

The home of the turntable

THE VINYL **ENGINE**®

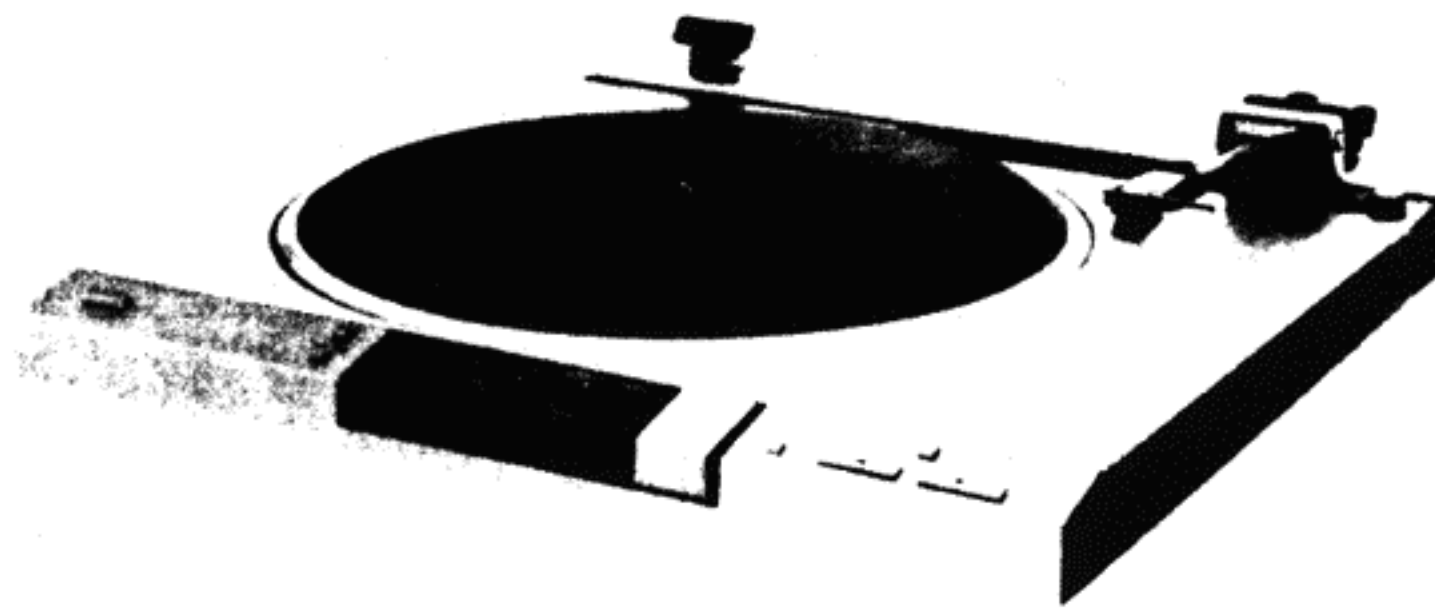
For more turntable manuals and setup information
please visit www.vinylengine.com

Operating Instructions

STEREO TURNTABLE

PL-L800

KU
KC



IMPORTANT NOTICE

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.

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

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■ TURNTABLE FEATURES ■

■ LINEAR TRACKING TONEARM WITH LOW-NOISE DIRECT-DRIVE MOTOR

The linear type tonearm tracks the record grooves in the same tangential way in which the record was originally cut, providing faithful sound reproduction. An electronically controlled linear servo motor directly moves the tonearm to constantly maintain its perpendicular tracking angle.

■ UNIVERSAL HEADSHELL CONNECTOR MAKES CARTRIDGE CHANGES EASY

The tonearm has a universal headshell connector to let you use any standard cartridge on the market.

■ LOW MASS STRAIGHT-LINE POLYMER-GRAPHITE TONEARM ENHANCES TRACKING CHARACTERISTICS

The tonearm pipe is made of polymer-graphite to provide both high rigidity and outstanding damping characteristics. The headshell uses a composite carbon fiber material to achieve an extremely low mass. Because the entire tonearm mass is centered in one point, tracking stability is excellent in both planes.

■ CORELESS MOTOR WITH SH ROTOR PROVIDES SMOOTH, STABLE DRIVING FORCE

The coreless motor eliminates cogging, a major cause of speed deviations, and the SH rotor bearing construction lowers the center of gravity in the rotating section to assure highly stable operation.

■ QUARTZ PLL SERVO CONTROL FOR ROTATIONAL PRECISION

A PLL system with a highly accurate and stable quartz oscillator maintains a consistent rotational precision regardless of tracking forces, groove modulations or arm-type record cleaners.

■ AUTOMATIC LEAD IN

Automatically places the tonearm stylus in the lead in groove of the record when PLAYBACK START/STOP switch is depressed.

■ AUTOMATIC REPEAT

When this switch is depressed, the record is automatically played over again until the REPEAT PLAYBACK switch is depressed again.

■ AUTOMATIC RETURN/AUTOMATIC CUT

At the end of record play, the tonearm is automatically returned to the arm rest. Depressing the PLAYBACK START/STOP switch during playback automatically returns the tonearm to the arm rest at that point.

■ MANUAL/REMOTE TONEARM OPERATION

The linear tracking tonearm may be operated manually or by remote control switch for offset tonearm turntable convenience.

■ QUICK PLAY/QUICK STOP

Fast turntable platter start up and stop.

■ ARM ELEVATION MECHANISM

Operating ARM ELEVATION SWITCH gently lifts the tonearm from the record groove for temporarily stopping playback, or for starting playback in the middle of a record.

■ HIGH-OUTPUT MOVING-COIL (MC) CARTRIDGE

Amplifier or preamp may be used in the moving-magnet (MM) cartridge position. No special MC transformer needed.

SAFETY INSTRUCTIONS

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

RETAIN INSTRUCTIONS — The safety and 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.

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.

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.

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

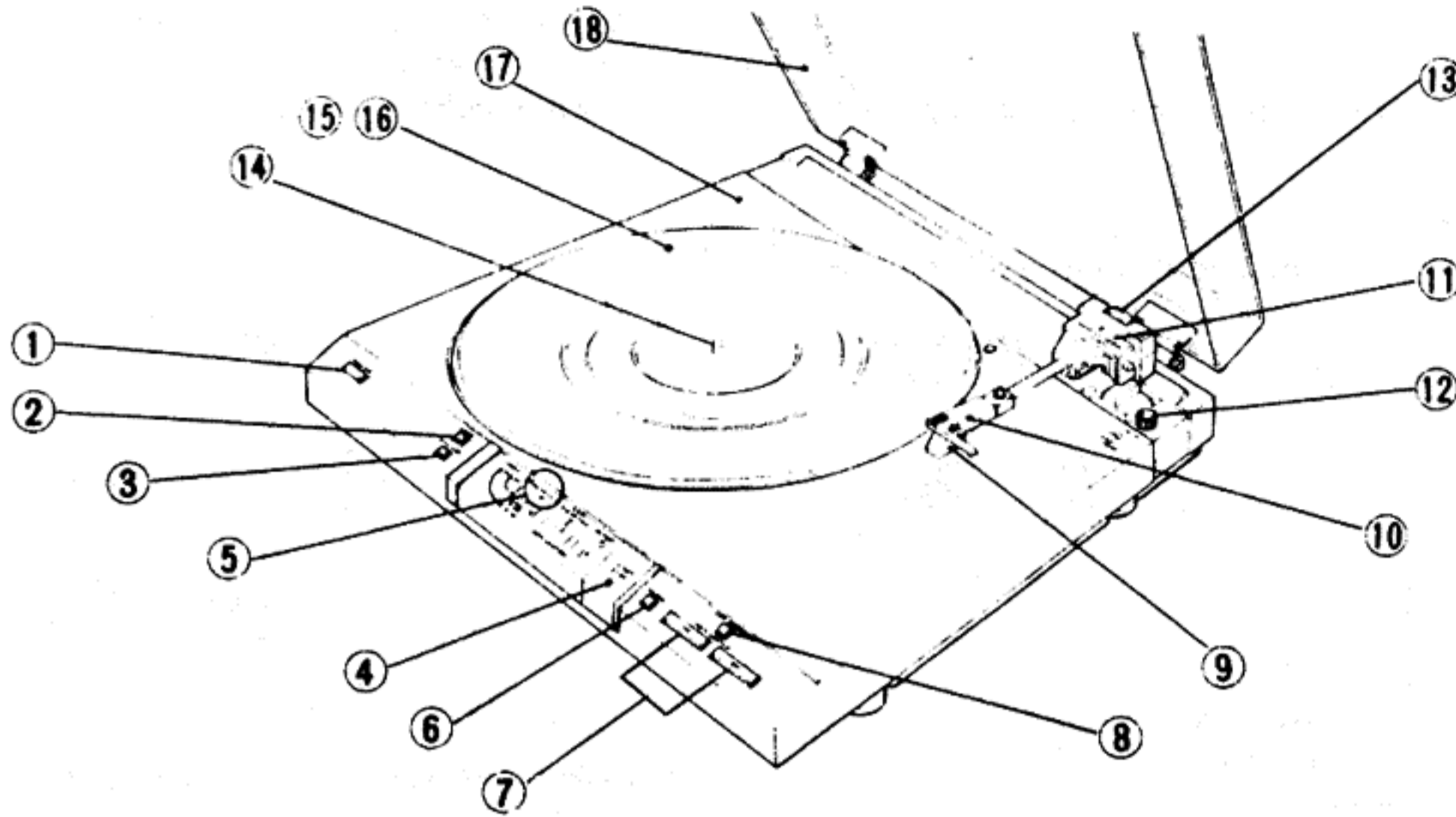
OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

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. All other servicing should be contacted nearest Pioneer authorized service center.

PANEL FACILITIES



① POWER SWITCH (POWER)

Depress this switch to turn power ON and OFF.

Switch depressed – Power ON

Switch out – Power OFF

When power is turned ON, the SPEED 33, DISC SIZE 12" 30, and ARM ELEVATION lamp is illuminated.

② SPEED SELECTOR SWITCH (SPEED)/LAMP (▲ 33 ▲ 45)

Depress this switch until the lamp corresponding to speed of the record to be played is illuminated.

When power is turned ON- the "33" lamp is illuminated.

"33" lamp illuminated – 33 1/3 rpm LP record playback

"45" lamp illuminated – 45 rpm EP record playback

③ RECORD SIZE SELECTOR SWITCH (DISC SIZE)/LAMP (● 7" 17 ● 12" 30)

Depress this switch until the lamp corresponding to the record size is illuminated. When power is turned ON, the "12" 30" lamp is illuminated.

"12" 30" lamp illuminated – 30 cm (12") LP record playback

"7" 17" lamp illuminated – 17 cm (7") EP record playback

④ PLAYBACK START/STOP SWITCH (START/STOP)

This switch is depressed to start automatic playback or to stop playback in the middle of a record. (See page 9 for detailed instructions.)

⑤ QUARTZ LOCK INDICATOR (QUARTZ LOCK)

This lamp illuminates indicating accurate speed of 33 1/3 or 45 rpm.

⑥ REPEAT PLAYBACK SWITCH (REPEAT)/LAMP (↺)

Depressing this switch will illuminate the "REPEAT" lamp and repeat playback of the present record. (See page 10 for detailed instructions.)

⑦ TONEARM POSITIONING SWITCH (ARM LOCATION)/LAMP (◀ · ▶)

Depress this switch to move the tonearm to the left or right in the manual playback mode. (See page 11 for detailed instructions.)

Depressing the ◀ switch moves the tonearm to the left and causes the ◀ lamp to blink.

Depressing the ▶ switch moves the tonearm to the right and causes the ▶ lamp to blink.

The tonearm movement speed is variable in two steps depending on the pressure applied to the switch.

Depress firmly for fast speeds, lightly for slow speeds.

⑧ ARM ELEVATION SWITCH (ARM-ELEVATION)/LAMP (▼)

Depress this switch to raise or lower the tonearm in the manual playback mode. (See page 11 for detailed instructions.) When power switch is turned ON, this lamp is illuminated.

Lamp illuminated (▼) – tonearm raises

Lamp extinguished – tonearm lowers

⑨ CARTRIDGE (PC-4MC)

⑩ HEADSHELL

⑪ TONEARM

⑫ ARM CLAMP KNOB (ARM CLAMP)

Turn this knob to lock the tonearm into the arm clamp. (See page 9 for detailed instructions.)

LOCK position – tonearm locked

OPEN position – tonearm lock released. (Keep lock in this position for normal operations.)

⑬ STYLUS TRACKING FORCE ADJUSTMENT WEIGHT

Rotate this weight to adjust vertical tracking force. (See page 6~7 for detailed instructions.)

⑭ CENTER SHAFT

⑮ PLATTER

⑯ RUBBER PLATTER MAT

⑰ CABINET

⑱ DUST COVER

SETTING UP THE TURNTABLE

(Complete **STEP 1** through **STEP 4** before operating turntable.)

STEP 1 ASSEMBLY

(Do not plug in the power cord until all steps are complete.)

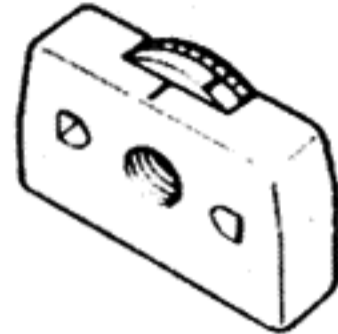
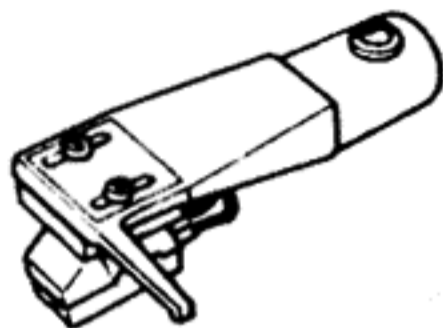
1. Check for Accessories

The following accessory parts are enclosed in a molded styrofoam board.

EP adapter

Headshell

Stylus tracking force adjustment weight



Used for playing 45 rpm records.

Attach to the tonearm.

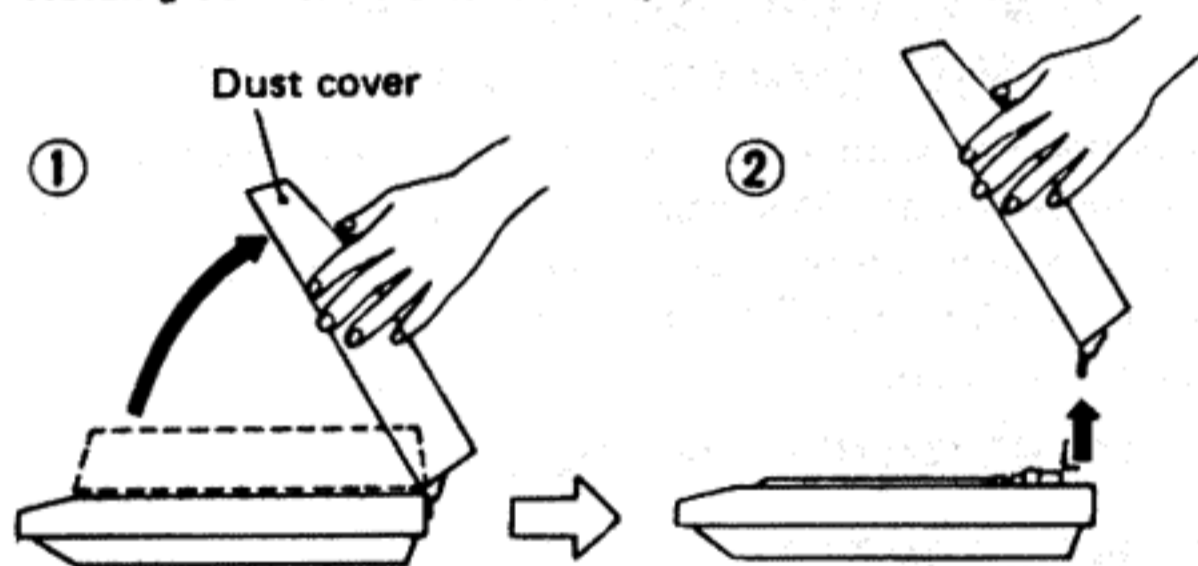
Headshell adapter (0.5 grams)



Use this headshell adapter when using cartridges other than the one supplied with this turntable (cartridges heavier than 5 grams and/or with a stylus height of more than 17 mm). Refer to page 14 for details.

2. Remove the Dust Cover

1. Open the dust cover to its fully open position.
2. Holding both sides of the cover, lift off the cabinet.



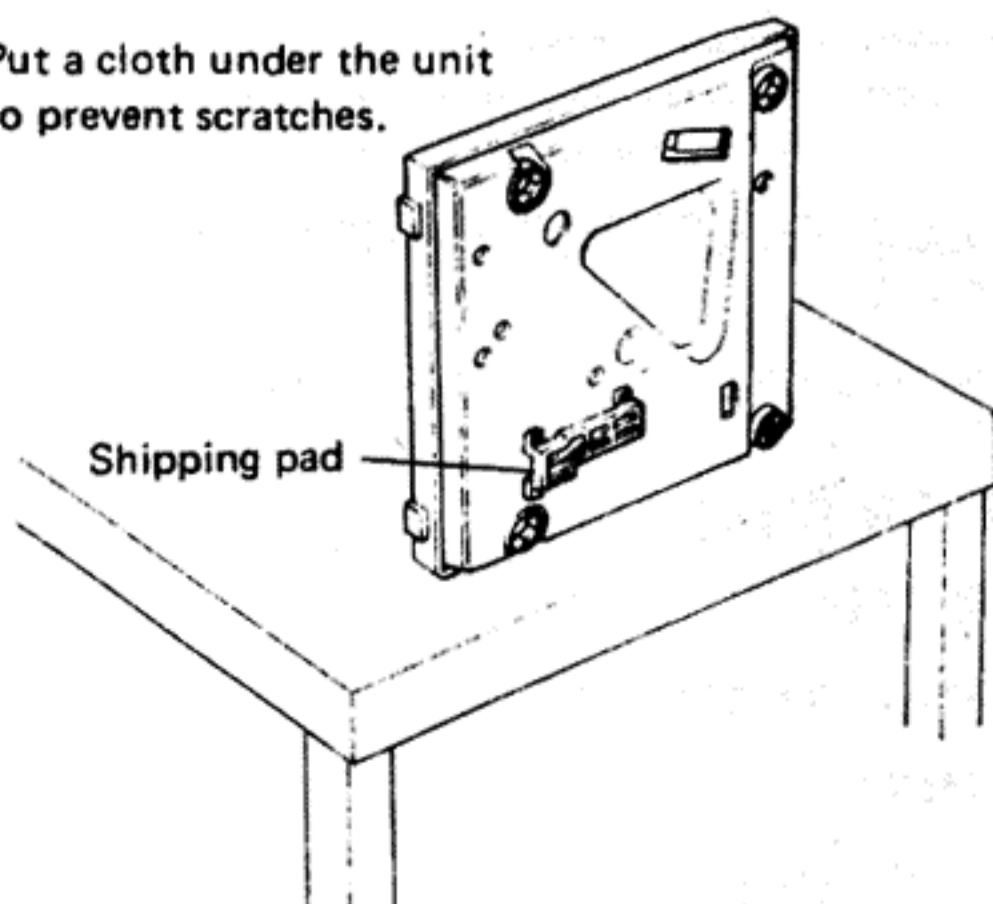
NOTE:

Do not place the dust cover where it will get scratched.

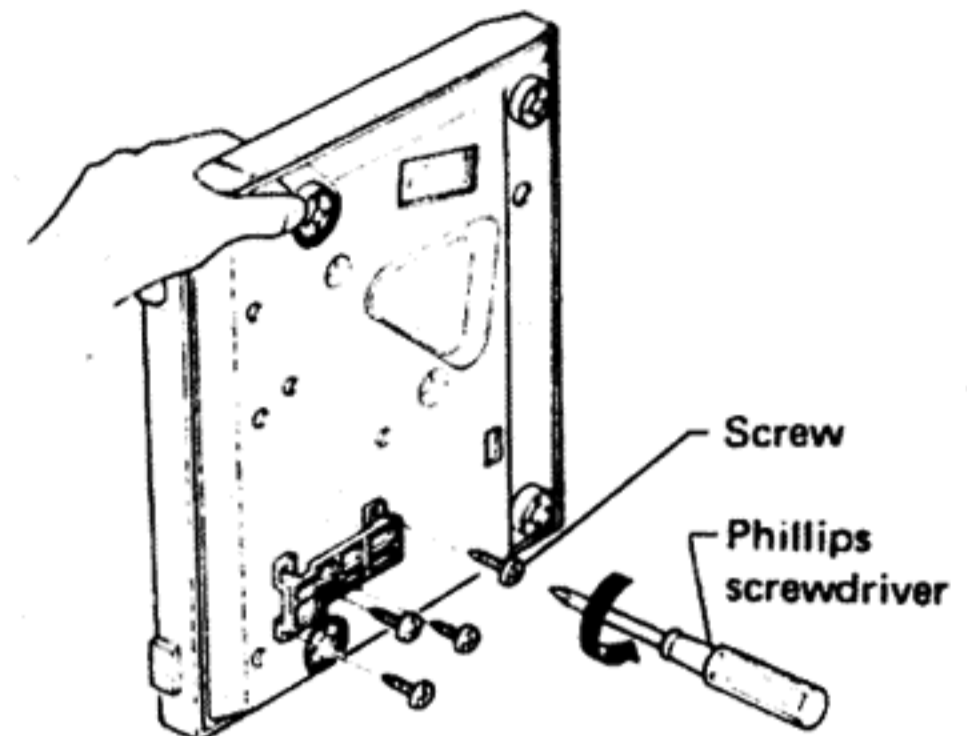
3. Removing the tonearm shipping pad

1. Position the unit as shown in the diagram.

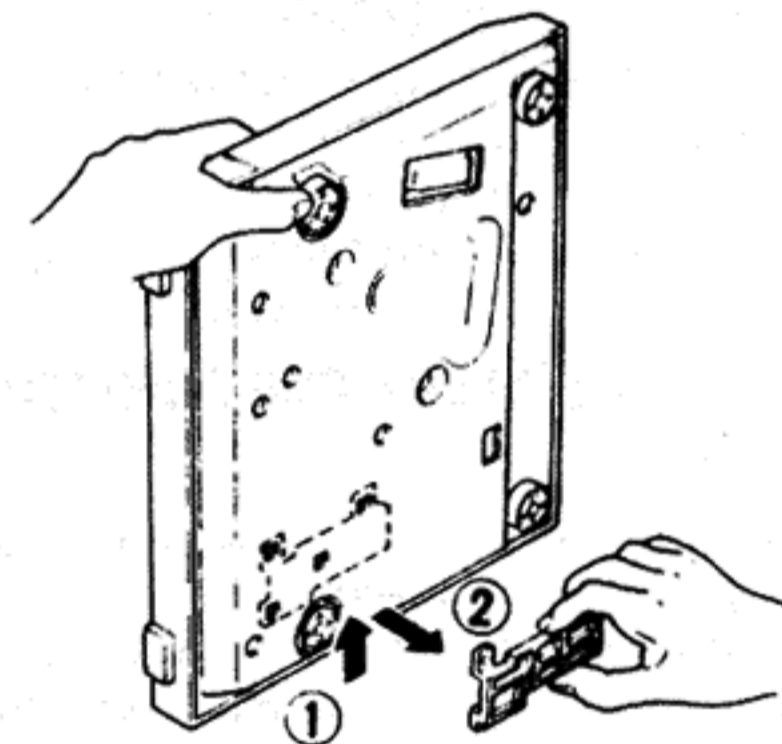
Put a cloth under the unit to prevent scratches.



2. Steady the unit with one hand to prevent it from falling, and using a medium-sized Phillips screwdriver with the other hand, remove the four screws.



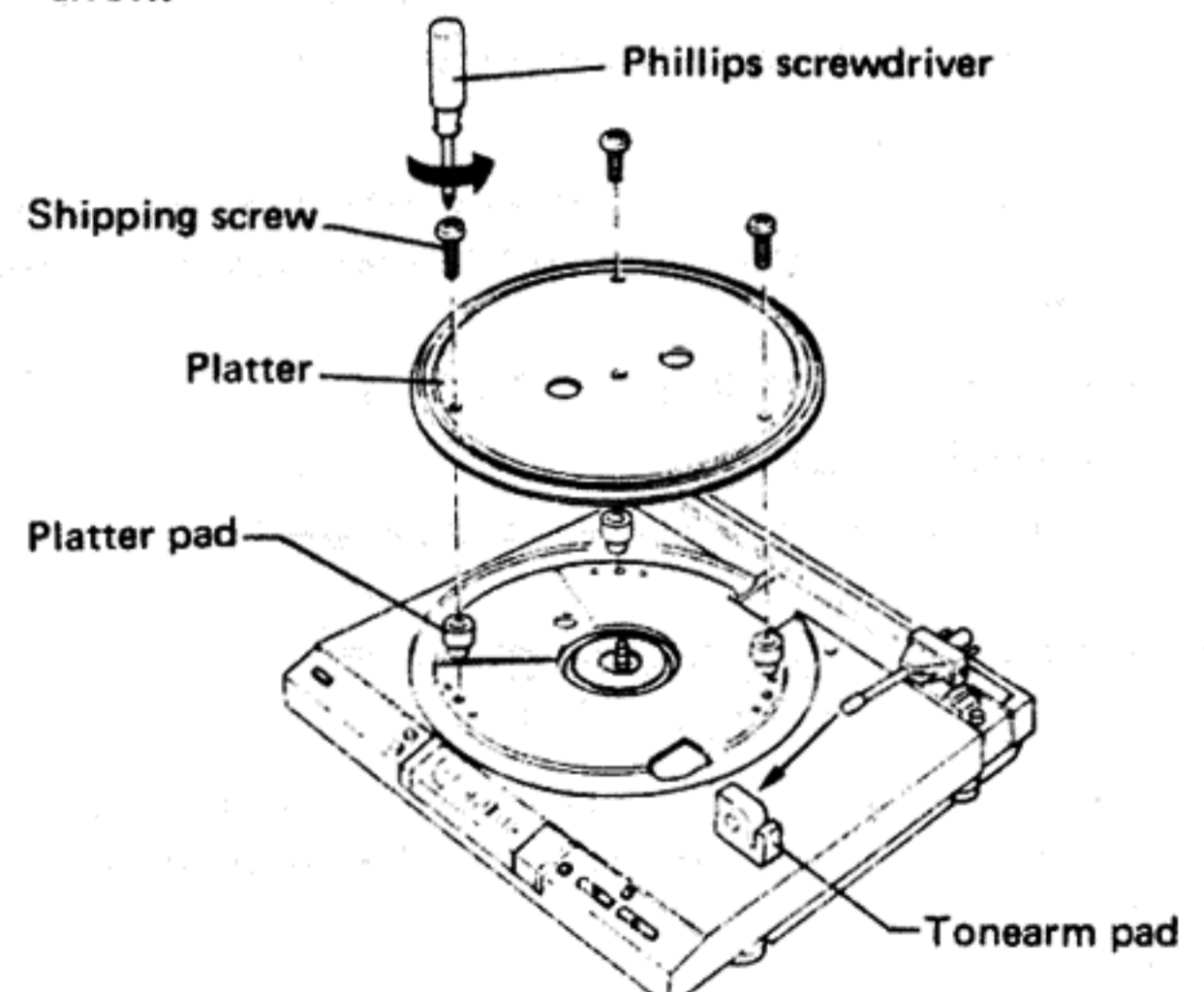
3. Slide the tonearm shipping pad out from the side ①, then lift it out ②.



4. Set the unit back down carefully.

4. Remove the Shipping screws and Tonearm Pad

1. Using a medium-sized Phillips screwdriver, remove the three screws securing the platter to the deck (turn screws counter-clockwise) and take off the platter and platter pads.
2. Remove the tonearm pad by pulling it in the direction of the arrow.

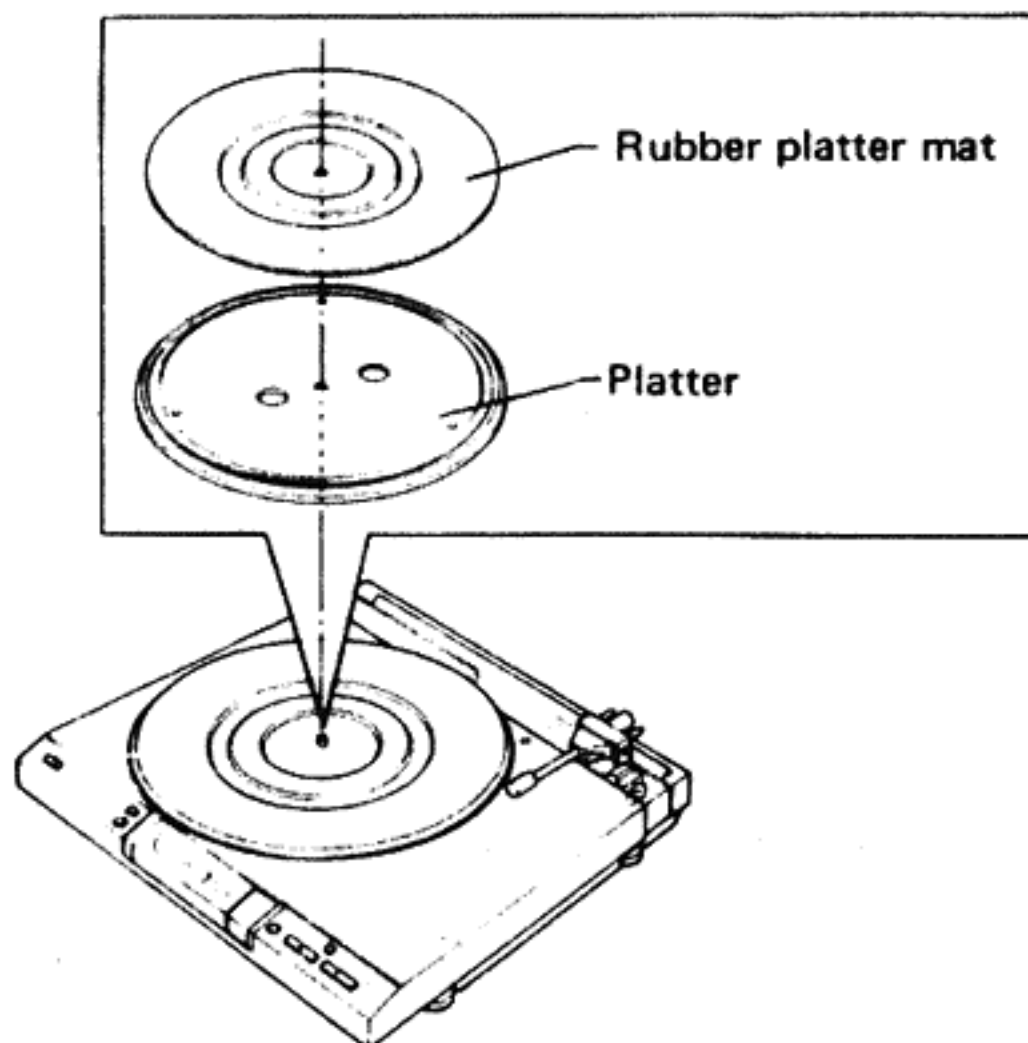


NOTE:

Turntable will not operate unless screws are removed. Keep the screws and pads for future use whenever the turntable is shipped or moved any distance.

5. Install the Platter and Rubber Platter Mat

1. Place the platter over the turntable center shaft.
2. Place the rubber platter mat on the platter.



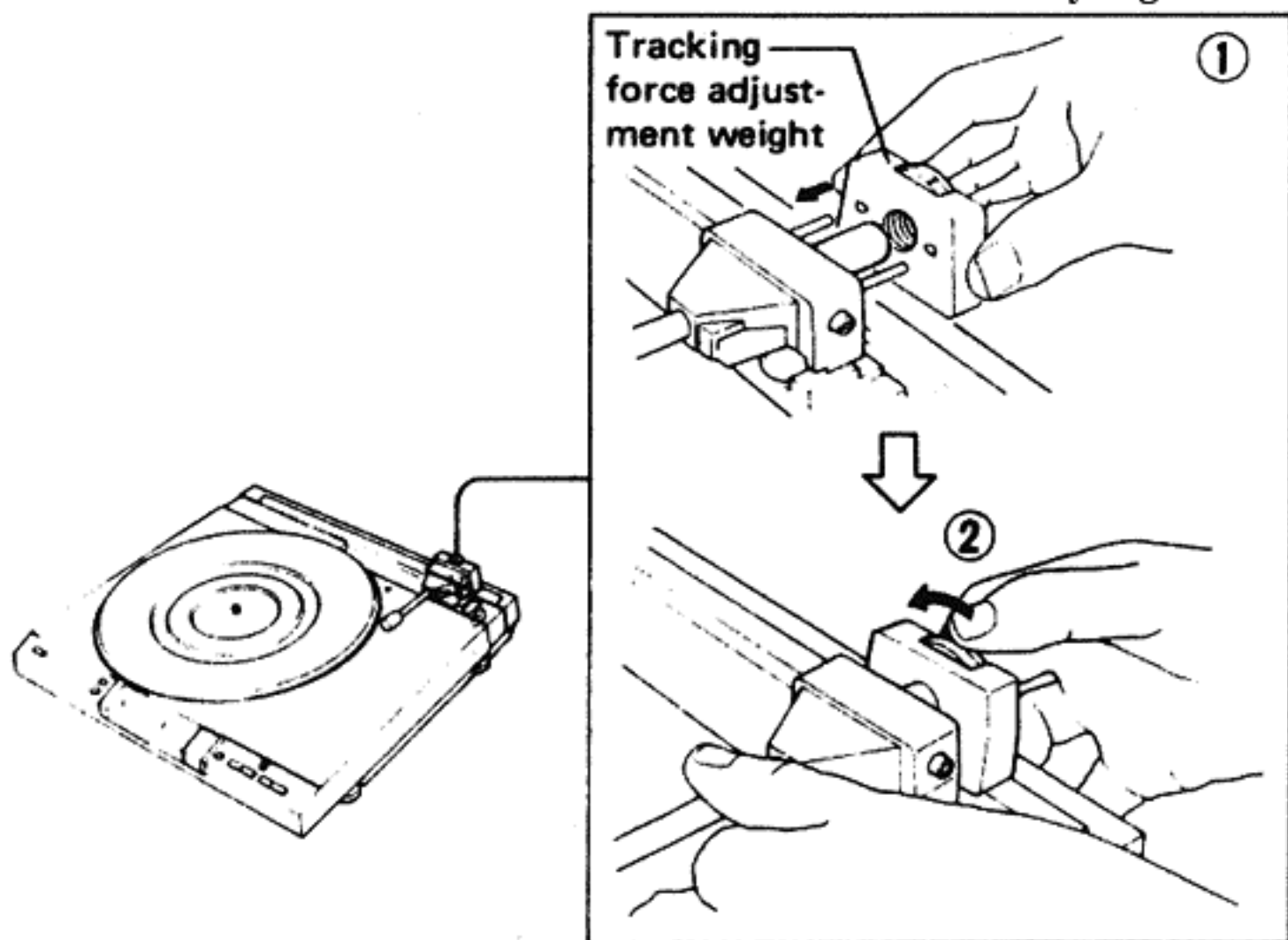
NOTE:

Do not bump the turntable center shaft, cabinet, or tonearm during platter installation.

6. Mounting the stylus Tracking Force Adjustment Weight

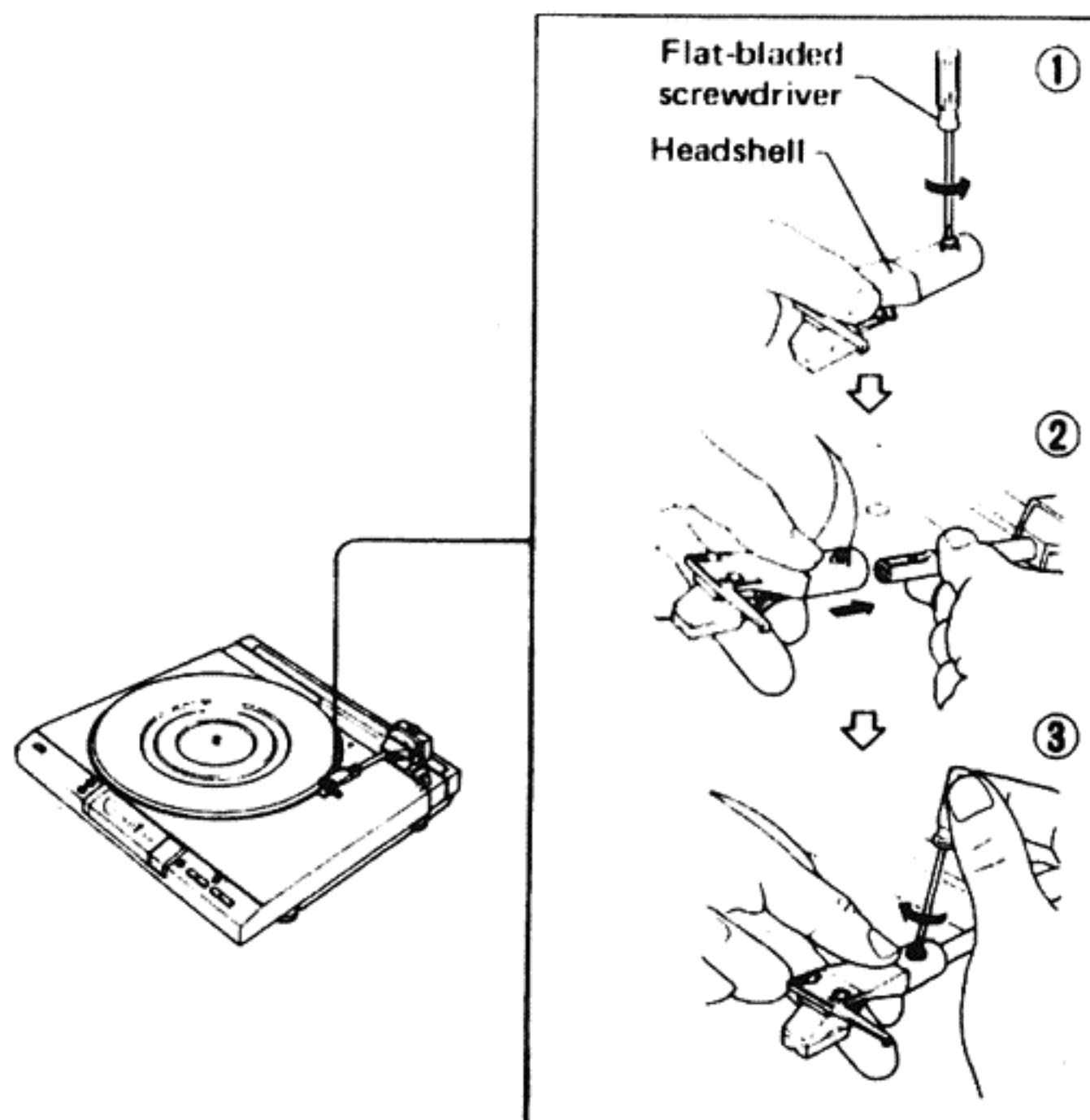
1. Position the weight as shown in the diagram and slide it onto the tonearm weight shaft.
2. Turn the weight portion (serrated ring) in the direction of the arrow completely to its stop to prevent the weight from falling off the shaft.

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7. Install the headshell

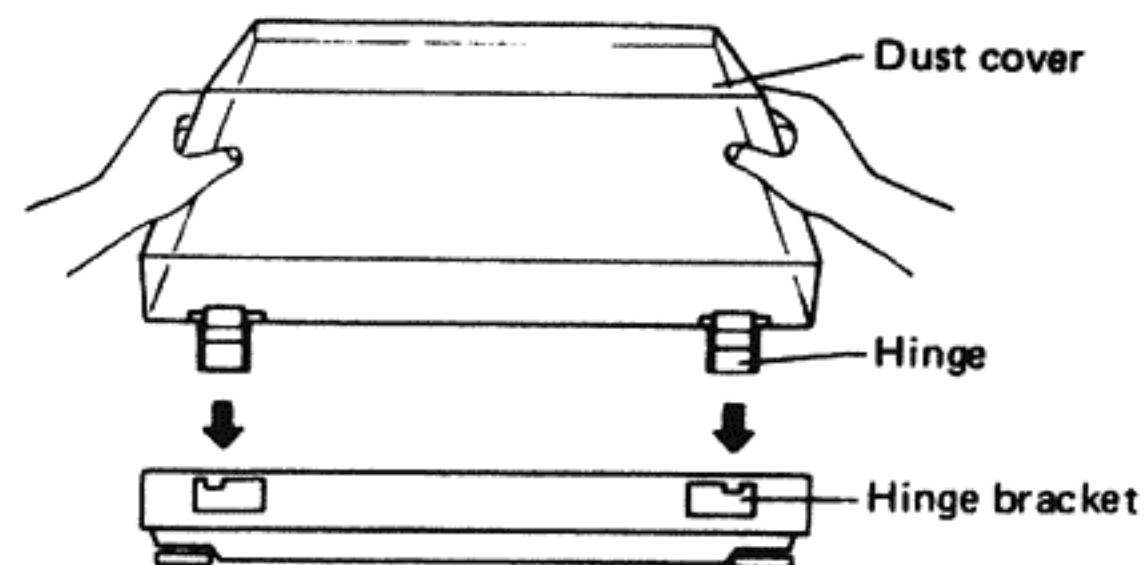
1. Loosen the screw using a small flat-bladed screwdriver.
2. Slide the headshell onto the tonearm. Make sure the headshell is in as far as it will go.
3. Secure the locking screw.



8. Remove the plastic strap securing the tonearm.

9. Install the Dust Cover

1. Holding the dust cover by both sides, tip it back and insert its hinges into the cabinet hinge brackets.
2. Make certain the cover will close correctly.

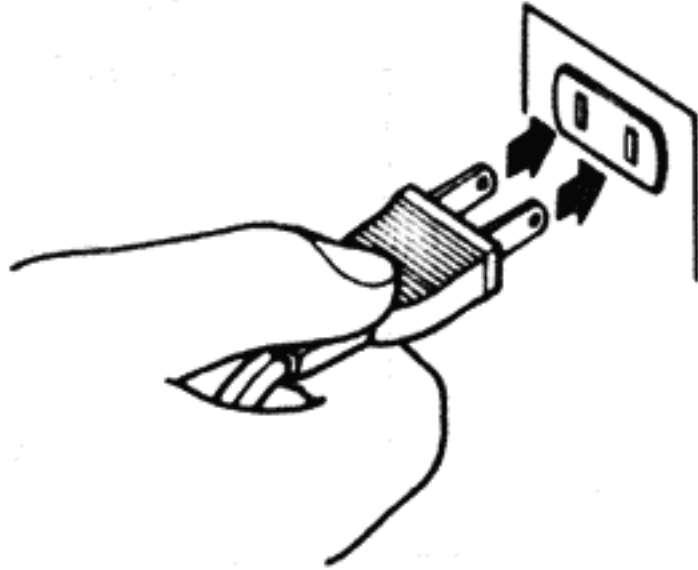


SETTING UP THE TURNTABLE

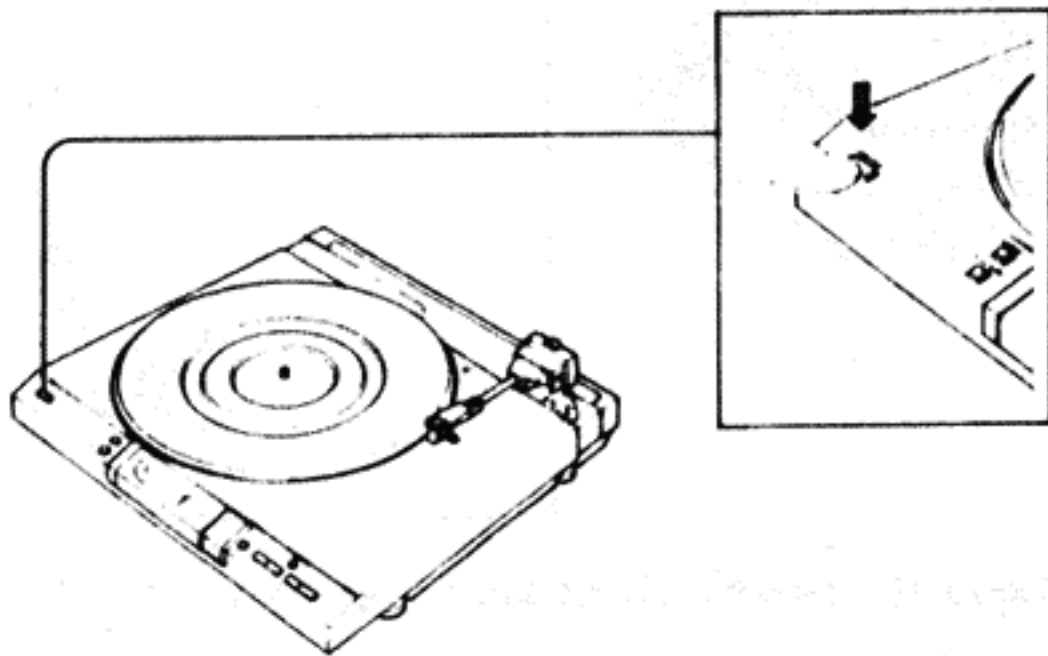
STEP 2 ADJUSTING STYLUS TRACKING FORCE

(Make this adjustment with turntable on a level surface.)

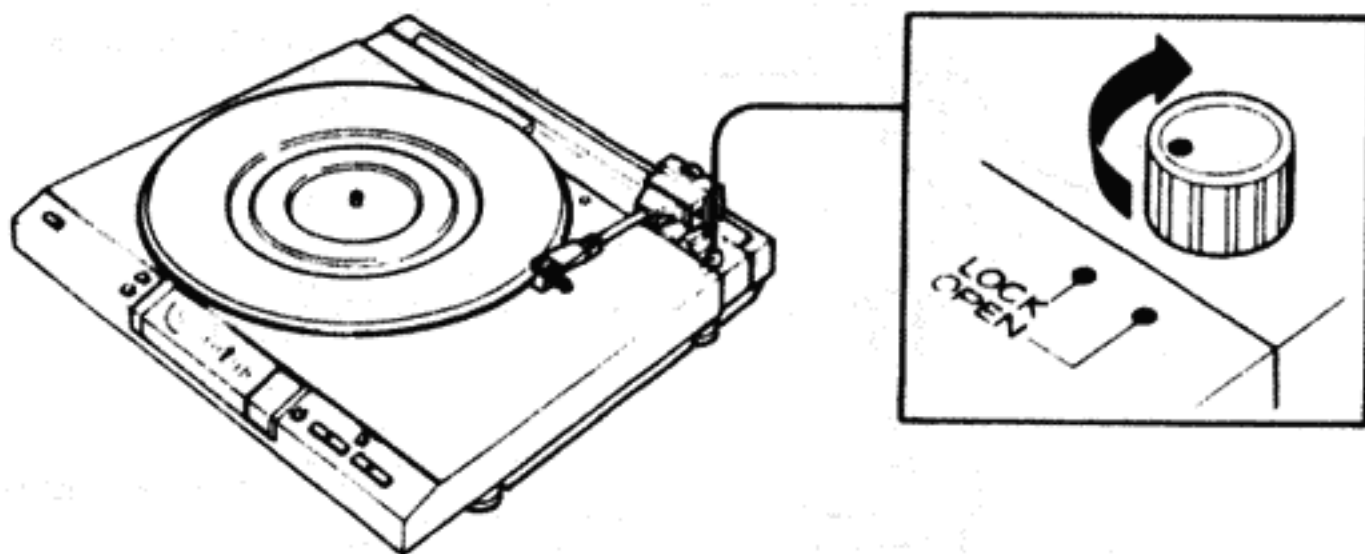
1. Plug the power cord into a wall socket



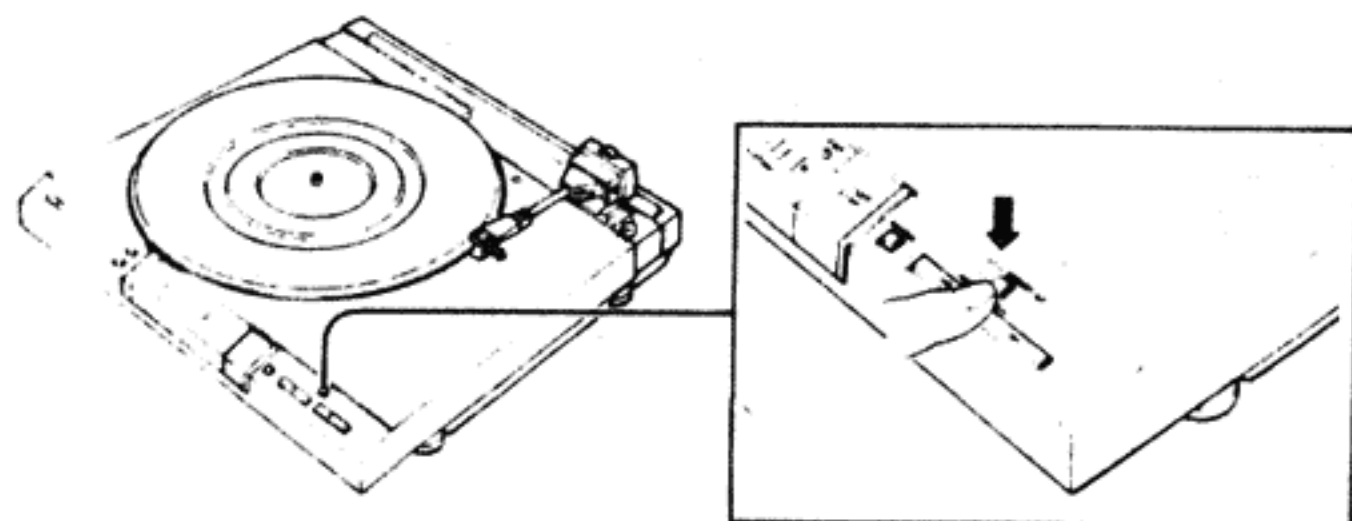
2. Turn the power switch ON



3. Turn the arm clamp knob to the LOCK position.

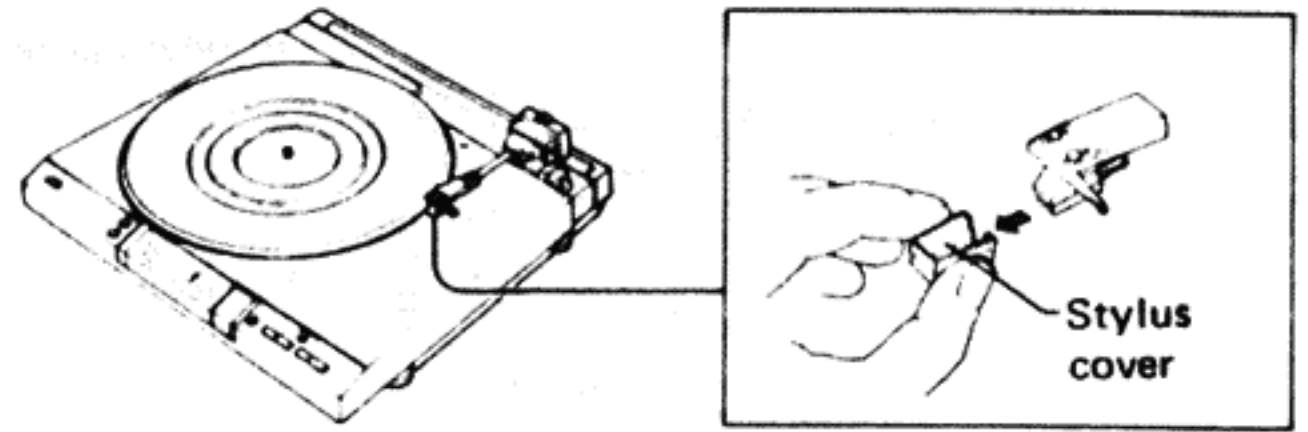


4. Depress the arm elevation switch
The ARM-ELEVATION lamp ∇ should extinguish.



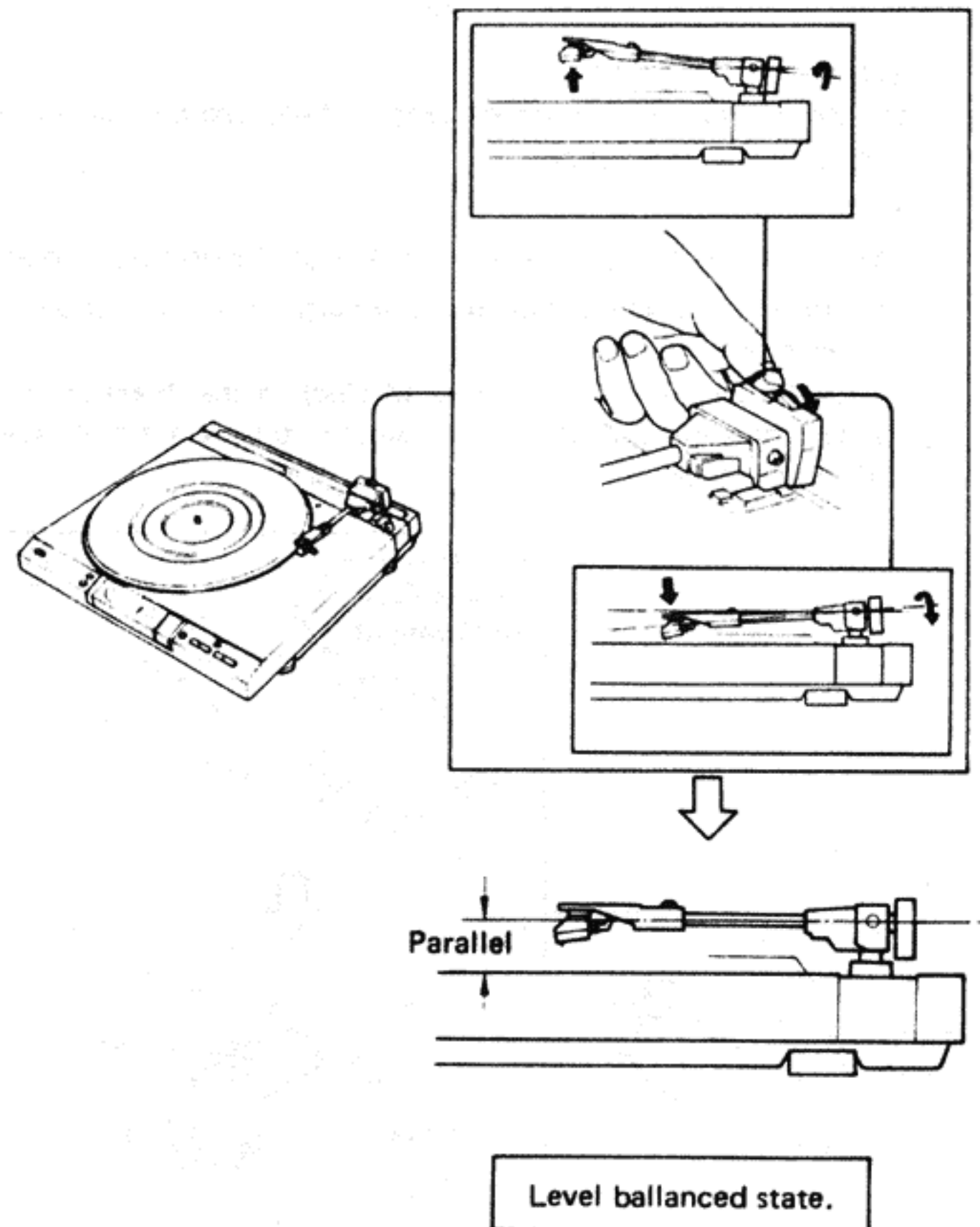
5. Remove the Stylus Cover

Grasp the stylus cover with your fingers and gently pull straight out.



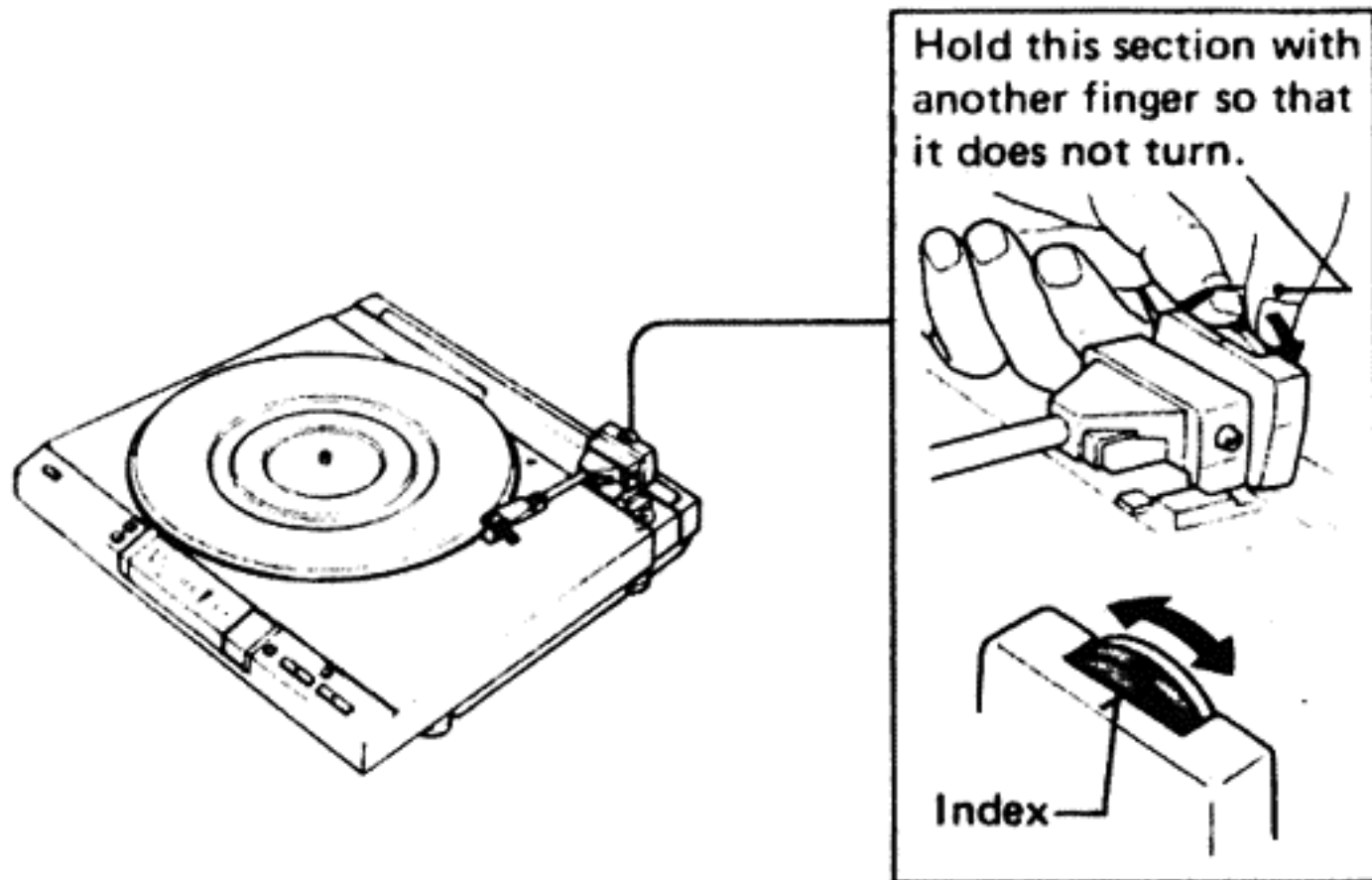
6. Balancing the Tonearm

Turn the weight portion (serrated ring) of the stylus tracking force adjustment weight in the direction of the arrows until the tonearm will remain in a balanced position over the turntable with no hand support.



7. Zero (0) the Stylus Tracking Force Graduation Ring

Turn the graduated ring portion (darkened portion in illustration) of the stylus tracking force adjustment weight in either direction until the 0 lines up with the index.

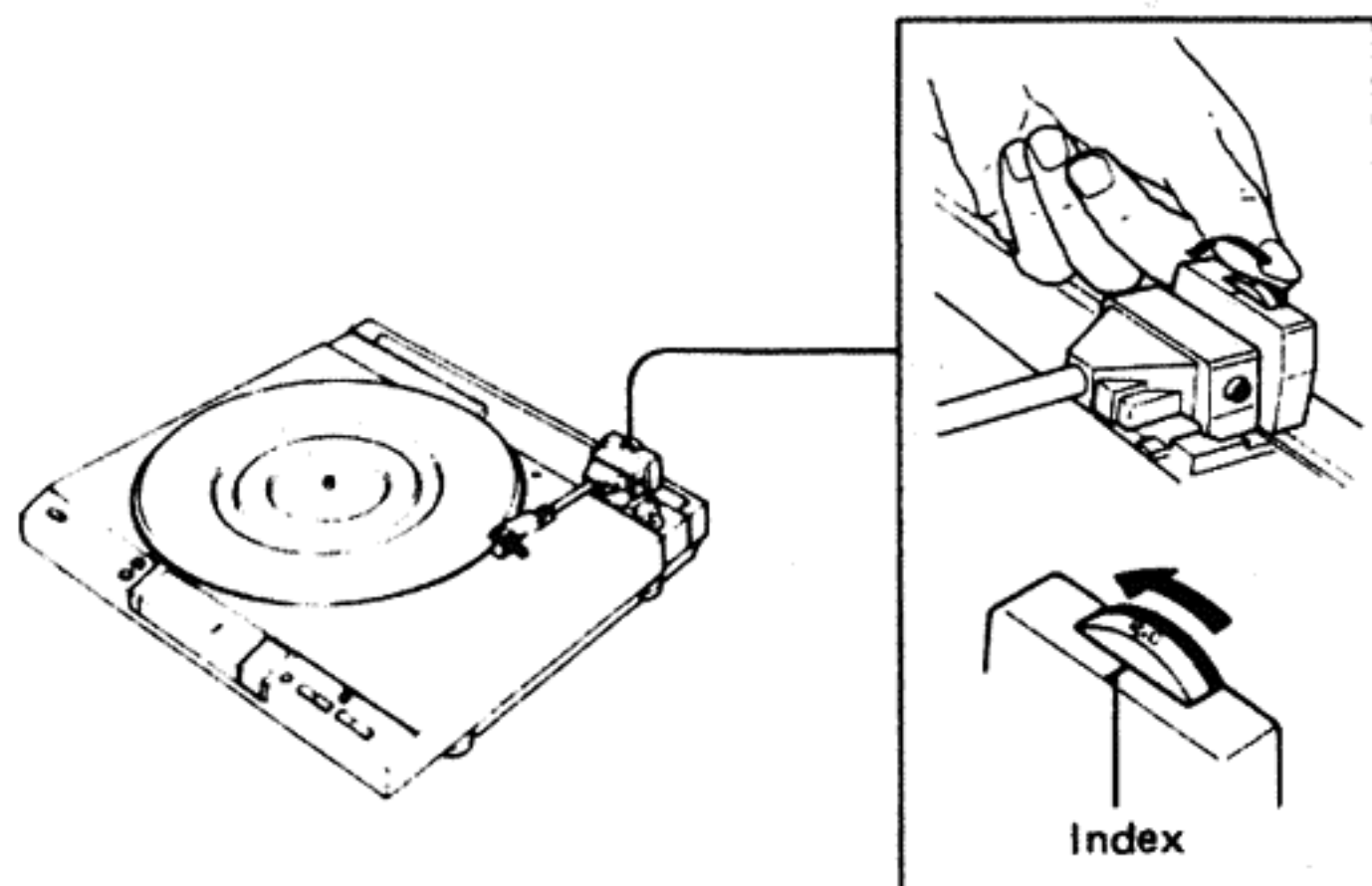


NOTE:

Support the weight portion (serrated ring) with your other hand so that it will not turn with the ring. If the weight portion turns, go back and repeat sub-step 6. over again.

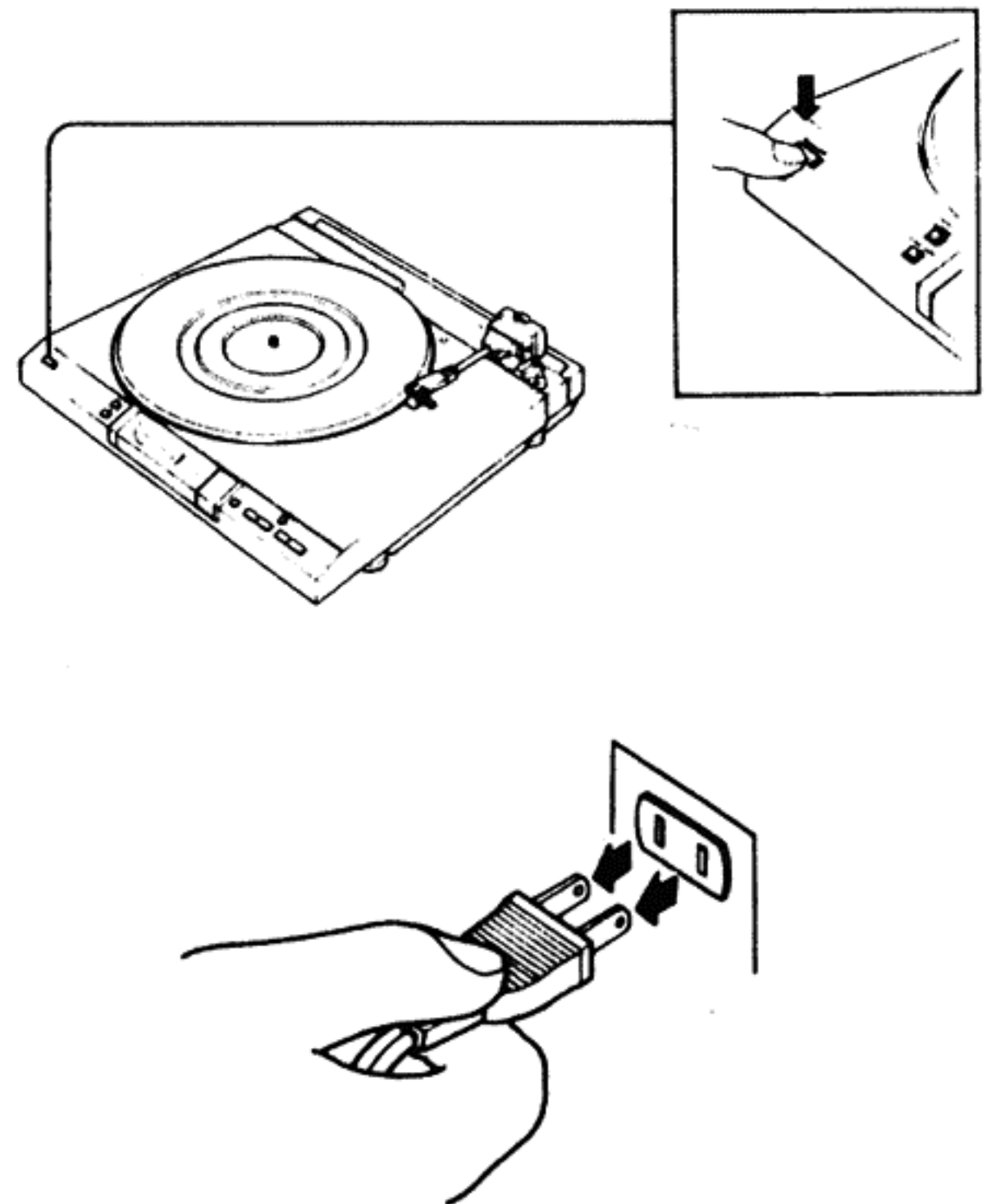
8. Set Stylus Tracking Force

Turn the weight portion (darkened portion in illustration) in the direction of the arrow (the graduated ring should also turn) until the "2" graduation is lined up with the index.



Each graduation on the ring represents 0.25g.
One revolution of the weight equals 3g.

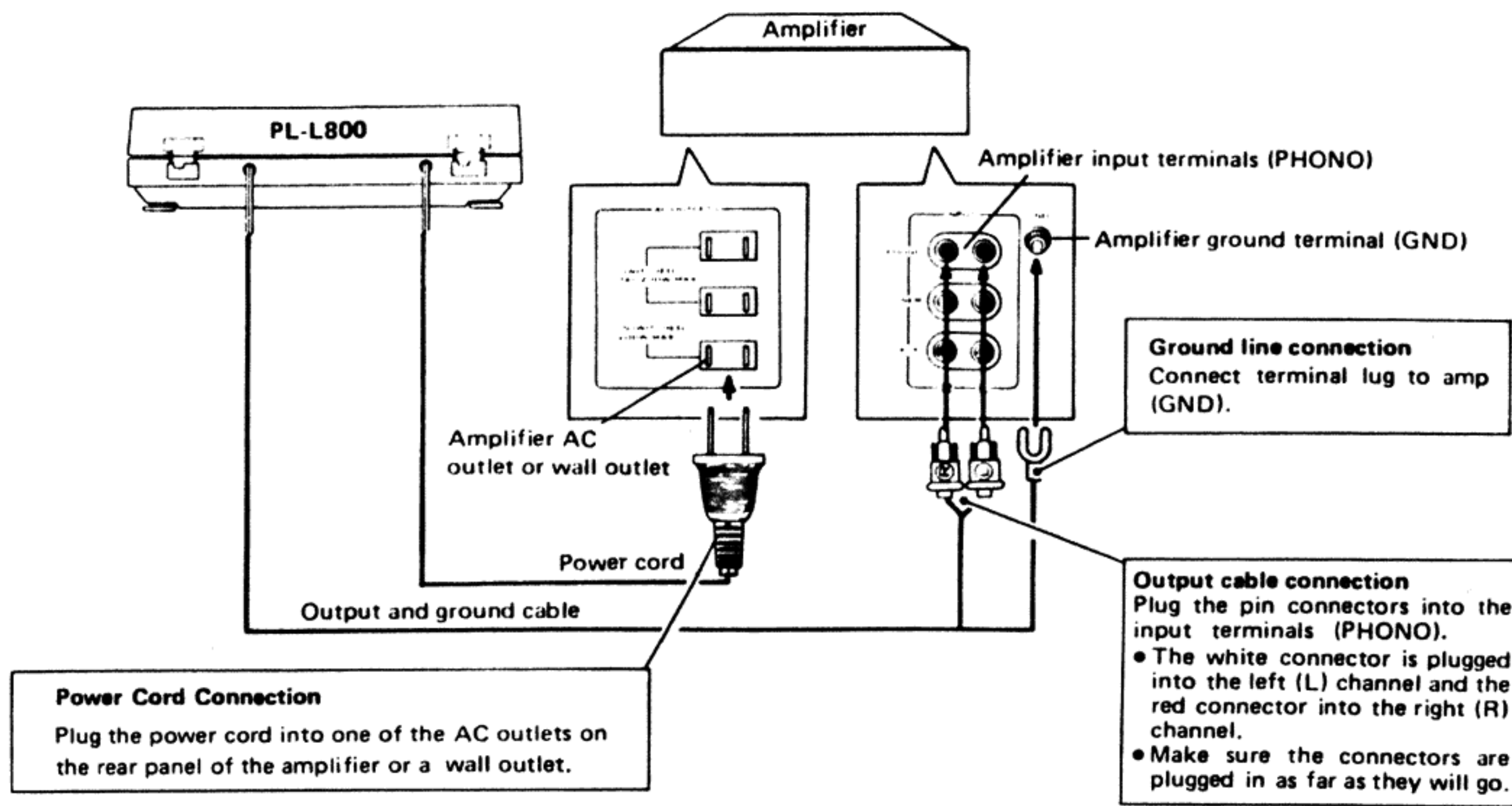
9. Turn the power switch OFF, and unplug the power cord



Precautions in adjusting stylus tracking force

- Always adjust stylus tracking force to the recommended value for the cartridge you are using. (The recommended range for the cartridge furnished with this unit is 1.7~2.3 grams with an ideal force of 2.0 grams.)
- Improper tracking force can result in the following:
- | | | |
|-------------------------|---|---|
| Tracking force too high | — | Distortion. |
| | | Cartridge body rides too low, bumping record surface. |
| Tracking force too low | — | Distortion. |
| | | Skipping. |

STEP 3 CONNECTING TO AMPLIFIER



STEP 4 TURNTABLE LOCATION

Proper location for the turntable is more important than for any other stereo component. The following rules must be observed for good system operation.

- Make sure that location is level and flat.
- Locate where vibrations from the floor or outside sources will not be transmitted to turntable.
- Do not place where it will pick up vibrations from the speaker system. (Do not place in front of, or directly over speaker system.)
- Place where controls are easy to operate, and where the record and stylus are easily visible.
- Place near the amplifier so relatively short connection cables can be used.
- Do not place in direct sunlight or near a stove or furnace.
- Do not locate turntable in a dusty or dirty or excessively humid environment.

Connection and placement precautions

- **Faulty connection and bad location problems.**
 - Connecting the unit wrong will result in no sound output. Also, if the output cable connectors are not fully inserted into the terminal sockets, or the ground wire is not connected, hum from the speaker will result.
 - The turntable in a tilted position will result in distortion and tonearm skating. Vibrations transmitted to the turntable will cause the stylus to skip or waver and can also produce howling. (Loud, low frequency static from speaker system.)
- **Connect the turntable to the amplifier MM input terminal (PHONO MM).**
The cartridge furnished with this unit is an MC (moving coil) type, however, it is a high-output type and must be connected to the MM (moving magnet) terminal.
- **Make sure all connection cables have slack.**
After connection, check each cable for slack. If they are stretched taut, this can cut the cable leading to howling.
- **Terminate the cartridge with 50kΩ load resistance.**
If the amplifier has a cartridge load resistance selector switch, set it to 50kΩ.
- **If another cartridge is used. . . .**
Follow the instructions furnished with the cartridge and amplifier.

OPERATING INSTRUCTIONS



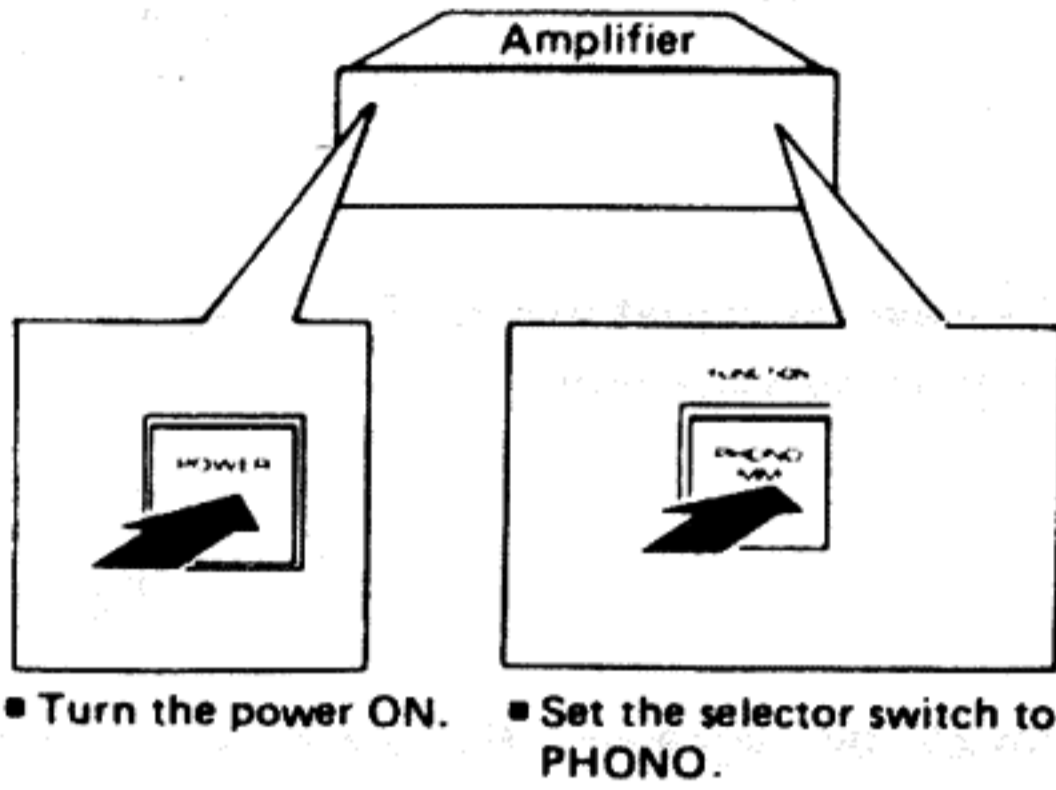
Are the shipping screws removed?



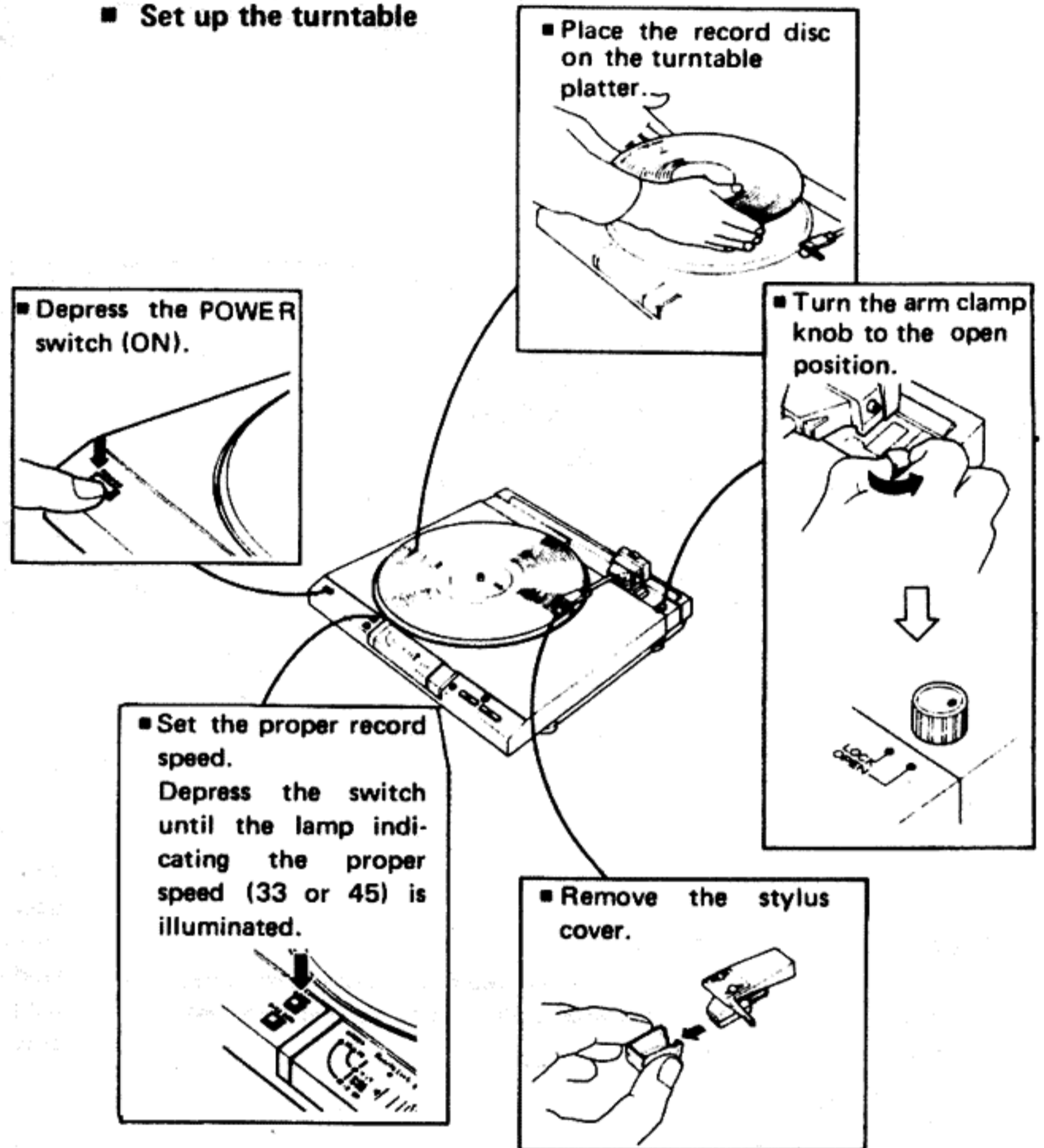
Is stylus tracking force properly adjusted?

PREPARATIONS

- Place the amplifier in the record play mode

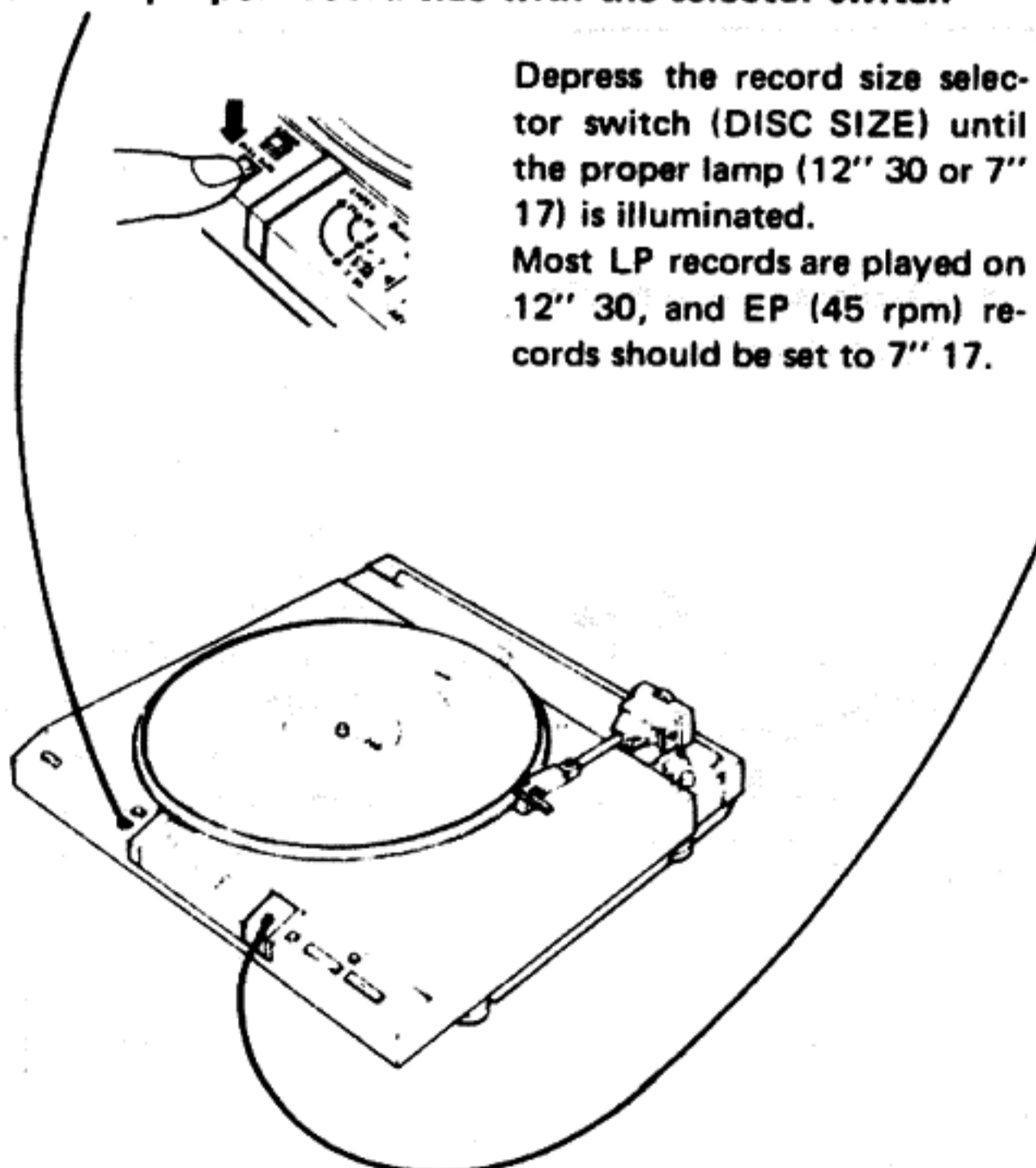


- Set up the turntable

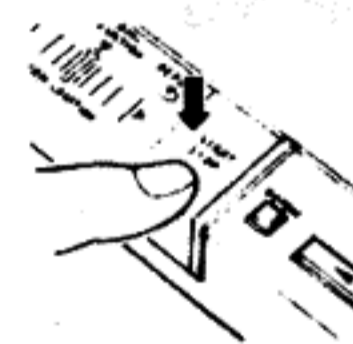


AUTOMATIC PLAYBACK (AUTO PLAY)

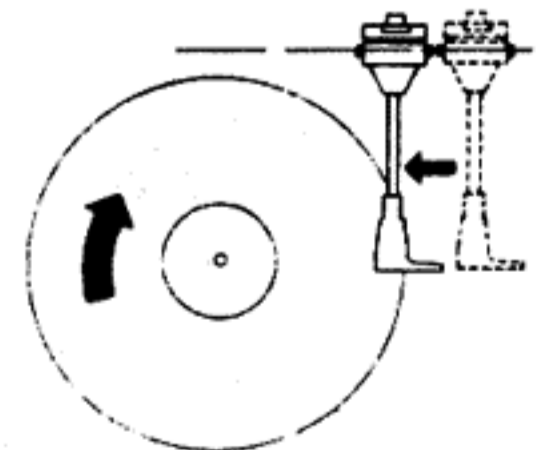
- Set the proper record size with the selector switch



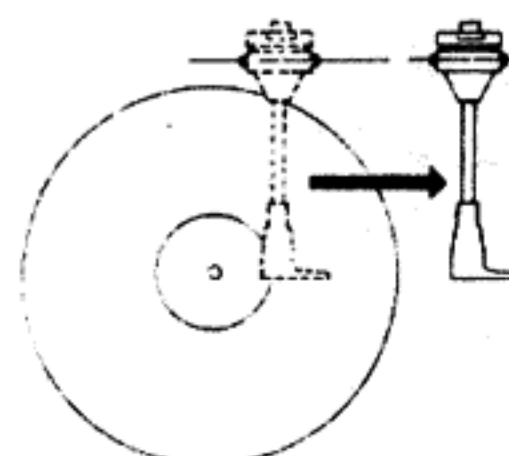
- Starting playback by depressing the playback start/stop switch



The platter starts rotation, and the tonearm is automatically moved to the record disc, starting playback.

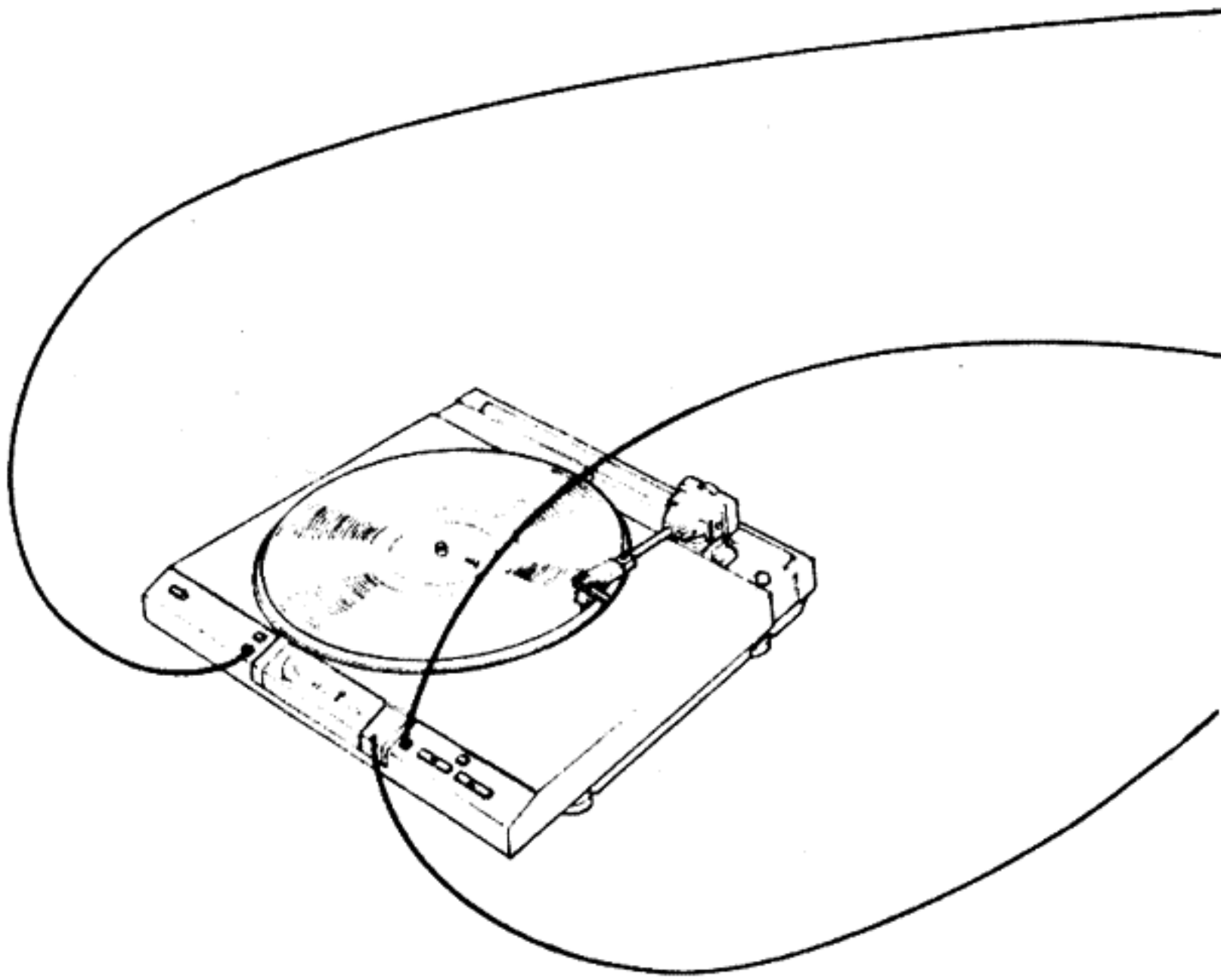


- Stopping playback



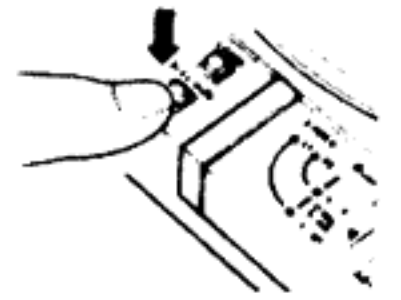
The tonearm is automatically returned to the arm clamp position, and the platter is stopped.

REPEAT PLAYBACK (REPEAT PLAY)



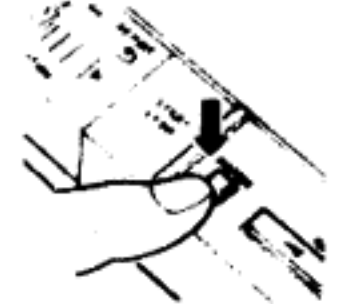
1. Set the record disc size by depressing the record size selector switch

Procedure same as for auto play.



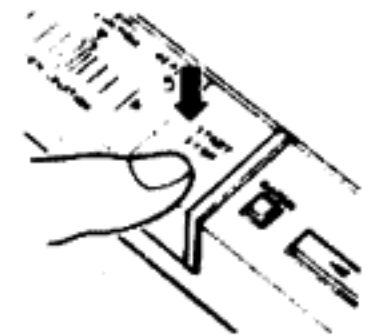
2. Depress the playback repeat switch (REPEAT)

The repeat lamp  should illuminate.



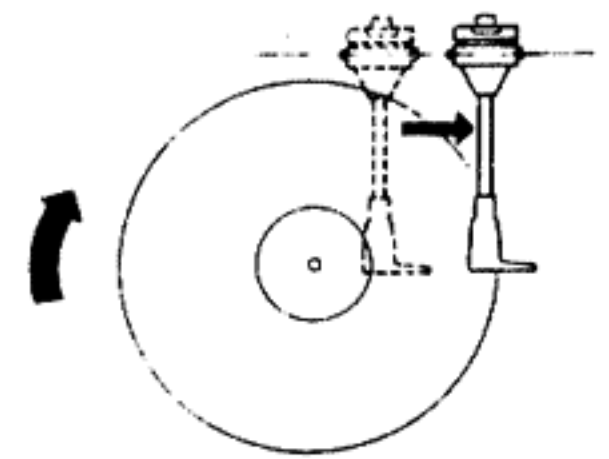
3. Start playback by depressing the playback start/stop switch

This will start automatic playback.



4. At end of record, playback will be repeated

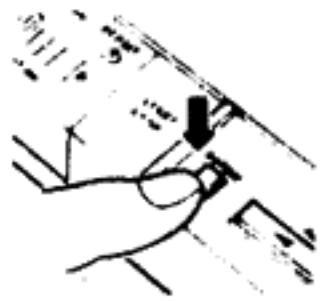
At the end of record playback, the tonearm will automatically return to the lead-in groove at the beginning of the record and play the record over.



This operation will be repeated over until repeat playback is stopped.

■ **Stopping repeat playback**

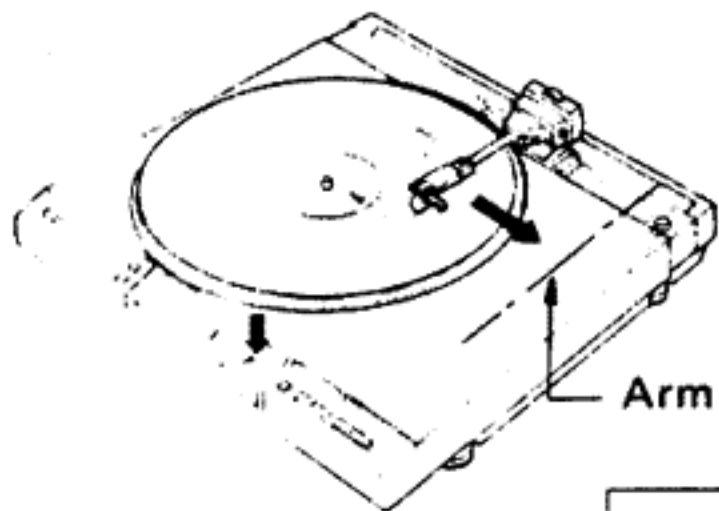
Depressing the playback repeat switch again (extinguishing lamp) will cause the tonearm to automatically return to the arm rest, stopping platter rotation.



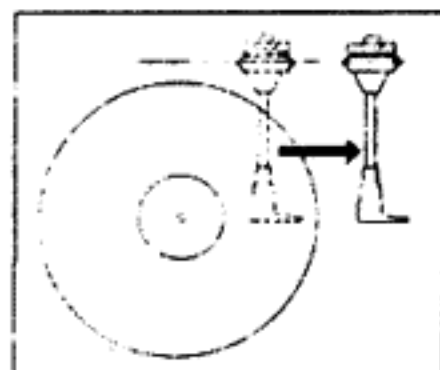
STOPPING THE TURNTABLE DURING PLAYBACK

Two methods may be used.

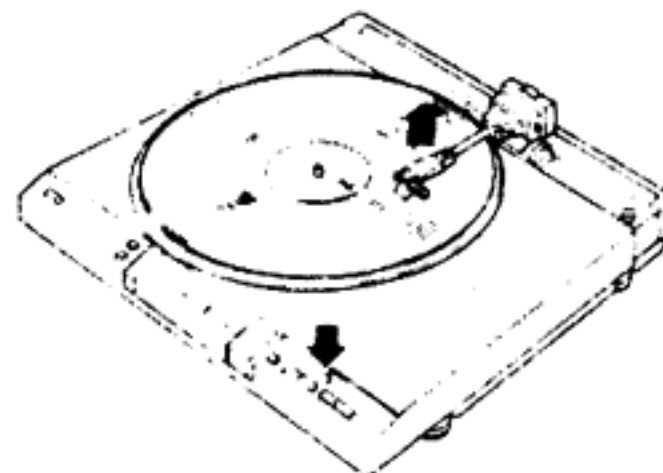
■ **Depress the playback start/stop switch**




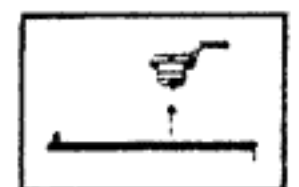
The tonearm will automatically return to the arm clamp position and stop platter rotation.



■ **Depress the arm elevation switch to raise the tonearm (temporary stop)**



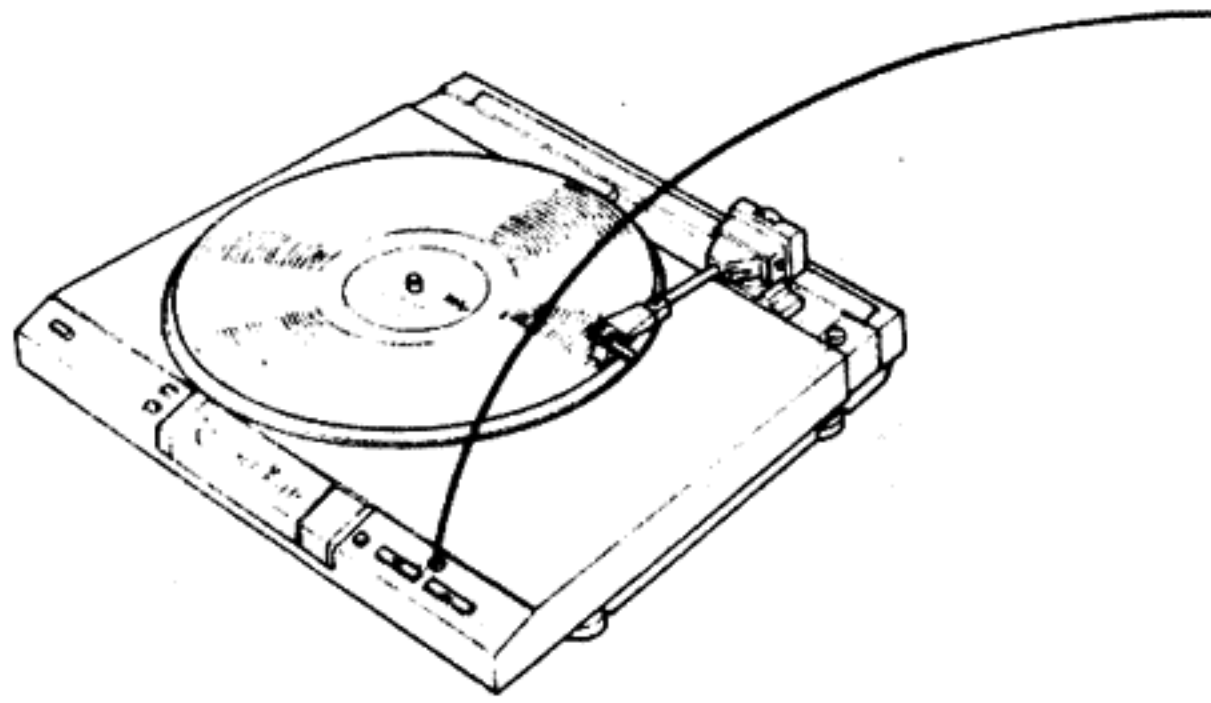
The arm-elevation lamp  should illuminate. The tonearm moves up off the record disc stopping playback (platter continues rotation). Returning the tonearm to the arm clamp position by hand will stop platter rotation.



MANUAL PLAYBACK (MANUAL PLAY)

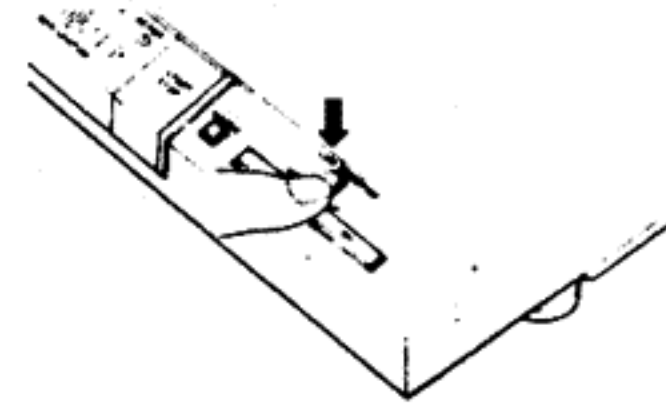
Used in the following instances:

- When starting playback in the middle of a record.
- When a non-standard size record disc is played.



1. Place the arm-elevation switch to the up position

The arm-elevation lamp  should illuminate.



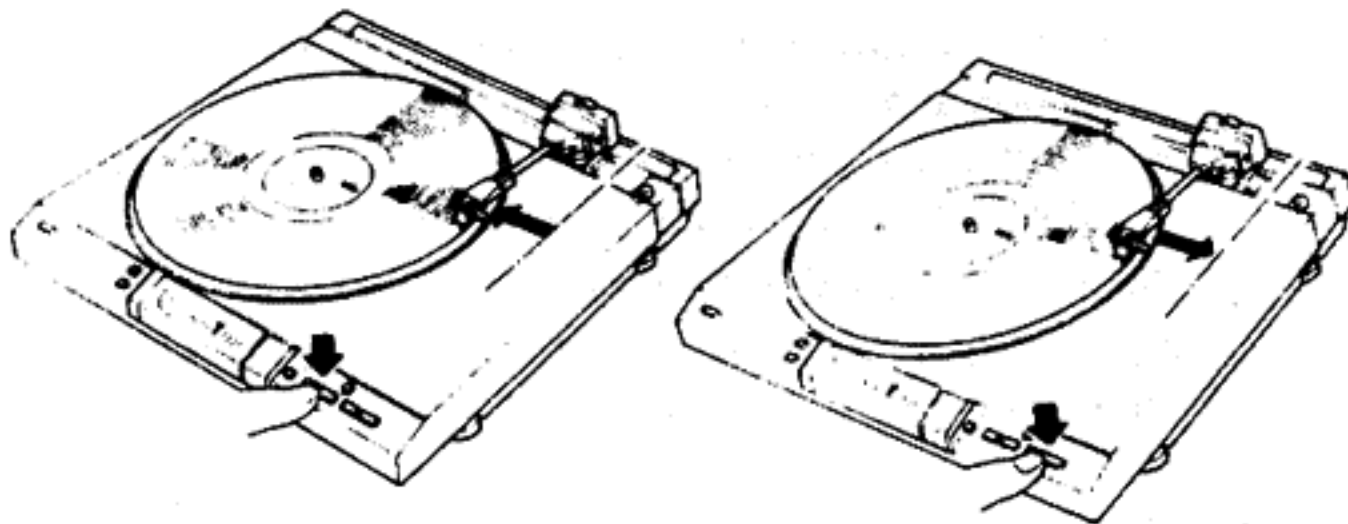
2. Move the tonearm to the record disc



■ Remote control operations

Depress the tonearm positioning switch (◀ , ▶) and move the tonearm until the stylus is positioned over the lead in groove of the song you want to play.

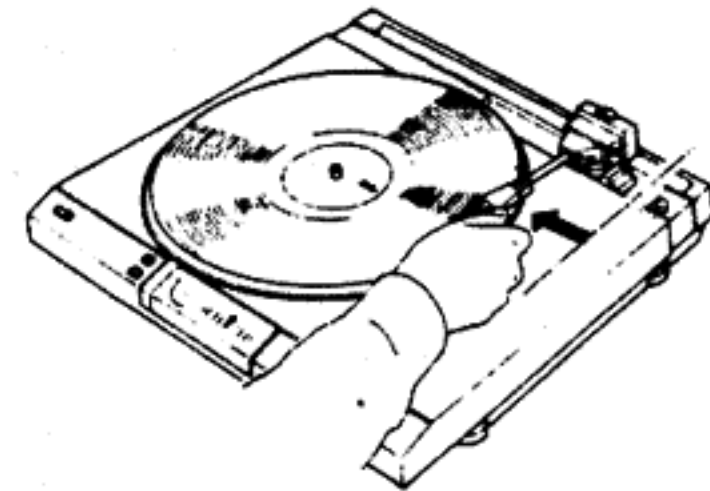
Depressing the ◀ switch moves tonearm to the left, and depressing the ▶ switch moves it to the right. Depress firmly for fast movement, gently for slow movement.



- The platter will start rotation.
- The stylus will still be off the record and no sounds will be reproduced.

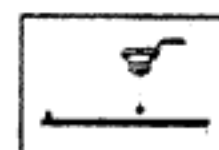
■ Manual operations

Take the headshell between your thumb and forefinger and move the tonearm to where the stylus is positioned over the lead in groove of the song you want to play.

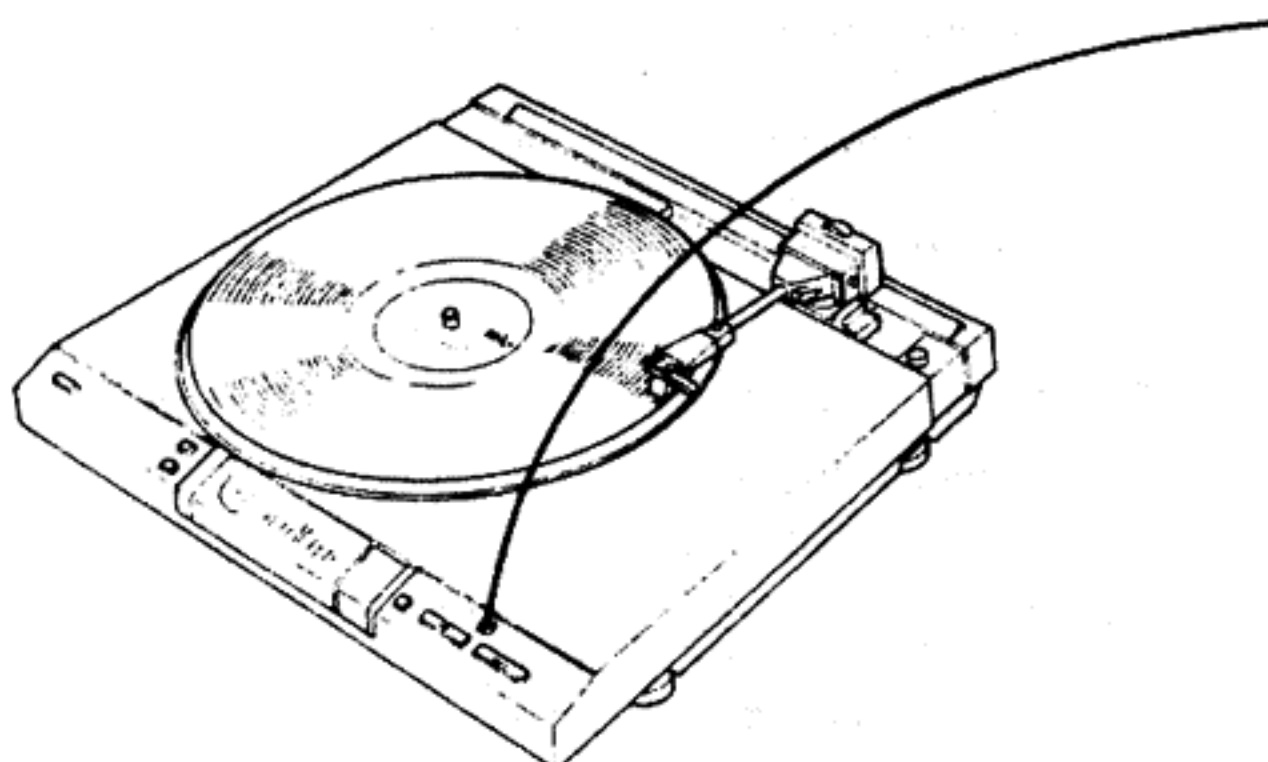


3. Start playback. (Depress the arm-elevation switch)

The lamp should extinguish, and the tonearm lower onto the record starting playback.



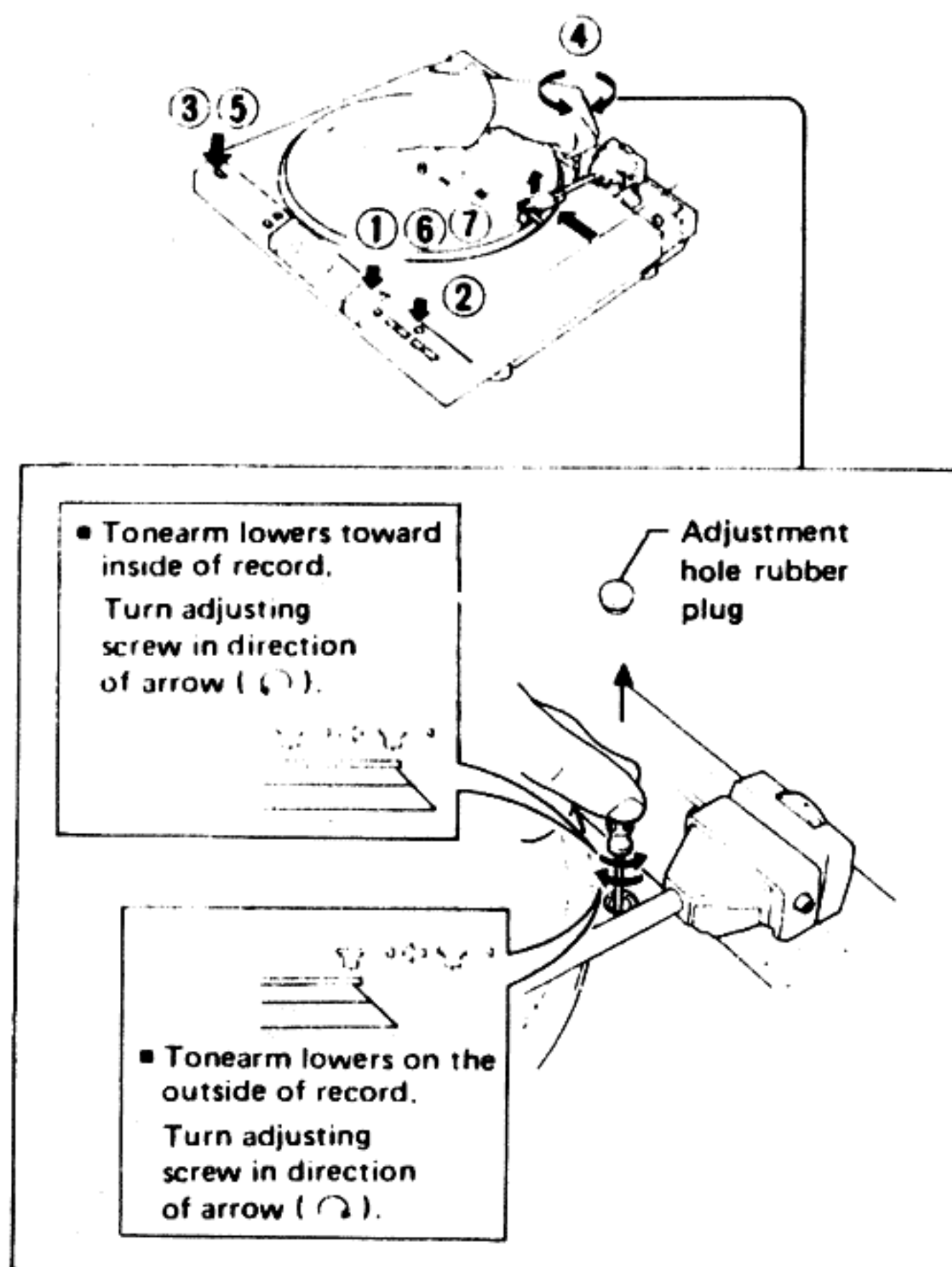
(When the record ends, the tonearm will automatically return to the arm rest.)



ADJUSTING THE TONEARM LOWERING POSITION

When the tonearm doesn't lower in the right position during automatic playback, adjust according to the following procedures. (Be careful not to damage the record disc with the stylus while making this adjustment.)

1. Place a 30cm record on the platter.
2. Depress the playback start/stop switch and start automatic playback. Note the direction and amount the lower position is off. (①)
3. Depress the arm elevation switch and raise the tonearm (arm-elevation lamp ∇ illuminated.). (②)
4. Depress the power switch to turn power off. (③)
5. After the platter stops turning, remove the rubber plug from the adjustment screw hole.
6. Using a small flat-bladed screwdriver, turn the adjustment screw to correct the offset noted in item 2. above. (④)
 - When the stylus lowers to the outside of the record, turn the screw clockwise (↻).
 - When the stylus lowers too far to the inside of the record, turn the screw counterclockwise (↺).
7. Turn power on again (⑤), depress the playback start/stop switch and return the tonearm to the arm clamp. (⑥)
8. Depress the playback start/stop switch and check the adjustment (⑦). If the lowering position is still off, repeat steps 3. through 8 above.
9. Replace the rubber plug after adjustment has been completed.



Playback precautions

- **Tonearm doesn't lower in the right position on the record.**

During automatic playback, the tonearm doesn't travel far enough onto the record before lowering, or travels too far and starts playback in the middle of a song. In cases like this, adjust tonearm lowering position referring to adjusting the tonearm lowering position on page 12.

- **Tonearm will not automatically return.**

When a non-standard size record is played, sometimes the tonearm will not return when playback is completed, or will return too soon. When the tonearm will not return automatically, depress the playback start/stop switch to return it.

- **Attempting automatic operation with the tonearm locked**

If the playback START/STOP switch is inadvertently depressed while the tonearm is locked in place, the following events will occur bringing the unit automatically to the playback completion status.

- The arm location lamp \blacktriangleleft will illuminate for approximately 7 seconds.
- Both arm location lamps (\blacktriangleleft and \blacktriangleright) will blink for approximately 10 seconds.
(When blinking stops, the unit will be in the playback completion status.)

- **Open and close the dust cover carefully during playback.**

During playback, avoid opening and closing the dust cover as much as possible. When it must be opened and closed, avoid shaking the turntable or slamming the cover.

- **Clean the record disc and stylus before and after use. (Refer to page 14.)**

- Dirt and dust on the record or stylus will result in sound distortion and skipping.
- Clean the stylus with a soft brush and clean the record disc with a good quality commercial record cleaner.

- **Place one record at a time on the platter.**

Placing more than one record at a time on the platter will change the vertical tracking angle of the stylus, resulting in sound distortion.

- **Maintain stylus tracking force within recommended range.**

- The range for the cartridge accompanying this unit is 1.7~2.3 grams. Maintain stylus tracking force within this range. (For instructions on stylus tracking force adjustment, refer to page 6~7.)
- When playing back a record recorded at an extremely high recording level (all other records seem to be ok, but this one will not track properly (skips), or when using the turntable at low ambient temperature, adjust stylus tracking force to its highest recommended value (2.3g for the furnished cartridge).

- **Do not vibrate or handle the turntable unnecessarily during playback.**

This can cause skipping and result in the stylus damaging the record. Be particularly careful not to touch the rotating platter or the tonearm when it is moving in the automatic mode. This can damage the operating mechanism.

- **Do not forcefully move the tonearm by hand.**

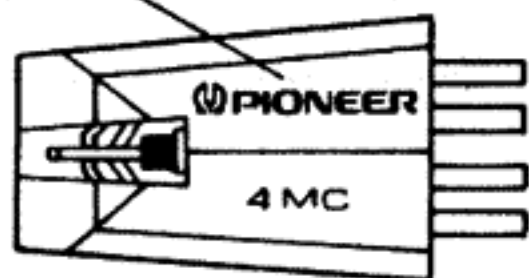
The design of the turntable limits tonearm travel to the turntable center shaft. Forcing the tonearm past the center shaft will result in damage to the internal mechanism.

MAINTENANCE

STYLUS REPLACEMENT

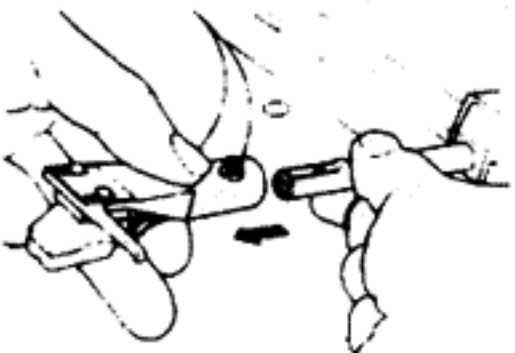
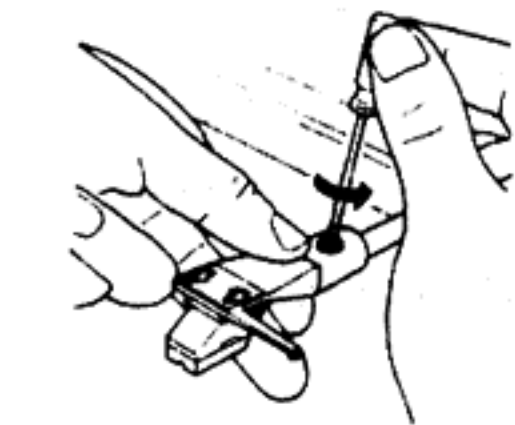
- The life of the furnished cartridge is from 800 to 1000 hours. (Equivalent to 1~2 hours daily use for 1~2 years.) Using a worn-out or damaged stylus will result in sound distortion or damage to the record disc. To be safe, replace the stylus before it is worn-out.
- A replacement stylus may be purchased at the Pioneer dealer where you bought this turntable. Specify a Pioneer PN-4MC replacement stylus. The cartridge furnished with this turntable was developed by Pioneer especially for use with this unit, and only the PN-4MC may be used with this cartridge.
- Always use Pioneer Genuine Parts for stylus replacement. Using other replacement stili may result in degraded performance or damage to the unit voiding the Pioneer guarantee.

Pioneer Genuine Parts are marked with the Pioneer trade name.



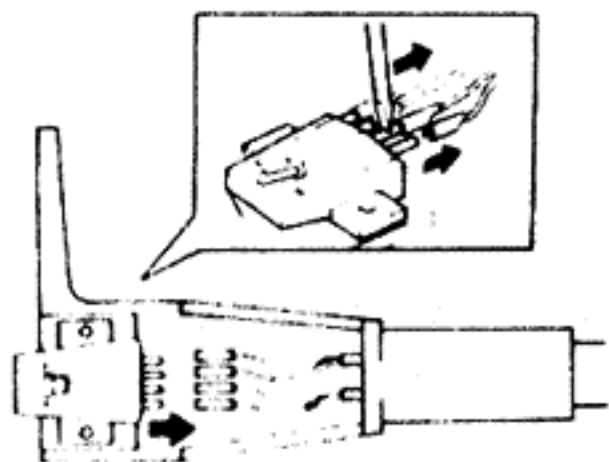
Stylus replacement procedure

1. Return the tonearm to the arm clamp and turn the arm clamp knob to the LOCK position.
2. Remove the headshell from the tonearm. Using a small, flat bladed screwdriver, loosen the retaining screw in the direction of the arrow and remove the headshell.

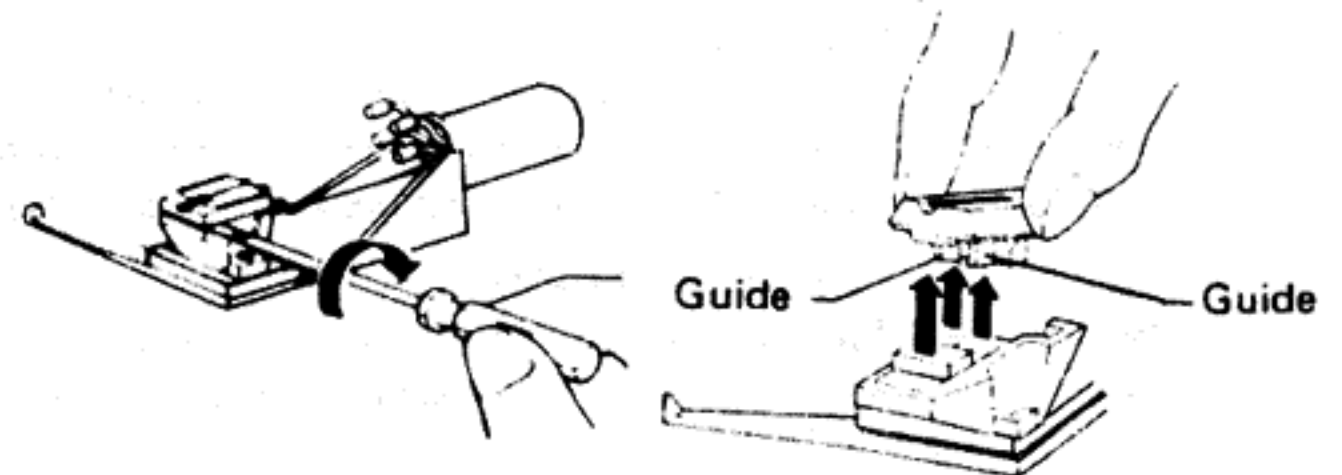


When removing the headshell, support the tonearm with your free hand.

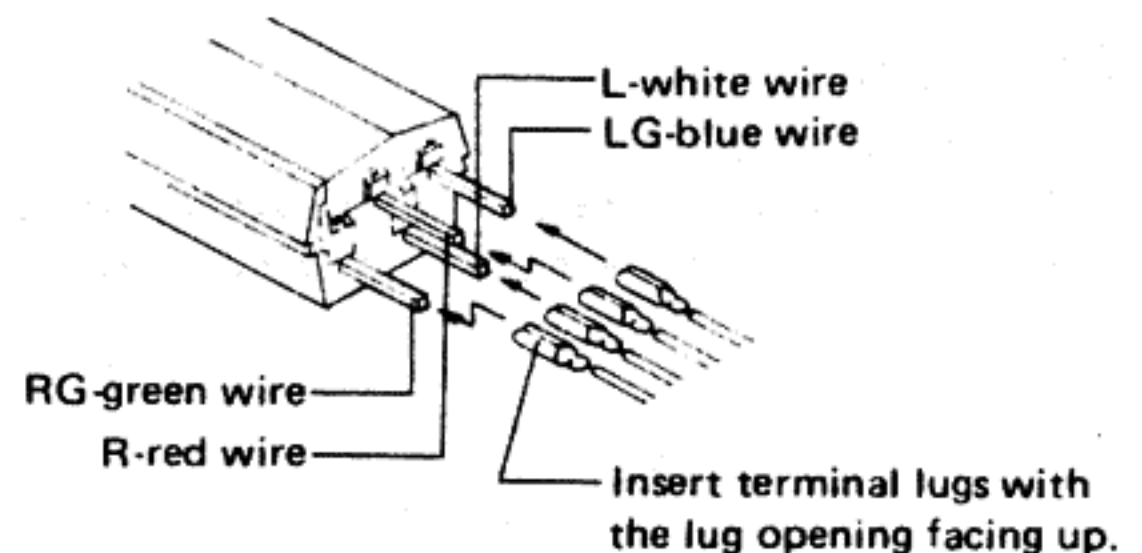
3. Disconnect the lead wires from the cartridge. Remove the terminal lugs with a small screwdriver or tweezers.



4. Remove the stylus from the cartridge. Insert a small screwdriver into cartridge's slot and rotate as shown in the figure. (The stylus holder will rise slightly.) Hold the stylus holder and pull the stylus gently in the direction indicated by the arrow.



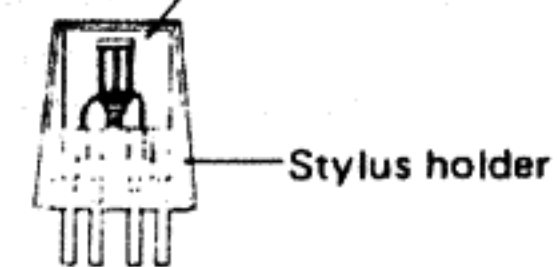
5. Connect the lead wires to the new stylus holder.



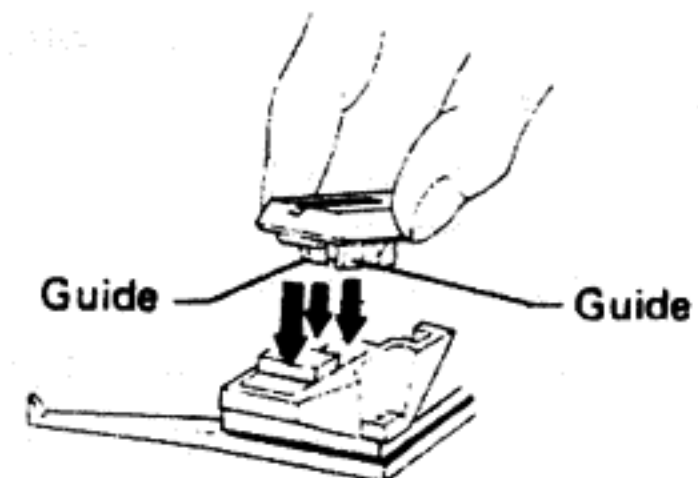
NOTE:

When replacing the stylus holder, be careful not to touch the internal coil or wiring.

Be particularly careful not to touch this area.



6. Attaching the new stylus holder to the cartridge. Lining the stylus holder up with the guide channel, press the holder into the cartridge with your fingers until a click is heard.



7. Attach the headshell to the tonearm. Following the reverse procedure of step 2. above, remount the headshell to the tonearm. Make sure the headshell is fully inserted to the shoulder on the tonearm before securing the screw.

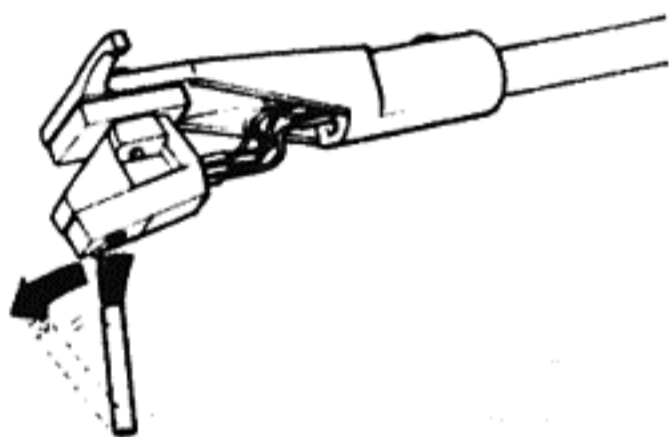
TURNTABLE CARE

Cabinet and dust cover care

- **Dusting and cleaning.**
Wipe the unit gently with a polishing cloth or dry, soft cloth.
- **Heavily soiled areas.**
Dip a soft cloth in a solution containing a non-detergent soap diluted to a 1/5 or 1/6 ratio. Wring the cloth out thoroughly and wipe the unit down. Finish by polishing with a soft, dry cloth.
- **No chemicals or furniture wax.**
Do not use furniture wax, commercial cleaners, thinner, or benzene to clean the unit. These will remove or discolor the surface finish.
- **No insecticides.**
Insecticides will discolor and stain the surface finish.

Stylus care

- **Use a soft brush.**
Clean the stylus stroking from the rear of the holder toward the front. Cleaning the stylus with your finger tip can destroy the stylus.

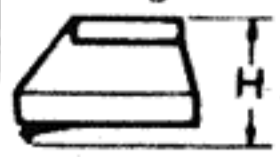


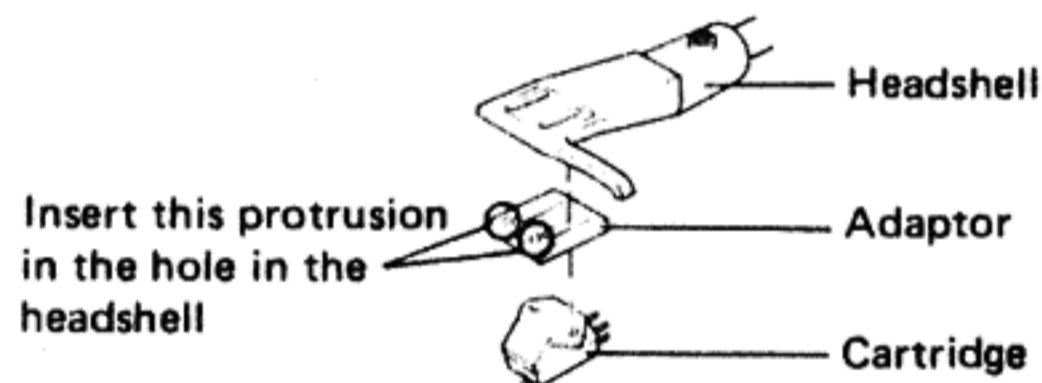
- **Stylus too dirty to be cleaned with a brush.**
The stylus may be cleaned using a commercial stylus cleaner. However, take care not to get any of the liquid on the plastic parts of the cartridge. Some cleaners can dissolve plastic.

CARTRIDGE REPLACEMENT

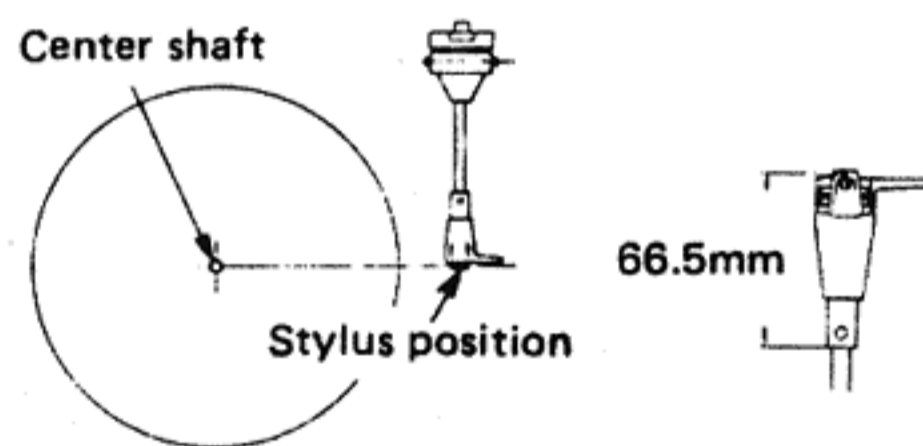
- The standard cartridge (furnished with the unit) may be replaced with any cartridge with a weight of 3 to 8 grams.
- The lead wire polarity of the furnished headshell is noted in the following table. Make certain connection is correct.

| | | | |
|-------|----------------------------|-------|-----------------|
| red | — right channel (R) | green | — right channel |
| white | — left channel (L) | | ground (RG) |
| blue | — left channel ground (LG) | | |
- One of the two accessory headshell adapters may be necessary in some cases to compensate for different cartridge weights and sizes. One adapter is already attached to the headshell; the other is packed separately. If required, the appropriate adapter should be attached between the headshell and the cartridge. Refer to the following chart to determine if one of the adapters should be used.

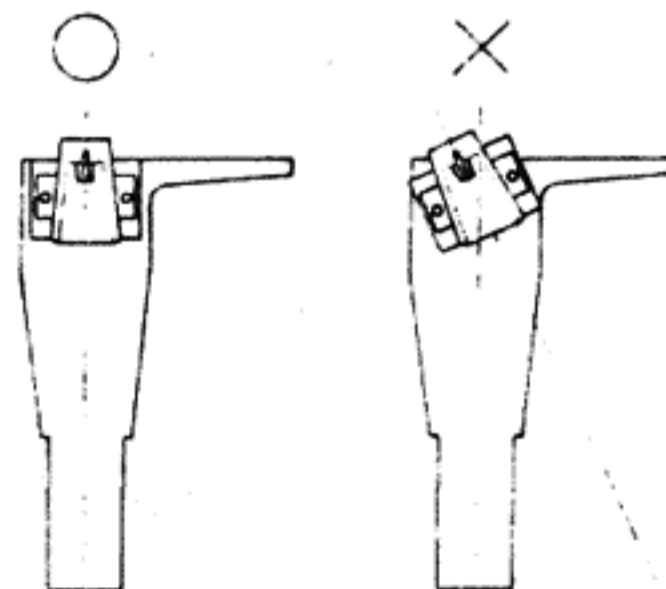
| Cartridge weight | Height  (from attachment surface to stylus tip) | Required adapter | Representative cartridges |
|------------------|--|--------------------------------|--|
| over 5g | under 17mm | 0.5 gram adapter (lighter one) | Shure V-15/III Shure V-15/IV Denon DL-103S Denon DL-303 |
| under 5g | under 17mm | 2 gram adapter (heavier one) | Pioneer PC-70MC Pioneer PC-50MC |
| over 5g | over 17mm | none | Pioneer PC-1000II Shure M91E Stanton 681E Ortofon MC-20 Audio Technica AT-12SA |



- Adjust the position of the headshell cartridge to where the stylus will travel over the exact center of the center shaft. (This is a simple adjustment. Refer to the diagram below.)



- Attach the cartridge to the headshell with the front faces parallel to each other. (If the cartridge is not straight, it may cause the tonearm to operate improperly and/or create distortion.)



- When the cartridge is replaced, refer to page 6 and 7 and adjust stylus tracking force.

TROUBLESHOOTING

Sometimes, an operational fault can be mistaken for a malfunction or failure. Check the following points and see if you can find the symptoms of the trouble below before you get in touch with the serviceman. If you cannot locate the symptoms, contact your nearest Pioneer dealer.

| Symptom | Cause | Remedy |
|--|---|---|
| Turntable platter won't turn | <ol style="list-style-type: none"> 1. Power cord unplugged 2. When the AC OUTLET (SWITCHED) on the amplifier is used | <ol style="list-style-type: none"> 1. Plug power cord into wall outlet 2. Turn the amplifier power switch ON |
| No sound | <ol style="list-style-type: none"> 1. Output cable connection incomplete 2. Cartridge lead wire connection incomplete (when cartridge or stylus is replaced) 3. Pin connectors or amplifier input terminals dirty | <ol style="list-style-type: none"> 1. Firmly plug the pin connector into the amplifier PHONO terminal 2. Make connection properly (refer to page 14) 3. Clean |
| Distortion, skipping, noise, scratching | <ol style="list-style-type: none"> 1. Stylus tracking force incorrect 2. Stylus dirty or worn 3. Record disc warped or scratched 4. Pin connectors or amplifier input terminals dirty 5. Cartridge installed at angle 6. Record disc dusty or dirty | <ol style="list-style-type: none"> 1. Set tracking force correctly (refer to page 6~7) 2. Clean stylus or replace it 3. Discard record 4. Clean 5. Install correctly (refer to page 14) 6. Clean record |
| Howling (Occurs when the sound volume is increased during playback resulting in a loud howling noise) | <ol style="list-style-type: none"> 1. Speaker vibration transmitted through the floor and picked up by the cartridge 2. Sounds from the speaker directly transmitted to cartridge | <ol style="list-style-type: none"> 1. Insulate the speaker from the floor (with a rug or pad) Place the turntable on a sturdy stand 2. Change turntable location |
| Sound too fast or too slow | Speed selector switch at wrong speed | Set to correct speed for record |
| Hum (humming noise from speaker system) | <ol style="list-style-type: none"> 1. Output cable or ground wire connection incomplete 2. System affected by magnetic flux leakage from amplifier transformer (or another source) | <ol style="list-style-type: none"> 1. Make a good connection to the amplifier PHONO terminal or GND terminal 2. Change the position of the amp or turntable |
| Will not move to lead-in groove (tonearm won't move in automatic playback mode) | Tonearm clamp locked | Release clamp |
| Tonearm sets down in wrong position (auto play) | <ol style="list-style-type: none"> 1. Tonearm lowering position adjustment off 2. Record size selector switch on wrong size | <ol style="list-style-type: none"> 1. Adjust referring to page 12. 2. Select correct size for record being played |

If the turntable is brought into a warm room from previously cold surroundings, or if the room temperature rises suddenly, moisture will form on the operating sections and the turntable will not be able to display its performance to the full.

In a situation like this, leave the turntable in its new environment for about an hour, or try and increase the room temperature gradually, before operation.

SPECIFICATIONS

Motor and Turntable

| | |
|-------------------|---|
| Drive System | Direct-drive |
| Motor | Quartz PLL-Hall motor |
| Turntable Platter | 320 mm diam. aluminum alloy die-cast |
| Speeds | 33-1/3 and 45rpm |
| Wow and Flutter | Less than *0.012% (WRMS) 0.025% (WRMS) 0.035% (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 78dB (DIN-B) (with Pioneer cartridge model PC-4MC) |
|-----------------------|---|

Rotational Characteristics

| | |
|-----------------|--|
| Build-up Time | Within 120° rotation at 33-1/3rpm |
| Speed Deviation | Less than 0.002% |
| Speed Drift | Less than 0.00008%/h at 33-1/3rpm Less than 0.00003%/degree temp. change at 33-1/3rpm |

Tonearm

| | |
|-------------------------|---|
| Type | Linear Motor Direct-drive Static-balance type, Linear-tracking arm |
| Effective Arm Length | 162mm |
| Overhang | 0mm |
| Usable Cartridge Weight | 3g (min.) to 8g (max.) |

Subfunctions

Auto lead-in
Auto-return
Auto cut
Quick repeat
Quick play
Quick stop
Remote Tonearm Operation
Stylus pressure direct-readout counterweight
Cueing device
Free stop hinges

Miscellaneous

| | |
|--------------------|--|
| Power Requirements | AC120V ~ 60Hz |
| Power Consumption | 22W |
| Dimensions | 420(W) x 120(H) x 427(D)mm 16-9/16(W) x 4-3/4(H) x 16-13/16(D)in. |
| Weight | 8.3kg/18lb 5oz |

Accessories

| | |
|------------------------|---|
| EP Adapter | 1 |
| Headshell adapter | 1 |
| Operating instructions | 1 |

PC-4MC Specifications

| | |
|--------------------|---|
| Type | Moving coil type |
| Stylus | 0.3 x 0.7 mil diamond (PN-4MC) |
| Output Voltage | 1.5mV (1kHz, 50mm/s peak velocity · LAT) |
| Tracking Force | 1.7g to 2.3g (Proper 2g) |
| Frequency Response | 10 to 35.000Hz |
| Recommended Load | 50kΩ |
| Weight | 3.1g |

NOTE:

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