

CDP-35

SERVICE MANUAL

Note: Set changed with preliminary.


*US Model
Canadian Model
AEP Model
UK Model
E Model*



SPECIFICATIONS

System	Compact disc digital audio system
Disc	Compact disc
Laser	Semiconductor laser ($\lambda = 780 \text{ nm}$)
Laser output	Max. 0.4 mW*
	* This output is the value measured at a distance of about 1.6 mm from the objective lens surface on the Optical Pick-up Block.
Spindle speed	200 r.p.m. to 500 r.p.m. (CLV)
Scan velocity	1.2 - 1.4 m/sec. Constant
Error correction	Sony Super Strategy Cross Interleave Reed Solomon Code
Number of channels	2
D-A conversion	16-bit linear
Frequency response	2 Hz - 20 kHz ($\pm_{1.0}^{0.5} \text{ dB}$)
Signal to noise ratio	More than 97 dB
Dynamic range	More than 95 dB
Harmonic distortion	Less than 0.004% (at 1 kHz)
Channel separation	More than 90 dB
Wow and flutter	Below measurable limit
Outputs	Line outputs FIXED (phono jacks) Output level 2 V rms (at MSB) Load impedance over 10 kilohms


ATTENTION AU COMPOSANT AYANT RAPPORT
À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE  SUR LES DIAGRAMMES SCHEMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

Disc	
Track pitch	1.6 μm
Sampling frequency	44.1 kHz
Quantization	16 bit linear quantizing/channel
Modulation system	EFM
Transfer rate	2.03 Mbit/sec. (before modulation)

General	
Power requirements	US, Canadian model: 120 V ac 60 Hz AEP model: 220 V ac 50 Hz UK model: 240 V ac 50 Hz E model: 120, 220 or 240 V ac adjustable 50/60 Hz
Power consumption	13 W
Dimensions	Approx. 355 x 80 x 280 mm (w/h/d) (14 x 3 ¹ / ₄ x 11 ¹ / ₈ inches) including projecting parts and controls
Weight	Approx. 3.8 kg (8 lbs 6 oz), net

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

COMPACT DISC PLAYER

SONY



PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING !!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

1. Laser Diode Properties

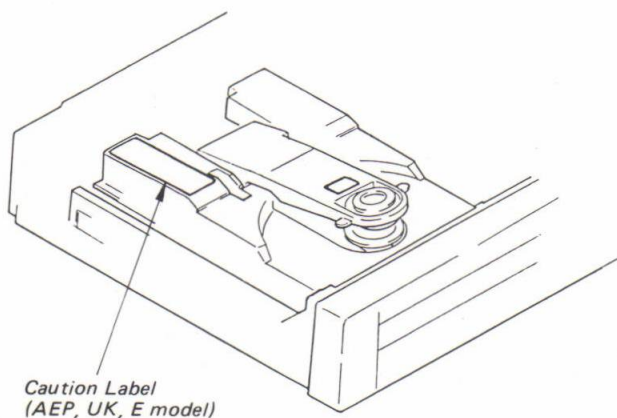
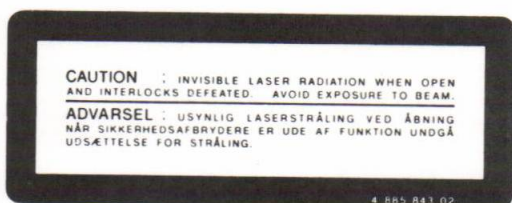
- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output: max. 0.4 mW*

* This output is the value measured at a distance of about 1.6 mm from the objective lens surface on the Optical Pick-up Block.

- Classification: Class Ib

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including APC board).

Caution Label (AEP, UK, E model)



BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 30 cm fra den optiske pick-up.

1. Data for Laser Diode

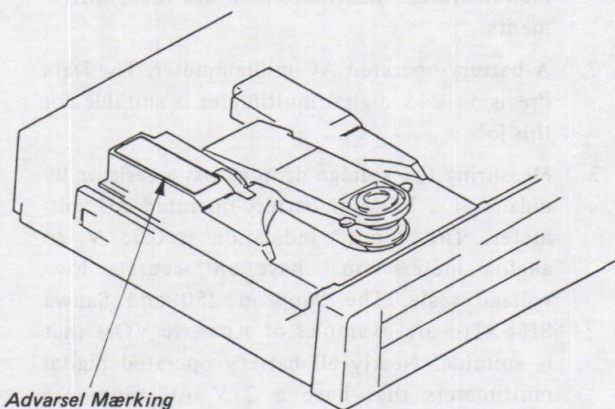
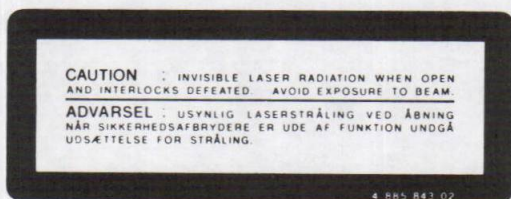
- Materiale: GaAlAs
- Bølgelængde: 780 nm
- Udstråling: Kontinuerlig
- Laser Output: max. 0.4 mW*
 - * målt i 1.6 mm afstand fra overfladen af objektiv-linsen på den optiske pick-up enhed.
- Klassification: Svarende til Klasse Ib

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laser-dioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING (AEP model)

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning



MODEL IDENTIFICATION

— Specification Label —

US model:



Canadian model:



AEP model:



UK model:



E model:



SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

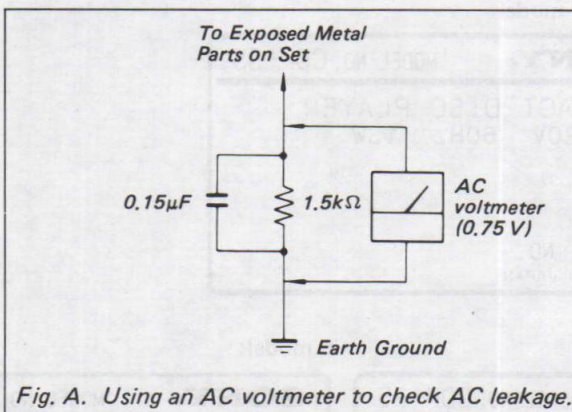


Fig. A. Using an AC voltmeter to check AC leakage.

FEATURES

High performance and high fidelity

With the Sony CDP-35 Compact Disc player, flat frequency response, low wow and flutter, wide dynamic range, minimal distortion and high channel separation are achieved.

Various functions

- The RMS play function for playing the selections in a desired order
- The shuffle play function for playing the selections in a random order
- The index function for the quick location of the part you want
- The auto space function for giving blank space of 3 seconds between each function
- Full repeat function for one selection, a whole disc, RMS play, shuffle play and a particular portion
- Large and easy-to-read music calendar display shows the selection numbers on the disc and the time counter shows the elapsed or remaining playing time.

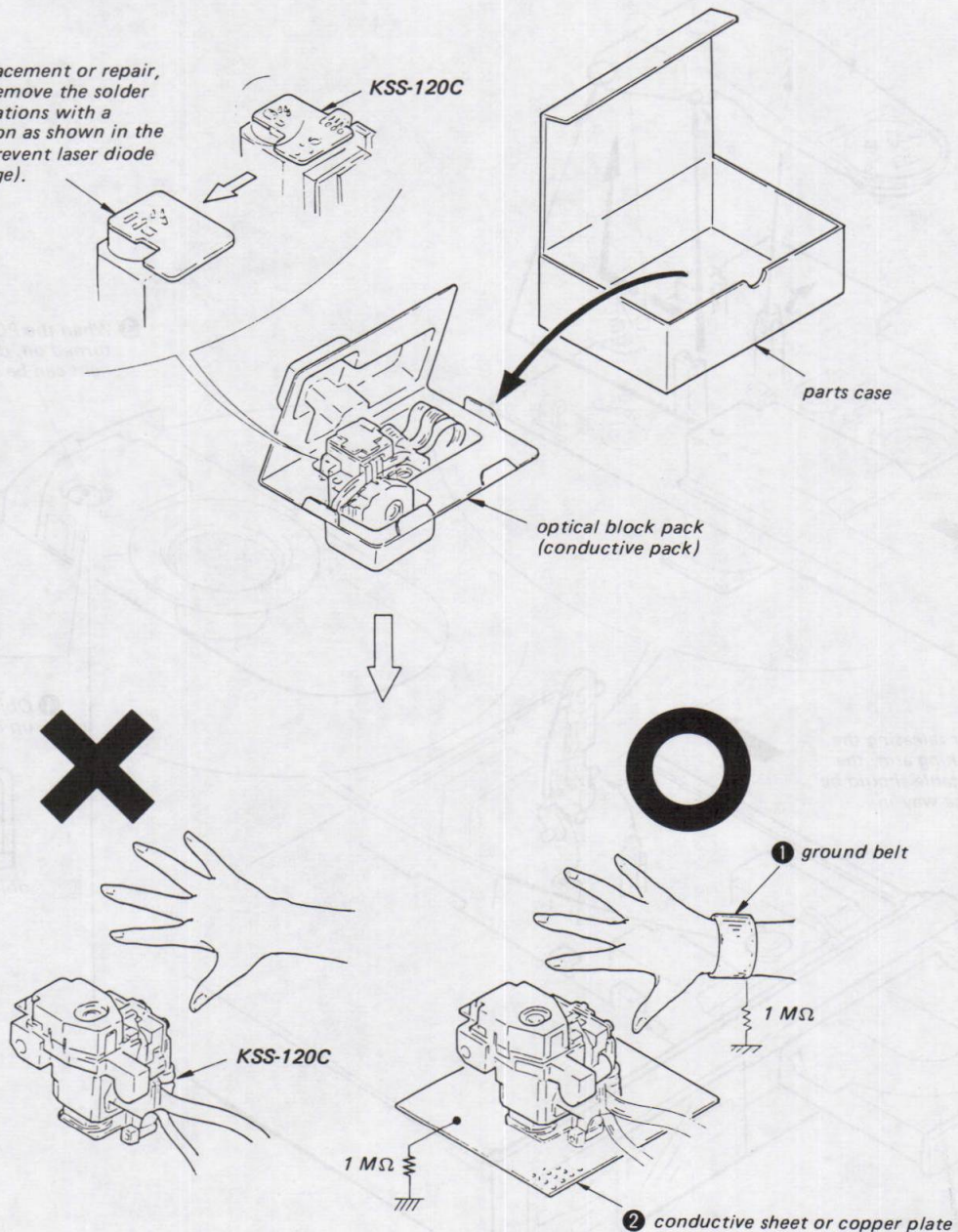
NOTES ON HANDLING THE OPTICAL BLOCK (KSS-120C)

The laser diode inside the optical block may be damaged by static electricity in clothes or the human body.

The following procedures are required when unpacking and repairing KSS-120C in order to avoid static electricity damage.

1. Body grounding
Be sure to wear a ground belt (less than $10^8 \Omega$) in order to release the static electricity stored in the body.
2. Workbench grounding
Place a conductive sheet (less than $10^9 \Omega$) or copper plate on the bench where KSS-120C is to be placed to ground it.
3. Static electricity in the clothing will not be released by the ground belt, so be careful not to let KSS-120C touch clothing.

During replacement or repair, be sure to remove the solder at these locations with a soldering iron as shown in the figure (to prevent laser diode static damage).



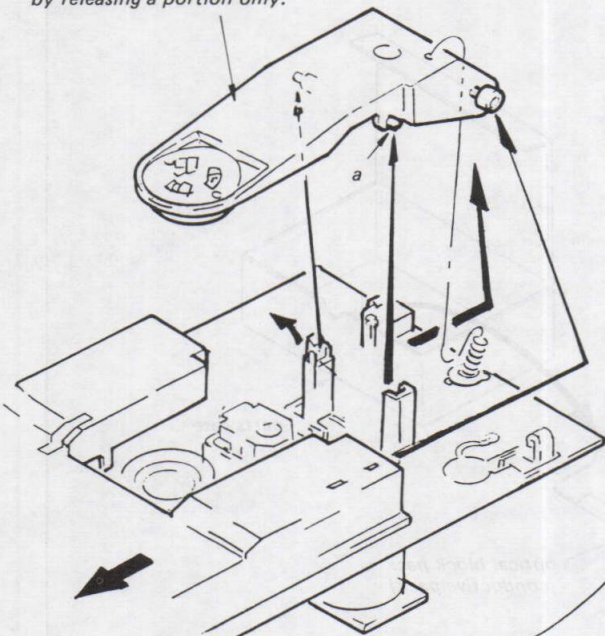
NOTES ON CHECKING LASER DIODE LIGHT EMISSION

The laser beam on this set is converged by the objective lens in the optical block so that it focuses on the disc reflective surface. Therefore, when checking light emission of the laser diode, be sure to keep the eyes more than 30 cm away from the objective lens.

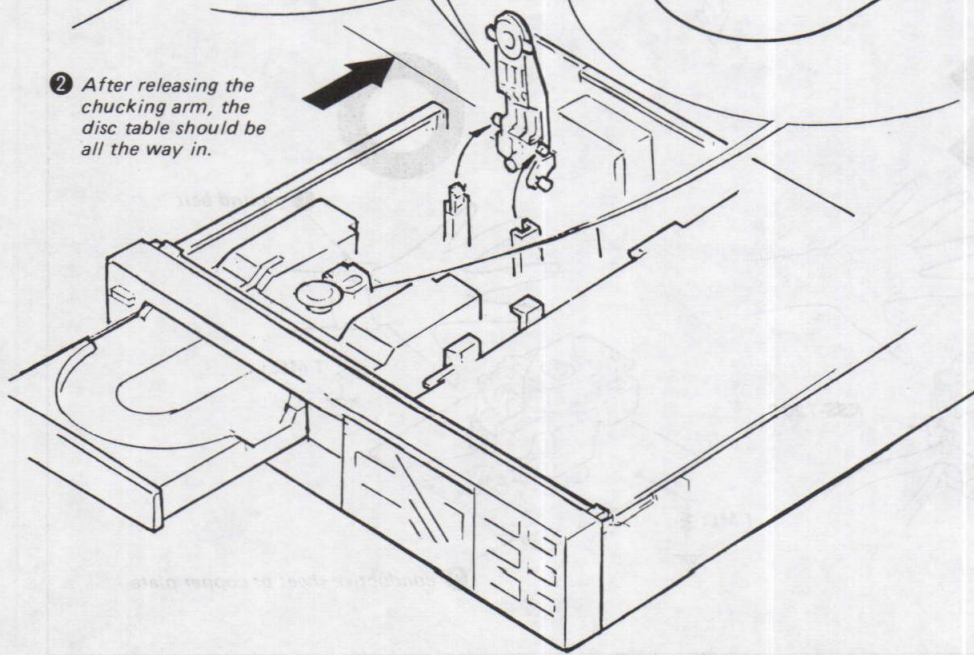
CHECKING LASER DIODE AND FOCUS SEARCH OPERATION

Check if the following operation is performed by looking at the objective lens after releasing the chucking arm and turning the POWER switch on. (Optical block should be at the innermost circumference when checking.)

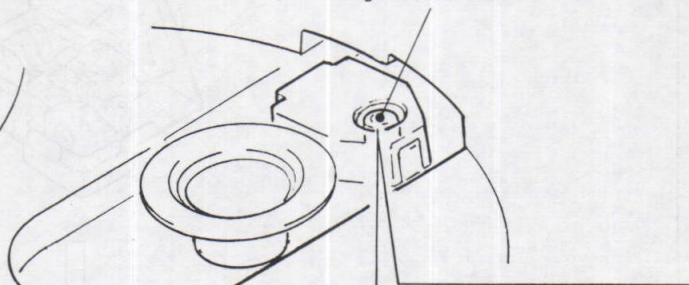
- 1 Release chucking arm. This figure shows the entire chucking arm released, but checking can be done by releasing a portion only.



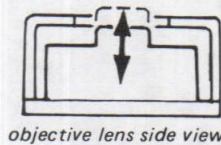
- 2 After releasing the chucking arm, the disc table should be all the way in.



- 3 When the POWER switch is turned on, diffused laser light can be seen.



- 4 Objective lens moves up and down (2 - 3 times)

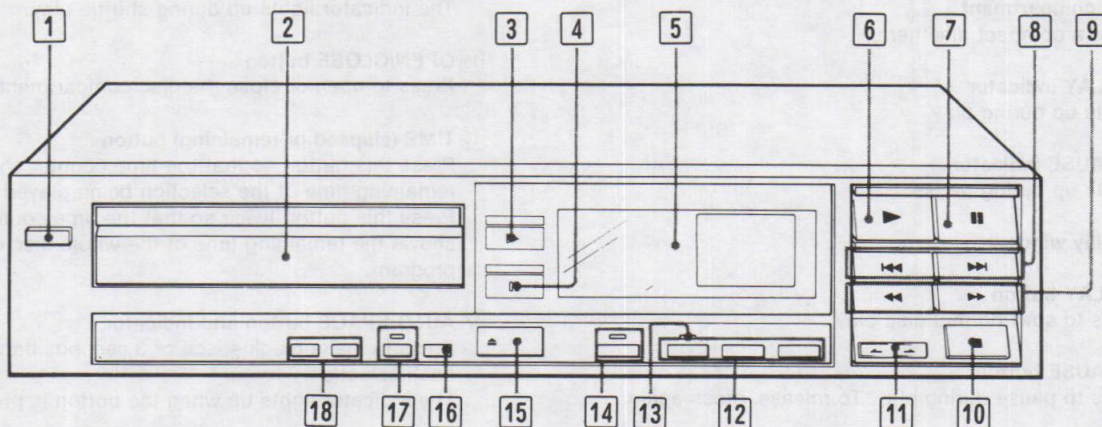


SECTION 1

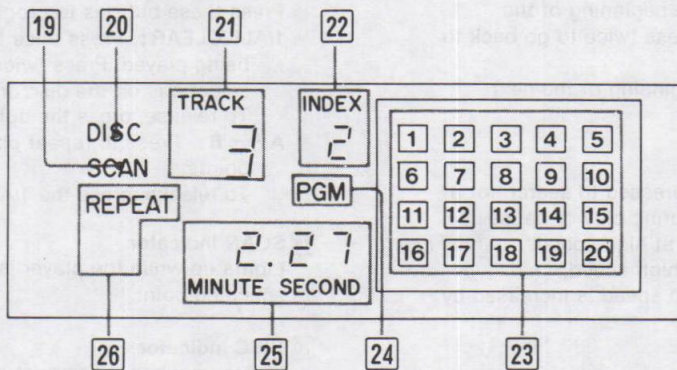
OUTLINE

LOCATION AND FUNCTION OF CONTROLS

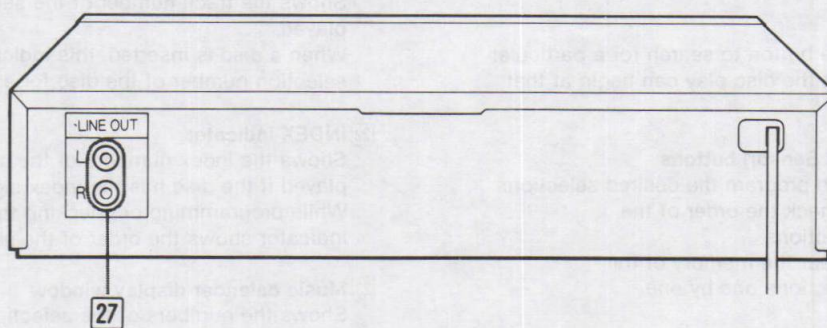
Front panel



Display window



Rear panel



Front panel

- 1 **POWER switch**
- 2 **Disc compartment**
Place a compact disc here.
- 3 **▶ PLAY indicator**
Lights up during play.
- 4 **|| PAUSE indicator**
Lights up during pause.
- 5 **Display window**
- 6 **▶ PLAY button**
Press to start normal disc play.
- 7 **|| PAUSE button**
Press to pause during play. To release, press again.
- 8 **AMS (Automatic Music Sensor) buttons**
◀◀: Press to go back to the beginning of the selection being played. Press twice to go back to the previous selection.
▶▶: Press to skip to the beginning of the next selection.
- 9 **Manual search buttons**
Keep the appropriate button pressed to search for a particular point on the disc during play or pause.
◀◀: Press to go backwards at high speed.
▶▶: Press to go forward at high speed.
In the pause mode, the search speed is increased by 3 times.
- 10 **■ STOP button**
Press to stop the disc play.
The disc will be reset to the very beginning of the first selection, and the player enters the standby mode.
- 11 **INDEX buttons**
Press the appropriate button to search for a particular index number so that the disc play can begin at that point.
- 12 **RMS (Random Music Sensor) buttons**
PROGRAM: Press to program the desired selections.
CHECK: Press to check the order of the programmed selections.
CLEAR: Press to clear the memory of the programmed selections one by one.
- 13 **Program indicator**
Lights up during programming of the selections and RMS play.
- 14 **SHUFFLE button and indicator**
Press to start shuffle play. To release, press again. The indicator lights up during shuffle play.
- 15 **OPEN/CLOSE button**
Press to open or close the disc compartment.
- 16 **TIME (elapsed or remaining) button**
Press this button so that the time counter shows the remaining time of the selection being played. Press this button twice so that the time counter shows the remaining time of the whole disc or program.
- 17 **AUTO SPACE button and indicator**
Press to make blank space of 3 seconds between each selection. The indicator lights up when the button is pressed.
- 18 **REPEAT buttons**
Press these buttons to program repeat play.
1/ALL/CLEAR: Press once to repeat the selection being played. Press twice to repeat all the selections on the disc or program. To release, press the button three times in total.
A ↔ B: Press to repeat play between two particular points. To release, press the 1/ALL/CLEAR button.
- 19 **SCAN indicator**
Lights up while the player is searching for the specified point.
- 20 **DISC indicator**
Lights up when a compact disc is inside or when the disc compartment is opened.
- 21 **TRACK indicator**
Shows the track number of the selection being played. When a disc is inserted, this indicator shows the total selection number of the disc for a while.
- 22 **INDEX indicator**
Shows the index numbers of the selection being played if the disc has the index signals recorded. While programming or checking the selections, this indicator shows the order of the selections.
- 23 **Music calendar display window**
Shows the numbers of the selections (up to 20) on the inserted disc.
- 24 **PGM indicator**
Lights up when the PROGRAM button is pressed. This indicator disappears as soon as the RMS play begins.

25 Time counter

Shows the elapsed playing time of the selection being played in minutes and seconds. When the disc is inserted, this indicator shows the total playing time of the disc for a while.

26 REPEAT indicator

- 1:** Lights up during repeat play of a selection.
- ALL:** Lights up during repeat play of the whole disc, RMS play or shuffle play.
- A ↔ B:** Lights up during A ↔ B repeat play.

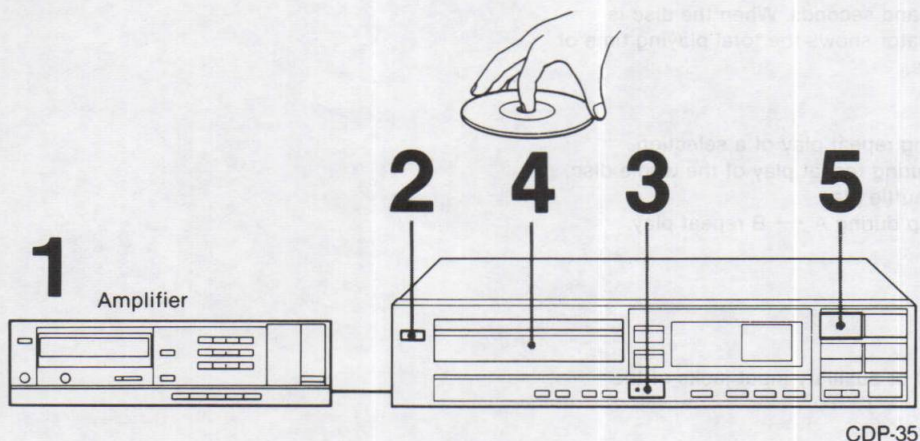
Rear panel

27 LINE OUT jacks

Connect to the CD or auxiliary input jacks of the amplifier.



BASIC OPERATION
DISC PLAYING



TO PLAY

- 1** Turn on the amplifier and set the input selector to the CD player position.
- 2** Depress the POWER switch (⏻ ON).
- 3** Press the OPEN/CLOSE button. The disc compartment opens.
- 4** Put the disc in the disc compartment **with the label surface up**.
- 5** Press the ▶ PLAY button. The compartment closes and play begins from the beginning of the disc.

The number of the selections on the disc and the total time of all the selections are displayed for a few seconds on the display window when the disc is inserted.
The number indicators light up on the music calendar display window to show the number of selections on the disc.

If you press the || PAUSE button when the compartment is open, the compartment will close and the disc will pause at the beginning of the first selection.

When the player reaches the end of the last selection of the disc, it is automatically reset to the beginning of the disc and stands by. TRACK indicator displays 0.

An important point to remember
In the CD system, a wider dynamic range is achieved than that of the conventional analog system, and the peaks of high level inputs are recorded with high-fidelity. In addition, the noise level is very low. If you turn up the volume inadvertently while listening to a portion where no audio signals or very low level inputs are recorded, the speakers may be damaged when the portion with peak levels is played.

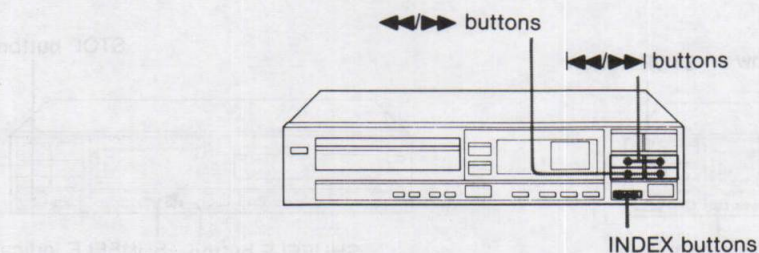
TO STOP DURING PLAY

To open the compartment
Press the OPEN/CLOSE button.
The disc will stop rotating and the compartment will open.

To pause for a moment during play
Press the || PAUSE button.
The || indicator will illuminate. To release pause and restart play from the same point, press the || PAUSE button again.

To reset to the beginning of the first selection
Press the STOP button.
The player will stand by.

SEARCH OPERATION



TO SEARCH FOR A PARTICULAR SELECTION -AMS-(Automatic Music Sensor)

Using the ◀◀ or ▶▶ button, you can quickly locate a desired selection ahead or back. When the button is pressed, the player searches the selection data recorded at the beginning of each selection and play will start from the beginning of the selection.

To search for the beginning of the selection

Press the ◀◀ button **once** during play or pause mode. The beginning of the selection being played is searched for.

To search for a previous selection, keep the ◀◀ button pressed.

If you press the ◀◀ button after the first selection is located, the TRACK indicator will not change.

To search for a selection ahead

Press the ▶▶ button **once** during play or pause mode. The beginning of the next selection is searched for.

To search for the further ahead selection, keep the ▶▶ button pressed.

If you press the ▶▶ button after the last selection is located, the TRACK indicator will not change.

TO START PLAYING FROM A PARTICULAR SECTION (INDEX SEARCH)

On some discs, the index numbers divide the selections into sections, such as chapters in a book or movements in a symphony.

To start playback from a particular section, press the INDEX buttons during playback or in the pause mode. The selected index number is displayed in the INDEX indicator.

Note: With discs without index numbers, this function cannot be activated.

TO SEARCH FOR A PARTICULAR POINT IN A SELECTION (MANUAL SEARCH)

Using the manual search buttons, you can locate a particular point of a selection during play or pause.

To go back at a high speed, keep the ◀◀ button depressed.

To advance at a high speed, keep the ▶▶ button depressed.

In the pause mode, the search speed is increased by three times.

What are these indications?



This indication appears if you continuously press the ▶▶ button at the end of the disc.

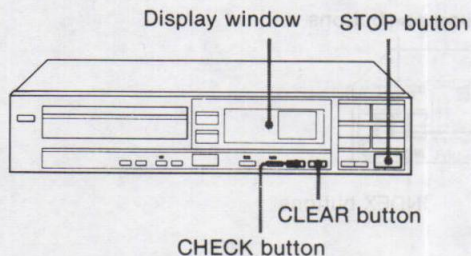
To go back to TRACK indication, press the ◀◀ button.



This indication appears if you continuously press the ◀◀ button at the very beginning of the disc.

TO PLAY THE SELECTIONS IN A RANDOM ORDER (SHUFFLE PLAY)

TO CHECK THE PROGRAMMED SELECTIONS



Press the CHECK button.
The programmed selections and their order can be checked.
With each press, the selection number, its order and its playing time will be displayed in the display window. After all programmed selections are displayed, the original display appears after a few seconds.

Notes

- When selections after the 20th are being checked, the track number and program order number are displayed, but there is no display in the music calendar.
- The CHECK button also works during play.

TO CLEAR THE PROGRAMMED SELECTIONS

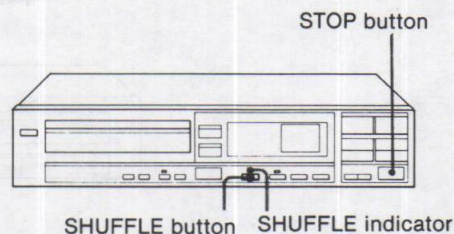
Use the CLEAR and CHECK buttons to erase programmed selections.

During programming

Press the CLEAR button.
With each press, the selections will be cleared in the order from the last selection programmed.
To clear all of the programmed selections, press the STOP button.

During play

- 1 Press the CHECK button until the selection to be cleared is displayed.
 - 2 Press the CLEAR button.
- This function can be also activated **during** programming.



Press the SHUFFLE button
The SHUFFLE indicator lights up.
To go back to normal disc playing, press the SHUFFLE button again. To stop the disc play, press the STOP button.

Play begins from any selection on the disc. Each selection is played once, in a random order. There is a blank of 3 seconds between each selection.

To skip to the next selection, press the ►► button.

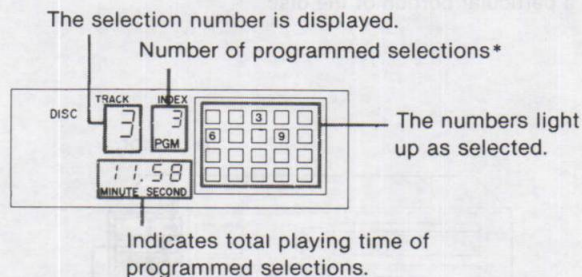
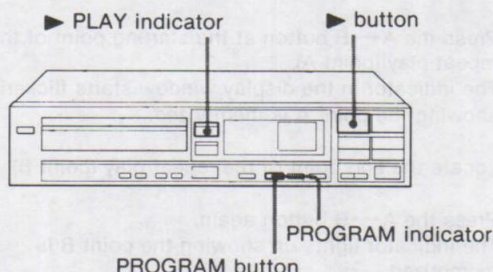
To return to the beginning of the selection being played, press the ◀◀ button.

To go forward to any point, press the ►► button. You cannot return to a previous selection.

- Shuffle play does not operate if the disc compartment is open.
- On discs with more than 20 selections, all selections will be shuffle played although the music calendar display window shows only the selection number up to 20.

ADVANCED OPERATION**TO PLAY THE SELECTIONS IN A DESIRED ORDER (RMS)**

Any number of selections up to 20 can be selected and played in any order by using the PROGRAM button.



- 1** Choose the selection to be programmed with ◀◀ or ▶▶ button in standby mode.
- 2** Press the PROGRAM button.
The ▶ PLAY indicator starts flickering.
- 3** Repeat the steps 1 and 2 for other selections to be programmed.
- 4** Press ▶ PLAY button.

When program play begins, the PGM indication goes out. The INDEX indicator which displays the number of programmed selection (* in the illustration) returns to the first index number.

When a selection ends, its number disappears from the music calendar and the selection is also erased from the program memory. After 3 seconds the next programmed selection begins.

To skip to the next selection, use the ▶▶ button. (See page 9). You cannot return to the previous selection.

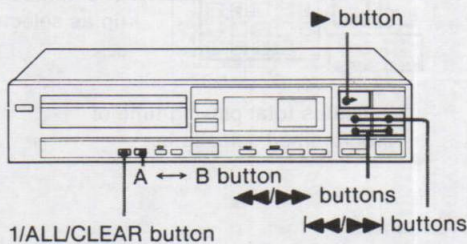
After all programmed selections are played, the player returns to the standby mode.

For a disc with more than 20 selections, only the selection numbers up to 20 will be shown in the music calendar display window.

You can program even without the disc inserted. Program with the disc compartment open. After programming place the disc in the compartment and press the ▶PLAY button to begin play. The total playing time is calculated and displayed after the disc is inserted.

REPEAT PLAY

Using the REPEAT buttons, you can repeat the selection being played, the whole disc, RMS play, shuffle play, and a particular portion of the disc.



TO REPEAT ONLY THE SELECTION BEING PLAYED

Press the 1/ALL/CLEAR button once during play or standby mode.
The REPEAT indicator shows "1".
To release, press the 1/ALL/CLEAR button twice.

TO REPEAT THE WHOLE DISC

Press the 1/ALL/CLEAR button twice during play or standby mode.
The REPEAT indicator shows "ALL".
To release, press the 1/ALL/CLEAR button again.

TO REPEAT RMS PLAY OR SHUFFLE PLAY

Press 1/ALL/CLEAR button once during RMS play or shuffle play or in standby mode.
The REPEAT indicator shows "ALL".
To release, press the 1/ALL/CLEAR button again.
During RMS play or shuffle play, repeat play of a single selection cannot be activated.

When the ▶▶▶▶ or ▶▶▶▶ button is kept pressed during repeat play until the end of the disc or the program, the display window shows "-0.03", and repeat play resumes after 3 seconds.

TO PLAY BETWEEN TWO PARTICULAR POINTS REPEATEDLY(A↔B REPEAT)

- 1 Press the A↔B button at the starting point of the repeat play (point A).
The indicator in the display window starts flickering showing the point A is memorized.
- 2 Locate the end point of the repeat play (point B).
- 3 Press the A↔B button again.
The indicator lights up showing the point B is memorized.

The disc will go back to point A, and the repeat play starts. To release, press the 1/ALL/CLEAR button.

Note: During RMS play or shuffle play, A↔B repeat play cannot be activated, when A↔B points are in different selections.

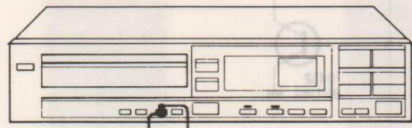
MORE ABOUT A ↔ B REPEAT FUNCTION

To play from a desired point (memory play)

- 1 At the point from which you wish to listen later (point A), press the A↔B button.
- 2 When you press the ▶PLAY button, the disc will go back to the point A and play will restart.
To cancel the point A, press the 1/ALL/CLEAR button.

AUTO SPACE FUNCTION

Using the auto space function, blank space of approximately 3 seconds can be inserted between each selection.

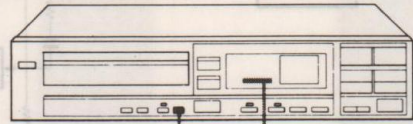


AUTO SPACE button AUTO SPACE indicator

To activate the auto space function
Press the AUTO SPACE button.
This button can be activated in any mode.

To cancel the auto space function
Press the AUTO SPACE button again.

USING THE TIME COUNTER



TIME button Time counter display

Generally, the time counter shows the elapsed playing time from the beginning of a selection in minutes and seconds.
If the selection has a blank space at its beginning, the counter is reset to the time preceded by the minus sign such as "-0.02", "-0.01", etc.

TO MONITOR THE REMAINING PLAYING TIME

To monitor the remaining time of the selection being played
Press the TIME button once.
To release, press the TIME button twice.



The remaining time of the selection being played

To monitor the remaining play time of the whole disc or program
Press the TIME button twice.
To release, press the TIME button again.



The selection number disappears.

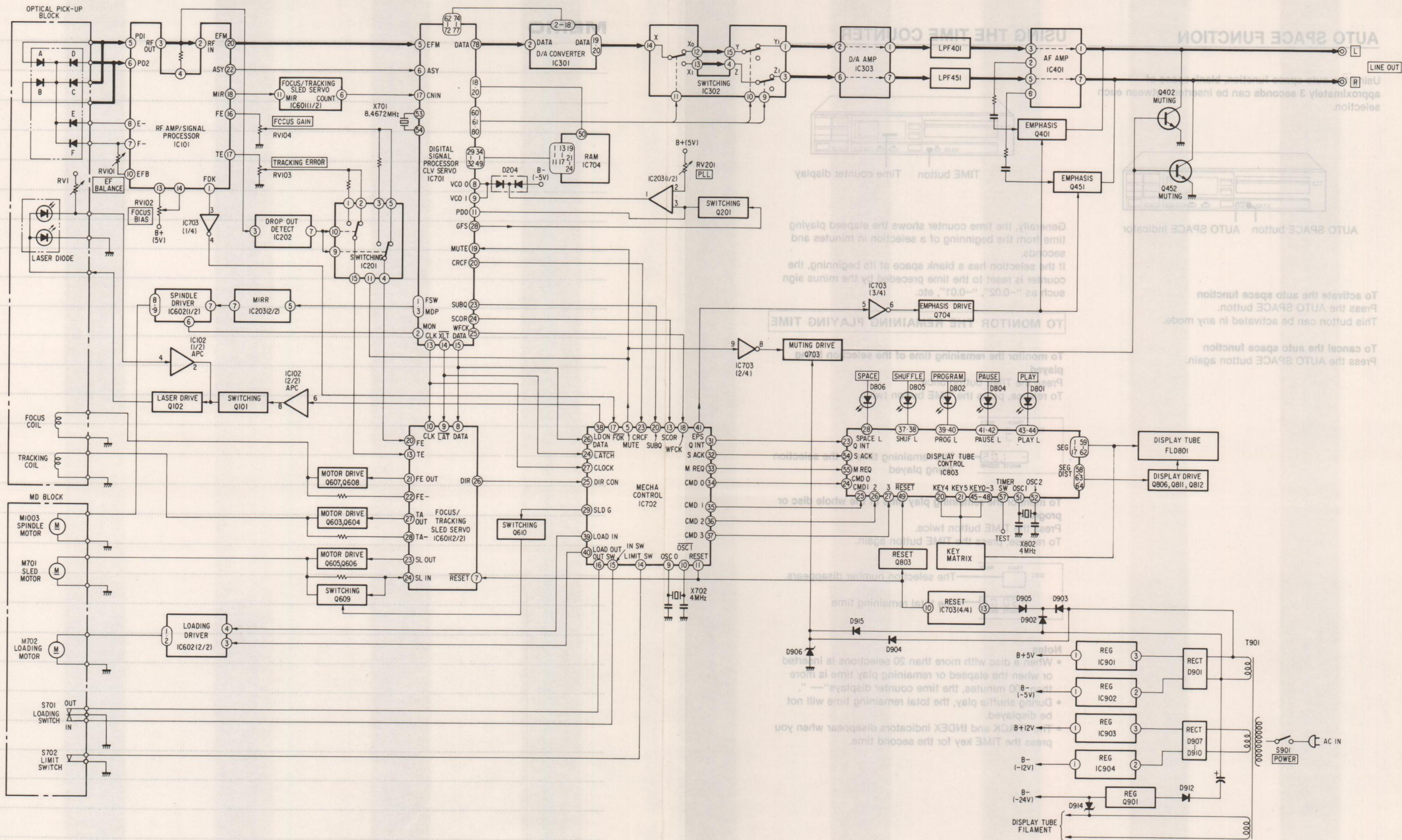
The total remaining time

Notes

- When a disc with more than 20 selections is inserted or when the elapsed or remaining play time is more than 100 minutes, the time counter displays "—".
- During shuffle play, the total remaining time will not be displayed.
- The TRACK and INDEX indicators disappear when you press the TIME key for the second time.

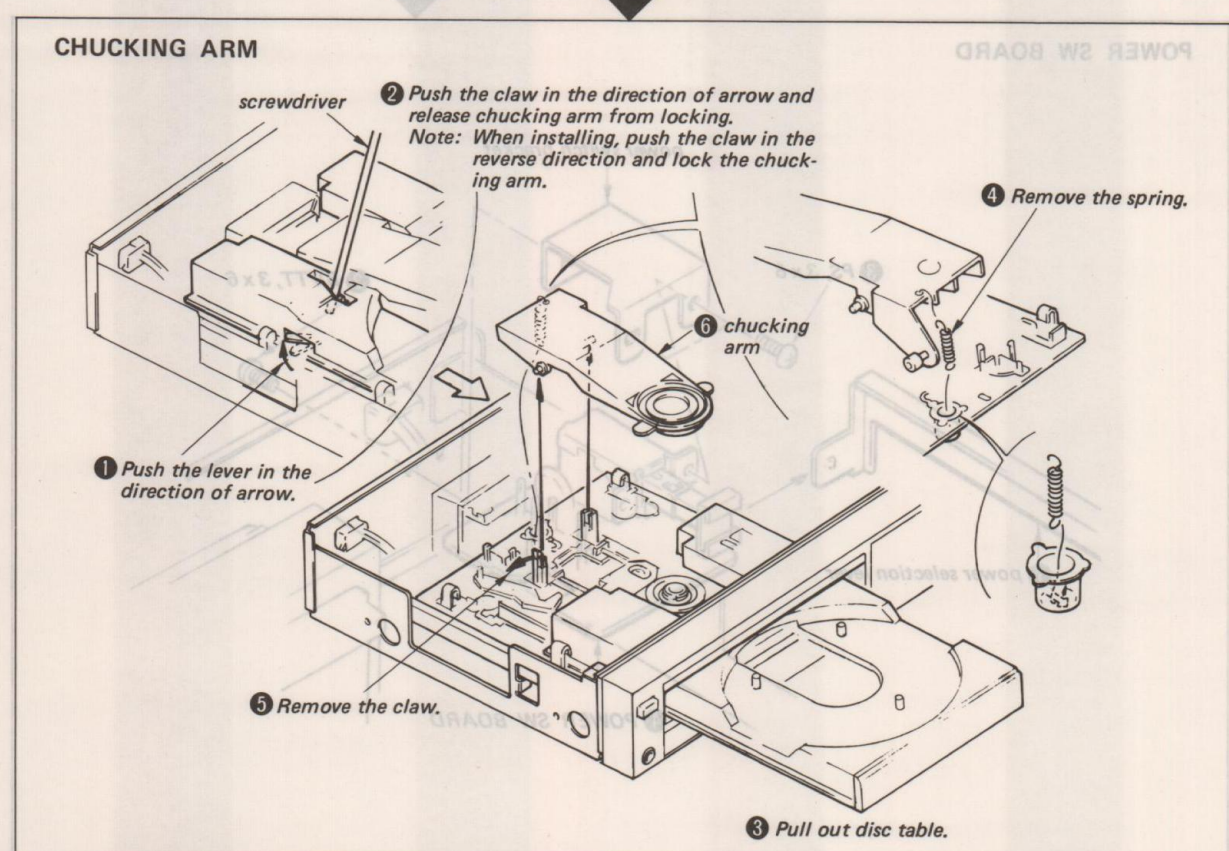
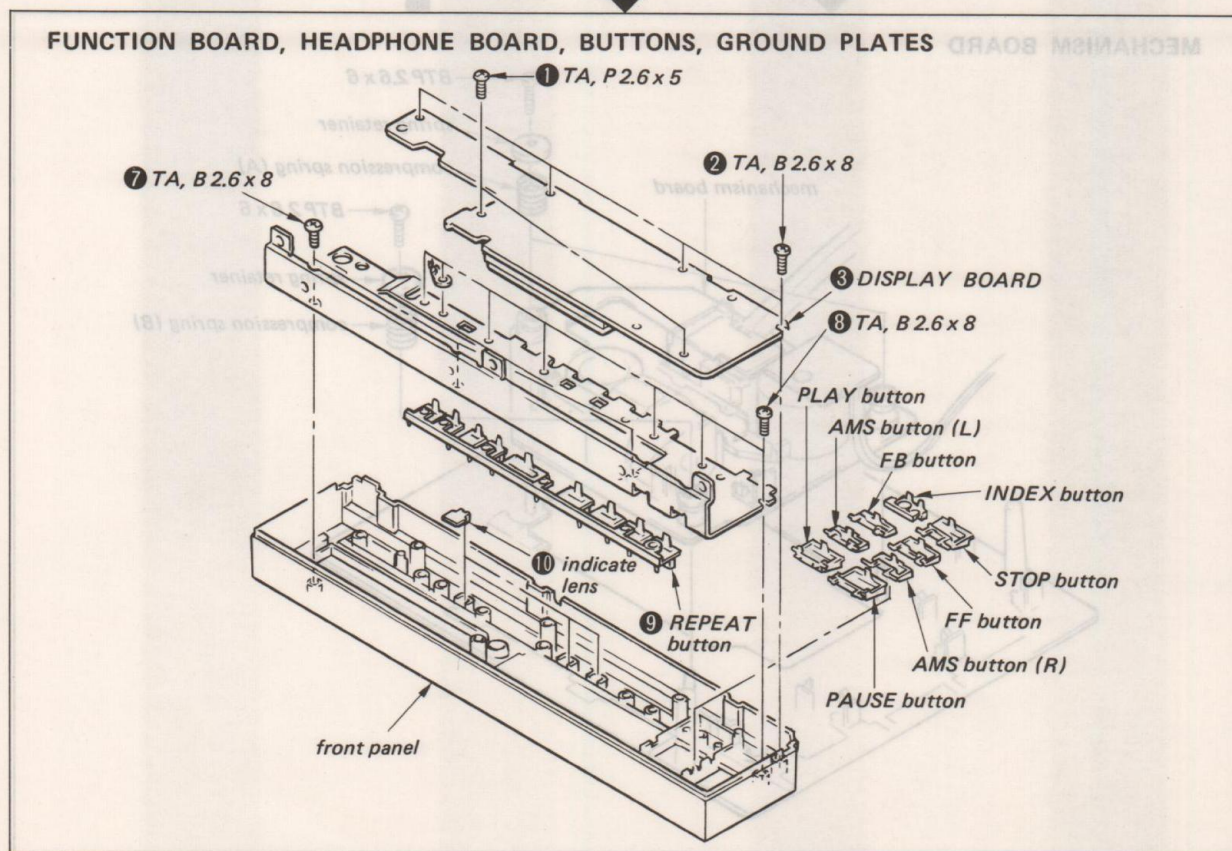
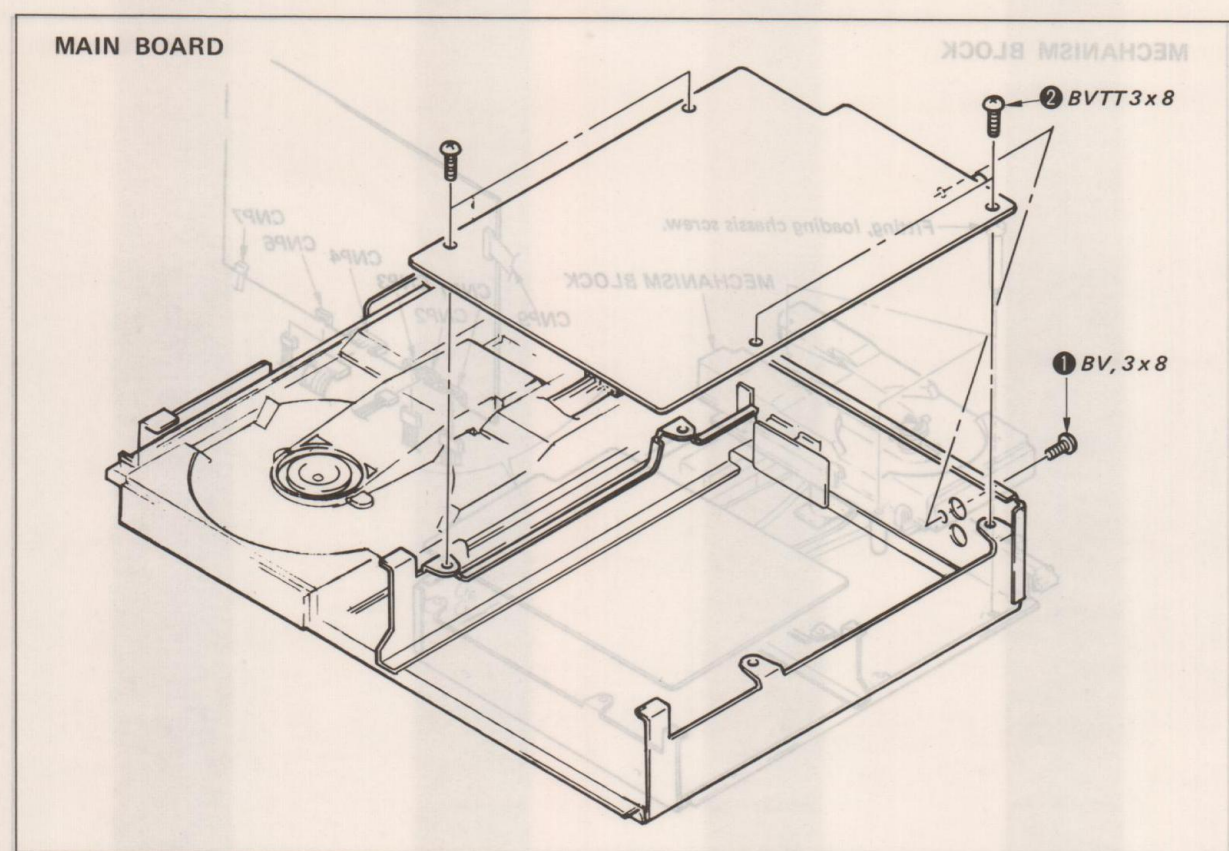
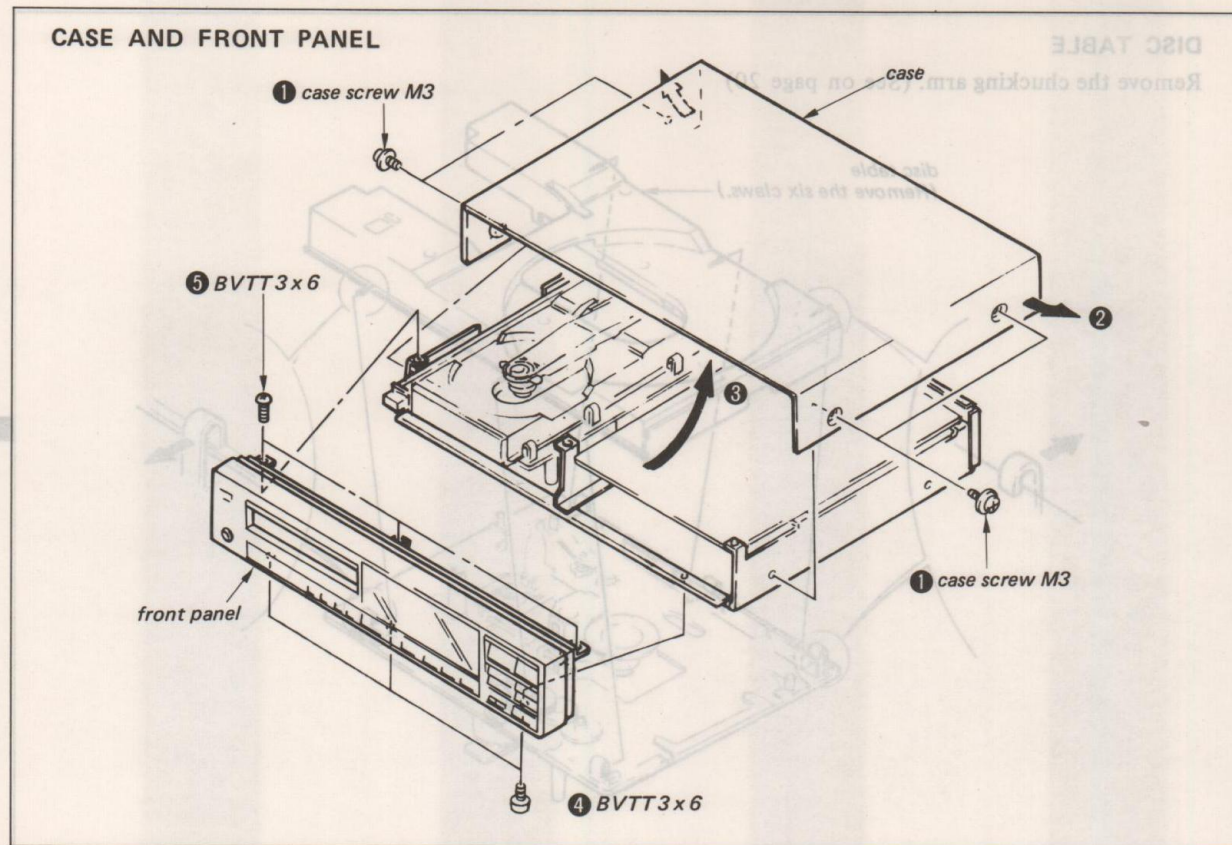
MEMO

SECTION 2 BLOCK DIAGRAM

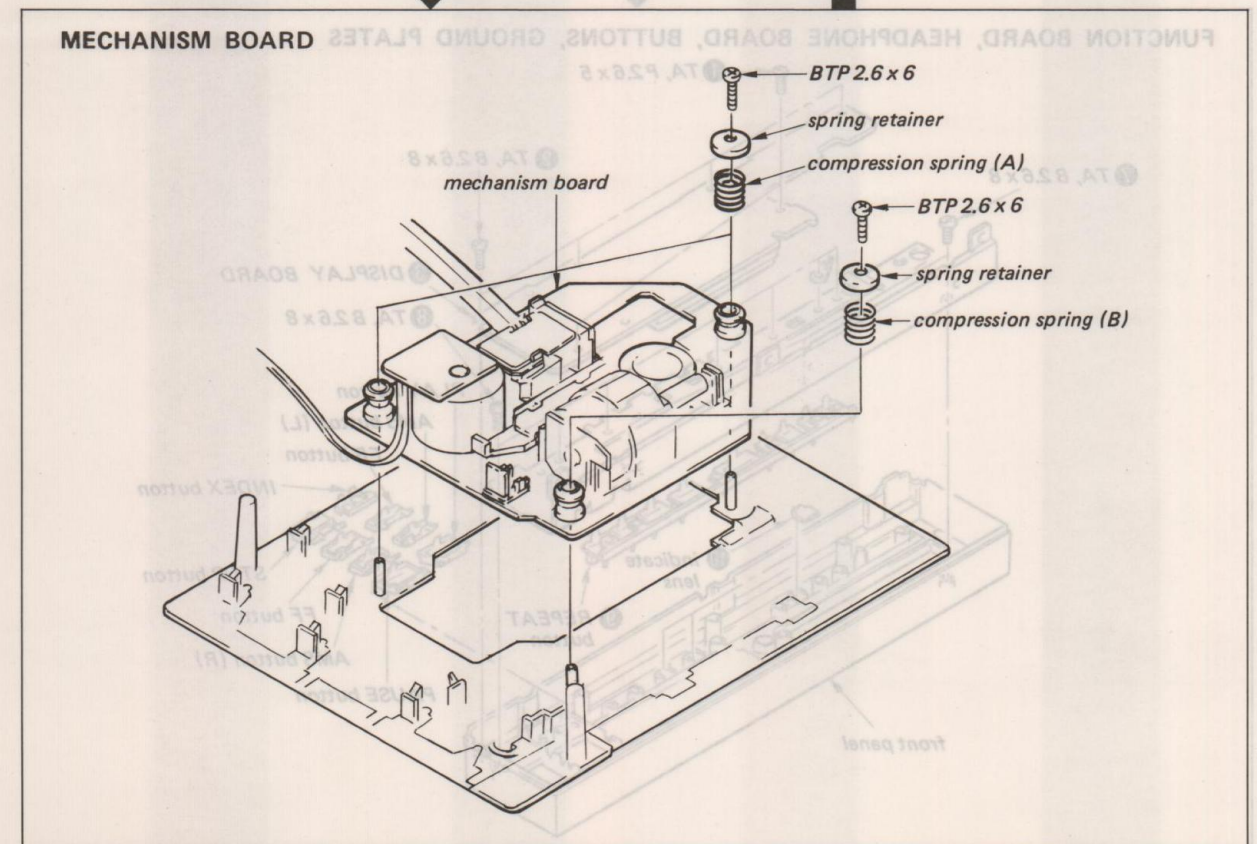
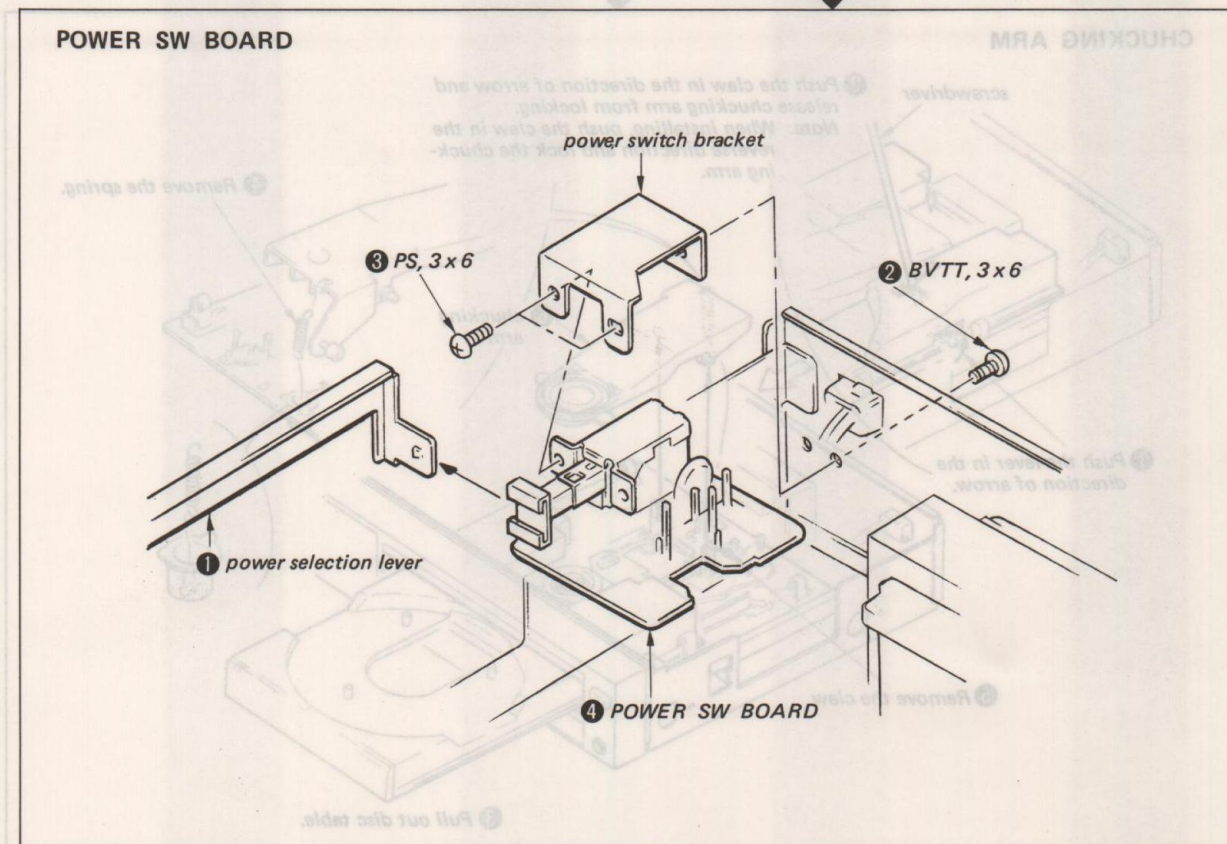
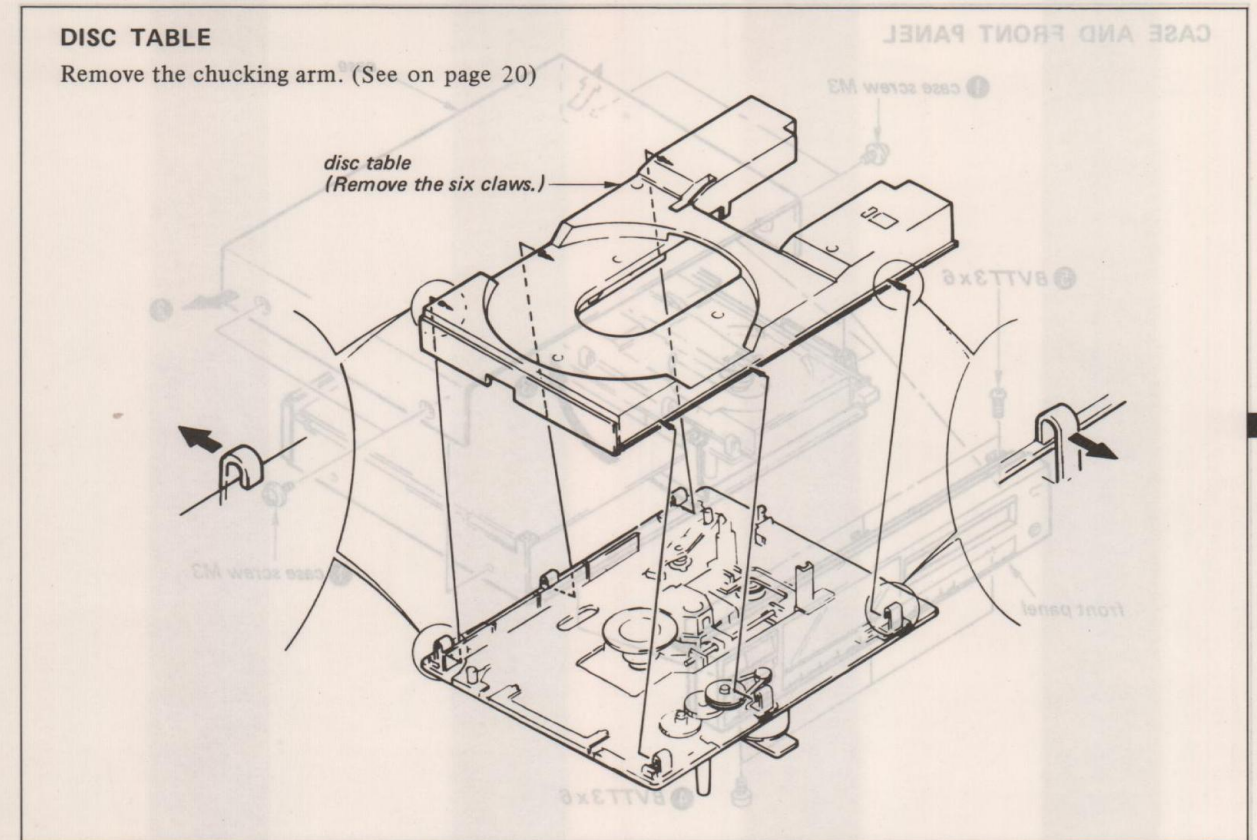
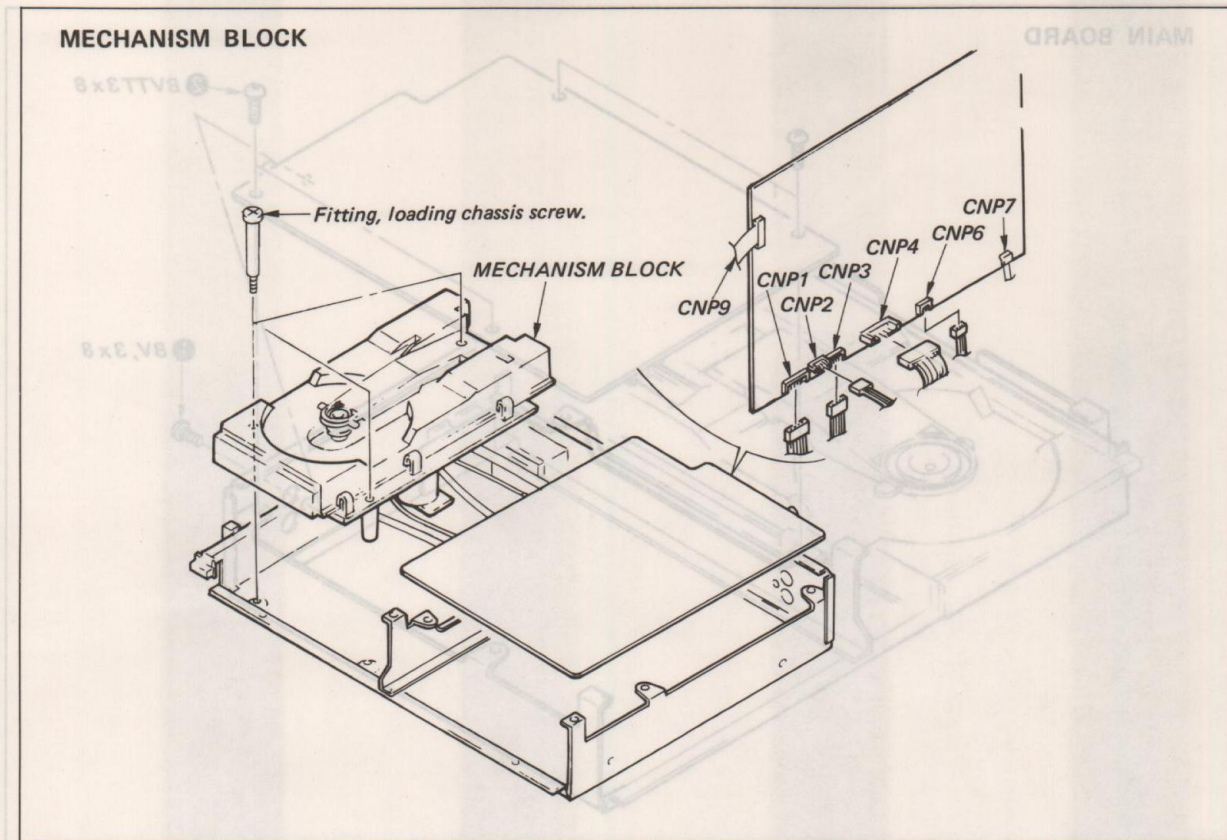


SECTION 3
DISASSEMBLY

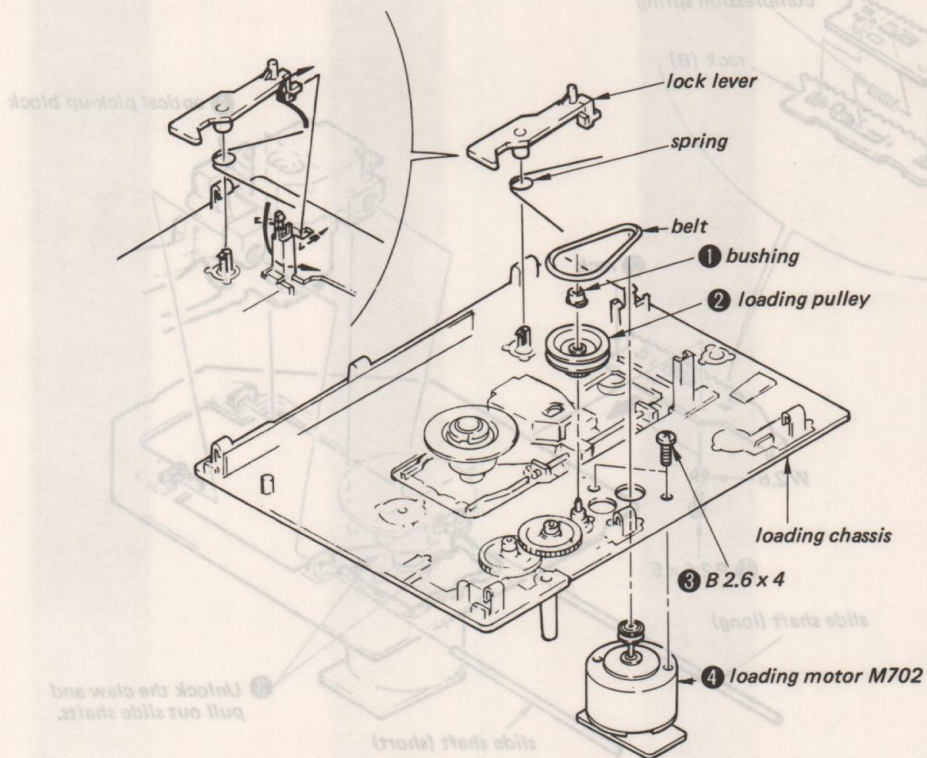
Note: Follow the disassembly procedure in the numerical order given.



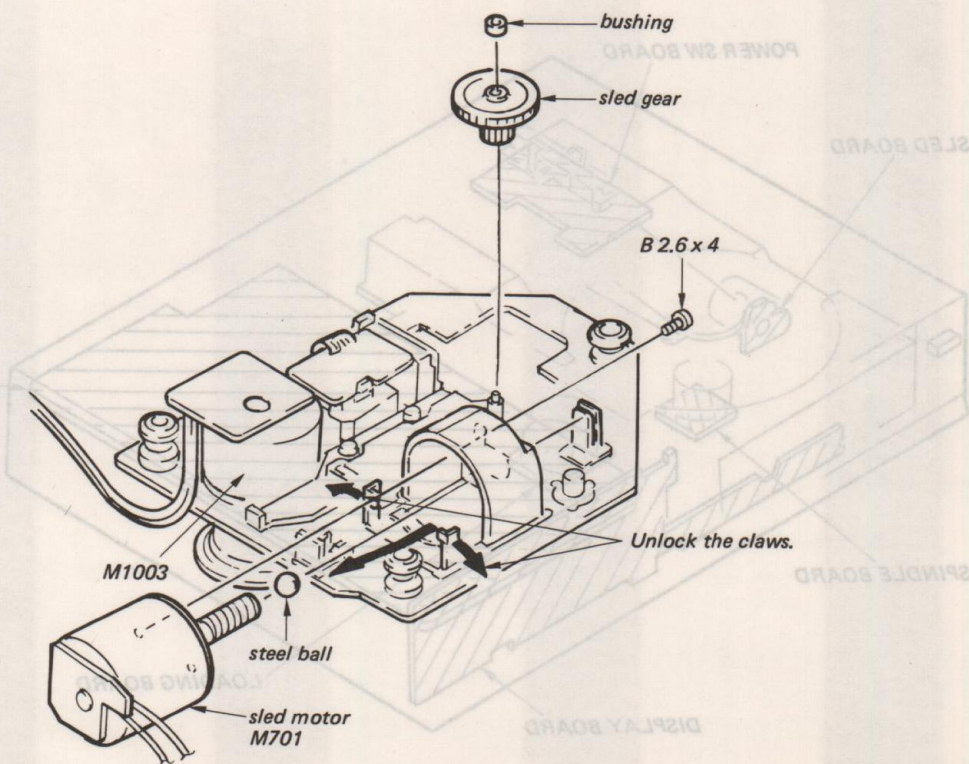
Note: Follow the disassembly procedure in the numerical order given.

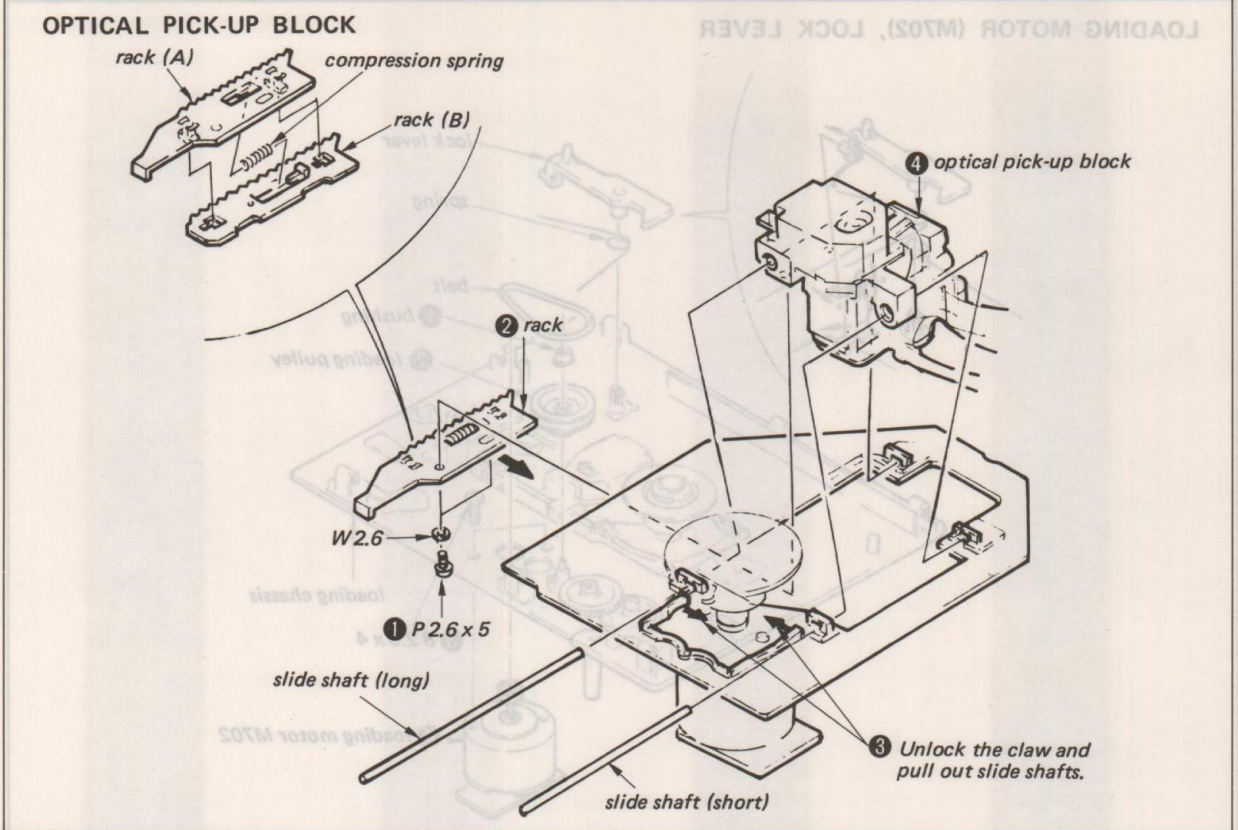


LOADING MOTOR (M702), LOCK LEVER

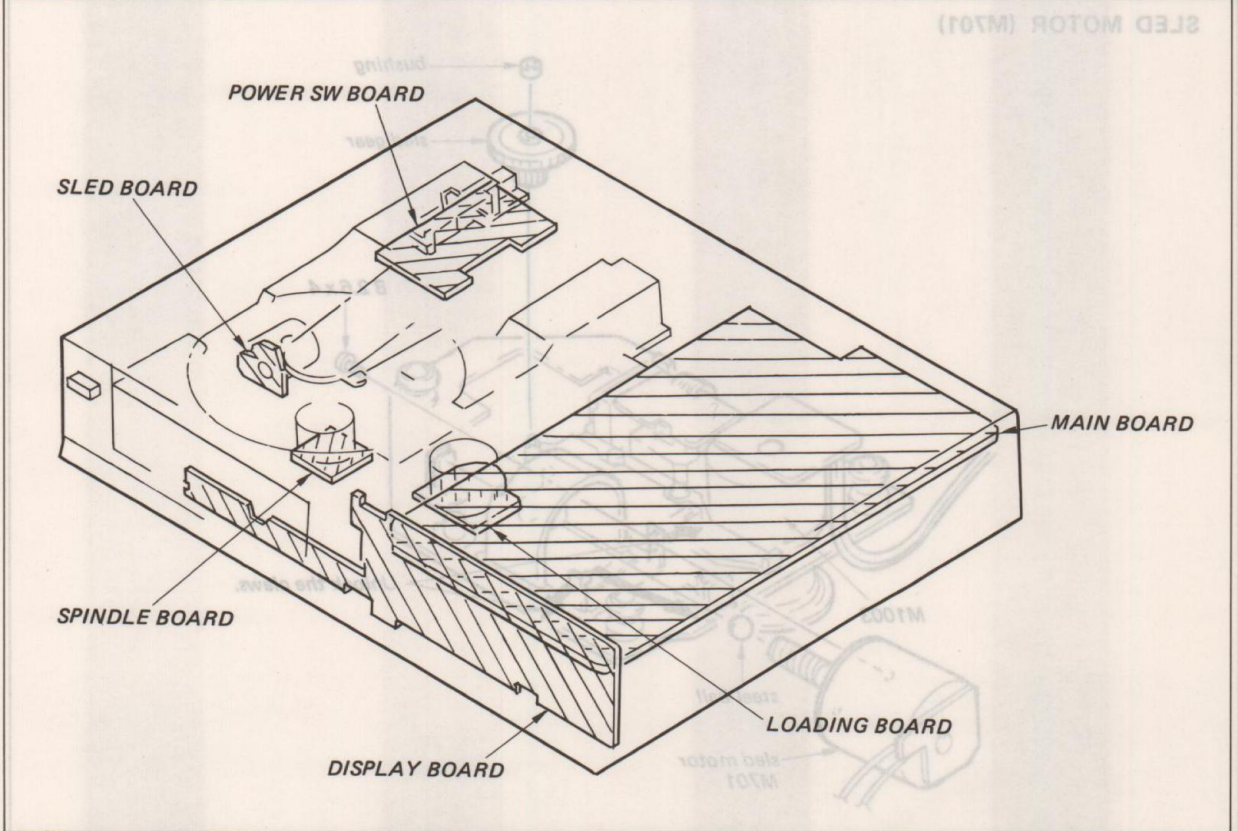


SLED MOTOR (M701)





CIRCUIT BOARD LAYOUT



SECTION 4 ADJUSTMENTS

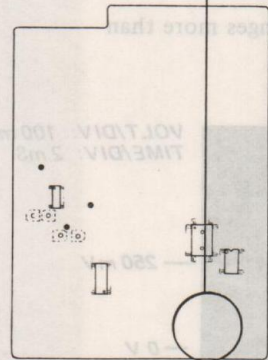
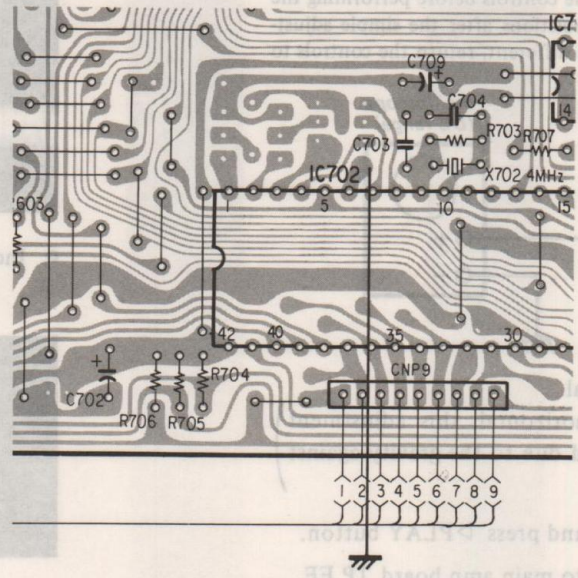
ELECTRICAL ADJUSTMENTS

1. Perform adjustments in the order given.
2. Use YEDS-1 disc unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.

Adjustment Mode

Ground IC702 pin ⑥ on main board.

Adjustment Location: main board

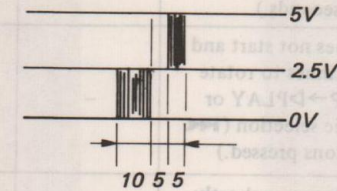


RF PLL FREE-RUN FREQUENCY CHECK

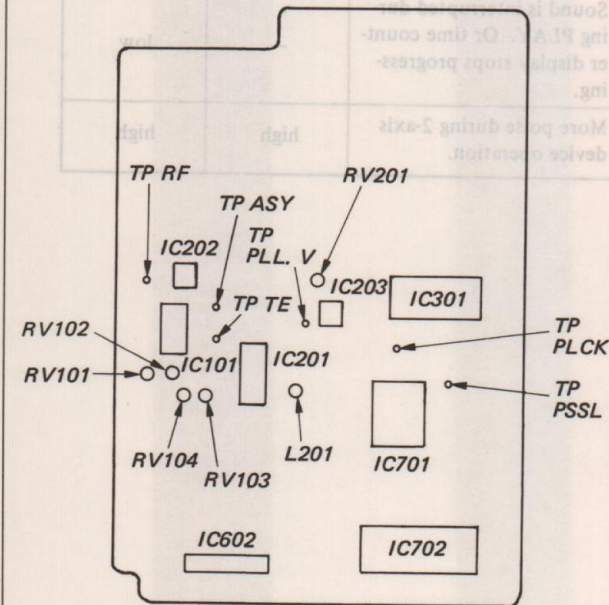
1. Ground both test points TP ASY and TP PSSL (pins 58 and 59 of IC701).
2. Press OPEN/CLOSE button and open the disk holder.
3. Adjust RV201 for a $0 \pm 0.05V$ dc at test point TP PLLV.
4. Check for 4.3218 MHz at test point TP PLCK using a frequency counter. If not, adjust L201.

CLV WAVEFORM CHECK

Check at test point TP CLV.



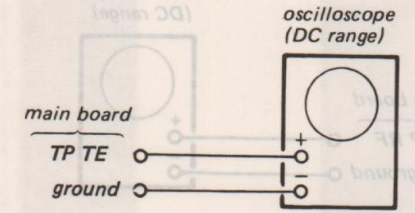
Adjustment Location: main board



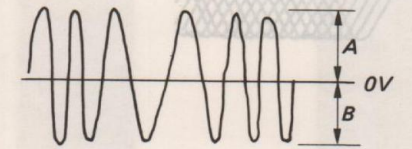
TRAVERSE ADJUSTMENT

This adjustment should be made when replacing TOP (T-type Optical Pick-up).

Procedure:

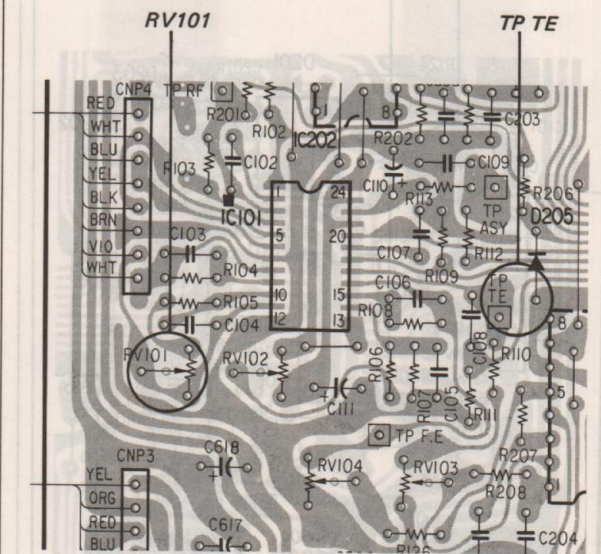


1. Connect oscilloscope to test point TP TE and ground.
2. Put set into adjustment mode. (See page 25.)
3. Turn POWER switch on.
4. Put disc (YEDS-1) in and press ▷ button.
5. Set RV103 to counterclockwise stop.
6. Adjust RV101 for a vertically-symmetrical waveform as shown below. (A=B).
7. After adjustment, cancel the adjustment mode. (See page 25.)



VOLT/DIV: 1 V
TIME/DIV: 1 ms

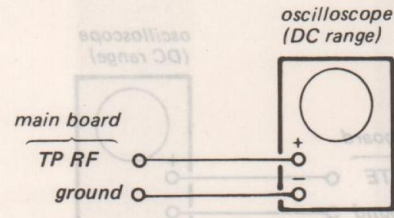
Adjustment Location: main board



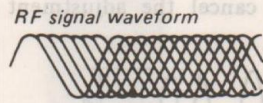
Focus Bias Adjustment

This adjustment should be made when replacing TOP (T-type Optical Pick-up).

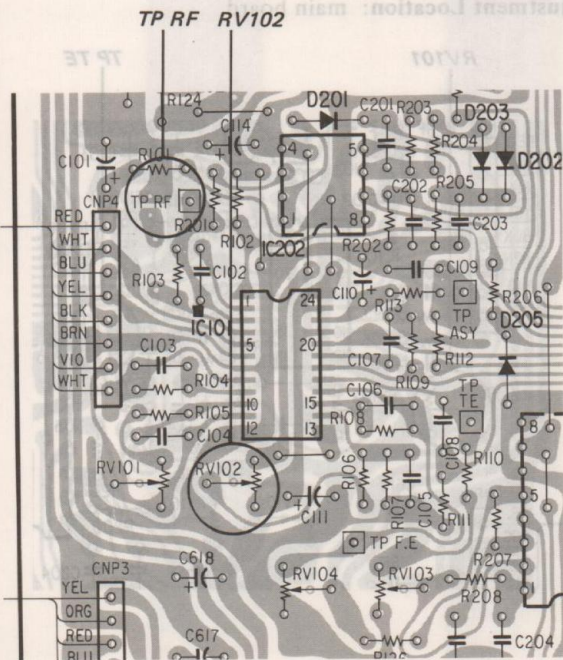
Procedure:



1. Connect oscilloscope to test points TP RF and ground.
2. Put set into adjustment mode. (See page 25.)
3. Turn POWER switch on.
4. Put disc (YEDS-1) in and press ▷ button.
5. Adjust RV102 for an optimum waveform eye pattern or so that the peak is maximum. Optimum eye pattern means that shape "◇" can be clearly distinguished at the center of the waveform.



Adjustment Location: main board



REFERENCE

Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly. However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

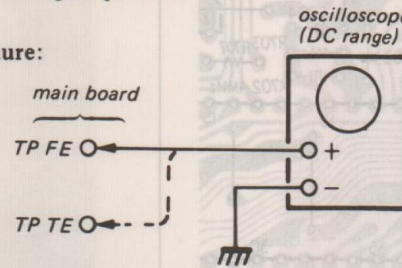
Symptoms	Gain	Focus	Tracking
• The time until music starts becomes longer for STOP →▷PLAY or automatic selection (◀▶ buttons pressed. (Normally takes about 2 seconds.)		low	low or high
• Music does not start and disc continues to rotate for STOP →▷PLAY or automatic selection (◀▶ buttons pressed.)		—	low
• Disc table opens shortly after STOP →▷PLAY.		low or high	—
• Sound is interrupted during PLAY. Or time counter display stops progressing.		—	low
• More poise during 2-axis device operation.		high	high

The following is a simple adjustment method.

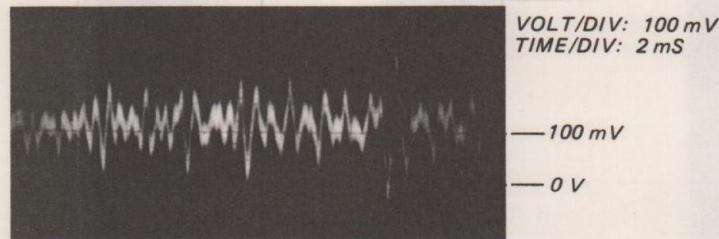
— Simple Adjustment —

Note: Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

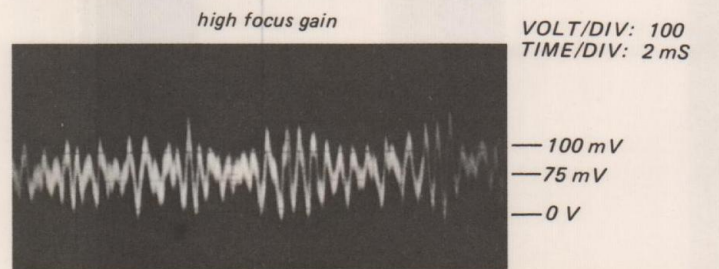
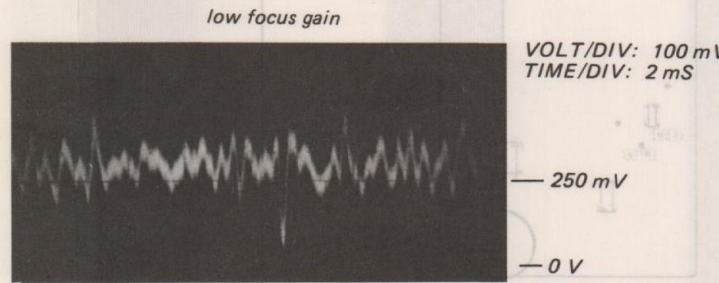
Procedure:



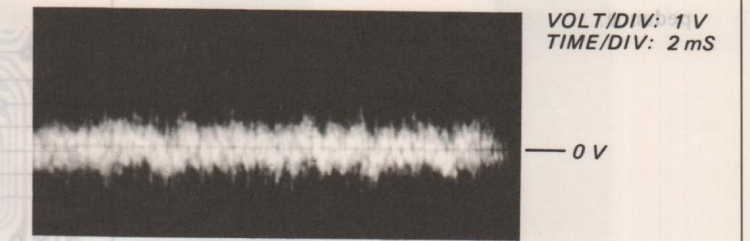
1. Keep the set horizontal. (If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.)
2. Insert disc (YEDS-1) and press ▷PLAY button.
3. Connect oscilloscope to main amp board TP FE.
4. Adjustment RV104 so that the waveform is as shown in the figure below. (focus gain adjustment)



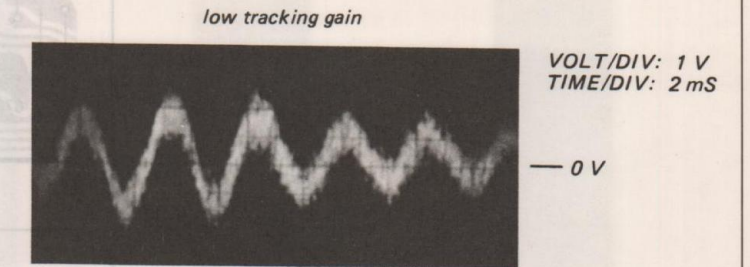
- Inconrrent Examples (DC level changes more than on adjusted waveform)



5. Connect oscilloscope to main board TP TE.
6. Adjust RV103 so that the waveform is as shown in the figure below. (tracking gain adjustment)



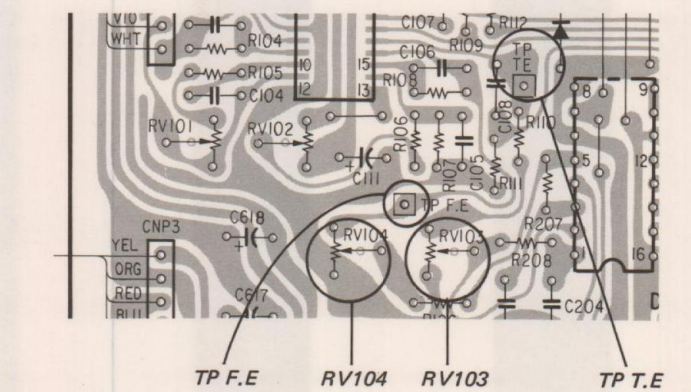
- Inconrrent Examples (fundamental wave appears)



- Inconrrent Examples (higher fundamental wave than for low gain)



Adjustment Location: main board



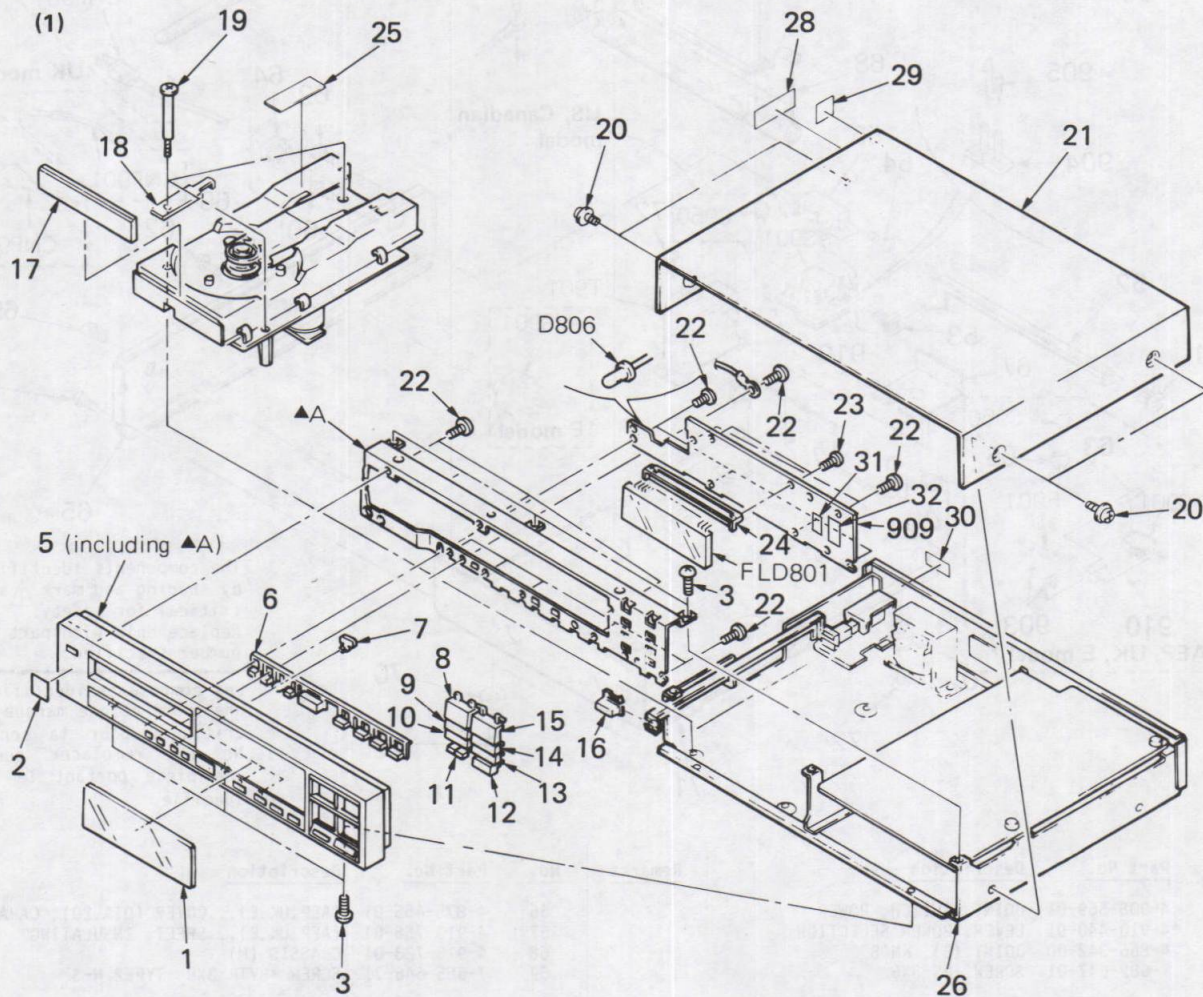
SECTION 5 EXPLODED VIEWS AND PARTS LIST

NOTE:

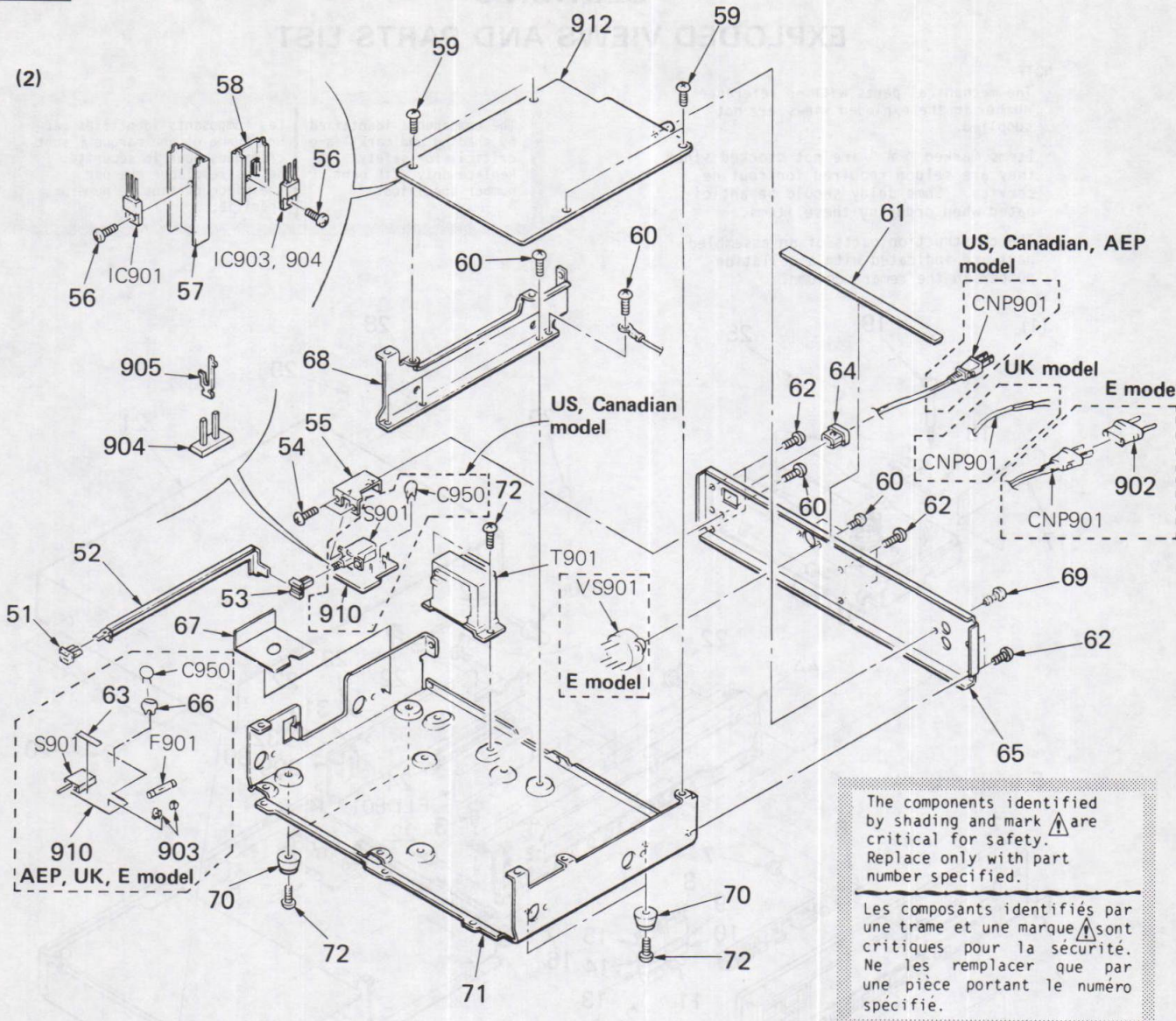
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



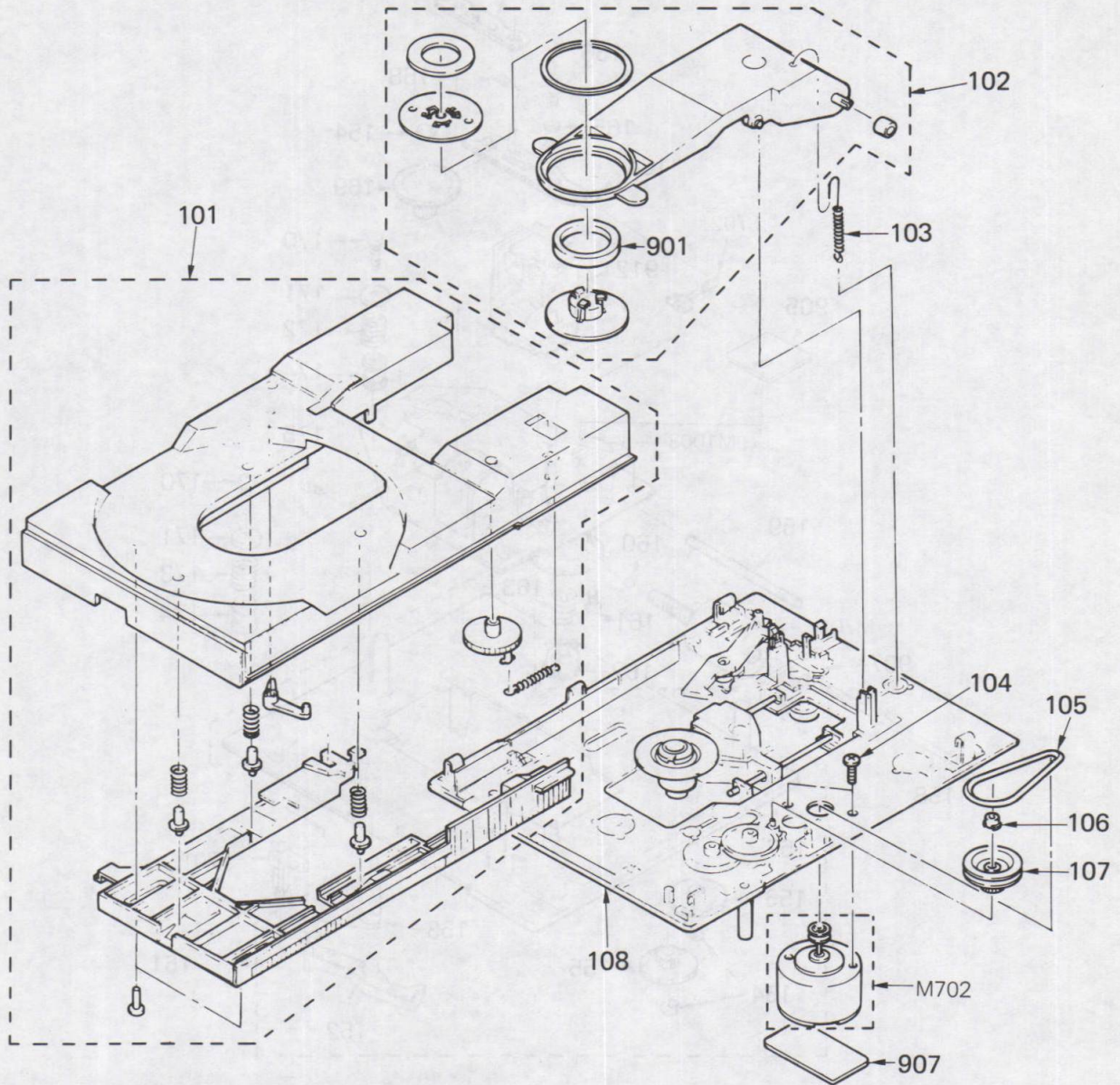
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-913-743-01	PLATE, INDICATION		14	4-913-738-01	(US,Canadian)BUTTON (RIGHT), AMS	
2	3-703-713-41	STICKER, SONY SYMBOL (10)		15	4-913-738-11	(AEP,UK,E)...BUTTON (RIGHT), AMS	
3	7-685-871-01	SCREW +BVT 3X6 (S)			4-913-736-01	(US,Canadian)BUTTON, PAUSE	
5	X-4913-706-1	(US).....PANEL ASSY, FRONT			4-913-736-11	(AEP,UK,E)...BUTTON, PAUSE	
	X-4913-707-1	(AEP,UK,E)...PANEL ASSY, FRONT		16	4-907-611-01	KNOB, POWER	
6	4-913-745-01	BUTTON, REPEAT		17	X-4913-704-1	PANEL ASSY (BLACK), ROADING	
7	4-913-734-01	INDICATE LENS		18	4-913-752-01	SPRING	
8	4-913-735-01	(US,Canadian)BUTTON, PLAY		19	4-910-416-01	SCREW, FITTING, LOADING CHASSIS	
	4-913-735-11	(AEP,UK,E)...BUTTON, PLAY		20	4-886-821-01	SCREW, M3 CASE	
9	4-913-737-01	(US,Canadian)BUTTON (LEFT), AMS		21	4-913-728-01	CASE	
	4-913-737-11	(AEP,UK,E)...BUTTON (LEFT), AMS		22	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
10	4-913-739-01	(US,Canadian)BUTTON (L), FB		23	7-685-132-11	SCREW +P 2.6X5 TYPE2 NON-SLIT	
	4-913-739-11	(AEP,UK,E)...BUTTON (L), FB		24	*4-913-715-01	RETAINER, INDICATION TUBE	
11	4-913-742-01	(US,Canadian)BUTTON, INDEX		25	4-885-843-02	(AEP,UK,E)...LABEL, CAUTION, LASER	
	4-913-742-11	(AEP,UK,E)...BUTTON, INDEX		26	*4-913-727-01	CHASSIS, MAIN	
12	4-913-741-01	(US,Canadian)BUTTON, STOP		27	3-655-122-00	TIRE, S BRAKE	
	4-913-741-11	(AEP,UK,E)...BUTTON, STOP		28	3-703-079-21	(UK)...LABEL, CAUTION (BACK)	
13	4-913-740-01	(US,Canadian)BUTTON (R), FF		29	3-703-680-00	(US)...LABEL, CAUTION, SUB, NEW UL	
	4-913-740-11	(AEP,UK,E)...BUTTON (R), FF		30	4-885-838-00	(AEP,UK,E)...LABEL, CLASS 1	
				31	4-913-782-01	CAUTION (2), BUTTON	
				32	4-913-782-11	CAUTION (1), BUTTON	
				*1-618-478-11	PC BOARD, DISPLAY		



No.	Part No.	Description	Remarks
51	4-908-569-01	JOINT, SWITCH, POWER	
52	*4-910-440-01	LEVER, POWER SELECTION	
53	4-866-342-00	JOINT (B), KNOB	
54	7-682-647-01	SCREW +PS 3X6	
55	*4-913-712-01	BRACKET, POWER SWITCH	
56	2-259-121-00	SCREW, TR	
57	*4-880-403-11	HEAT SINK	
58	*3-309-144-01	HEAT SINK	
59	4-911-049-01	SCREW (3X8)	
60	7-685-871-01	SCREW +BVTT 3X6 (S)	
61	3-831-441-XX	FELT, PANEL	
62	7-685-872-01	SCREW BVTT 3X8 (S)	
63	*3-701-948-13 *3-701-948-15	(AEP,UK)...LABEL, FUSE (E).....LABEL, FUSE	
64	3-703-244-00 3-703-571-11	(AEP,UK)...BUSHING (2104), CORD (US,E,Canadian)..BUSHING (S)(4516), CORD	
65	4-913-702-11 4-913-702-21 4-913-702-31 4-913-702-41 4-913-702-51	(US)...PLATE, JACK (AEP)...PLATE, JACK (E)....PLATE, JACK (Canadian)... PLATE, JACK (UK)...PLATE, JACK	
66	4-875-455-01	(AEP,UK,E)...COVER (DIA.20), CAPACITOR	
67	4-913-756-01	(AEP,UK,E)...SHEET, INSULATING	
68	4-913-723-01	CHASSIS (M)	
69	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	

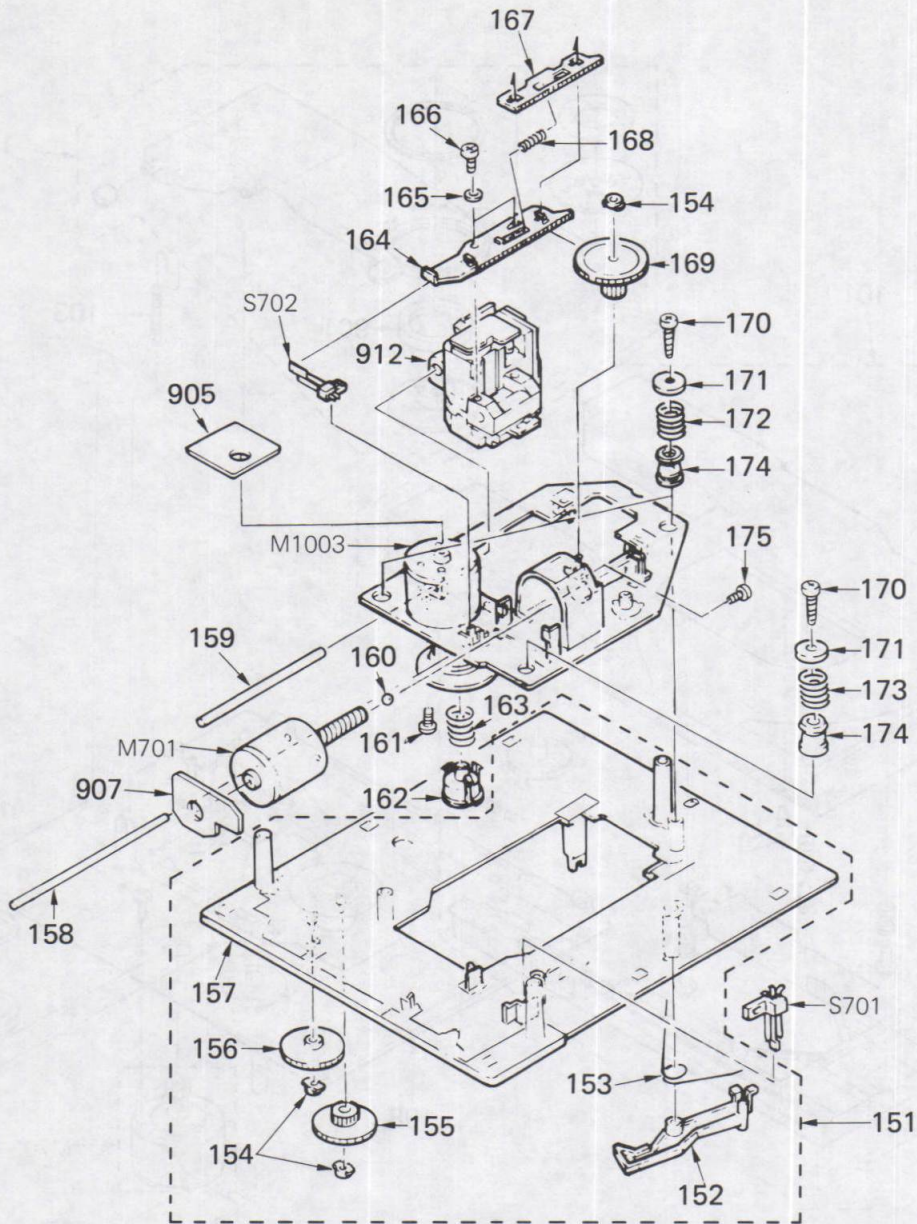
No.	Part No.	Description	Remarks
66	4-875-455-01	(AEP,UK,E)...COVER (DIA.20), CAPACITOR	
67	4-913-756-01	(AEP,UK,E)...SHEET, INSULATING	
68	4-913-723-01	CHASSIS (M)	
69	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
70	3-701-191-99	FOOT ASSY, MINI	
71	*4-913-727-01	CHASSIS, MAIN	
72	7-685-880-01	SCREW +BVTT 4X6 (S)	
902	1-526-565-11	(E)...AC PLUG ADAPTOR	
903	1-533-183-11	(AEP,UK,E)...HOLDER, FUSE	
904	*1-535-139-00	BASE POST 19MM (10MM PITCH) 2P	
905	1-535-416-00	TERMINAL	
910	*1-618-479-11	PC BOARD, POWER SW	
912	*A-4651-068-A	MOUNTED PCB, MAIN	
	⚠CNP901.1-551-472-11	(E).....CORD, POWER	
	⚠CNP901.1-551-908-11	(AEP).....CORD, POWER, EURO PLUG	
	⚠CNP901.1-556-562-11	(UK).....CORD, POWER	
	⚠CNP901.1-557-579-11	(US,Canadian)..CORD, POWER	
	F901 ⚠.1-532-286-11	FUSE, TIME-LAG (2.5A)	
	T901 ⚠.1-448-448-11	(US,Canadian)..TRANSFORMER, POWER	
	T901 ⚠.1-448-449-11	(AEP,UK)... .TRANSFORMER, POWER	
	T901 ⚠.1-448-450-11	(E)..... .TRANSFORMER, POWER	
	⚠VS901 .1-526-576-11	(E).....SELECTOR, POWER VOLTAGE	

(3)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	X-4910-410-4	TABEL ASSY, DISK		107	4-913-731-01	PULLEY, ROADING	
102	A-4604-149-A	ARM ASSY, CHUCKING		108	*X-4910-405-1	CHASSIS ASSY, LOADING	
103	4-913-729-01	SPRING, TENSION		901	1-452-340-11	MAGNET	
104	7-621-775-10	SCREW +B 2.6X4		907	*1-618-387-11	PC BOARD, LOADING	
105	3-653-387-00	BELT, LM		M702	A-4608-320-A	MOTOR ASSY, L	
106	4-910-418-01	BUSHING (DIA. 4)					

(4)



The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	*X-4910-405-1	CHASSIS ASSY, LOADING		166	7-621-775-20	SCREW +P 2.6X5	
152	*4-910-434-01	LEVER, LOCK		167	4-910-442-01	RACK (B)	
153	4-910-412-01	SPRING		168	4-910-462-01	SPRING, COMPRESSION (RACK)	
154	4-910-418-01	BUSHING (DIA. 4)		169	4-910-432-02	GEAR, SLED	
155	4-910-402-01	GEAR (2), LOADING		170	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
156	4-910-403-01	GEAR (3), LOADING		171	4-910-414-01	RETAINER, SPRING	
157	*4-912-902-01	CHASSIS (OUTSERT), LOADING		172	4-910-423-01	SPRING (FLOATING A), COMPRESSION	
158	*4-910-431-11	SHAFT, SLIDE		173	4-910-463-01	SPRING (FLOATING B), COMPRESSION	
159	*4-910-431-01	SHAFT, SLIDE		174	4-910-498-01	RUBBER, FLOATING	
160	7-671-112-11	BALL, STEEL		175	7-621-775-15	SCREW +B 2.6X4	
161	7-621-255-35	SCREW +P 2X5		906	*1-618-386-11	PC BOARD, SPINDLE	
162	4-911-694-01	CAP, CENTERING		908	*1-618-388-11	PC BOARD, SLED	
163	4-910-427-01	SPRING, COMPRESSION		911	Δ 8-848-035-01	PICKUP, OPTICS (KSS-120C)	
164	4-910-425-01	RACK (A)		M701	A-4608-308-A	MOTOR ASSY, SELD	
165	7-688-002-01	W 2.6 SMALL		M1003	X-4910-411-4	MOTOR ASSY, SPINDLE	

SECTION 6

ELECTRICAL PARTS LIST

NOTE

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable


COILS


• MMH : mH, UH : μH

SEMICONDUCTORS


In each case, U : μ, for example:

 UA...: μA..., UPA...: μPA..., UPC...: μPC,
 UPD...: μPD...

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	1-452-340-11	MAGNET
902	1-526-565-11	(E)...AC PLUG ADAPTOR
903	1-533-183-11	(AEP,UK,E)...HOLDER, FUSE
904	*1-535-139-00	BASE POST 19MM (10MM PITCH) 2P
905	1-535-416-00	TERMINAL
906	*1-618-386-11	PC BOARD, SPINDLE
907	*1-618-387-11	PC BOARD, LOADING
908	*1-618-388-11	PC BOARD, SLED
909	*1-618-478-11	PC BOARD, DISPLAY
910	*1-618-479-11	PC BOARD, POWER SW
911	 A-8-848-035-01	PICKUP, OPTICS (KSS-120C)
912	*A-4651-068-A	MOUNTED PCB, MAIN
C101	1-123-343-00	ELECT 33MF 20% 25V
C102	1-162-600-00	CERAMIC 0.0047MF 10% 16V
C103	1-162-205-31	CERAMIC 18PF 5% 50V
C104	1-162-205-31	CERAMIC 18PF 5% 50V
C105	1-162-282-31	CERAMIC 100PF 10% 50V
C106	1-162-282-31	CERAMIC 100PF 10% 50V
C107	1-130-489-00	MYLAR 0.033MF 5% 50V
C108	1-162-302-31	CERAMIC 0.0022MF 20% 16V
C109	1-162-306-31	CERAMIC 0.01MF 20% 16V
C110	1-123-379-00	ELECT 0.47MF 20% 50V
C111	1-123-332-00	ELECT 47MF 20% 16V
C112	1-124-443-00	ELECT 100MF 20% 10V
C113	1-124-443-00	ELECT 100MF 20% 10V
C114	1-123-332-00	ELECT 47MF 20% 16V
C115	1-162-294-31	CERAMIC 0.001MF 10% 50V
C201	1-130-489-00	MYLAR 0.033MF 5% 50V
C202	1-130-483-00	MYLAR 0.01MF 5% 50V
C203	1-136-165-00	FILM 0.1MF 5% 50V
C204	1-136-173-00	FILM 0.47MF 5% 50V
C205	1-136-173-00	FILM 0.47MF 5% 50V
C206	1-162-286-31	CERAMIC 220PF 10% 50V
C208	1-102-647-00	CERAMIC 39PF 5% 50V
C209	1-102-658-00	CERAMIC 180PF 5% 50V
C210	1-102-725-00	CERAMIC 36PF 5% 50V
C211	1-162-302-31	CERAMIC 0.0022MF 20% 16V
C212	1-162-302-31	CERAMIC 0.0022MF 20% 16V
C214	1-130-483-00	MYLAR 0.01MF 5% 50V
C215	1-123-356-00	ELECT 10MF 20% 50V
C216	1-123-369-00	ELECT 4.7MF 20% 50V
C217	1-123-343-00	ELECT 33MF 20% 25V
C218	1-123-343-00	ELECT 33MF 20% 25V
C219	1-161-974-00	CERAMIC 0.1MF 20% 16V
C220	1-162-282-31	CERAMIC 100PF 10% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C301	1-124-444-00	ELECT 220MF 20% 10V
C302	1-130-483-00	MYLAR 0.01MF 5% 50V
C303	1-124-472-11	ELECT 470MF 20% 10V
C304	1-123-321-00	ELECT 220MF 20% 16V
C305	1-123-321-00	ELECT 220MF 20% 16V
C306	1-124-472-11	ELECT 470MF 20% 10V
C307	1-104-233-00	POLYSTYRENE 220PF 5% 125V
C308	1-104-233-00	POLYSTYRENE 220PF 5% 125V
C309	1-123-318-00	ELECT 33MF 20% 16V
C311	1-123-318-00	ELECT 33MF 20% 16V
C401	1-130-289-00	FILM 0.0047MF 5% 100V
C402	1-104-235-00	POLYSTYRENE 820PF 5% 125V
C403	1-104-235-00	POLYSTYRENE 820PF 5% 125V
C404	1-123-318-00	ELECT 33MF 20% 16V
C405	1-123-356-00	ELECT 10MF 20% 50V
C406	1-162-291-31	CERAMIC 560PF 10% 50V
C408	1-162-306-31	CERAMIC 0.01MF 20% 16V
C456	1-162-291-31	CERAMIC 560PF 10% 50V
C501	1-123-380-00	ELECT 1MF 20% 50V
C502	1-136-165-00	FILM 0.1MF 5% 50V
C503	1-130-481-00	MYLAR 0.0068MF 5% 50V
C504	1-136-165-00	FILM 0.1MF 5% 50V
C505	1-136-169-00	FILM 0.22MF 5% 50V
C506	1-162-290-31	CERAMIC 470PF 10% 50V
C601	1-124-443-00	ELECT 100MF 20% 10V
C603	1-123-332-00	ELECT 47MF 20% 16V
C604	1-162-294-31	CERAMIC 0.001MF 10% 50V
C605	1-136-169-00	FILM 0.22MF 5% 50V
C606	1-130-489-00	MYLAR 0.033MF 5% 50V
C607	1-162-294-31	CERAMIC 0.001MF 10% 50V
C608	1-136-161-00	FILM 0.047MF 5% 50V
C609	1-124-183-00	ELECT 2.2MF 20% 50V
C610	1-124-184-00	ELECT (NONPOLAR) 3.3MF 20% 50V
C611	1-136-169-00	FILM 0.22MF 5% 50V
C612	1-162-294-31	CERAMIC 0.001MF 10% 50V
C613	1-162-294-31	CERAMIC 0.001MF 10% 50V
C614	1-130-487-00	MYLAR 0.022MF 5% 50V
C615	1-130-475-00	MYLAR 0.0022MF 5% 50V
C616	1-162-291-31	CERAMIC 560PF 10% 50V
C617	1-124-445-00	ELECT 100MF 20% 16V
C618	1-124-445-00	ELECT 100MF 20% 16V
C619	1-162-302-31	CERAMIC 0.0022MF 20% 16V
C620	1-123-356-00	ELECT 10MF 20% 50V
C621	1-162-302-31	CERAMIC 0.0022MF 20% 16V
C622	1-130-489-00	MYLAR 0.033MF 5% 50V

SECTION 6
ELECTRICAL PARTS LIST

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C623	1-136-165-00	FILM	0.1MF	5%	50V
C624	1-136-169-00	FILM	0.22MF	5%	50V
C625	1-162-290-31	CERAMIC	470PF	10%	50V
C626	1-162-302-31	CERAMIC	0.0022MF	20%	16V
C702	1-123-343-00	ELECT	33MF	20%	25V
C703	1-162-210-31	CERAMIC	30PF	5%	50V
C704	1-162-210-31	CERAMIC	30PF	5%	50V
C705	1-162-596-00	CERAMIC	0.022MF		25V
C706	1-162-213-31	CERAMIC	39PF	5%	50V
C707	1-162-213-31	CERAMIC	39PF	5%	50V
C708	1-124-444-00	ELECT	220MF	20%	10V
C709	1-123-318-00	ELECT	33MF	20%	16V
C711	1-161-974-00	CERAMIC	0.1MF	20%	16V
C713	1-161-974-00	CERAMIC	0.1MF	20%	16V
C808	1-162-596-00	CERAMIC	0.022MF		25V
C809	1-162-596-00	CERAMIC	0.022MF		25V
C810	1-162-211-31	CERAMIC	33PF	5%	50V
C811	1-162-211-31	CERAMIC	33PF	5%	50V
C813	1-162-294-31	CERAMIC	0.001MF	10%	50V
C815	1-162-282-31	CERAMIC	100PF	10%	50V
C901	1-123-325-00	ELECT	2200MF	20%	16V
C902	1-123-325-00	ELECT	2200MF	20%	16V
C903	1-124-471-00	ELECT	1000MF	20%	6.3V
C904	1-124-471-00	ELECT	1000MF	20%	6.3V
C905	1-123-356-00	ELECT	10MF	20%	50V
C906	1-123-356-00	ELECT	10MF	20%	50V
C907	1-124-475-11	ELECT	470MF	20%	16V
C908	1-123-338-00	ELECT	2200MF	20%	25V
C909	1-123-338-00	ELECT	2200MF	20%	25V
C910	1-124-475-11	ELECT	470MF	20%	16V
C911	1-124-555-00	ELECT	1000MF	20%	16V
C912	1-124-122-11	ELECT	100MF	20%	50V
C913	1-124-121-00	ELECT	100MF	20%	35V
C914	1-124-479-11	ELECT	330MF	20%	25V
C915	1-130-789-00	FILM	1MF	10%	100V
C916	1-130-483-00	MYLAR	0.01MF	5%	50V
C950	1-161-744-00	CERAMIC	0.01MF		400V
C1001	1-124-270-11	ELECT(NONPOLAR)	0.47MF	20%	50V
C1002	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C1003	1-102-121-00	CERAMIC	0.0022MF	10%	50V
CNJ401	1-562-830-11	JACK, PIN 2P (LINE OUT)			
CNP1	*1-564-521-31	PLUG, CONNECTOR 6P			
CNP2	1-564-519-41	PLUG, CONNECTOR 4P			
CNP3	*1-564-520-11	PLUG, CONNECTOR 5P			
CNP4	1-564-523-41	PLUG, CONNECTOR 8P			
CNP6	*1-564-519-11	PLUG, CONNECTOR 4P			
CNP7	*1-564-339-00	PIN, CONNECTOR 5P			
CNP9	*1-506-503-11	PIN, CONNECTOR 9P			
CNP10	*1-564-369-11	BASE POST (U TYPE)			
△CNP901.1	1-551-472-11	(E)....CORD, POWER			
△CNP901.1	1-551-908-11	(AEP)...CORD, POWER, EURO PLUG			
△CNP901.1	1-556-562-11	(UK)....CORD, POWER			
△CNP901.1	1-557-579-11	(US,Canadian)....CORD, POWER			
CP802	1-232-992-11	COMPOSITION CIRCUIT BLOCK			
CP804	1-232-967-11	COMPOSITION CIRCUIT BLOCK			
CP807	1-232-992-11	COMPOSITION CIRCUIT BLOCK			
D101	8-719-911-19	DIODE 1SS119			
D201	8-719-911-06	DIODE 1SS106			
D202	8-719-911-06	DIODE 1SS106			

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
D203	8-719-911-06	DIODE 1SS106			
D204	8-719-928-03	DIODE KV1260M			
D205	8-719-911-19	DIODE 1SS119			
D301	8-719-951-13	DIODE HZ5CLL			
D302	8-719-951-13	DIODE HZ5CLL			
D601	8-719-951-13	DIODE HZ5CLL			
D801	8-719-301-35	DIODE SEL4410E-C			
D802	8-719-301-35	DIODE SEL4410E-C			
D804	8-719-302-13	DIODE SEL4910A-C			
D805	8-719-302-13	DIODE SEL4910A-C			
D806	8-719-301-35	DIODE SEL4410E-C			
D810	8-719-911-19	DIODE 1SS119			
D814	8-719-911-19	DIODE 1SS119			
D815	8-719-911-19	DIODE 1SS119			
D901	8-719-937-50	DIODE DF02M			
D902	8-719-911-19	DIODE 1SS119			
D903	8-719-911-19	DIODE 1SS119			
D904	8-719-911-19	DIODE 1SS119			
D905	8-719-911-19	DIODE 1SS119			
D906	8-719-143-07	DIODE RD4.3E-B			
D907	8-719-200-02	DIODE 10E2			
D908	8-719-200-02	DIODE 10E2			
D909	8-719-200-02	DIODE 10E2			
D910	8-719-200-02	DIODE 10E2			
D911	8-719-200-23	DIODE 11E2			
D912	8-719-200-23	DIODE 11E2			
D913	8-719-124-07	DIODE RD24E-B			
D914	8-719-910-64	DIODE HZ6B1L			
D915	8-719-911-19	DIODE 1SS119			
F901	△.1-532-286-11	FUSE, TIME-LAG (2.5A)			
FLD801	1-519-383-11	INDICATOR TUBE, FLUORESCENT			
IC101	8-752-010-90	IC CX20109			
IC102	8-759-600-02	IC M5218L			
IC201	8-759-340-53	IC HD14053BP			
IC202	8-759-990-82	IC TL082CP			
IC203	8-759-990-82	IC TL082CP			
IC301	8-759-924-26	IC PCM54JP			
IC302	8-759-340-53	IC HD14053BP			
IC303	8-759-990-82	IC TL082CP			
IC401	8-759-900-72	IC NE5532P			
IC601	8-752-010-80	IC CX20108			
IC602	8-759-202-01	IC TA7256P			
IC701	8-759-912-52	IC CX23035			
IC702	8-759-924-82	IC MSM6404A-120RS			
IC703	8-759-001-05	IC MC74HCU04N			
IC704	8-759-302-72	IC HM6116LFP-3			
IC803	8-759-303-40	IC HD614042SD62			
IC901	8-759-170-05	IC UPC78M05H			
IC902	8-759-105-38	IC UPC79M05H			
IC903	8-759-170-12	IC UPC78M12H			
IC904	8-759-105-40	IC UPC79M12H			
L201	1-426-212-11	COIL (RF)			
L602	1-408-117-00	MICRO INDUCTOR 10UH			
L802	1-410-328-11	MICRO INDUCTOR 10UH			

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
LPF401	1-464-619-11	FILTER UNIT, LOW PASS
LPF451	1-464-619-11	FILTER UNIT, LOW PASS
M701	A-4608-308-A	MOTOR ASSY, SELD
M702	A-4608-320-A	MOTOR ASSY, L
M1003	X-4910-411-4	MOTOR ASSY, SPINDLE
PS901 [▲]	1-532-679-00	LINK, IC (N-15)
PS902 [▲]	1-532-679-00	LINK, IC (N-15)
Q101	8-729-117-54	TRANSISTOR 2SA1175
Q102	8-729-206-43	TRANSISTOR 2SA1426Y
Q201	8-729-900-00	TRANSISTOR DTC114ES
Q401	8-729-107-99	TRANSISTOR 2SC3622A-K
Q402	8-729-107-99	TRANSISTOR 2SC3622A-K
Q451	8-729-107-99	TRANSISTOR 2SC3622A-K
Q452	8-729-107-99	TRANSISTOR 2SC3622A-K
Q603	8-729-206-49	TRANSISTOR 2SC3666Y
Q604	8-729-206-43	TRANSISTOR 2SA1426Y
Q605	8-729-206-49	TRANSISTOR 2SC3666Y
Q606	8-729-206-43	TRANSISTOR 2SA1426Y
Q607	8-729-206-49	TRANSISTOR 2SC3666Y
Q608	8-729-206-43	TRANSISTOR 2SA1426Y
Q609	8-729-107-99	TRANSISTOR 2SC3622A-K
Q610	8-729-900-65	TRANSISTOR DTA144ES
Q703	8-729-900-65	TRANSISTOR DTA144ES
Q704	8-729-900-65	TRANSISTOR DTA144ES
Q803	8-729-900-37	TRANSISTOR DTC124EF
Q806	8-729-900-45	TRANSISTOR DTC114EF
Q811	8-729-900-45	TRANSISTOR DTC114EF
Q812	8-729-900-45	TRANSISTOR DTC114EF
Q901	8-729-205-94	TRANSISTOR 2SA14280-F2
R101	1-247-831-00	CARBON 1K 5% 1/6W
R102	1-249-429-11	CARBON 10K 5% 1/6W
R103	1-249-432-11	CARBON 18K 5% 1/6W
R104	1-247-893-00	CARBON 390K 5% 1/6W
R105	1-247-883-00	CARBON 150K 5% 1/6W
R106	1-247-897-00	CARBON 560K 5% 1/6W
R107	1-247-883-00	CARBON 150K 5% 1/6W
R108	1-247-881-00	CARBON 120K 5% 1/6W
R109	1-249-429-11	CARBON 10K 5% 1/6W
R110	1-249-433-11	CARBON 22K 5% 1/6W
R111	1-247-867-00	CARBON 33K 5% 1/6W
R112	1-249-429-11	CARBON 10K 5% 1/6W
R113	1-247-879-00	CARBON 100K 5% 1/6W
R114	1-249-429-11	CARBON 10K 5% 1/6W
R115	1-215-415-81	METAL 560 1% 1/6W
R116	1-215-429-00	METAL 2.2K 1% 1/6W
R118	1-247-845-00	CARBON 3.9K 5% 1/6W
R119	1-247-831-00	CARBON 1K 5% 1/6W
R120	1-215-435-81	METAL 3.9K 1% 1/6W
R121	1-215-445-00	METAL 10K 1% 1/6W
R122	1-247-873-00	CARBON 56K 5% 1/6W
R123	1-247-831-00	CARBON 1K 5% 1/6W
R124	1-214-092-00	METAL 22 1% 1/4W
R126	1-249-433-11	CARBON 22K 5% 1/6W
R201	1-247-879-00	CARBON 100K 5% 1/6W
R202	1-249-433-11	CARBON 22K 5% 1/6W
R203	1-247-903-00	CARBON 1M 5% 1/6W
R204	1-247-867-00	CARBON 33K 5% 1/6W
R205	1-247-895-00	CARBON 470K 5% 1/6W
R206	1-249-425-11	CARBON 4.7K 5% 1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R207	1-247-895-00	CARBON 470K 5% 1/6W
R208	1-247-895-00	CARBON 470K 5% 1/6W
R209	1-215-453-00	METAL 22K 1% 1/6W
R211	1-215-453-00	METAL 22K 1% 1/6W
R212	1-249-425-11	CARBON 4.7K 5% 1/6W
R213	1-247-879-00	CARBON 100K 5% 1/6W
R214	1-247-879-00	CARBON 100K 5% 1/6W
R215	1-247-879-00	CARBON 100K 5% 1/6W
R216	1-247-867-00	CARBON 33K 5% 1/6W
R217	1-247-852-00	CARBON 7.5K 5% 1/6W
R218	1-247-857-00	CARBON 12K 5% 1/6W
R219	1-247-841-00	CARBON 2.7K 5% 1/6W
R220	1-249-433-11	CARBON 22K 5% 1/6W
R221	1-249-429-11	CARBON 10K 5% 1/6W
R222	1-247-831-11	CARBON 1K 5% 1/6W
R301	1-247-717-11	CARBON 2.2K 5% 1/4W
R302	1-247-717-11	CARBON 2.2K 5% 1/4W
R303	1-247-725-11	CARBON 10K 5% 1/4W
R304	1-247-151-00	CARBON 6.8K 5% 1/4W
R305	1-247-151-00	CARBON 6.8K 5% 1/4W
R401	1-247-133-00	CARBON 1.2K 5% 1/4W
R402	1-246-543-00	CARBON 820K 5% 1/4W
R403	1-249-459-11	CARBON 12K 5% 1/4W
R404	1-247-149-00	CARBON 5.6K 5% 1/4W
R405	1-247-717-11	CARBON 2.2K 5% 1/4W
R406	1-247-167-00	CARBON 33K 5% 1/4W
R407	1-247-129-00	CARBON 820 5% 1/4W
R409	1-247-831-00	CARBON 1K 5% 1/6W
R417	1-249-425-11	CARBON 4.7K 5% 1/6W
R418	1-247-879-00	CARBON 100K 5% 1/6W
R467	1-249-425-11	CARBON 4.7K 5% 1/6W
R468	1-247-879-00	CARBON 100K 5% 1/6W
R501	1-215-441-00	METAL 6.8K 1% 1/6W
R502	1-247-856-00	CARBON 11K 5% 1/6W
R503	1-215-441-00	METAL 6.8K 1% 1/6W
R504	1-247-903-00	CARBON 1M 5% 1/6W
R505	1-247-856-00	CARBON 11K 5% 1/6W
R506	1-249-433-11	CARBON 22K 5% 1/6W
R507	1-215-453-00	METAL 22K 1% 1/6W
R508	1-215-449-00	METAL 15K 1% 1/6W
R509	1-247-843-00	CARBON 3.3K 5% 1/6W
R510	1-247-869-00	CARBON 39K 5% 1/6W
R511	1-247-887-00	CARBON 220K 5% 1/6W
R601	1-247-851-00	CARBON 6.8K 5% 1/6W
R602	1-247-864-00	CARBON 24K 5% 1/6W
R603	1-249-425-11	CARBON 4.7K 5% 1/6W
R604	1-249-425-11	CARBON 4.7K 5% 1/6W
R605	1-247-859-00	CARBON 15K 5% 1/6W
R606	1-249-429-11	CARBON 10K 5% 1/6W
R607	1-247-831-00	CARBON 1K 5% 1/6W
R608	1-247-851-00	CARBON 6.8K 5% 1/6W
R609	1-247-837-00	CARBON 1.8K 5% 1/6W
R610	1-247-879-00	CARBON 100K 5% 1/6W
R611	1-249-429-11	CARBON 10K 5% 1/6W
R612	1-249-437-11	CARBON 47K 5% 1/6W
R613	1-249-429-11	CARBON 10K 5% 1/6W
R614	1-247-878-00	CARBON 91K 5% 1/6W

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ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R615	1-249-440-11	CARBON	82K	5%	1/6W	
R616	1-249-440-11	CARBON	82K	5%	1/6W	
R617	1-247-878-00	CARBON	91K	5%	1/6W	
R618	1-247-903-00	CARBON	1M	5%	1/6W	
R619	1-247-831-00	CARBON	1K	5%	1/6W	
R620	1-247-869-00	CARBON	39K	5%	1/6W	
R621	1-247-807-00	CARBON	100	5%	1/6W	
R622	1-249-434-11	CARBON	27K	5%	1/6W	
R623	1-249-433-11	CARBON	22K	5%	1/6W	
R624	1-247-845-00	CARBON	3.9K	5%	1/6W	
R625	1-247-807-00	CARBON	100	5%	1/6W	
R626	1-247-873-00	CARBON	56K	5%	1/6W	
R627	1-249-425-11	CARBON	4.7K	5%	1/6W	
R628	1-247-819-00	CARBON	330	5%	1/6W	
R629	1-247-851-00	CARBON	6.8K	5%	1/6W	
R630	1-249-434-11	CARBON	27K	5%	1/6W	
R631	1-247-807-00	CARBON	100	5%	1/6W	
R632	1-247-851-00	CARBON	6.8K	5%	1/6W	
R633	1-247-879-00	CARBON	100K	5%	1/6W	
R634	1-247-849-00	CARBON	5.6K	5%	1/6W	
R640	1-247-889-00	CARBON	270K	5%	1/6W	
R641	1-249-433-11	CARBON	22K	5%	1/6W	
R703	1-247-903-00	CARBON	1M	5%	1/6W	
R704	1-249-429-11	CARBON	10K	5%	1/6W	
R705	1-249-421-11	CARBON	2.2K	5%	1/6W	
R706	1-249-421-11	CARBON	2.2K	5%	1/6W	
R707	1-249-437-11	CARBON	47K	5%	1/6W	
R708	1-247-891-00	CARBON	330K	5%	1/6W	
R710	1-249-429-11	CARBON	10K	5%	1/6W	
R808	1-249-433-11	CARBON	22K	5%	1/6W	
R809	1-247-903-00	CARBON	1M	5%	1/6W	
R813	1-247-819-00	CARBON	330	5%	1/6W	
R814	1-247-819-00	CARBON	330	5%	1/6W	
R815	1-247-819-00	CARBON	330	5%	1/6W	
R816	1-247-819-00	CARBON	330	5%	1/6W	
R817	1-247-819-00	CARBON	330	5%	1/6W	
R818	1-247-819-00	CARBON	330	5%	1/6W	
R819	1-247-879-00	CARBON	100K	5%	1/6W	
R820	1-247-879-00	CARBON	100K	5%	1/6W	
R821	1-247-879-00	CARBON	100K	5%	1/6W	
R822	1-249-433-11	CARBON	22K	5%	1/6W	
R823	1-249-433-11	CARBON	22K	5%	1/6W	
R824	1-249-433-11	CARBON	22K	5%	1/6W	
R901	1-247-831-00	CARBON	1K	5%	1/6W	
R902	1-247-879-00	CARBON	100K	5%	1/6W	
R903	1-247-799-00	CARBON	47	5%	1/6W	
R904	1-217-387-00	FUSIBLE	10	5%	1/4W F	
R905	1-247-831-00	CARBON	1K	5%	1/6W	
R906	1-249-421-11	CARBON	2.2K	5%	1/6W	
R907	1-249-429-11	CARBON	10K	5%	1/6W	
R908	1-217-391-00	FUSIBLE	22	5%	1/4W F	
RV101	1-228-999-00	RES. ADJ. CARBON 500K (EF BALANCE)				
RV102	1-230-600-11	RES. ADJ. CARBON 20K (FOCUS BIAS)				
RV103	1-230-503-11	RES. ADJ. CARBON 10K (TRACKING ERROR)				
RV104	1-230-600-11	RES. ADJ. CARBON 20K (FOCUS GAIN)				
RV201	1-228-991-00	RES. ADJ. CARBON 2K (PLL VOLTAGE)				

ELECTRICAL PARTS

Ref.No.	Part No.	Description
S701	1-570-203-11	SWITCH, LEAF (LOADING)
S702	1-570-202-11	SWITCH, LEAF (LIMIT)
S801	1-554-303-21	SWITCH, KEY BOARD (OPEN/CLOSE)
S802	1-554-303-21	SWITCH, KEY BOARD (SHUFFLE)
S803	1-554-303-21	SWITCH, KEY BOARD (PROGRAM)
S804	1-554-303-21	SWITCH, KEY BOARD (STOP)
S805	1-554-303-21	SWITCH, KEY BOARD (▶)
S806	1-554-303-21	SWITCH, KEY BOARD (◀)
S807	1-554-303-21	SWITCH, KEY BOARD (REPEAT)
S808	1-554-303-21	SWITCH, KEY BOARD (TIME)
S809	1-554-303-21	SWITCH, KEY BOARD (CLEAR)
S810	1-554-303-21	SWITCH, KEY BOARD (▶)
S811	1-554-303-21	SWITCH, KEY BOARD (▶▶)
S812	1-554-303-21	SWITCH, KEY BOARD (◀◀)
S813	1-554-303-21	SWITCH, KEY BOARD (A←→B)
S814	1-554-303-21	SWITCH, KEY BOARD (AUTO SPACE)
S815	1-554-303-21	SWITCH, KEY BOARD (CHECK)
S816	1-554-303-21	SWITCH, KEY BOARD (■)
S817	1-554-303-21	SWITCH, KEY BOARD (▶▶)
S818	1-554-303-21	SWITCH, KEY BOARD (◀◀)
S901	1-553-318-00	SWITCH, PUSH (AC POWER)(1 KEY)(POWER)
T901	1-448-448-11	(US,Canadian)..TRANSFORMER, POWER
T901	1-448-449-11	(AEP,UK).....TRANSFORMER, POWER
T901	1-448-450-11	(E).....TRANSFORMER, POWER
VS901	1-526-576-11	(E)....SELECTOR, POWER VOLTAGE
X701	1-567-301-11	OSCILLATOR, CRYSTAL (8.4672MHz)
X702	1-567-192-11	OSCILLATOR, CERAMIC (4MHz)
X802	1-567-192-11	OSCILLATOR, CERAMIC (4MHz)

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-558-543-11	CORD, CONNECTION
2-370-716-01	(US,AEP,UK,Canadian)..SHEET, PROTECTION
3-536-080-11	(E)....BAG, POLYETHYLENE
3-701-630-00	BAG, POLYETHYLENE
3-703-390-01	INSTRUCTION
3-703-834-01	LABEL, DISTRIBUTION
3-765-129-11	(AEP,UK,E)...MANUAL, INSTRUCTION
3-765-129-21	(US,Canadian)MANUAL, INSTRUCTION
3-765-129-31	(Canadian)...MANUAL, INSTRUCTION
3-765-129-41	(AEP).....MANUAL, INSTRUCTION
3-795-629-11	(AEP).....INSTRUCTION
4-913-749-12	(Canadian)...INDIVIDUAL CARTON
4-913-749-21	(US).....INDIVIDUAL CARTON
4-913-749-41	(AEP,UK,E)...INDIVIDUAL CARTON
4-913-750-01	CUSHION

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SONY

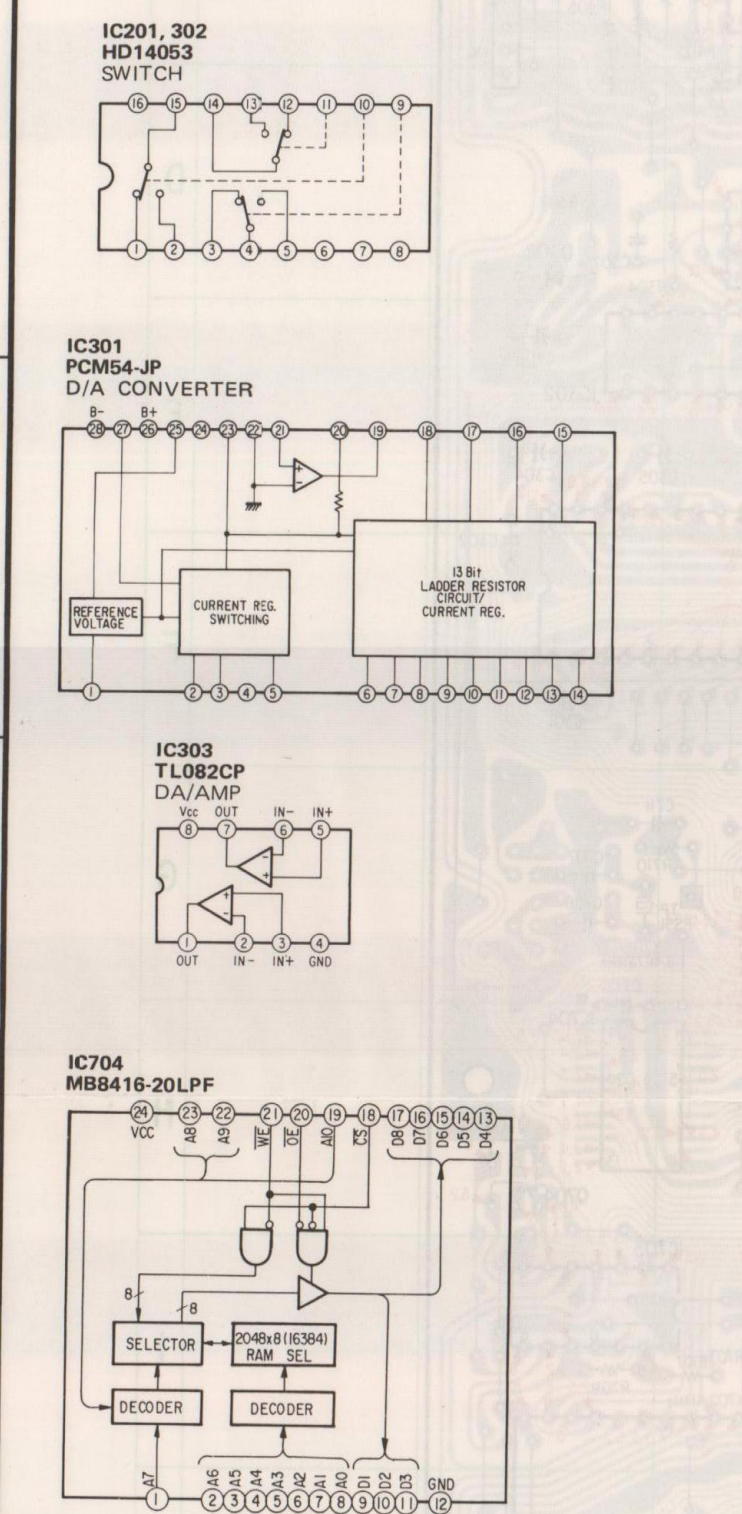
COMPACT DISC PLAYER CDP-35

US Model
Canadian Model
AEP Model
UK Model
E Model

SCHEMATIC DIAGRAM

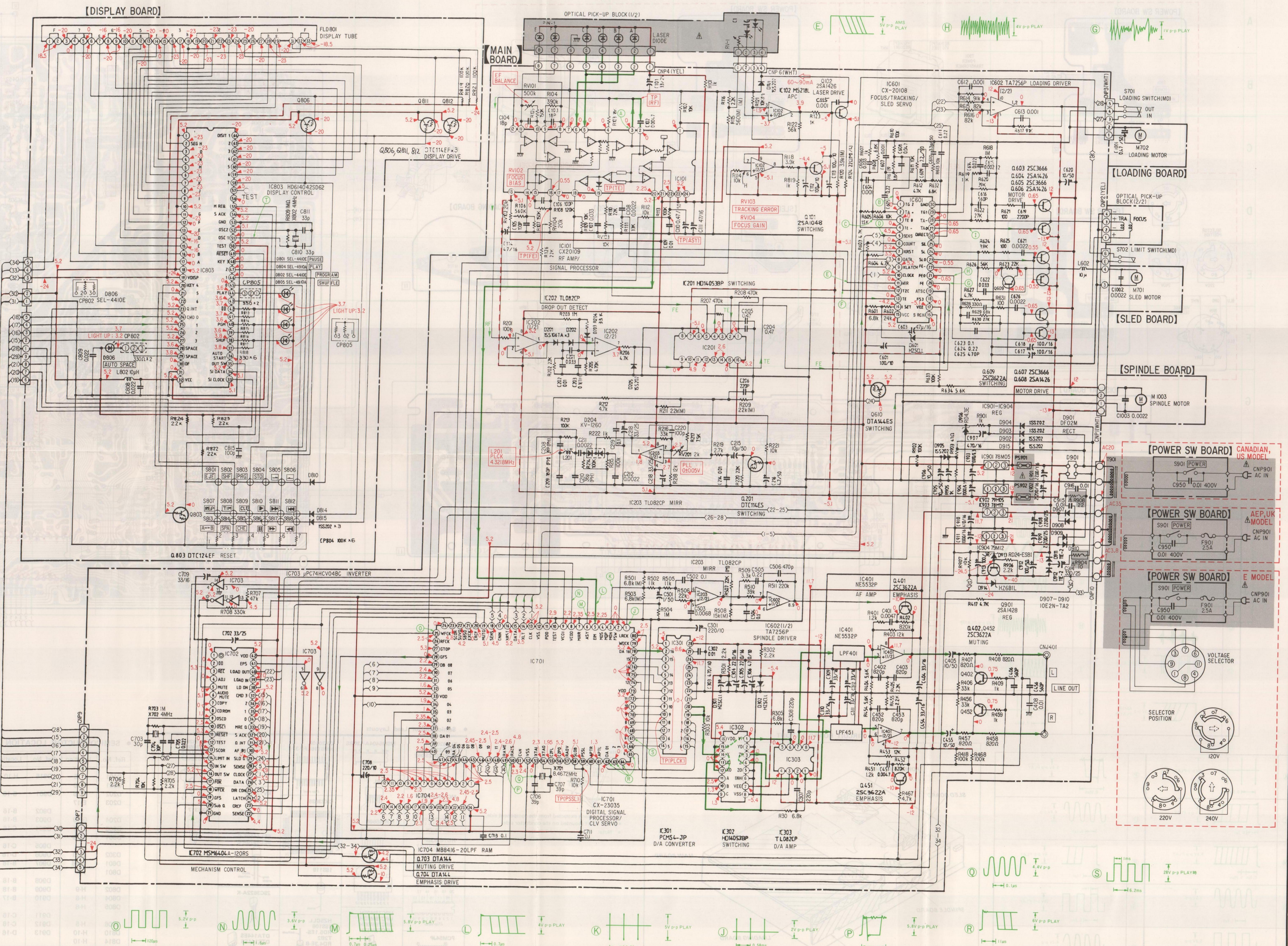
Note: The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

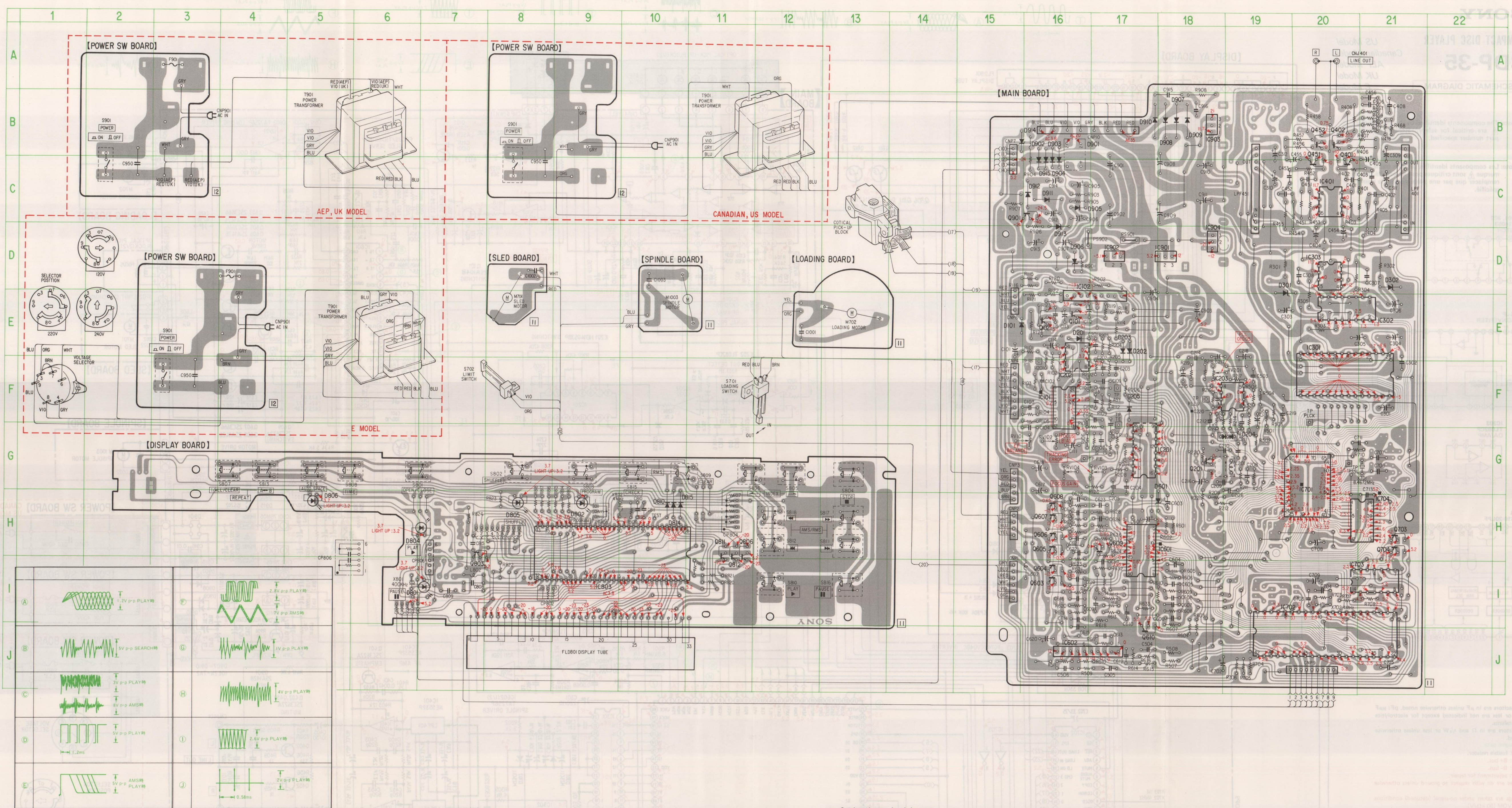
Note: Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



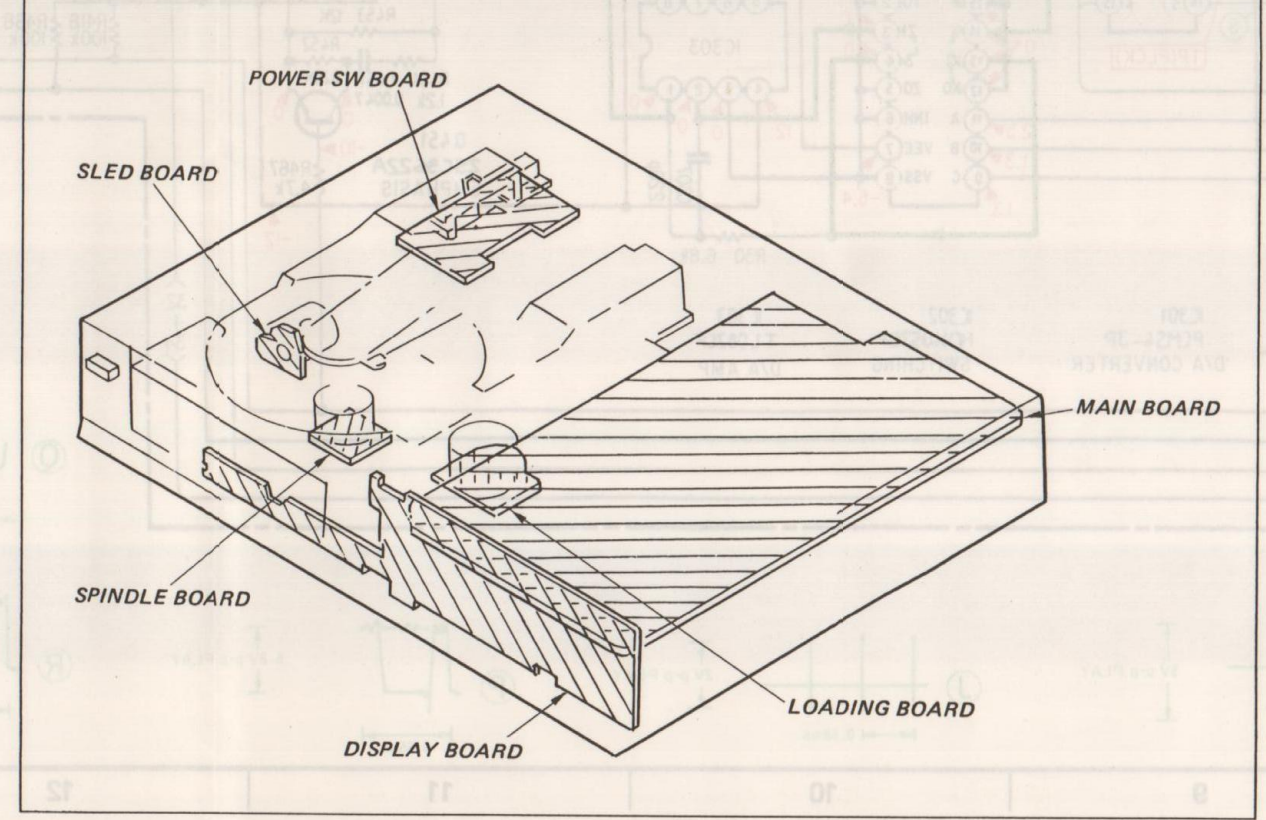
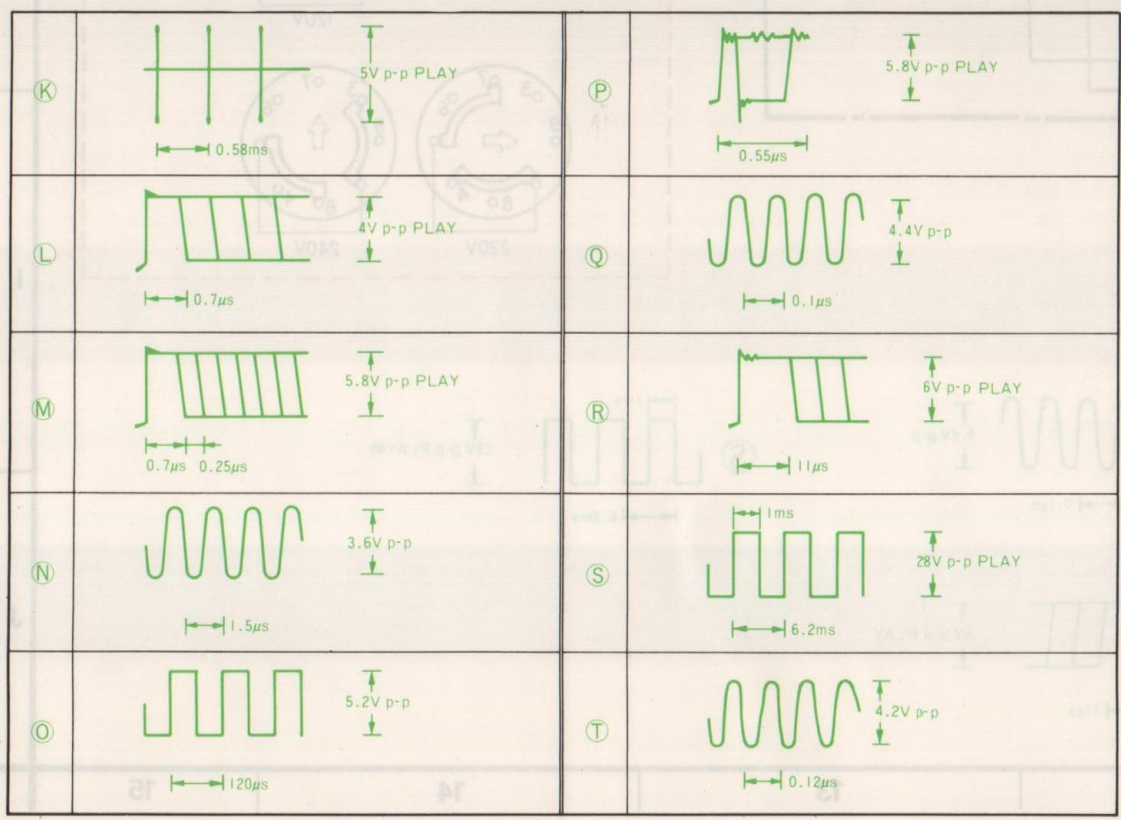
- Note:**
- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 - Signal path.
 - Fusible resistor.
 - B+ bus.
 - B- bus.
 - Adjustment for repair.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken under no-signal (detuned) conditions with a VOM (50 k Ω /V).
 - Voltage variations may be noted due to normal production tolerances.
 - Notes: Δ : Circled T.P. No's coincide with those in mounting and schematic diagrams.
 - Waveforms are taken to ground by using oscilloscope.
 - Switches

Ref. No.	Switch	Position
S701	LOADING	OFF
S702	LIMIT	OFF
S801	OPEN/CLOSE	0000
S802	SHUFFLE	1000
S803	MEMORY	OFF
S804	STOP	0000
S805	REPEAT	OFF
S806	TIME	OFF
S807	CLEAR	OFF
S808	SHUFFLE	OFF
S809	SHUFFLE	OFF
S810	SHUFFLE	OFF
S811	SHUFFLE	OFF
S812	A \leftrightarrow B	OFF
S813	SPACE	OFF
S814	SPACE	OFF
S815	CHECK	OFF
S816	II	OFF
S817	II	OFF
S818	II	OFF
S901	POWER	OFF





CIRCUIT BOARD LAYOUT



Note:
 • Color code of sleeving over the end of the jacket.

 • ○ : parts extracted from the component side.
 • ■ : part mounted on the conductor side.
 • Note: *A... : Circled T.P. No.'s coincide with those in mounting and schematic diagrams.

• Semiconductor Lead Layouts

TL082CP NE5532P HD614042SD62	MSM6404A-120RS M5218L	CX20109 HM6116LFP-3	DF02M KV1260M	2SA1426Y 2SC3866Y DTC114EF DTC124EF
MC74HCU04N	NJM4560S	CX2303S	SEL4410E-C SEL4910A-C	BX1317
HD14053BP	TA7256P	ISS119	2SC3622A-K	
MS0761-420P	UPC78M05H UPC78M12H UPC78M15H	HZ5CLL ISS106 T2B2 RD4.3E-B 10E2 11E2 RD24E-B HZ6B1L	DTA144ES DTC144ES	
PCM54JP				

• SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	E-15	D815	H-10	D914	B-15	IC704	H-21	Q605	H-16
D201	E-16	D901	B-16	D915	C-16	IC803	I-9	Q606	H-16
D203	E-17	D902	B-16	IC101	F-16	IC901	D-18	Q607	H-16
D204	G-19	D903	B-16	IC102	D-16	IC902	D-17	Q608	G-16
D205	F-17	D904	C-16	IC201	G-17	IC903	B-18	Q609	H-17
D301	D-19	D905	C-16	IC202	F-16	IC904	D-18	Q703	H-21
D302	D-21	D906	D-16	IC203	F-19	Q101	E-16	Q704	H-21
D601	H-18	D907	B-18	IC301	E-20	Q102	E-16	Q803	I-7
D801	I-6	D908	B-18	IC302	D-20	Q201	G-18	Q806	H-11
D802	H-9	D909	B-18	IC303	D-20	Q401	B-20	Q811	H-11
D804	H-6	D910	B-17	IC401	C-20	Q402	B-20	Q812	I-11
D805	H-8			IC601	H-17	Q451	B-20	Q901	C-15
D806	H-5			IC602	J-16	Q452	B-20		
D810	H-10			IC701	G-20	Q601	J17		
D814	H-10			IC702	I-19	Q603	I-16		
				IC703	I-21	Q604	I-16		

