

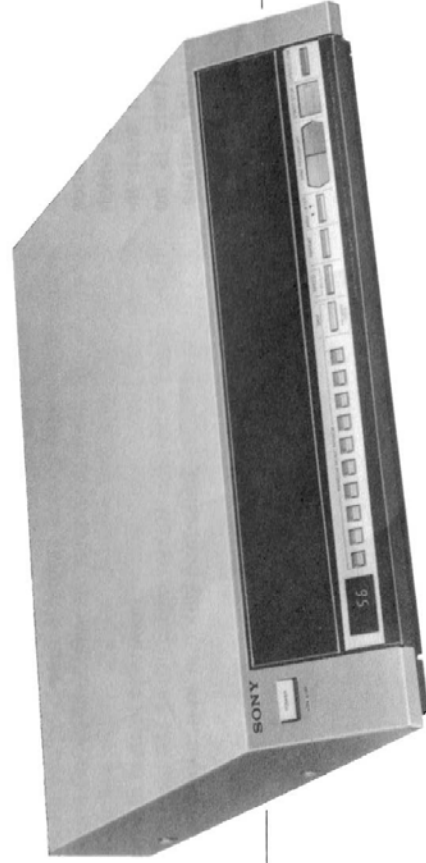
**SONY**<sup>®</sup>

STEREO TURNTABLE SYSTEM

# PS-FL9

## OPERATING INSTRUCTIONS

Before operating the unit, please read this manual thoroughly.  
This manual should be retained for future reference.



## OWNER'S RECORD


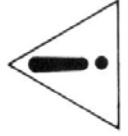
The model and serial numbers are located at the rear. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

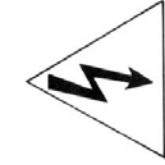
Model No. PS-FL9

Serial No.

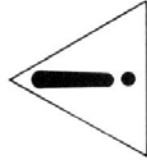
### **WARNING**

**To prevent fire or shock hazard, do not expose the unit to rain or moisture.**

	
<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
<b>CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</b>	



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### **INFORMATION**

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- Reorient the receiving antenna
- Relocate the equipment with respect to the receiver
- Move the equipment away from the receiver
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful :

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

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## FEATURES

### Unique modular turntable system

When you touch the OPEN/CLOSE button the turntable module will smoothly slide out. Other audio components can be positioned on top of the turntable cabinet.

### Servo-controlled linear tracking tonearm

Compared with a pivoted tonearm, a linear tracking arm has a very small tracking error (which means greatly reduced harmonic distortion) and almost no pressure on the inside wall of the groove (which means improved tracking ability and channel separation).

### Programmed play

The RMS (Random Music Sensor), AMS (Automatic Music Sensor) and skip functions allow you to program record play as you like. RMS: for playing the selections on one side of the record in a desired sequence.

AMS: for starting record play from the desired selection.

Skip function: for skipping selections to the desired selection.

### A microcomputer controls four motors

The movement of the turntable, the tonearm and the turntable module is controlled by a microcomputer. When you press the START/STOP button, the module will close, the turntable will rotate and the tonearm will lower onto the record. The tonearm up/down is controlled by its own linear motor to obtain quiet movement.

### Fully automatic system

With the module closed, automatic record play and tonearm up/down are operated by the "feather-touch" function buttons on the front panel. The record size is automatically set by a photo-sensor system.

### Muting system

A muting system activates when the tonearm is lifted and deactivates after the tonearm lowers onto a record so there is no need to turn the amplifier volume down every time a stylus is placed on a record.

### Quartz lock servo system

The turntable maintains accurate and drift-free speed by referring to a frequency generated by a very stable quartz oscillator.

### Linear torque BSL motor

Direct drive system with Sony's unique BSL (brushless and slotless) motor which has an extremely low noise level and whose smoothness virtually eliminates wow and flutter. Its high torque assures a quick start to 33 $\frac{1}{3}$  rpm after only a half revolution.

### Synchronized operation with the Sony cassette decks

When the tonearm lowers onto the lead-in groove of a record, the cassette deck stand-by mode is released and the record mode assumed. This synchronized operation is possible with Sony cassette decks equipped with a remote control jack which is connected with the Sony RM-65 synchro remote control unit.

### Wireless remote control operation

Using the optional RM-S410 system remote controller, power on/off and start/stop play can be remotely controlled.

## PRECAUTIONS

### On safety

- Operate the unit on 120 V ac, 50/60 Hz.

- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.

- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

### On installation

- Do not install the unit in a location near heat sources such as radiators or air ducts or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

- Place the turntable on a level surface.

- Avoid placing the unit near electrical appliances (such as a television, hair dryer, or fluorescent lamp) which may cause hum or noise.

- Place the turntable where it will not be subject to any vibration, such as from speakers, slamming of doors, etc.

### On cleaning

- Clean the cabinet periodically with a soft dry cloth. If the stains are difficult to remove, use a cloth moistened with a mild detergent solution. Do not use solvents such as alcohol, benzine or thinner, since they will damage the finish.

- Before playing a record, clean the stylus with a soft brush. Brush the stylus from back to front. Never attempt to clean the stylus with your finger tip. If a fluid stylus cleaner is used, make sure not to moisten the stylus too much.

### On repacking

Do not throw away the carton and packing materials. It is an ideal container in which to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton box.

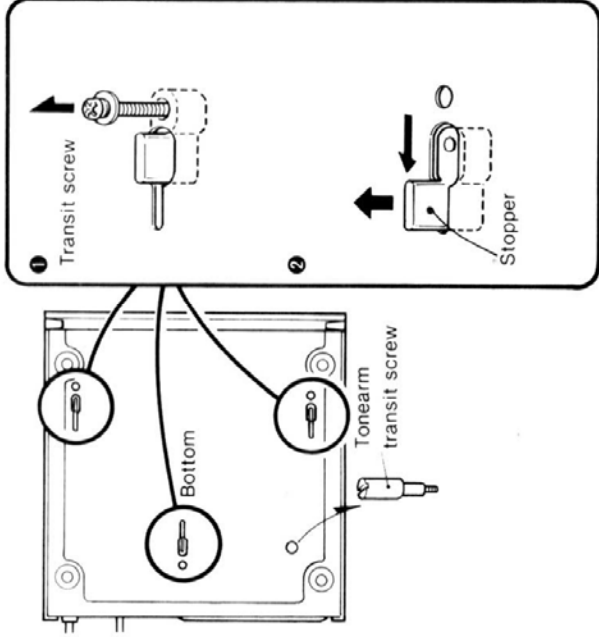
Before repacking, fix the transit screws in the original positions.

### For the customers in the USA

For detailed safety precautions, see the leaflet "IMPORTANT SAFEGUARDS".

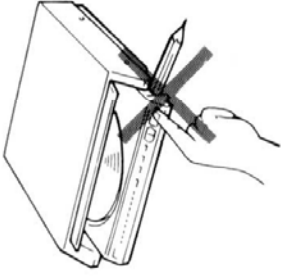
## TURNTABLE ASSEMBLY

- 1 Remove the tonearm transit screw, three transit screws and stoppers as follows. Save these screws and stoppers, since they will be required when repacking.



### Notes on the module

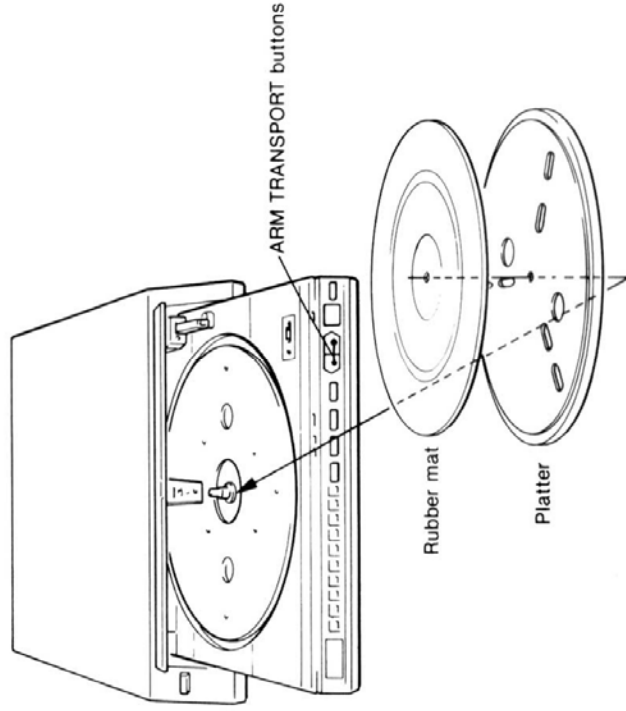
- The OPEN/CLOSE button does not activate when the power is turned off. Never push or pull the module forcibly.
- Do not push down on the module.
- Do not stop the module when it is moving.
- Be careful that no foreign object is caught between the module and the cabinet.



If the foreign object should be caught in this position, press the OPEN/CLOSE button immediately so that the module will move in the opposite direction. If you leave the foreign object between the module and the cabinet for 10 seconds, the module will automatically move in the opposite direction.

- Do not hold the unit so that the front panel faces down after you have removed the transit screws, since this may cause serious damage to the module.

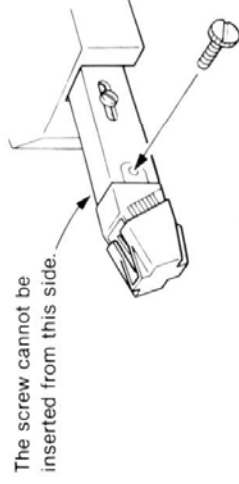
- 2 Remove all packing material and wipe off the cabinet. Save the packing box and materials for possible future use.
- 3 Connect the power cord to an ac outlet, depress the POWER switch (ON) and press the OPEN/CLOSE button. The module will open.
- 4 Press the ◀ ARM TRANSPORT button to move the tonearm inward, remove the tonearm transit plate, then press the ▶ ARM TRANSPORT button to move the tonearm to the arm rest.
- 5 Carefully place the platter and the rubber mat on the motor board.



## CARTRIDGE INSTALLATION

A cartridge with **TAP** label (optional) can be installed. Install the cartridge as follows.

- 1 Press the OPEN/CLOSE button to open the module.
- 2 Press the ◀ ARM TRANSPORT button to move the tonearm toward the center spindle.
- 3 Remove the cartridge locking screw.
- 4 Plug the cartridge into the tonearm and tighten the cartridge locking screw firmly.

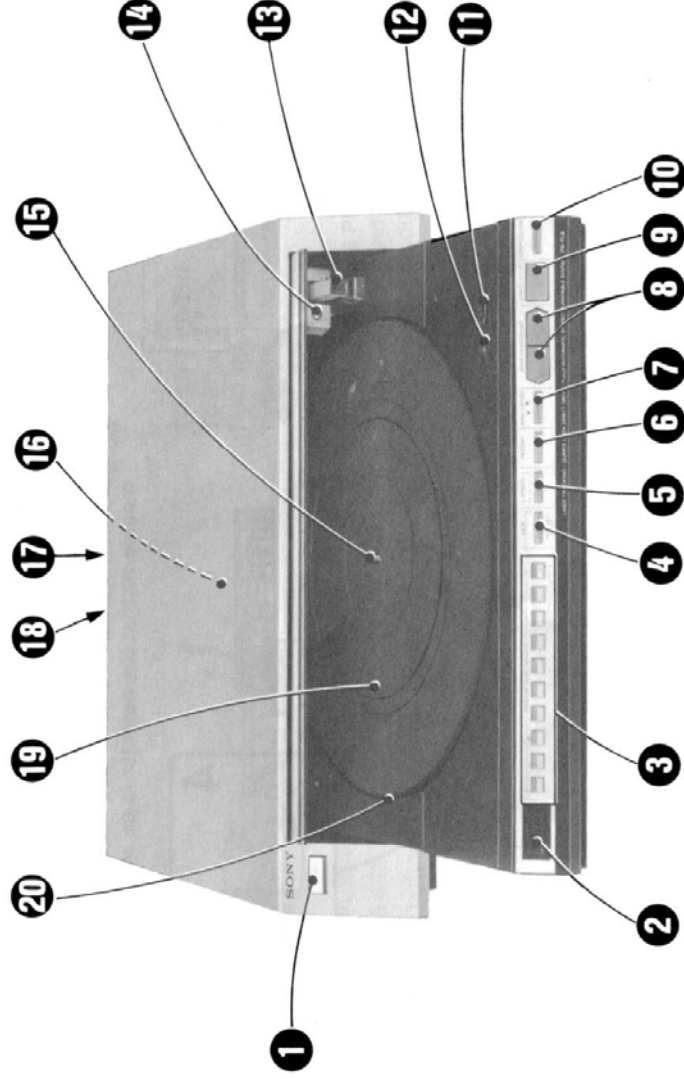


- 5 Press the ▶ ARM TRANSPORT button to move the tonearm to the arm rest.

The **TAP** label indicates that a cartridge is a standardized plug-in type.

## FUNCTION OF CONTROLS

Each number in the text is keyed to that of the photo. The photo shows the assembled turntable.



### 1 POWER switch

Depress to turn on the power. To turn the power off, press it again.

### 2 Display window

The number of the selection being played, the programmed selections for RMS play, etc. are displayed in this window.

### 3 RANDOM MUSIC SENSOR programming buttons and C (clear) button

Used for programming the selections to be played in the desired sequence. See "RMS play" on page 8.

### 4 SKIP button

Press this button to skip from the selection being played to the next selection. See "To skip to the desired selection during play" on page 8.

This button is also used for AMS (Automatic Music Sensor) play. See "AMS play" on page 7.

### 5 SPEED selector and indicators

When the power is turned on, the speed is automatically set to 33 $\frac{1}{3}$  rpm, and the "33" indicator lights up. Press this button when a 45 rpm record is to be played, and the "45" indicator lights up. Press it again for a 33 $\frac{1}{3}$  rpm record.

### 6 REPEAT button and indicator

Press this button to repeat play. Repeat play continues until this button is pressed to release it. During RMS play, only the programmed selections will be repeated in the programmed sequence.

### 7 $\blacktriangledown/\blacktriangledup$ ARM LIFTER button

This button lifts and lowers the tonearm. When the tonearm is on the arm rest, this button is not operative.

### 8 ARM TRANSPORT buttons

To move the tonearm inward, press the  $\blacktriangleleft$  button, and to move outward, the  $\blacktriangleright$  button. The tonearm is raised and continues to move while the button is pressed. The tonearm will stop when the button is released. For fine adjustments, press and immediately release the appropriate button.

### 9 START/STOP button and indicator

Press to start the record playing. The indicator will light up. To stop during play, press it again.

This button is not operative while the turntable module is opening or closing.

### 10 OPEN/CLOSE button

With one touch of this button the turntable module automatically opens for loading a record. With another touch the module automatically closes.

### 11 SENSITIVITY selector

Normally set this selector to M. When the number of the selections detected is not correct, set the selector to either H or L. See page 9.

### 12 DP ADJUST (drop-point adjustment) opening

See page 11.

### 13 Tonearm

### 14 Tonearm position indicator

### 15 Center spindle

### 16 Photo detector

Detects the record size (30 cm, 25 cm and 17 cm) and how many selections are on a record, by searching for blank spaces between selections when the module closes. See page 9.

### 17 Remote control connector (rear)

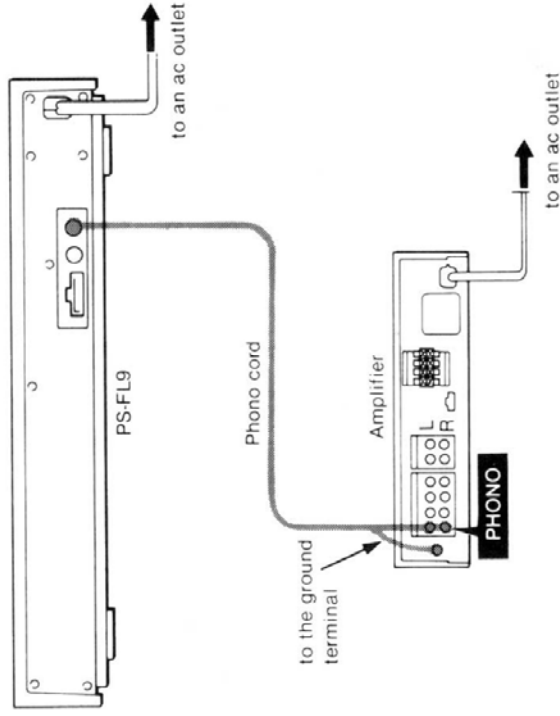
### 18 Synchro remote control jack (rear)

### 19 Rubber mat

### 20 Platter

## CONNECTIONS

- Turn off the amplifier before making connections.
- Be sure to connect the red plug of the connecting cord to the R (right) jack and the other plug to the L (left). The cable connector should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Leave a little slack in the connecting cord to allow for inadvertent shock or vibration.



## TIPS ON RECORD HANDLING

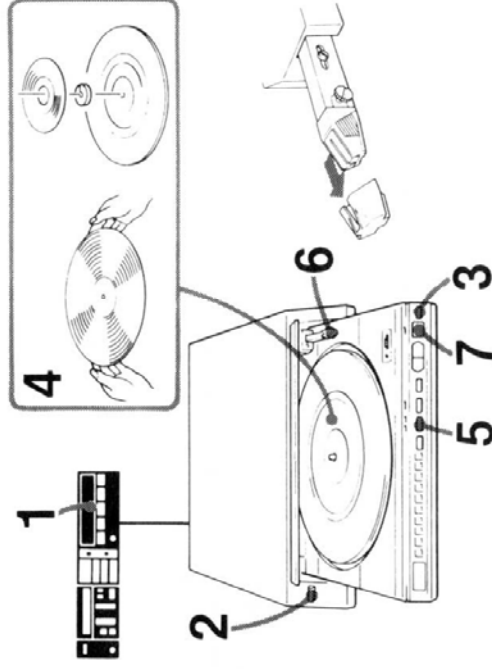
- Before playing, clean the record with a record cleaner or soft cloth. If a spray cleaner is used, make sure that it has dried completely before playing the record.
- Handle a record by its edges and do not touch the grooves.
- Use a commercially available anti-static spray to neutralize the static electricity on a record.
- Avoid exposing a record to direct sunlight or sources of heat, such as a hot-air duct.
- Store your records vertically. They should not be compressed.

## RECORD PLAYING

### AUTO PLAY

—To begin record play from the beginning of the record

This turntable's photo detector detects the record size: 30 cm (12 inch), 25 cm (10 inch) or 17 cm (7 inch), and the number of the selections on the record **when the module closes**. Therefore **after turning the power on, be sure to press the OPEN/CLOSE button to open the module** so that the detector is on standby.



- 1 Turn on the amplifier and set the input selector to PHONO.
- 2 Depress the POWER switch (ON).
- 3 Press the OPEN/CLOSE button to open the module.
- 4 Place a record on the platter. For 45-rpm record playing, place the supplied 45-rpm adaptor.
- 5 For 45-rpm record playing, press the SPEED button to illuminate the "45" indicator.
- 6 Remove the stylus guard.
- 7 Press the START/STOP button. The module closes and play will begin. The indicator of the START/STOP button lights during play. The number of the selection being played is displayed in the display window.



When the tonearm reaches the end of the record, it will automatically return to the arm rest. Press the POWER switch to turn the unit off after the tonearm returns to the arm rest.

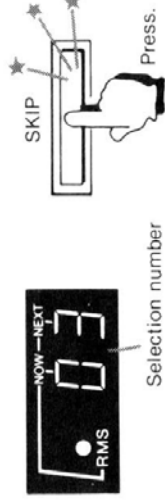
### Notes

- If the turntable causes interference to radio and television reception, turn off the turntable or move the turntable away from the receiver.
- A badly warped record cannot be played because it will rub against the tonearm.
- Transparent records, records of an unusual shape or color (red or blue), or non-standardized records cannot be played automatically. To play these records, follow the instructions on page 7.
- Turn off the POWER switch after the tonearm returns to the arm rest. If the POWER switch is turned off while the tonearm is returning to the arm rest, when you press the POWER switch the next time the tonearm will return to the arm rest. While the tonearm is moving, the START/STOP button is not activated.

## AMS (AUTOMATIC MUSIC SENSOR) PLAY

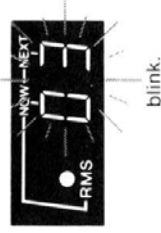
### —To begin record play from the desired selection

- 1 Press the OPEN/CLOSE button to open the module, put on a record and select the correct record speed.
- 2 Press the SKIP button repeatedly until the number of the selection from which you want to start play is displayed. Each time the SKIP button is pressed, the number of the selection displayed increases by one, up to 15, then returns to 01.

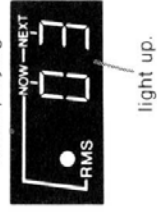


- 3 Press the START/STOP button. The module closes, the tonearm searches for the preset selection and play begins.

While searching



While playing



## Note

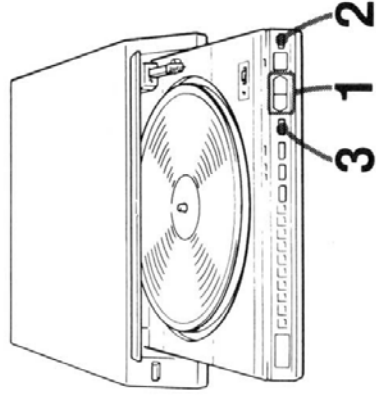
If the selection number which does not exist (for example, "08" for a record which contains only 7 selections) is input, the "E" (error) indicator appears and flashes several times, then "00" is displayed. In this case, input an appropriate selection number.

## MANUAL PLAY

### —To begin record play at a particular point

#### Manual play is used :

- for beginning record play in the middle of a selection
- for playing a record which cannot be played automatically
- for playing a record with the module open



- 1 After proceeding from step 1 to 6 in "AUTO PLAY", press the ◀ or ▶ ARM TRANSPORT button to move the tonearm over the record to the desired point. At the desired point, release the button.
- 2 Press the OPEN/CLOSE button to close the module.
- 3 Press the ARM LIFTER button. Play will begin.  
The number of the selection being played is displayed in the display window.

When the tonearm reaches the end of the record, it will automatically return to the arm rest. Press the POWER switch to turn the unit off after the tonearm returns to the arm rest.

## Note

To play a record with the module open, press the ARM LIFTER button without pressing the OPEN/CLOSE button. In this case, the number of the selection being played is not displayed and the auto return function does not operate at the end of the record. Press the START/STOP button at the end of the record to return the tonearm to the arm rest.

## TO LIFT UP THE STYLUS DURING PLAY

To lift the stylus from a record for a moment and then start playing from the same point, press the ARM LIFTER button. To lower the tonearm onto the record, press the ARM LIFTER button again.

## TO STOP DURING PLAY

To stop playing and open the module, press the OPEN/CLOSE button. (When the module has opened, a touch of this button will close the module.)

You can stop play by pressing the START/STOP button instead of the OPEN/CLOSE button. In this case, the module will not move.

## TO MOVE TO A DIFFERENT PART OF A RECORD DURING PLAY

Move the tonearm to the desired point of the record by pressing the ARM TRANSPORT buttons and then press the ARM LIFTER button to start play.

## TO REPEAT PLAY

Press the REPEAT button either before or after starting play when the module is closed. The indicator of the REPEAT button lights up. To cancel the repeat play, press the REPEAT button again. (The indicator goes off.)

To stop during repeat play, press the OPEN/CLOSE button or the START/STOP button.

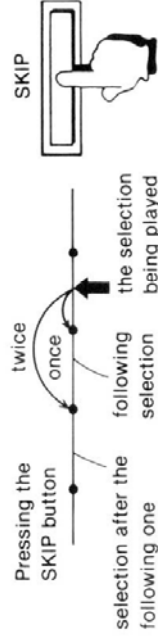
The indicators of the REPEAT and START/STOP buttons go off and the repeat function is cancelled. The module will open only when the OPEN/CLOSE button has been pressed.

## Note

Repeat play cannot be activated while the module is open or while the tonearm is moving.

## TO SKIP TO THE DESIRED SELECTION DURING PLAY —Using the SKIP function

- 1 Press the SKIP button repeatedly during play until the number of the desired selection is displayed. Each time the SKIP button is pressed, the next selection in advance is displayed, and when the last selection has been selected, the display reverts to 01.



The tonearm will lift up, search for the preset selection and play will start automatically.

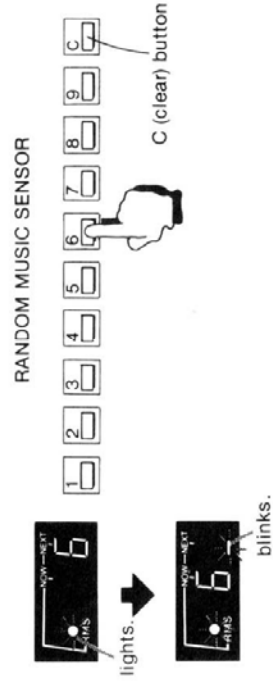
## Note

The SKIP function is inoperative while the tonearm is in the raised position or while the record is being played with the module open.

## RMS (RANDOM MUSIC SENSOR) PLAY

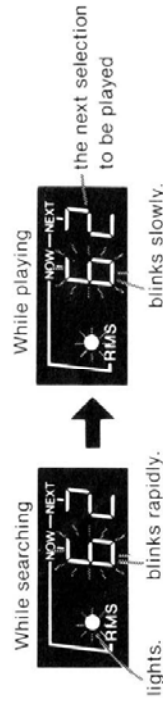
You can play selections on one side of the record in the desired sequence, which has been programmed using the RANDOM MUSIC SENSOR buttons.

- 1 Press the OPEN/CLOSE button to open the module, put on a record and select the record speed.
- 2 Press the RANDOM MUSIC SENSOR buttons in the sequence in which you want to listen to the selections.  
Each time the RANDOM MUSIC SENSOR button is pressed, the selected number is displayed once in the right position in the display window, immediately moves to the left position, and the cursor blinks in the right position to indicate another selection can be programmed.  
Up to 15 selections can be programmed.



- 3 Press the START/STOP button.

The module closes and play begins from the first-programmed selection. The RMS indicator lights during RMS play.



At the end of the last-programmed selection, the tonearm will return to the arm rest automatically.  
If you wish to play the same selections in the same sequence again, press the START/STOP button.

### To change the programmed sequence

Press the C button when the tonearm is on the arm rest.  
The display will change to 00 and the programmed sequence will be erased. Then press the RANDOM MUSIC SENSOR buttons again in the desired sequence.

### Automatic editing function of the RMS program

If a selection number which does not exist on the record is selected with the module open, that number will be erased automatically when the module closes.  
For example, if you have pressed the 6, 2, 8, 5 and 7 RANDOM MUSIC SENSOR buttons in that order, for a record containing only 6 selections, numbers 8 and 7 will be erased when the module closes and the 6th, 2nd and 5th selections will be played.

If an incorrect RANDOM MUSIC SENSOR button is pressed with the module closed, the number of the button will not be displayed. This is an automatic editing function of the RMS program.  
If the pressed RANDOM MUSIC SENSOR buttons are all incorrect, the "E"(error) indicator will flash several times, or the display will not change from 00.

### To cancel the RMS program

Press the ARM TRANSPORT buttons or the OPEN/CLOSE button during play, or press the C button when the tonearm is on the arm rest. The display will change to 00 and the programmed sequence will be erased.

### TO LIFT UP THE STYLUS DURING RMS PLAY

To lift up the stylus for a moment and then start playing from the same point, press the ARM LIFTER button. To lower the tonearm onto the record, press the ARM LIFTER button again.

### TO STOP DURING RMS PLAY

Press the START/STOP button. The tonearm will return to the arm rest.

When the START/STOP button is pressed again, the RMS play will restart from the beginning.

### TO SKIP SELECTIONS DURING RMS PLAY

Press the SKIP button during play. Each time the SKIP button is pressed, the next selection ahead is played.

### TO REPEAT RMS PLAY IN THE PROGRAMMED SEQUENCE

Press the REPEAT button either before or after starting RMS play. At the end of the last-programmed selection, the tonearm will return to the first-programmed selection automatically, then play will restart.

To stop during repeat play, press the REPEAT button. When the last-programmed selection has been played, the tonearm will return to the arm rest and repeat function will be cancelled.

If you press the START/STOP button during repeat play, play will stop immediately, the tonearm will return to the arm rest and the repeat function will be cancelled.

### Error indicator



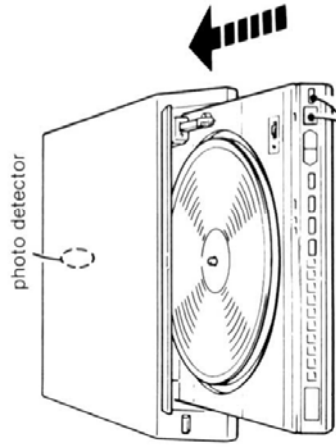
The "E" (error) indicator flashes several times and the display will change to 00 in the following cases.

- When the START/STOP button is pressed, but there is no record on the platter.
- When inappropriate selection numbers are set for AMS or RMS play with the module open, and the START/STOP button is pressed.
- When the OPEN/CLOSE button is pressed while the module is closing and the same button is pressed again before the module has opened completely, then the START/STOP button is pressed.



## HOW RECORD SIZED AND SELECTIONS ARE DETECTED

When the module closes, the photo detector searches over the record to detect the record size (30 cm, 25 cm or 17 cm) and sense how many selections are on the record, by detecting the blank spaces between selections. The selection number indicator changes rapidly from 01 to the number of the selection contained on the record. Up to 15 selections can be counted. The data is input into the memory of the microcomputer incorporated. This data will be erased from the memory when the OPEN/CLOSE button is pressed to open the module or when the POWER switch is turned off.



Press START/STOP or  
OPEN/CLOSE.

### Note

If the OPEN/CLOSE button is pressed while the module is closing and the same button is pressed again before the module has opened completely, the record size and selections will not be detected and the "E" (error) indicator will flash several times when the START/STOP button is pressed later.

In this case, press the OPEN/CLOSE button to open the module completely and press it again to close the module.

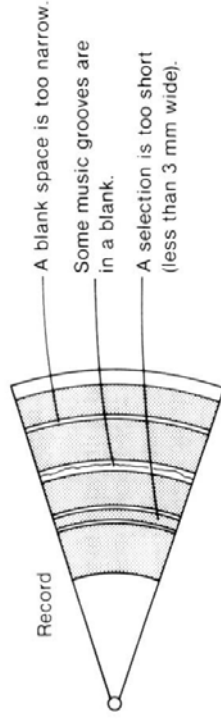
### SENSITIVITY selector

Since the photo detector searches for the blank spaces on a record, it cannot operate correctly if the blank spaces and music grooves are not in good condition. As a result, the RMS, AMS and skip functions may malfunction.

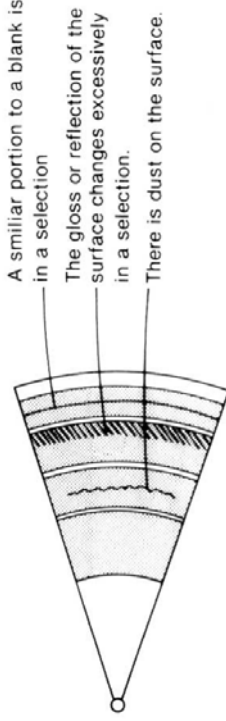
If the number of the selections detected is different from the number of the selections actually existing, change the position of the SENSITIVITY selector to either H (high) or L (low).



Why too few selections are detected :



Why too many selections are detected :



### Special records

The photo detector cannot operate with transparent records, non-standardized records and records of an unusual shape or color (red or blue). Play these records manually, referring to "Manual play" on page 7.

## SYNCHRONIZED PLAY OF THE TURNTABLE AND A CASSETTE DECK

— with an RM-65 synchro remote control unit connected

When the tonearm lowers onto the record, the cassette deck goes into the record mode and, when the tonearm is lifted up, the deck goes into the auto record muting mode for four seconds, then into the pause mode.

Cassette decks which can be used with your turntable for this special synchronized operation are those Sony models which are equipped with a 4-pin or 5-pin remote control jack.

An RM-65 synchro remote control unit (optional) is required to connect the turntable and the cassette deck.

### PREPARATION

- 1 Turn the amplifier on and set its input selector to **PHONO**.
- 2 Turn the turntable system on, place a record and select the correct record speed.
- 3 Adjust the recording level on the cassette deck and set it in the record stand-by mode.
- 4 Set the **SYNCHRO** switch of the RM-65 to **ON**.

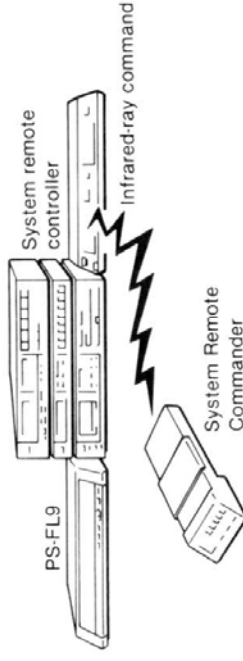
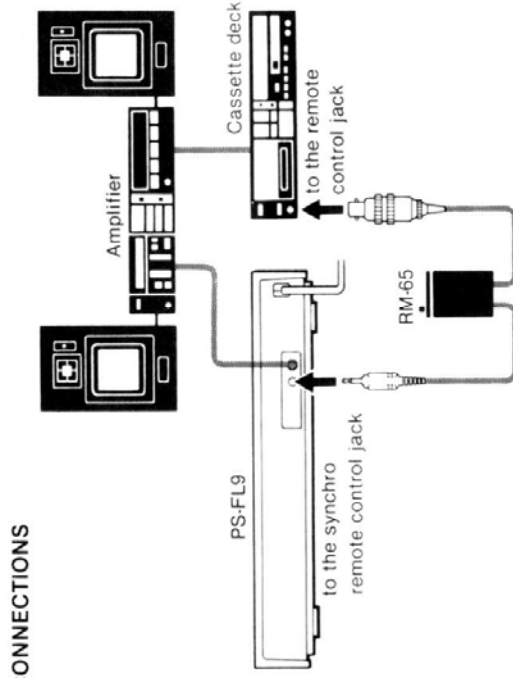
### RECORDING

Desired action	Turntable operation	Synchronized operation of the cassette deck
To start recording	Press the <b>START/STOP</b> button.	When the tonearm lowers onto the record, the pause mode is released and recording begins.
To lift up the tonearm to move to a different point on a record...	Press the <b>ARM TRANSPORT</b> button.	When the tonearm is lifted up, auto-recording muting activates for four seconds, then the pause mode is assumed.
To record from a point some way in the record...	Move the tonearm over the desired point and press the <b>START/STOP</b> or <b>ARM LIFTER</b> button.	When the tonearm lowers onto the record, the pause mode is released and recording begins.
To stop recording during record play...	Press the <b>START/STOP</b> or <b>OPEN/CLOSE</b> button.	When the tonearm is lifted up, auto-recording muting activates for four seconds, then the pause mode is assumed.
When record play ends...	The tonearm returns automatically to the arm rest.	When the tonearm is lifted up, auto-recording muting activates for four seconds, then the pause mode is assumed.

**Note :** Be sure to set the **SYNCHRO** switch of the RM-65 to **OFF** when you do not want to use the synchronized play function.

## REMOTE CONTROL OPERATION WITH AN OPTIONAL REMOTE CONTROLLER

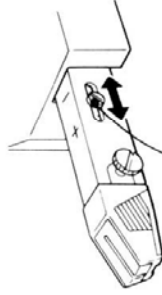
The optional RM-S410 system remote controller controls the following functions of the turntable : power on/off, start/stop of the record play and synchronized operation with the Sony cassette decks using the optional RM-65 synchro remote control unit. This remote controller, with its infrared ray sensor, can control connected components by an infrared ray transmitted from the Remote Commander supplied with the system remote controller. For connections and operations, refer to the remote controller's instruction manual.



## TRACKING FORCE FINE ADJUSTMENT

The tracking force has been correctly adjusted at the factory. Make fine adjustment only when the tracking force is so light that the stylus skips grooves.

- 1 Press the OPEN/CLOSE button to open the module.
- 2 Press the ◀ ARM TRANSPORT button to move the tonearm toward the center spindle.
- 3 Slide the tracking force adjustment lever.

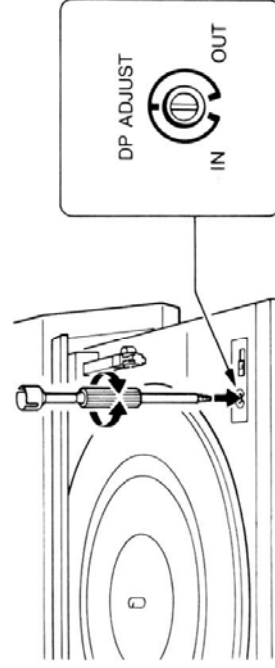


Slide the tracking force adjustment lever towards + (forward) for heavier tracking force or towards - (backward) for lighter tracking force.

## TONEARM DROP-POINT ADJUSTMENT

The tonearm's drop-point during auto play, AMS play or RMS play has been adjusted at the factory. Adjust this if the stylus does not lower correctly at the beginning of the desired selection.

- 1 Press the OPEN/CLOSE button to open the module.
- 2 Insert the supplied screwdriver into the DP ADJUST opening. To move the drop-point inward, turn the screw counterclockwise (towards IN). To move the drop-point outward, turn the screw clockwise (towards OUT). Do not turn it so far clockwise that the stylus tip cannot make contact with the record.



- 3 Check if the drop-point is correctly adjusted by lowering the tonearm to the beginning of a selection in the middle of the record, using the AMS function. (Checking the drop-point for the first selection is not sufficiently accurate.)

If the drop-point is correct for one selection, it will also be correct for all the selections.

## SPECIFICATIONS

### Turntable

Platter 29 cm (11<sup>1</sup>/<sub>2</sub> in.), aluminum-alloy diecast  
Motor Linear torque BSL (brushless and slotless) motor

### Drive system

Control system Direct drive

Speed Quartz lock servo control system

Wow and flutter 33<sup>1</sup>/<sub>3</sub> rpm, 45 rpm

Signal-to-noise ratio 0.03% (WRMS)\*, 0.035% (WRMS)

Automatic system 75 dB (DIN-B)

Loading, lead-in, return, reject, repeat, tonearm up/down, record size selection, RMS, AMS, skip

### Load characteristics

0 % up to 1.5 g tracking force (at lead-in groove of a record)

Speed deviation Within  $\pm 0.003$  %

### Tonearm

Type Linear tracking tonearm

Pivot-to-stylus length 75 mm (3 in.)

Tracking error  $\pm 0.1^\circ$

Tracking force adjustment range 1.25  $\pm$  0.25 g

Cartridge plug-in type, 6 g

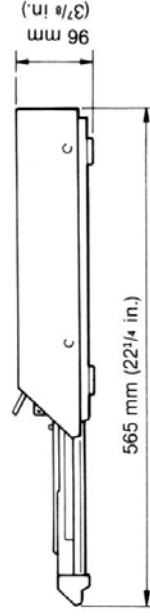
### General

Power requirements 120 V ac, 60 Hz

Power consumption 13 W

Dimensions Approx. 430  $\times$  96  $\times$  382 mm (w/h/d)  
(17  $\times$  3<sup>7</sup>/<sub>8</sub>  $\times$  15<sup>1</sup>/<sub>8</sub> in.)

including projecting parts and controls



### Weight

Approx. 7.6 kg (16 lbs 12 oz), net

Approx. 9.4 kg (20 lbs 12 oz), in shipping carton

### Supplied accessories

45-rpm adaptor (1)

Screwdriver (1)

Cartridge locking screw (1)

Design and specifications subject to change without notice.

\* This new measuring method concerns only the turntable assembly, including the platter. It excludes wow and flutter caused by the tonearm, the cartridge or the record. Measured by obtaining signal from magnetic pick-up head.

## TROUBLE CHECKS

Should any problem persist after you have made these checks, consult your nearest Sony service facility. Before proceeding with these trouble checks, first refer to the connections and the operating procedures.

TROUBLES	CAUSES	WHAT TO DO
Auto play does not start.	A transparent record, non-standardized record, or a record of unusual shape or color is being used.	Play the record manually. See page 7.
The SKIP function does not operate.	Tonearm has been lifted up with the ARM LIFTER or ARM TRANSPORT button. The module is open.	Press the SKIP button during play. —
The C button does not operate.	The button was pressed during play or while the tonearm was moving. The module is open.	Press the button when the tonearm is on the arm rest. —
Repeat play does not operate.	The REPEAT button has been pressed when the module is open or the tonearm was moving.	Press the button during play.
Play does not start and the "E" indicator appears.	See "Error indicator" on page 8.	—
Impaired tone quality	Improper tracking force	Apply proper tracking force. See page 11.
	Dusty stylus	Clean the stylus with a soft brush from back to front.
	Worn stylus	The stylus life is approx. 400 hours. Replace with a new stylus.
No audio from one channel	Loose connection of phono cord	Connect the cord firmly.
	Dirty terminals of the cartridge	Clean the terminals with a soft dry cloth.
	Loose attachment of the cartridge to the tonearm	Fix the cartridge to the tonearm firmly.
Steady low-pitched humming sound	Loose attachment of the cartridge to the tonearm	Fix the cartridge to the tonearm firmly.
	Ground wire is not connected to the amplifier.	Connect the ground wire to the amplifier.
Groove skipping ; tonearm skating ; tonearm not advancing	Improper tracking force	Apply proper tracking force. See page 11.
	Turntable not level	Place the turntable on a level surface.
	Defective record	—
Loud rumble or low-frequency howl *	The turntable is subjected to external vibration.	Place the turntable on a solid surface free from external vibration.
	The turntable is placed too near the speaker.	Locate the turntable as far away from the speaker as possible.

\* This is called "acoustic feedback" and is caused when vibrations from the speakers are transmitted through the air or via solid objects (such as the shelves, the cabinet, the floor, etc.) to the turntable, where they are picked up by the stylus, amplified and reproduced through the speakers once again.