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# THE VINYL **ENGINE**®

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**Operating Instructions**  
**Bedienungsanleitung**  
**Mode d'emploi**  
**Istruzioni per l'uso**

STEREO TURNTABLE  
 STEREO-PLATTENSPIELER  
 PLATINE TOURNE-DISQUE STÉRÉO  
 GIRADISCHI STEREO

# PL-3F

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Thank you for buying this Pioneer product. Please read through these operating instructions and then you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference. In accordance with the power and voltage requirements of differing areas, the following model names are used to designate models with differing electrical specifications.

Models	Line voltage
HEMT, HBT, HP	a.c. 220, 240 volts ~ (Switchable voltage)
WE, WB, WP	a.c. 220-240 volts ~
S, S/G, SS	AC 110, 120, 220, 240 volts (Switchable voltage)
D, D/G	AC 120, 220, 240 volts (Switchable voltage)
R, R/G	AC 110-120, 220-240 volts (Switchable voltage)
KUT, KCT	AC 120 volts
YP, YB	a.c. 240 volts ~

**NOTES:**

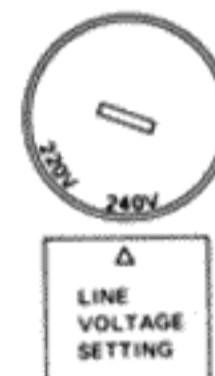
- The model names are stamped on the packing case.
- These operating instructions are prepared on the basis of the HEMT model, and they can be used for other models. Although the design of the power plug and the power outlet shown may differ from the actual one, the operating procedures are the same.

**WARNING:** TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

**LINE VOLTAGE SELECTOR SWITCH**  
**[Only multi-voltage models are provided with this switch but U.S.A. and Canadian models are not provided with this switch]**

The line voltage selector switch is located on the top of the cabinet of this turntable. Before your turntable is shipped from the factory, the switch is set to the power requirements of the turntable's destination. Check that it is set properly before plugging the power cord into the outlet. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switch as follows:

- Provide yourself with a medium-sized screwdriver. Insert the tip of the screwdriver into the groove of the selector switch and turn it so that the arrow points to the power volume marking of your area.



"This product is manufactured to comply with the radio interference requirements of EEC Directive 76/889/EEC and 82/499/EEC."

**IMPORTANT NOTICE [For U.S.A. and Canadian models]**

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep in a secure area. This is for your security.

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 **PIONEER**

ENGLISH

DEUTSCH

FRANÇAIS

ITALIANO

# SAFETY INSTRUCTIONS

**READ INSTRUCTIONS** — All the safety and operating instructions should be read before the appliance is operated.

**RETAIN INSTRUCTIONS** — The operating instructions should be retained for future reference.

**HEED WARNING** — All warnings on the appliance and in the operating instructions should be adhered to.

**FOLLOW INSTRUCTIONS** — All operating and use instructions should be followed.

**WATER AND MOISTURE** — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

**LOCATION** — The appliance should be installed in a stable location.

**WALL OR CEILING MOUNTING** — The appliance should not be mounted to a wall or ceiling.

**VENTILATION** — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

**HEAT** — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

**POWER SOURCES** — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

**POWER-CORD PROTECTION** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

**POLARIZATION** — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

**CLEANING** — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzene, insecticides or other volatile liquids since they may corrode the cabinet.

**POWER LINES** — An outdoor antenna should be located away from power lines.

**NONUSE PERIODS** — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

**OBJECT AND LIQUID ENTRY** — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

**DAMAGE REQUIRING SERVICE** — The appliance should be serviced by Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

**SERVICING** — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

**OUTDOOR ANTENNA GROUNDING** — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.

In the U.S.A. section 810 of the National Electrical Code, ANSI/NEPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

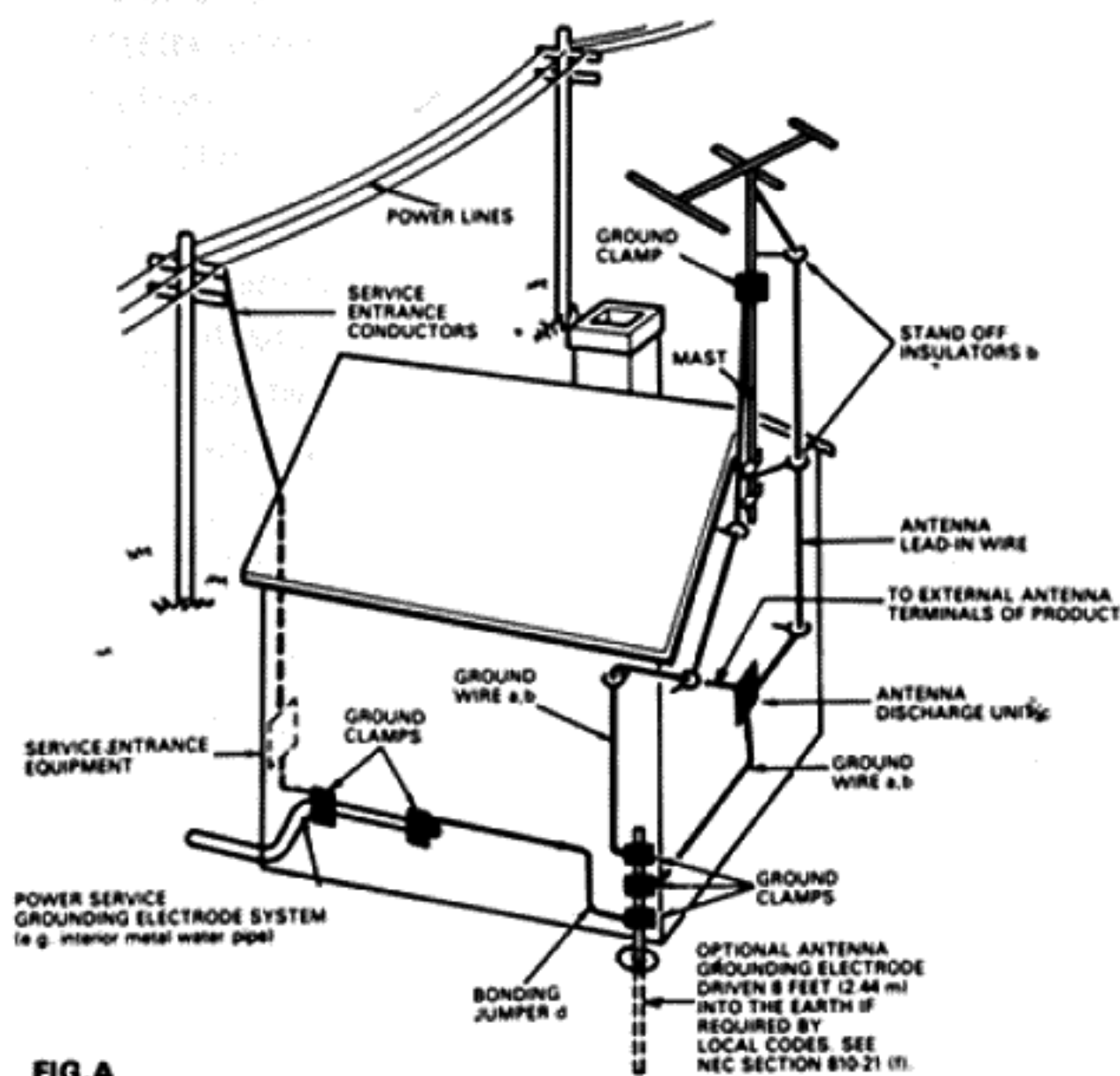


FIG. A

- a) Use No. 10 AWG (5.3 mm<sup>2</sup>) copper, No. 8 AWG (8.4 mm<sup>2</sup>) aluminum, No. 17 AWG (1.0 mm<sup>2</sup>) copper-clad steel, bronze wire, or larger as ground wire.
- b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.
- c) Mount antenna discharge unit as closely as possible to where lead-in enters house.
- d) Use jumper wire not smaller than No. 6 AWG (13.3 mm<sup>2</sup>) copper or equivalent when separate antenna-grounding electrode is used.

## IMPORTANT 1



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of 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.



**CAUTION:**  
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## IMPORTANT 2

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last, make sure that the power switch is off. Disconnect the wall plug when the equipment is not in (regular) use, e.g. when on vacation.

### FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Equipment sold in the U.K. is not supplied with a power plug.

# CARTRIDGE MOUNTING

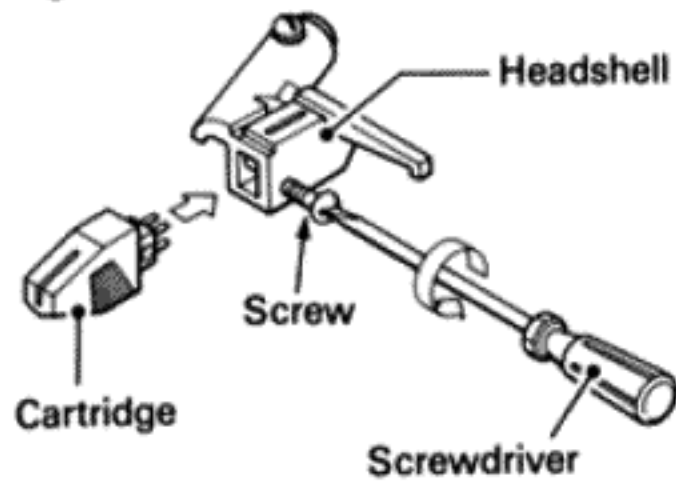
[Applicable to European, U.K. and U.S.A. models.]

Since this turntable does not come with a cartridge, provide one of your own choosing and attach it to the headshell as below. This turntable uses a cartridge which weighs between 3 and 8.5 g.

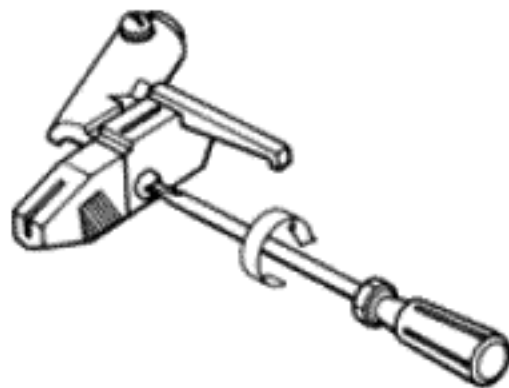
## Method of mounting the P-mount cartridge (Use the headshell attached to the tonearm.)

**TAP** is the universal mark for the Plug-in connector system. Products carrying this mark are interchangeable and will accommodate each other.

1. Remove the screw from the attached headshell and insert the cartridge.

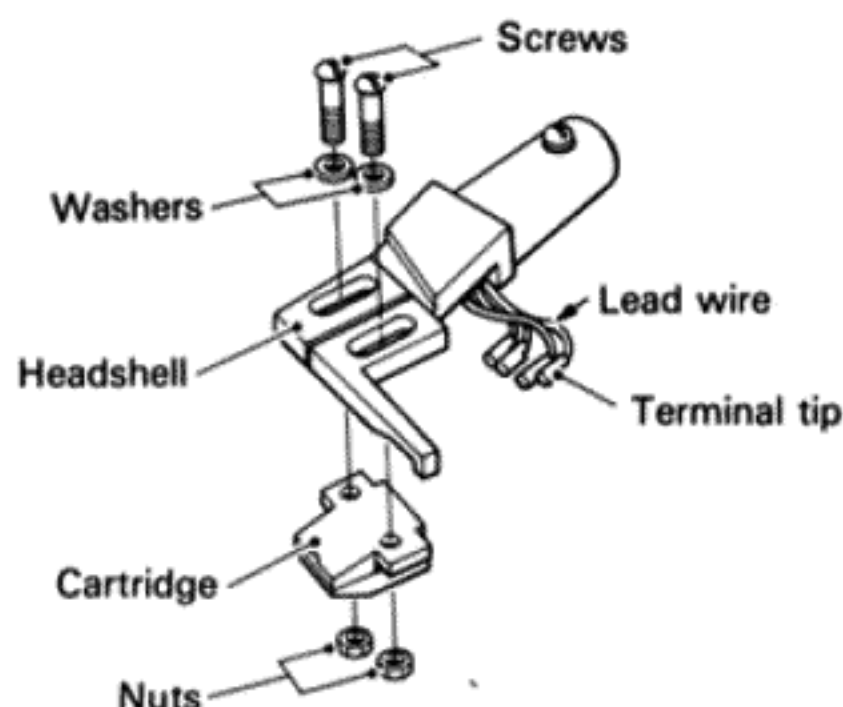


2. Secure the cartridge by tightening the screw.



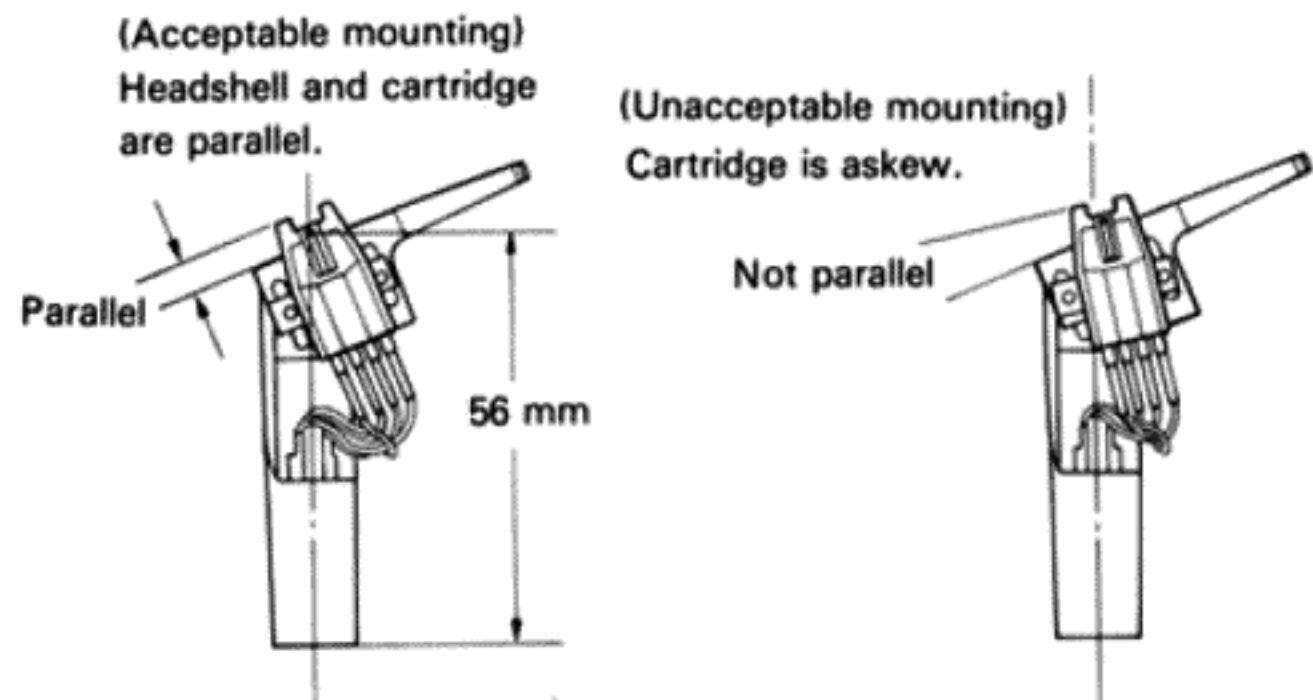
## Method of mounting the cartridge when other than the P-mount type (Use the headshell which comes packed in the styrofoam container.)

1. Connect the headshell leads to the cartridge.  
The polarities of the leads are color-coded.  
Plug them into the correct terminal tips.
  - Red: Right channel (R)
  - Green: Right channel ground (RG)
  - White: Left channel (L)
  - Blue: Left channel ground (LG)
2. Attach the cartridge to the headshell.  
Attach the screws, nuts and washers provided to the cartridge. Keep the screws loose.

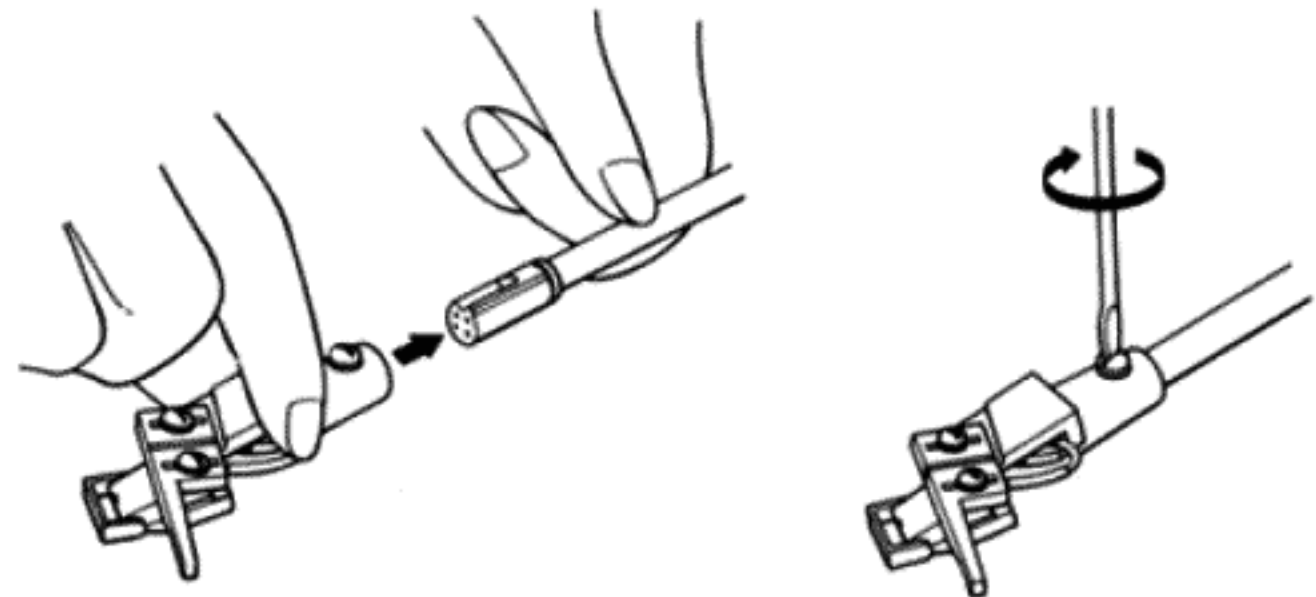


3. Adjust the mounting position of the cartridge.

- (1) Stylus position: As shown in the figure, the stylus and headshell length is 56 mm.
- (2) Compensating for bending: As shown in the figure, make the cartridge parallel to the headshell.

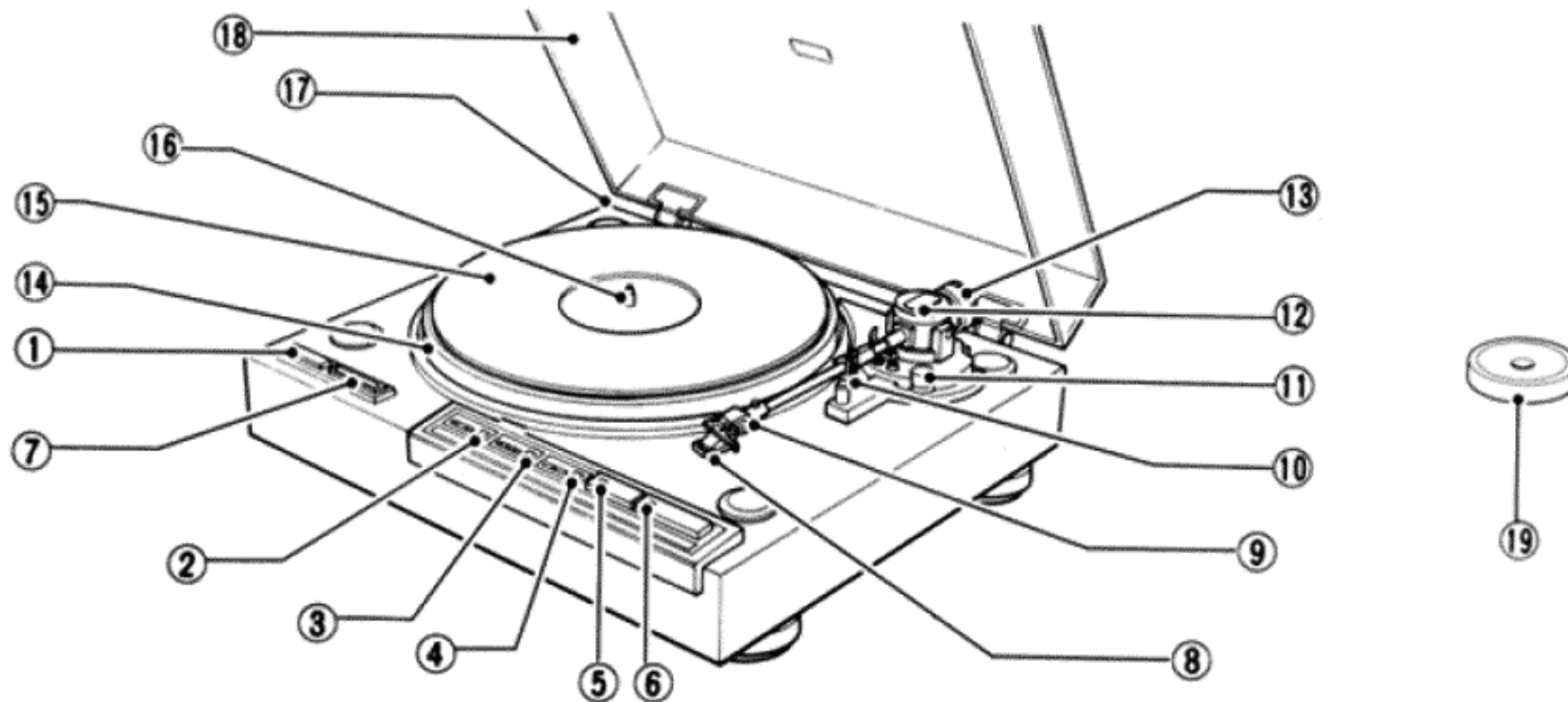


4. After having tightened up the screws, attach the headshell to the tonearm (following the procedure given in step 1 in reverse).



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# PANEL FACILITIES



## ① POWER switch

- Press this switch to turn the power on and off.  
 [ON] (depressed position) : Power is switched ON.  
 [OFF] (released position) ; Power is switched OFF.  
 When the POWER switch is set to ON, the following switches are set automatically.
- SPEED switch \_\_\_\_\_ [33]
  - SIZE switch \_\_\_\_\_ [30]
  - REPEAT switch \_\_\_\_\_ [OFF]

## ② SPEED switch/indicator

- Set this switch in accordance with the speed of the record which is to be played, so that the indicator lights.
- [33] indicator lights:  
 For playing 33-1/3 rpm records.
- [45] indicator lights:  
 For playing 45 rpm records.

## ③ SIZE switch/indicator

- Set this switch in accordance with the size of the record which is to be played, so that the indicator lights.
- [12" 30] indicator lights:  
 For playing 30 cm (12") records.
- [10" 25] indicator lights:  
 For playing 25 cm (10") records.
- [7" 17] indicator lights:  
 For playing 17 cm (7") records.

## ④ REPEAT switch/indicator

- Press this switch so that the indicator lights for repeat play.

## ⑤ ARM ELEVATION switch/indicator

- Use the switch for manual play.
  - Use the switch to suspend record play temporarily.
  - Use the switch when changing the tracks during manual play.
- Indicator lights:  
 The tonearm rises (the stylus moves away from the record).  
 Indicator goes out:  
 The tonearm descends (the stylus is lowered onto the record).

**⑥ START/STOP switch**

Depress this switch when starting auto play or when stopping play

**⑦ Quartz locked indicator**

This lights when the platter is rotating at exactly 33-1/3 or 45 revolutions per minute.

**⑧ Cartridge (PC-7MC)**

The cartridge supplied with this turntable is an MC (moving coil) type cartridge. Since this type of cartridge has a lower output than an MM (moving magnet) type, the turntable's output cord should be connected to your amplifier's MC input terminals. If your amplifier does not have MC terminals, use a separate transformer and head amplifier for MC cartridges.

*NOTE:*

*A cartridge is not provided with the European, U.K. and U.S.A. models and so your own cartridge should be mounted, following the instructions laid down in CARTRIDGE MOUNTING.*

**⑨ Headshell****⑩ Arm rest**

This serves to hold and clamp the tonearm. When moving the tonearm, release the clamp.

**⑪ Anti-skate control**

This is rotated when performing the anti-skating adjustment.

**⑫ Tonearm****⑬ Tracking force adjustment weight**

This is used when adjusting the tracking force.

**⑭ Platter****⑮ Rubber mat****⑯ Platter shaft****⑰ Cabinet****⑱ Dust cover****⑲ EP adapter**

This is used when playing records with a "large center hole."

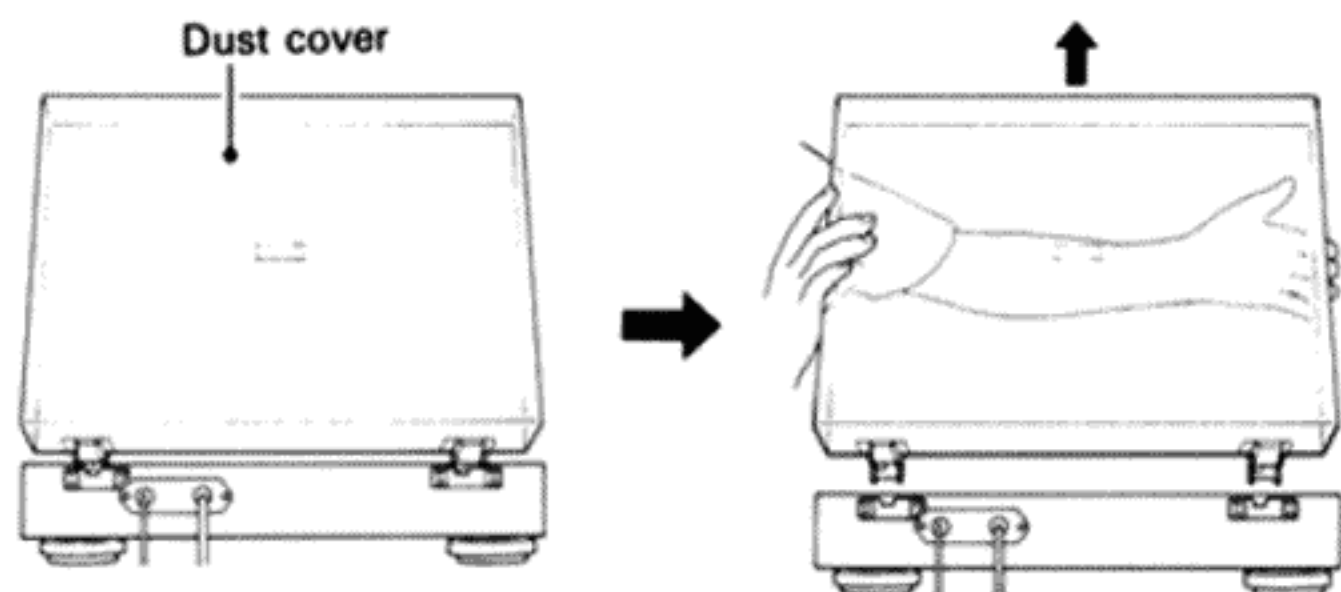
# OPERATION BEFORE USE

(Before using your turntable, carry out the instruction in Step 1 through 4.)

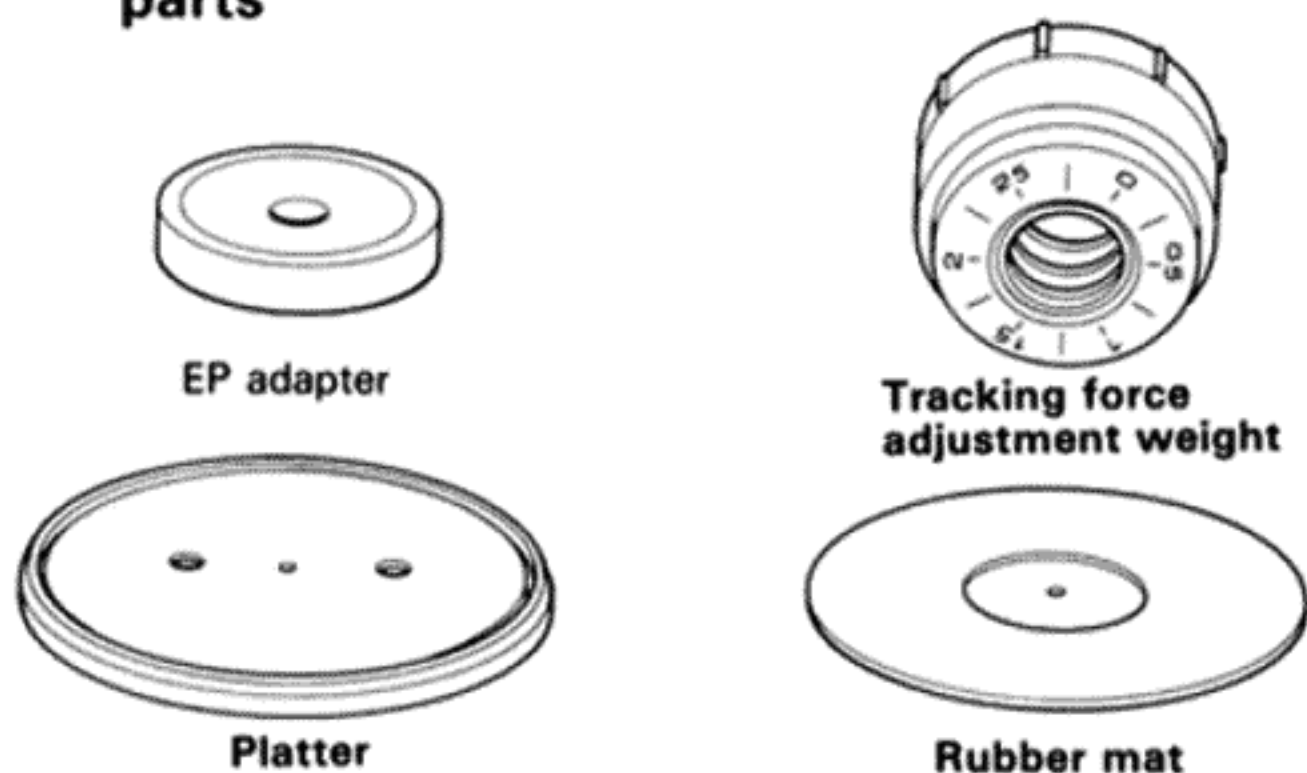
## STEP 1 ASSEMBLING THE TURNTABLE

### (1) Removing the dust cover

1. Open the dust cover as far as it will go.
2. Hold both sides of the dust cover and remove it from the cabinet by pulling it up.



### (2) Checking the accessories and mounting parts

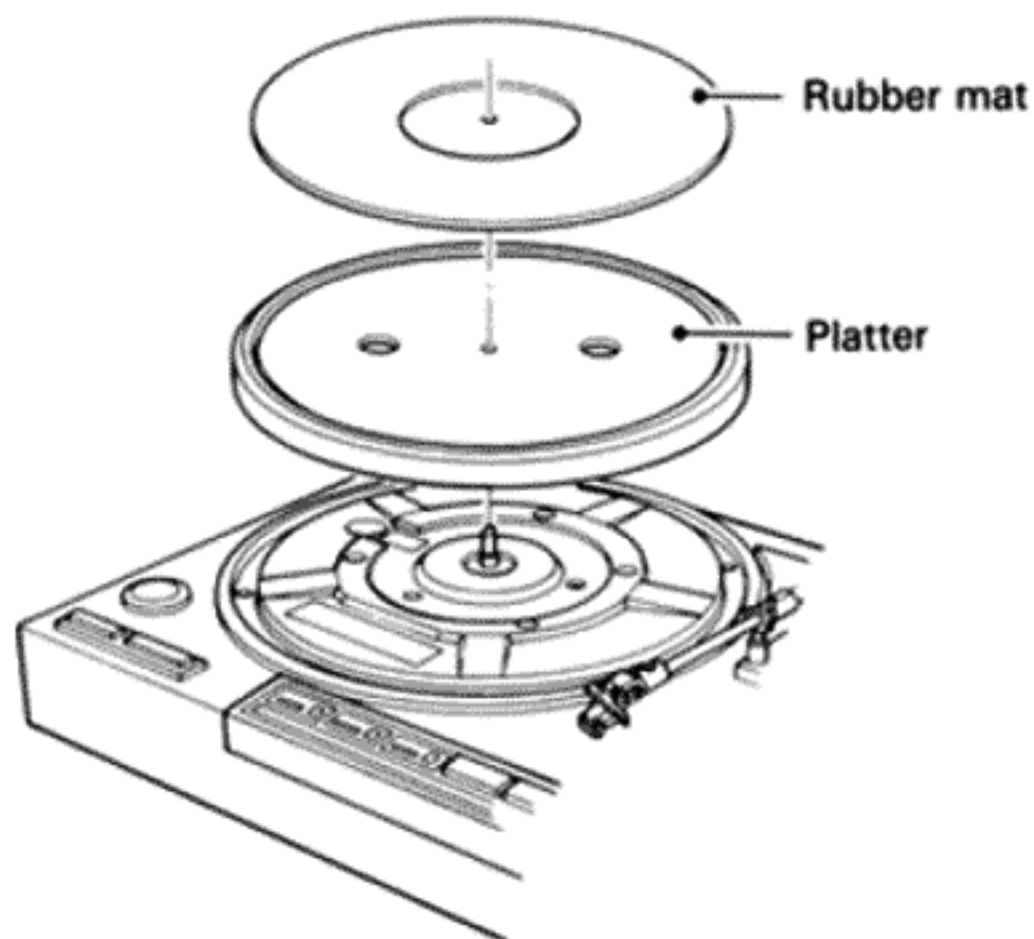


Cartridge mounting parts (For European, U.K. and U.S.A. models)



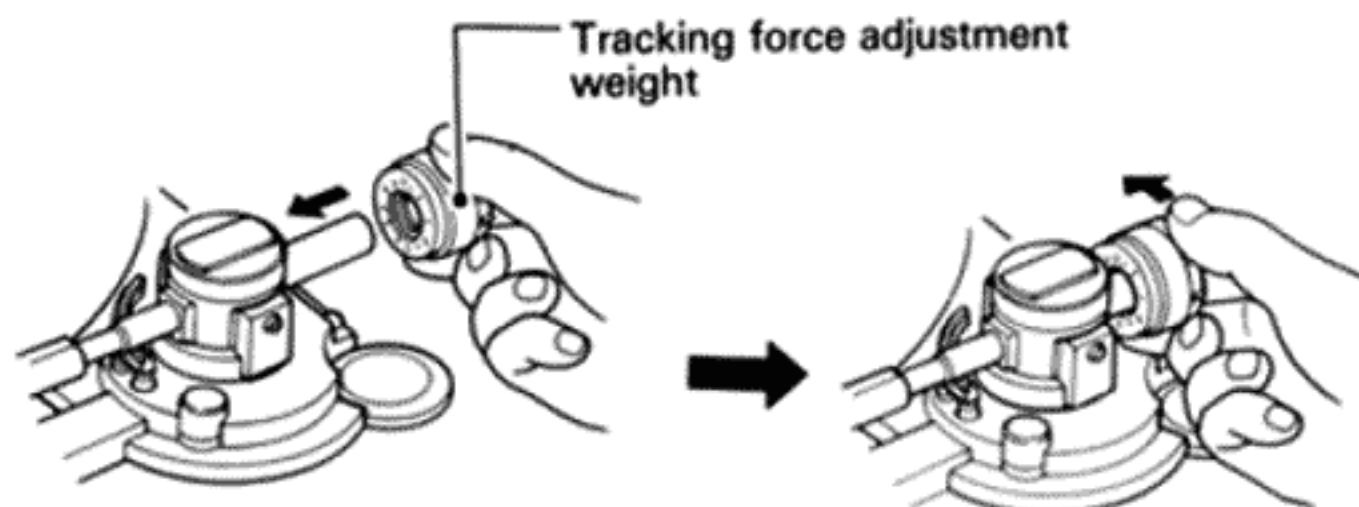
### (3) Mounting the platter and rubber mat

1. Place the platter over the platter shaft.
2. Place the rubber mat on top of the platter.



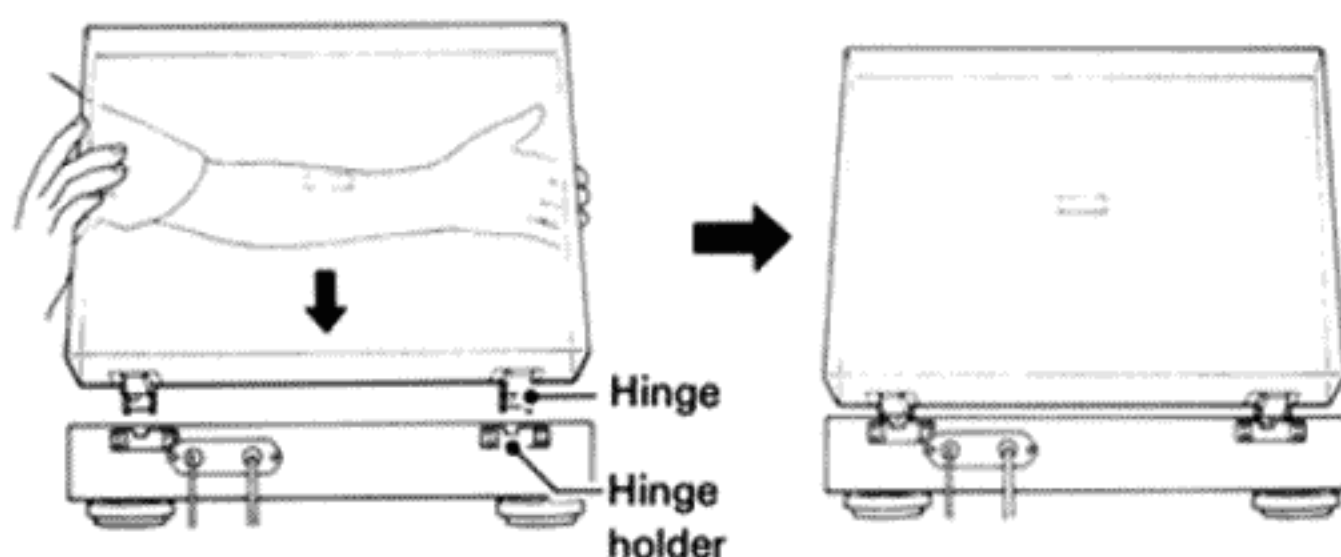
### (4) Attaching the tracking force adjustment weight

1. Insert the weight over the end of the weight shaft with the scale side turned in front.
2. Push it a short way along the shaft and rotate the weight part in the direction indicated by the arrow for two or three turns.



### (5) Mounting the dust cover

1. Hold both sides of the dust cover and slide the hinges into the cabinet's hinge holders.
2. Push down until the dust cover goes no farther.



## STEP 2 ADJUSTING THE TRACKING FORCE AND ANTI-SKATING

**NOTE:**  
Install this unit on a level surface.

- (1) Set the ANTI-SKATE control to [0].



- (2) Connect the power plug to the AC outlet.



- (3) Press the POWER switch and switch on the power.

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**(4) Confirm that the ARM ELEVATION indicator is not lighted.**

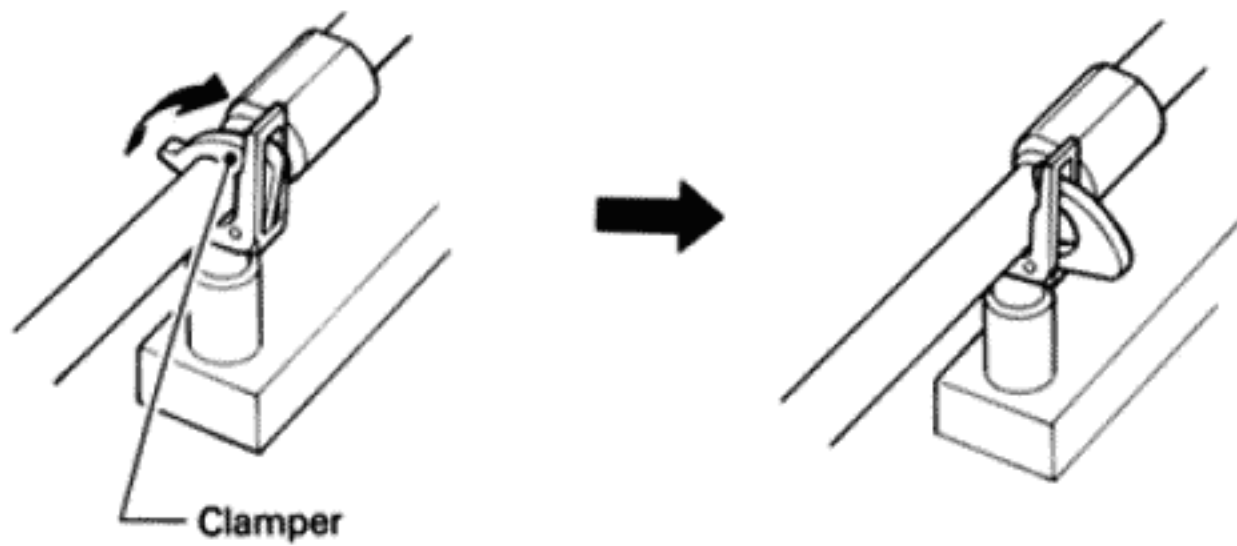
If the indicator is lighted, press the ARM ELEVATION switch so that the indicator goes out

**(5) Release the POWER switch to the OFF position to switch off the power.**



**(6) Release the arm rest.**

Move the arm rest in the direction of the arrow by hand.

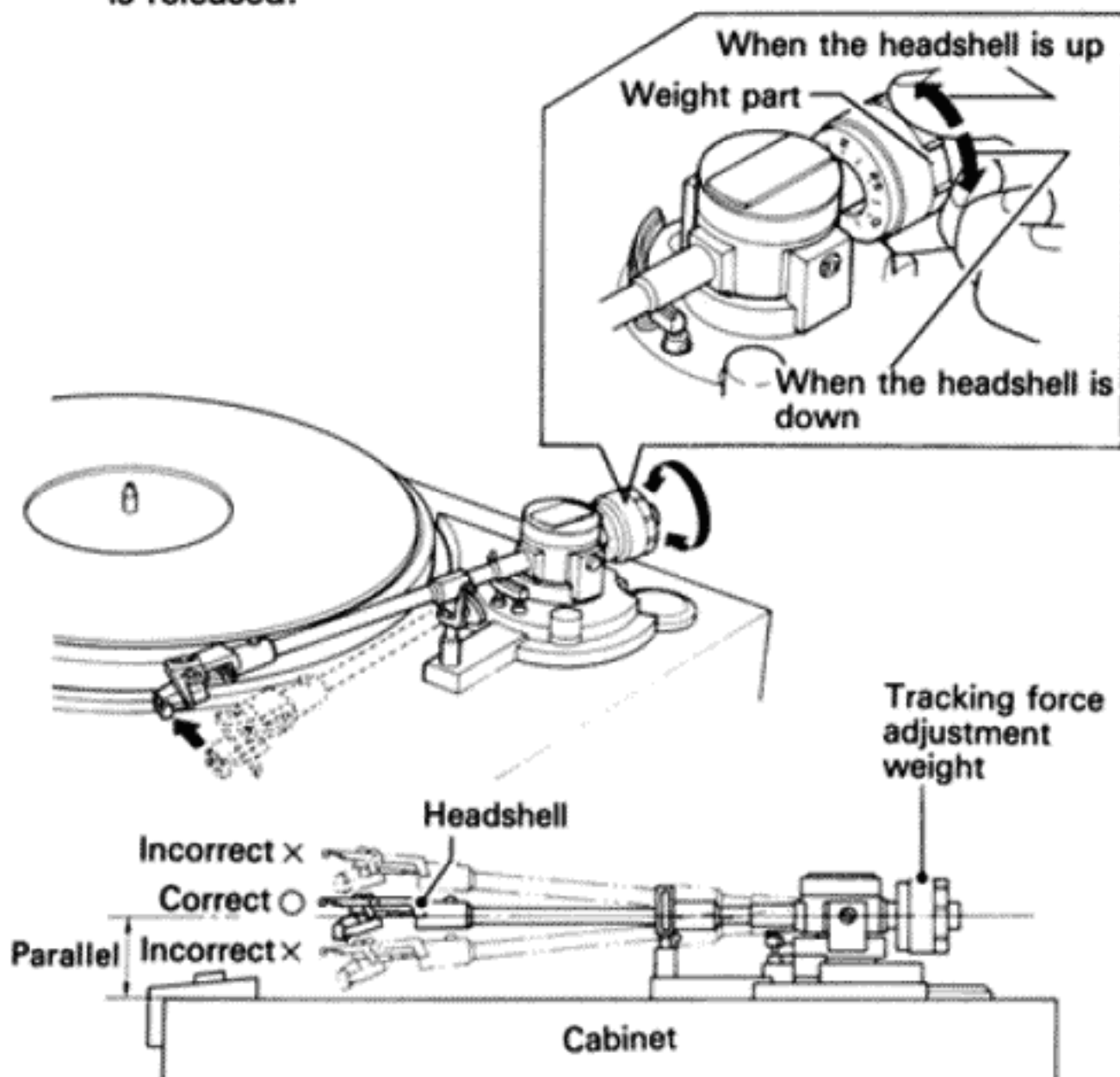


**NOTE.**

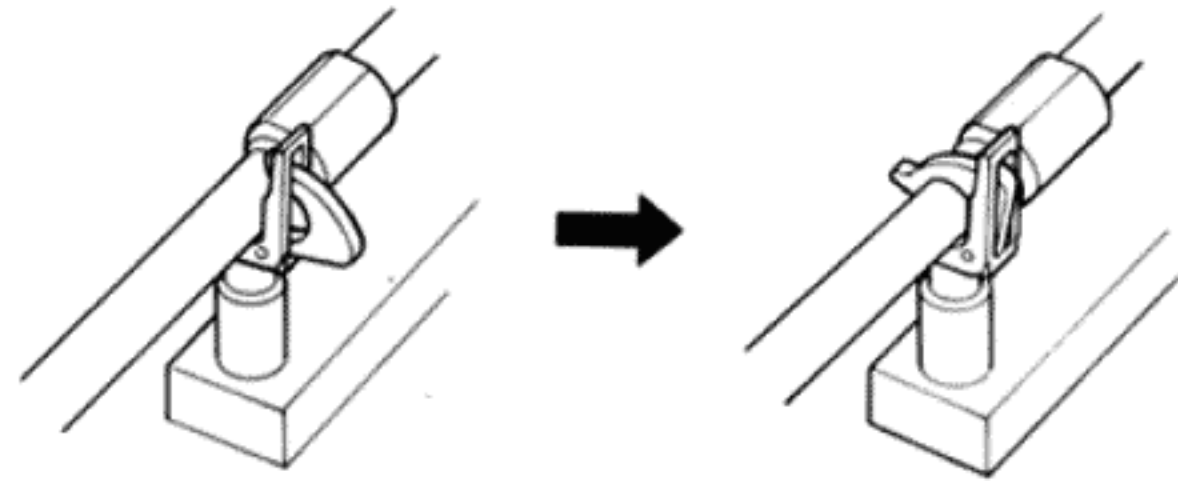
Hold the tonearm with your other hand since it may move.

**(7) Set the horizontal balance (make the tonearm parallel).**

1. Move the tonearm to the arm rest and platter.
2. Rotate the weight part of the tracking force adjustment weight in the direction indicated by the arrow and adjust it so that the tonearm remains parallel to the cabinet when it is released.

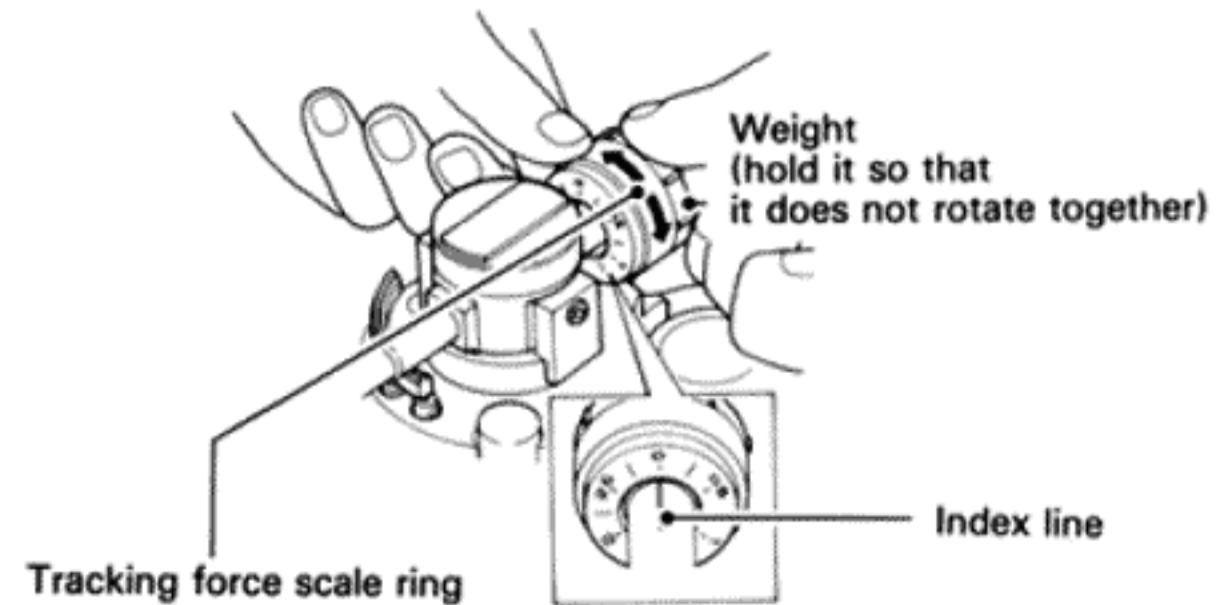


**(8) Anchor the tonearm to the arm rest.**



**(9) Set the tracking force scale ring to [0].**

Rotate only the tracking force scale ring of the tracking force adjustment weight in either of the directions shown by the arrows and align [0] with the index line.



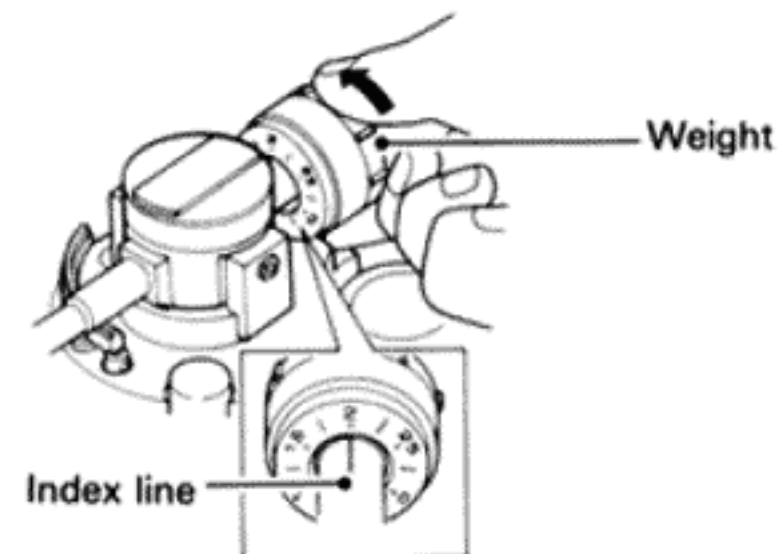
**NOTE:**

- Hold the weight part with your other hand to prevent it from rotating with the ring.
- Once the weight part has been rotated, set the horizontal balance again as under section (7).

**(10) Adjust the tracking force.**

Rotate the weight in the direction indicated by the arrow (the tracking force scale ring also rotates together) and align the 2 position on the scale ring with the index line.

- On the European, U.K. and U.S.A. models adjust to the same figure as the correct tracking force of the cartridge mounted. (For instance, if this force is 1.25 g, then adjust the "1.25" to the index line.)
- One scale unit on the tracking force scale ring is 0.25 g.
- A tracking force of 3 g is applied with every turn of the weight.



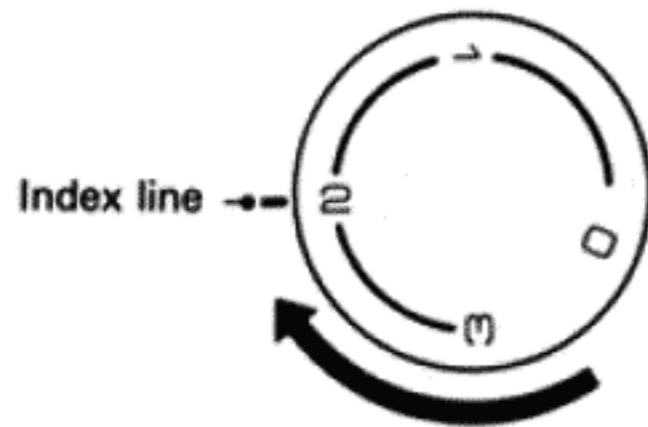
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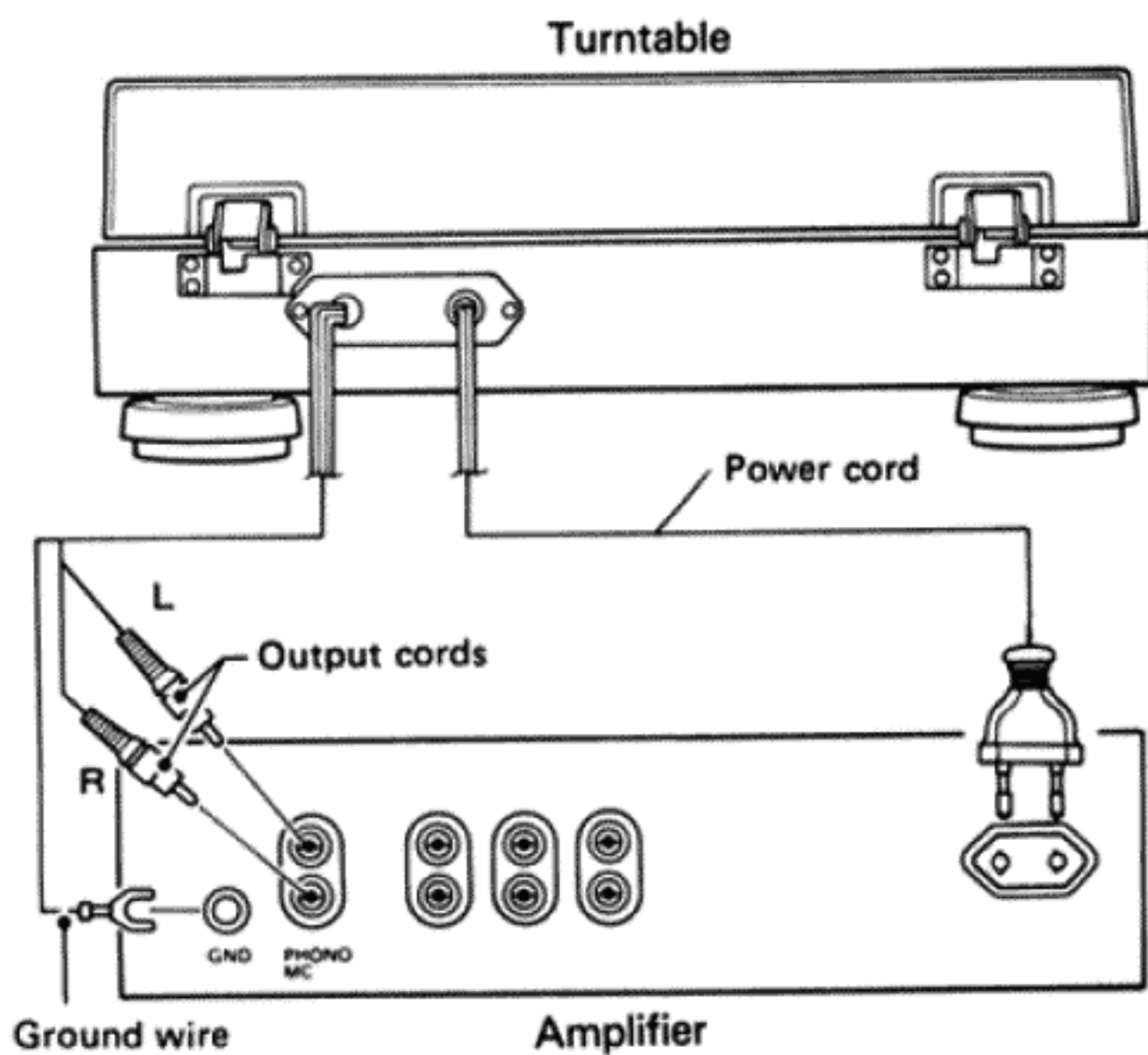
**(11) Adjust the anti-skating.**

Rotate the anti-skating control in the direction of the arrow and align the "2" point on the control with the index line.

- On the European, U.K. and U.S.A. models adjust to the same figure as the correct tracking force of the cartridge mounted. (For instance, if this force is 1.25 g, then adjust the "1.25" to the index line.)



**STEP 3 CONNECTING THE TURNTABLE AND AMPLIFIER**



**Connecting the ground wire**

Attach the metal fitting onto the amplifier ground (GND) terminal.

**Connecting the output cords**

Insert the plugs into the amplifier's "PHONO" input terminals.

- Connect the white plug to the left (L) channel and the red plug to the right (R) channel.
- Insert the plugs as far as they will go.

**Connecting the power cord**

Connect the power plug to the auxiliary "AC OUTLET" on the amplifier or to a household power outlet.

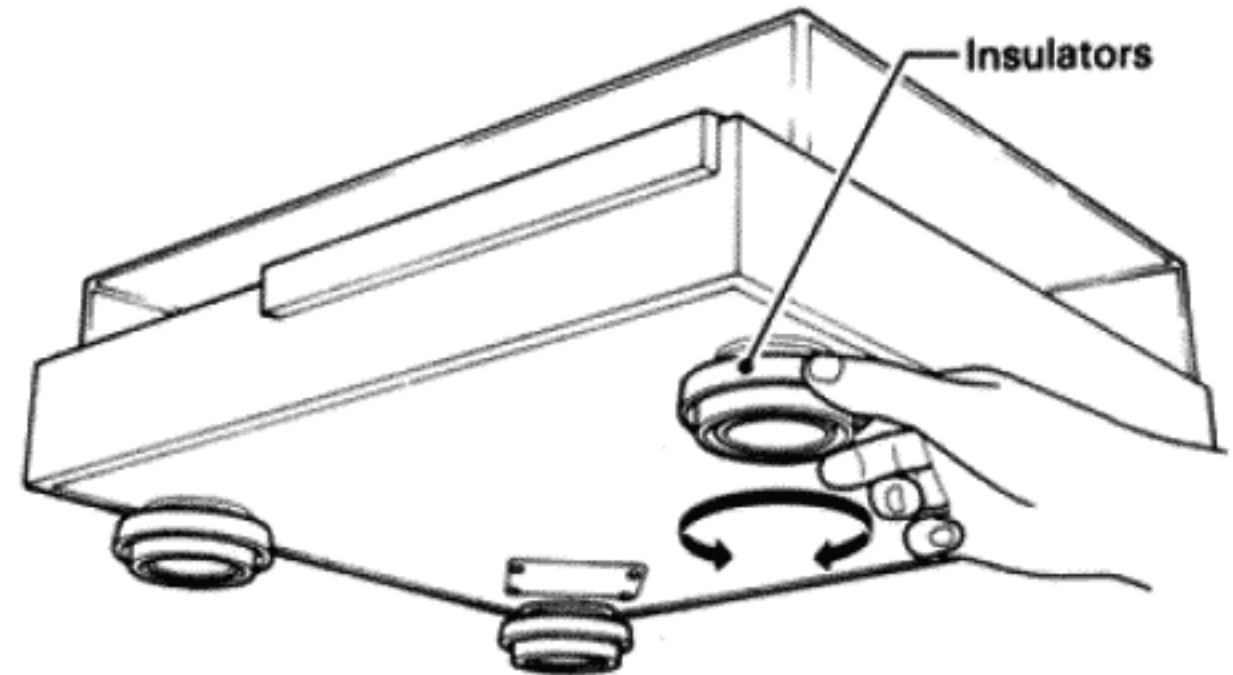
Illustration not applicable to U.K. model. In U.K., the power plug should be connected to the "AC OUTLET" of the amplifier.

**STEP 4 HORIZONTAL ADJUSTMENT OF THE TURNTABLE**

Rotate the four insulators provided on the unit's bottom panel to adjust the height of the cabinet and make the cabinet top horizontal. When rotating these insulators, lift up the cabinet slightly first and then proceed.

**NOTE:**

*If the turntable is moved by sliding it, the insulators may rotate. If this occurs, once again raise the entire cabinet and make the insulator heights equal.*



After having carried out steps [1] through [4], read through the following checkpoints.

Check the tracking force and anti-skating adjustments.

- **The ANTI-SKATE control must be aligned with the same number as the tracking force.**

The following troubles are apparent when the number does not tally with the tracking force:

Too high:

The sound is distorted and the tonearm slides toward the outside of the record.

Too low:

The tonearm slides towards the inside of the record when the stylus descends onto the record.

- **The tracking force must be adjusted within the correct tracking force range of the cartridge.**

The following troubles are apparent when the tracking force is not properly adjusted:

Excessive tracking force:

The sound is distorted and the cartridge itself touches the record.

Insufficient tracking force:

The sound is distorted and interrupted.

- **The tracking force must be adjusted with the ANTI-SKATE control at [0].**

Unless this control is set to the [0] position, a force is generated by the anti-skating mechanism which pulls the tonearm to the right (toward the arm rest). Therefore, when setting the horizontal balance, the tonearm is not at rest and so the operation is difficult to perform.

Even at the [0] position there may be some movement. This is due to the increased rotational sensitivity of the tonearm enabling the stylus to trace efficiently the sound grooves on the record, and it does not indicate that there is anything wrong with the turntable.

Check the installation and connections of the turntable.

- **Connection must be made to the amplifier's PHONO MC terminals. (Only models supplied with cartridge)**

The cartridge supplied with this turntable is an MC (moving coil) type cartridge. Since this type of cartridge has a lower output than an MM (moving magnet) type, be sure to connect the turntable's output cord to your amplifier's MC input terminals. If your amplifier has no MC terminals, a separate transformer and head amplifier for MC cartridges should be used. If the MC cartridge is connected to an amplifier's MM terminals, the playback sound will be lowered in volume and distortion may also be produced, thus preventing the cartridge from performing to its design specifications.

- **Make the connection to the terminals on the amplifier that correspond to the type of cartridge being used. (For European, U.K. and U.S.A. models)**

Connect to the PHONO MM terminals for an MM (moving magnet) type.

Connect to the PHONO MC terminals for an MC (moving coil) type.

- **When using a cartridge other than that supplied:** Consult the Operating Instructions of the cartridge and stereo amplifier and proceed.

- **Incorrect connections of installation will lead to trouble.**

If the equipment is connected improperly, no sound will be heard. If the output cord plugs are not inserted as far as they will go or if the ground wire is not connected, a humming noise will be heard through the speakers.

If the turntable is installed at an angle, the tonearm will slide on the record and the sound will be distorted. If vibrations are transmitted to the turntable, the sound may be discontinuous or it may tremble, and in some cases howl (a prolonged wailing sound from the speakers) may be heard.

- **The connecting cords should be given some slack.**

Check that none of the connecting cords are pulled taut after they have been connected. Tautness may lead to cord disconnections and howl.

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# RECORD PLAY

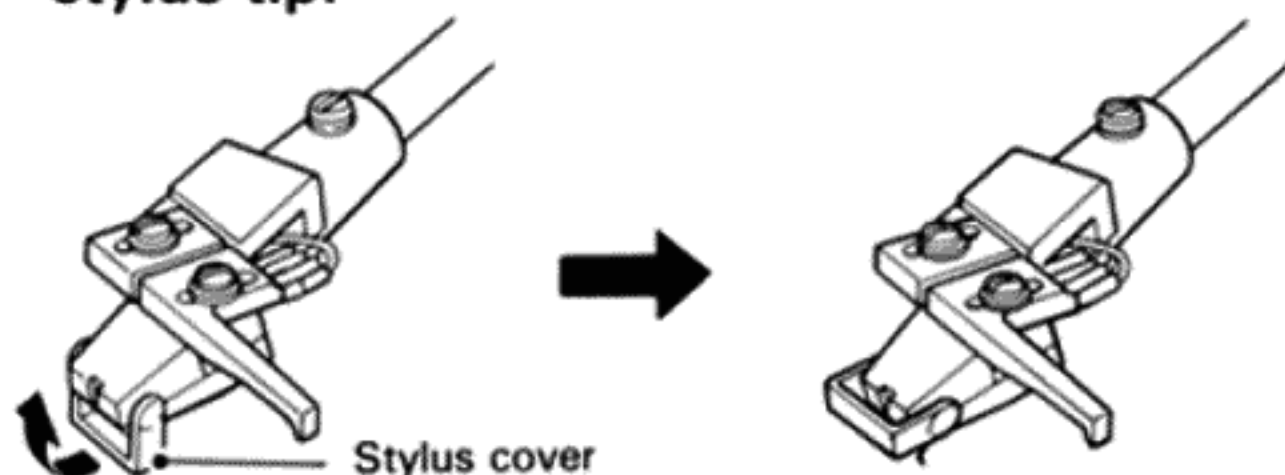
## RECORD PLAY PROCEDURE

(Auto Play)

- (1) Set the stereo amplifier up for record play.

For details, refer to the Operating Instructions of the stereo amplifier.

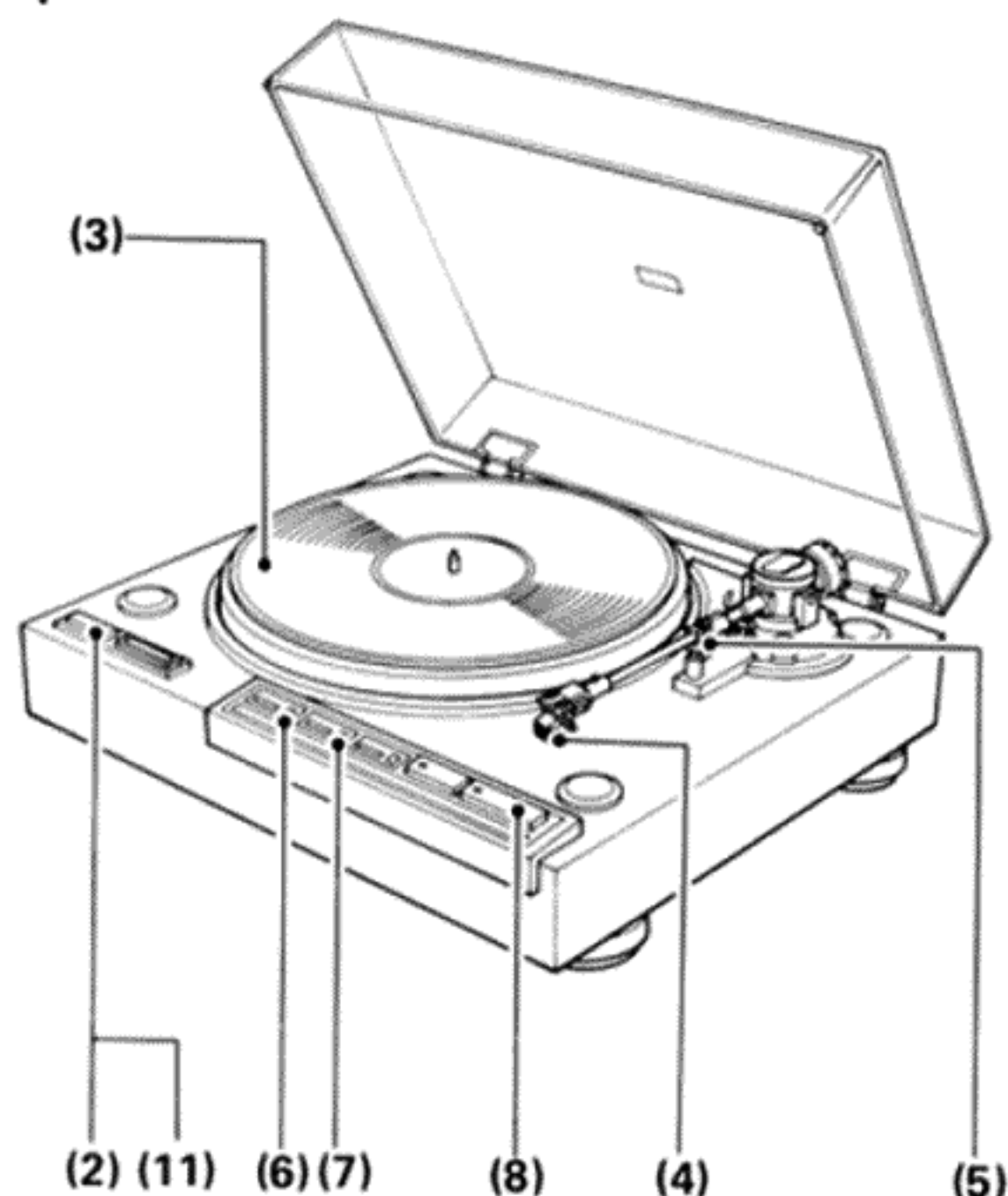
- (2) Press the unit's POWER switch to ON.
- (3) Place the record onto the platter.
- (4) Lift up the stylus cover and expose the stylus tip.



- (5) Release the tonearm.
- (6) Press the SPEED switch and set the speed.
- (7) Press the SIZE switch and set the size of the record.
- (8) Press the START/STOP switch to start record play.
- (9) Adjust the volume and tone using the controls on the stereo amplifier.
- (10) Record play ends.

The tonearm automatically returns to the arm rest and the platter stops rotating.

- (11) Release the POWER switch to the OFF position.



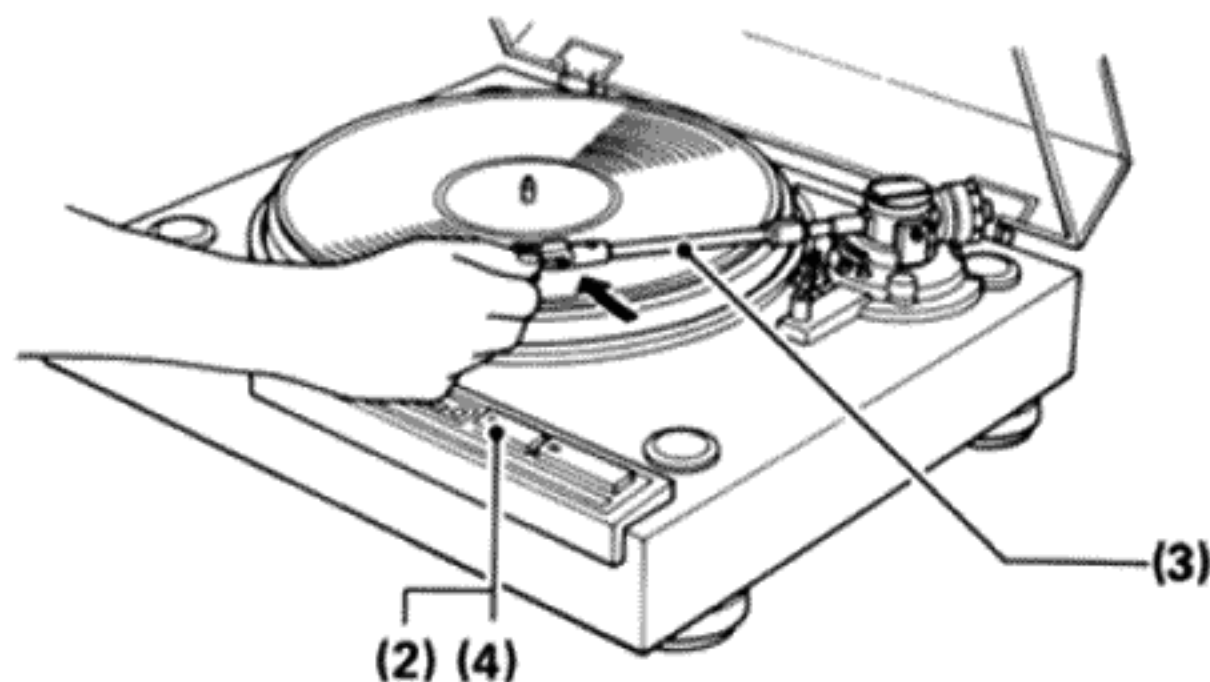
## MANUAL PLAY

Proceed with manual play in the following circumstances:

- When starting play at any track except the first.
- When the size of the record is not standard, which makes auto play impossible.

- (1) Perform steps (1) through (6) of the RECORD PLAY PROCEDURE.
- (2) Press the ARM ELEVATION switch to raise the tonearm.
- (3) Move the tonearm by hand to the desired position on the record.
- (4) Press the ARM ELEVATION switch and start record play.
- (5) Adjust the volume and tone using the controls on the stereo amplifier.

(Upon completion of record play, the tonearm returns automatically to the arm rest.)



## REPEAT PLAY

One side of the record is repeatedly played automatically.

- (1) Perform steps (1) through (9) of RECORD PLAY PROCEDURE and start auto play.
- (2) Press the REPEAT switch to the ON position.

Make the indicator light.

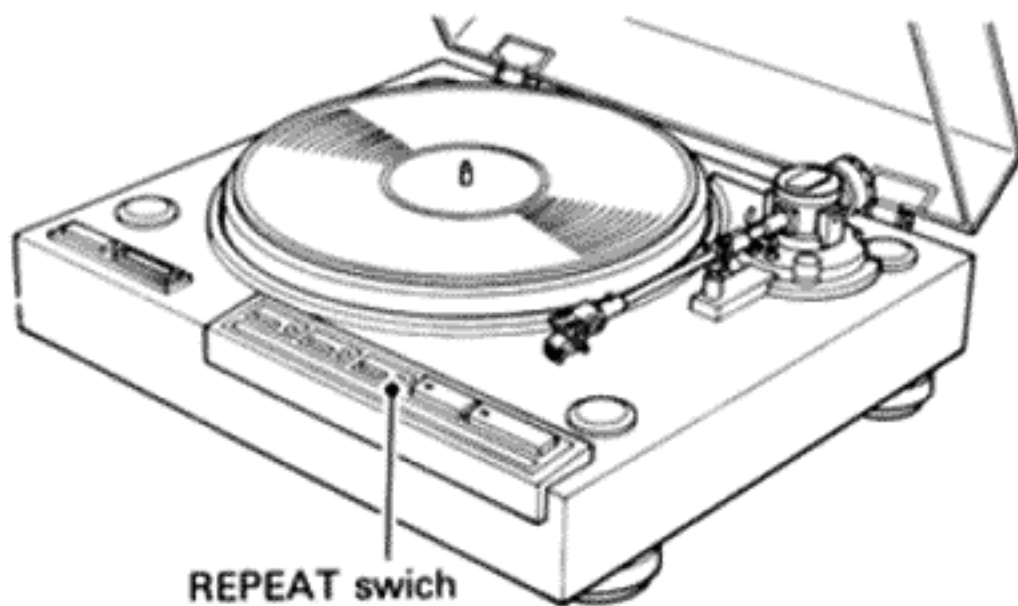
- (3) Play ends. Play is repeated.

When the last track is played, the tonearm automatically returns to the first track and play is repeated. Play is repeated until the repeat play mode is released.

### ■ How to release repeat play.

Press the REPEAT switch once again; the repeat play will be cancelled (the indicator light will go out), and the turntable will revert to its AUTO PLAY function.

Pressing the START/STOP switch in the middle of play will also cancel the repeat function.



### OPERATIONS FOR STOPPING PLAY

#### When stopping play in the middle of a record

#### (1) Press the START/STOP switch.

Several seconds after this switch is set, the tonearm automatically returns to the arm rest and the platter stops rotating.

#### (2) Release the POWER switch to the OFF position.

#### When suspending play temporarily

#### (1) Press the ARM ELEVATION switch.

The stylus rises from the surface of the record and play stops (but the platter continues rotating).

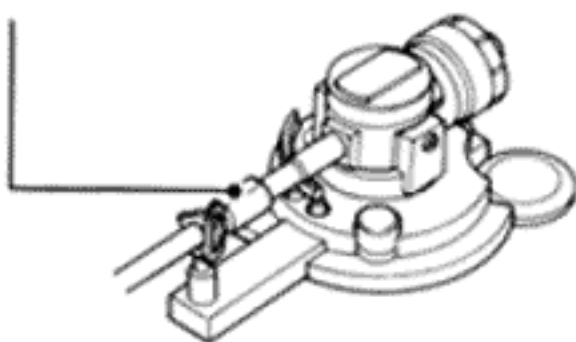
#### NOTE:

After the tonearm has been returned manually to the arm rest, always remember to set the ARM ELEVATION switch to the indicator unlighted position.

#### (2) Press the ARM ELEVATION switch again.

The stylus descends onto the record and play begins again.

This dynamic resonance absorber (DRA) is designed to make the most of the tonearm's performance. It should not be forcibly rotated or pulled.



### ADJUSTING THE STYLUS DESCENT POSITION

Proceed as follows when the stylus does not descend in the proper position on the record during auto play. While performing the adjustment, take care not to scratch the record with the stylus.

#### (1) Perform steps (1) through (7) of the RECORD PLAY PROCEDURE.

(Place a 30 cm LP record on the platter.)

#### (2) Press the START/STOP switch and start auto play.

Check the direction and amount of stylus deviation (how many millimeters toward the inside or outside of the record's lead-in groove).

#### (3) Press the START/STOP switch and return the tonearm to the arm rest.

#### (4) Once the platter has stopped rotating, remove the rubber cap from the adjustment hole.

#### (5) Rotate the screw with a small screwdriver in accordance to the direction of the deviation observed in step 2. (While rotating the screw, hold the tonearm with the other hand.)

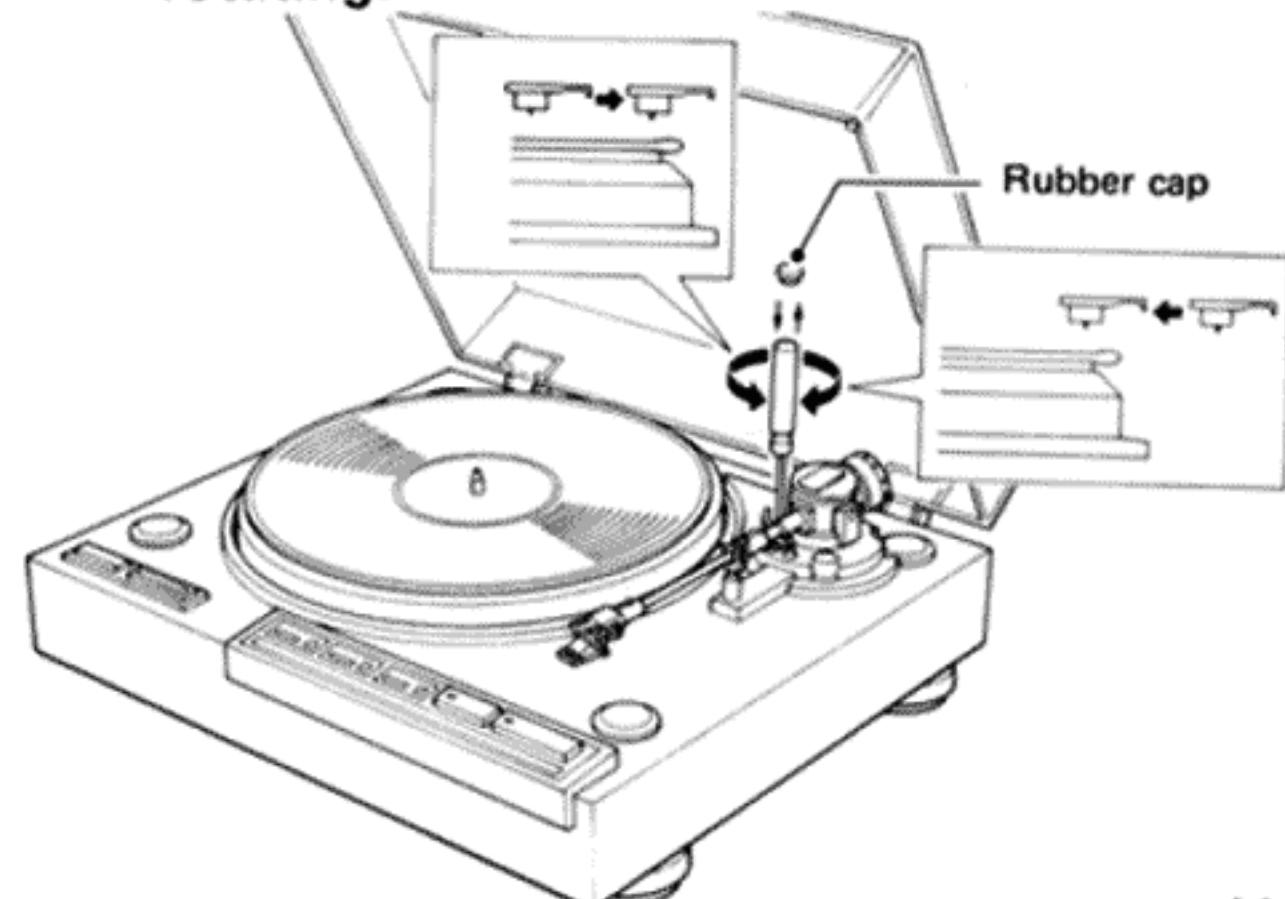
- Every semi-turn of the screw corrects the stylus descent position by about 18 mm.
- Rotate the screw clockwise (↻) if the stylus descends on the outside of the proper position.
- Rotate the screw counterclockwise (↺) if the stylus descends on the inside of the proper position.

#### (6) Check the adjustment.

After the adjustment, press the START/STOP switch and check that the stylus stops at the lead-in groove on the outer circumference of the record.

If the position is still not correct, repeat steps (3) through (5).

#### (7) Replace the rubber cap in the adjustment hole once the platter has stopped rotating.



# MAINTENANCE

## REPLACING THE STYLUS

[Only models supplied with cartridge]

- The service life of the stylus on the cartridge supplied ranges from 800 to 1,000 hours. (If the stylus is used for 1 or 2 hours every day, it will last for one or two years.)

Using a worn or damaged stylus can damage the record and distort the sound reproduced. Remember to replace the stylus at the earliest possible date.

- Always use the PIONEER "PN-7MC" as the replacement stylus.

The cartridge used in this turntable was developed by PIONEER and so the specially designed replacement stylus should be used. It can be purchased at your PIONEER dealer.

- Always obtain the genuine PIONEER replacement stylus.

PIONEER is not able to safeguard against deterioration in performance or possible mechanical trouble if a replacement stylus of another make is used. A genuine PIONEER replacement stylus always comes with the PIONEER mark. Check that this mark is on the stylus before purchasing it.

## STYLUS REPLACEMENT PROCEDURE

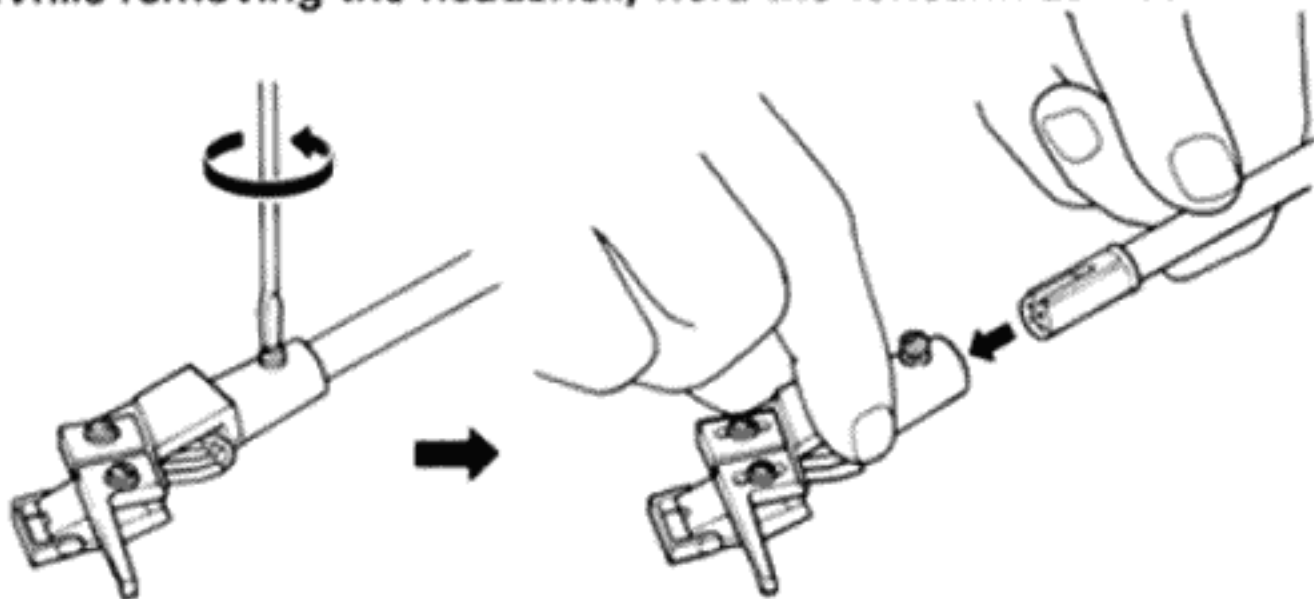
[Only models supplied with cartridge]

*Turn down the stereo amplifier's volume control to its lowest position for this operation.*

1. Anchor the tonearm to the arm rest.
2. Remove the headshell from the tonearm.

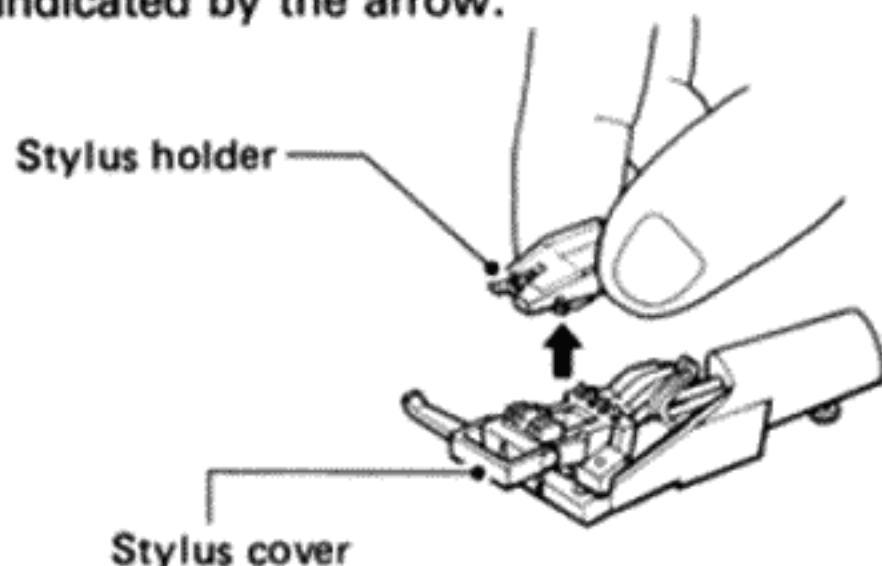
Use a small screwdriver to rotate the anchoring screw in the direction indicated by the arrow to remove the headshell.

While removing the headshell, hold the tonearm as illustrated.



3. Remove the stylus from the cartridge. (This operation should be performed with the stylus cover removed and the stylus itself exposed.)

Hold the stylus holder and pull the stylus gently in the direction indicated by the arrow.



4. Attach the new stylus holder to the cartridge.

5. Mount the headshell onto the tonearm.

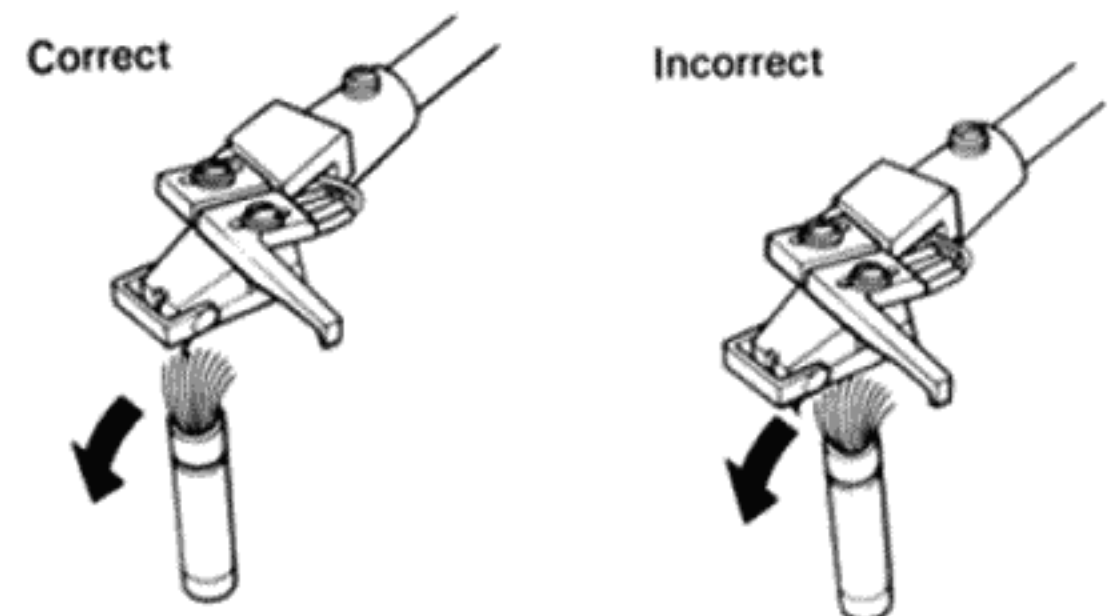
Follow the procedure of section 2 in reverse. Push the headshell as far as it will go and then secure it.

## MAINTAINING THE STYLUS

- Use a soft brush

Move the brush toward you to clear off the dust and dirt. Do not use your finger since this will damage the stylus.

An extremely fine copper wire is wound at the base of the stylus attachment on the cartridge accompanying this unit. Since the use of a brush when cleaning the stylus may result in breakage of this fine wire, take great care not to touch the stylus base.



- When the dirt cannot be removed by a brush

Obtain some stylus cleaner from your dealer and remove. Do not allow any of the liquid to come into contact with the plastic parts as they may dissolve.

## MAINTAINING YOUR RECORDS

- Use a good-quality record cleaner

Cleaning records with a dry cleaner (velvet or nylon brush) may charge the records with static and generate noise. Wet cleaners and static removal sprays are more effective in getting rid of dust.

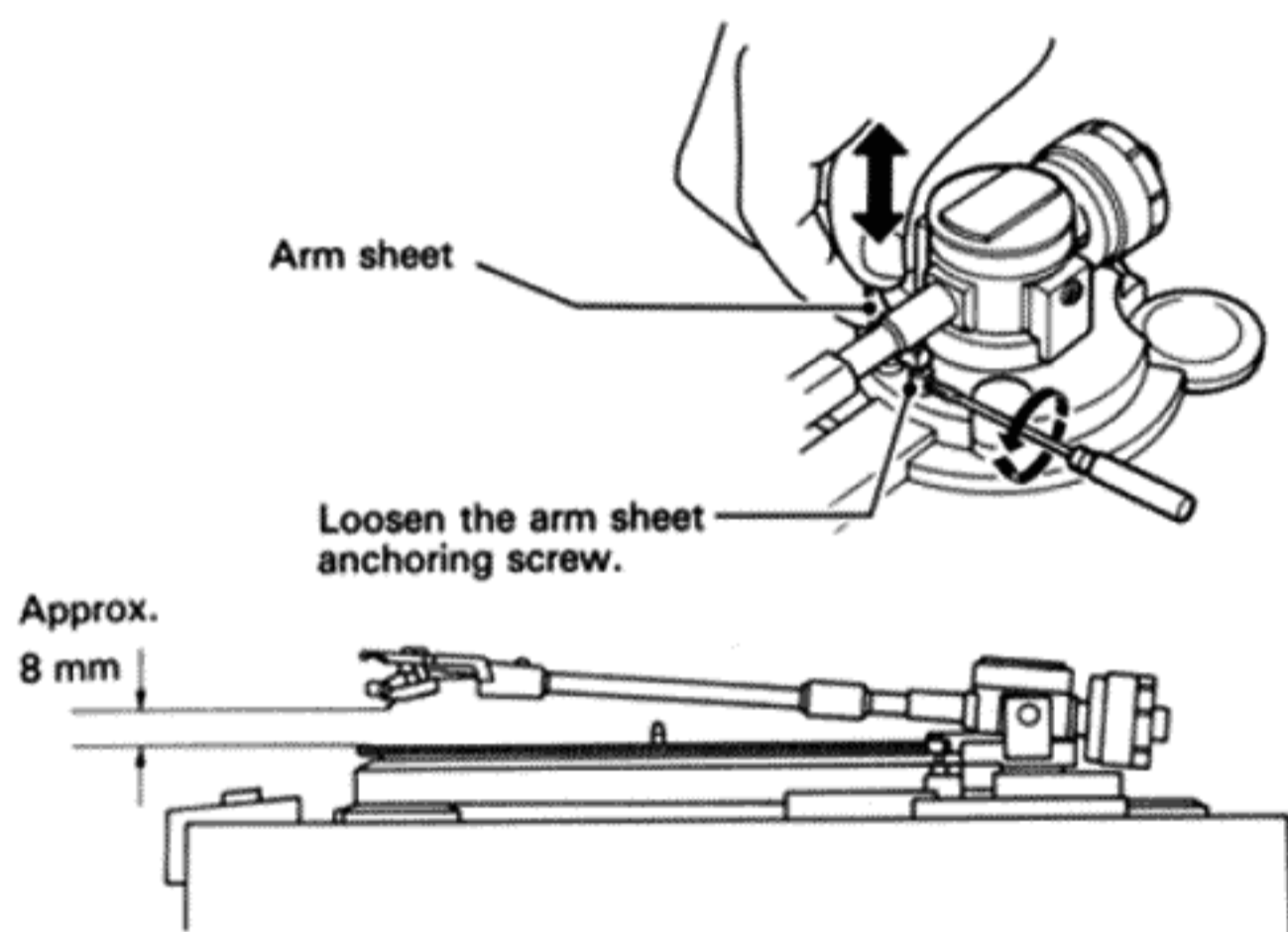
## CONDENSATION

When this turntable is brought into a warm room from previously cold surroundings or when the room temperature rises sharply, condensation may form inside and the unit may not perform optimally. In cases like this, allow the unit to stand for about an hour or raise the room temperature gradually.

## ADJUSTING THE STYLUS TIP HEIGHT

*This adjustment should be performed if the clearance between the stylus tip and record (when the stylus is raised) is too big or small when a cartridge or platter mat other than that supplied is employed. (The correct clearance is approximately 8 mm.)*

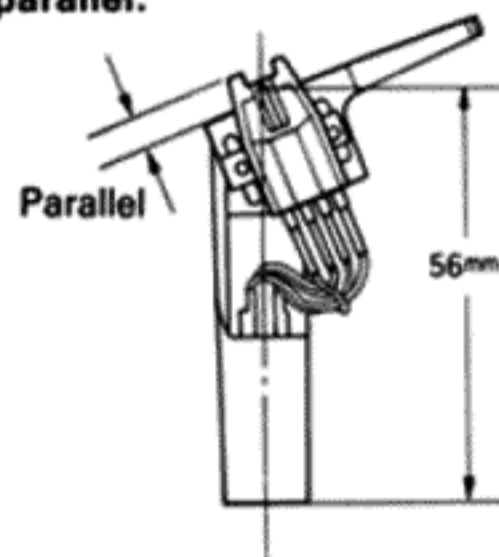
- (1) Press the **ARM ELEVATION** switch and make the indicator light.
- (2) Loosen the arm sheet anchoring screw using a small slot-head screwdriver.
- (3) Move the arm sheet up or down, adjust it so that the clearance between the stylus tip and record is made approximately 8 mm and then tighten up the arm sheet anchoring screw.



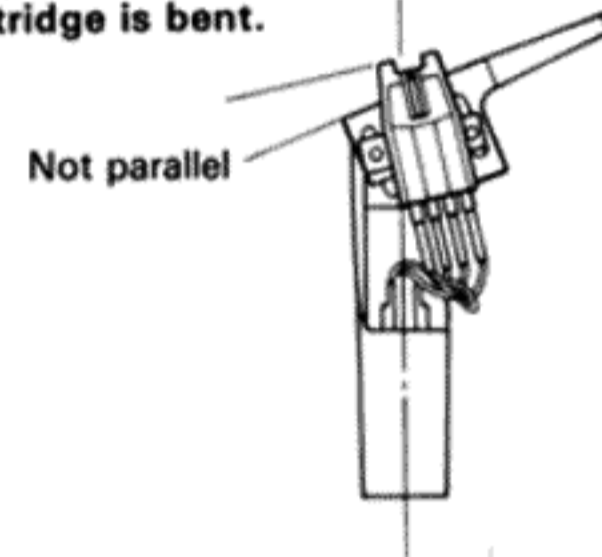
## CARTRIDGE REPLACEMENT

- Any cartridge besides that supplied having a weight of between 3 and 8.5 g may be used with this turntable.
- The polarities of the accessory headshell's leads are as shown below. Align them properly.  
**Red: Right channel (R)**  
**Green: Right channel ground (RG)**  
**White: Left channel (L)**  
**Blue: Left channel ground (LG)**
- The overhang of the tonearm is 15 mm. When using the accessory headshell, the overhang can be adjusted when the stylus and connector length is set to 56 mm.
- After having replaced the cartridge, perform the tracking force and anti-skating adjustments again.

(Acceptable mounting)  
Must be mounted in parallel.



(Unacceptable mounting)  
Cartridge is bent.



ENGLISH

# SPECIFICATIONS

## Motor and Turntable

Drive System .....	Direct-drive
Motor .....	Quartz PLL Hall motor
Turntable Platter .....	310 mm diam. aluminum alloy die-cast
Speeds .....	33-1/3 and 45 rpm
Wow and Flutter .....	Less than *0.012% (WRMS) 0.025% (WRMS) ± 0.035% WTD Peak (DIN)

Values marked with an "\*" designate the wow and flutter for motor, and do not include the cartridge or tonearm load.

Signal-to-Noise-Ratio .....	More than 80 dB (DIN-B) (with Pioneer cartridge model PC-7MC)
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### Motor characteristics

Start up .....	Less than 1/2 revolution
Speed variation .....	Less than 0.002%
Drift .....	Time: 0.00008%/h Temp: 0.00003% °C

## Tonearm

Type .....	Static-balance type, Straight pipe arm
Effective Arm Length .....	235 mm
Overhang .....	15 mm
Usable Cartridge Weight .....	3 g (min.) to 8.5 g (max.)

## PC-7MC Specifications

Type .....	Moving coil type
Stylus .....	0.3 x 0.7 mil diamond (PN-7 MC)
Output Voltage .....	0.2 mV (1 kHz, 5 cm/s LAT. Peak)
Tracking Force .....	1.7 g to 2.3 g (proper 2 g)
Frequency Response .....	10 to 35,000 Hz
Recommended Load .....	100 Ω (with MC trans.: 40 Ω)
Weight .....	3.3 g

## Subfunctions

Auto lead in, Auto return, Auto cut, Repeat, Quick play, Quick stop, Anti-skating, Arm elevation, Tracking-force direct-read-out, Insulator height adjusting device, Free stop hinges.

## Miscellaneous

### Power Requirements

HEMT, HBT models .....	AC 220 V/240 V ~ (switchable), 50, 60 Hz
KUT, KCT models .....	AC 120 V, 60 Hz
S, S/G models .....	AC 110 V/120 V/220 V/240 V ~ (switchable), 50, 60 Hz

### Power Consumption

HEMT, HBT models .....	9 W
KUT, KCT models .....	10 W
S, S/G models .....	7 W

Dimensions .....	460 (W) x 164 (H) x 409 (D) mm 18-1/8 (W) x 6-3/4 (H) x 16-1/8 (D) in.
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Weight .....	8.6 kg/19 lb
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## Accessories

EP Adapter .....	1
Operating Instructions .....	1
Cartridge mounting parts (For HEMT, HBT, KUT, KCT models)	
Screws (L) .....	2
Screws (M) .....	2
Screws (S) .....	2
Washers .....	2
Nuts .....	2
Headshell .....	1

### NOTE:

Specifications and design subject to possible modification without notice, due to improvements.

## INFORMATION TO USER [FOR U.S.A. MODEL]

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 this component with respect to the receiver
- move this component away from the receiver
- plug this component into a different outlet so that component 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 US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

*The above instructions apply only to units which will be operated in the United States.*