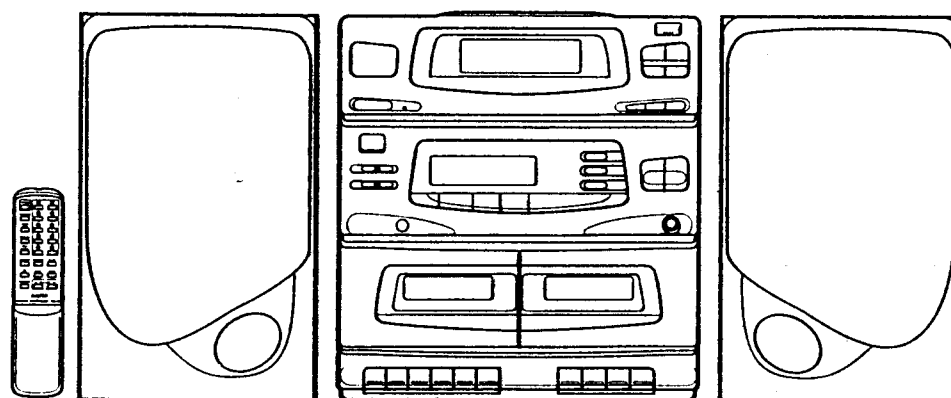


Service Manual

Mini Component System

DC-F170 (AU)



Specifications

PRODUCT CODE No.
129 502 05

TUNER SECTION

Reception frequency . FM : 87.5 - 108.0 MHz
MW : 522 - 1,611 kHz

CASSETTE DECK SECTION

Track system 4 track, 2-channel stereo
Frequency response . . 80 Hz - 13,500 Hz
Signal to noise ratio . . 50 dB
Wow & Flutter 0.15 % (WRMS)
Tape speed 4.75 cm/sec
Fast forward and
rewind time Approx. 110 sec. (C-60)

CD PLAYER SECTION

Type Changer, 3-disc
Channels 2-channel stereo
Sampling frequency . . 44.1 kHz
Pick-up Optical 3-beam semiconductor laser
Laser output 0.6 mW (Continuous wave max.)
Wave length 790 nm
Frequency response . . 20 Hz - 20,000 Hz
Wow & Flutter Below measurable limits

AMPLIFIER SECTION

Output power 15 W x 2
(at 4 ohms, 10% distortion)
Inputs VIDEO : 400 mV /50k ohms
Outputs SPEAKER : 4 ohms
PHONES : 8 - 32 ohms
Power requirements . . AC : 230-240 V, 50 Hz
Power consumption . . 45 W
Dimensions (WxHxD) . . Approx. 270 x 300 x 293 mm
Weight Approx. 5.7 kg

SPEAKER SYSTEMS

Type 2 way bass reflex
Unit used Woofer: 12 cm cone type
Tweeter : piezoelectric
Maximum power-handling capacity 25 W (peak)
Nominal impedance . . 4 ohms
Dimensions (WxHxD) . . Approx. 180 x 300 x 207 mm
Weight Approx. 1.8 kg (per speaker)

Specifications subject to change without notice.

This service manual consists of "DC-F170U" (main unit),
"RB-D9" (remote control) & "SX-F170" (speaker system)

REFERENCE No. SM580751

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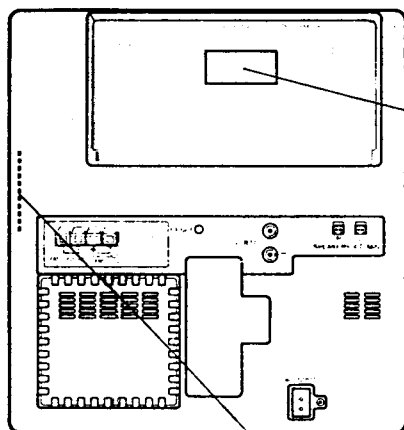
LASER BEAM SAFETY PRECAUTIONS

- Pick-up that emits a laser beam is used in this CD player.

CAUTION:

USE OF CONTROLS OR ADJUSTMENTS
OR PERFORMANCE OF PROCEDURES
OTHER THAN THOSE SPECIFIED
HEREIN MAY RESULT IN HAZARDOUS
RADIATION EXPOSURE

LASER OUTPUT 0.6 mW Max. (CW)
WAVELENGTH 790 nm



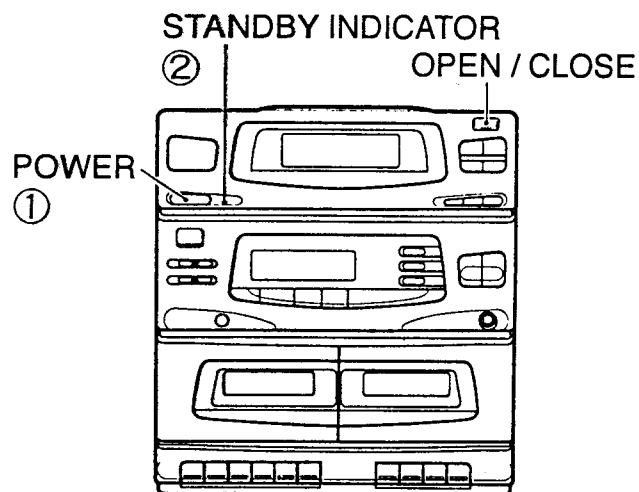
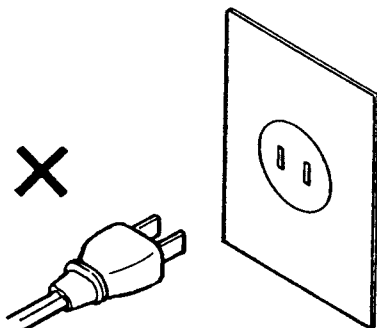
CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

CAUTION - INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL - USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING - OSYNLIG LASER STRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
VORSICHT - UNSICHTBARE LASERSTRAHLUNG TRITTS AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.
VARO! Avattaessa ja suojauslaitteita ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso ätteeseen.



BEFORE USE OR TRANSPORTATION

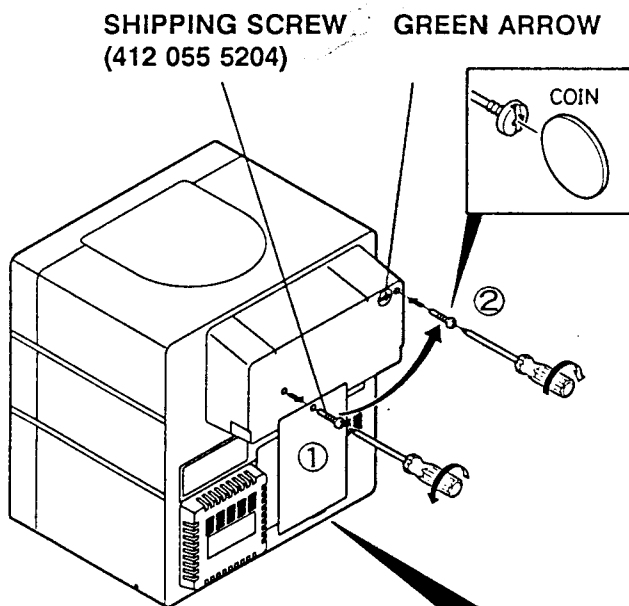
- (1) When carrying the unit, be sure to remove any discs which may be inside.
- (2) Press the POWER "OFF". (①)



- (3) CD mechanism : Moving start
- (4) CD mechanism : Home position
- (5) The STANDBY indicator "lights". (②)
- (6) Then unplug the power cord from the AC outlet.

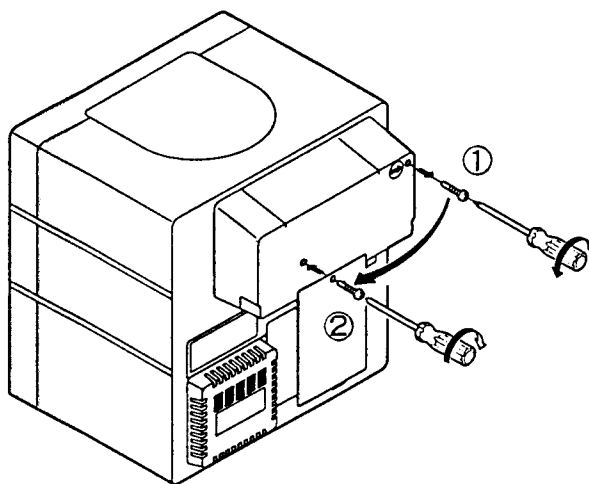
• Before use

- (1) Remove the shipping screw from the rear of the unit. (①)
- (2) This screw is used to secure the CD mechanism during shipment and should be retained for the future use. (②)



• Before transportation

- (1) Turn on the power and remove all discs from the unit. (①)
- (2) Turn the **POWER OFF**. (②)
The **STANDBY** indicator lights.
- (3) Then unplug the power cord from the **AC outlet**.
- (4) Reinstall the shipping screw.



CATTION LABEL
(614 286 4159)

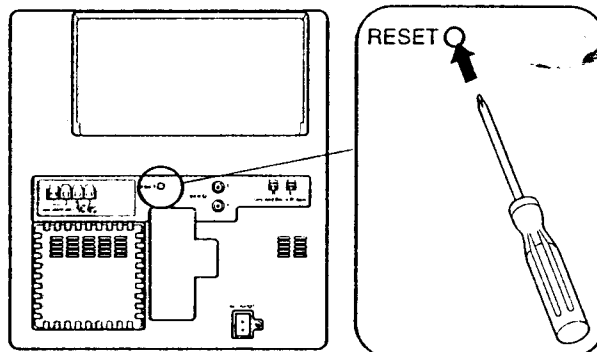
• IMPORTANT!

Before use remove this shipping screw.
The removed screw should be retained by
reinstalling the screw to the point indicated green arrow.

WHAT TO DO IF

If the operation of the unit or display is not normal, or you wish to clear the contents of the memory.

1. Disconnect the power cord's plug from the electrical outlet.
2. Press the **RESET** button for at least 20 seconds.
3. Connect the power cord.
4. Press the **POWER** button to turn the power on.

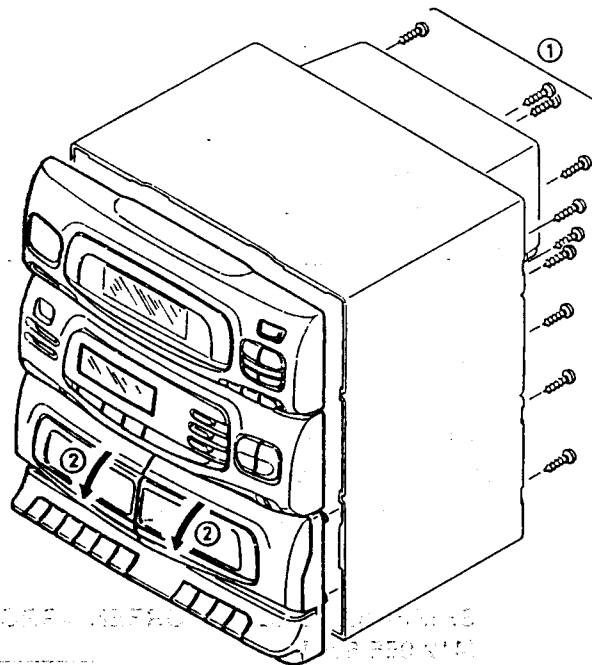


REMOVAL AND INSTALLATION

- Press the "POWER" button and check that the **STANDBY LED** lights.
- Disconnect the power cord's plug from the electrical outlet.
- All wiring should be returned to the original position after work is completed.
- First have ready many the new **FIXERS** (614 129 2496) for replacement.
- Arrange the lead wires so that they are not near the heat sink.

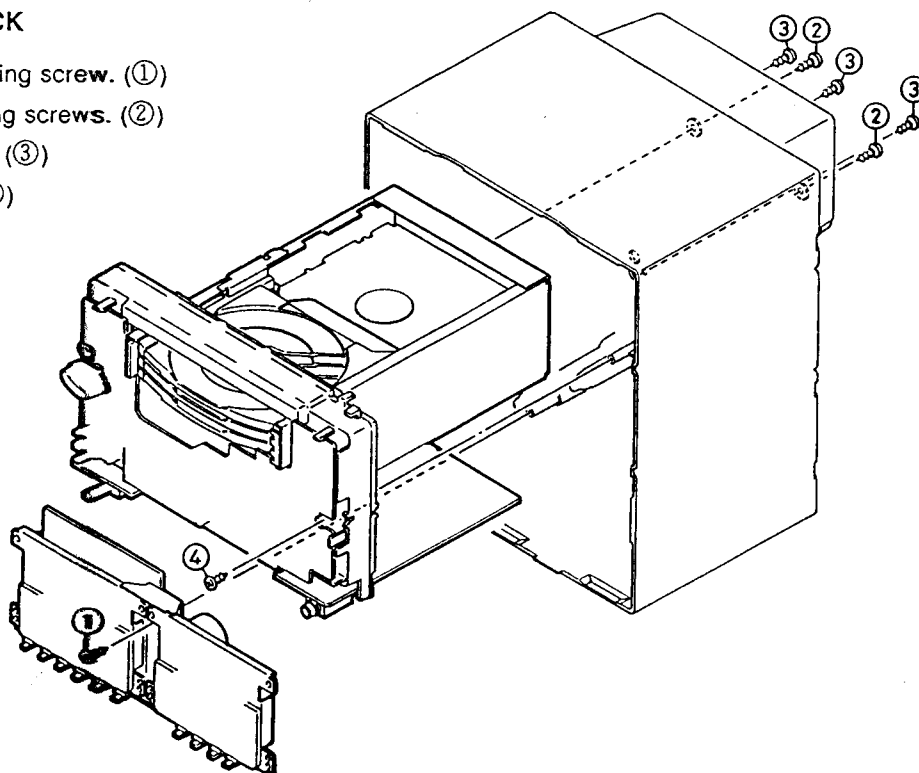
a. CABINET

- (1) Remove the 10 rear panel mounting screws. (①)
- (2) Press the **STOP/EJECT** Button.
- (3) Open the cassette compartment lid. (②)



b. TAPE AND CD MECHANISM BLOCK

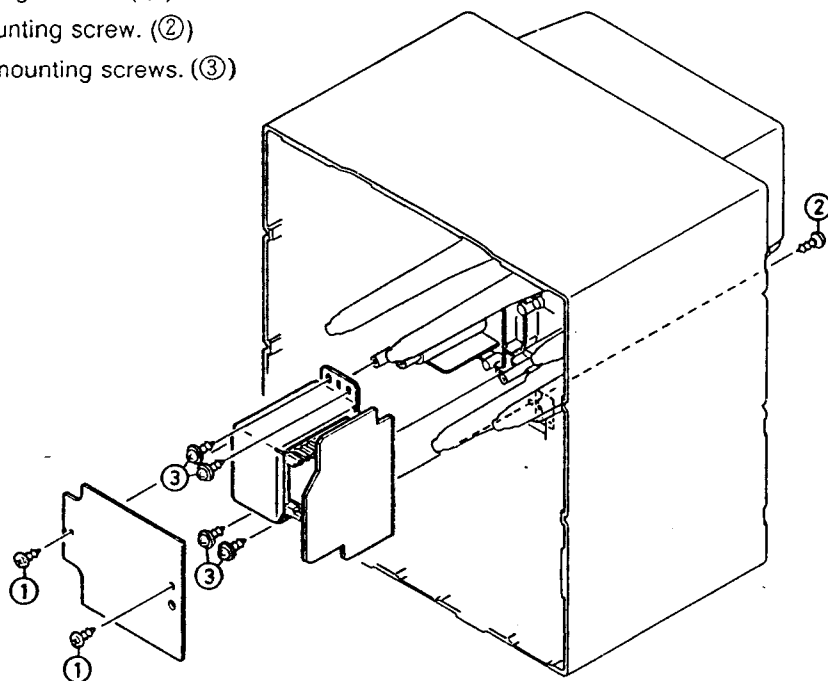
- (1) Remove the **TAPE MECHANISM** mounting screw. (①)
- (2) Remove the 2 **CD MECHANISM** mounting screws. (②)
- (3) Remove the **P.W.board** mounting screw. (③)
- (4) Remove the **chassis** mounting screw. (④)



REMOVAL AND INSTALLATION

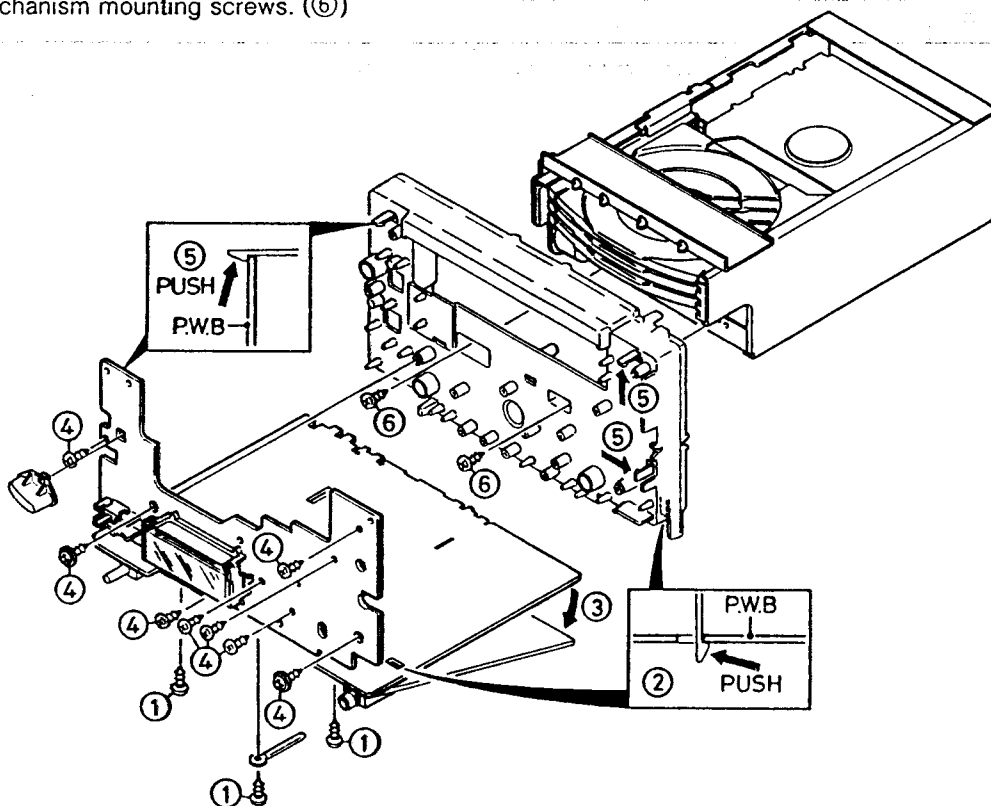
c. POWER TRANSFORMER

- (1) Removal the 2 shield cover mounting screws. (①)
- (2) Removal the AC power socket mounting screw. (②)
- (3) Remove the 4 power transformer mounting screws. (③)



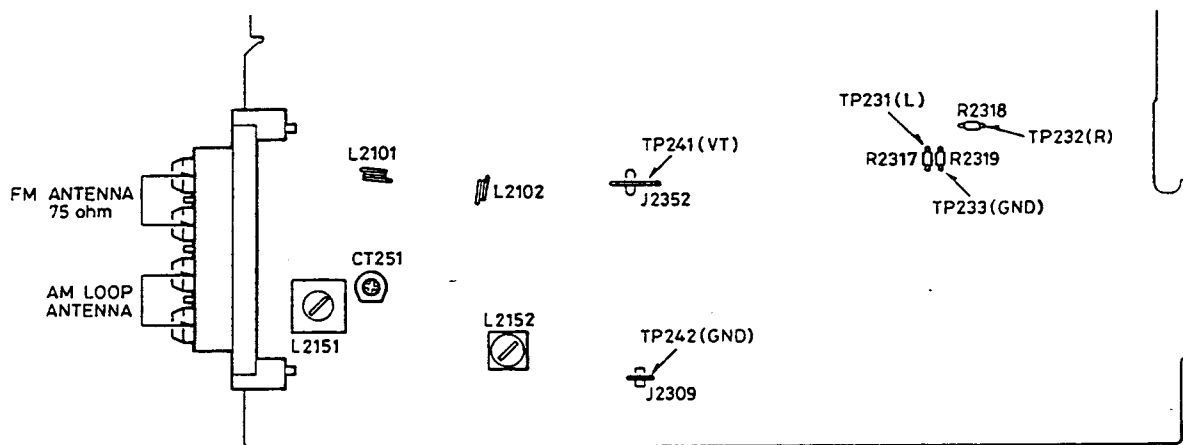
d. CHASSIS

- (1) Removal the 3 TUNER, AMP. & CD P.W.Board mounting screws. (①)
- (2) Removal the TUNER, AMP. & CD P.W.Board. (②,③)
- (3) Removal the FRONT P.W.Board. (④,⑤)
- (4) Removal the 2 CD mechanism mounting screws. (⑥)



TUNER ADJUSTMENTS

- Use a plastic screw driver for adjustments.
- Speaker impedance : 4 ohm
- Standard Output : 500 mW
- FM MODE switch : STEREO
- TUNING FM : 87.5 - 108.0 MHz (200 kHz step)
- AM : 522 - 1,611 kHz (10 kHz step)



SG RF Level : 75 ohm Open Voltage dB_{μ}V

Antenna : 75 ohm unbalanced , Modulation : 1 kHz,

Dev. : ± 75 kHz (MONO) ± 40 kHz (STEREO) ± 6.75 kHz (PILOT)

a. ADJUSTMENTS OF FM BAND

Step	Adjusting Circuit	Connections		SG Frequency	Position of tuning dial	Adjustment	VTVM Oscilloscope or DC voltmeter
		Input	Output				
1	Tuning coverage	---	Connect to Digital DC voltmeter TP 241 (H), TP 242 (G)	87.5 MHz	Low end	L2102	$1.1 \pm 0.2 \text{ V}$
				108.0 MHz	High end	---	less than 9.5 V
2	Tracking	FM Antenna (SG = $8 \text{ dB}_{\mu}\text{V}$)	Connect to VTVM TP 231 (H) or TP 232 (H), TP 233 (G)	90.0 MHz	90.0 MHz	L2101	Max.
				106.0 MHz	106.0 MHz	---	

SG Modulation : 1,000 Hz, 30%
IRE Loop Antenna

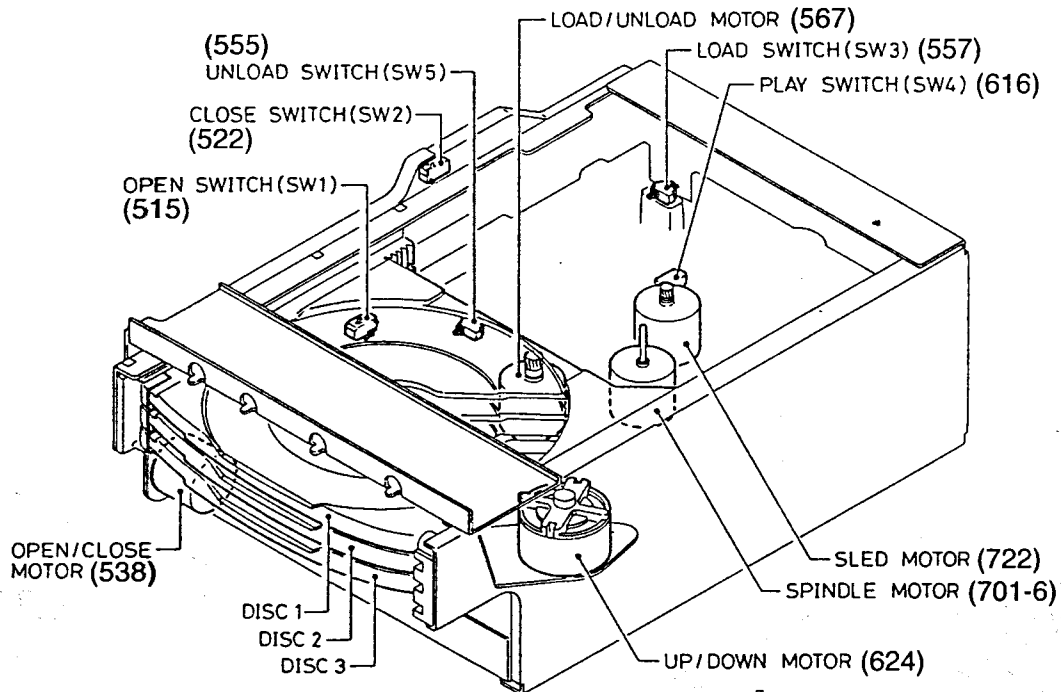
b. ADJUSTMENTS OF AM BAND

Step	Adjusting Circuit	Connections		SG Frequency	Position of tuning dial	Adjustment	VTVM Oscilloscope or DC voltmeter
		Input	Output				
1	Tuning coverage	---	Connect to Digital DC voltmeter TP 241 (H), TP 242 (G)	522 kHz	Low end	L2152	$1.00 \pm 0.05 \text{ V}$
				1611 kHz	High end	---	less than 9.5 V
2	Tracking	Connect AM SG to Test Loop (SG = $80 \text{ dB}_{\mu}\text{V}$)	Connect to VTVM TP 231 (H) or TP 232 (H), TP 233 (G)	603 kHz	603 kHz	L2151	Max.
				1404 kHz	1404 kHz	CT251	

CD CHANGER OPERATION DESCRIPTION

- This set is capable of stocking and playing up to 3 CDs.
- While playing a CD, other discs can be replaced.
In this case, press the button for the disc No. you wish to remove, and then press the OPEN/CLOSE button.
- When the "POWER" button is turned off, the power turns off after the discs are loaded in the disc trays.

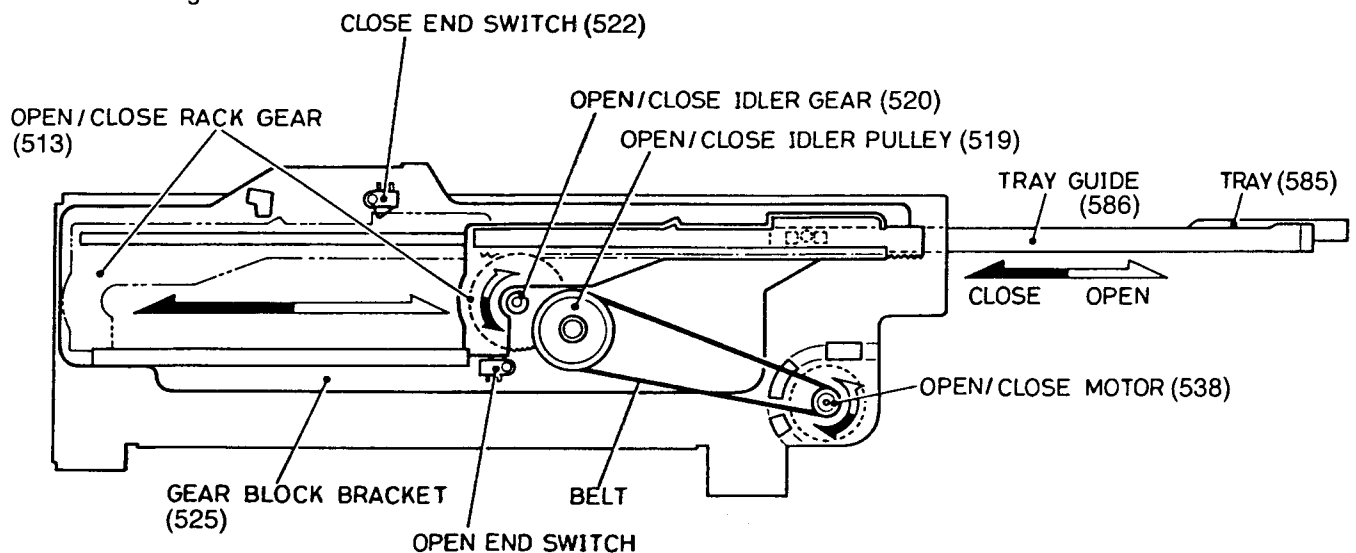
a. MOTOR & MECHANISM SWITCHES LAYOUT



b. FUNCTION

(1) OPEN/CLOSE

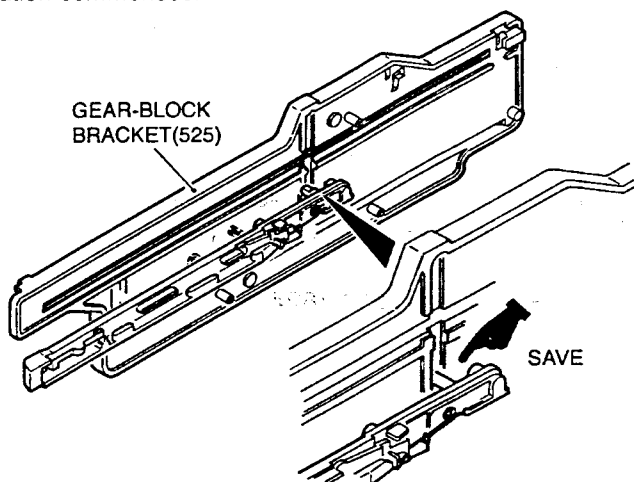
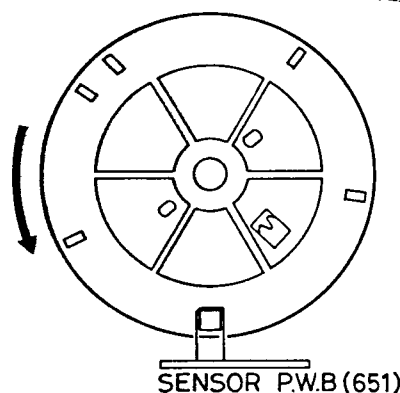
- (a) The rotation of the OPEN/CLOSE MOTOR rotates the OPEN/CLOSE IDLER GEAR via the BELT and PULLEY, and the RACK GEAR which is intermeshed with the OPEN/CLOSE IDLER GEAR moves forward during "OPEN", backwards during "CLOSE".



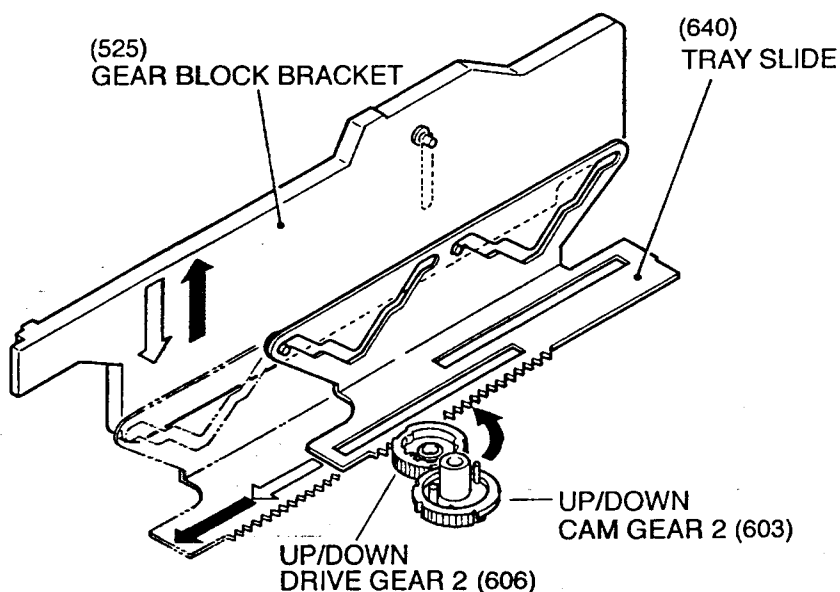
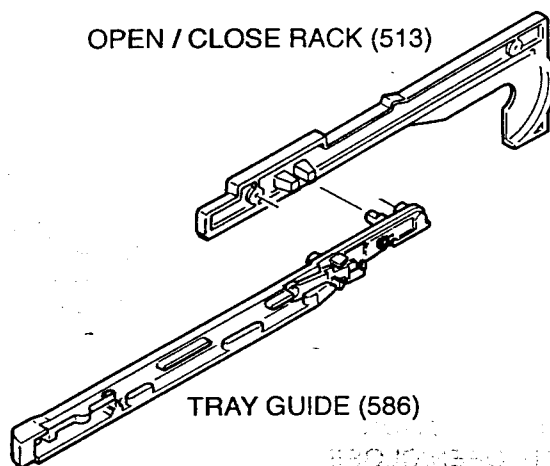
CD CHANGER OPERATION DESCRIPTION

- The HOME POSITION is reached when the largest square hole in the UP/DOWN CAM GEAR (602) is between the SENSORS.
- (b) Rotate the UP/DOWN CAM GEAR (602) counterclockwise (with OPEN/CLOSE during PLAY) or clockwise (with normal OPEN/CLOSE), raise the GEAR-BLOCK BRACKET, stop at the selected TRAY, hold the TRAY GUIDE by means of the OPEN/CLOSE RACK and save the other TRAY GUIDES.
- (c) The OPEN/CLOSE motor starts running, the OPEN/CLOSE RACK moves forward, the TRAY LOCK LEVER is raised to lock the TRAY, and the OPEN operation commences.

UP/DOWN CAM GEAR 1 (602)

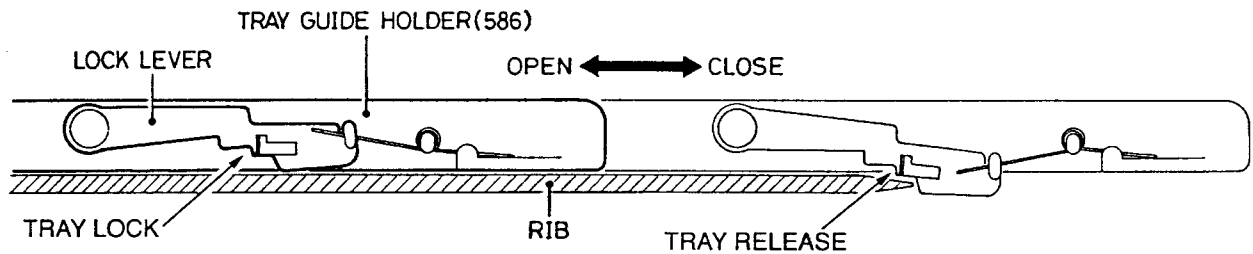


OPEN / CLOSE RACK (513)



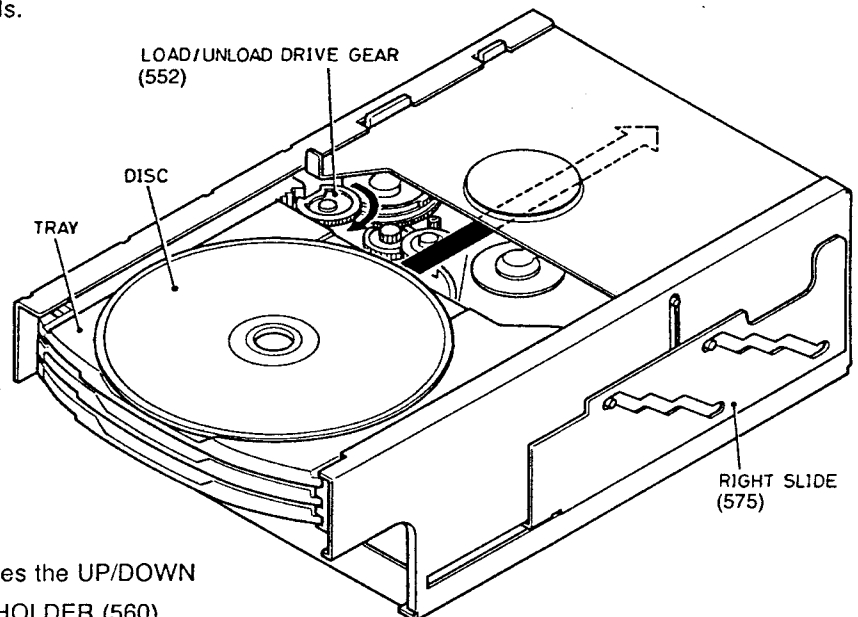
CD CHANGER OPERATION DESCRIPTION

- (d) When the TRAY closes and it reaches the tip of the RIB part of the LEFT TRAY GUIDE (589), the LOCK LEVER is lowered to release the TRAY, and loading proceeds.

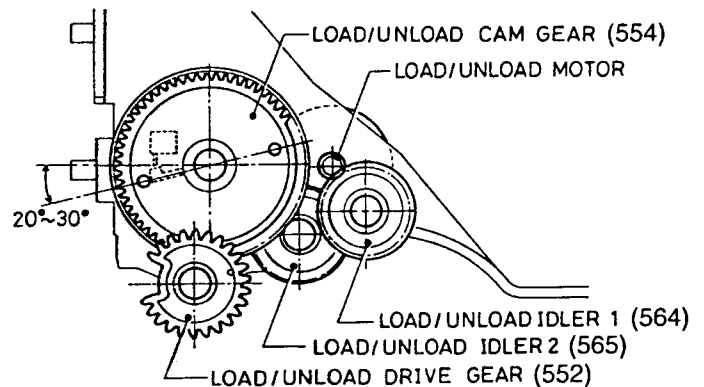


(2) LOADING

- (a) The rotation of the LOAD/UNLOAD MOTOR rotates the LOAD/UNLOAD DRIVE GEAR (552) in the clockwise direction.
- (b) The DRIVE GEAR and the gear portion of the TRAY mesh together and the TRAY moves backwards.

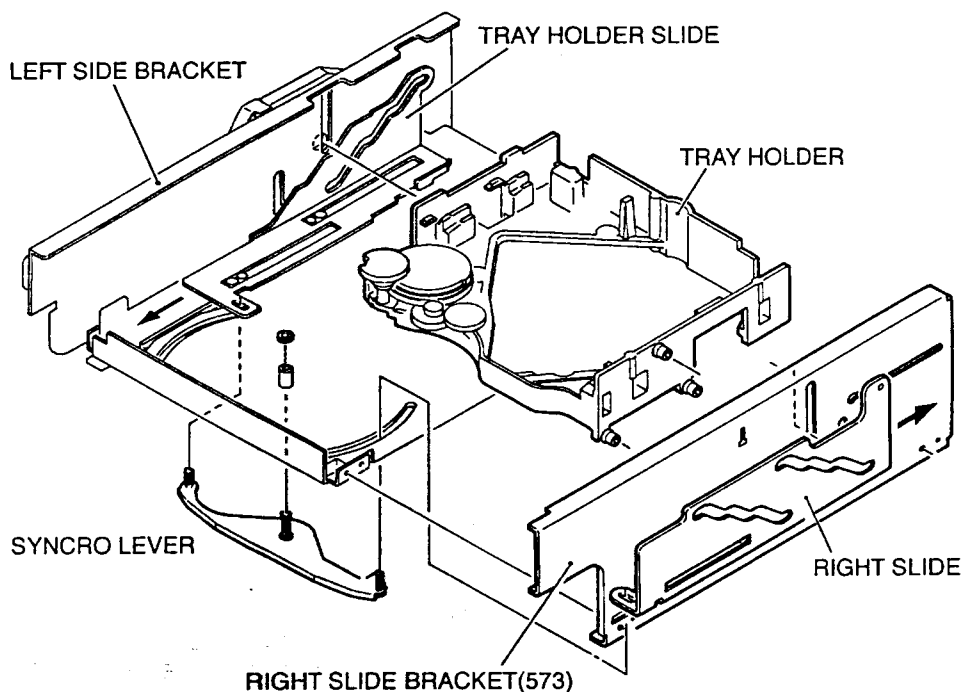
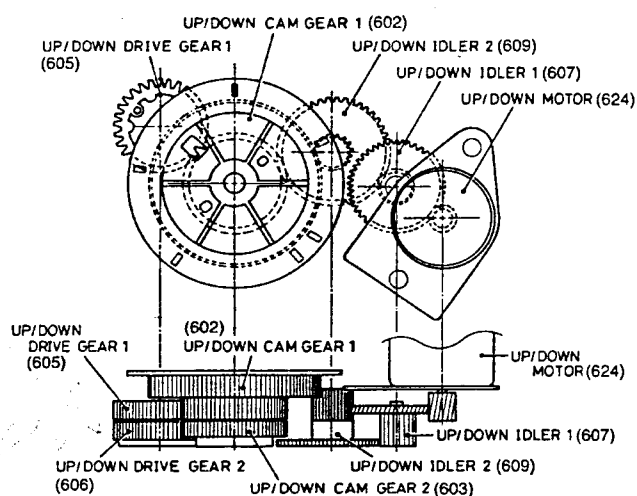
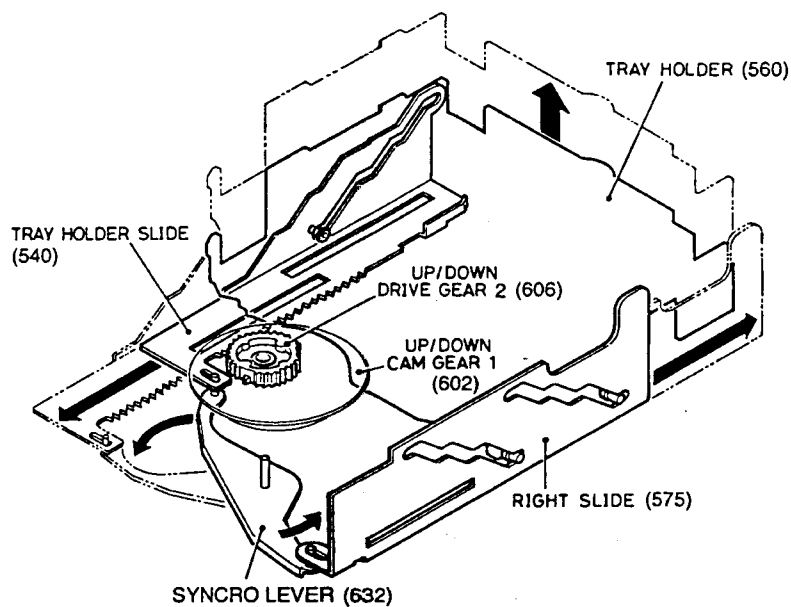


- (c) The completion of TRAY movement causes the UP/DOWN MOTOR to operate and lower the TRAY HOLDER (560), putting the unit to chucking status.



CD CHANGER OPERATION DESCRIPTION

- (d) The rotation of the UP/DOWN MOTOR (624) rotates the UP/DOWN DRIVE GEAR (605) in the counter-clockwise direction. In connection with this, the TRAY HOLDER SLIDE (540) moves forward, and at the same time, the RIGHT SLIDE (575) is moved backwards by the SYNCRO LEVER (632).



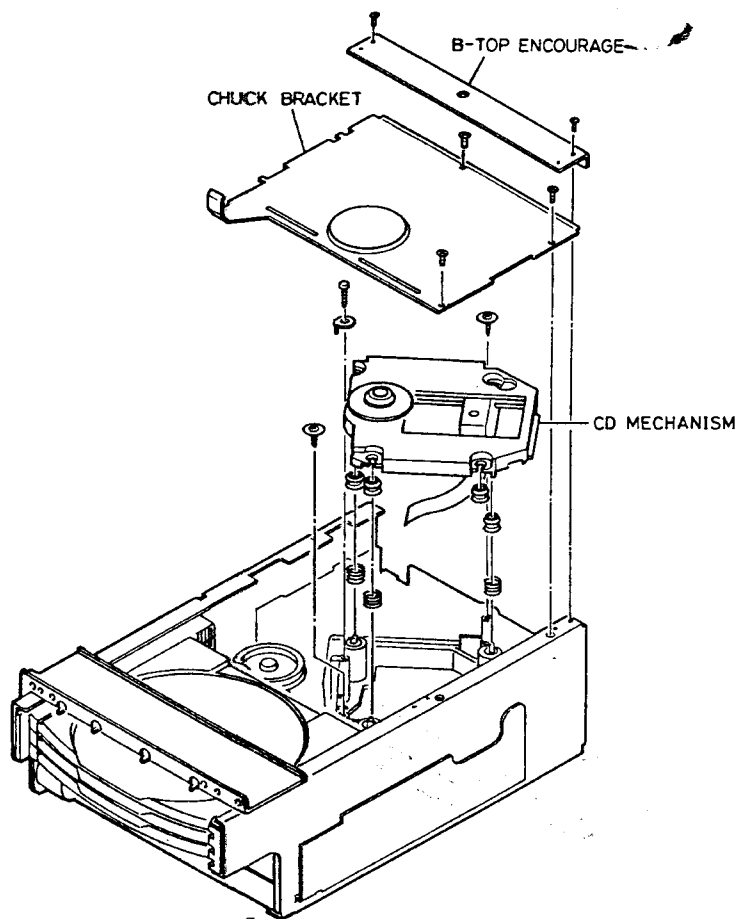
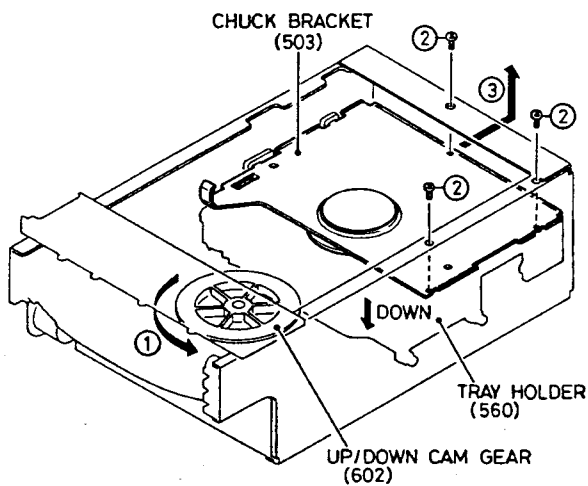
CD CHANGER REPLACEMENT

a. LOAD/UNLOAD FUNCTION

- (1) Remove the B TOP ENCOURAGE.
- (2) Remove the CD MECHANISM.

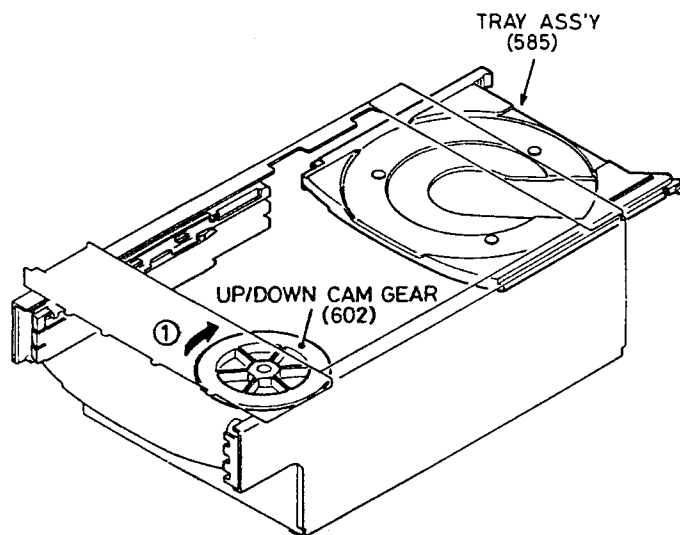
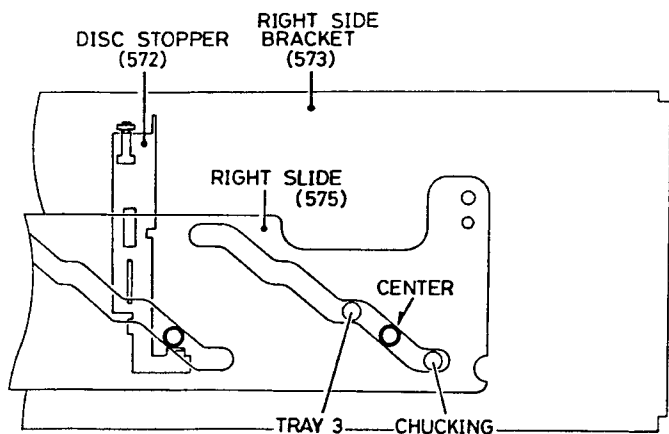
b. HOW TO REMOVE THE TRAYS

- (1) Remove the CHUCK BRACKET.



- (2) Rotate the UP/DOWN CAM GEAR (602) and position the collar part of the TRAY HOLDER visible from the RIGHT SLIDE at the midpoint between the CHUCKING and TRAY 3.

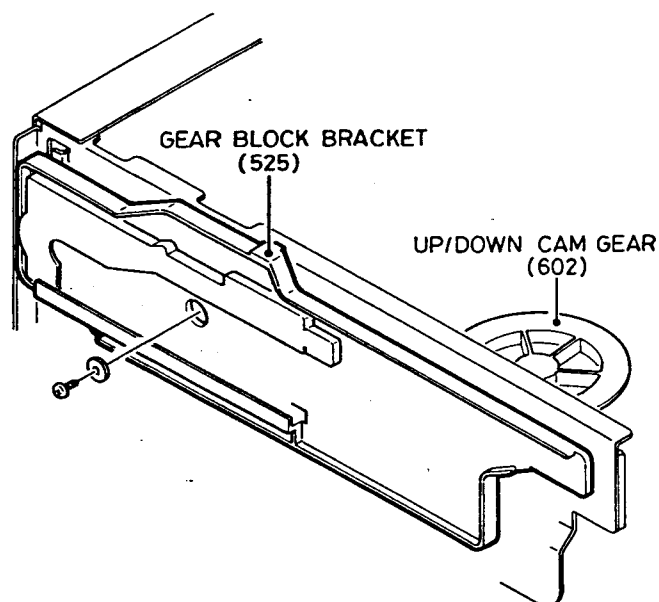
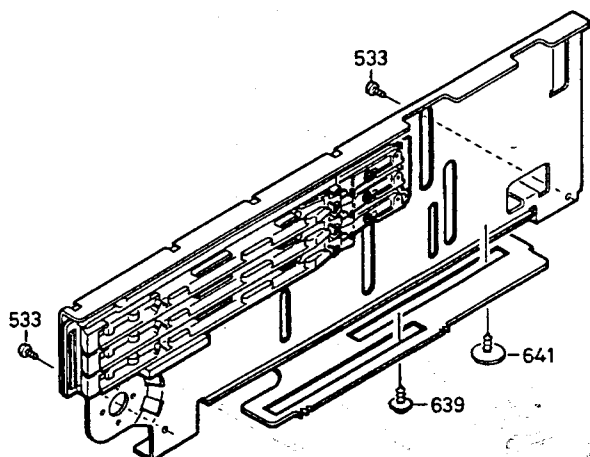
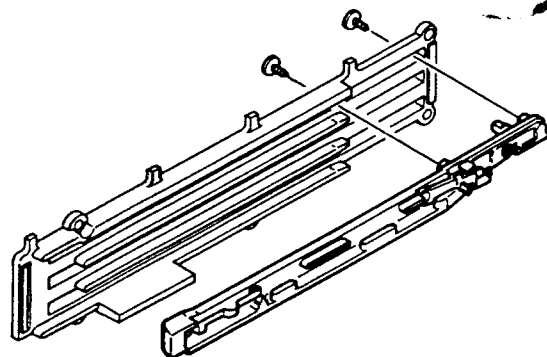
- (3) Remove the three TRAYS through the gap at the back.



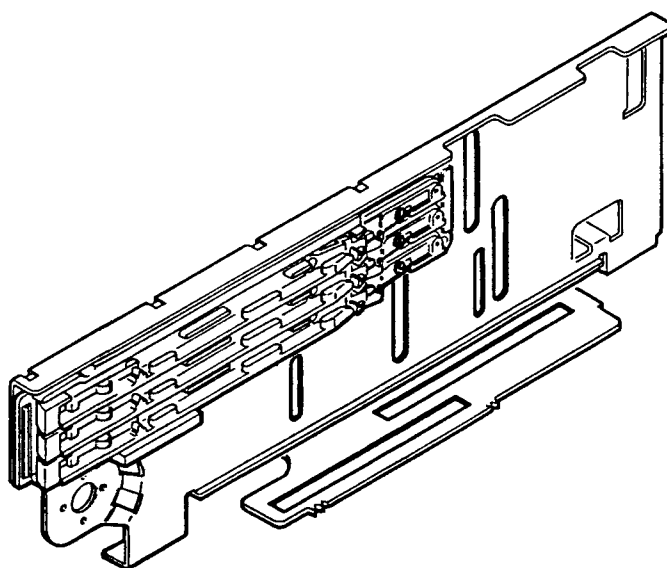
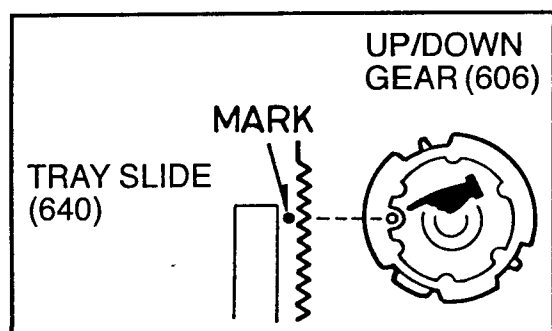
CD CHANGER REPLACEMENT

c. REPLACING THE TRAY GUIDE

- Have the LEFT TRAY GUIDE HOLDER and TRAY GUIDE ready before proceeding.
- (1) Turn the UP/DOWN CAM GEAR (602) and remove the setscrew of the TRAY HOLDER from the hole in the GEAR BLOCK BRACKET.
 - (2) Turn the UP/DOWN CAM GEAR (602) counterclockwise as far as it will go, and remove the SCREWS (533 x 2, 639, 641).



- (3) Remove the five setscrews of the LEFT TRAY GUIDE HOLDER, and remove it in the direction of the arrow.
- (4) When assembling the parts, align the TRAY SLIDE (640) and UP/DOWN DRIVE GEAR (606).



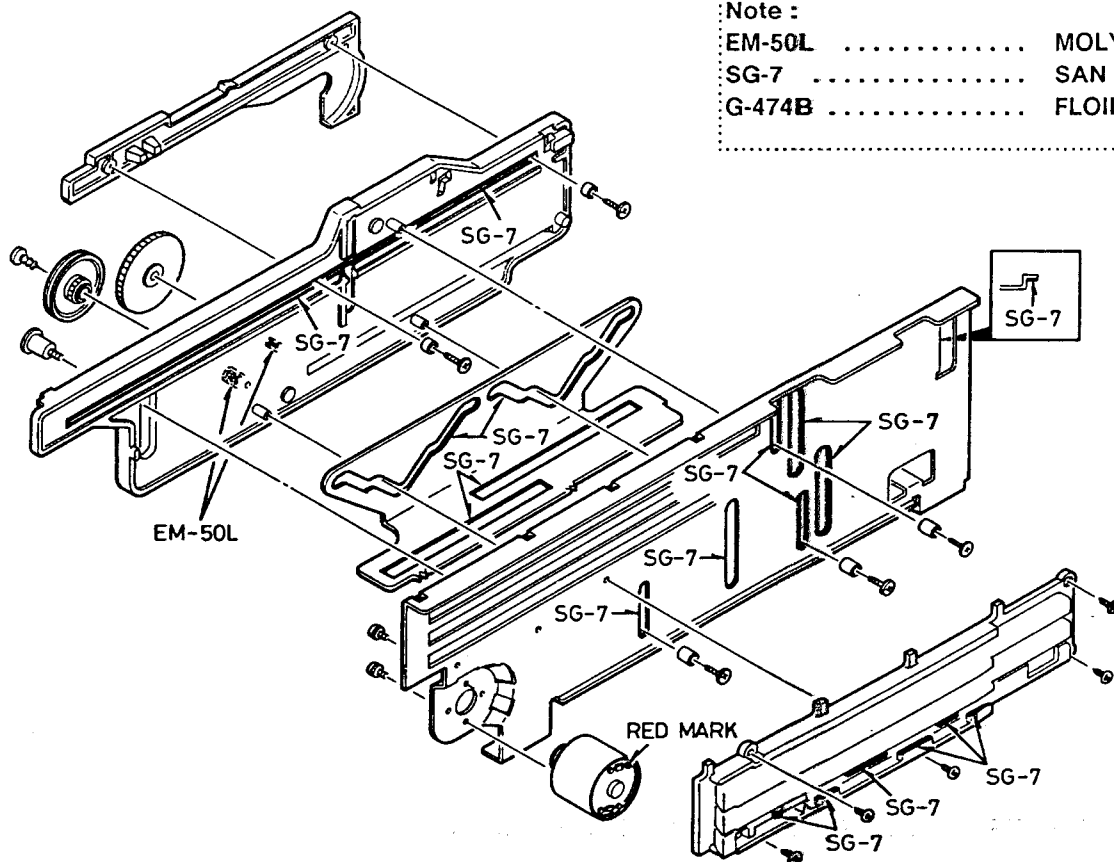
CD CHANGER REPLACEMENT

d. LEFT SIDE BRACKET

OF THE LUBRICATION

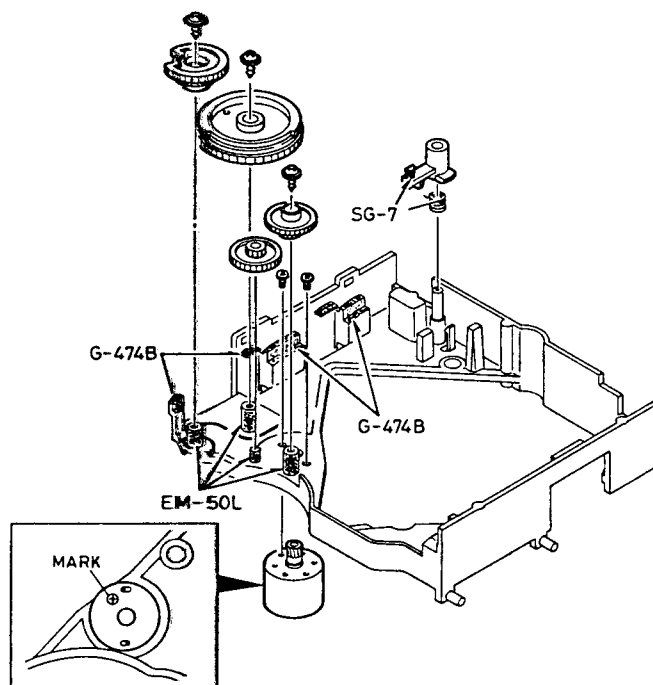
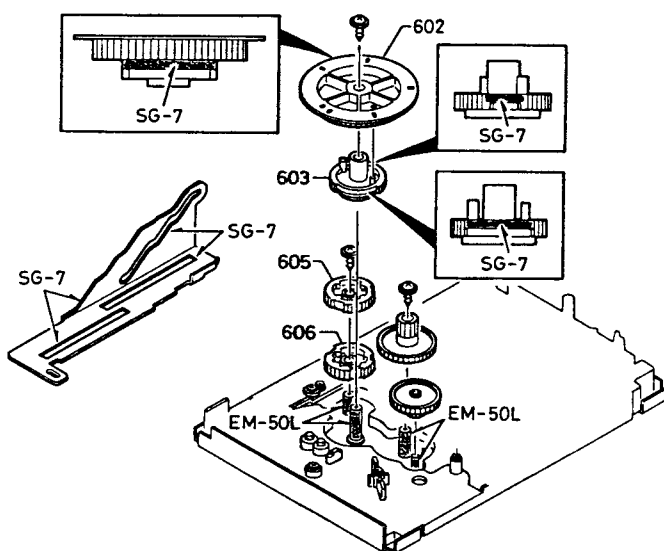
Note :

EM-50L	MOLYKOTE, EM-50L
SG-7	SAN GREASE, SG-7
G-474B	FLOIL OIL, G-474B



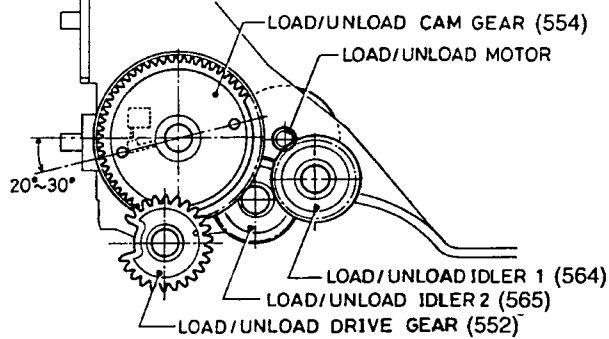
e. UP/DOWN CAM GEAR

f. LOAD/UNLOAD GEAR

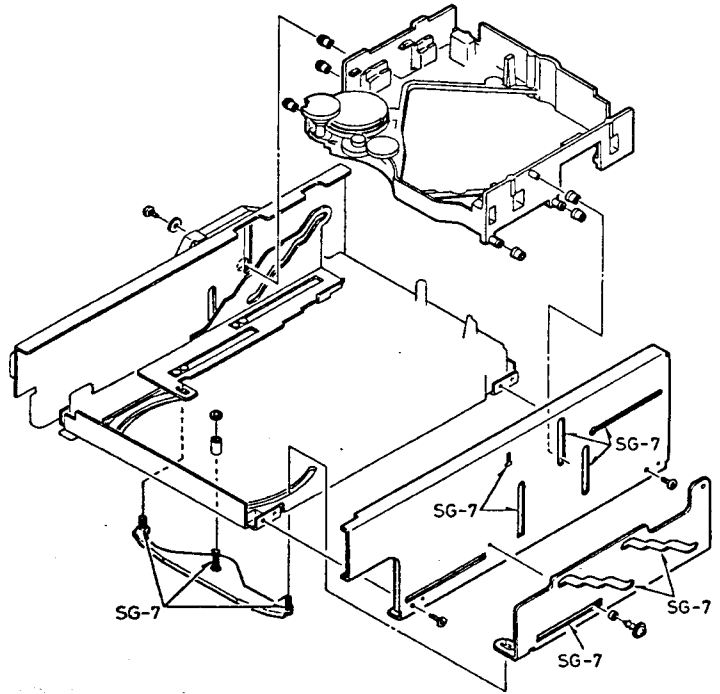


CD CHANGER REPLACEMENT

g. SETTING UP THE LOAD/UNLOAD GEAR

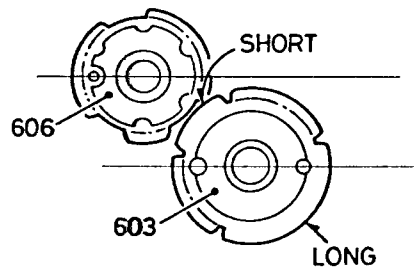
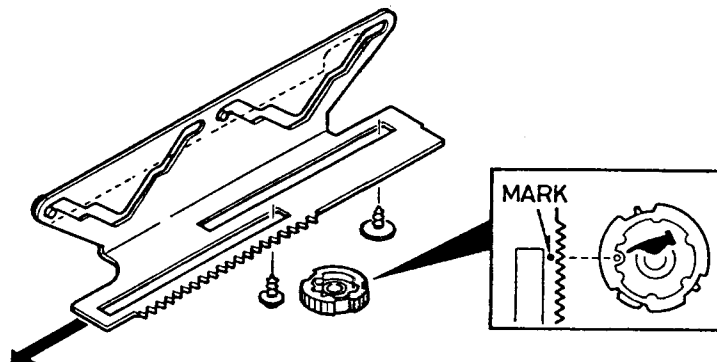


h. TRAY HOLDER



i. SETTING UP THE TRAY SLIDE AND UP/DOWN DRIVE GEAR (603)

- (1) Slide the TRAY SLIDE forward until it goes no further.
- (2) Align the round mark on the UP/DOWN DRIVE GEAR with the mark area on the TRAY SLIDE, and install.
- (3) Align the shorter flat part of the UP/DOWN CAM GEAR (603), and install.

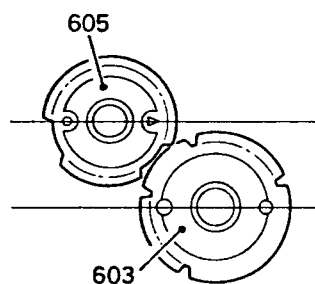


- Set the parts in such a way that the round marks on the two GEARS (606, 603) are horizontal.

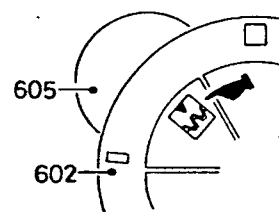
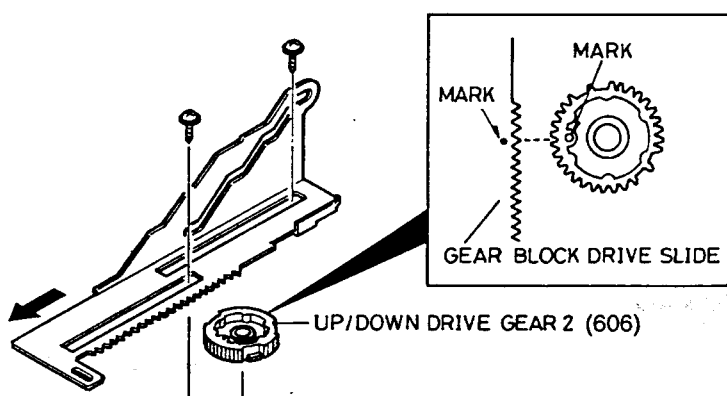
CD CHANGER REPLACEMENT

j. SETTING UP THE TRAY HOLDER AND UP/DOWN DRIVE GEAR (605)

- (1) Loosen and install the SET SCREW of the SENSOR P.W.B.
- (2) Slide the TRAY HOLDER SLIDE forward until it goes no further.
- (3) Align the round mark on the UP/DOWN GEAR (605) with the mark area on the TRAY HOLDER SLIDE, and install.
- (4) Secure the screw.
- (5) As shown in the figure, place the UP/DOWN DRIVE GEAR (603) and UP/DOWN CAM GEAR (605) in such a way that they are horizontal.
- (6) Align with the triangular mark through the hole through which the UP/DOWN CAM GEAR teeth are visible.
- (7) Secure the SCREW of the SENSOR and GEAR.

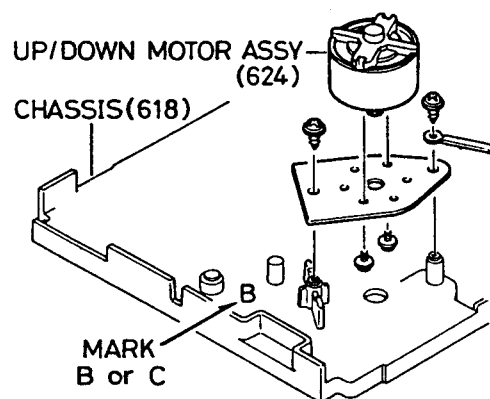


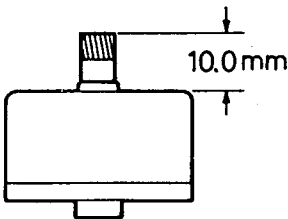
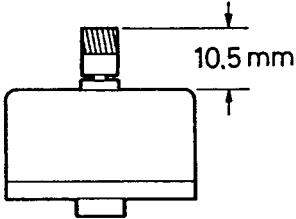
- Set the parts in such a way that the round marks on the two GEARS (606, 603) are horizontal.



k. TRAY HOLDER SLIDE

There are two types UP/DOWN MOTOR (624) which have been used. These UP/DOWN MOTOR (624) can be used not interchangeably. Use the following procedure in accordance with which type of UP/DOWN MOTOR (624) and chassis (618) you will replace. Please be sure which type of motor you have before serving.



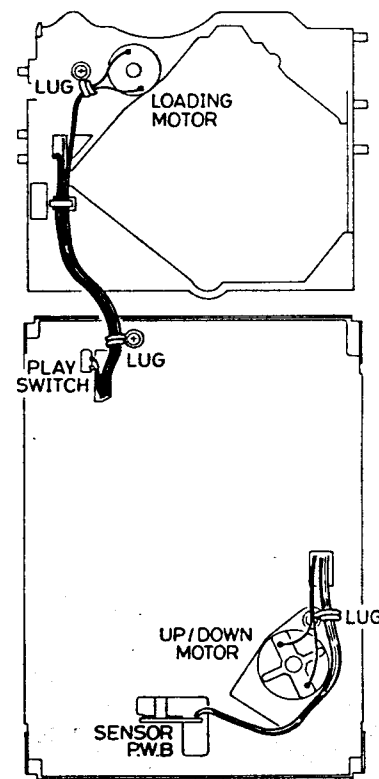
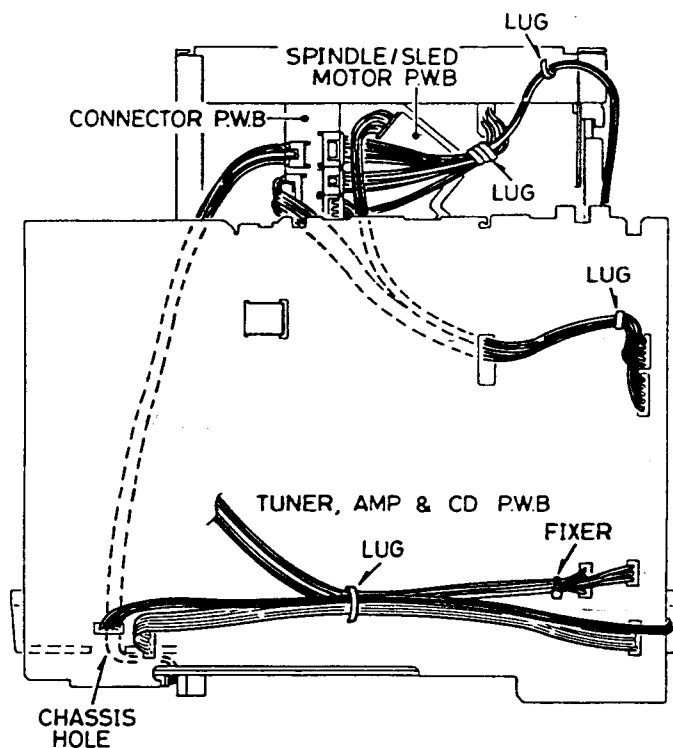
TYPE	1	2
CHASSIS (618) MARK	B	C
UP/DOWN MOTOR ASSY (624)		
(PART No.)	(614 268 2890)	(614 287 0440)

CD MECHANISM ADJUSTMENTS

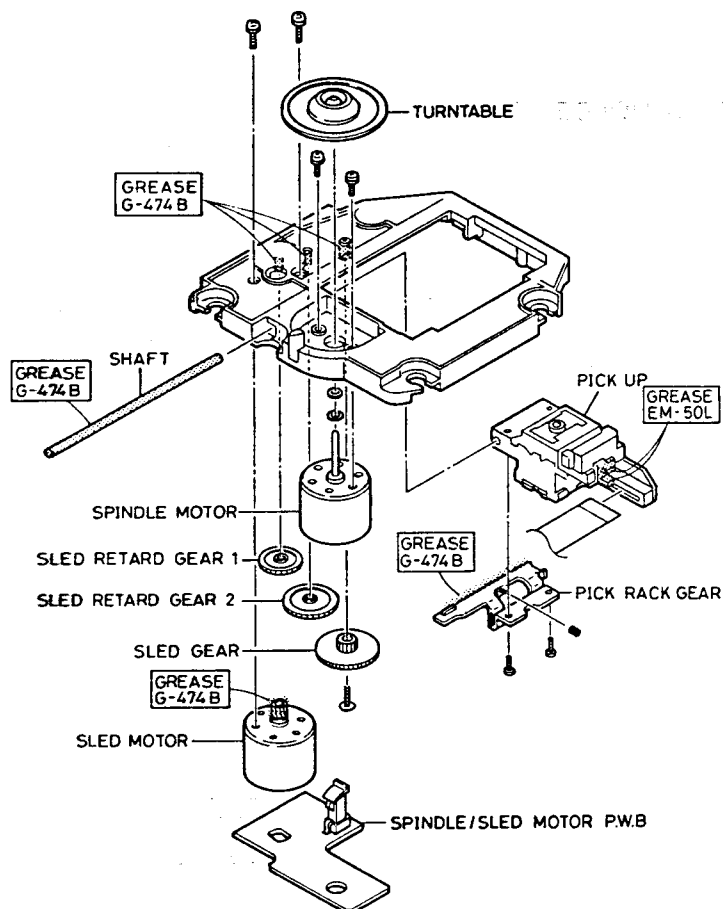
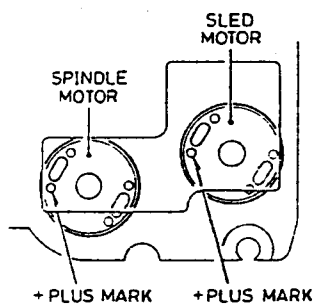
a. REPLACEMENT AND LUBRICATION OF THE CD MECHANISM

Note :

EM-50L	MOLYKOTE, EM-50L
SG-7	SAN GREASE, SG-7
G-474B	FLOIL OIL, G-474B



b. CD BASE MECHANISM



CD MECHANISM ADJUSTMENTS

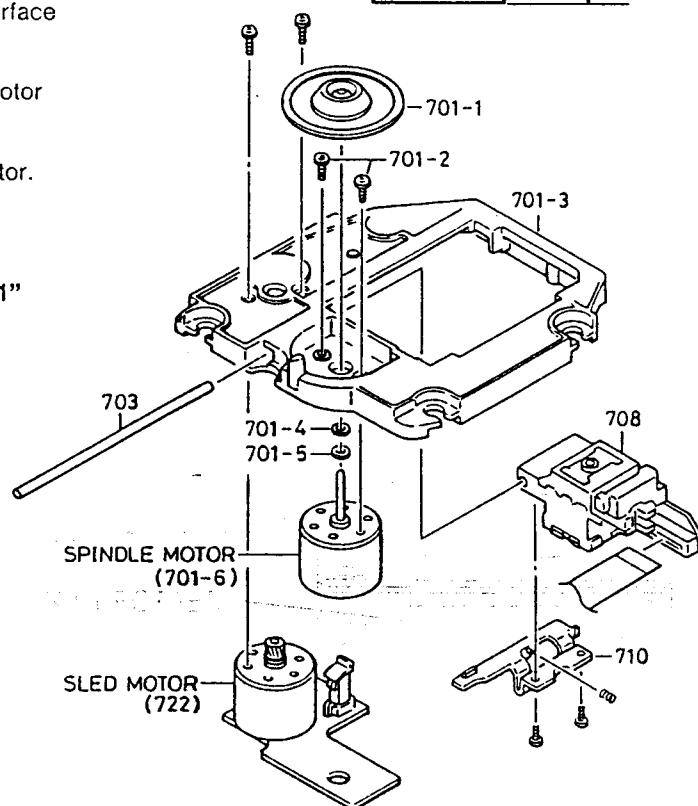
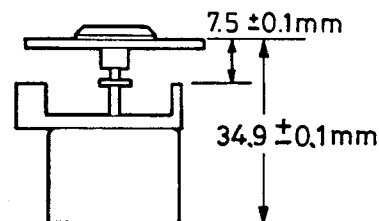
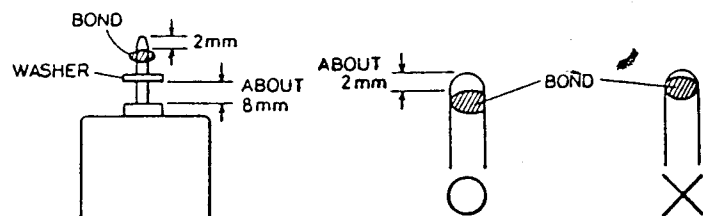
c. CD MECHANISM

(a) Replacement of the spindle motor

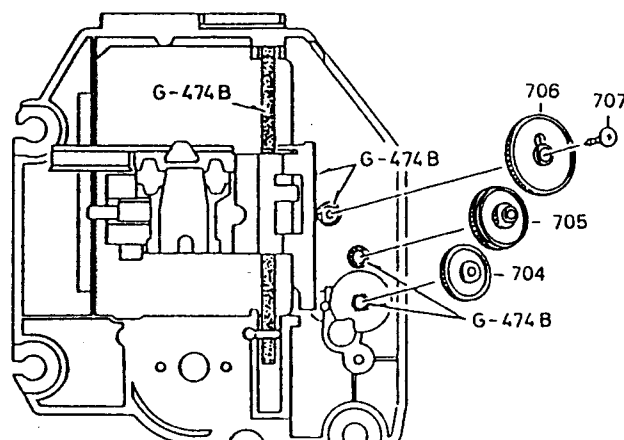
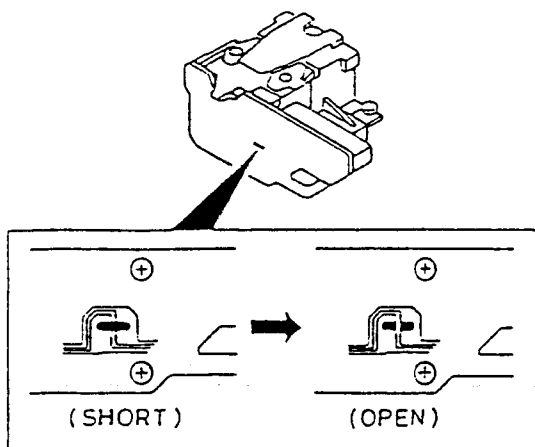
- First, prepare the new turntable (701-1) and new special washer (701-4,701-5) for replacement.
The removed turntable will be deformed by the heat of the soldering iron, and cannot be reused.
- Prepare dial-type calipers.
- (1) The attached bonding material can be dissolved by using a 60W soldering iron to heat the shaft at the upper part of the turntable for about one minute.
- (2) The turntable can then be removed from the shaft by very carefully applying force upward at the center of the lower surface of the turntable.
- (3) Remove the two screws (701-2) and remove the spindle motor (701-6).
- (4) Attach the special washer (701-4, 701-5) to the spindle motor.
- (5) Clean the spindle motor's shaft.
To clean them, use a soft cloth soaked in isopropyl alcohol.
- (6) Apply a small amount of a mixture of the "Three Bond 2001" and "2015F" bonding materials to the motor's shaft.
- (7) Install the turntable as shown in the figure.
- (8) Secure the turntable by pressing gently.
Be sure to wipe away (by using a piece of cloth, or similar material) any bonding material coming out of the hole.

(b) Replacing the pick-up

- (1) Insert the pick-up rail (703) into the base chassis. (701-3)
- (2) If the latch of the base chassis (701-3) are missing when the pick-up rails have been installed, first wipe the tips of the rail with alcohol.
- (3) After the pick-up has been replaced, apply grease (FLOIL G-474B) to the  sections.
- (4) The pick-up P.W.Board pattern is "shorted", as shown in the figure, so that the new pick-up will not be susceptible to the effects of static.
- (5) Set the pattern to "open" after the pick-up has been replaced.



(BE SURE AT THIS TIME,
NOT TO TOUCH ANY OTHER PART.)



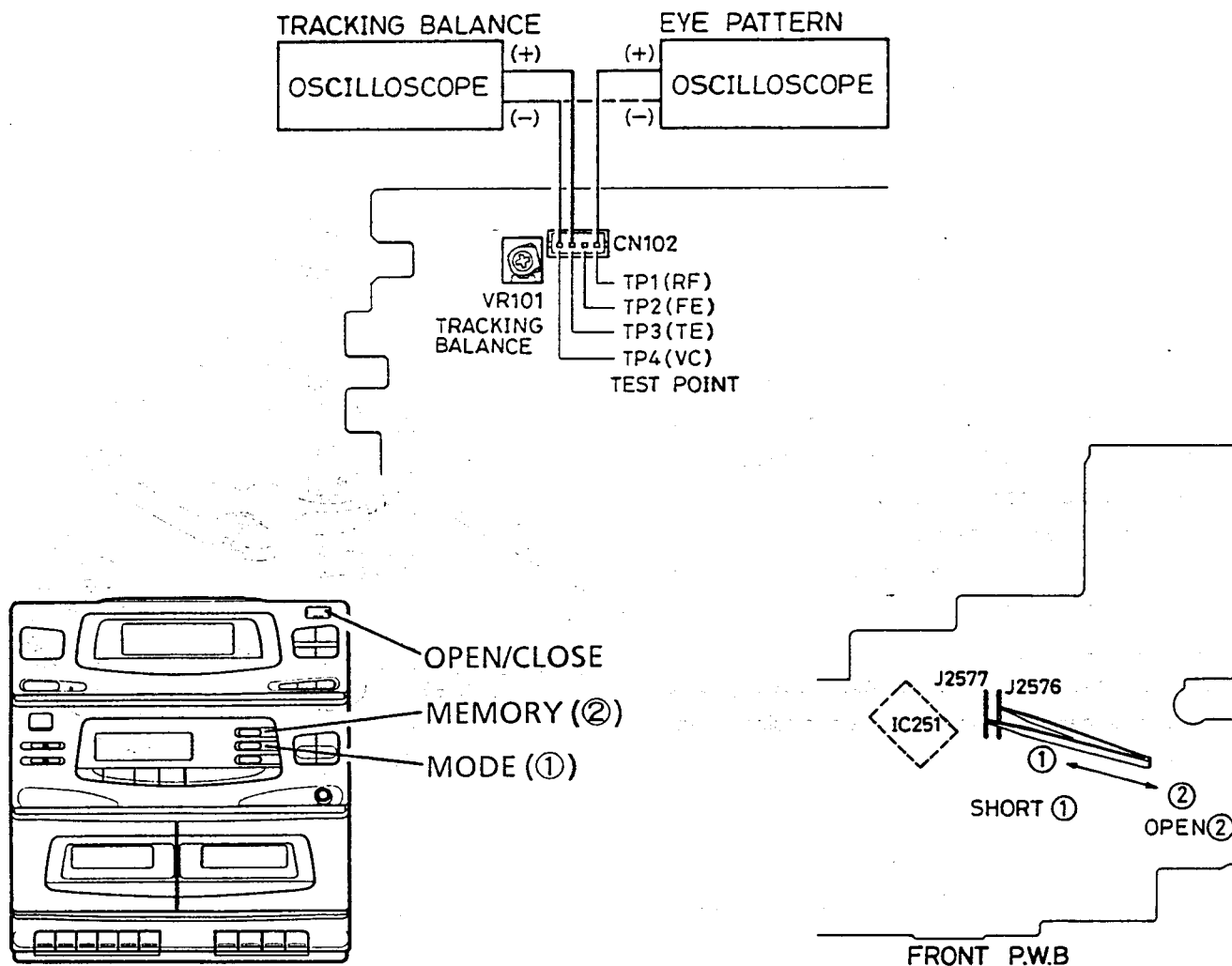
CD PLAYER ADJUSTMENTS

a. PREPARATIONS

(a) Measuring instruments, tools and filter

- (1) Test disc. : YEDS 18 (SONY) or etc.
- (2) Oscilloscope : SS5711 (10 MHz or dual-phenomenon) or Memoryscope : DSS6521 (Storagescope)
- (3) Screwdrivers (non-metallic) for adjustments

b. PARTS LOCATION



c. ADJUSTING THE SERVICE MODE (TRACKING BALANCE)

- (1) While short circuiting JUMPER (J2576 and J2577) with the tweezers, simultaneously press the MODE switch. (①)
- (2) Within 1 second after pressing the MODE switch, cancel the short circuit of JUMPER (J2576 and J2577), and press the MEMORY switch. (②)

STEP	JUMPER WIRE	SWITCH
1	J2576 and J2577 "short"	MODE switch pressing
2	J2576 and J2577 "open"	MEMORY switch pressing

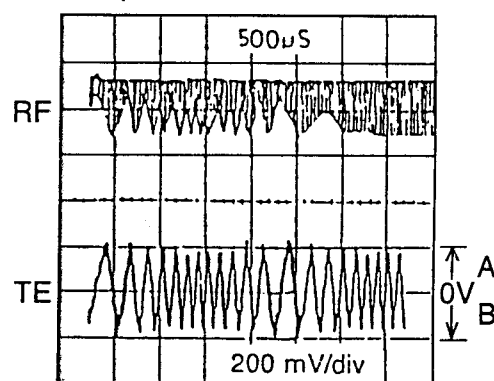
CD PLAYER ADJUSTMENTS

d. ADJUSTMENTS

Adjustment Item	Measuring instrument	Service mode	Output connection	Adjustment location	Adjustment value
(a) Tracking balance	Oscilloscope	yes	TP 3 : TE TP 4 : VC	VR101	Waveform symmetry $A = B$
(b) Checking the "eye" pattern	Oscilloscope	—	TP 1 : RF TP 4 : VC	—	Check be sure that the "eye" pattern is at the center of the waveform and that the diamond shape is clearly defined

(a) Tracking balance adjustment

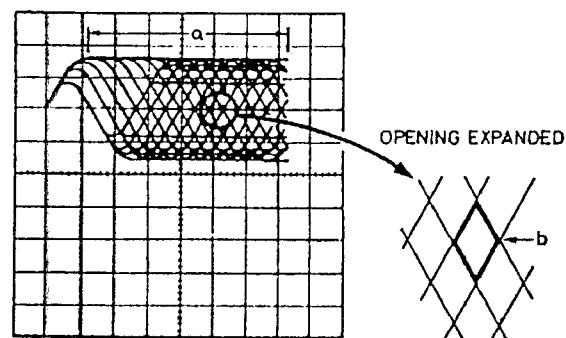
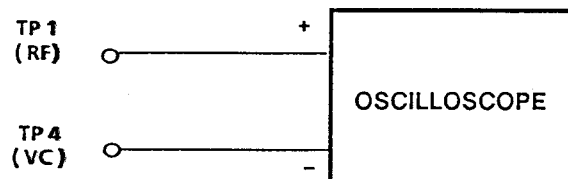
- Connect an oscilloscope to TP3 (TE) and TP4 (VC).
- Set the test disc. (DISC 1)
- While short circuiting JUMPER (J2576 and J2577) with the tweezers, simultaneously press the MODE switch. (①)
- Within 1 second after pressing the MODE switch, cancel the short circuit of JUMPER (J2576 and J2577), and press the MEMORY switch. (②)
(SERVICE MODE : Tracking balance)
- PLAY / PAUSE switch push "ON".
- Adjust VR101 so that the oscilloscope's waveform is symmetrical, as shown in the illustration.
- To cancel service mode, disconnect the power cord's plug from the electrical outlet.



$A = B$

(b) Checking the "eye" pattern

- Switch "ON" the POWER.
- Connect an oscilloscope to TP1 (RF) and TP4 (VC).
- Load the test disc.
- PLAY switch push ON.
- Check to be sure that the "eye" pattern is at the center of waveform and that the diamond shape is clearly defined.
- Press the STOP button.
- Switch "OFF" the POWER.



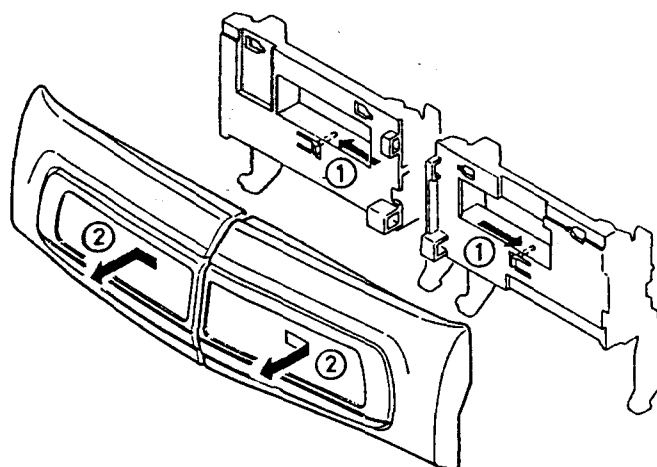
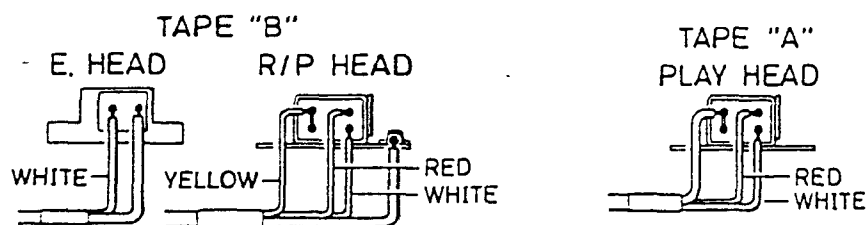
TAPE DECK ADJUSTMENTS

Adjustment Item	Test Tape	Measuring Instrument	Output connection	Adjust location	Adjust value	Note
(a) HEAD AZIMUTH TAPE "B"	VTT738 etc. (10 kHz)	AC-voltmeter	SPEAKER TERMINAL	HEAD AZIMUTH SCREW	Max.	---
(b) HEAD AZIMUTH TAPE "A"	VTT738 etc. (10 kHz)	AC-voltmeter	SPEAKER TERMINAL	HEAD AZIMUTH SCREW	Max.	---
(c) MOTOR SPEED (NORMAL)	MTT-111 (3,000 Hz)	FREQUENCY COUNTER	SPEAKER TERMINAL	SVR01	3,000 Hz	---

a. HEAD REPLACEMENT AND AZIMUTH ADJUSTMENT

(a) Head replacement

- (1) After replacement, demagnetize the heads by using a degausser.
- (2) Be sure to clean the heads before attempting to make any adjustments.
- (3) Be sure both channels (1 and 2) are the same level
(Using a dual-channel oscilloscope).
- (4) All wiring should be returned to the original position after work is completed.



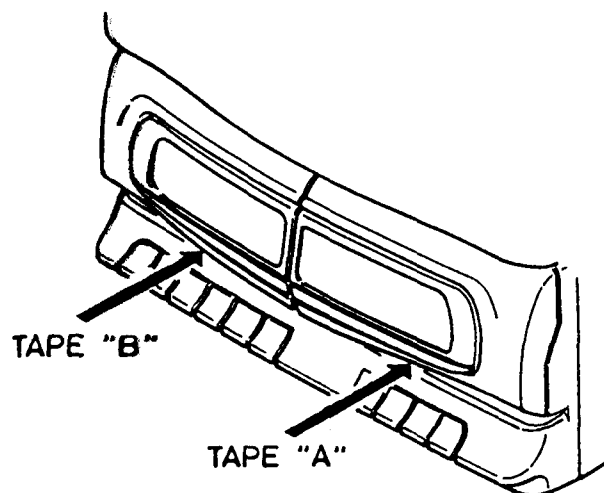
(b) Head azimuth

• TAPE "A"

- (1) Load a test tape (VTT-738, etc.: 10 kHz) for azimuth adjustment.
- (2) Press the PLAY button.
- (3) Use a flat-tip (-) screwdriver to turn the screw for normal azimuth adjustment so that the left and right outputs are maximized at the same phase during normal playback.
- (4) Press the STOP button.

• TAPE "B"

- (1) Load a test tape for azimuth adjustment.
- (2) Press the PLAY button.
- (3) Azimuth screw adjustment.
- (4) Press the STOP button.



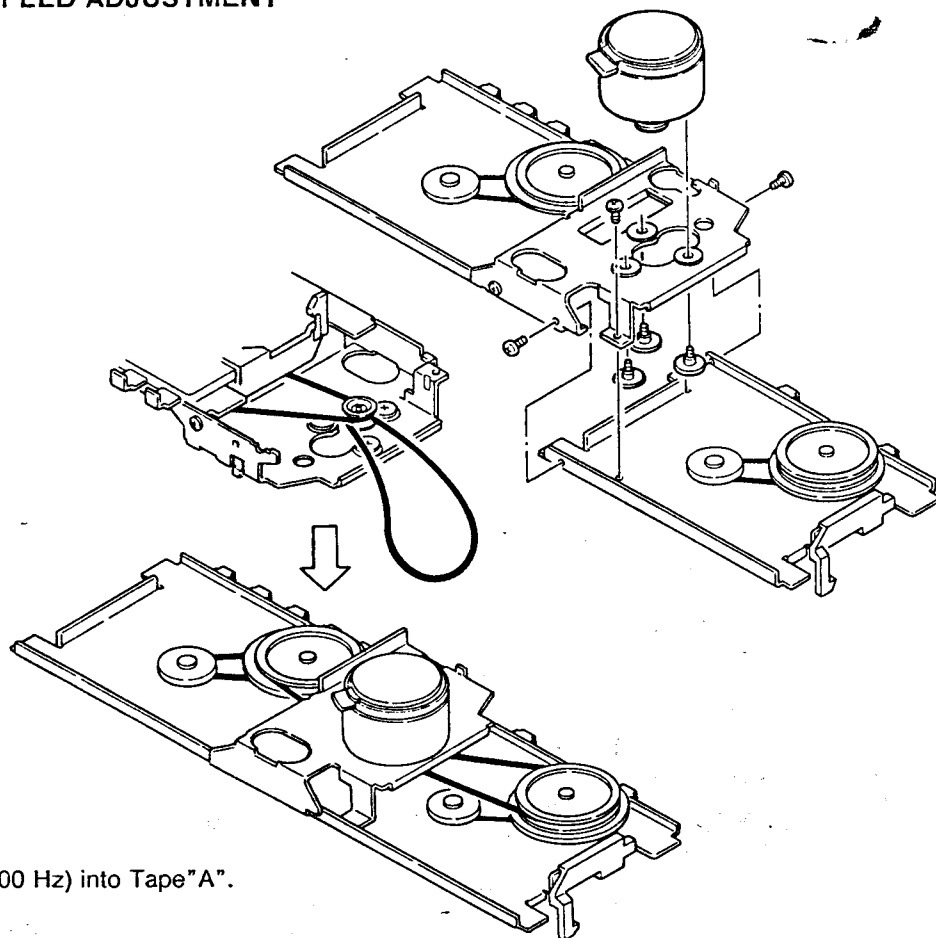
- After making the adjustment, secure the azimuth adjustment screw by applying screw lock (TB-1401B).

TAPE DECK ADJUSTMENTS

b. MOTOR REPLACEMENT AND SPEED ADJUSTMENT

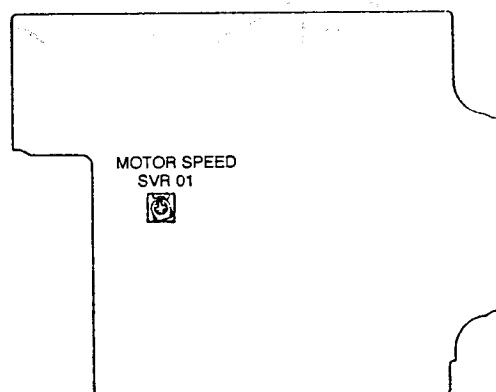
(a) Motor replacement

(1) See illustration at right.



(b) Motor speed

- (1) Insert the test tape (MTT-111, etc. 3,000 Hz) into Tape "A".
- (2) Press PLAY button.
- (3) Adjust SVR01 so that the frequency counter shows a reading of 3,000Hz.
- (4) Press STOP button.



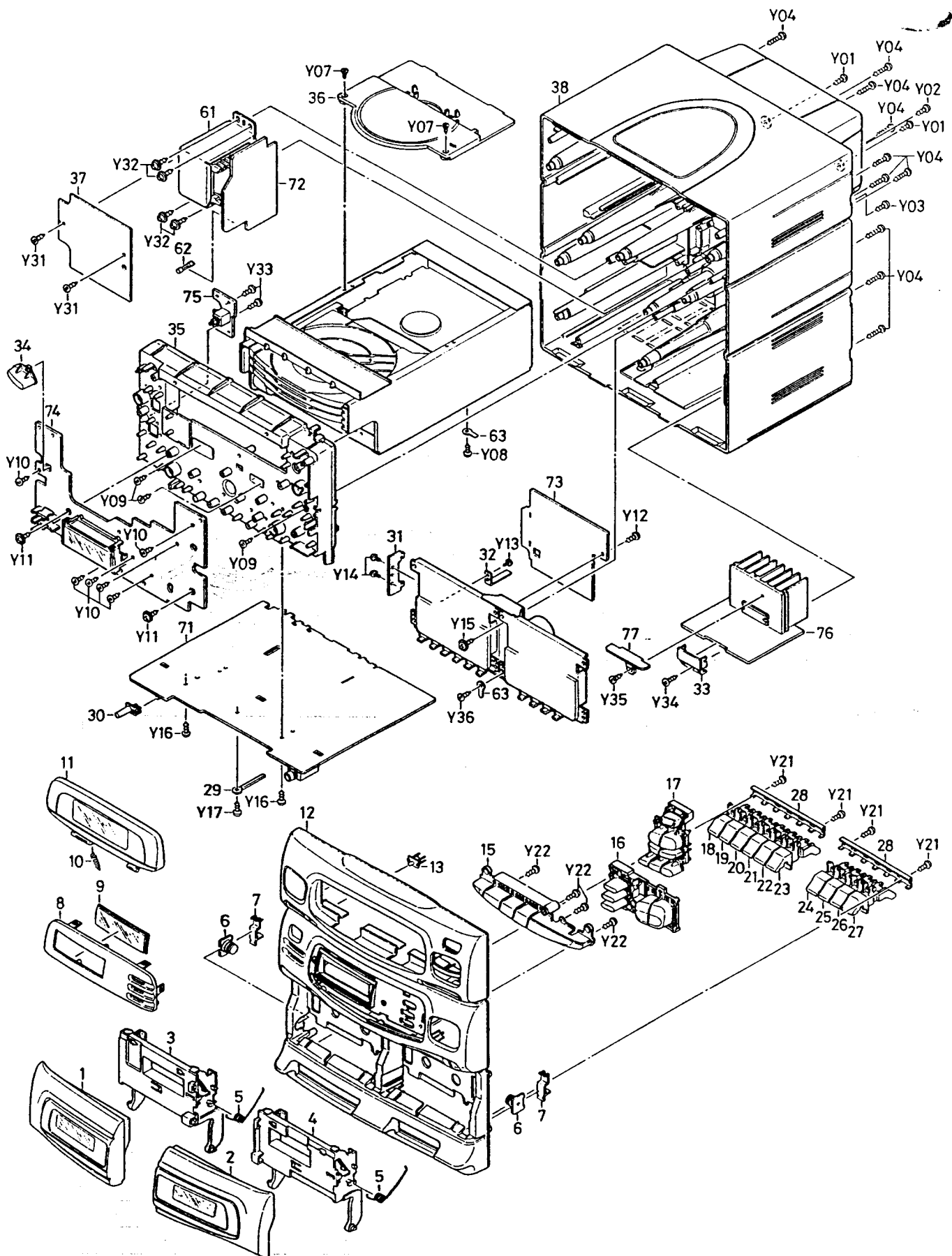
c. CHECKING THE MECHANISM TORQUES

- Clean the head, capstan and pinch roller before making any measurement.

TAPE "A & B"

Measurement	Take-up torque	Back tension	Tape tension
Cassette for measurement	PLAY:TW-2111A F.FWD/REW:TW-2231	PLAY:TW-2111A	Drive-power cassette TW-2412
PLAY	30~ 60 gr.cm	2.0~ 5.0 gr.cm	60 gr or more
F.FWD / REW	55~ 120 gr.cm	—	—

EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified Δ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

CAUTION: Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.

N.S.P : Not available as service parts.

PACKING & ACCESSORIES

Ref. No.	Part No.	Description
	614 282 9516	CARTON CASE
	614 280 8061	CUSHION, TOP
	614 280 8078	CUSHION, BOTTOM, SET BOTTOM
	614 282 9622	INSTRUCTION MANUAL
	645 012 1302	POLY SHEET-1200X550MM
	645 009 0271	REMOCON, RB-09
	645 005 7007	BATTERY COVER, REMOTE CONTROL
	645 005 1227	ASSY, ANTENNA, LOOP, AM
	614 245 0055	ANTENNA, FM
	Δ 614 256 5292	POWER CORD, AC
	412 055 5204	SPECIAL SCREW- 3.0X18.5MM, SHIPPING SCREW

CABINET & CHASSIS

Ref. No.	Part No.	Description
1	614 282 9073	ASSY, COVER, LEFT, TAPE B
2	614 282 9097	ASSY, COVER, RIGHT, TAPE A
3	614 267 7001	LID, CASSETTE, LEFT, TAPE B
4	614 267 7018	LID, CASSETTE, RIGHT, TAPE A
5	614 267 7780	SPRING, TENS, CASSETTE OPEN
6	614 270 8316	ASSY, GEAR, CASSETTE
7	614 267 8312	MOUNTING, GEAR SUPPORT
8	614 280 7927	PANEL, FRONT, LCD
9	614 280 7774	DEC, WINDOW, LCD
10	614 267 7773	SPRING, TENS, CD DOOR CLOSE
11	614 280 7491	ASSY, DOOR, CD
12	614 281 5106	ASSY, CABINET
13	614 282 6157	DEC, WINDOW LED, POWER LED
15	614 280 7606	BUTTON, FUNCTION/TUNING
16	614 280 7576	BUTTON, VOL, TUN, VOLUME/TUNING
17	614 280 7590	BUTTON, VOL, OPERATION, CD OPERATION
18	614 267 6776	BUTTON, RECORD, TAPE B
19	614 267 6783	BUTTON, PLAY, TAPE B
20	614 267 6790	BUTTON, REW, TAPE B
21	614 267 6806	BUTTON, FFW, TAPE B
22	614 267 6813	BUTTON, STOP/EJECT
23	614 267 6820	BUTTON, PAUSE, TAPE B
24	614 267 8237	BUTTON, PLAY, TAPE A
25	614 267 8244	BUTTON, REW, TAPE A
26	614 267 8251	BUTTON, FFW, TAPE A
27	614 267 8268	BUTTON, STOP/EJECT, TAPE A
28	614 270 8422	MOUNTING, MECHANISM BUTTON
29	614 130 0382	LUG, CHASSIS MAIN
30	614 281 5175	BUTTON PUSH, HIGH SPEED DUBBING
31	614 270 8408	HOLDER, TAPE DECK PWB
32	614 270 8484	SPRING, PLATE, RECORD/PLAY
33	614 261 1319	MOUNTING, POWER PWB
34	614 281 4147	BUTTON POWER
35	614 280 7699	CHASSIS, CD MECHANISM

Ref. No.	Part No.	Description
36	614 270 9948	DEC, WINDOW, CD CHANGER MECHANISM, TOP
37	614 268 8908	SHIELD, POWER TRANSFORMER
38	614 282 9042	ASSY, CABINET, REAR
	614 129 4971	FIXER, LEAD FIX
	614 208 0986	CUSHION, TAPE MECHANISM LEAD
	614 231 6832	LABEL, SAFETY, CLASS 1
	614 281 1078	LABEL, CAUTION, WHEN CARRYING THE UNIT
	614 283 2295	LABEL, CAUTION, SET TOP, PRESS THE OPEN/CLOSE BUTTON
	614 286 4159	LABEL, CAUTION, SHIPPING SCREW CAUTION BEFORE USE, REAR
	614 286 4166	LABEL, CAUTION, SHIPPING SCREW CAUTION BEFORE USE, FRONT
	614 286 4173	LABEL, SHIPPING SCREW ARROW, GREEN LABEL
	614 287 1072	SHIELD, AL, 41X76MM
	614 281 3218	SHIELD, CABINET REAR BACK
	614 125 1233	CUSHION, 5X20MM, CD MECHANISM LEAD

FIXING PARTS

Ref. No.	Part No.	Description
Y01	411 021 3701	SCR S-TPG BIN 3X10MM, CABI REAR/CD MECHANISM
Y02	411 021 3701	SCR S-TPG BIN 3X10MM, VIDEO SOCKET
Y03	411 021 3701	SCR S-TPG BIN 3X10MM, AC POWER SOCKET
Y04	411 021 4906	SCR S-TPG BIN 3X20MM, CABINET RAER
Y07	411 024 3708	SCR S-TPG PAN+FLG 2X6MM, DEC, WINDOW MTG.
Y08	411 028 9201	SCR S-TPG PAN 3X4MM, TUNER GND
Y09	411 021 3503	SCR S-TPG BIN 3X10MM, CHASSIS
Y10	411 021 3503	SCR S-TPG BIN 3X10MM, CHASSIS
Y11	411 020 8905	SCR S-TPG BRZ+FLG 3X10MM, FRONT PWB
Y12	411 021 3503	SCR S-TPG BIN 3X10MM, TAPE DECK PWB
Y13	411 028 2806	SCR S-TPG PAN 2X3MM, RECORD/PLAY SPRING PLATE
Y14	411 028 2805	SCR S-TPG PAN 2X4MM, BRACKET-E
Y15	411 020 8905	SCR S-TPG BRZ+FLG 3X10MM, TAPE MECHANISM

PARTS LIST

Ref. No.	Part No.	Description
Y16	411 020 8905	SCR S-TPG BRZ+FLG 3X10MM, TUNER/AMP. & CD PWB
Y17	411 020 8905	SCR S-TPG BRZ+FLG 3X10MM, LUG MTG.
Y21	411 021 3503	SCR S-TPG BIN 3X10MM, MECHANISM BUTTON BRACKET
Y22	411 021 3503	SCR S-TPG BIN 3X10MM, BUTTON, FUNCTION/TUNING
Y31	411 021 3503	SCR S-TPG BIN 3X10MM, POWER TRANSFORMER, SHIELD
Y32	411 020 8905	SCR S-TPG BRZ+FLG 3X10MM, POWER TRANSFORMER
Y33	411 021 3503	SCR S-TPG BIN 3X10MM, POWER SWITCH PWB
Y34	411 021 3503	SCR S-TPG BIN 3X10MM, MOUNTING, POWER AMP. PWB
Y35	411 021 3503	SCR S-TPG BIN 3X10MM, TRANSISTOR
Y36	411 028 6200	SCR S-TPG PAN 2.6X6MM, LUG MTG.

ELECTRICAL PARTS

Ref. No.	Part No.	Description
61	Δ 645 018 4369	TRANSFORMER, POWER (PT401)
62	Δ 423 016 8605	FUSE 250V 0.4A (FU491)
63	614 129 9082	LUG, SHIELD
CM121	614 271 2191	ASSY, CONNECTOR-S, 4P, CD-CD MECHANISM
CM131	614 273 3905	CORD, 1P, CONNECTOR
CM310	614 253 8463	ASSY, CONNECTOR-S, 4P, R/P HEAD
or	614 273 0393	ASSY, CONNECTOR-S, 4P, R/P HEAD
CM311	614 251 1404	ASSY, CONNECTOR-S, 3P, P HEAD
or	614 273 0386	ASSY, CONNECTOR-S, 3P, P HEAD
CM312	614 251 1411	ASSY, CONNECTOR-S, 2P, E HEAD
or	614 273 0416	ASSY, CONNECTOR-S, 2P, E HEAD
CM313	614 251 3279	ASSY, CONNECTOR-S, 6P, MECHANISM SWITCH
or	614 273 0409	ASSY, CONNECTOR-S, 6P, MECHANISM SWITCH

TUNER, AMP., CD P.W. BOARD ASSY

Ref. No.	Part No.	Description
71	614 284 5530	ASSY, PWB, TUNER, AMP. & CD
C1601	403 125 5507	ELECT 1000U M 16V
C2153	403 081 8406	POLYPRO 390P J 100V
C2463	403 106 1063	NP-ELECT 1U Q 50V
C4930	403 135 3302	ELECT 1000U M 6.3V
C4933	403 135 0400	ELECT 3300U M 25V
C4940	403 135 3302	ELECT 1000U M 6.3V
CM101	645 010 1465	SOCKET, FPC 13P
CM102	645 005 8110	PLUG, 4P
CM103	645 005 8127	PLUG, 6P
CM104	614 271 2184	ASSY, WIRE, 8P
CM105	614 221 8273	TERMINAL, 1P
CM201	645 005 0695	TERMINAL, 4P
CM417	645 004 2898	PLUG, 3P
CM420	614 020 1222	SOCKET, 3P
CM421	645 006 1141	JACK, PHONES
CM422	645 006 1875	PLUG, 2P
CM423	645 006 1875	PLUG, 2P
CM424	614 020 1246	SOCKET, 5P
CM425	645 006 0885	PLUG, 13P
CM426	614 020 6548	SOCKET, 2P

Ref. No.	Part No.	Description
CM428	614 020 6548	SOCKET, 2P
CM429	645 004 2904	PLUG, 4P
CM431	614 283 6682	ASSY, WIRE
CM432	614 270 6411	ASSY, WIRE
CM433	614 268 3866	ASSY, WIRE
CM434	614 224 9864	SOCKET
CM436	645 004 2904	PLUG, 4P
CM437	614 020 1215	SOCKET, 2P
CM492	614 020 6579	SOCKET, 5P
CM493	614 020 6579	SOCKET, 5P
CT251	614 007 6356	TRIMMER, 11PF
D1351	407 099 5402	ZENER DIODE MTZJ6.2B
or	407 051 7208	ZENER DIODE GZS6.2Y
D1361	407 099 5105	ZENER DIODE MTZJ4.7B
or	407 051 6508	ZENER DIODE GZS4.7Y
D1371	407 099 4504	ZENER DIODE MTZJ3.9A
or	407 051 5808	ZENER DIODE GZS3.9X
D1372	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1601	407 004 9709	DIODE DSK10C
D1602	407 004 9709	DIODE DSK10C
D1603	407 004 9709	DIODE DSK10C
D1604	407 004 9709	DIODE DSK10C
D2101	407 157 8109	DIODE SVC211-B
D2102	407 157 8109	DIODE SVC211-B
D2103	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D2104	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D2105	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D2131	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D2132	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D2151	407 105 1305	VARACTOR DI SVC342L-V
or	407 105 1602	VARACTOR DI SVC342M-V
D2453	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D2454	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D2455	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D4911	407 099 6706	DIODE MTZJ13A
D4912	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D4923	407 127 3905	ZENER DIODE MTZJ5.6B
HS001	614 266 6500	HEAT SINK
HS002	614 249 0754	HEAT SINK
IC101	409 327 3402	IC CXA1782BQ
IC102	409 317 8509	IC BA6398FP
IC104	409 322 2707	IC CXD2518Q
IC106	409 039 7408	IC NJM4558D
or	409 018 4305	IC LA6458D
IC131	Δ 409 127 1400	IC LB1648
IC132	409 114 4803	IC LB1641
IC211	409 049 2103	IC TA7358P
IC231	409 377 4909	IC LA1832L
IC245	409 066 7600	IC LM7001
IC422	409 265 3601	IC TC9213P
IC423	409 211 6601	IC NJM4558L
IC424	Δ 409 026 8500	IC L78M05
or	Δ 409 057 6407	IC UPC78M05H
or	Δ 409 169 7804	IC NJM78M05FA

PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
IC425	409 051 2801	IC TC4052BP	Q2462	405 019 3903	TR 2SC536-G-SPA
or	409 336 0508	IC BU4052BC	or	405 017 9709	TR 2SC3330-U
L1401	645 002 1534	INDUCTOR, 8.2U K	or	405 011 8609	TR 2SC1740S-S
L1500	645 006 9864	INDUCTOR, 80U	or	405 011 8500	TR 2SC1740S-R
or	614 212 3171	INDUCTOR, FERITE	or	405 014 5209	TR 2SC2458-GR
L1501	645 006 9864	INDUCTOR, 80U	or	405 014 5407	TR 2SC2458-Y
or	614 212 3171	INDUCTOR, FERITE	Q4721	405 019 3705	TR 2SC536-G-AUD-SPA
L2101	614 034 5988	VHF COIL	or	405 017 9709	TR 2SC3330-U
L2102	614 034 6732	VHF COIL	or	405 011 8609	TR 2SC1740S-S
L2103	645 002 1534	INDUCTOR, 8.2U K	or	405 011 8500	TR 2SC1740S-R
L2104	645 002 1534	INDUCTOR, 8.2U K	or	405 014 5209	TR 2SC2458-GR
L2151	645 013 5873	TRANS, ANT, 796MHZ	or	405 014 5407	TR 2SC2458-Y
L2152	645 013 5811	TRANS, OSC, 796KHZ	Q4821	405 019 3705	TR 2SC536-G-AUD-SPA
L2451	645 001 4581	INDUCTOR, 100U K	or	405 017 9709	TR 2SC3330-U
L4910	645 001 4581	INDUCTOR, 100U K	or	405 011 8609	TR 2SC1740S-S
LG001	614 051 9785	LUG, TUNER GND	or	405 011 8500	TR 2SC1740S-R
LG101	645 006 4432	FIXER	or	405 014 5209	TR 2SC2458-GR
PR131	△645 013 7075	PROTECTOR, 0.5A, 125V	or	405 014 5407	TR 2SC2458-Y
PR491	△645 006 2322	PROTECTOR, IC, 0.4A, 50V	Q4912	405 019 3705	TR 2SC536-G-AUD-SPA
Q1101	405 004 4601	TR 2SA608-F-SPA	or	405 017 9709	TR 2SC3330-U
or	405 003 5401	TR 2SA1317-U	or	405 011 8609	TR 2SC1740S-S
or	405 006 1905	TR 2SA933S-S	or	405 011 8500	TR 2SC1740S-R
or	405 006 1806	TR 2SA933S-R	or	405 014 5209	TR 2SC2458-GR
or	405 002 1305	TR 2SA1048-Y	or	405 014 5407	TR 2SC2458-Y
or	405 002 1107	TR 2SA1048-GR	Q4916	405 000 3103	TR DTC114ES
Q1102	405 004 4601	TR 2SA608-F-SPA	or	405 078 2909	TR BA1A4M
or	405 003 5401	TR 2SA1317-U	or	405 001 0200	TR RN1202
or	405 006 1905	TR 2SA933S-S	Q4921	405 000 1208	TR DTA124ES
or	405 006 1806	TR 2SA933S-R	or	405 078 2206	TR BN1F4M
or	405 002 1305	TR 2SA1048-Y	or	405 001 1207	TR RN2202
or	405 002 1107	TR 2SA1048-GR	Q4922	405 000 3103	TR DTC114ES
Q1201	405 009 5207	TR 2SB927-S	or	405 078 2909	TR BA1A4M
or	405 001 9302	TR 2SA1020-Y	or	405 001 0200	TR RN1202
Q1202	405 008 6809	TR 2SB808-F-SPA	Q4923	405 000 3103	TR DTC114ES
Q1211	405 000 3103	TR DTC114ES	or	405 078 2909	TR BA1A4M
or	405 078 2909	TR BA1A4M	or	405 001 0200	TR RN1202
Q1321	405 001 0200	TR RN1202	R1350	△402 048 1603	RESISTOR 10 J- 1W
or	405 019 3705	TR 2SC536-G-AUD-SPA	R1371	402 049 2500	RESISTOR 18 J- 2W
or	405 017 9709	TR 2SC3330-U	R4911	△402 060 5306	RESISTOR 1 J- 1/2W
or	405 011 8609	TR 2SC1740S-S	S4911	614 247 6840	SWITCH, DUBBING SPEED/
or	405 011 8500	TR 2SC1740S-R			BEAT CANCEL
or	405 014 5209	TR 2SC2458-GR	or	614 023 9683	SWITCH, DUBBING SPEED/
or	405 014 5407	TR 2SC2458-Y			BEAT CANCEL
Q1351	405 000 0508	TR DTA114ES	S4912	645 006 9673	SWITCH, PUSH 1P-1T, RESET
or	405 078 2305	TR BN1A4M	VR101	645 006 5613	VR, SEMI, 47K N
or	405 001 1108	TR RN2202	X1401	614 259 2137	RESONATOR, CERAMIC, 33.86MHZ
Q1361	405 000 0508	TR DTA114ES	X2451	614 229 2457	CRYSTAL, 7.2MHZ
or	405 078 2305	TR BN1A4M	or	614 240 1118	RESONATOR, 7.2MHZ
or	405 001 1108	TR RN2202	or	614 204 0317	CRYSTAL, 7.2MHZ
Q1371	405 000 0508	TR DTA114ES	XF211	614 252 1045	FILTER, LC, FM
or	405 078 2305	TR BN1A4M	XF221	645 010 7665	CERAMIC FILTER 10.70MHZ
or	405 001 1108	TR RN2202	XF222	645 010 7665	CERAMIC FILTER 10.70MHZ
Q2101	405 016 0806	TR 2SC2839-E	XF231	614 248 4432	FILTER, 450 KHZ
Q2201	405 016 0806	TR 2SC2839-E	XF232	645 012 0138	DISCR, CERAMIC, 10.75 MHZ
Q2302	405 000 3806	TR DTC114YS	XF233	645 010 0024	OSC, CERAMIC 456KHZ
or	405 037 0809	TR 2SC4048	XF424	645 006 3602	INDUCTOR, 1.1UH
Q2451	405 000 0904	TR DTA114YS	XF425	645 006 3602	INDUCTOR, 1.1UH
or	405 036 3702	TR 2SA1564			
Q2461	405 019 3903	TR 2SC536-G-SPA			
or	405 017 9709	TR 2SC3330-U			
or	405 011 8609	TR 2SC1740S-S			
or	405 011 8500	TR 2SC1740S-R			
or	405 014 5209	TR 2SC2458-GR			
or	405 014 5407	TR 2SC2458-Y			

PARTS LIST

POWER SUPPLY P.W.BOARD ASSY

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
72	614 284 5554	ASSY, PWB, POWER SUPPLY	or	405 011 8609	TR 2SC1740S-S
CN451	614 020 1215	SOCKET, 2P	or	405 011 8500	TR 2SC1740S-R
CN452	△614 239 4724	PLUG, 2P	or	405 014 5209	TR 2SC2458-GR
CN453	614 020 1215	SOCKET, 2P	or	405 014 5407	TR 2SC2458-Y
CN454	614 283 6699	ASSY, WIRE	Q3903	405 000 0508	TR DTA114ES
D4971	△407 098 3300	DIODE RL153-BF-S2	or	405 078 2305	TR BN1A4M
D4972	△407 098 3300	DIODE RL153-BF-S2	or	405 001 1108	TR RN2202
D4973	△407 098 3300	DIODE RL153-BF-S2	Q3904	405 005 2002	TR 2SA733-P
D4974	△407 098 3300	DIODE RL153-BF-S2	or	405 005 1906	TR 2SA733-K
FCLP1	△645 006 4760	HOLDER, FUSE	or	405 001 7001	TR 2SA1015-GR
FCLP2	△645 006 4760	HOLDER, FUSE	Q3912	405 018 0200	TR 2SC3331-U
L4971	△645 017 8061	INDUCTOR, 181M	Q3916	405 019 3705	TR 2SC536-G-AUD-SPA
PR497	△614 263 8781	IC PROTECTOR ICP-N70	or	405 017 9709	TR 2SC3330-U
			or	405 011 8609	TR 2SC1740S-S
			or	405 011 8500	TR 2SC1740S-R
			or	405 014 5209	TR 2SC2458-GR
			or	405 014 5407	TR 2SC2458-Y
			R3904	△402 052 4607	FUSIBLE RES 1.0 J- 1/4W
			S3000	614 243 3256	SWITCH, SLIDE, RECORD/PLAY (S3001-S3006)
			SVR01	645 006 2414	VR, SEMI, 2K N
			XF301	645 006 3602	INDUCTOR, 1.1UH

TAPE DECK P.W.BOARD ASSY

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
73	614 285 8516	ASSY, PWB, TAPE DECK	74	614 284 5547	ASSY, PWB, FRONT
C3911	403 058 9108	POLYESTER 0.018U J 50V	AM001	614 261 1333	REFLECTOR, LCD MOUNT
C3917	403 061 9607	POLYESTER 0.047U J 50V	AM002	614 261 1142	COVER, LCD
CN301	645 005 7373	PLUG, 3P	CN251	645 006 0915	PLUG, 4P
CN302	645 005 8110	PLUG, 4P	CN252	614 283 6705	ASSY, WIRE
CN304	614 272 3098	ASSY, WIRE	D2501	408 017 5801	LED SLZ-981C-15-AB-T2
CN305	645 005 8127	PLUG, 6P	D2520	407 007 9904	DIODE GMA01
CN306	614 020 0562	SOCKET, 4P	or	407 012 4406	DIODE 1SS133
or	614 223 9223	SOCKET, 4P	D2550	407 127 3905	ZENER DIODE MTZJ5.6B
CN307	645 005 7366	PLUG, 2P	D2551	407 007 9904	DIODE GMA01
D3901	407 007 9904	DIODE GMA01	or	407 012 4406	DIODE 1SS133
or	407 012 4406	DIODE 1SS133	D2552	407 007 9904	DIODE GMA01
D3902	407 007 9904	DIODE GMA01	or	407 012 4406	DIODE 1SS133
or	407 012 4406	DIODE 1SS133	D2553	407 007 9904	DIODE GMA01
D3905	407 007 9904	DIODE GMA01	or	407 012 4406	DIODE 1SS133
or	407 012 4406	DIODE 1SS133	D2581	407 007 9904	DIODE GMA01
D3906	407 007 9904	DIODE GMA01	or	407 012 4406	DIODE 1SS133
or	407 012 4406	DIODE 1SS133	IC251	410 265 4802	IC TMP87CM21F-2132
D3907	407 007 9904	DIODE GMA01	1R201	407 138 4700	PHOTO DIODE SPS-420-1
or	407 012 4406	DIODE 1SS133	L2501	645 001 4581	INDUCTOR, 100U K
D3908	407 009 6805	ZENER DIODE MTZJ13B	L2550	645 002 1534	INDUCTOR, 8.2U K
IC301	409 251 1000	IC TA8189N	LC001	645 018 9937	LCD
L3901	645 010 7177	TRANS, OSC, 85KHZ	LP251	614 046 0094	LAMP, 12V 100MA
Q3702	405 000 3103	TR DTC114ES	LP252	614 046 0094	LAMP, 12V 100MA
or	405 078 2909	TR BA1A4M	Q2503	405 000 3103	TR DTC114ES
or	405 001 0200	TR RN1202	or	405 078 2909	TR BA1A4M
Q3703	405 019 3705	TR 2SC536-G-AUD-SPA	or	405 001 0200	TR RN1202
or	405 017 9709	TR 2SC3330-U	Q2550	405 004 4601	TR 2SA608-F-SPA
or	405 011 8609	TR 2SC1740S-S	or	405 003 5401	TR 2SA1317-U
or	405 011 8500	TR 2SC1740S-R	or	405 006 1905	TR 2SA933S-S
or	405 014 5209	TR 2SC2458-GR	or	405 006 1806	TR 2SA933S-R
or	405 014 5407	TR 2SC2458-Y	or	405 002 1305	TR 2SA1048-Y
Q3901	△405 035 7107	TR 2SD1913-R	or	405 002 1107	TR 2SA1048-GR
or	△405 035 7206	TR 2SD1913-S	Q2551	405 004 4601	TR 2SA608-F-SPA
or	△405 095 1602	TR 2SD2061-E	or	405 003 5401	TR 2SA1317-U
or	△405 095 1701	TR 2SD2061-F	or	405 006 1905	TR 2SA933S-S
Q3902	405 019 3705	TR 2SC536-G-AUD-SPA	or	405 006 1806	TR 2SA933S-R
or	405 017 9709	TR 2SC3330-U	or	405 002 1305	TR 2SA1048-Y
			or	405 002 1107	TR 2SA1048-GR

PARTS LIST

Ref. No.	Part No.	Description
Q2552	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 017 9709	TR 2SC3330-U
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 014 5209	TR 2SC2458-GR
or	405 014 5407	TR 2SC2458-Y
Q2553	405 004 4601	TR 2SA608-F-SPA
or	405 003 5401	TR 2SA1317-U
or	405 006 1905	TR 2SA933S-S
or	405 006 1806	TR 2SA933S-R
or	405 002 1305	TR 2SA1048-Y
or	405 002 1107	TR 2SA1048-GR
Q2554	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 017 9709	TR 2SC3330-U
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 014 5209	TR 2SC2458-GR
or	405 014 5407	TR 2SC2458-Y
Q2580	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 017 9709	TR 2SC3330-U
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 014 5209	TR 2SC2458-GR
or	405 014 5407	TR 2SC2458-Y
Q2581	405 000 6104	TR DTC144ES
Q2582	405 000 6104	TR DTC144ES
Q2583	405 000 6104	TR DTC144ES
S2501	614 240 1002	SWITCH,TACT,TUNING UP
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2502	614 240 1002	SWITCH,TACT,TUNING DOWN
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2504	614 240 1002	SWITCH,TACT,PRESET DOWN
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2505	614 240 1002	SWITCH,TACT,PRESET UP
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2506	614 240 1002	SWITCH,TACT,MODE
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2507	614 240 1002	SWITCH,TACT,BAND
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2508	614 240 1002	SWITCH,TACT,MEMORY
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2509	614 240 1002	SWITCH,TACT,FUNCTION
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2510	614 240 1002	SWITCH,TACT,PLAY/PAUSE
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2511	614 240 1002	SWITCH,TACT,STOP
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2512	614 240 1002	SWITCH,TACT,DISC 1
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2513	614 240 1002	SWITCH,TACT,DISC 2
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2514	614 240 1002	SWITCH,TACT,DISC 3
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT

Ref. No.	Part No.	Description
S2515	614 240 1002	SWITCH,TACT,OPEN/CLOSE
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2516	614 240 1002	SWITCH,TACT,VOLUME UP
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S2517	614 240 1002	SWITCH,TACT,VOLUME DOWN
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
SH001	614 248 0458	SHEET,LCD,BLUE
SH002	614 256 1041	SHEET,LCD,WHITE
VR401	645 017 5916	VR,SLIDE 50KAX2,BASSXPANDER
VR402	645 017 5916	VR,SLIDE 50KAX2,BASSXPANDER
X2501	614 215 5561	RESONATOR,CERAMIC,4.19MHZ
or	645 013 7532	OSC,CERAMIC 4.19MHZ

POWER SWITCH P.W.BOARD ASSY

Ref. No.	Part No.	Description
75	614 283 6576	ASSY,PWB,POWER SWITCH
CN496	614 283 6675	ASSY,WIRE
CN499	614 020 1239	SOCKET,4P
S4990	645 017 4308	SWITCH,PUSH 2P-1T,POWER

POWER AMP. P.W.BOARD ASSY

Ref. No.	Part No.	Description
76	614 283 6590	ASSY,PWB,POWER AMP.
C4704	403 059 9008	POLYESTER 0.22U M 50V
C4804	403 059 9008	POLYESTER 0.22U M 50V
C4806	403 134 9305	ELECT 2200U M 16V
R4913	403 135 9106	ELECT 3300U M 35V
CN409	645 005 7366	PLUG,2P
CN410	645 004 2898	PLUG,3P
CN411	645 005 9292	PLUG,5P
CN412	645 004 2881	PLUG,2P
D4011	645 004 2881	PLUG,2P
D4012	645 004 2881	PLUG,2P
D4013	645 004 2881	PLUG,2P
D4014	645 004 2881	PLUG,2P
D4901	403 099 8304	ZENER DIODE MTJZ228
HS401	614 261 1234	HEAT SINK
IC401	645 004 2881	IC LA4450
Q4701	405 021 0600	TR 2SD1012-G-SPA
or	405 033 6805	TR 2SD1468S-S
or	405 021 0204	TR 2SD1012-F-SPA
Q4801	405 021 0600	TR 2SD1012-G-SPA
or	405 033 6805	TR 2SD1468S-S
or	405 021 0204	TR 2SD1012-F-SPA
Q4902	645 035 7107	TR 2SD1913-R
or	645 035 7206	TR 2SD1913-S
or	645 095 1602	TR 2SD2061-E
or	645 095 1701	TR 2SD2061-F
Q4903	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 017 9709	TR 2SC3330-U
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 014 5209	TR 2SC2458-GR
or	405 014 5407	TR 2SC2458-Y
Q4904	405 018 0200	TR 2SC3331-U
Q4905	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 017 9709	TR 2SC3330-U
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 014 5209	TR 2SC2458-GR
or	405 014 5407	TR 2SC2458-Y

PARTS LIST

Ref. No.	Part No.	Description
R4705	645 004 5201	FUSIBLE RES 2.2 J- 1/4W
R4805	645 004 5201	FUSIBLE RES 2.2 J- 1/4W
SA010	411 021 3503	SCR S-TPG BIN 3X10MM,IC401
SA011	411 021 3503	SCR S-TPG BIN 3X10MM,IC401
SA012	411 021 3503	SCR S-TPG BIN 3X10MM,HEATSINK
SA013	411 021 3503	SCR S-TPG BIN 3X10MM,HEATSINK

TRANSISTOR P.W.BOARD ASSY

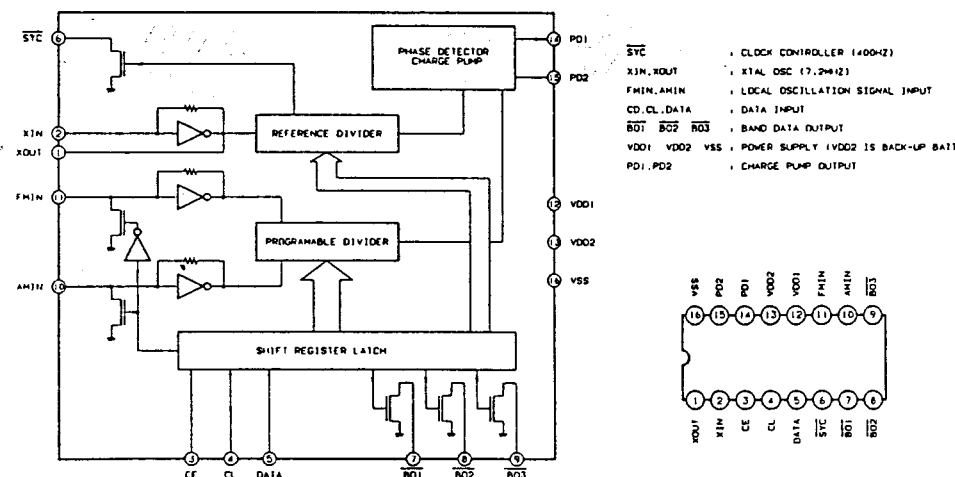
Ref. No.	Part No.	Description
77	614 283 6606	ASSY,PWB,TRANSISTOR
CN427	614 275 9936	ASSY WIRE,3P
CN439	614 020 1222	SOCKET,3P
Q4901	645 035 7107	TR 2SD1913-R
or	645 035 7206	TR 2SD1913-S
or	645 095 1602	TR 2SD2061-E
or	645 095 1701	TR 2SD2061-F
SA014	411 021 3503	SCR S-TPG BIN 3X10MM

SPEAKER BOX ASSY

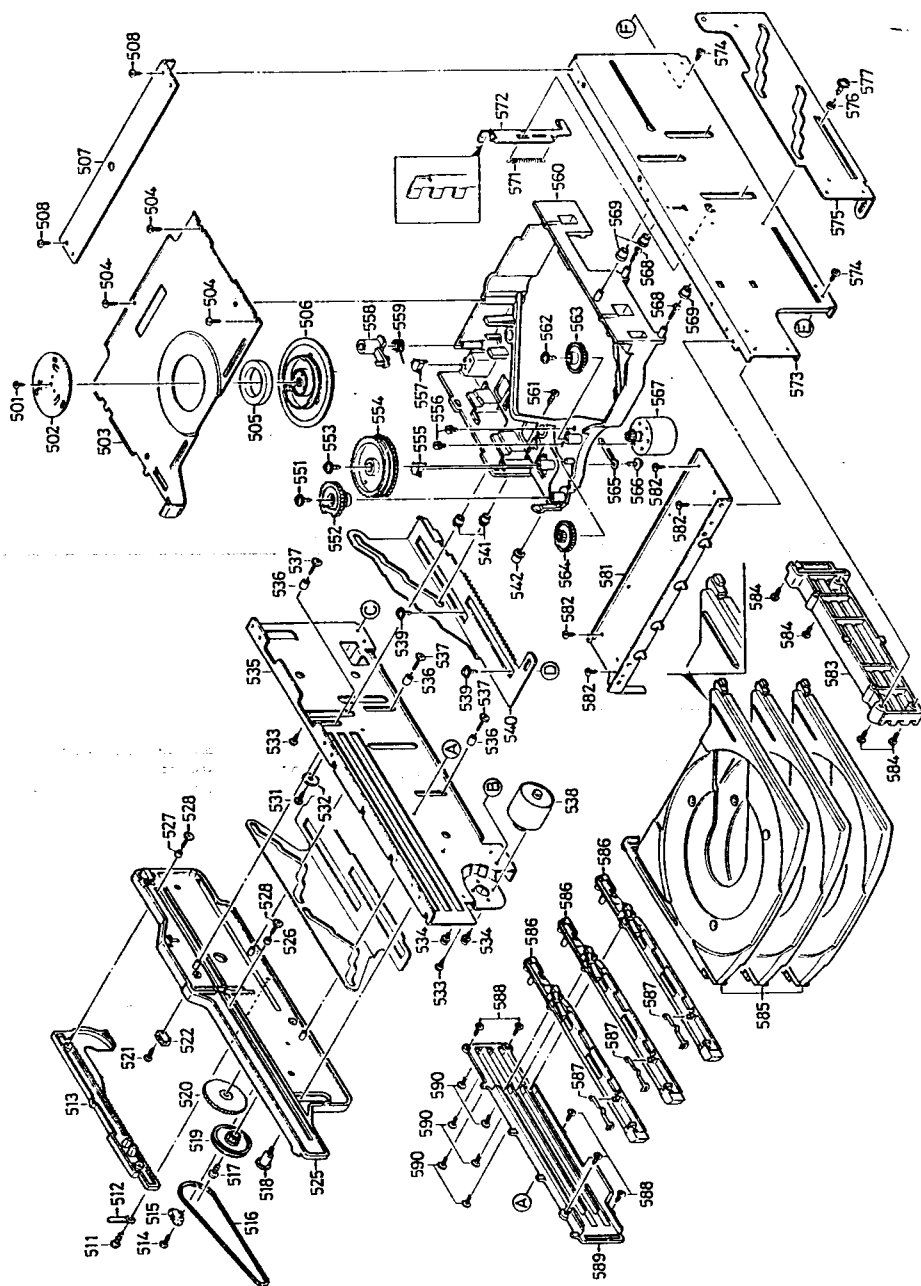
Ref. No.	Part No.	Description
	645 019 1886	CUSHION, TOP (1/2)
	645 019 1893	CUSHION, BOTTOM (1/2)
	645 010 3087	SHEET
	645 010 3094	POLY COVER
		ASSY,BOX,SPEAKER,LEFT
		ASSY,BOX,SPEAKER,RIGHT
		SX-F170L/AU
		SX-F170R/AU

IC BLOCK DIAGRAM & DESCRIPTION

IC245 LM7001 (PLL SYNTHESIZER)



EXPLODED VIEW (CD CHANGER MECHANISM)

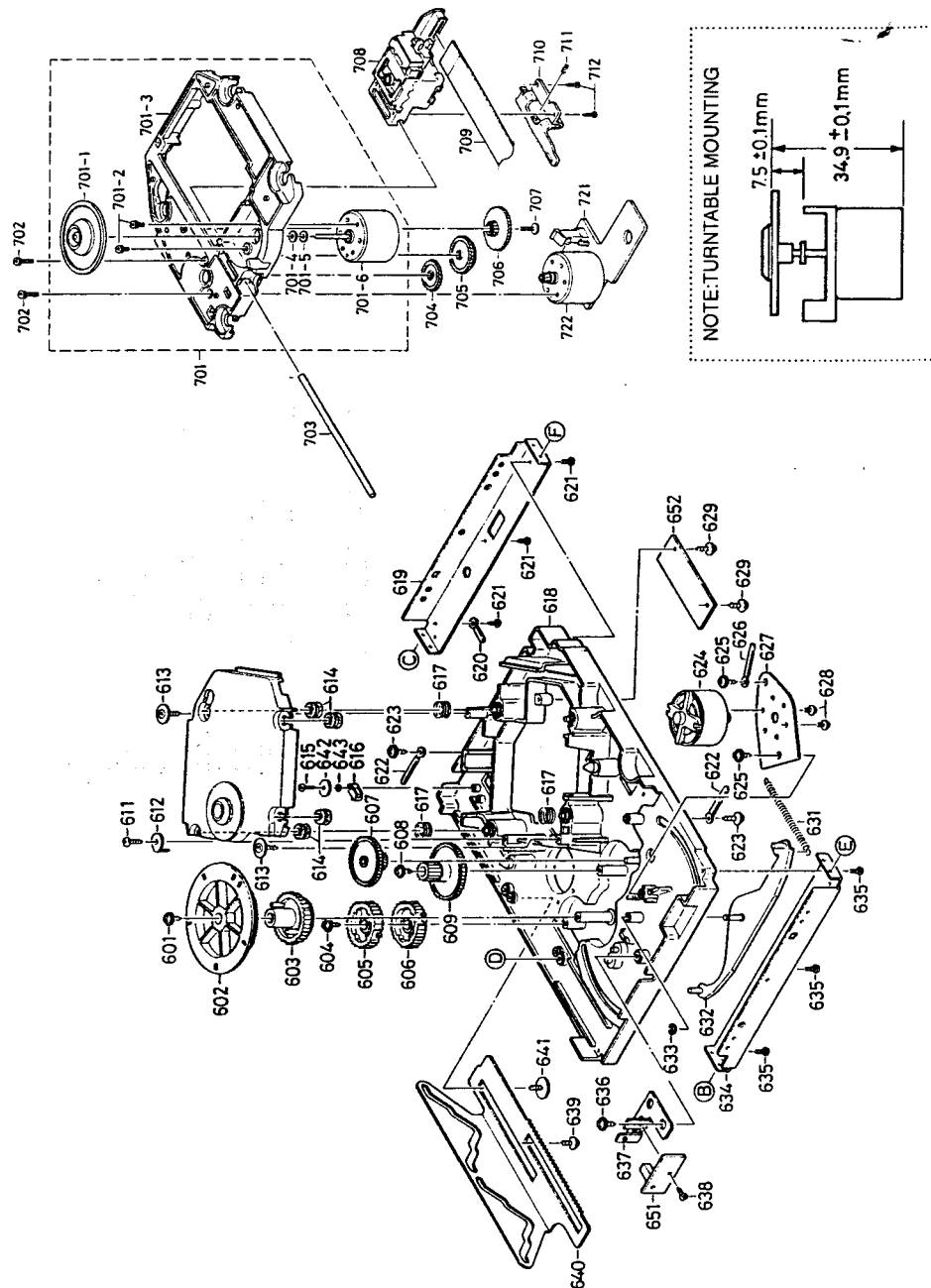


PARTS LIST

CD CHANGER MECHANISM (PM-CD96CHN1/SH)

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
501	411 022 7500	SCR S-TPG PAN 2X4MM, CHUCK PULLEY FIX	561	411 022 8408	SCR S-TPG PAN 2X8MM, TRAY HOLDER
502	614 266 8061	HOLDER, CHUCK PLATE PULLEY	562	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX
503	614 286 3329	HOLDER, CHUCK BRACKET	563	614 266 8030	GEAR, LOAD/UNLOAD IDLER1
504	411 022 7807	SCR S-TPG PAN 2X6MM, CHUCK BRACKET FIX	564	614 266 1796	GEAR, LOAD/UNLOAD IDLER2
505	645 009 8809	MAGNET CHUCK, CHUCKING	565	614 129 9136	LUG, LEAD MTG.
506	614 272 1674	ASSY, PULLEY, CHUCK	566	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, LUG FIX
507	614 266 1918	JOINT, B-TOP ENCOURAGER	567	645 009 1193	ASSY, MOTOR, LOAD/UNLOAD
508	411 028 2905	SCR S-TPG PAN 2X4MM, JOINT FIX	568	411 022 8408	SCR S-TPG PAN 2X8MM, TRAY HOLDER
511	411 021 0809	SCR S-TPG BIN 2X6MM, LUG FIX	569	614 268 0469	PIPE, TRAY HOLDER GUIDE
512	614 129 9341	LUG, OPEN/CLOSE SWITCH LOAD	571	614 268 0162	SPRING, TENSION, STOPPER PULL
513	614 266 1833	GEAR, OPEN/CLOSE RACK	572	614 279 0595	STOPPER, DISC STOPPER
514	411 021 1202	SCR S-TPG BIN 2X8MM, OPEN/CLOSE SW FIX	573	614 266 1956	MOUNTING, RIGHT SIDE BRACKET
515	645 010 6491	SWITCH, LEVER, OPEN END	574	411 028 2905	SCR S-TPG PAN 2X4MM, MOUNTING FIX
516	614 277 6896	BELT, SQUARE, OPEN/CLOSE	575	614 268 2906	ASSY, SLIDE, RIGHT
517	411 021 2704	SCR S-TPG BIN 2.6X6MM, PULLEY FIX	576	614 270 2239	PIPE, RIGHT SLIDE GUIDE
518	412 004 5705	SPECIAL SCREW, GEAR BLOCK FIX	577	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, RIGHT SLIDE FIX
519	614 277 7312	PULLEY, OPEN/CLOSE IDLER	581	614 266 1901	JOINT, F-TOP ENCOURAGER
520	614 266 1826	GEAR, OPEN/CLOSE IDLER	582	411 028 2905	SCR S-TPG PAN 2X4MM, JOINT FIX
521	411 021 1202	SCR S-TPG BIN 2X8MM, OPEN/CLOSE SW FIX	583	614 286 3343	HOLDER, RIGHT, TRAY GUIDE
522	645 010 6491	SWITCH, LEVER, CLOSE END	584	411 028 3100	SCR S-TPG PAN 2X6MM, HOLDER FIX
525	614 266 1970	MOUNTING, GEAR BLOCK BRACKET	585	614 286 3312	ASSY, TRAY
526	614 273 5992	PIPE, GEAR RACK GUIDE (F)	586	614 286 3541	ASSY, HOLDER
527	614 270 2222	PIPE, GEAR RACK GUIDE (R)	587	614 266 8924	SPRING, PLATE, TRAY HOLD
528	412 054 6202	SPECIAL SCREW, 2X7.5MM, GEAR RACK FIX	588	411 028 2905	SCR S-TPG PAN 2X4MM, HOLDER FIX
531	411 022 7807	SCR S-TPG PAN 2X6MM, TRAY HOLDER	589	614 286 3336	HOLDER, LEFT, TRAY GUIDE
532	411 091 9702	WASHER V 2X8X0.5MM	590	412 055 5303	SPECIAL SCREW 2X5MM, HOLDER FIX
533	411 028 2905	SCR S-TPG PAN 2X4MM, MOUNTING FIX	601	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX
534	411 044 7007	SCR PAN+SW 2X3MM, OPEN/CLOSE MOTOR FIX	602	614 266 1758	GEAR, UP/DOWN CAM (1)
535	614 266 1949	MOUNTING, LEFT SIDE BRACKET	603	614 266 1765	GEAR, UP/DOWN CAM (2)
536	614 268 0476	PIPE, OPEN/CLOSE BRACKET GUIDE	604	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX
537	412 054 6202	SPECIAL SCREW, 2X7.5MM, MOUNTING FIX	605	614 266 1772	GEAR, UP/DOWN DRIVE (1)
538	645 009 1186	ASSY, MOTOR, OPEN/CLOSE	606	614 266 1789	GEAR, UP/DOWN DRIVE (2)
539	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, SLIDE FIX	607	614 266 1734	GEAR, UP/DOWN IDLER 1
540	614 266 1894	SLIDE, TRAY HOLDER	608	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX
541	614 277 9460	PIPE, TRAY HOLDER GUIDE	609	614 266 1741	GEAR, UP/DOWN IDLER 2
542	614 268 0469	PIPE, TRAY HOLDER GUIDE (R)	611	411 020 9902	SCR S-TPG BRZ+FLG 3X8MM, HOLDER FIX
551	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX	612	614 267 6998	HOLDER, BASE MECHANISM FIX
552	614 266 1819	GEAR, LOAD/UNLOAD DRIVE	613	614 279 1202	SPECIAL SCREW, BLACK, BASE MECHANISM FIX
553	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, GEAR FIX	614	614 237 7031	CUSHION, RUBBER, FLOATING
554	614 266 1802	GEAR, LOAD/UNLOAD CAM	or	614 277 1952	CUSHION, RUBBER, FLOATING
555	645 012 5904	SWITCH, UNLOAD END	615	411 132 4703	SCR S-TPG BIN 2X10MM, PLAY SW FIX
556	411 044 7205	SCR PAN+SW 2X4MM, LOAD/UNLOAD MTR FIX	616	645 010 6491	SWITCH, LEVER, PLAY
557	645 012 5904	SWITCH, LOAD END	617	614 247 4907	SPRING, COMP, FLOATING
558	614 266 1932	LEVER, LOCK	618	614 266 1727	CHASSIS, BOTTOM CHASSIS
559	614 268 0186	SPRING, WIRE, LOAD/UN-LOAD LOCK LEVER	619	614 266 1888	JOINT, BOTTOM BACK
560	614 266 1963	MOUNTING, TRAY HOLDER	620	614 129 9341	LUG, OPEN/CLOSE SWITCH LEAD

EXPLODED VIEW (CD CHANGER & BASE MECHANISM)



PARTS LIST

Ref. No.	Part No.	Description
621	411 022 7807	SCR S-TPG PAN 2X6MM, JOINT FIX
622	614 129 9136	LUG, LOAD/UN-LOAD SWITCH LEAD
623	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, LUG FIX
624	614 268 2890	ASSY, MOTOR, UP/DOWN CHASSIS MARK "B" (A PAIR USE)
624	614 287 0440	ASSY, MOTOR, UP/DOWN CHASSIS MARK "C" (A PAIR USE)
625	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, BRACKET MOTOR FIX
626	614 129 9136	LUG, SENSOR LEAD
627	614 266 8054	HOLDER, BRACKET MOTOR
628	411 102 6300	SCR PAN-FLG 2.6X2.8MM, UP/DOWN MOTOR FIX
629	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, CHUKET PWB FIX
631	614 268 0155	SPRING, TENSION, SYNCRO LEVER PULL
632	614 268 2883	ASSY, LEVER, SYNCRO
633	412 014 6402	SPECIAL WASHER, LEVER ASSY FIX
634	614 272 6600	JOINT, BOTTOM FRONT
635	411 022 7807	SCR S-TPG PAN 2X6MM, JOINT FIX
636	411 098 8807	SCR S-TPG BRZ+FLG 3X6MM, SENSOR BK FIX
637	614 266 9907	HOLDER, SENSOR BRACKET
638	411 028 2905	SCR S-TPG PAN 2X4MM, SENSOR PWB FIX
639	411 020 9902	SCR S-TPG BRZ+FLG 3X8MM, SLIDE FIX
640	614 266 2007	SLIDE, TRAY SLISE
641	412 005 2307	SPECIAL SCREW, 3X10MM (WITH WASHER 3X14X1MM)
642	614 126 8774	WASHER, FIBER 2X10X1MM PLASY SWITCH
643	412 012 7104	SPECIAL WASHER, GF NYLON 2.1X4X0.5MM
	614 269 6026	ASSY, WIRE, 5P, SENSOR, UP/DOWN MOTOR
	614 269 6033	ASSY, WIRE, 6P, LOAD/UNLOAD/PLAY SWITCH
	614 269 6040	ASSY, WIRE, 4P, LOAD/UNLOAD, UP/DOWN MOTOR
	614 269 6057	ASSY, WIRE, 4P, OPEN/CLOSE SWITCH

CD SENSOR P.W.BOARD ASSY

Ref. No.	Part No.	Description
651	614 270 1928	ASSY, PWB, SENSOR
D191	407 177 6109	PHOTO COUPLE GP1A53E

CD CONNECTOR P.W.BOARD ASSY

Ref. No.	Part No.	Description
652	614 267 6646	ASSY, PWB CD, CONNECTOR, CHANGER
CN191	645 006 0915	PLUG, 4P, LOAD/UNLOAD SWITCH
or	645 009 6440	PLUG, 4P, LOAD/UNLOAD SWITCH
CN192	645 004 2706	PLUG, 4P, LOAD/UNLOAD, UP/DOWN MOTOR
or	645 014 9825	PLUG, 4P, LOAD/UNLOAD, UP/DOWN MOTOR
CN193	645 006 0939	PLUG, 6P, OPEN/CLOSE/PLAY SWITCH
or	645 009 6464	PLUG, 6P, OPEN/CLOSE/PLAY SWITCH
CN194	645 006 0922	PLUG, 5P, SENSOR, UP/DOWN MOTOR
or	645 009 6457	PLUG, 5P, SENSOR, UP/DOWN MOTOR
CN195	645 006 0915	PLUG, 4P, CD, PWB
or	645 009 6440	PLUG, 4P, CD, PWB
CN196	645 006 0953	PLUG, 8P, CD, PWB
or	645 009 6488	PLUG, 8P, CD, PWB

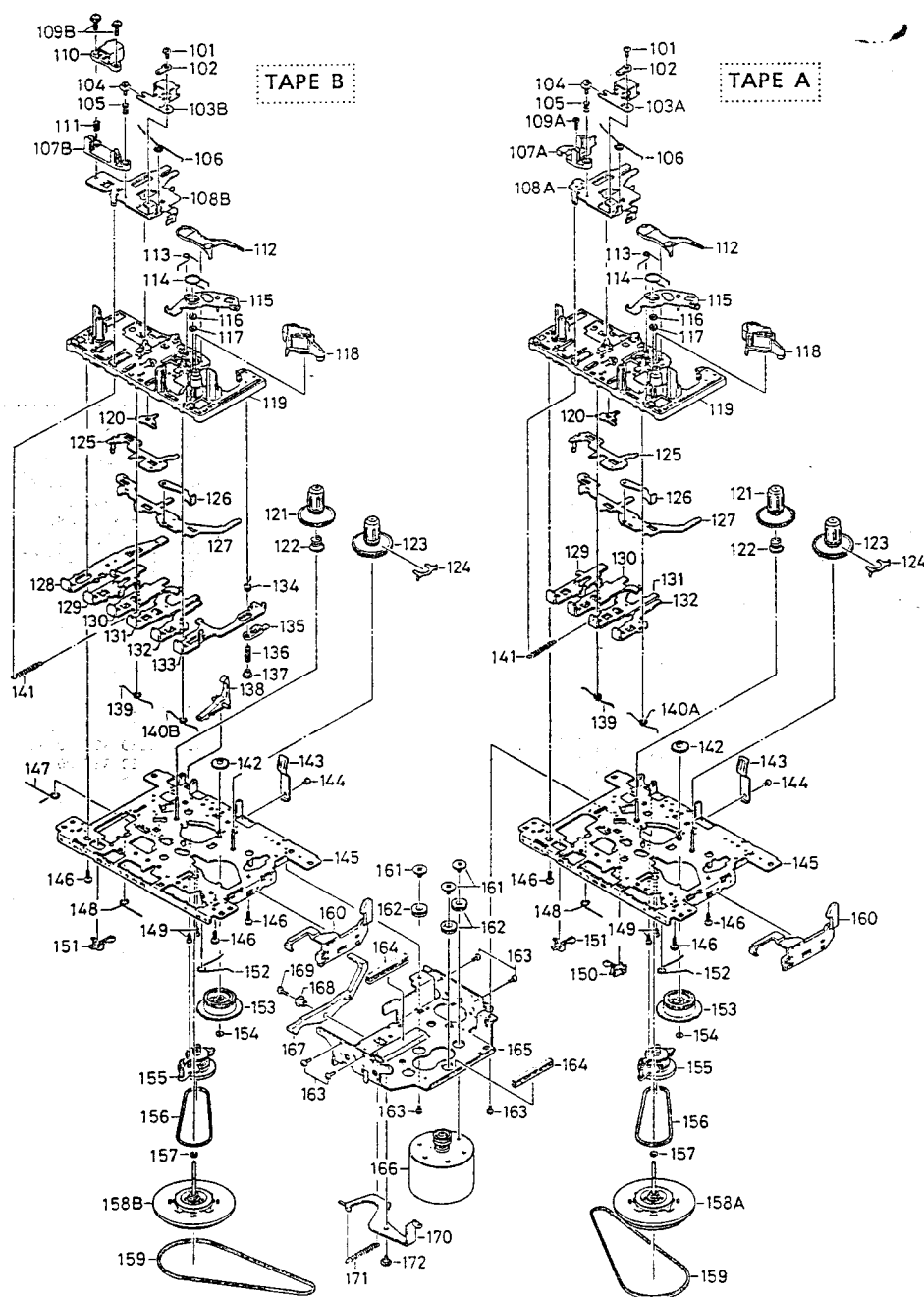
CD BASE MECHANISM (PM-CDBM94D2SH)

Ref. No.	Part No.	Description
701	614 270 2031	ASSY, CHASSIS, BASE MECHANISM
701-1	614 268 3354	ASSY, TURNTABLE, SPINDLE
701-2	411 044 7502	SCR PAN+SW 2X5MM, SPINDLE MOTOR FIX
701-3	614 262 2582	CHASSIS, BASE MECHANISM
701-4	412 032 0208	SPECIAL WASHER, 1.9X5X0.3M
701-5	412 014 5603	SPECIAL WASHER, TURNTABLE STOPPER
701-6	645 007 7821	MOTOR, CD-SPINDLE DC 0.2W, SPINDLE MOTOR
702	411 044 8004	SCR PAN+SW 2X8MM, SLED MOTOR FIX
703	614 237 7024	SHAFT, PICK-UP RAIL
or	614 277 8029	SHAFT, PICK-UP RAIL
704	614 237 7093	GEAR, SLED RETARD GEAR 1
705	614 237 7109	GEAR, SLED RETARD GEAR 2
706	614 237 7116	GEAR, SLED
707	412 047 3904	SPECIAL SCREW 2X8MM, SLED GEAR FIX
708	645 006 7983	PICKUP, LASER, SF-P100
709	645 009 9960	FLEXIBLE FLAT CABLE, 13P, PICK-UP
710	614 262 2599	GEAR, RACK PICK-UP RACK GEAR
711	614 238 6934	SPRING, COMP, PICK-UP RACK GEAR
712	411 152 4301	SCR S-TPG PAN PCS 1.7X6MM
722	645 007 7814	PICK RACK GEAR FIX
	614 270 2543	ASSY, MOTOR CD-SLED, BASE MECHANISM

BASE MECHANISM P.W.BOARD ASSY

Ref. No.	Part No.	Description
721	614 254 0664	ASSY, PWB, MOTOR & LIMIT SWITCH
CN001	645 006 0939	PLUG, 6P
S001	645 012 5836	SWITCH, LEAF, LIMIT SWITCH
or	645 019 2661	SWITCH, LEAF, LIMIT SWITCH

EXPLODED VIEW (TAPE MECHANISM)



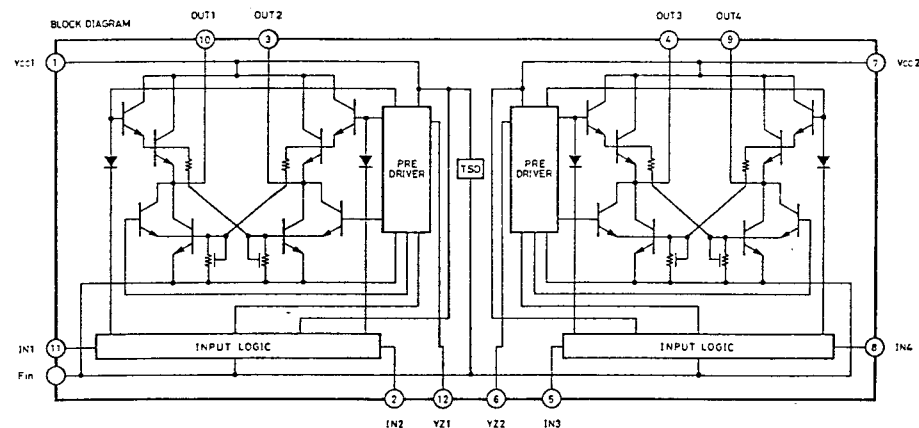
PARTS LIST

TAPE MECHANISM (TM-F200TN-SH)

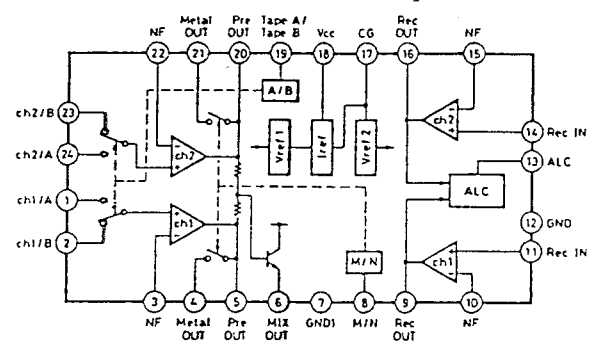
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
101	645 011 1235	(+) BIND SCREW M2X3	136	645 009 1391	PAUSE LEVER SPRING, TAPE B
102	645 009 3401	LUG, TAPE HEAD, GROUND	137	645 009 1384	PAUSE STOPPER, TAPE B
103A	614 221 0277	HEAD, PLAY HEAD	138	645 009 1674	RECORD SAFETY LEVER, TAPE B
103B	614 221 0277	HEAD, RECORD/PLAY HEAD	139	645 009 1414	BUTTON LEVER SPRING(A)
104	645 011 1310	AZIMUTH SCREW M2X7	140A	645 011 1839	BUTTON LEVER SPRING(C)
105	645 009 1551	AZIMUTH SPRING	140B	645 009 1421	BUTTON LEVER SPRING(B)
106	645 009 1360	PANEL P SPRING	141	645 009 3210	PLAY BUTTON LEVER SPRING
107A	645 009 1353	HEAD BASE	142	645 009 1568	FF GEAR
107B	645 010 9409	HEAD BASE	143	645 011 1075	PACK SPRING
108A	645 009 1377	HEAD PANEL	144	645 011 1242	C TAPP SCREW M2X3
108B	645 010 9416	HEAD PANEL	145	645 009 1346	CHASSIS ASSY
109A	645 011 1228	SCREW M2X6	146	645 011 1297	P TAPP BIND SCREW M2X5
109B	645 011 1303	(+)(-) CAP SCREW M2X8	147	645 009 1476	RECORD BUTTON LEVER SPRING TAPE B
110	614 021 8251	MAGNETIC HEAD, ERASING HEAD TAPE B	148	645 009 1445	PAUSE LEVER SPRING, TAPE B
111	645 009 6891	ERASE HEAD SPRING, TAPE B	149	645 011 2478	CAMERA, TAPP SCREW M2X4.5
112	645 009 1506	SENSING LEVER	150	645 010 9560	LEAF SWITCH, PLAY, TAPE A
113	645 009 1452	M CONTROL SPRING	151	645 009 1544	LEAF SWITCH, MOTOR POWER
114	645 009 1513	GEAR PLATE SPRING	152	645 009 1438	EJECT ACTUATOR SPRING
115	645 009 1520	GEAR PLATE ASSY	153	645 009 1490	CAM GEAR
116	645 011 1327	P WASHER CUT 1.45X3.8X0.5MM	154	645 011 1273	P WASHER CUT 1.2X3.8X0.3MM
117	645 011 1280	P WASHER, 2.1X0.4X0.25MM	155	645 011 1136	RF CLUTCH ASSY
118	645 009 1612	PINCH ROLLER ARM ASSY	156	645 009 1766	RF BELT
119	645 009 1308	BASE ASSY	157	645 009 2626	P WASHER 2.0X3.5X0.3MM
120	645 009 1469	PLAY/RECORD STOPPER	158A	645 011 1167	FLYWHEEL ASSY
121	645 009 1742	SUPPLY REEL ASSY	158B	645 009 3227	FLYWHEEL ASSY
122	645 009 1575	BACK TENSION SPRING	159	645 011 1150	MAIN BELT
123	645 009 1735	TAKE UP REEL ASSY	160	645 010 9423	E SLIDE LEVER
124	645 009 1629	SENSOR, TAKE UP REEL	161	645 011 1044	MOTOR COLLAR SCREW
125	645 009 1285	SWITCH ACTUATOR	162	645 011 1037	MOTOR RUBBER
126	645 009 1339	EJECT KICK LEVER	163	645 011 1259	C TAPP SCREW M2X4
127	645 009 3760	PUSH BUTTON ACTUATOR	164	645 011 1198	ANTI VIBRATION FELT MAT
128	645 011 0757	RECORD BUTTON LEVER, TAPE B	165	645 011 1181	MOTOR BRACKET
129	645 011 0764	PLAY BUTTON LEVER	166	614 276 2417	ASSY, MOTOR
130	645 011 0771	REW BUTTON LEVER	167	645 011 1174	P KICK LEVER(B)
131	645 011 0788	FF BUTTON LEVER	168	645 009 2435	COLLAR(B)
132	645 011 0795	STOP/EJECT BUTTON LEVER	169	645 011 1266	C TAPP SCREW M2X6
133	645 011 0801	PAUSE BUTTON LEVER, TAPE B	170	645 011 1068	P KICK LEVER(A)
134	645 009 1407	PAUSE CONTROL SPRING TAPE B	171	645 011 1051	P KICK LEVER SPRING
135	645 011 1211	PAUSE LEVER(E), TAPE B	172	645 009 2428	PK COLLAR SCREW(A)

IC BLOCK DIAGRAM & DESCRIPTION

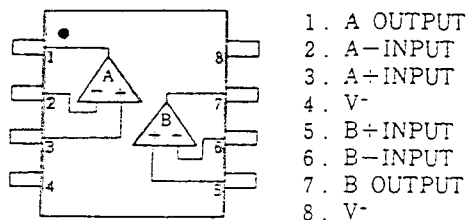
IC131 LB1648 (DUAL MOTOR DRIVER)



IC301 TA8189N (PRE-AMP.)



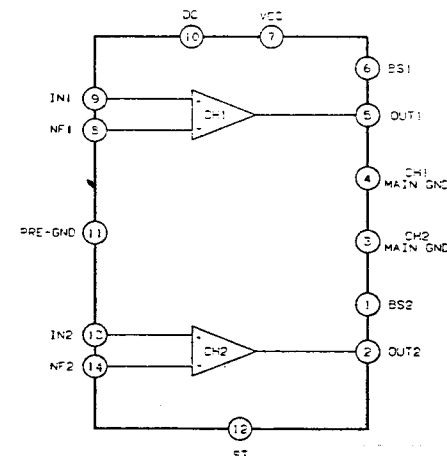
IC106 NJM4558D or LA6458D (OP. AMP.)



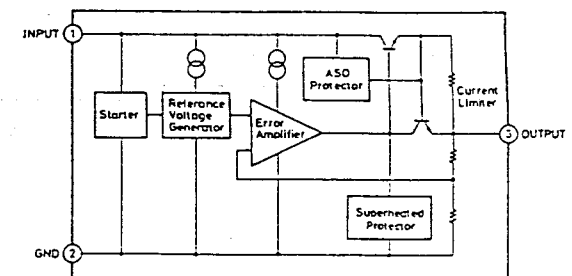
1. A OUTPUT
2. A-INPUT
3. A+INPUT
4. V-
5. B+INPUT
6. B-INPUT
7. B OUTPUT
8. V+

IC BLOCK DIAGRAM & DESCRIPTION

IC401 LA4450 (POWER AMP.)



IC424 μ PC78M05, L78M05 or NJM7805FA (REGULATOR)

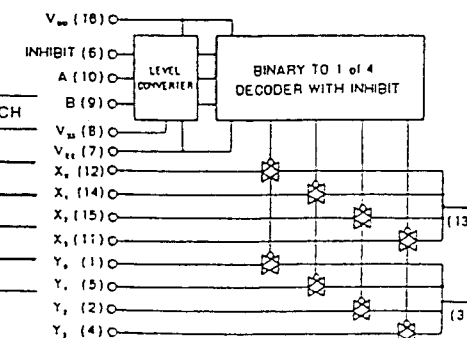


IC425 TC4052BP (FUNCTION)

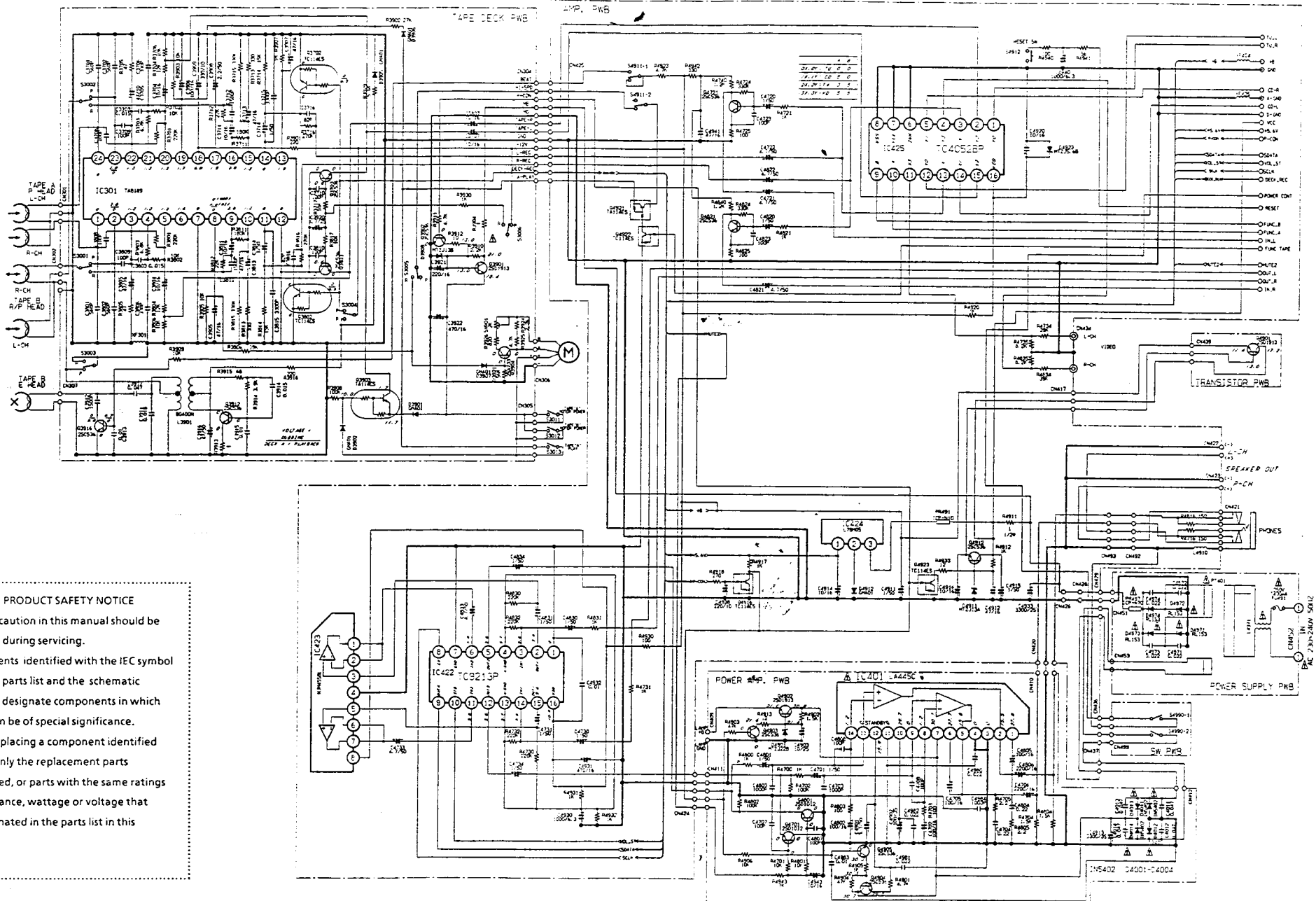
Truth Table

INHIBIT	A	B	ON SWITCH
L	L	L	X0 Y0
L	H	L	X1 Y1
L	L	H	X2 Y2
L	H	H	X3 Y3
H	X	X	NONE

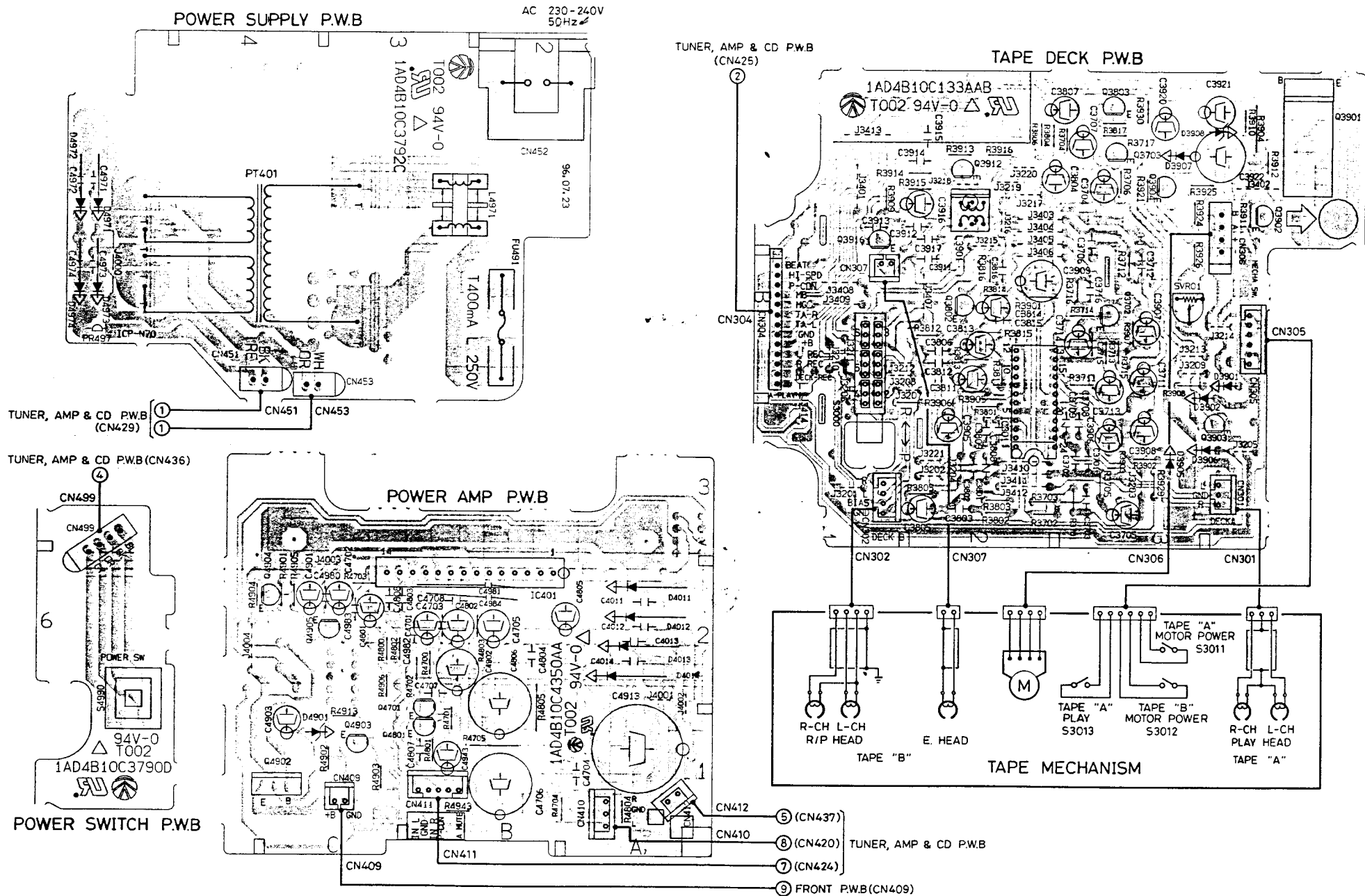
X: Don't Care



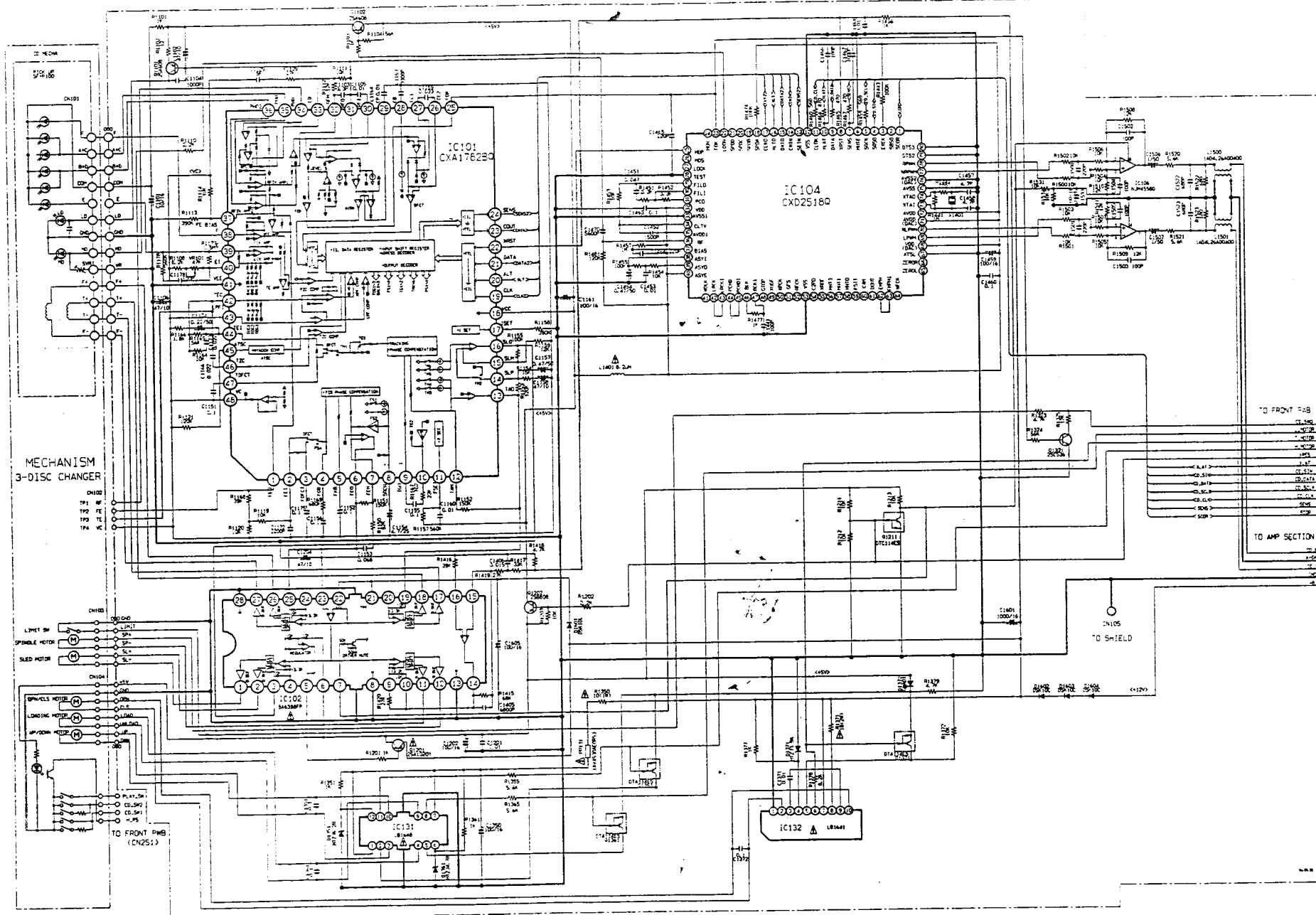
SCHEMATIC DIAGRAM (AMP.)

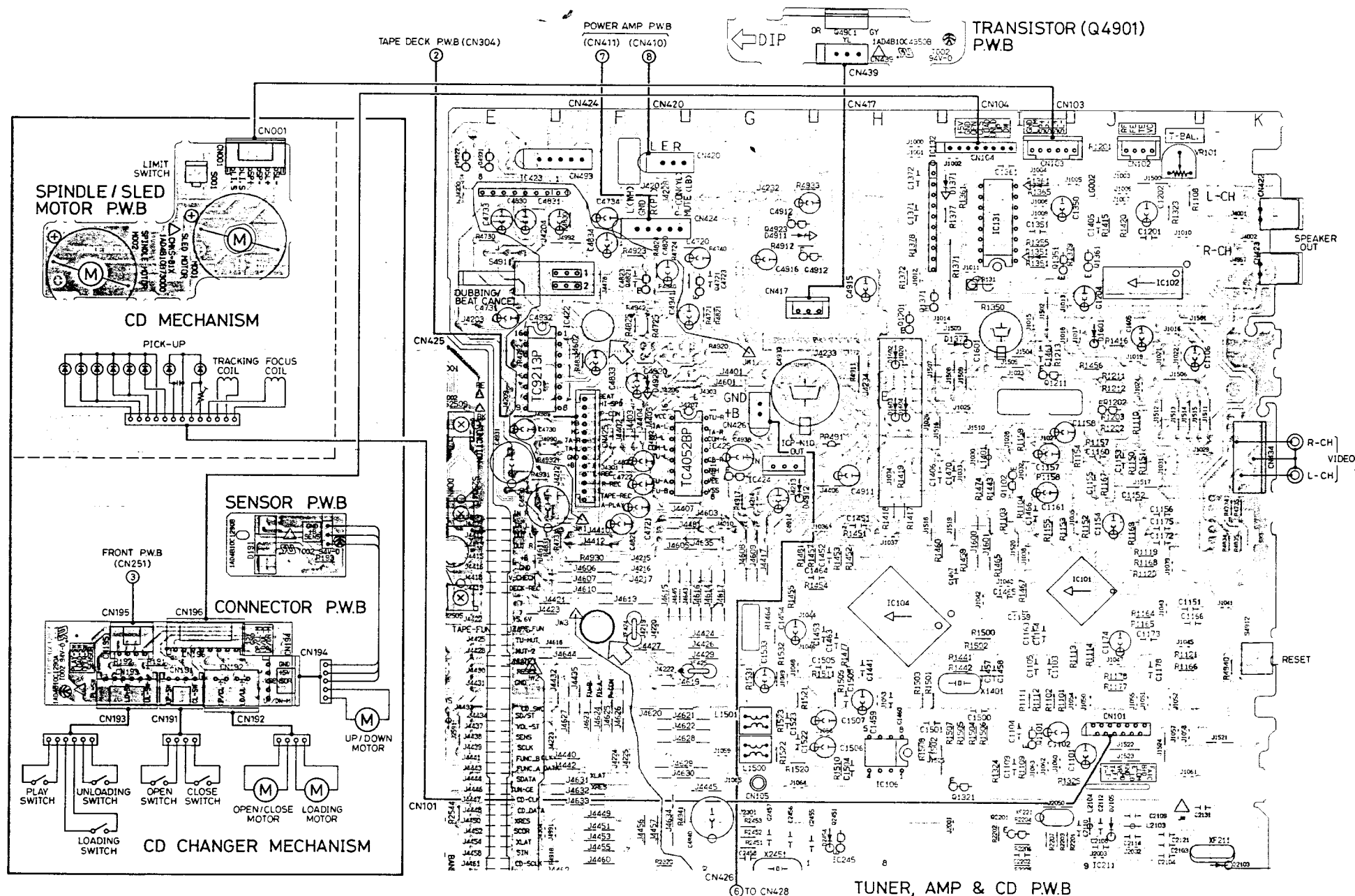


WIRING DIAGRAM (POWER SUPPLY, POWER AMP. & TAPE DECK)

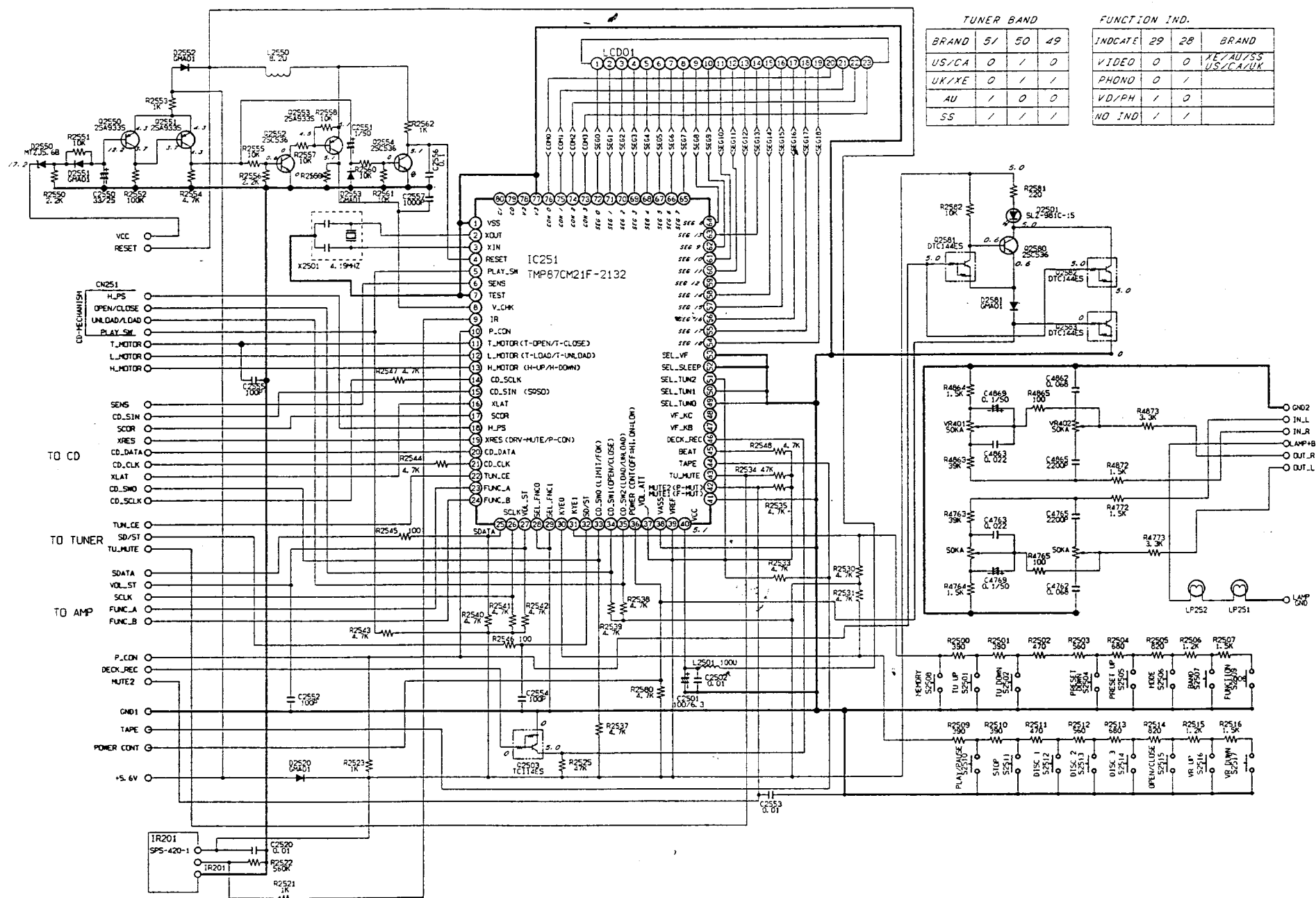


SCHEMATIC DIAGRAM (CD)

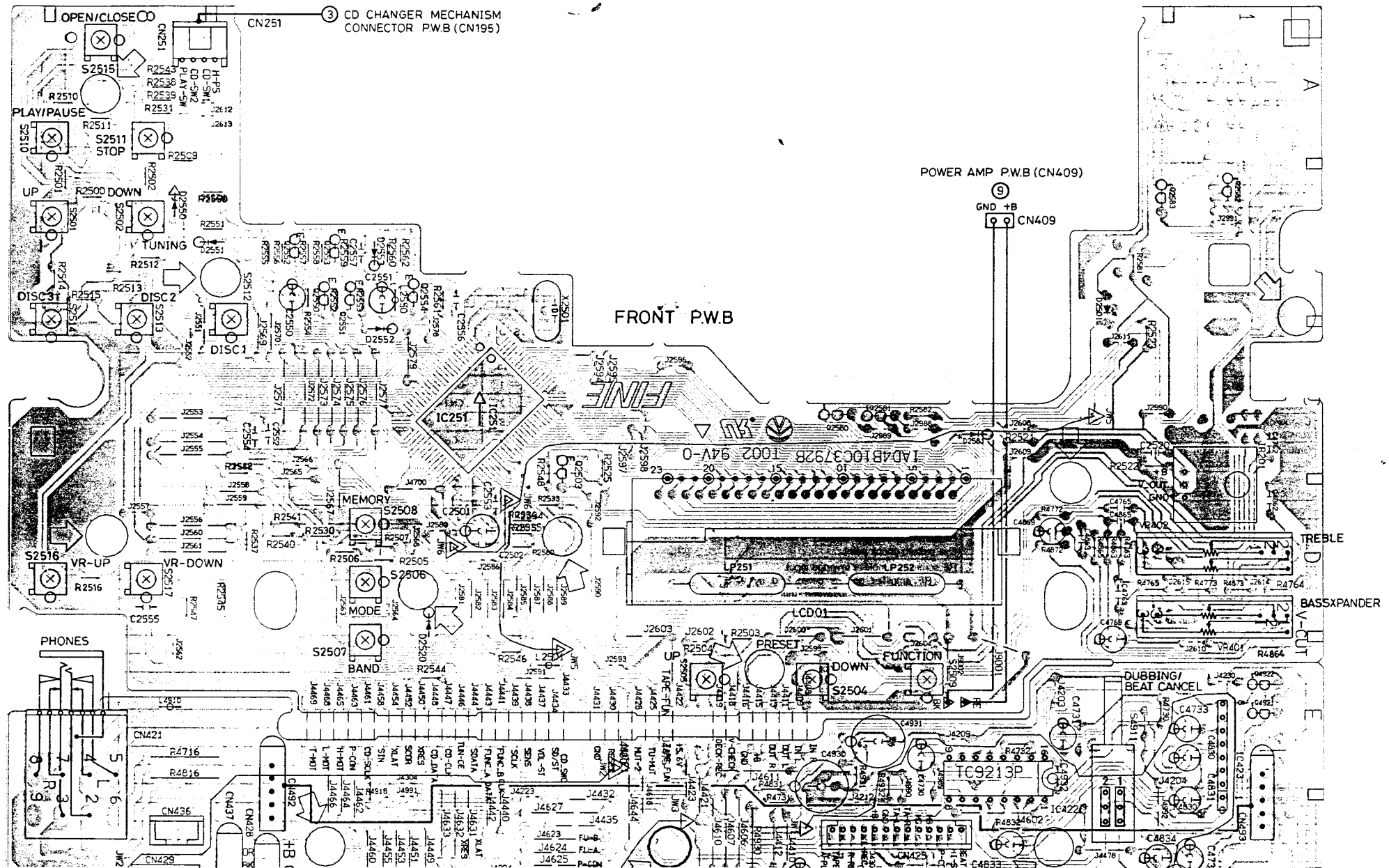




SCHEMATIC DIAGRAM (FRONT)

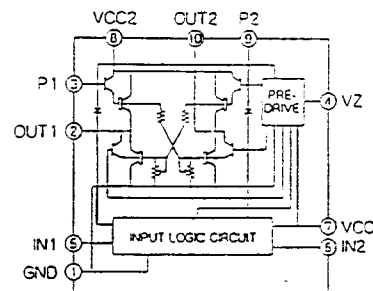


WIRING DIAGRAM (FRONT)



IC BLOCK DIAGRAM & DESCRIPTION

IC132 LB1641 (RECORD/PLAY SWITCHING)



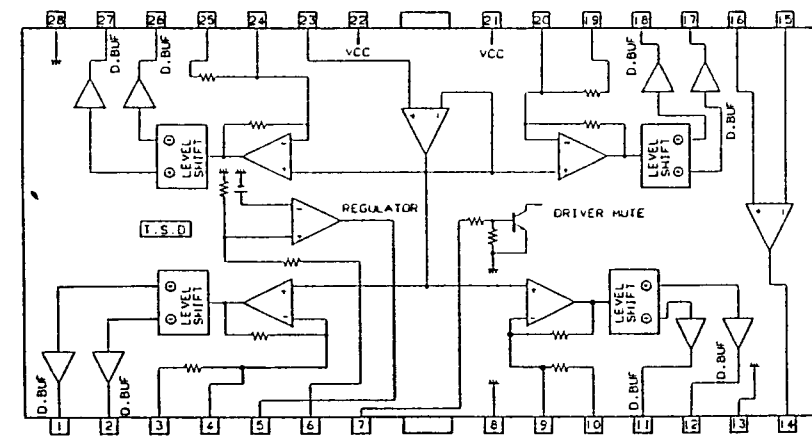
Input	Output	Action
IN1 IN2	OUT1 OUT2	
0 0	0 0	Brake
1 0	1 0	Normal(Reverse)Rotary
0 1	0 1	Reverse(Normal)Rotary
1 1	0 0	Brake

IC101 CXA1782BQ (SERVO SIGNAL PROCESSOR)

No.	Name	I / O	Description
1	FEO	O	Focus error amplifier output.
2	FEI	I	Focus error input.
3	FDFCT	I	Capacitor connection pin for detect time constant.
4	FGD	I	Ground this pin through a capacitor when decreasing the focus servo high-frequency.
5	FLB	I	External time constant setting pin for increasing the focus servo low frequency.
6	FEO	O	Focus drive output.
7	FEM	I	Focus amplifier negative input.
8	SRCH	I	External time constant setting pin for generating focus servo waveform.
9	TGU	I	External time constant setting pin for switching tracking high-frequency gain.
10	TG2	I	External time constant setting pin for switching tracking high-frequency gain.
11	FSET	I	High cut off frequency setting pin for focus and tracking phase compensation amplifier.
12	TAM	I	Tracking amplifier negative input.
13	TAO	O	Tracking drive output.
14	SLP	I	Sled amplifier non-inverted input.
15	SLM	I	Sled amplifier negative input.
16	SLO	O	Sled drive output.
17	ISET	I	Setting pin for Focus search, Tracking jump, and Sled kick current.
18	V _{CC}	-	+5.0V
19	CLK	I	Serial data transfer clock input from CPU.
20	XLT	I	Latch input from CPU.
21	DATA	I	Serial data input from CPU.
22	XRST	I	Reset input; resets at Low.
23	C.OUT	O	Track number count signal output.
24	SENS	O	Outputs FZC, DFCT, TZC, gain, balance, and others according to the command from CPU.

IC BLOCK DIAGRAM & DESCRIPTION

IC102 BA6398FP (POWER DRIVER)



T.S.D : THERMAL SHUT DOWN D.BUF : DRIVE BUFFER

No.	NAME	DESCRIPTION
1	CH1-OUT A	DRIVER CH1 (-)
2	CH1-OUT B	DRIVER CH1 (+)
3	CH1-IN A	DRIVER CH1
4	CH1-IN B	NOT USED
5	Tr-B	REGULATOR
6	Vreg OUT	Vreg
7	MUTE	MUTE CONTROL
8	GND	GND
9	CH2-IN B	DRIVER CH2 GAIN
10	CH2-IN A	DRIVER CH2
11	CH2-OUT B	DRIVER CH2 (+)
12	CH2-OUT A	DRIVER CH2 (-)
13	GND	GND
14	OP OUT	OP. AMP
15	OP IN (-)	OP. AMP
16	OP IN (+)	OP. AMP
17	CH3-OUT A	DRIVER CH3 (-)
18	CH3-OUT B	DRIVER CH3 (+)
19	CH3-IN A	DRIVER CH3
20	CH3-IN B	NOT USED
21	VCC	VCC
22	VCC	VCC
23	BIAS IN	BIAS
24	CH4-IN B	NOT USED
25	CH4-IN A	DRIVER CH4
26	CH4-OUT B	DRIVER CH4 (+)
27	CH4-OUT A	DRIVER CH4 (-)
28	GND	GND

IC BLOCK DIAGRAM & DESCRIPTION

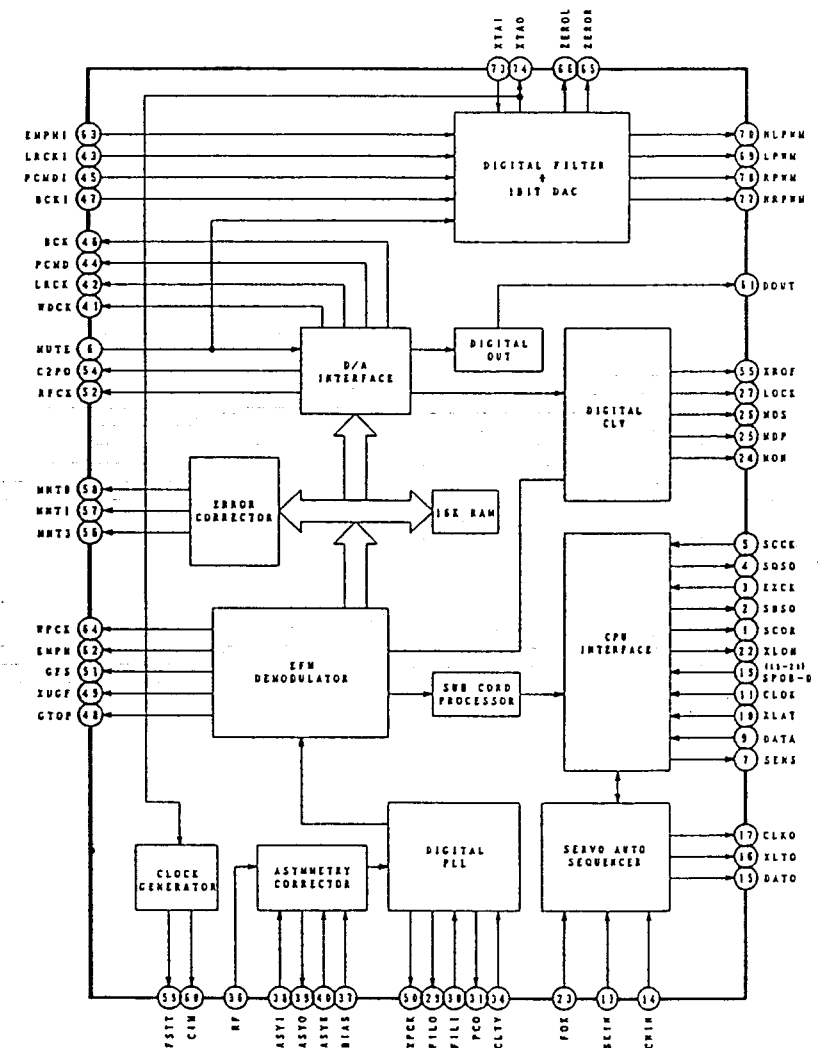
IC104 CXD2518Q (DIGITAL SIGNAL PROCESSOR)

No.	Name	I/O	Description
1	SCOR	O	Turns "H" when sync S0 or S1 is detected.
2	SBSO	O	Serial output of sub-code P ~ W.
3	EXCK	I	Clock input for reading SBSO.
4	SOSO	O	Serial output of SUBO & SOBIT.
5	SOCK	I	Clock input for reading SOSO.
6	MUTE	I	"H" at muting, "L" at muting cancel.
7	SENS	O	SENS signal output to CPU.
8	XRST	I	System reset, "L" at resetting.
9	DATA	I	Inputs serial data from CPU.
10	XLAT	I	Latches input from CPU. Serial data latches at falling edge.
11	CLOCK	I	Inputs serial data transfer clock from CPU.
12	V _{SS}	-	GND.
13	SEIN	I	Inputs SENS signal from SSP.
14	CNIN	I	Inputs track jump count signal
15	DATO	O	Outputs serial data to SSP
16	XLTO	O	Outputs latches to SSP. Serial data latches at falling edge.
17	CLKO	O	Outputs serial data transfer clock to SSP.
18	TEST2	I	Pin for TEST. Normal used state: V _{DD} .
19	SPOB	I	Not used
20	SPOC	I	Not used
21	SPOD	I	Not used
22	XLON	O	Interface for extension of M. processor(output.)
23	FOK	I	Focus OK signal input pin. Used servo auto sequencer with SENS output.
24	MON	O	ON/OFF control signal for spindle motor.
25	MDP	O	Servo control signal for spindle motor.
26	MDS	O	Not used
27	LOCK	O	Not used
28	TEST	I	GND.
29	FIL0	O	Output of filter for master PLL.(Slave = Digital PLL)
30	FIL1	I	Inputs to filter for master PLL.
31	PCO	O	Outputs of charge pump for master PLL.
32	V _{DD}	-	Power supply for digital.(+5V)
33	AV _{SS1}	-	Power supply for analog.(0V)
34	CLTV	I	VCO control voltage input for master PLL.
35	AV _{DD1}	-	Power supply for analog.(+5V)
36	RF	I	EFM signal input.
37	BIAS	I	Inputs constant current for asymmetry correction circuit.
38	ASYI	I	Inputs comparator voltage for asymmetry correction circuit.
39	ASYO	O	EFM fill swing output.("L" = V _{SS} , "H" = V _{DD})
40	ASYE	I	"L" : OFF of asymmetry correction. "H" : ON of asymmetry correction.

No.	Name	I/O	Description
41	WDCK	O	Not used
42	LRCK	O	D/A interface for 48-bit slot. LR clock (f = FS)
43	LRCKI	I	Inputs LR clock to DAC.(48-bit slot)
44	PCMD	O	D/A interface. Serial data(2'SCOMP,MBS first)
45	PCMDI	I	Inputs audio data to DAC.(48-bit slot)
46	BCK	O	D/A interface. Bit clock.
47	BCKI	I	Inputs bit clock to DAC.(48-bit slot)
48	GTOP	O	Not used
49	XUGF	O	Not used
50	XPCK	O	Not used
51	GFS	O	Not used
52	RFCK	O	Not used
53	V _{SS}	-	GND.
54	C2PO	O	Not used
55	XROF	O	Not used
56	MNT3	O	Not used
57	MNT1	O	Not used
58	MNT0	O	Not used
59	FSTT	O	Not used
60	C4M	O	Not used
61	DOUT	O	Not used
62	EMPH	O	Stays "H" for playback disc provided with emphasis or "L" for that without emphasis.
63	EMPHI	I	De-emphasis ON/OFF of DAC. "H" at ON, "L" at OFF.
64	WFCK	O	Not used
65	ZEROL	O	Outputs detection for non-sound data. "H" at detection for non-sound data (L-ch)
66	ZEROR	O	Outputs detection for non-sound data. "H" at detection for non-sound data (R-ch)
67	DTS1	I	Normal used state: "L".
68	V _{DD}	-	Power supply for DAC.
69	LPWM	O	Outputs PWM for L-ch. (Positive Phase)
70	NLPWM	O	Outputs PWM for L-ch. (Negative Phase)
71	AV _{DD2}	-	Power supply for L-ch PWM driver.
72	AV _{DD3}	-	Power supply for X'tal.
73	XTAI	I	Inputs X'tal oscillation circuit (33.8688MHz).
74	XTAO	I	Outputs X'tal oscillation circuit (33.8688MHz).
75	AV _{SS3}	-	GND.
76	AV _{SS2}	-	GND.
77	NRPWM	O	Outputs PWM for R-ch. (Negative Phase)
78	RPWM	O	Outputs PWM for R-ch. (Positive Phase)
79	DTS2	I	Normal used state: "L".
80	DTS3	I	Normal used state: "L".

IC BLOCK DIAGRAM & DESCRIPTION

IC104 CXD2518Q (DIGITAL SIGNAL PROCESSOR)



IC BLOCK DIAGRAM & DESCRIPTION

IC251 TMP87CM21F-2132 (MICROPROCESSOR)

No.	NAME	I/O	DESCRIPTION	No.	NAME	I/O	DESCRIPTION
1	VSS		GROUND	39	VREF		REFERENCE VOLTAGE
2	XOUT	O	CLOCK, 4.19MHz	40	VDD		POWER (+)
3	XIN	I	CLOCK, 4.19MHz	41	MUTE1	O	AMP /FUNCTION, MUTE SIGNAL (L=OFF, H=ON)
4	RESET	I	SYSTEM RESET	42	MUTE2	O	AMP /POWER MUTE SIGNAL (L=OFF, H=ON)
5	PLAY-SW	I	CD PLAY SWITCH	43	TU-MUTE	O	TUNER MUTE SIGNAL (L=OFF, H=ON)
6	SENS	I	CD SENS	44	TAPE	O	TAPE FUNCTION
7	V-CHK		VOLTAGE CHECK, FAILURE	45	BEAT	O	TAPE, BEAT CANCEL (L=POSITION 1, H=POSITION 2)
8	TEST		TEST	46	DECK-REC	I	TAPE RECORD CONDITION
9	IR	I	REMOTE CONTROL	47	VF-KB	O	VOCAL FADER
10	P-CON	O	POWER CONTROL (L=OFF, H=ON)	48	VF-KC	O	VOCAL FADER (H=V-FADER, L=MPX, H=NORMAL)
11	T-MOTOR	O	CD OPEN/CLOSE MOTOR (L=CLOSE, M=STOP, H=OPEN)	49	NC		
12	L-MOTOR	O	CD LOADING MOTOR (L=UNLOAD, M=STOP, H=LOAD)	50	NC		
13	H-MOTOR	O	CD UP/DOWN MOTOR (L=DOWN, M=STOP, H=UP)	51	NC		
14	CD-SCLK	O	IC104 SCLK SIGNAL	52	SEL-SLEEP	I	SLEEP TIMER SELECT
15	CD-SIN	I	IC104 SQSO SIGNAL	53	SEL-VF	I	VOCAL FADER SELECT
16	XTAL	O	IC104 XLAT SIGNAL	54	SEG18	O	LCD SEGMENT 18
17	SCOR	I	IC104 SCOR SIGNAL	55	SEG17	O	LCD SEGMENT 17
18	H-PS	I	CD PHOTO SENSOR (UP/DOWN)	56	SEG16	O	LCD SEGMENT 16
19	XRES		CD DSP RESET/POWER CONTROL SIGNAL (H=POWER OFF, DSP=RESET) (M=POWER ON, DSP=RESET) (L=POWER ON, DSP=ON)	57	SEG15	O	LCD SEGMENT 15
20	CD-DATA	O	IC104 DATA SIGNAL	58	SEG14	O	LCD SEGMENT 14
21	CD-CLK	O	IC104 CLOCK SIGNAL	59	SEG12	O	LCD SEGMENT 12
22	TUN-CE	O	TUNER IC245 CE SIGNAL	60	SEG11	O	LCD SEGMENT 11
23	FUNC-A	O	FUNCTION A (L=TUNER, L=TAPE, H=CD, H=LINE)	61	SEG10	O	LCD SEGMENT 10
24	FUNC-B	O	FUNCTION B (L=TUNER, L=CD, L=LINE, H=TAPE)	62	SEG9	O	LCD SEGMENT 9
25	SDATA	O	SIREAL DATA SIGNAL	63	SEG13	O	LCD SEGMENT 13
26	SCLK	O	SIREAL CLOCK SIGNAL	64	SEG8	O	LCD SEGMENT 8
27	VOL-ST	O	VOLUME, IC402 CONTROL SIGNAL	65	SEG7	O	LCD SEGMENT 7
28	SELOUT0	O	TUNER SELECTION	66	SEG6	O	LCD SEGMENT 6
29	SELOUT1	O	FUNCTION SELECTION	67	SEG5	O	LCD SEGMENT 5
30	KEY0	I	KEY INPUT	68	SEG4	O	LCD SEGMENT 4
31	KEY1	I	KEY INPUT	69	SEG3	O	LCD SEGMENT 3
32	SD/ST	I	TUNER SD, STEREO/SELECTION	70	SEG2	O	LCD SEGMENT 2
33	CD-SW0	I	CD LIMIT SWITCH, FOK	71	SEG1	O	LCD SEGMENT 1
34	CD-SW1	I	CD OPEN/CLOSE SWITCH	72	SEG0	O	LCD SEGMENT 0
35	CD-SW2	I	CD LOAD/UNLOAD SWITCH	73	COM3	O	LCD COMMON 3
36	NC			74	COM2	O	LCD COMMON 2
37	NC			75	COM1	O	LCD COMMON 1
38	VASS		A GROUND	76	COM0	O	LCD COMMON 0
				77	VLC	O	LCD DRIVE POWER
				78	NC		
				79	NC		
				80	NC		

IC & TRANSISTOR VOLTAGES

TRANSISTORS

PIN NAME	Q1101			Q1102			Q1201			Q1202			Q1211			Q1321		
	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
PLAY	4.5	1.8	3.7	5.0	5.0	4.2	9.7	5.0	9.1	5.0	1.2	4.7	0	0	4.6	0	0	0.6
STOP	1.4	1.3	0	5.0	1.3	5.0	9.1	5.0	7.8	5.0	4.9	0.7	0	4.4	0	0	0	0.6

PIN NAME	Q1351			PIN NAME	Q1361			PIN NAME	Q1371		
	B	C	E		B	C	E		B	C	E
UP	0	4.2	4.4	LOAD	0	4.2	4.4	OPEN	4.0	0	4.4
DOWN	4.2	0	4.4	UNLOAD	4.2	0	4.4	CLOSE	0	4.2	4.4
STOP	2.6	4.2	4.4	STOP	2.6	4.2	4.4	STOP	2.3	4.0	4.4

IC & TRANSISTOR VOLTAGES

CD SECTION

IC101 CXA1782BQ

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PLAY	2.6	2.5	2.5	2.5	2.5	2.7	2.5	2.9	2.5	2.5	0.8	2.5	2.5	2.5	2.5
STOP	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.9	2.5	2.5	0.8	2.5	2.5	2.5	2.5
Pin No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
PLAY	2.5	1.2	5.0	5.0	5.0	4.9	4.8	0	5.0	5.0	0.6	0.7	1.5	2.4	2.5
STOP	2.5	1.2	5.0	5.0	5.0	4.9	4.8	0	5.0	5.0	0.2	4.3	3.1	1.2	2.5
Pin No.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
PLAY	3.5	2.5	3.8	0.2	2.5	2.5	2.4	2.3	2.5	2.2	0	2.5	2.5	2.5	2.5
STOP	1.0	3.5	0.8	0	2.2	2.2	2.5	2.5	2.1	3.4	0	2.5	2.5	2.5	2.5
Pin No.	46	47	48												
PLAY	2.5	2.5	2.5												
STOP	2.5	2.5	2.5												

IC102 BA6398FP

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PLAY	4.2	4.2	2.5	2.5	8.2	5.0	4.8	0	2.5	2.4	4.6	4.1	0	2.4	2.5
STOP	4.2	0	2.5	2.5	9.3	5.0	4.8	0	2.5	2.5	4.6	4.6	0	9.0	2.5
Pin No.	16	17	18	19	20	21	22	23	24	25	26	27	28		
PLAY	2.5	4.2	4.4	2.5	2.5	9.2	9.2	2.5	2.5	2.5	4.2	4.2	0		
STOP	2.5	4.6	4.6	2.5	2.5	9.2	9.2	2.5	2.5	0	4.6	4.6	0		

IC104 CXD2518

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PLAY	0	0	5.0	0	4.7	0	5.0	4.8	4.7	4.8	4.8	0	5.0	0	3.3
STOP	0	3.4	5.0	0	4.9	0	0	4.8	4.8	4.8	4.8	0	5.0	0	5.0
Pin No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
PLAY	5.0	5.0	5.0	5.0	0	0	0.5	5.0	5.0	2.6	0	5.0	0	2.5	2.5
STOP	5.0	5.0	5.0	0	0	0	5.0	0	0	2.5	0	0	0	2.5	2.5
Pin No.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
PLAY	2.5	5.0	0	2.5	5.0	2.7	0.8	2.5	2.5	5.0	2.5	2.5	2.5	2.5	2.5
STOP	2.5	5.0	0	2.5	5.0	2.7	0.8	2.5	2.5	5.0	2.5	2.5	2.5	2.7	2.7
Pin No.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.0	2.4	0	5.0	1.7	5.0	2.5	1.7	0	5.0	4.5	0	0	2.6	1.7
STOP	2.0	2.4	5.0	5.0	1.7	0	2.5	0	5.0	0	4.3	3.6	0	2.6	2.1
Pin No.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
PLAY	1.7	0	0	2.5	0	0	0	0	0	2.5	2.5	5.0	2.5	2.5	0
STOP	2.1	2.1	2.1	2.5	4.8	4.8	0	5.0	2.5	2.5	5.0	5.0	2.5	2.5	0
Pin No.	76	77	78	79	80										
PLAY	0	2.5	0	0											
STOP	0	2.5	2.5	0	0										

IC105 NJM4558D

Pin No.	1	2	3	4	5	6	7	8							
PLAY	Fluc	Fluc	Fluc	0	Fluc	Fluc	Fluc	11.5							
STOP	Fluc	Fluc	Fluc	0	Fluc	Fluc	Fluc	11.5							

IC131 LB1648

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12			
STOP	8.8	4.3	0.4	0	4.3	3.8	8.8	1.9	0	0.4	1.9	6.1			
UP	8.8	4.3	0	0	4.3	3.8	8.8	4.0	0	6.0	0	6.1			
DOWN	8.8	0	6.0	0	4.3	3.8	8.8	0	0	0	4.0	6.1			
LOAD	8.8	4.3	0.4	0	4.3	3.8	8.8	1.9	4.0	0.4	1.9	6.1			
UNLOAD	8.8	4.3	0.4	4.0	0	3.8	8.8	1.9	0	0.4	1.9	6.1			

Fluc : Fluctuation

IC132 LB1641

Pin No.	1	2	3	4	5	6	7	8	9	10					
STOP	0	0.5	0.7	3.8	4.2	1.5	8.8	8.9	0.7	0.5					
OPEN	0	0.2	0.7	3.8	0	4.0	8.8	8.9	5.2	4.0					
CLOSE	0	4.0	4.9	3.8	4.2	0	8.8	8.9	0.7	0.7					