.C.B. and AF P.C.B.

Part number of the Extention Cable Kit: RFKZ0014

10-pin flat cable ..... ×2

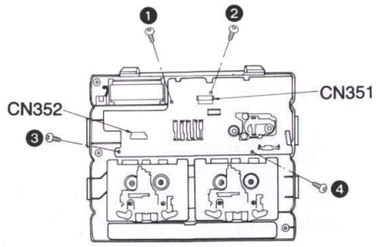


8-pin flat cable ..... ×1

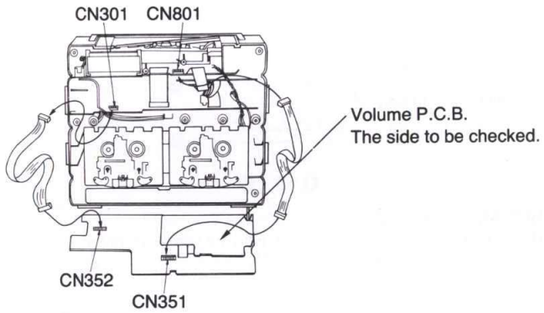


•How to check the Volume P.C.B.

1. Remove the upper cabinet by following the disassembly instructions in Ref. No. 8 in the Removal of the Upper Cabinet. (See page 9.)



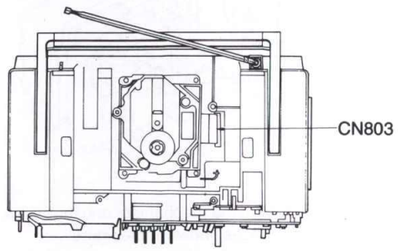
2. Remove 4 screws (❶~❹).
3. Remove the graphic equalizer P.C.B.
4. Release 2 connectors (CN351, CN352).



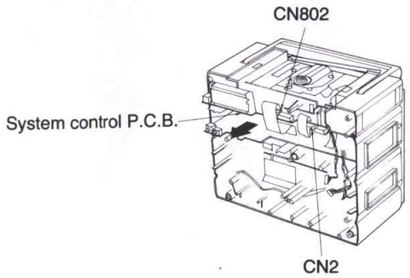
5. Connect two 10-pin flat cable of the extention cable.

•How to check the System Control P.C.B.

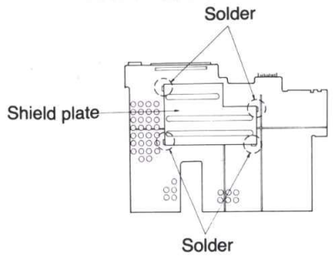
1. Remove the graphic equalizer P.C.B. by following the disassembly instructions in Ref. No. 9 in the Removal of the G. Equalizer P.C.B. (See page 10.)



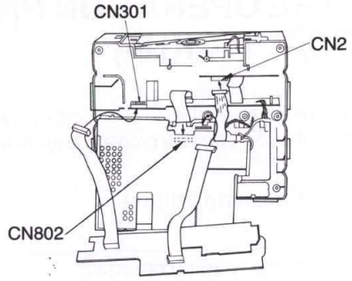
2. Release the connector (CN803).



3. Release 2 connectors (CN2, CN802).
4. Remove the system control P.C.B. in the direction of arrow.



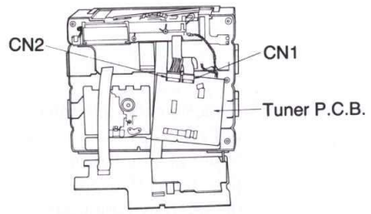
5. Remove 4 solder points.
6. Remove the shield plate.



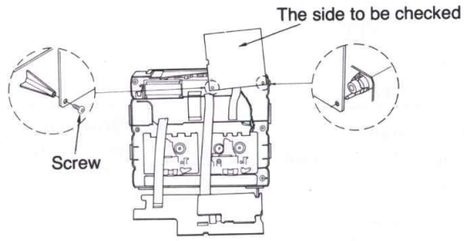
7. Connect two 10-pin flat cables of the extention cable.

•How to check the Tuner P.C.B.

1. Remove the tuner P.C.B. by following the disassembly instructions in Ref. No. 12 in the Removal of the Tuner P.C.B. (See page 12.)



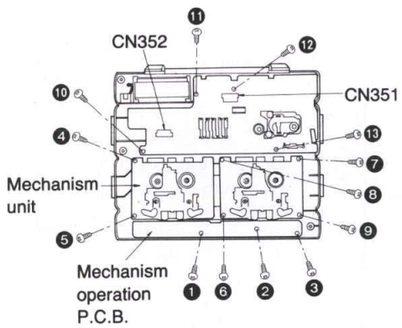
2. Connect 2 connectors (CN1, CN2).
3. Connect two 10-pin flat cables of the extention cable.



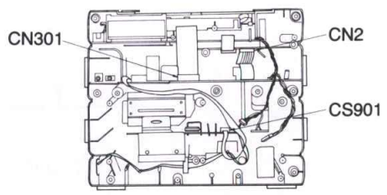
4. Attach the tuner P.C.B. as shown in the figure.

•How to check the AF P.C.B.

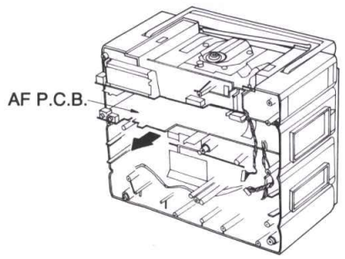
1. Remove the upper cabinet by following the disassembly instructions in Ref. No. 8 in the Removal of the Upper Cabinet. (See page 9.)



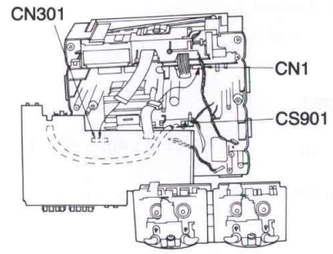
2. Remove 3 screws (❶~❸).
3. Remove the deck operation P.C.B. with the wires connect.
4. Remove 6 screws (❹~❾).
5. Remove the mechanism unit by pulling it to the front with the wires connect.
6. Remove 4 screws (❿~⓭).
7. Remove the graphic equalizer P.C.B.
8. Release 2 connectors (CN351, CN352).



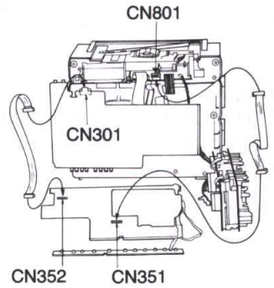
9. Release 3 connectors (CN2, CN301, CS901).



10. Pull out the AF P.C.B.



11. Connect 3 connectors (CN2, CN301, CS901).



12. Connect two 10-pin flat cables of the extention cable.

■ MEASUREMENTS AND ADJUSTMENTS

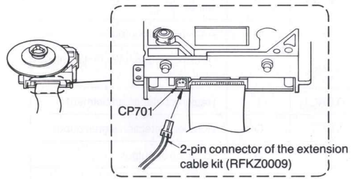
<CD SECTION>

■ The optional extension cable kit composed of a 23-pin flat cable and a 2-pin connector should be used to perform measurement and adjustment of the unit's CD P.C.B.

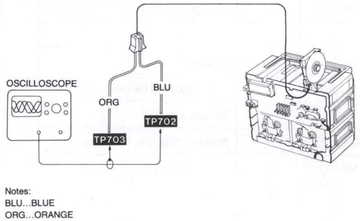
Part number of the Extention Cable Kit: RFKZ0009

●HOW TO ADJUST THE CD P.C.B.

1. Attach the CD unit and load the test disc by following the steps in the section "How to check the CD P.C.B." (See page 43).

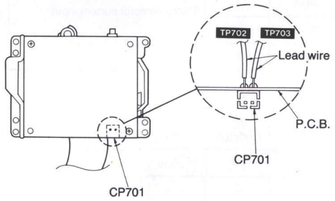


2. Connect the 2-pin connector of the extension cable kit (RFKZ0009) to CP701 as shown in the figure.

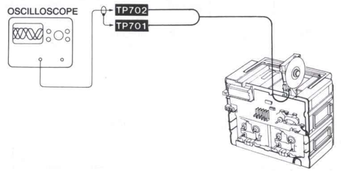


3. Connect the 2-pin connector's orange and blue wires respectively to an oscilloscope as shown in the figure.

●HOW TO ADJUST THE CD P.C.B. IF THE EXTENSION CABLE KIT IS NOT AVAILABLE



1. Solder the lead wire to the connector (CP701) as shown in the figure.



2. Attach the CD unit and load the test disc by following the steps in the section "How to check the CD P.C.B.".

●ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
●Set power source voltage to 15 V DC. ●Set power switch to ON. ●Set function switch to CD.	●Set graphic equalizer control to center. ●Set S-XBS control to minimum. ●Output of signal generator should be no higher than necessary to obtain an output reading.

Caution:
●It is very dangerous to look at or touch the laser beam. (Laser radiation is invisible.)
With the unit turned "on", laser radiation is emitted from the pickup lens.
Avoid exposure to the laser beam, especially when performing adjustments.

Measuring Instruments and Special Tools

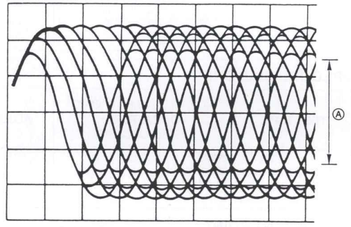
●Test disc
1. Playability test disc (SZZP1054C)
2. Uneven test disc (SZZP1056C)

●Allen wrench (M2.0) (SZZP1101C)
●Oscilloscope
●Lock paint (RZZOL01)

(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 when the traverse deck has not been replaced. Make the electrical adjustments first.

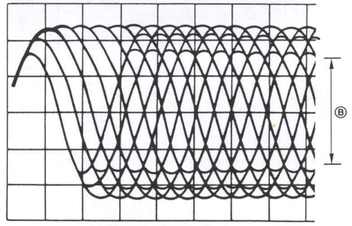
1. Connect the oscilloscope's CH. 1 probe across **TP702** (+) and **TP703** (V-REF) on the Servo P.C.B.
   Oscilloscope setting:
   VOLT ..... 200 mV
   SWEEP ..... 0.5 µsec
   Input coupling ..... AC
2. Switch the player power **ON**, and play track **19** on the test disc (SZZP1056C).
3. Leave the player in Play mode and place it as shown in the figure on the right.
4. Alternately adjust the two mechanical adjusting screws with the 2.0 mm allen wrench (SZZP1101C) until the RF signal amplitude variation on the oscilloscope is minimized. (Shown in Fig. 2)
5. After completing the adjustment, lock the **mechanical adjustments** with lock paint (RZZOL01).



Ⓐ Minimize the variation of amplitude.

(2) BEST EYE (PD BALANCE) ADJUSTMENT

1. Connect the oscilloscope's CH. 1 probe across **TP702** (+)and **TP703** (V-REF) on the Servo P.C.B.
   Oscilloscope setting:
   VOLT ..... 200 mV
   SWEEP ..... 0.5 µsec
   Input coupling ..... AC
2. Switch the player power **ON**, and play the 1 kHz (track 1) on test disc (SZZP1054C).
3. Adjust **VR701** until the RF signal eye pattern amplitude is maximized.



Ⓑ Maximize the amplitude

(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 and verify that no sound skip or noise occurs.

■ ALIGNMENT POINT

●Please refer to Circuit Board Diagram for test point location

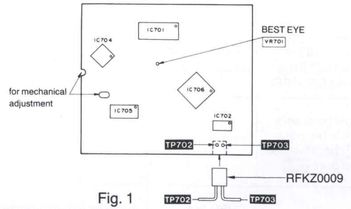


Fig. 1

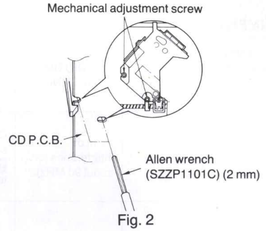


Fig. 2

<TUNER SECTION>

●ALIGNMENT INSTRUCTION

Attach the tuner P.C.B. by following the steps in the section "How to check the Tuner P.C.B.".

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
●Set power source voltage to 15 V DC. ●Set power switch to ON. ●Set function switch to TUNER-AM or FM. ●Set volume control to center. ●Set balance control to center.	●Set graphic equalizer control to center. ●Set S-XBS control to minimum. ●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. 3)	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 600 kHz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 4 and then connect the lead wires of the plug to the measuring instrument.)	T2 (AM IFT)	Adjust for maximum output.

●LW-RF ALIGNMENT

Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	144 kHz	Tuning capacitor fully closed.	〃	L10 (LW OSC Coil)	Adjust for maximum output.
〃	162 kHz	Tune to signal	〃	(*1) L7-1(LW ANT Coil)	Adjust for maximum output. Adjust L7-1 by moving coil along the ferrite core.
〃	270 kHz	〃	〃	CT4 (LW ANT Trimmer)	Adjust for maximum output.

(*1) Fix antenna coil with wax after completing alignment.

●MW-RF ALIGNMENT

〃	522 kHz	Tuning capacitor fully closed.	〃	L9 (MW OSC Coil)	Adjust for maximum output.
〃	603 kHz	Tune to signal.	〃	(*2) L7-2 (MW ANT Coil)	Adjust for maximum output. Adjust L7-2 by moving the ferrite core.
〃	1404 kHz	〃	〃	CT3 (MW ANT Trimmer)	Adjust for maximum output.

(*2) Cement antenna ferrite core 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. 3.)	REMARKS
CONNECTIONS	FREQUENCY				
Connect to test point "-" through ceramic capacitor (0.001 μF). Negative side to test point TP2.	10.7 MHz (SWEEP)	Point of interference (on/ about 90 MHz)	Connect vert. amp. scope to test point TP3. Negative side to test point TP4.	T1 (FM 1st)	Adjust for maximum amplitude.
"	"	"	"	T3 (FM 2nd)	Adjust for maximum amplitude.

•FM DC BALANCE ALIGNMENT

FM SIGNAL GENERTOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT (Shown in Fig. 3)	SPECIFICATION	REMARKS
98 MHz, 60 dB (CW) Connect to test point TP1 through FM dummy antenna. Negative side to TP2.	TP9 ...(+) TP10 ...(−)	T3	0±30 mV	Adjust T3, for 0±30 mV reading on DC voltmeter.

•FM SEPARATION ALIGNMENT

FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
98 MHz, 60 dB (CW) Connect to test point TP1 through FM dummy antenna. Negative side to TP2.	TP5 ...(+) TP6 ...(−)	VR1	19 kHz	Adjust VR1, for 19 kHz ±50 Hz reading on frequency counter.

The parts other than the ones listed below are aligned at the factory before they are supplied.
Therefore, alignment of those parts is unnecessary when used for replacement.

<CASSETTE DECK SECTION>

•ALIGNMENT INSTRUCTION

Attach the tape deck unit by following the step in the section "How to check the Tape Deck" in the step 5.

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
•Set power source voltage to 15 V DC. •Set power switch to ON. •Set function switch to TAPE. •Set volume control to center.	•Set tone graphic equalizer to center. •Set S-XBS control to minimum. •Output of signal generator should be no higher than necessary to obtain an output reading.

•HEAD AZIMUTH ALIGNMENT

TEST TAPE	INDICATOR ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCFM (8 kHz, −20 dB)	Headphones Jack (32Ω) (Fabricate the plug shown in Fig. 4 and then connect the lead wires of the plug to the measuring instrument.)	Azimuth Screw (Shown in Fig. 5.)	maximum output.	1. Playback mode. 2. Adjust for maximum output.

•TAPE SPEED ALIGNMENT

TEST TAPE	INDICATOR ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	REMARKS
QZZCWAT (3 kHz, −10 dB)	Headphones Jack (32Ω) (Fabricate the plug shown in Fig. 4 and then connect the lead wires of the plug to the measuring instrument.)	DECK 2 HIGH SPEED ..... VR301 DECK 1 NORMAL SPEED ..... VR303 DECK 2 NORMAL SPEED ..... VR302 (Shown in Fig. 7.)	1. Short the test point TP1 and TP2, TP2 and TP3 to set the high speed mode. 2. Insert test tape (QZZCWAT) in DECK 1 and start playback in forward direction. •This frequency is defined as **F**. 3. Insert test tape (QZZCWAT) in DECK 2 and start playback in forward direction. 4. Adjust VR301 until the frequency is set to **F±40 Hz**. 5. Open the test point TP1 and TP2, TP2 and TP3 to set the normal speed mode. 6. Insert test tape (QZZCWAT) in DECK 1 and start playback in forward direction. 7. Adjust VR303 until the frequency is set to **3000±40 Hz**. 8. Insert test tape (QZZCWAT) in DECK 2 and start playback in forward direction. 9. Ajust VR302 until the frequency is set to **3000±40 Hz**.

•RECORD BIAS CHECK

TEST TAPE	INDICATOR ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	SPECIFICATION	REMARKS
Use CrO_2 tape and Normal tape	TP6 ...(+) TP4 ...(−) (Shown in Fig. 6.)	——	CrO_2...18.5±1 mV Normal...13±1 mV	•Record mode

•ALIGNMENT POINT

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

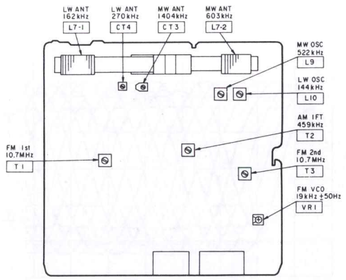


Fig. 3

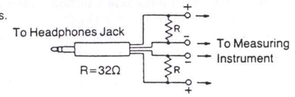


Fig. 4

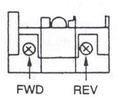
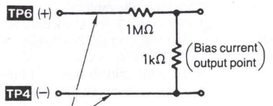


Fig. 5



Keep these cords short. (Line capacitance: 3 pF of less)

•In order not ot influence the bias oscillation, divide the voltage with 1 MΩ and 1 kΩ resistors, and measure the voltage across the 1 kΩ resistor.

Fig. 6

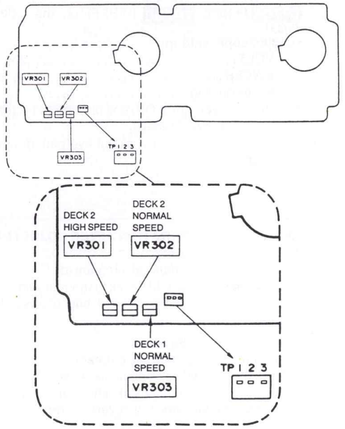


Fig. 7

■ FUNCTION OF IC TERMINALS

•IC701 (AN8800SC-E2)

Pin No.	Mark	I/O Division	Function
1	LDG	I	+5 V input
2	LDP	—	——
3	LD	O	Laser power control output
4	LPD	I	Laser power monitor input
5	GND	—	Ground terminal
6	LDON	I	Laser power control input
7	AMPI	I	RF signal input
8	AMPO	O	RF signal output
9	RFIN	I	RF signal input
10	RFEQ	—	Ground
11	C.AGC	I	AGC detecting capacitor input
12	ARF	O	RF signal output
13	C.SBDO	I	Dropout detecting capacitor input
14	RFDET	O	RF detections signal output
15	BDO	O	Black dropout detection output
16	VCC	I	Power supply (+5 V input)
17	SDO	O	System dropont detection output
18	VAD+	O	A/D converter reference voltage output
19	VREF	O	Reference voltage output
20	VAD−	O	A/D converter reference voltage output
21	OFTR	O	Off track detection output

Pin No.	Mark	I/O Division	Function
22	PLAY	I	Play signal input
23	WVEL	I	High speed signal input
24	TES	I	Tracking error signal input
25	PTO	—	——
26	PTI	I	Traverse speed detection signal input
27	PBO	—	——
28	POT	I	Position detecting buffer input
29	CROSS	O	Tracking error cross detection output
30	TE	O	Tracking error output
31	TEBAL	I	Tracking error gain detecting filter input
32	TBAL	I	Tracking balance adjustment
33	VDET	O	Vibration detection signal ouput
34	FE	O	Focus error output
35	EBL2	I	Focus balance adjustment
36	FBL1		
37	VCC	I	Power supply (+5 V input)
38	GND	—	Ground
39	PDBD	I	Photo detector current input
40	PDA	I	
41	PDAD	I	
42	PDB	I	

•IC702 (TCA0372DM2R)

Pin No.	Mark	I/O Division	Function
1	GND	—	Ground
2	NC	—	——
3	VOUT1	O	Spindle motor control output
4	VCC	I	Power supply (+7.5 V input)
5	VOUT2	O	Spindle motor control output
6	NC	—	——
7	NC	—	——
8	GND	—	Ground

Pin No.	Mark	I/O Division	Function
9	GND	—	Ground
10	NC	—	——
11	−VIN2	I	Spinde motor control input
12	+VIN2		
13	+VIN1		
14	−VIN1		
15	NC	—	——
16	GND	—	Ground

•IC703 (AN8377N): Motor Dirve

Pin No.	Mark	I/O Division	Function
1	PVCC	I	Driver power supply (+8.9 input)
2	VCC	I	Power supply (+8.9 V input)
3	TB	O	External transistor base driving output
4	VMON	O	Voltage output
5	TVDI	I	Traverse error signal input
6	FDI	I	Focus error signal input
7	TDI	I	Tracking error signal input
8	VREF	I	Reference voltage input
9	TD−	O	Inverting output of tracking driver
10	TD+	O	Non-inverting output of tracking driver
11	FD−	O	Inverting output of focus driver
12	FD+	O	Non-inverting output of focus driver
13	TVD−	O	Inverting output of traverse driver
14	TVD+	O	Non-inverting output of traverse driver
15	RESET	O	Reset signal output
16	PC	I	PC input (connect to GND)

•IC706 (MN6626)

Pin No.	Mark	I/O Division	Function
1	AVSS	—	Ground
2	IREF	I	Reference current input
3	ARF	I	RF signal input
4	DRF	I	DSL bias input
5	DSLF	O	DSL loop filter
6	PLLF	I	PLL loop filter
7	AVDD	I	Power supply (+5 V input)
8	RSEL	I	+5 V input
9 ~ 16	TBUS7 ~ TBUSO	—	Test terminal (Ground)
17	FLAG	—	———
18	IPFLAG		
19	FCLK		
20	BTYCK		
21	WDCK		
22	/RST	I	Reset signal input
23	TX	O	Digital audio interface signal output
24	LDG	—	———
25	RDG		
26	SRDATA	O	Serial data output
27	SCK	O	Serial bit clock output
28	LRCK	O	Clock output
29	XCK	O	Clock output (f=16.9344 MHz)
30	PMCK	—	———
31	CSEL	I	+5 V input
32	PSEL	—	Ground
33	×1	I	Clock input (f=16.9344 MHz)
34	×2	—	———
35	VSS	—	Ground
36	SUBQ	O	Sub-code (Q data) output
37	SQCK	I	Sub-code (Q data) clock input f=7.3 kHz
38	/CLDCK	—	———
39	BLKCK	O	Sub-code block (Q data) clock f=75 Hz
40	DEMPH	O	De-emphasis ON signal output
41	MEMP	I	Enphasis signal input
42	MLD	I	Command load signal input
43	MCLK	I	Command clock signal input
44	MDATA	I	Command data input
45	DMUTE	I	Muting control signal input
46	SMCK	O	Clock output (f=4.2336 MHz)
47	STAT	O	Status signal output
48	CRC	—	———
49	SUBC	—	———
50	SBCK	I	Clock for sub-code serial output
51	/TRON	I	Tracking servo ON signal input
52	CLVS	O	Spindle servo signal output
53	PC	—	———
54	ECM	O	Spindle motor control signal output
55	ECS	O	Spindle motor control signal output
56	VDD	I	Power supply (+5 V input)
57	/TEST	I	+5 V input
58	SSEL	I	+5 V input
59	MSEL	—	———
60	RESY	—	———
61	DO	I	Drop out signal input
62	EFM	—	———
63	PCK		
64	PDO		

•IC704 (MN6650)

Pin No.	Mark	I/O Division	Function
1	TES	O	Tracking error signal output
2	PLAY	O	Play signal output
3	RFDET	I	RF detection signal input
4	DO	I	Dropout signal input
5	OFT	I	Off track signal input
6	ARF	I	RF signal input
7	WVEL	O	High speed status signal output
8	PBO	I	Potension buffer signal input
9	TE	I	Tracking error signal input
10	FE	I	Focus error signal input
11	VR2	I	A/D reference voltage input
12	VR1	I	A/D reference voltage input
13	LDON	O	Laser power control signal output
14	VSS	—	Ground
15	AVSS	—	Ground
16	AVDD	I	Power supply (+5 V input)
17	VDD	I	Power supply (+5 V input)
18	TRV	O	Traverse servo control output
19	VTD	O	Traverse drive output
20	FOD	O	Focus drive output
21	TRD	O	Tracking drive output
22	KICK	O	Track kick signal output

Pin No.	Mark	I/O Division	Function
23	/TEST	I	+5 V input
24	VSS	—	Ground
25	CLVS	I	Spindle servo signal input
26	/TRON	O	Tracking servo signal output
27	MDATA	I	Command data input
28	MCLK	I	Command clock signal input
29	MLD	I	Command load signal input
30	SENSE	O	Sense signal output
31	/FLOCK	O	Focus servo signal output
32	/TLOCK	I	Tracking servo signal output
33	/RST	I	Reset signal input (L: Reset)
34	XI	I	Clock input (fXI=16.9344 MHz)
35	TO	—	Open
36	T1		
37	T2		
38	T3		
39	T4	—	Ground
40	T5		
41	T6		
42	VDET	I	Vibration detecting signal input
43	TBAL	O	Tracking balance adjustment output
44	TRCRS	I	Track cross signal input

•IC705 (MN6475)

Pin No.	Mark	I/O Division	Function
1	LRCK	I	Clock input
2	BCLK	I	Serial data bit clock input
3	SRDATA	I	Serial data input
4	COT1	—	Ground
5	COT2		
6	TEST		
7	VDD	I	Power supply (+5 V input)
8	X2	—	Clock (f=33.8688 MHz)
9	X1		
10	VSS	—	Ground
11	AVDDL	I	Power supply (+5 V input)
12	OUT.L	O	AF signal output (Lch)

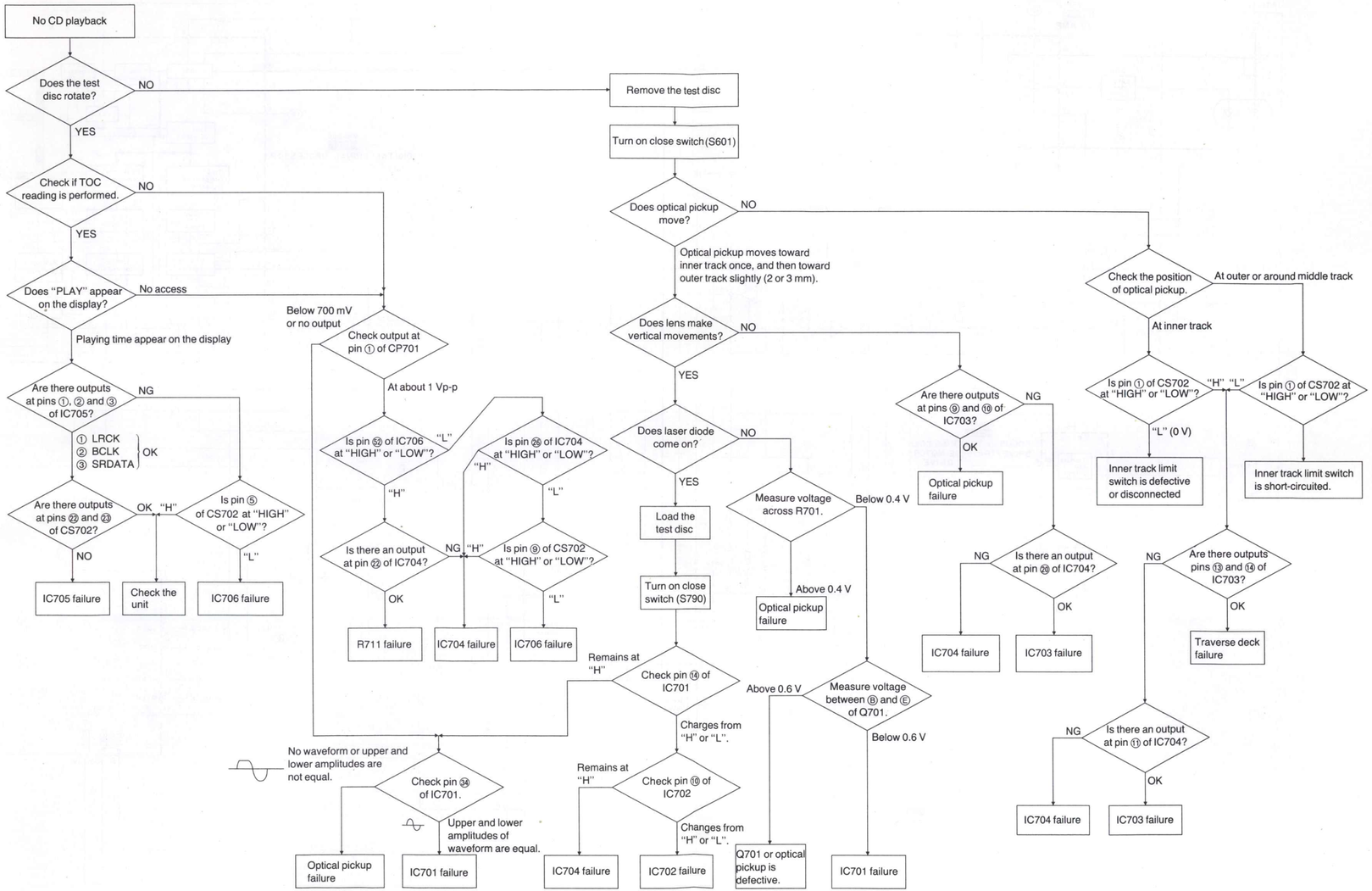
Pin No.	Mark	I/O Division	Function
13	AVSS.L	—	Ground
14	AVSS.R	—	Ground
15	OUT.R	O	AF signal output (Rch)
16	AVDD.R	I	Power supply input
17	/RST	I	Reset signal input
18	PWM	—	———
19	TP	—	Ground
20	WVEL	I	High speed status signal input
21	DEMPH	I	De-emphasis signal input
22	CSEL	I	+5 V input
23	192FS	—	———
24	768FS	O	Clock output (f=16.9344 MHz)

•IC601 (MN1872410RRM)

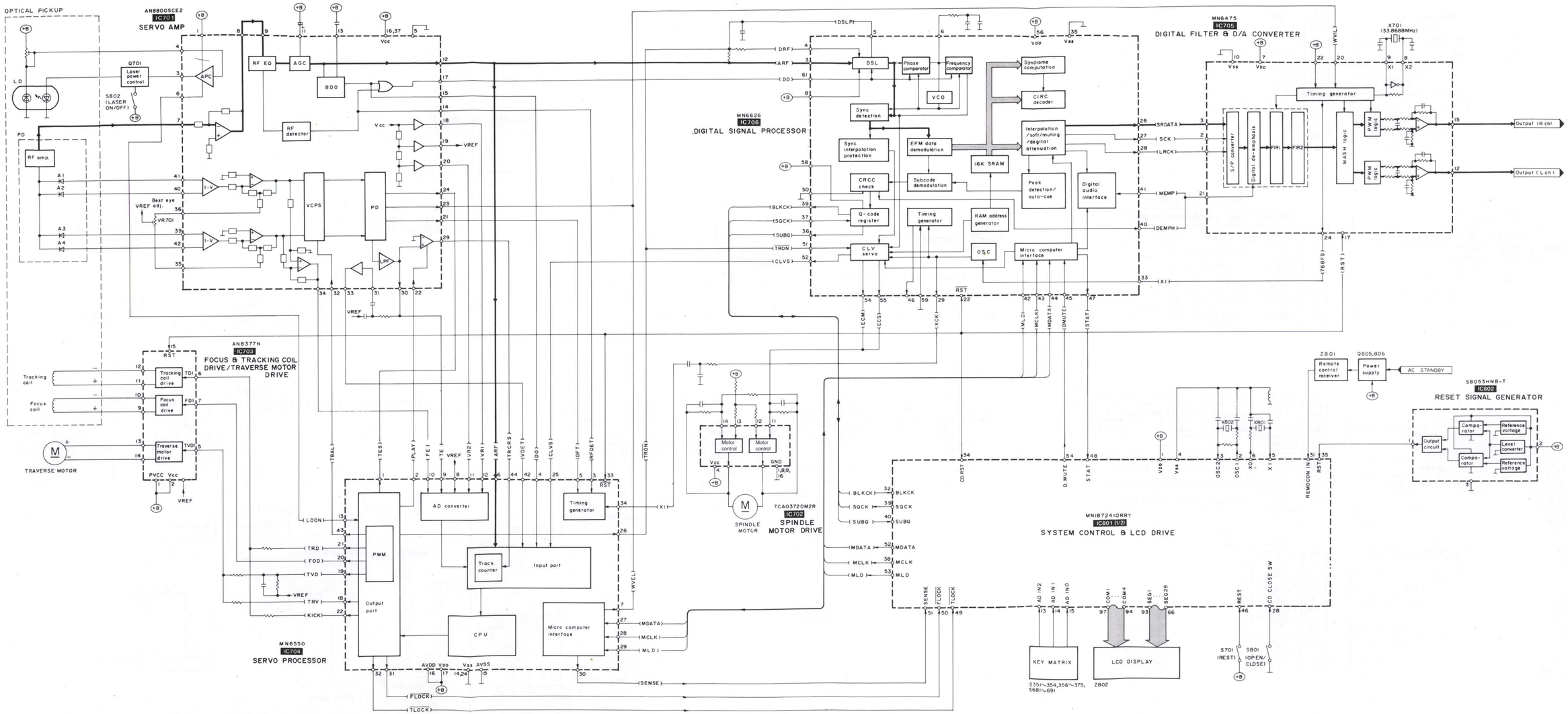
Pin No.	Mark	Function
1	VDD	Power supply (+5 V input)
2	OSC1	Clock output (4 MHz)
3	OSC2	Clock input (4 MHz)
4	VSS	GND
5	XI	Clock input (32 kHz)
6	XO	Clock output (32 kHz)
7	VREF−	A/D converter reference voltage (GND)
8	ADIN7	DECK 2 front side record prevention tab detection. "HIGH"...Recording is not possible "LOW"...Recording is possible
9	ADIN6	DECK 2 cassette tape insertion detection. "HIGH"...Playback is not possible "LOW"...Playback is possible
10	ADIN5	DECK1 cassette tape insertion detection. "HIGH"...Playback is not possible "LOW"...Playback is possible
11	ADIN4	Power supply circuit operation detection.
12	ADIN3	———
13	ADIN2	Operation signal input
14	ADIN1	
15	ADIN0	
16	VREF+	A/D converter reference voltage (+5 V)
17	BP3	———
18	MKCLK	Deck control data output
19	BEEP	Beep signal output
20	MKDAT	Deck control data output
21	PLL CE	PLL tuner strove signal output
22	PLL DI	PLL tuner data signal output
23	PLL CL	PLL tuner clock signal output
24	M/$\overline{ST}$	Tuner stereo/mono select signal output
25	$\overline{STEREO}$	Tuner stereo signal input
26	$\overline{TUNED}$	Tuning signal input
27	ATT6	ATLS control signal output
28	CD SLOSE	CD cover open/close detection signal input
29	MUTE A	AF muting signal output
30	POWER CONT	Power AMP control signal output
31	REMOCON IN	Remote control signal input
32	BLKCK	CD sub code block clock signal input
33	$\overline{MCD\ OUT}$	CD line out control
34	RESET	CD reset signal input

Pin No.	Mark	Function
35	RST	System control reset signal input
36	VOL UP	Motor (for Volume) control signal output
37	VOL DOWN	Motor (for Volume) control signal output
38	MCLK	CD signal process IC control signal output
39	SQCD	CD sub-code clock input
40	SUBQ	CD sub-code data input
41	SBOO	———
42	SYNC	———
43	CM	———
44	P77	———
45	9K/10K	AM tuning step select terminal
46	RESET SW	Reset switch (S701) signal input
47	P74	———
48	STAT	CD status signal input
49	TLOCK	CD tracking signal input
50	FLOCK	CD focus lock signal input
51	SENSE	CD sense signal input
52	MDATA	CD signal process IC data output
53	MLD	CD signal process strove signal input
54	DMUTE	CD muting signal output
55	FUNCTION	Power supply control signal output
56	ATT3	ATLS control signal output
57	TAPE H	Input selector control signal output (TAPE)
58	CD H	Input selector control signal output (CD)
59	TUNER H	Input selector control signal output (TUNER)
60	DES 1	———
61	DES 2	———
62	—	———
63	REMOCON STBY	Remote control sensor power control
64	—	———
65	—	———
66 ~ 94	SEG 27 ~ SEG 0	LCD segment signal output
95 ~ 97	COM 2 ~ COM 0	LCD common signal output
98	VLC3	LCD bias reference voltage input V3
99	VLC2	LCD bias reference voltage input V2
100	VLC1	LCD bias reference voltage input V1

■ TROUBLESHOOTING GUIDE

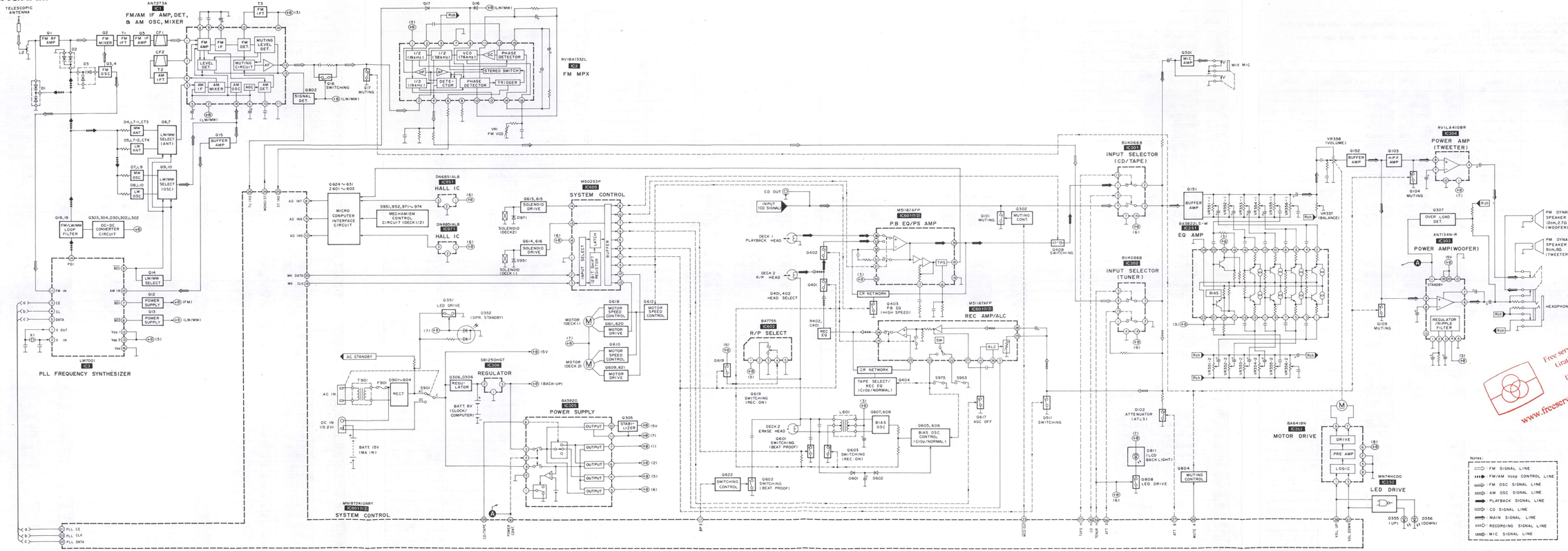


■ BLOCK DIAGRAM •CD CIRCUIT



RX-DT680 RX-DT680

■ BLOCK DIAGRAM



RX-DT680 RX-DT680

■ REPLACEMENT PARTS LIST

Notes : ＊ Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.When replacing any of these components use only manufacturer's specified parts.
＊ 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.
＊ Ⓜ Indicates in Remarks columns parts that are supplied by MESA.

Ref.No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC1	AN7273A	I. C, FM/AM. IF	
IC2	RV1BA1332L	I. C, FM MPX	
IC3	LM7001	I. C, PLL FREQ	
IC301, 302	BU4066B	I. C, INPUT SELECTOR	
IC303	AN7134N-R	I. C, POWER AMP	(WOOFER DRIVE)
IC304	LA4108R	I. C, POWER AMP	(TWEETER DRIVE)
IC305	BA3920	I. C, POWER SUPPLY CONT.	
IC306	S81250HGT	I. C, REGULATOR	
IC351	BA3822LS	I. C, G. EQ AMP	
IC352	MN74HC00	I. C, LED DRIVE	
IC353	BA6418N	I. C, MOTOR DRIVE	
IC601	M51167AFP	I. C, HEAD SELECT	
IC602	BA7755	I. C, R/P SELECT	
IC605	M50253P	I. C, SYSTEM CONTROL	
IC701	AN8800SCE2	I. C, SERVO AMP	
IC702	TC4037ZEM2R	I. C, SPINDLE MOTOR DRIVE	
IC703	AN8377N	I. C, TRAVERSE MOTOR DRIVE	
IC704	MN6650	I. C, DIGITAL SERVO PROCESSOR	
IC705	MN6475	I. C, DIGITAL FILTER	
IC706	MN6626	I. C, D. SIGINAL PROCESSOR	
IC801	MN1872410RHY	I. C, SYSTEM CONT.	
IC802	S8053HNB-T	I. C, RESET SIGNAL	
IC951, 971	DN6851ALB	I. C, HALL	
		IC PROTECTOR	
ICP1	RAHICPN157A	IC PROTECTOR	
ICP2	RAHICPN107A	IC PROTECTOR	
ICP3, 4	RAHICPN57A	IC PROTECTOR	
		TRANSISTOR(S)	
Q1	2SK544F-AC	TRANSISTOR	
Q2, 3	2SC2786M	TRANSISTOR	
Q4	2SC1675L1L2	TRANSISTOR	
Q5	2SC829D	TRANSISTOR	
Q6, 7	2SA720STA	TRANSISTOR	
Q9	2SA720STA	TRANSISTOR	
Q10	2SA720STA	TRANSISTOR	
Q12	2SA1127-S	TRANSISTOR	
Q13, 14	BN1L3NTA	TRANSISTOR	Ⓜ
Q15	2SC829CTA	TRANSISTOR	
Q16	2SA1127-S	TRANSISTOR	
Q17	2SC2785F	TRANSISTOR	

Ref.No.	Part No.	Part Name & Description	Remarks
Q18, 19	2SC2784FTA	TRANSISTOR	
Q101	2SC1684RTA	TRANSISTOR	
Q102	RVTDTC114ES	TRANSISTOR	
Q103	2SC1684URTA	TRANSISTOR	
Q104, 105	2SC2001K1TA	TRANSISTOR	
Q151, 152	2SC1684URTA	TRANSISTOR	
Q201	2SC1684RTA	TRANSISTOR	
Q202	RVTDTC114ES	TRANSISTOR	
Q203	2SC1684URTA	TRANSISTOR	
Q204, 205	2SC2001K1TA	TRANSISTOR	
Q251, 252	2SC1684URTA	TRANSISTOR	
Q301	2SC1684URTA	TRANSISTOR	
Q302	RVTDTA144TST	TRANSISTOR	
Q303, 304	2SC1684RTA	TRANSISTOR	
Q305	2SB1185E	TRANSISTOR	
Q306, 307	2SC1684RTA	TRANSISTOR	
Q351	RVTDTC114ES	TRANSISTOR	
Q401, 402	2SJ40CDTA	TRANSISTOR	
Q403, 404	RVTDTC144TST	TRANSISTOR	
Q408	2SJ40CDTA	TRANSISTOR	
Q411	RVTDTC144TST	TRANSISTOR	
Q501, 502	2SJ40CDTA	TRANSISTOR	
Q503, 504	RVTDTC144TST	TRANSISTOR	
Q508	2SJ40CDTA	TRANSISTOR	
Q511	RVTDTC144TST	TRANSISTOR	
Q601, 602	2SC3311AR	TRANSISTOR	
Q603	2SD1450RTA	TRANSISTOR	
Q605	RVTDTC124TST	TRANSISTOR	
Q606	2SC1740STA	TRANSISTOR	
Q607, 608	2SD1450RTA	TRANSISTOR	
Q609	2SD965Q	TRANSISTOR	
Q610	2SK301QTA	TRANSISTOR	Ⓜ
Q611	2SD965Q	TRANSISTOR	
Q612	RVTDTC144TST	TRANSISTOR	
Q613, 614	2SB621R	TRANSISTOR	
Q615, 616	RVTDTC143TST	TRANSISTOR	
Q617	RVTDTC144TST	TRANSISTOR	
Q618	2SK301QTA	TRANSISTOR	Ⓜ
Q619-621	RVTDTA143XST	TRANSISTOR	
Q622	RVTDTC144TST	TRANSISTOR	
Q624-628	2SC1740STA	TRANSISTOR	
Q629	RVTDTC114TST	TRANSISTOR	
Q630, 631	2SC1740STA	TRANSISTOR	
Q701	2SB709S	TRANSISTOR	
Q802	2SC1740SQ	TRANSISTOR	
Q804	RVTDTC113ZST	TRANSISTOR	

Ref.No.	Part No.	Part Name & Description	Remarks
Q805	RVTDTA143XST	TRANSISTOR	
Q806	RVTDTC143XST	TRANSISTOR	
Q808	2SC2001K1TA	TRANSISTOR	
		DIODE(S)	
D1	1SV147T4MATU	DIODE	
D2	1SV147T4MATU	DIODE	
D3	1SV147T4MATU	DIODE	
D4, 5	RVDSVC321	DIODE	
D7, 8	RVDSVC321	DIODE	
D10, 11	RVD1SS133TA	DIODE	
D12	RVDMTZ5R6BTA	DIODE	
D15-18	RVD1SS133TA	DIODE	
D001	RVDMTZ11BTA	DIODE	
D002	RVD1SS133TA	DIODE	
D003 .	RVDMTZ6R8BTA	DIODE	
D004, 305	RVD1SS133TA	DIODE	
D006	RVDMTZ11BTA	DIODE	
D007	RVD1SS133TA	DIODE	
D010	RVDMTZ6R8BTA	DIODE	
D352	LN11CP23	DIODE	
D353, 354	RVD1SS133TA	DIODE	
D355, 356	SLR33VC160	LED	Ⓜ
D357	RVD1SS133TA	DIODE	
D358	RVDMTZ6R2BTA	DIODE	
D601	RVD1SS133TA	DIODE	
D602	RVDMTZ4R7BTA	DIODE	
D603, 604	RVD1SS133TA	DIODE	
D701	WA110TW	DIODE	
D802	RVD1SS133TA	DIODE	
D804, 805	RVD1SS133TA	DIODE	
D811	LN083493P	DIODE	Ⓜ
D901-904	1N5402BM21	DIODE	Ⓜ
D905	RVD1SS133TA	DIODE	
D951, 971	RVD1SS133TA	DIODE	
		VARIABLE RESISTOR(S)	
VR1	EVNDXAA00B14	V. R, FM VCO ADJ.	
VR351	EWC2UAF2054D	V. R, S-XBS LEVEL	Ⓜ
VR352	EWAJQAW05G54	V. R, G. EQ(100Hz)	Ⓜ
VR353	EWAJQAW05G54	V. R, G. EQ(330Hz)	Ⓜ
VR354	EWAJQAW05G54	V. R, G. EQ(1KHz)	Ⓜ
VR355	EWAJQAW05G54	V. R, G. EQ(3. 3KHz)	Ⓜ
VR356	EWAJQAW05G54	V. R, G. EQ(10KHz)	Ⓜ
VR357	EWAJUAW09G15	V. R, BALANCE CONT.	Ⓜ
VR358	EWCD7A027B54	V. R, VOLUME CONT.	
VR601	RVNCC14B1T-A	V. R, TAPE SPEED ADJ.	(HIGH)
VR602	RVNCC24B1T-A	V. R, TAPE SPEED ADJ.	(NORMAL)
VR603	RVNCC73B1T-A	V. R, TAPE SPEED ADJ.	
VR701	EVNDXAA00B14	V. R, BEST EYE ADJ.	

Ref.No.	Part No.	Part Name & Description	Remarks
		COMPONENT COMBINATION(S)	
Z601-603	EXBFBL306SYV	COMPONENT COMBINATION	
Z801	RCD0002	COMPONENT COMBINATION	
Z802	RSL5041-L	LCD	Ⓜ
		COIL(S)	
L1	RLQ7C30S4W-0	COIL	
L2	RLM4Y001-0	COIL	Ⓜ
L3	RLM4Y002-0	COIL	Ⓜ
L4	RLQ7P1R2KT-Y	COIL	
L7	RLV6C004-0	COIL	Ⓜ
L9	RLQ2B126-M	COIL	Ⓜ
L10	RLQ1B15-M	COIL	Ⓜ
L15	RLQ7P101KT-Y	COIL	
L16	RLQ7P1R2KT-Y	COIL	
L17	RLQ7P100KT-Y	COIL	
L20	RLQ7C30S1W-0	COIL	(E)
L301	RLQ7P220KT-Y	COIL	
L302	RLQ98G07-M	COIL	
L303, 304	RLQ7P221KT-Y	COIL	
L305	RLQ2B4R7KT-D	COIL	Ⓜ
L351	RLQ2B101KT-D	COIL	
L352, 353	RLQ4Y72K-Z	COIL	
L354	RLQ7P101KT-Y	COIL	
L355	RLQ7P221KT-Y	COIL	
L356	RLQ2B102K-D	COIL	
L601	RLO8C002-T	COIL	
L602	RLQ2B470KT-D	COIL	
L603	RLQ2B4R7KT-D	COIL	Ⓜ
L681, 682	RLQ7P101KT-Y	COIL	
L801, 802	RLQ7P2R2KT-Y	COIL	
L803	RLQ2B1R8KT-D	COIL	
L804-807	RLQ7P2R2KT-Y	COIL	
L811-815	RLQ7P2R2KT-Y	COIL	
L817, 818	RLQ7P2R2KT-Y	COIL	
L820	RLQ7P2R2KT-Y	COIL	
L821	RLQ7P220KT-Y	COIL	
L901, 902⚠	RLQ2B220KT-D	COIL	
		TRANSFORMER(S)	
T1	RL14B153-MB	TRANSFORMER	
T2	RL12B153-M	TRANSFORMER	
T3	SL14B524-Z	TRANSFORMER	
T901 ⚠	RTPIM1B001-X	POWER TRANSFORMER	Ⓜ
		FILTER(S)	
CF1	RLFFETWNA01L	CERAMIC FILTER	
CF2	RVFSF2459HL3	CERAMIC FILTER	Ⓜ

Ref.No.	Part No.	Part Name & Description	Remarks
		OSCILLATOR(S)	
X1	SVQ49U722T-D	OSCILLATOR	Ⓜ
X701	RSX233M6M01T	OSCILLATOR	
X801	RSXD32K7S02	OSCILLATOR	Ⓜ
X802	RVBCSA4R0MGT	OSCILLATOR	
		FUSE(S)	
F901 ⚠	XBA2C40TB0	FUSE	
		SWITCH(ES)	
S351	EVQ21405R	SW, OPERATION	
S352	EVQ21405R	SW, TAPE	
S353	EVQ21405R	SW, TUNER	
S354	EVQ21405R	SW, CD	
S356	EVQ21405R	SW, TIME SET/TUN	
S357	EVQ21405R	SW, TIMER-REC	
S358	EVQ21405R	SW, SLEEP	
S359	EVQ21405R	SW, PLAY-TIMER	
S360	EVQ21405R	SW, TIME SET/TUNING-	
S361	EVQ21405R	SW, TIMER CHECK	
S362	EVQ21405R	SW, TIME ADJUST	
S363	EVQ21405R	SW, STOP	
S364	EVQ21405R	SW, PAUSE	
S365	EVQ21405R	SW, FM MODE/B. P.	
S366	EVQ21405R	SW, EDIT MODE	
S367	EVQ21405R	SW, SKIP/SEARCH	
S368	EVQ21405R	SW, PRESET TUNING	
S369	EVQ21405R	SW, TUNING MEMORY	
S370	EVQ21405R	SW, SKIP/SEARCH	
S371	EVQ21405R	SW, TAPE LENGTH	
S372	EVQ21405R	SW, PRESET TUNING	
S373	EVQ21405R	SW, ATLS	
S374	EVQ21405R	SW, SET	
S375	EVQ21405R	SW, PLAY	
S681	EVQ21405R	SW, DECK STOP	
S682	EVQ21405R	SW, PLAYBACK(REV)	
S683	EVQ21405R	SW, FAST/TPS	
S684	EVQ21405R	SW, DECK1/2	
S685	EVQ21405R	SW, COUNTER RESET	
S686	EVQ21405R	SW, PLAY BACK(FWD)	
S687	EVQ21405R	SW, FAST/TPS	
S688	EVQ21405R	SW, REVERSE MODE	
S689	EVQ21405R	SW, REC PAUSE	
S690	EVQ21405R	SW, NORMAL	
S691	EVQ21405R	SW, HIGH	
S701	SSH05-E	SW, REST	
S801	RSHLA012-U	SW, OPEN/CLOSE	
S802	RSHLA012-U	SW, LASER ON/OFF	

Ref.No.	Part No.	Part Name & Description	Remarks
S901 ⚠	RJJ1SE01-H	SW, AC/DC SELECT.	
S951	RSHLA892B-U	SW, MODE DETECT(1)	
S952	RSHLA90YB-U	SW, TAPE DETECT(1)	
S953	RSHLA90YB-U	SW, Cr02 DETECT(1)	
S971	RSHLA892B-U	SW, MODE DETECT(2)	
S972	RSHLA90YB-U	SW, TAPE DETECT(2)	
S973	RSHLA90YB-U	SW, TAB DETECT(2)	(REV)
S974	RSHLA90YB-U	SW, TAB DETECT(2)	(FWD)
S975	RSHLA90YB-U	SW, Cr02 DETECT(2)	
		CONNECTOR	
CN1	SJT3711	CONNECTOR	
CN2	SJT3909	CONNECTOR	
CN3	RJP2G182ZA	CONNECTOR	
CN301	RJS1A6821	CONNECTOR	Ⓜ
CN351, 352	RJT0030310M1	CONNECTOR(10P)	
CN353	RJS3T52A	SOCKET	
CN354-356	SJS50581BB	SOCKET(5P)	
CN801	RJU0030310M1	SOCKET(10P)	
CN802	RJS1A6821	CONNECTOR	Ⓜ
CN803	RJS1A6823	CONNECTOR	Ⓜ
CP1	RJP2G172A	PLUG	(E)
CP301	RJU0030310M1	SOCKET(10P)	
CP351-353	SJT30549BB1	CONNECTOR	
CP601	RJP5G182A	CONNECTOR	
CP602	SJTD413	CONNECTOR	
CP607	SJTD1013	CONNECTOR	
CP609	RJP9G182A	CONNECTOR	
CP701, 702	RJP2G172A	PLUG	
CP703	RJP4G172A	PLUG	
CS701	RJU035T016-1	CONNECTOR	
CS702	RJS1A6723	CONNECTOR	
CS901	SJT30444-H	CONNECTOR	
		TRIMMER	
CT3	RCV10AF1T-S	TRIMMER CAPACITOR	
CT4	ECRLA030E53R	TRIMMER CAPACITOR	
		JACK(S)	
JK1	RJJ92M02-H	EXT ANT	(E) Ⓜ
JK301	RJJ1D252A-C	MIC	
JK302	RJF10992A	CD OUT	
JK303	RJF10989A-H	SP	
JK304	RJF10989A-H	SP	
JK305	RJJ3BTD1-1H	HEADPHONES	
JK901 ⚠	RJJ1SE01-H	AC IN	
JK902 ⚠	RJJB3ZD-C	DC IN	

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

Ref.No.	Part No.	Values & Remarks
		RESISTORS
R1	ERDS2TJ470	1/4W 47
R2	ERDS2TJ102	1/4W 1K
R3	ERDS2TJ104	1/4W 100K
R4	ERDS2TJ104	1/4W 100K
R5	ERDS2TJ470	1/4W 47
R7	ERDS2TJ222	1/4W 2.2K
R8	ERDS2TJ104	1/4W 100K
R9	ERDS2TJ103	1/4W 10K
R10	ERDS2TJ563	1/4W 56K
R11	ERDS2TJ471	1/4W 470
R12	ERDS2TJ224T	1/4W 220K
R13	ERDS2TJ471	1/4W 470
R14	ERDS2TJ473	1/4W 47K
R15	ERDS2TJ102	1/4W 1K
R16	ERDS2TJ101	1/4W 100
R17	ERDS2TJ332	1/4W 3.3K
R18	ERDS2TJ334	1/4W 330K
R19-21	ERDS2TJ331	1/4W 330
R22	ERDS2TJ103	1/4W 10K
R23	ERDS2TJ151	1/4W 150
R24	ERDS2TJ562	1/4W 5.6K
R25	ERDS2TJ332	1/4W 3.3K
R26	ERDS2TJ102	1/4W 1K
R27	ERDS2TJ104	1/4W 100K
R28	ERDS2TJ562	1/4W 5.6K
R29	ERDS2TJ681	1/4W 680
R30	ERDS2TJ683	1/4W 68K
R31	ERDS2TJ102	1/4W 1K
R32	ERDS2TJ682T	1/4W 6.8K
R33, 34	ERDS2TJ104	1/4W 100K
R36, 37	ERDS2TJ103	1/4W 10K
R39, 40	ERDS2TJ104	1/4W 100K
R44	ERDS2TJ103	1/4W 10K
R47	ERDS2TJ103	1/4W 10K
R49	ERDS2EJ121	1/4W 120
R50	ERDS2TJ102	1/4W 1K
R51	ERDS2TJ222	1/4W 2.2K
R52	ERDS2TJ471	1/4W 470
R53	ERDS2TJ683	1/4W 68K
R54	ERDS2TJ153	1/4W 15K
R55	ERDS2TJ561	1/4W 560
R56	ERDS2TJ222	1/4W 2.2K
R57	ERDS2TJ472	1/4W 4.7K
R58	ERDS2TJ103	1/4W 10K
R59	ERDS2TJ222	1/4W 2.2K
R60	ERDS2TJ151	1/4W 150

Ref.No.	Part No.	Values & Remarks
R61	ERDS2TJ222	1/4W 2.2K
R62	ERDS2TJ103	1/4W 10K
R63	ERDS2TJ102	1/4W 1K
R68	ERDS2TJ391	1/4W 390
R69-71	ERDS2TJ103	1/4W 10K
R72	ERDS2TJ104	1/4W 100K
R73	ERDS2TJ103	1/4W 10K
R74-76	ERDS2TJ224T	1/4W 220K
R77	ERDS2TJ472	1/4W 4.7K
R78	ERDS2TJ103	1/4W 1K
R81	ERDS2TJ102	1/4W 1K
R91	ERDS2TJ151	1/4W 150 (E)
R92	ERDS2TJ101	1/4W 100 (E)
R101	ERDS2TJ823T	1/4W 82K
R102	ERDS2TJ153	1/4W 15K
R103	ERDS2TJ473	1/4W 47K
R104	ERDS2TJ223	1/4W 22K
R105	ERDS2TJ563	1/4W 56K
R106	ERDS2TJ393	1/4W 39K
R107	ERDS2TJ223	1/4W 22K
R108	ERDS2TJ183T	1/4W 18K
R109	ERDS2TJ123	1/4W 12K
R110	ERDS2TJ223	1/4W 22K
R111	ERDS2TJ472	1/4W 4.7K
R112	ERDS2TJ561	1/4W 560
R113	ERDS2TJ152	1/4W 1.5K
R114	ERDS2TJ102	1/4W 1K
R115	ERDS2TJ223	1/4W 22K
R116	ERDS2TJ101	1/4W 100
R117	ERDS2TJ152	1/4W 1.5K
R118	ERDS2TJ2R7T	1/4W 2.7
R119	ERDS2TJ2R2T	1/4W 2.2
R120	ERDS2TJ221	1/4W 220
R121	ERDS2TJ224T	1/4W 220K
R122	ERDS2TJ151	1/4W 150
R123	ERDS2TJ472	1/4W 4.7K
R151	ERDS2TJ105T	1/4W 1M
R152, 153	ERDS2TJ472	1/4W 4.7K
R154	ERDS2TJ561	1/4W 560
R156	ERDS2TJ682T	1/4W 6.8K
R157	ERDS2TJ471	1/4W 470
R158	ERDS2TJ222	1/4W 2.2K
R181	ERDS2TJ183T	1/4W 18K
R182	ERDS2TJ101	1/4W 100
R183	ERDS2TJ474	1/4W 470K
R184	ERDS2TJ271	1/4W 270
R185	ERDS2TJ681	1/4W 680
R201	ERDS2TJ823T	1/4W 82K
R202	ERDS2TJ153	1/4W 15K

Ref.No.	Part No.	Values & Remarks
R203	ERDS2TJ473	1/4W 47K
R204	ERDS2TJ223	1/4W 22K
R205	ERDS2TJ563	1/4W 56K
R206	ERDS2TJ393	1/4W 39K
R207	ERDS2TJ223	1/4W 22K
R208	ERDS2TJ183T	1/4W 18K
R209	ERDS2TJ123	1/4W 12K
R210	ERDS2TJ223	1/4W 22K
R211	ERDS2TJ472	1/4W 4.7K
R212	ERDS2TJ561	1/4W 560
R213	ERDS2TJ152	1/4W 1.5K
R214	ERDS2TJ102	1/4W 1K
R215	ERDS2TJ223	1/4W 22K
R216	ERDS2TJ101	1/4W 100
R217	ERDS2TJ152	1/4W 1.5K
R218	ERDS2TJ2R7T	1/4W 2.7
R219	ERDS2TJ2R2T	1/4W 2.2
R220	ERDS2TJ221	1/4W 220
R221	ERDS2TJ224T	1/4W 220K
R222	ERDS2TJ151	1/4W 150
R223	ERDS2TJ472	1/4W 4.7K
R251	ERDS2TJ105T	1/4W 1M
R252, 253	ERDS2TJ472	1/4W 4.7K
R254	ERDS2TJ561	1/4W 560
R256	ERDS2TJ682T	1/4W 6.8K
R257	ERDS2TJ471	1/4W 470
R258	ERDS2TJ222	1/4W 2.2K
R281	ERDS2TJ183T	1/4W 18K
R282	ERDS2TJ101	1/4W 100
R283	ERDS2TJ474	1/4W 470K
R284	ERDS2TJ271	1/4W 270
R285	ERDS2TJ681	1/4W 680
R301	ERDS2TJ334	1/4W 330K
R302	ERDS2TJ102	1/4W 1K
R303	ERDS2TJ180T	1/4W 18
R304	ERDS2TJ101	1/4W 100
R305	ERDS2TJ332	1/4W 3.3K
R307	ERDS2TJ471	1/4W 470
R308	ERDS2TJ472	1/4W 4.7K
R309	ERDS2TJ104	1/4W 100K
R311	ERDS2TJ471	1/4W 470
R312	ERDS2TJ222	1/4W 2.2K
R313	ERDS2TJ223	1/4W 22K
R314	ERDS2TJ102	1/4W 1K
R315	ERDS2TJ223	1/4W 22K
R316	ERDS2TJ332	1/4W 3.3K
R317	ERDS2TJ1R5T	1/4W 1.5
R318	ERDS2TJ473	1/4W 47K
R319	ERDS2TJ472	1/4W 4.7K

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Ref. No.	Part No.	Values & Remarks
R320	ERDS2TJ333	1/4W 33K
R321	ERDS2TJ222	1/4W 2.2K
R322, 323	ERDS2TJ473	1/4W 47K
R324	ERDS2TJ682T	1/4W 6.8K
R325	ERDS2TJ153	1/4W 15K
R326	ERDS2TJ104	1/4W 100K
R327	ERDS2TJ472	1/4W 4.7K
R328	ERDS2TJ1R5T	1/4W 1.5
R329	ERDS2TJ2R7T	1/4W 2.7
R330	ERDS2TJ101	1/4W 100
R331	ERDS2TJ330	1/4W 33
R332	ERDS2TJ102	1/4W 1K
R333	ERDS2TJ333	1/4W 33K
R334	ERDS2TJ683	1/4W 68K
R335	ERDS2TJ1R5T	1/4W 1.5
R337	ERDS2TJ102	1/4W 1K
R339	ERDS2TJ104	1/4W 100K
R340	ERDS2TJ331	1/4W 330
R351	ERDS2TJ331	1/4W 330
R352	ERDS2TJ221	1/4W 220
R356, 357	ERDS2TG102T	1/4W 1K
R358	ERDS2TG122T	1/4W 1.2K
R359	ERDS2TG152T	1/4W 1.5K
R360	ERDS2TG222T	1/4W 2.2K
R361	ERDS2TG272T	1/4W 2.7K
R362	ERDS2TG392T	1/4W 3.9K
R363	ERDS2TG562T	1/4W 5.6K
R364	ERDS2TG103T	1/4W 10K
R365	ERDS2TG183T	1/4W 18K
R366	ERDS2TG563T	1/4W 56K
R367, 368	ERDS2TG102T	1/4W 1K
R369	ERDS2TG122T	1/4W 1.2K
R370	ERDS2TG152T	1/4W 1.5K
R371	ERDS2TG222T	1/4W 2.2K
R372	ERDS2TG272T	1/4W 2.7K
R373	ERDS2TG392T	1/4W 3.9K
R374	ERDS2TG562T	1/4W 5.6K
R375	ERDS2TG103T	1/4W 10K
R376	ERDS2TG183T	1/4W 18K
R377	ERDS2TG563T	1/4W 56K
R378	ERDS2TJ472	1/4W 4.7K
R379	ERDS2TJ153	1/4W 15K
R380	ERDS2TJ474	1/4W 470K
R381, 382	ERDS2TJ391	1/4W 390
R383	ERDS2TJ563	1/4W 56K
R384	ERDS2TJ103	1/4W 10K
R385	ERDS2TJ472	1/4W 4.7K
R385	ERDS2TJ682T	1/4W 6.8K
R386	ERDS2TJ682T	1/4W 6.8K
R387, 388	ERDS2TJ334	1/4W 330K
R389	ERDS2TJ222	1/4W 2.2K
R389	ERDS2TJ331	1/4W 330

Ref. No.	Part No.	Values & Remarks
R402	ERDS2TJ123	1/4W 12K
R403	ERDS2TJ122	1/4W 1.2K
R405	ERDS2TJ300T	1/4W 30
R406	ERDS2TJ392T	1/4W 3.9K
R407	ERDS2TJ682T	1/4W 6.8K
R408	ERDS2TJ222	1/4W 2.2K
R409	ERDS2TJ104	1/4W 100K
R410	ERDS2TJ223	1/4W 22K
R411	ERDS2TJ822	1/4W 8.2K
R412	ERDS2TJ101	1/4W 100
R415	ERDS2TJ474	1/4W 470K
R416	ERDS2TJ154	1/4W 150K
R420	ERDS2TJ822	1/4W 8.2K
R424	ERDS2TJ104	1/4W 100K
R428	ERDS2TJ152	1/4W 1.5K
R430	ERDS2TJ822	1/4W 8.2K
R502	ERDS2TJ123	1/4W 12K
R503	ERDS2TJ122	1/4W 1.2K
R505	ERDS2TJ330	1/4W 33
R506	ERDS2TJ392T	1/4W 3.9K
R507	ERDS2TJ682T	1/4W 6.8K
R508	ERDS2TJ222	1/4W 2.2K
R509	ERDS2TJ104	1/4W 100K
R510	ERDS2TJ223	1/4W 22K
R511	ERDS2TJ822	1/4W 8.2K
R512	ERDS2TJ101	1/4W 100
R515	ERDS2TJ474	1/4W 470K
R516	ERDS2TJ154	1/4W 150K
R520	ERDS2TJ822	1/4W 8.2K
R524	ERDS2TJ104	1/4W 100K
R528	ERDS2TJ152	1/4W 1.5K
R530	ERDS2TJ822	1/4W 8.2K
R601	ERDS2TJ334	1/4W 330K
R602	ERDS2TJ102	1/4W 1K
R603	ERDS2TJ103	1/4W 10K
R604, 605	ERDS2TJ102	1/4W 1K
R606	ERDS2TJ472	1/4W 4.7K
R608	ERDS2TJ822	1/4W 8.2K
R609	ERDS2TJ1R2	1/4W 1.2
R610	ERDS2TJ103	1/4W 10K
R611, 612	ERDS2TJ472	1/4W 4.7K
R613	ERDS2TJ332	1/4W 3.3K
R614	ERDS2TJ102	1/4W 1K
R615	ERDS2TJ221	1/4W 220
R616	ERDS2TJ1R2	1/4W 1.2
R617	ERDS2TJ562	1/4W 5.6K
R618	ERDS2TJ153	1/4W 15K
R619	ERDS2TJ183T	1/4W 18K
R620	ERDS2TJ334	1/4W 330K
R621	ERDS2TJ221	1/4W 220
R622	ERDS2TJ1R2	1/4W 1.2
R623	ERDS2TJ123	1/4W 12K

Ref. No.	Part No.	Values & Remarks
R625	ERDS2TJ123	1/4W 12K
R626	ERDS2TJ272T	1/4W 2.7K
R627	ERDS2TJ334	1/4W 330K
R628	ERDS2TJ123	1/4W 12K
R629 ⚠	ERDS1VJ680T	1/2W 68
R630	ERDS2TJ104	1/4W 100K
R631	ERDS2TJ332	1/4W 3.3K
R632	ERDS2TJ474	1/4W 470K
R633	ERDS2TJ472	1/4W 4.7K
R634	ERDS2TJ102	1/4W 1K
R636	ERDS2TJ223	1/4W 22K
R637	ERDS2TJ2R7T	1/4W 2.7
R638	ERDS2TJ103	1/4W 10K
R639	ERDS2TJ2R7T	1/4W 2.7
R640	ERDS2TJ334	1/4W 330K
R646-649	ERDS2TJ472	1/4W 4.7K
R650	ERDS2TJ473	1/4W 47K
R651	ERDS2TJ472	1/4W 4.7K
R652, 653	ERDS2TJ473	1/4W 47K
R655	ERDS2TJ473	1/4W 47K
R656	ERDS2TJ335T	1/4W 3.3M
R657	ERDS2TJ222	1/4W 2.2K
R658, 659	ERDS2TJ472	1/4W 4.7K
R660	ERDS2TJ102	1/4W 1K
R661, 662	ERDS2TJ104	1/4W 100K
R664	ERDS2TJ104	1/4W 100K
R665	ERDS2TJ222	1/4W 2.2K
R666	ERDS2TJ103	1/4W 10K
R681, 682	ERDS2TG102T	1/4W 1K
R683	ERDS2TG122T	1/4W 1.2K
R684	ERDS2TG152T	1/4W 1.5K
R685	ERDS2TG222T	1/4W 2.2K
R686	ERDS2TG272T	1/4W 2.7K
R687	ERDS2TG392T	1/4W 3.9K
R688	ERDS2TG562T	1/4W 5.6K
R689	ERDS2TG103T	1/4W 10K
R690	ERDS2TG183T	1/4W 18K
R701	ERJ6GEYJ100	1/10W 10
R702	ERJ6GEYJ471V	1/10W 470
R703	ERJ6GEYJ102V	1/10W 1K
R704	ERJ6GEYJ103V	1/10W 10K
R706	ERJ6GEYJ473V	1/10W 47K
R707	ERJ6GEYJ222V	1/10W 2.2K
R708	ERJ6GEYJ683V	1/10W 68K
R709	ERJ6GEYJ122V	1/10W 1.2K
R710	ERJ6GEYJ182V	1/10W 1.8K
R711	ERJ6GEYJ473V	1/10W 47K
R712	ERJ6GEYJ471V	1/10W 470
R714	ERJ6GEYJ473V	1/10W 47K
R715	ERJ6GEYJ223V	1/10W 22K
R716	ERJ6GEYJ104V	1/10W 100K
R717	ERJ6GEYJ682V	1/10W 6.8K

Ref. No.	Part No.	Values & Remarks
R718	ERJ6GEYJ223V	1/10W 22K
R719	ERJ6GEYJ123V	1/10W 12K
R720	ERJ6GEYJ273V	1/10W 27K
R721	ERJ6GEYJ823	1/10W 82K
R722	ERJ6GEYJ102V	1/10W 1K
R723, 724	ERJ6GEYJ104V	1/10W 100K
R725	ERJ6GEYJ471V	1/10W 470
R726	ERJ6GEYJ102V	1/10W 1K
R729, 730	ERJ6GEYJ102V	1/10W 1K
R731	ERJ8GEYJ470V	1/8W 47
R732	ERJ6GEYJ562V	1/10W 5.6K
R733	ERJ6GEYJ332V	1/10W 3.3K
R734	ERJ6GEYJ562V	1/10W 5.6K
R735	ERJ6GEYJ222V	1/10W 2.2K
R736	ERJ6GEYJ682V	1/10W 6.8K
R737-739	ERJ6GEYJ562V	1/10W 5.6K
R741-743	ERJ6GEYJ102V	1/10W 1K
R744	ERJ6GEYJ393V	1/10W 39K
R745, 746	ERJ6GEYJ102V	1/10W 1K
R747	ERJ6GEYJ473V	1/10W 47K
R748	ERJ8GEYJ180V	1/8W 18
R802	ERDS2TJ103	1/4W 10K
R803	ERDS2TJ472	1/4W 4.7K
R804-806	ERDS2TJ102	1/4W 1K
R807	ERDS2TJ472	1/4W 4.7K
R808-810	ERDS2TJ104	1/4W 100K
R811	ERDS2TJ471	1/4W 470
R813-815	ERDS2TG103T	1/4W 10K
R816	ERDS2TJ471	1/4W 470
R817	ERDS2TJ105T	1/4W 1M
R818	ERDS2TJ334	1/4W 330K
R820	ERDS2TJ103	1/4W 10K
R821	ERDS2TJ183T	1/4W 18K
R822	ERDS2TJ563	1/4W 56K
R823	ERDS2TJ104	1/4W 100K
R824	ERDS2TJ823T	1/4W 82K
R825	ERDS2TJ103	1/4W 10K
R827-830	ERDS2TJ103	1/4W 10K
R833	ERDS2TJ104	1/4W 100K
R835	ERDS2TJ103	1/4W 10K
R840	ERDS2TJ103	1/4W 10K
R841	ERDS2TJ472	1/4W 4.7K
R842	ERDS2TJ223	1/4W 22K
R850, 851	ERDS2TJ563	1/4W 56K
R854	ERDS2TJ223	1/4W 22K
R860	ERDS2TJ561	1/4W 560
R861	ERDS2TJ391	1/4W 390
R862	ERDS2TJ470	1/4W 47
R864	ERDS2TJ474	1/4W 470K
R865-867	ERDS2TJ104	1/4W 100K
R869-871	ERDS2TJ102	1/4W 1K
R872, 873	ERDS2TJ472	1/4W 4.7K

Ref. No.	Part No.	Values & Remarks
R874	ERDS2TJ153	1/4W 15K
R875	ERDS2TJ104	1/4W 100K
R876	ERDS2TJ101	1/4W 100
R877, 878	ERDS2TJ103	1/4W 10K
R901	ERDS2TJ471	1/4W 470
		CHIP JUMPERS
RJ701	ERJ6GEY0R00V	1/10W 0
RJ703-710	ERJ6GEY0R00V	1/10W 0
		CAPACITORS
C2	ECBT1H102KB5	50V 1000P
C3	ECCR1H120KC5	50V 12P
C4	ECBT1H101KB5	50V 100P
C5, 6	ECBT1H102KB5	50V 1000P
C7	ECBT1H100JC5	50V 10P
C8	ECBT1H3R9KY	50V 3.9P
C9	ECBT1H150JC5	50V 15P
C10	ECBT1H102KB5	50V 1000P
C11	ECBT1H3R3KC5	50V 3.3P
C12	ECBT1H2R2KC5	50V 2.2P
C13	ECBT1H181KB5	50V 180P
C14	ECBT1H6R8J	50V 6.8P
C15	ECBT1H102KB5	50V 1000P
C17, 18	ECBT1C103MS5	16V 0.01U
C19, 20	ECBT1H102KB5	50V 1000P
C21, 22	ECBT1H181KB5	50V 180P
C23	ECBT1C103MS5	16V 0.01U
C24	ECBT1H102KB5	50V 1000P
C25	ECEA1CU100	16V 10U
C26	ECBT1H331KB5	50V 330P
C29	ECEA0JU101B	6.3V 100U
C30	ECEA1EU4R7	25V 4.7U
C31, 32	ECFR1C223MR	16V 0.022U
C33	ECEA1AU101	10V 100U
C34	ECFR1C153MR	16V 0.015U
C35	ECBT1C103MS5	16V 0.01U
C36	ECEA1HU2R2	50V 2.2U
C37	ECBT1H102KB5	50V 1000P
C38	ECFR1C153MR	16V 0.015U
C39	ECEA1HU010	50V 1U
C40, 41	ECEA1HUR47B	50V 0.47U
C42	ECQP2A102JZT	100V 1000P
C44	ECBT1C103MS5	16V 0.01U
C47	ECBT1C103MS5	16V 0.01U
C48	ECBT1H470J5	50V 47P
C52	ECFR1C223MR	16V 0.022U
C54	ECBT1H6R8KC5	50V 6.8P
C56	ECQP2A391JZT	100V 390P
C58	ECQP2A121GZT	100V 120P

Ref. No.	Part No.	Values & Remarks
C60	ECQP2A181GZT	100V 180P
C62	ECBT1H101KB5	50V 100P
C64	ECFR1C223MR	16V 0.022U
C65	ECBT1H121KB5	50V 120P
C66, 67	ECBT1C103MS5	16V 0.01U
C68	ECEA1HU010	50V 1U
C69	ECEA1HUR47B	50V 0.47U
C70	ECEA0JU101B	6.3V 100U
C71	ECKR1H103MD5	50V 0.01U
C72	ECBT1H101KB5	50V 100P
C73	ECKR1H103MD5	50V 0.01U
C74	ECBT0J153MS5	6.3V 0.015U
C75	ECEA1HU2R2	50V 2.2U
C76	ECFW1C223MDY	16V 0.022U
C77	ECBT1H102KB5	50V 1000P
C78	ECEA1HNR47SB	50V 0.47U
C79	ECBT1C103MS5	16V 0.01U
C83	ECEA1CU330	16V 33U
C86, 87	ECBT1H150JC5	50V 15P
C88-90	ECBT1H331KB5	50V 330P
C91	ECEA1CU100	16V 10U
C92	ECBT1H102KB5	50V 1000P
C93	ECEA1CU330	16V 33U
C94	ECBT1H102KB5	50V 1000P (E)
C96	ECEA1CU330	16V 33U
C97	ECBT1H102KB5	50V 1000P
C98	ECBT1H101KB5	50V 100P
C99	ECBT1H331KB5	50V 330P
C101	ECBT1H102KB5	50V 1000P
C102, 103	ECEA1CU100	16V 10U
C104, 105	ECBT1C332MR5	16V 3300P
C106	ECBT1H101KB5	50V 100P
C107	ECFR1C473MR	16V 0.047U
C108	ECEA1AU101	10V 100U
C109	ECEA1AU222E	10V 2200U
C110	ECEA0JU101B	6.3V 100U
C111	ECEA1EU4R7	25V 4.7U
C112	ECBT1C332MR5	16V 3300P
C113	ECEA1HU010	50V 1U
C114	ECBT1H471KB5	50V 470P
C115	ECEA0JU101B	6.3V 100U
C116	ECBT1H220JC5	50V 22P
C117	ECBT1C103MS5	16V 0.01U
C118	ECEA1AU470	10V 47U
C119	ECFR1C473MR	16V 0.047U
C120	ECEA1AU470	10V 47U
C121, 122	ECQM1H224JZ	50V 0.22U
C151	ECEA1HU010	50V 1U
C152	ECBT1H471KB5	50V 470P
C153	ECEA1CU100	16V 10U
C154	ECBT1C222MR5	16V 2200P
C155, 156	ECFR1C333MR	16V 0.033U

Ref. No.	Part No.	Values & Remarks
C157	ECEA1HKR68	50V 0.68U
C158	ECBT1C103MS5	16V 0.01U
C159	ECEA1HUR33	50V 0.33U
C160	ECBT1C332MR5	16V 3300P
C161	ECEA1HU0R1	50V 0.1U
C162	ECFR1C823MR	16V 0.082U
C163	ECEA1HU2R2	50V 2.2U
C165	ECFR1C153MR	16V 0.015U
C166	ECEA1HU010	50V 1U
C181	ECBT1H561KB5	50V 560P
C182	ECFR1C473MR	16V 0.047U
C183	ECEA1HKR33	50V 0.33U
C184	ECBT1H102KB5	50V 1000P
C201	ECBT1H102KB5	50V 1000P
C202, 203	ECEA1CU100	16V 10U
C204, 205	ECBT1C332MR5	16V 3300P
C206	ECBT1H101KB5	50V 100P
C207	ECFR1C473MR	16V 0.047U
C208	ECEA1AU101	10V 100U
C209	ECEA1AU222E	10V 2200U
C210	ECEA0JU101B	6.3V 100U
C211	ECEA1EU4R7	25V 4.7U
C212	ECBT1C332MR5	16V 3300P
C213	ECEA1HU010	50V 1U
C214	ECBT1H471KB5	50V 470P
C215	ECEA0JU101B	6.3V 100U
C216	ECBT1H220JC5	50V 22P
C217	ECBT1C103MS5	16V 0.01U
C218	ECEA1AU470	10V 47U
C219	ECFR1C473MR	16V 0.047U
C220	ECEA1AU470	10V 47U
C221, 222	ECQM1H224JZ	50V 0.22U
C251	ECEA1HU010	50V 1U
C252	ECBT1H471KB5	50V 470P
C253	ECEA1CU100	16V 10U
C254	ECBT1C222MR5	16V 2200P
C255, 256	ECFR1C333MR	16V 0.033U
C257	ECEA1HKR68	50V 0.68U
C258	ECBT1C103MS5	16V 0.01U
C259	ECEA1HUR33	50V 0.33U
C260	ECBT1C332MR5	16V 3300P
C261	ECEA1HU0R1	50V 0.1U
C262	ECFR1C823MR	16V 0.082U
C263	ECEA1HU2R2	50V 2.2U
C265	ECFR1C153MR	16V 0.015U
C266	ECEA1HU010	50V 1U
C281	ECBT1H561KB5	50V 560P
C282	ECFR1C473MR	16V 0.047U
C283	ECEA1HKR33	50V 0.33U
C284	ECBT1H102KB5	50V 1000P
C301	ECEA1HU010	50V 1U
C302	ECBT1H102KB5	50V 1000P

Ref. No.	Part No.	Values & Remarks
C303	ECEA1HU010	50V 1U
C304	ECEA1AU101	10V 100U
C306	ECBT1H102KB5	50V 1000P
C308	ECBT1C103MS5	16V 0.01U
C309, 310	ECEA1HU010	50V 1U
C311	ECBT1C103MS5	16V 0.01U
C312	ECBT1H220JC5	50V 22P
C313	ECEA1CU100	16V 10U
C314, 315	ECBT1C103MS5	16V 0.01U
C316	ECEA0JU101B	6.3V 100U
C317	ECEA1AU101	10V 100U
C318	ECEA0JU221	6.3V 220U
C319-322	ECEA1EU4R7	25V 4.7U
C323	ECEA1EU101	25V 100U
C324	ECEA1AU471	10V 470U
C325	ECEA1CU101	16V 100U
C326	ECEA1CU221	16V 220U
C327	ECEA1CU100	16V 10U
C328, 329	ECBT1H471KB5	50V 470P
C330	ECEA1CU101	16V 100U
C331	ECEA1EU472	25V 4700U
C332	ECEA1CU100	16V 10U
C333	ECBT1C103MS5	16V 0.01U
C334	ECEA1CU471B	16V 470U
C335	ECEA0JU471	6.3V 470U
C336	ECEA1HU2R2	50V 2.2U
C338	ECEA1CU220	16V 22U
C339	ECBT1C103MS5	16V 0.01U
C340	ECEA1EU4R7	25V 4.7U
C341	ECEA1HU0R1	50V 0.1U
C342	ECEA1AU471	10V 470U
C351	ECEA1AU471	10V 470U
C352	ECBT1C223NYY	16V 0.022U
C354	ECEA1CN100SB	16V 10U
C355	ECEA1HU010	50V 1U
C356, 357	ECBT1C103MS5	16V 0.01U
C358	ECBT1H102KB5	50V 1000P
C383	ECEA1AU221	10V 220U
C384	ECEA1AU101	10V 100U
C401	ECBT1H102KB5	50V 1000P
C404	ECQM1H333JZ	50V 0.033U
C405, 406	ECBT1H471KB5	50V 470P
C407	ECFR1C183KR	16V 0.018U
C408	ECEA1HK010B	50V 1U
C409	ECEA1EK4R7	25V 4.7U
C410	ECEA1HK010B	50V 1U
C411	ECBT1H102KB5	50V 1000P
C412	ECFR1C473MR	16V 0.047U
C413	ECEA1CK100B	16V 10U
C414	ECBT1C272MR5	16V 2700P
C415, 416	ECBT1H102KB5	50V 1000P
C417	ECEA1EK4R7	25V 4.7U

Ref. No.	Part No.	Values & Remarks
C418	ECBT1H102KB5	50V 1000P
C419	ECBT0J223NS5	6.3V 0.022U
C424	ECEA0JU221	6.3V 220U
C501	ECBT1H102KB5	50V 1000P
C504	ECQM1H333JZ	50V 0.033U
C505, 506	ECBT1H471KB5	50V 470P
C507	ECFR1C183KR	16V 0.018U
C508	ECEA1HK010B	50V 1U
C509	ECEA1EK4R7	25V 4.7U
C510	ECEA1HK010B	50V 1U
C511	ECBT1H102KB5	50V 1000P
C512	ECFR1C473MR	16V 0.047U
C513	ECEA1CK100B	16V 10U
C514	ECBT1C272MR5	16V 2700P
C515, 516	ECBT1H102KB5	50V 1000P
C517	ECEA1EK4R7	25V 4.7U
C518	ECBT1H102KB5	50V 1000P
C519	ECBT0J223NS5	6.3V 0.022U
C524	ECEA0JU221	6.3V 220U
C601	ECBT1C103MS5	16V 0.01U
C602	ECQV1H474JZ3	50V 0.47U
C603	ECQS2B272KZW	125V 2700P
C604	ECQP2A152JZT	100V0.0015U
C605	ECBT1C103MS5	16V 0.01U
C606	ECQP2A392JZT	100V 3900P
C607	ECEA1HU010	50V 1U
C608	ECQV1H473JZ3	50V 0.047U
C609	ECEA1AU101	10V 100U
C610, 611	ECBT1H102KB5	50V 1000P
C612, 613	ECFR1C103KR	16V 0.01U
C614	ECEA1EU101	25V 100U
C615	ECEA1AU330	10V 33U
C616	ECEA1AU101	10V 100U
C618	ECEA1CK100B	16V 10U
C619	ECEA1HK0R1	50V 0.1U
C620	ECFR1C223MR	16V 0.022U
C621	ECEA1HK010B	50V 1U
C622	ECEA1CU101	16V 100U
C623	ECBT1C103MS5	16V 0.01U
C628	ECKF1H153MD	50V 0.015U
C629	ECEA0JU221	6.3V 220U
C631	ECFR1C104MR	16V 0.1U
C632	ECEA1AU330	10V 33U
C633	ECEA1HK0R1	50V 0.1U
C635	ECEA0JU470B	6.3V 47U
C636, 637	ECBA1H681KB5	50V 680P
C639, 640	ECBT1C103MS5	16V 0.01U
C681, 682	ECBT1H104ZF5	50V 0.1U
C701	ECEA0JKA220	6.3V 22U
C702	ECEA0JKS470	6.3V 47U
C703	ECEA0JKS101I	6.3V 100U
C709	ECUV1C224KBM	16V 0.22U

Ref. No.	Part No.	Values & Remarks
C710	ECUV1C104MBM	16V 0.1U
C711	ECUV1E103MBN	25V 0.01U
C713	ECEA1CSN4R7I	16V 4.7U
C714	ECEA1HKS010	50V 1U
C715	ECUV1H472KBN	50V 4700P
C716	ECUV1C473KBN	16V 0.047U
C717	ECUV1H681KBN	50V 680P
C718	ECEA1AKS101I	10V 100U
C719	ECUV1E103MBN	25V 0.01U
C720	ECUV1E153MBN	25V 0.015U
C721	ECUV1E103MBN	25V 0.01U
C722	ECEA0JKS470	6.3V 47U
C723	ECUV1C104MBM	16V 0.1U
C724	ECUV1E333MBN	25V 0.033U
C725	ECUV1E103MBN	25V 0.01U
C726	ECUV1H471KBN	50V 470P
C727	ECEA0JKS470	6.3V 47U
C728, 729	ECUV1C104MBM	16V 0.1U
C730	ECUV1C224KBM	16V 0.22U
C731	ECEA0JKS331I	6.3V 330U
C732	ECUV1H102MBN	50V 1000P
C733	ECEA0JKS101I	6.3V 100U
C734	ECUV1E223MBN	25V 0.022U
C735	ECUV1C224KBM	16V 0.22U
C737	ECUV1C224KBM	16V 0.22U
C738	ECEA0JKS101I	6.3V 100U
C739	ECUV1E103MBN	25V 0.01U
C740	ECUV1H472MBN	50V 4700P
C741	ECUV1C224KBM	16V 0.22U
C742	ECUV1C104MBM	16V 0.1U
C743	ECEA0JKS331I	6.3V 330U
C744, 745	ECUV1H102KBN	50V 1000P
C746	ECEA0JKS101I	6.3V 100U
C747	ECUV1C104MBM	16V 0.1U
C748	ECEA1HKS010	50V 1U
C749	ECUV1E103MBN	25V 0.01U
C750	ECUV1H050DCN	50V 5P
C751	ECUV1C224KBM	16V 0.22U
C752	ECUV1C104MBM	16V 0.1U
C753, 754	ECEA1HKS010	50V 1U
C755	ECUV1C104MBM	16V 0.1U
C756, 757	ECUV1H050DCN	50V 5P
C758	ECUV1C224KBM	16V 0.22U
C763	ECUV1E103MBN	25V 0.01U
C764	ECUV1H331KBN	50V 330P
C801-803	ECBA1H681KB5	50V 680P
C806, 807	ECBA1H681KB5	50V 680P
C808-810	ECBT1H102KB5	50V 1000P
C811	ECBT1C103MS5	16V 0.01U
C812	ECBT1H102KB5	50V 1000P
C813	ECEA1AU221	10V 220U
C814	ECBT1H102KB5	50V 1000P

Ref. No.	Part No.	Values & Remarks
C815, 816	ECBT1H101KB5	50V 100P
C817	ECBT1H180JC5	50V 18P
C818	ECBT1H220JC5	50V 22P
C819	ECBT1H102KB5	50V 1000P
C820-823	ECBA1H681KB5	50V 680P
C824-826	ECBT1C103MS5	16V 0.01U
C827	ECEA1AU221	10V 220U
C828	ECQV1H104JZ3	50V 0.1U
C829	ECBT1C103MS5	16V 0.01U
C830	ECEA0JU470B	6.3V 47U
C831-833	ECBT1H102KB5	50V 1000P
C834-836	ECBA1H681KB5	50V 680P
C838-840	ECBT1H331KB5	50V 330P
C841-843	ECBT1C103MS5	16V 0.01U
C844	ECBT1H331KB5	50V 330P
C845, 846	ECBT1H102KB5	50V 1000P
C847	ECBT1H330J5	50V 33P
C848	ECBT1H102KB5	50V 1000P
C850	ECBT1C103MS5	16V 0.01U
C851	ECBT1H331KB5	50V 330P
C852	ECBT1H330J5	50V 33P
C853, 854	ECBT1H331KB5	50V 330P
C855	ECBT1H330J5	50V 33P
C856	ECBT1H680J5	50V 68P
C857	ECBT1H331KB5	50V 330P
C858	ECBT1H330J5	50V 33P
C859-861	ECBT1H331KB5	50V 330P
C862	ECBT1H101KB5	50V 100P
C863	ECBT1H331KB5	50V 330P
C864	ECBT1H330J5	50V 33P
C865, 866	ECBT1H470J5	50V 47P
C880	ECBT1H330J5	50V 33P
C901-904	ECQV1H474JZ3	50V 0.47U
C951	ECBT1H101KB5	50V 100P
C971	ECBT1H101KB5	50V 100P

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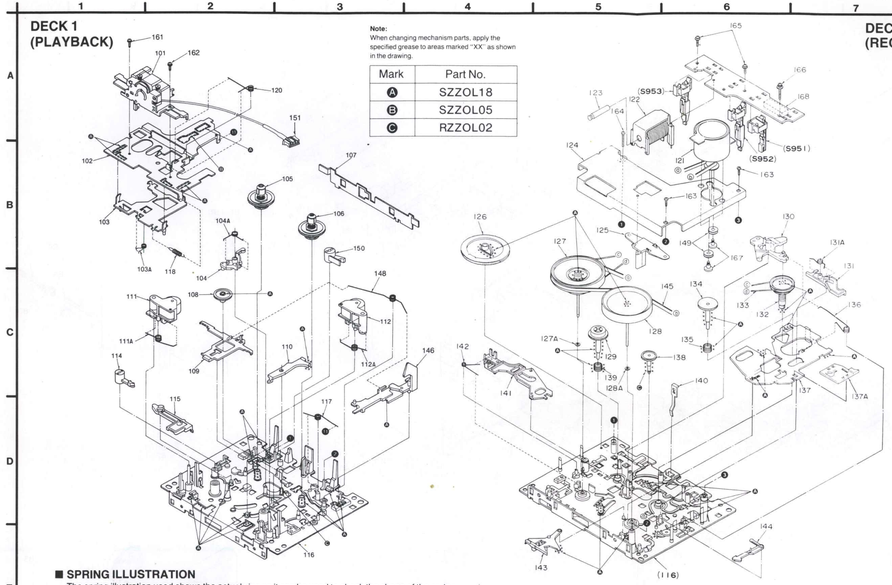
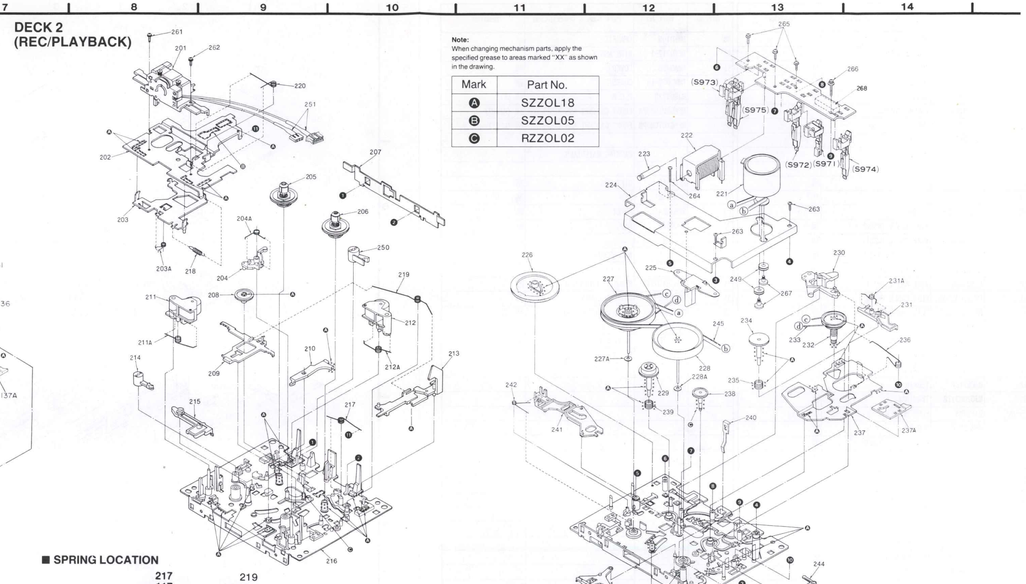
■ MECHANISM PARTS LOCATION





Ref.No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS	
		DECK1(P.B)	
101	RSQ0051	HEAD ASS'Y	
102	RUA7932F	CHASSIS	
103	RZLAR300A	LEVER ASS'Y	
103A	RUW1432A	SPRING	
104	1UB0089Z	ARM	
104A	RUW1482A	SPRING	
105	1DM0018ZB	REEL TABLE ASS'Y	
106	1DM0017ZB	REEL TABLE ASS'Y	
107	RML0069-1	LEVER	
108	RDG57722C	GEAR	
109	RUB5082B	LEVER	
110	RUB5062B	LEVER	
111	1UB0088ZB	PINCH ROLLER	
111A	RUW1412A	SPRING	
112	1UB0087ZB	PINCH ROLLER	
112A	RUW1402B	SPRING	
114	RNL12D	ARM	
115	RUB5032D	LEVER	
116	RZUAR300A	CHASSIS ASS'Y	
117	RUW1422A	SPRING	
118	RUD1052A	SPRING	
120	RUW1392A	SPRING	
121	RFM1332A	MOTOR ASS'Y	
122	1UE0015ZB	PLUNGER	
123	RUB4282E	SHAFT	
124	RUL1030YA	PLATE	
125	RMD5014ZC	SPACER	
126	RDG59272G	GEAR	
127	1DW0037ZB	FLYWHEEL ASS'Y	
127A	RNW1392A	WASHER	
128	1DW0038ZB	FLYWHEEL ASS'Y	
128A	RNW1382A	WASHER	
129	1DG0086ZB	GEAR ASS'Y	
130	RUB5132D	LEVER	
131	1UB0091Z	LEVER	
131A	RUW1462A	SPRING	
132	1DH0011ZB	PULLEY ASS'Y	
133	RDV90ZB	BELT	
134	RDG57692A	GEAR	
135	RUQ1112B	SPRING	
136	RUW1452A	SPRING	
137	1UB0090ZA	ROD	
137A	RUB5122B	ROD	
138	RDG57732B	GEAR	
139	RUQ1122A	SPRING	
140	RUS6092C	SPRING	
141	RUB5142C	LEVER	
142	RUW1472A	SPRING	

Ref.No.	Part No.	Part Name & Description	Remarks
143	RUB5152A	LEVER	
144	RUB5092A	LEVER	
145	RDV1082A	BELT	
146	RUB5072D	LEVER	
148	RUW1442A	SPRING	
149	RHG3032ZA	RUBBER	
150	RNL1802B	LEVER	
151	REX0074	CABLE ASS'Y	
161	XTW2+6L	SCREW	
162	XTW2+8L	SCREW	
163	XTN26+7J	SCREW	
164	RHE52032A	SCREW	
165	XTW2+8S	SCREW	
166	XYC2+JF16	SCREW	
167	RHD26002	SCREW	
168	RJS7772A	CONNECTOR(J951)	
		DECK2(R/P)	
201	RSQ0007	HEAD ASS'Y	
202	RUA7932F	CHASSIS	
203	RZLAR300A	LEVER ASS'Y	
203A	RUW1432A	SPRING	
204	1UB0089Z	ARM	
204A	RUW1482A	SPRING	
205	1DM0018ZB	REEL TABLE ASS'Y	
206	1DM0017ZB	REEL TABLE ASS'Y	
207	RML0069-1	LEVER	
208	RDG57722C	GEAR	
209	RUB5082B	LEVER	
210	RUB5062B	LEVER	
211	1UB0088ZB	PINCH ROLLER	
211A	RUW1412A	SPRING	
212	1UB0087ZB	PINCH ROLLER	
212A	RUW1402B	SPRING	
213	RUB5072D	LEVER	
214	RNL12D	ARM	
215	RUB5032D	LEVER	
216	RZUAR300A	CHASSIS ASS'Y	
217	RUW1422A	SPRING	
218	RUD1052A	SPRING	
219	RUW1442A	SPRING	
220	RUW1392A	SPRING	
221	RFM1332A	MOTOR ASS'Y	
222	1UE0015ZB	PLUNGER	
223	RUB4282E	SHAFT	
224	RUL1030YA	PLATE	
225	RMD5014ZC	SPACER	
226	RDG59272G	GEAR	
227	1DW0037ZB	FLYWHEEL ASS'Y	
227A	RNW1392A	WASHER	
228	1DW0038ZB	FLYWHEEL ASS'Y	

Ref. No.	Part No.	Part Name & Description	Remarks
228A	RNW1382A	WASHER	
229	1DG0006ZB	GEAR ASS'Y	
230	RUB5132D	LEVER	
231	1UB0091Z	LEVER	
231A	RUW1462A	SPRING	
232	1DR0011ZB	PULLEY ASS'Y	
233	RDV902B	BELT	
234	RDG5769ZA	GEAR	
235	RUQ1112B	SPRING	
236	RUW1452A	SPRING	
237	1UB0090ZA	ROD	
237A	RUB5122B	ROD	
238	RDG5773ZA	GEAR	
239	RUQ1122A	SPRING	
240	RUS6092C	SPRING	
241	RUB5142C	LEVER	
242	RUW1472A	SPRING	
243	RUB5152A	LEVER	
244	RUB5092A	LEVER	
245	RDV1082A	BELT	
249	RHG3032ZA	RUBBER	
250	RNL1802B	LEVER	
251	REX0062	CABLE ASS'Y	
261	XTW2+6L	SCREW	
262	XTW2+8L	SCREW	
263	XTN26+7J	SCREW	
264	RHE5203ZA	SCREW	
265	XTW2+8S	SCREW	
266	XYC2+JF16	SCREW	
267	RHD26002	SCREW	
268	RJS9T7ZA	SOCKET(J971)	

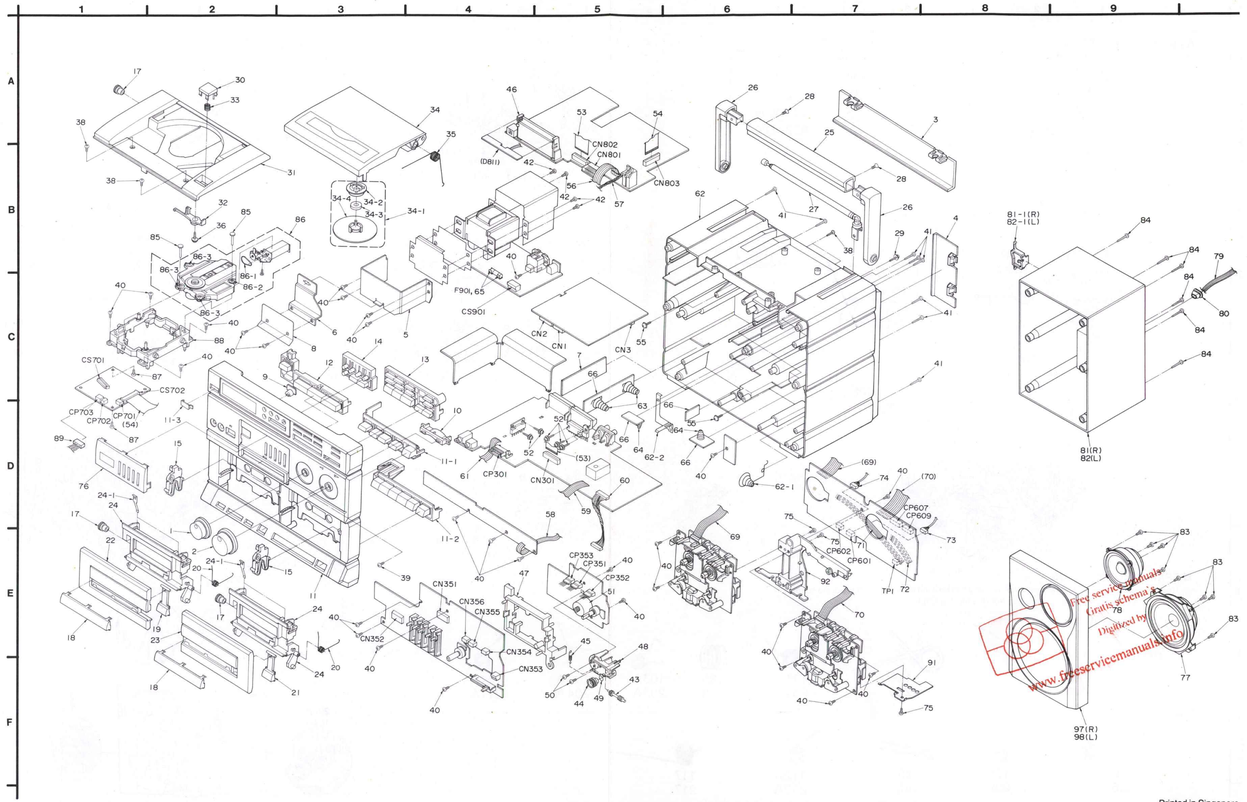
Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS	
1	RGW0103-H	KNOB, S-XBS	M
2	RGW0112-H	KNOB, VOLUME	M
3	RKD0035-H	BATTERY COVER	M
4	RKX347ZA-7	BATTERY COVER	M FOR BACK-UP
5	RMA0487	ANGLE	M
6	RMA0494	PLATE	M
7	RMQ0053	SPACER	M
8	RSC0172	SHIELD PLATE	M
9	RGL0097-Q	PANEL	M
10	RGL0119-C	PANEL	M
11	RFNXKDT680E	FRONT CABINET ASS'Y	M
11-1	RGL0544-H	BUTTON, DECK SELECT etc.	M
11-2	RGL0545-H	BUTTON, DECK OPERATION	M
11-3	RKM0149-Q	PANEL	M
12	RGL0542-H	BUTTON, POWER/SELECT	M
13	RGL0543-H	BUTTON, CD	M
14	RGL0547-K	BUTTON, TIMER	M
15	RML0220	LEVER	M
17	RDG5782YC	GEAR	M
18	RGM3052-H	PANEL	M
19	RGL0540-H	BUTTTON, DECK1 EJECT	M
20	RME0081	SPRING	M
21	RGL0541-H	BUTTON, DECK2 EJECT	M
22	RFNLXDT680PA	CASSETTE PANEL ASS'Y(1)	M
23	RFNLXDT680PB	CASSETTE PANEL ASS'Y(2)	M
24	RFNLXDT680PC	CASSETTE HOLDER ASS'Y	M
24-1	RUS757ZAA	SPRING	M
25	RKH0012-H	HANDLE	M
26	RKD0021-H	HANDLE ARM	M
27	XEAR8175FD-Y	TELESCOPIC ANTENNA	M
28	XTC3+10CFN	SCREW	
29	XYN3+F8FY	SCREW	
30	RBC1412YA	BUTTON, CD EJECT	M
31	RKQ0076-H	DISC TRAY	M
32	RUL1136ZA	LEVER	M
33	RUS7802A	SPRING	M
34	RFNLXDT680PD	CD COVER ASS'Y	M
34-1	RFNXNDT680PB	DISC HOLDER ASS'Y	M
34-2	RKF0196-H	MAGNET HOLDER	M
34-3	RHM245ZA	MAGNET	
34-4	RFNXNDT680PA	DISC PAD ASS'Y	M
35	RUW2172A	SPRING	M
36	XTW3+10P	SCREW	
37	REX0225	WIRE ASS'Y	M (E)
38	XTN3+10CFZ	SCREW	
39	XTV26+8G	SCREW	
40	XTV3+12G	SCREW	
41	XTV3+20JFZ	SCREW	
42	XTV3+8F	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
43	RDG5953ZC	WORM GEAR	
44	RDG5954ZA	VOLUME GAER	
45	RMB0017-Z	SPRING	M
46	RMN0118	LCD HOLDER	M
47	RMN0119	CHASSIS	M
48	RUA867ZB	VOLUME CHASSIS	
49	RUD123KA	SPRING	
50	XQN17+C3	SCREW	
51	RFM1562A	MOTOR ASS'Y	
52	XTW3+10F	SCREW	
53	REX0270	FLEXIBLE WIRE	M
54	REX0271	FLEXIBLE WIRE	M
55	XTW3+10Q	SCREW	
56	REX0301	WIRE ASS'Y (W802)	M
57	REX0304Y	WIRE ASS'Y (W801)	M
58	RWX0103230Q	FLAT CABLE (W681)	M
59	REX0302	WIRE ASS'Y (W302)	M
60	REX0303Y	WIRE ASS'Y (W301)	M
61	RWX0104350Q	FLAT CABLE (W303)	M
62	RFNXKDT680E	REAR CABINET ASS'Y	M (E)
62	RFNXKDT680EB	REAR CABINET ASS'Y	M (EB)
62	RFNXKDT680EG	REAR CABINET ASS'Y	M (EG)
62-1	RJC91003	TERMINAL,BATT.	M
62-2	RJR0074	TERMINAL,ANT.	M
63	RJC5112B	TERMINAL	
64	RJC70031YB	TERMINAL	M
65 ⚠	RJF282A	FUSE HOLDER	
66	RJB0568G	P. C. B.	M
69	RWX5607080QQ	FLAT CABLE (W603)	M
70	RWX5610080QQ	FLAT CABLE (W604)	M
71	RWJ470421OKD	FLAT CABLE (W605)	M
72	RWJ470411OKD	FLAT CABLE (W606)	M
73	REX0305	WIRE ASS'Y	M
74	REX0306	WIRE ASS'Y	M
75	XTN26+6B	SCREW	
76	RFNLXDT680PE	EQ VOLUME ORNAMENT ASS'Y	M
77	EAS12P463A-G	SPEAKER(WOOFER)	M
78	EAS8PH63D-G	SPEAKER(TWEETER)	M
79	RJL4W001W22	SP CORD	M
80	RMG0166	CORD BUSHING	M
81	RFNXDDT680PA	SP BOX (R)	M
81-1	RMB0407	LOCK LEVER(R)	M
82	RFNXDDT680PB	SP BOX (L)	M
82-1	RMB0408	LOCK LEVER(L)	M
83	XTV3+10G	SCREW	M
84	XTV3+20JFZ	SCREW	M
85	RMS0123-1	PIN	
86	SUD0110Z	TRAVERSE DECK ASS'Y	
86-1	RDV0014	BELT	
86-2	SHG0112	RUBBER	
86-3	SHG0113-1	RUBBER	
87	XTV26+6G	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
88	RMN0105	CHASSIS	
89	REE0217-1	WIRE ASS'Y	
91	RMA0488	COVER	M
92	RMN0059-1E	CHASSIS	M
94	RJB0572B	P. C. B.	M (E)
97	RFNXKDT680PA	FRONT CABINET ASS'Y(SP)	M (RIGHT)
98	RFNXKDT680PB	FRONT CABINET ASS'Y(SP)	M (LEFT)
		PACKING MATERIALS	
P1	RPN0269	GIFT BOX	M
P2	RPN0445	PAD	M
P3	RPH35ZA	SHEET	M
P4	RPQ0149	PAD	M
		ACCESSORIES	
A1	RAK-RC309WM	REMOTE CONTROLLER	M
A1-1	RKD0008-KE	BATTERY COVER	M
A2	RQT1010-G	INSTRUCTION MANUAL	M (E)
A2	RQT1010-G	INSTRUCTION MANUAL	M (EB)(EG)
A3 ⚠	RJA866ZB-K	POWER CORD, AC	(EB)
A3 ⚠	SFDAC05E03	POWER CORD, AC	(E)(EG)

RX-DT680 RX-DT680

■ CABINET PARTS LOCATION



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