Luxman

BELT DRIVE ANALOG PLAYER

PD-191A

Owner's Manual

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Precautions

Installation location

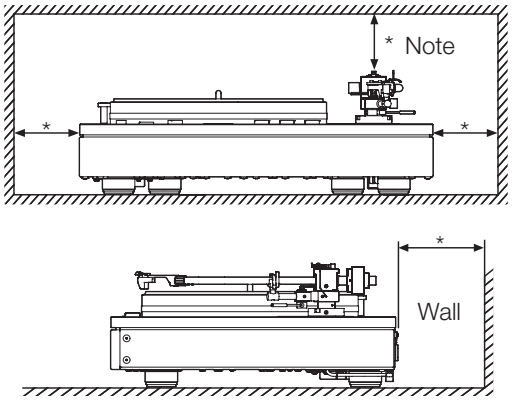
Install this unit in a location where good ventilation and heat radiation are assured.

Especially, installation of this unit where direct sunlight is present, where the temperature rises excessively high such as close to a heater, or where it is humid or dusty may cause a malfunction even if heat is efficiently released.

Therefore, do not install this unit in such places.

Note:

For heat dispersal, do not install this equipment in a confined space such as a book case or similar unit.



- Choose a stable place near the stereo system that is to be used in combination with this unit.
- Do not install this unit near a television or color monitor.
- Keep this unit away from magnetically sensitive devices such as cassette decks.
- Install this unit on a level surface.

DO NOT move this unit during playback.

Moving this unit during playback may cause needle jump, and damage the needle and record thereby.

When moving this unit

For moving this unit, be sure to turn off the power after stopping the platter and removing the record. Next, unplug the power and phono cables and remove the platter and rubber mat before moving.

Avoid the following locations for installation.

- Locations exposed to direct sunlight
- Locations subject to humidity and which lack ventilation
- Locations that are extremely hot or cold
- Locations which experience strong vibration
- Dusty locations
- Locations subject to oil, steam, and heat (such as kitchens)

Do not put articles.

Do not put articles on this unit.

Avoid sources of heat

Do not place this unit on top of any device as an amplifier that may emit heat. If the unit is installed on a rack, install the unit as distantly as possible from where the amplifier is installed so as to avoid heat emission from the amplifier and other audio devices.

Condensation

Be aware that condensation may occur when this unit is moved from a cold place to a warm place especially in winter or when the temperature of the room where this unit is installed is quickly raised with a heater or the like. It depends on the condensation state, however, this unit can be used after disappearance of water droplets by turning on the power and leaving the unit as it is for 1 to 2 hours to keep the unit at room temperature.

Condensation can occur even in summer if this unit is directly exposed to cool air from an air conditioner. In such a case, the installation location should be changed.

Lubrication

Do not lubricate this unit yourself because special oil is used for the spindle.

Cleaning

- Usually, wipe the unit with a dry soft cloth.
  When the dirt is hard to remove, dip soft cloth in detergent diluted 5 or 6 times with water, wring it well, and remove contaminants. Then, remove the moisture with dry cloth.
- Be aware that printed or painted portions may be damaged if the portions come into contact with alcohol, thinner, benzine, insecticide, or the like. In addition, do not let this unit contact a rubber or plastic foam for a long time. That may damage the cabinet surface of the unit.
- Be sure to unplug the power cable from the outlet before cleaning.

Repair and adjustment

When repair and adjustments are needed, please ask the dealer where you bought the unit.

Safety cautions

Caution

- Exercise extra care when this unit is unpacked, assembled, transported, and installed because this unit is heavy.

Features of This Unit

Belt drive

This product uses a belt drive system to decrease motor vibration and rotation irregularity and to obtain smooth rotation.

Circuit configuration

Rotation speed can be measured with the hall element of the motor, and the PID control system is adopted to reach the setting rotation speed smoothly in a short time.

Stroboscope

This unit is equipped with a reflective view type LED stroboscope that is useful for adjusting the rotation speed in a precise manner.

Arm base

For the arm base, 20-mm brass chrome plated spin finish is used. Replacement of the the existing arm base with the optional one allows users to mount various tone arms, which enables users to enjoy sound change. A dedicated arm base that enables 12-inch long arm to be mounted on the rear side of the main unit will be put on sale as an optional item.

High performance reference clock

A MEMS oscillator that is excellent in temperature characteristics is used as a reference clock for speed correction.

33-1/3/45/78 rotation supported

The rotation speed of 78 for SP records is supported as well as the rotation speeds of 33-1/3 and 45.

Tone arm

This item is equipped with a universal type static balance tone arm that was newly and fully designed under joint development with SAEC. The knife edge technique that is excellent in initial sensitivity is used in the bearing. The effective length is 10 inches because the length allows tracking errors to be suppressed and suppressing face deflection to be improved.

* SAEC is a brand of Saec Commerce Co., Ltd. that has a history of over 40 years in the world of analog audio.

Heavyweight platter

The platter weighs 5.2 kg, which is machined from aluminum metal to improve accuracy.
Approximately 0.7t·cm^2 of moment of inertia has been achieved.

High rigidity chassis

This unit uses an underslung vibration-damping structure capable of hanging a chassis housing including a sheet metal bottom plate with 3.2 mm in thickness and a machined aluminum plate with 15 mm in thickness as a base.

Large-sized spindle

This spindle is equipped with ball bearing type large-diameter polyether ether ketone (PEEK) providing stable rotation as a bearing.

Separate vibration-damping structure

The power transformer and motor are installed on the sheet metal bottom plate with 3.2 mm in thickness via vibration isolating rubber to prevent vibration from being transmitted to the top panel.

Large-sized insulator

A vibration isolating rubber is used because the rubber absorbs unnecessary vibration from external devices including an audio rack and from the chassis and converts such vibration into heat.

Rubber mat

This item is a newly developed mat equipped with vibration absorbing rubber that has achieved music signal pickup in a more stable manner by preventing floating and improving the adhesion level.

Headshell

Headshell has the LUXMAN logo.

D.U.C.C.-made shell lead wire

This item is a lead wire made of high-purity conductor 7N-Class D. U. C. C. (99.99998% or more pure copper) in which even the crystal direction is appropriately controlled.

* D. U. C. C. is a registered trademark of Mitsubishi Materials Corporation.

AC inlet

Power-cable-detachable AC inlet.

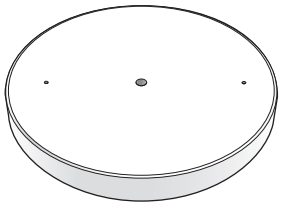
Before Use

Check the accessories.

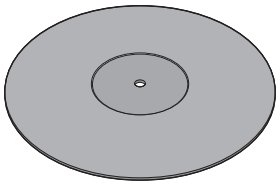
Make sure that all accessories shown below are in the package.

* No cartridge is supplied.

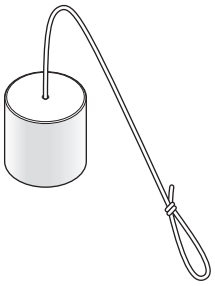
- Platter



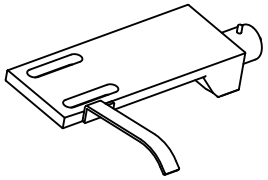
- Rubber mat



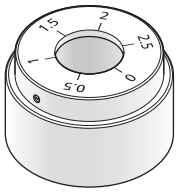
- Anti-skating weight



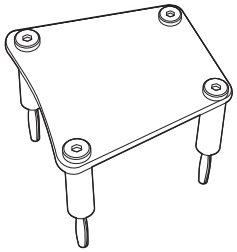
- Headshell



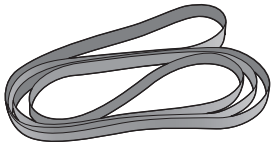
- Counter weight



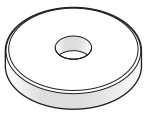
- Pulley cover



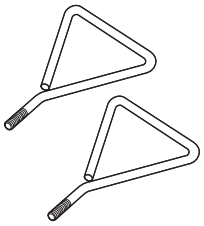
- Rubber belt



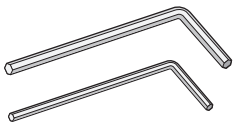
- EP adaptor



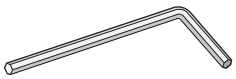
- Platter mount handle (2 pieces)



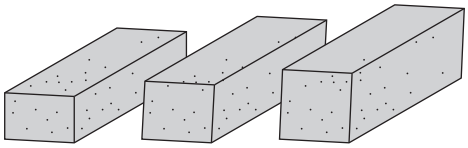
- Tone arm vertical adjustment wrench (2.0mm)
- Arm lifter vertical adjustment wrench (1.3mm)



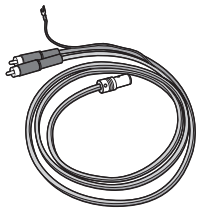
- Arm base cover removal wrench (3.0 mm)



- Phono cable securing cushion



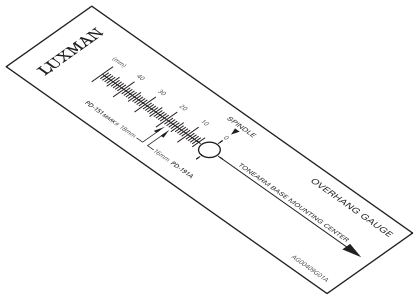
- Phono cable (with ground wire)
  * This cable is connected on the main unit at shipment.



- Power cable

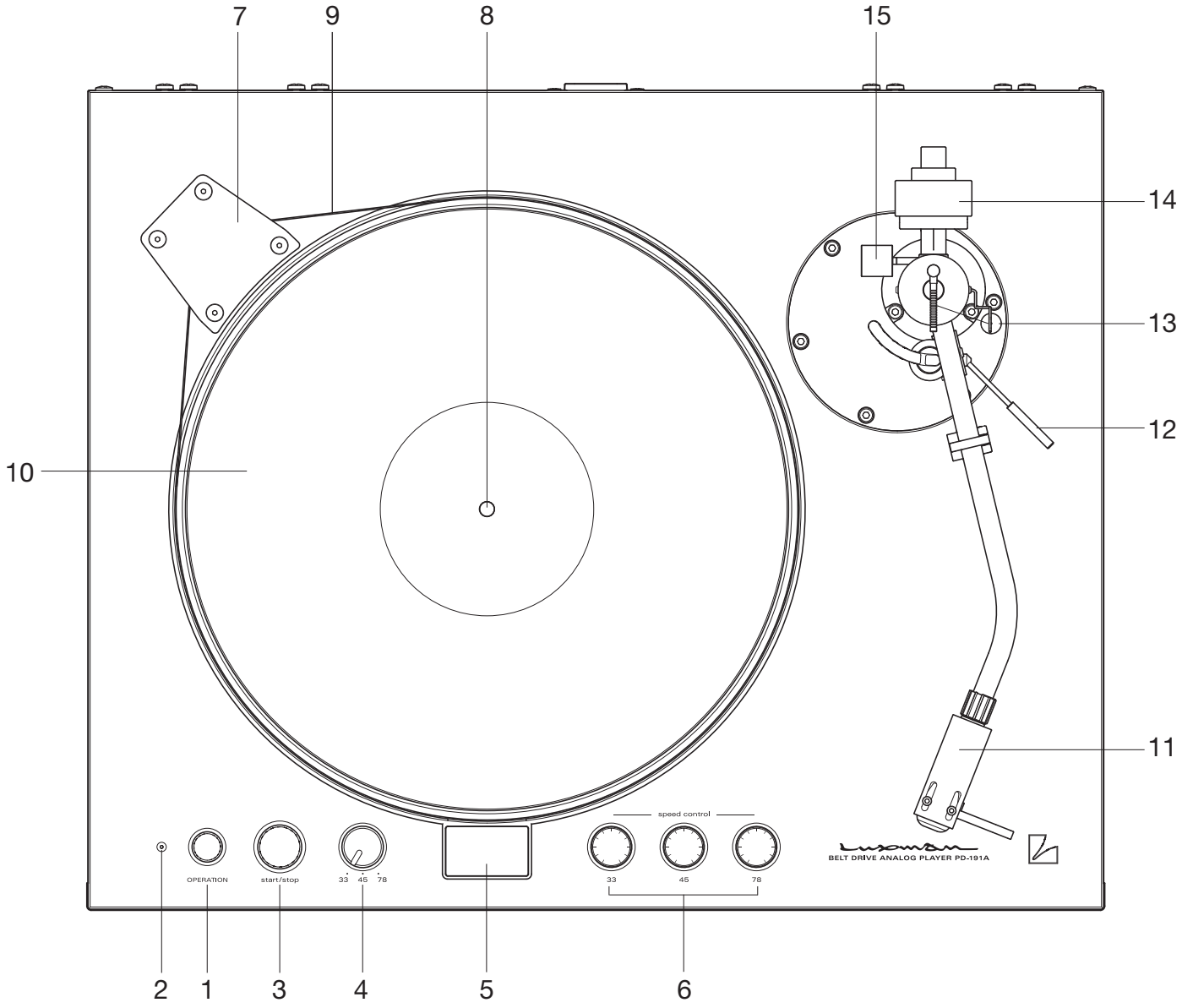
- Printed matters
  Safety cautions
  Owner's Manual (this document)

- Overhang Gauge



Names and Functions

Top view



1. Operation button (OPERATION)

This button turns on and off the power.

⏤: ON

⎕: OFF

2. Operation indicator

This indicator lights up when the power is turned on.

3. Start/stop button (start/stop)

This button starts rotating the platter at the selected rotation speed.

This button also stops platter rotation while the platter is rotating because this button serves as both start and stop buttons.

4. Rotation speed selection switch (33/45/78)

This switch toggles the rotation speed of the platter between 33-1/3 rpm, 45 rpm and 78 rpm.
Select a rotation speed in accordance with a record to listen to.

5. Stroboscope

Adjust the rotation speed fine tuning volume so that the indication (rectangle) in the stroboscope seems to be motionless.

6. Rotation speed fine tuning volume (33/45/78 speed control)

33: Adjusts so that the indication in the stroboscope seems to be motionless by setting the rotation speed selection switch to 33.
45: Adjusts so that the indication in the stroboscope seems to be motionless by setting the rotation speed selection switch to 45.
78: Adjusts so that the indication in the stroboscope seems to be motionless by setting the rotation speed selection switch to 78.

7. Pulley cover

This cover protects the rotating pulley.
Be sure to mount the cover when the platter is rotated.

8. Center spindle

This spindle is a center shaft to put a record.
For playing an EP record, mount the EP adaptor (accessory) here.

9. Belt

This belt transfers motor rotation to the platter.

10. Rubber mat

This rubber mat suppresses platter squeaks and brings a record into intimate contact with the platter.

11. Headshell

This item is an adaptor to mount a cartridge to the tone arm.

12. Arm lifter

This lifter moves the cartridge up and down at playback.

13. Anti-skating adjustment mechanism

This item is a device to cancel an inward force applied to the tone arm during record playback.
Perform adjustment in accordance with the stylus pressure of your cartridge.

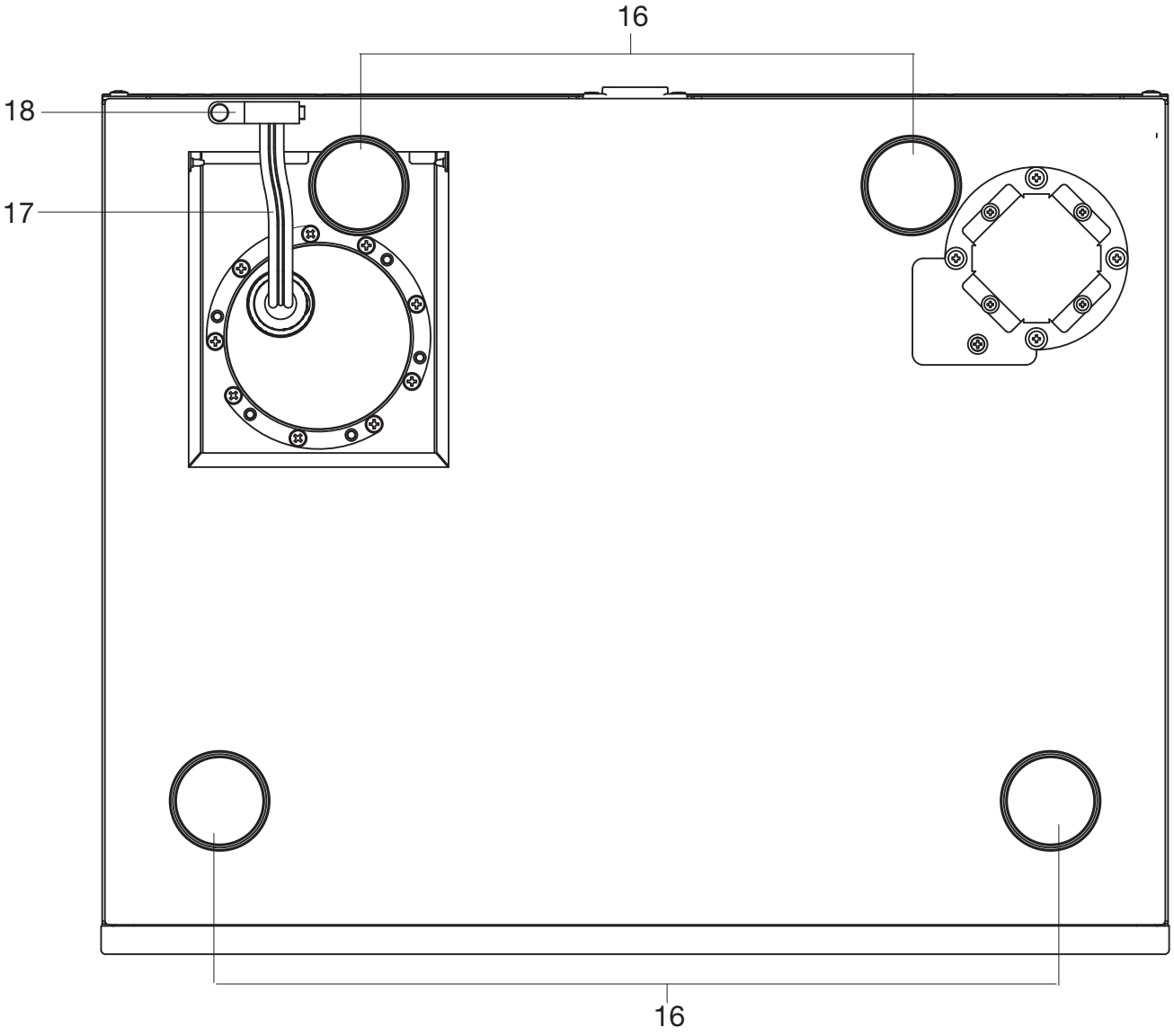
14. Counter weight

This weight is used to adjust the stylus pressure of your cartridge.

15. Lateral balance mechanism

This item is a mechanism to balance between right and left of the tone arm. This balance was adjusted at the shipment, and accordingly, readjustment is not necessary under normal circumstances.
If readjustment is necessary, consult your dealer.

Bottom view



16. Insulator

These support the entire player and absorb howling and vibration from outside.

These insulators are set at the lowest point at shipment and can be raised by up to 5mm.

Use these insulators for making this unit horizontal.

* Do not remove these insulators from the main unit.

17. Phono cable

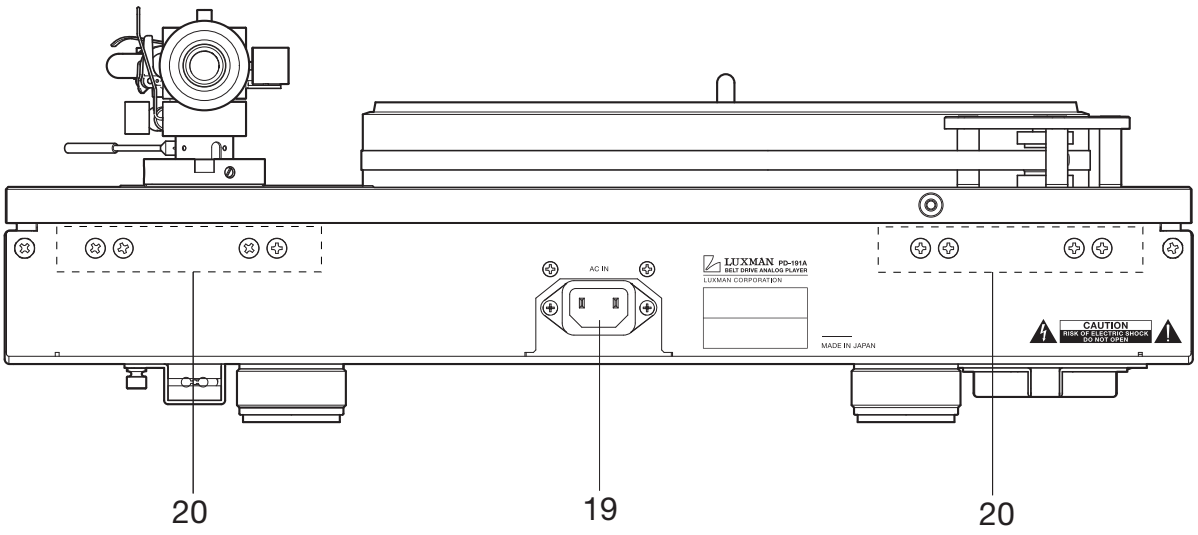
The phono cable is connected to the 5P connector of the tone arm.

(This cable is connected to the main unit at shipment.)

18. Cable holder

This holder secures the phono cable.

Rear view



19. AC inlet (AC IN)

Connect the accessory power cable here to supply power from the AC outlet on the wall.

20. Hinge receiver mounting section

This section is a portion on which the optional dust cover (OPPD- DSC 191) is mounted.

The screws to mount the hinge receiver are already tightened.

Even when the dust cover is not used, leave the screws as they are.

How to Assemble

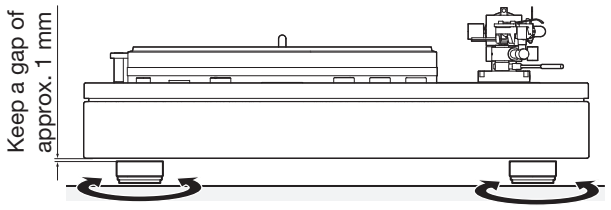
Do not turn on the power until assembly is completed.

1. Installation of main body

Install the main body on a rack that is in a position as horizontal as possible.

If the mounting position is inclined, rotate the insulators on four places of the bottom side to adjust the whole horizontal balance. When the produce is leveled, keep a gap of approximately one millimeter between the bottom of the main unit and each insulator, and then, level the product.

Confirm that there is a gap between the bottom and each insulator after leveling. This gap allows the insulators to be more effective and reproduced sound quality to improve.

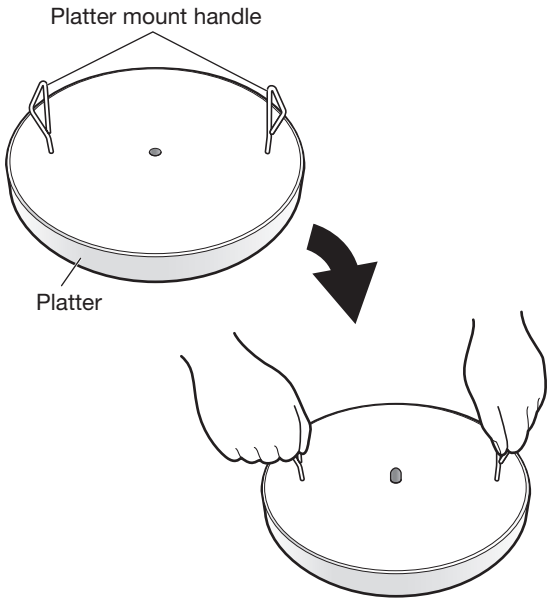


Counterclockwise for up, and clockwise for down.

2. Platter mounting

Engage the supplied platter mount handles in the platter, align the center of the platter with the center spindle while holding the handles, and engage them.

Be sure to use both hands to hold the platter and mount it while using caution not to apply any unreasonable force to the center spindle. After mounting the platter, remove the platter mount handle and keep it in storage.

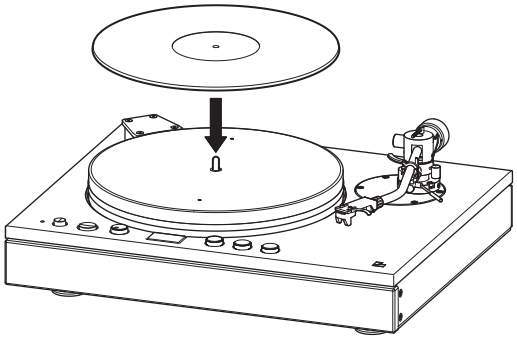


Exercise extra care to handle the platter because the platter is heavy.

3. Rubber mat mounting

The face with a hollow in the center is the upper side.

Put the rubber mat on the platter by aligning it with the center spindle.



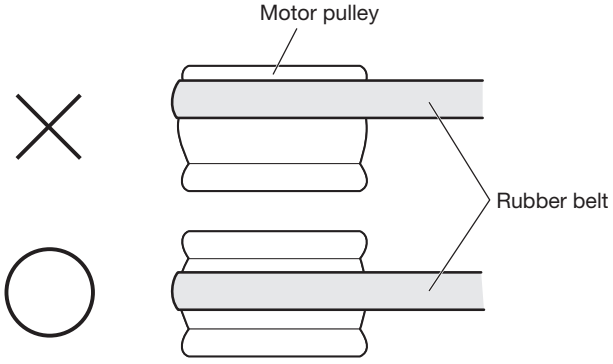
When the rubber mat is mounted, the center part may be raised.

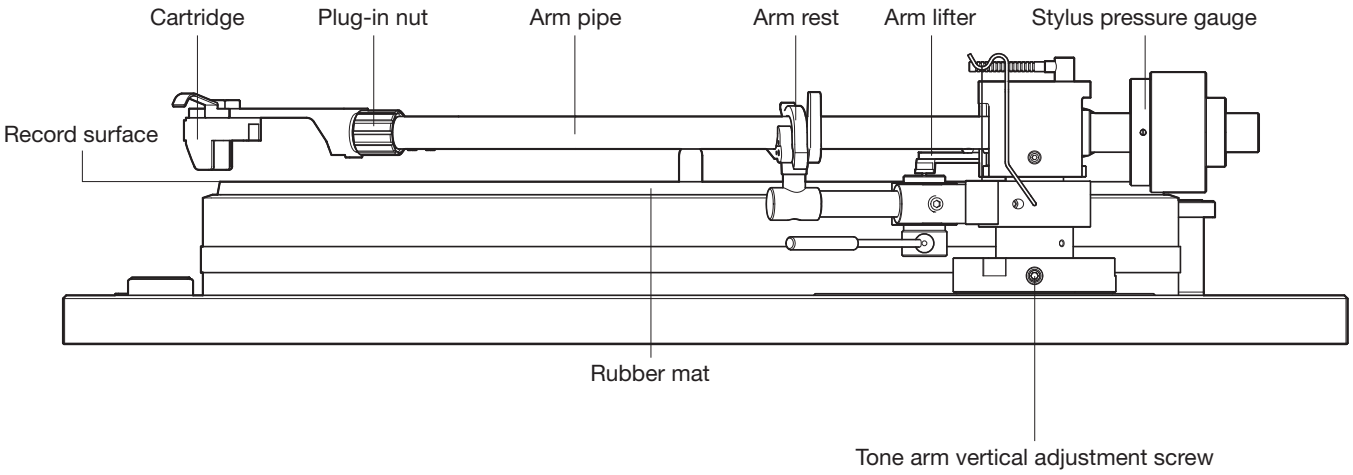
If the center part is raised, push the part with your finger to bring it into intimate contact with the platter.

4. Belt wrapping

Firstly, wrap the belt around the turntable. Secondly, wrap the belt that is wrapped around the turntable around the pulley.

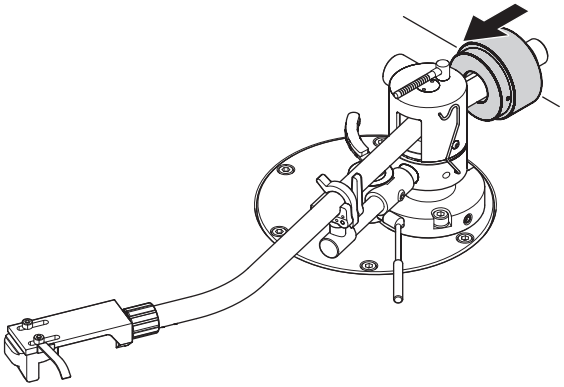
Rotate the turntable with your hand a few times, and check to see that the belt is wrapped around the correct position of the pulley.





5. Counter weight mounting

Direct the stylus pressure gauge of the counter weight frontward, and insert the tone arm into the weight until a click is heard.

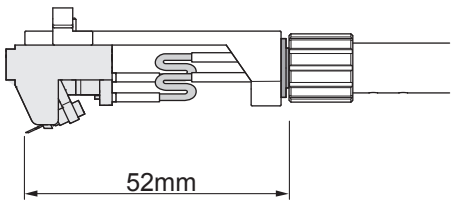


6. Cartridge mounting on headshell

No cartridge is supplied with this product. Mount your cartridge on the headshell. Connect the lead wires (see the table below) to the cartridge, and secure them to the headshell of this product with the screws and nuts included in the cartridge. If the lead wires are connected in a slack manner, hum may be caused. Refer to the instruction manual of your cartridge for the terminals to be connected.

White	Lch +
Blue	Lch –
Red	Rch +
Green	Rch –

Mount the cartridge so that the distance between the mounting face of the headshell with the tone arm and the stylus tip is 52 millimeters. Secure the cartridge in a straight line with the headshell to make the side face of the headshell parallel to the side face of the cartridge.



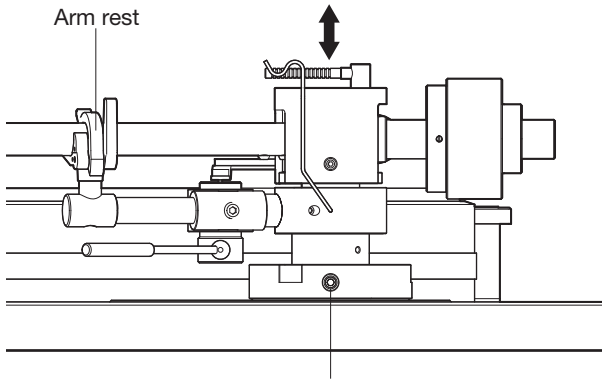
The overhang length of the tone arm equipped in this unit is 16 millimeters.

How to Assemble

7. Tone arm vertical adjustment

Adjust the height of the tone arm so that the record surface is parallelized with the arm pipe.

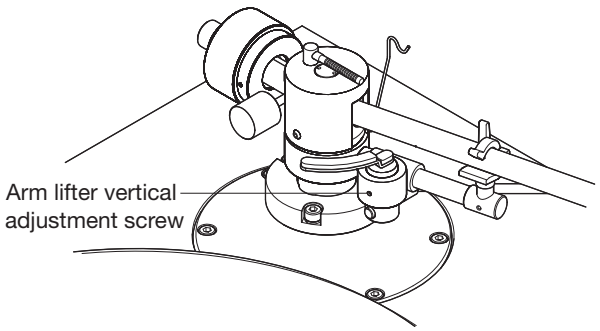
Move the tone arm vertically after loosening the screw of the arm base with the tone arm adjustment wrench, and tighten the screw when the position is at the vertically appropriate position.



The tone arm is secured only with the screw of the arm base. When the screw is loosened, be sure to put the tone arm on the arm rest and support the whole arm with your hand to prevent the arm from dropping.

8. Arm lifter vertical adjustment

Raise the arm lifter, loosen the arm lifter vertical adjustment screw with the arm lifter adjustment wrench, and adjust the arm lifter position so that the gap between the stylus tip and the record surface becomes 5 to 10 millimeters. After this adjustment, lower the lifter, confirm that the stylus tip comes into contact with the record surface, and tighten the arm lifter vertical adjustment screw to secure the arm lifter.



Confirm that a gap exists between the lifter and arm pipe at the same time the stylus tip comes into contact with the record surface.

9. Horizontal balance adjustment

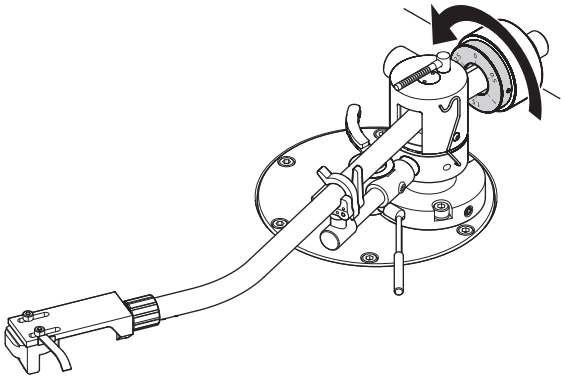
After removing the weight for anti-skating adjustment, remove the tone arm from the arm rest to make it free. Move the counter weight frontward or backward by rotating the weight to finely adjust the horizontal balance of the tone arm.

The stylus tip of the cartridge is remarkably delicate. Be extremely careful not to apply excessive force to it.

10. Stylus pressure adjustment

Set the stylus pressure gauge to zero in the state that the tone arm is horizontally balanced while carefully preventing the counter weight from moving.

Then, rotate the gauge in the direction as shown in the illustration below to set it to the required stylus pressure value. Refer to the instruction manual of your cartridge for the optimal value. A cartridge with 4 to 11 grams in weight is suitable for this product. For a heavyweight cartridge, use the optional heavy weight (A cartridge with 10 to 19 grams in weight is suitable for this product.).



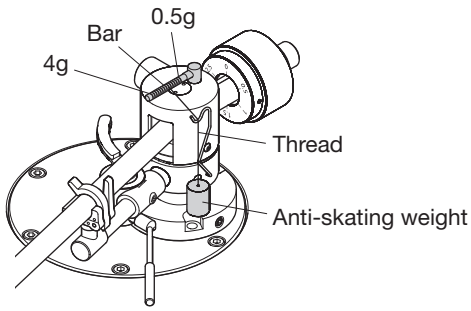
The stylus pressure gauge is not fixed on the counter weight, and is freely rotatable.

11. Anti-skating adjustment

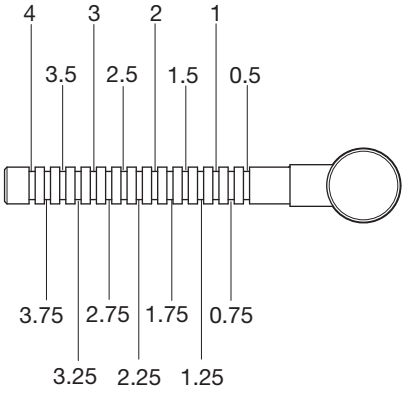
Mount the accessory anti-skating weight as shown in the illustration below.

Run the weight thread along the bar channel according to the the stylus pressure of the cartridge.

The setting can be conducted in units of 0.25 g and in the range between 0.5 and 4 g.



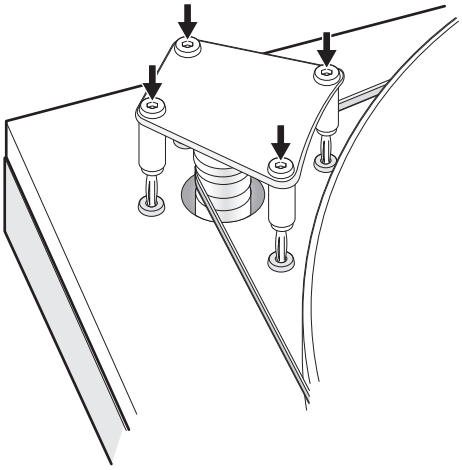
Detailed bar scale



Anti-skating is also called inside force canceler.

12. Pulley cover mounting

Make insertions at four corners slowly and evenly as shown in the illustration below.



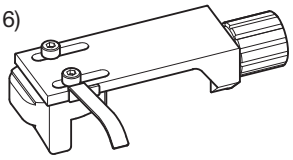
How to Assemble

13. Instructions on how to adjust the mounting position of the cartridge using our OVERHANG GAUGE

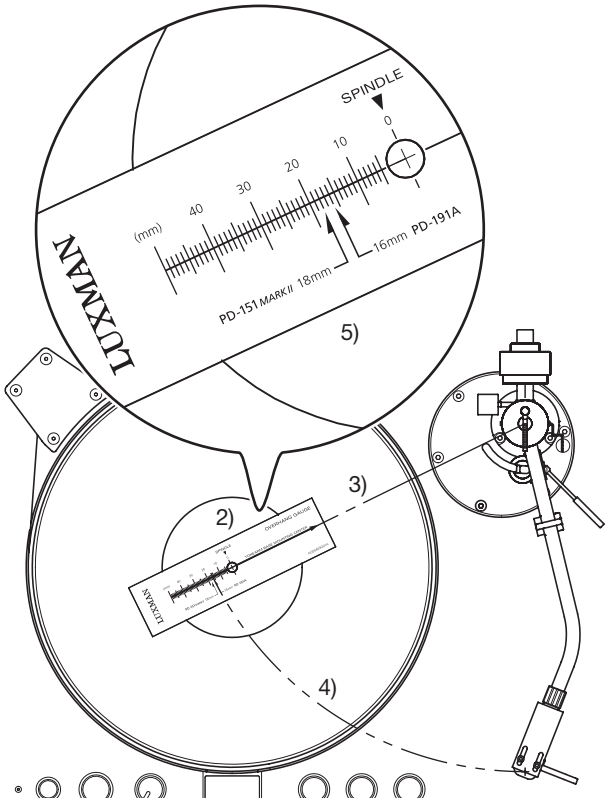
When installing a cartridge or a headshell, please use the included overhang gauge to set the correct alignment. Adjust the mounting position of the cartridge as follows to minimize tracking errors.

1) Temporarily secure the cartridge onto the headshell to be used.
   * Tighten the mounting screws gently and temporarily, so that you can fine-tune the cartridge position later. Over-tightening will make it impossible to re-adjust the alignment of the cartridge.

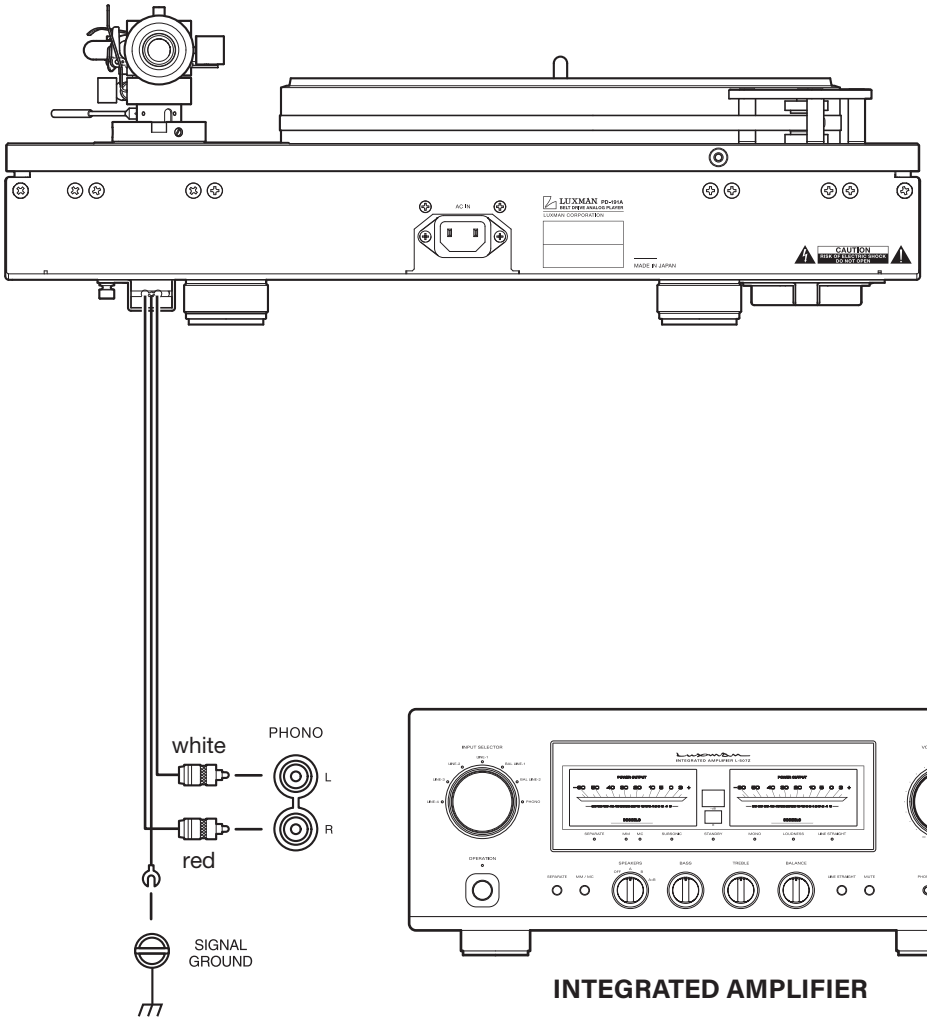
1), 6)

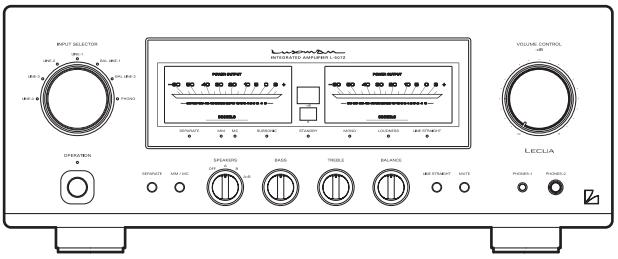


2) Mount the spindle (SPINDLE) hole of the overhang gauge onto the spindle of the turntable and lay it on the platter.
3) Rotate the overhang gauge on the turntable so that the large arrow mark faces the center of the tonearm's rotation axis.
4) Position the tonearm so that it is directly over the center of the spindle.
5) Re-position the cartridge so that the needle position of the model to be used and the stylus tip mark printed on the overhang gauge match. (PD-191A: 16 mm)
   * When adjusting the position of the cartridge, align the stylus tip with the center of the headshell and move the cartridge along the headshell screw tracks until the needle is in the correct position.



6) Be careful not to move the position of the cartridge as you tighten the screws firmly to secure it in place.





INTEGRATED AMPLIFIER

PHONO AMPLIFIER

Connections

Before connecting

Before connecting other devices, connect the jack side of the accessory power cable to the AC inlet of this unit.

When connecting, turn off the power supply for this unit and the power supplies of all auxiliary devices to prevent unexpected accidents that may be caused by noise.

Connecting to the power supply

Insert the accessory power supply cable plug into an AC outlet on the wall of the room.

Connection to a phono equalizer or an integrated amplifier

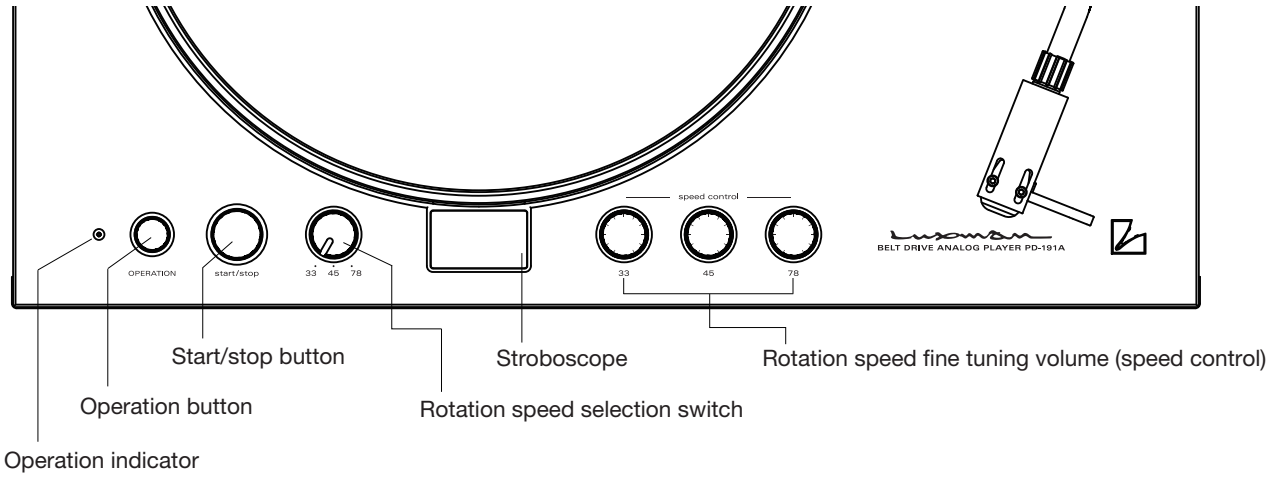
Connect the pin plug of the phono cable supplied with the tone arm to the phono terminal of a phono equalizer or an integrated amplifier.

Connect the white pin plug to the L channel, and the red pin plug to the R channel.

Connection of grounding conductor

Connect the grounding conductor of the phono cable supplied with the tone arm to the GND terminal of a phono equalizer or an integrated amplifier to be used.

Failure to observe this may induce hum noise on music signals.



How to play

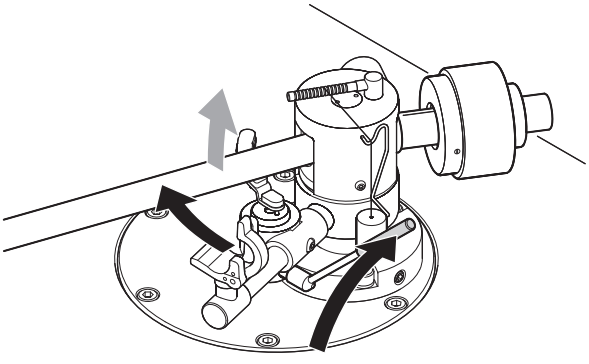
1. Press the operation button (OPERATION) to turn on the power, and the operation indicator lights blue.

2. Put a record on the platter while aligning the center hole of the record with the center spindle.
   For an EP record, use the EP adaptor.

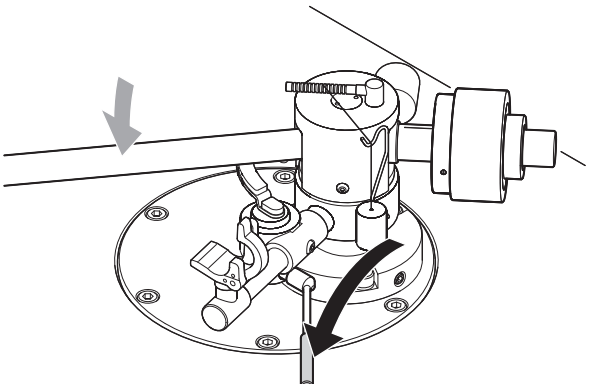
3. Select a rotation speed (33/45/78) with the rotation speed selection switch in accordance with a record and press the start/stop button, and the platter starts rotating.

4. Adjust the rotation speed finely while viewing the indication in the stroboscope. (See page 7)

5. Raise the arm lifter, disengage the tone arm from the arm rest, and move the tone arm to a position where you like to play.



6. Lowering the arm lifter allows the tone arm to be lowered and playback to start.



After the stylus tip comes into contact with the record, increase the volume of the amplifier. If the stylus tip comes into contact with the record in the state that the volume is set to a high position, loud sound may come out of the speakers.

7. After playback ends, raise the arm lifter, put the tone arm back on the arm rest, and press the start/stop button to stop the platter.

To prevent the stylus tip and records from being damaged, be sure to use the arm lifter for vertical movement of the tone arm.

How to replace tone arm

Replacing the arm base mounted on this product (PD-191A) with the optional arm base allows you to mount your tone arm. Tone arms applicable to the optional arm base are shown in the table below.

Model name	Compatible tone arm	Contents
OPPD-AB1	SME 3009R/ 3010R/ Series M2-9R/ Series M2-9, M2-10/ Series IV, V	Arm base, mounting wrench, arm mounting screws (4 pcs)*1, instruction manual
OPPD-AB2	FR64/ 64S/ 64FX, IKEDA IT-345	Arm base, mounting wrench, instruction manual
OPPD-AB3	SAEC WE-308	
OPPD-AB4	SAEC WE-407/ 23	
OPPD-AB5	ORTOFON AS-212S/ RD-212D	
OPPD-AB6	Universal type (no arm mounting hole)	
OPPD-AB11L*2	SME 3012R	Arm base, mounting wrench, instruction manual

*1: The supplied arm mounting screws (4 pieces) shall be used to mount Series M2-9, M2-10, Series IV, or V. Do not use the screws supplied with the tone arm, but use the screws supplied with the optional arm base.

*2: This arm base shall be mount on the side face of the main unit to use a long type tone arm. Refer to the instruction manual of the arm base for further information about how to mount it.

Concerning how to replace the tone arm, follow the procedure below, and be careful not to damage the main unit (PD-191A) or arm base. In addition, unplug the power cable of the main unit (PD-191A) before replacement.
When the arm is adjusted after replacement, conduct adjustment by following the contents of the instruction manual of your tone arm.

1. Removal of the arm and arm base of this product (PD-191A)

Remove the rubber mat, platter, and belt from the main unit.
Loosen the screw tightening the cable holder securing the phono cable, and remove the phono cable from the main unit.
Use the arm base cover removal wrench (3.0 mm) supplied with the main unit to remove the mounting screws (6 pieces) from the main unit. (Keep the removal mounting screws temporarily because they are used to mount the optional arm base later.)
When the arm base is removed from the main unit, unplug the phono cable from the tone arm.

2. Mounting of the tone arm on the arm base

When your tone arm is mounted on the purchased arm base, follow the instruction manual for the optional arm base.

3. Mounting of the arm base on the main unit (PD-191A)

A golden seal is attached on the main unit (PD-191A) from which the arm base is removed. Put the arm base so that the golden seals are aligned, and align the position of the screw hole on the arm base side with the position of the screw hole on the main unit side (PD-191A). Next, use the mounting screws removed from the original arm base to fasten the arm base securely.

Note:

Loosely tightening the screws may exert an adverse effect on sound quality. Therefore, Tighten the screws firmly.

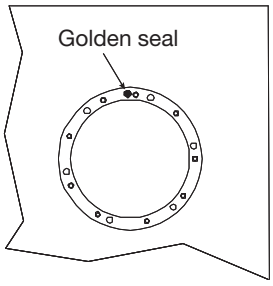
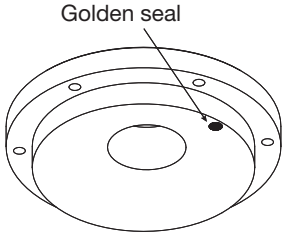


Illustration of the main unit (PD-191A) with the arm base removed

Adjust the position so that the golden seal positions are aligned at mounting the arm base on the main unit.

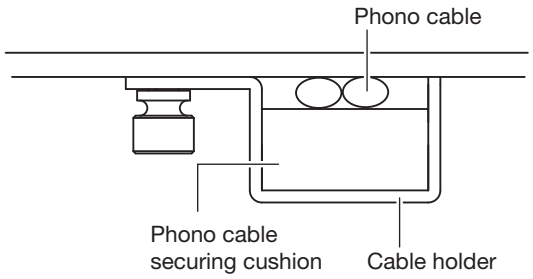


Position of the golden seal on the arm base side (example)

After completion of mounting the arm base and tone arm, put back the platter, rubber mat, and belt.

4. Mounting and securing of the phono cable

Connect the supplied phono cable to the tone arm securely.
Secure the phono cable using the supplied phono cable securing cushion.
Select a cushion whose thickness is best suited for placement.



5. Tone arm adjustment

Follow the instruction manual of your tone arm for each adjustment.
Adjustment examples are shown as follows:

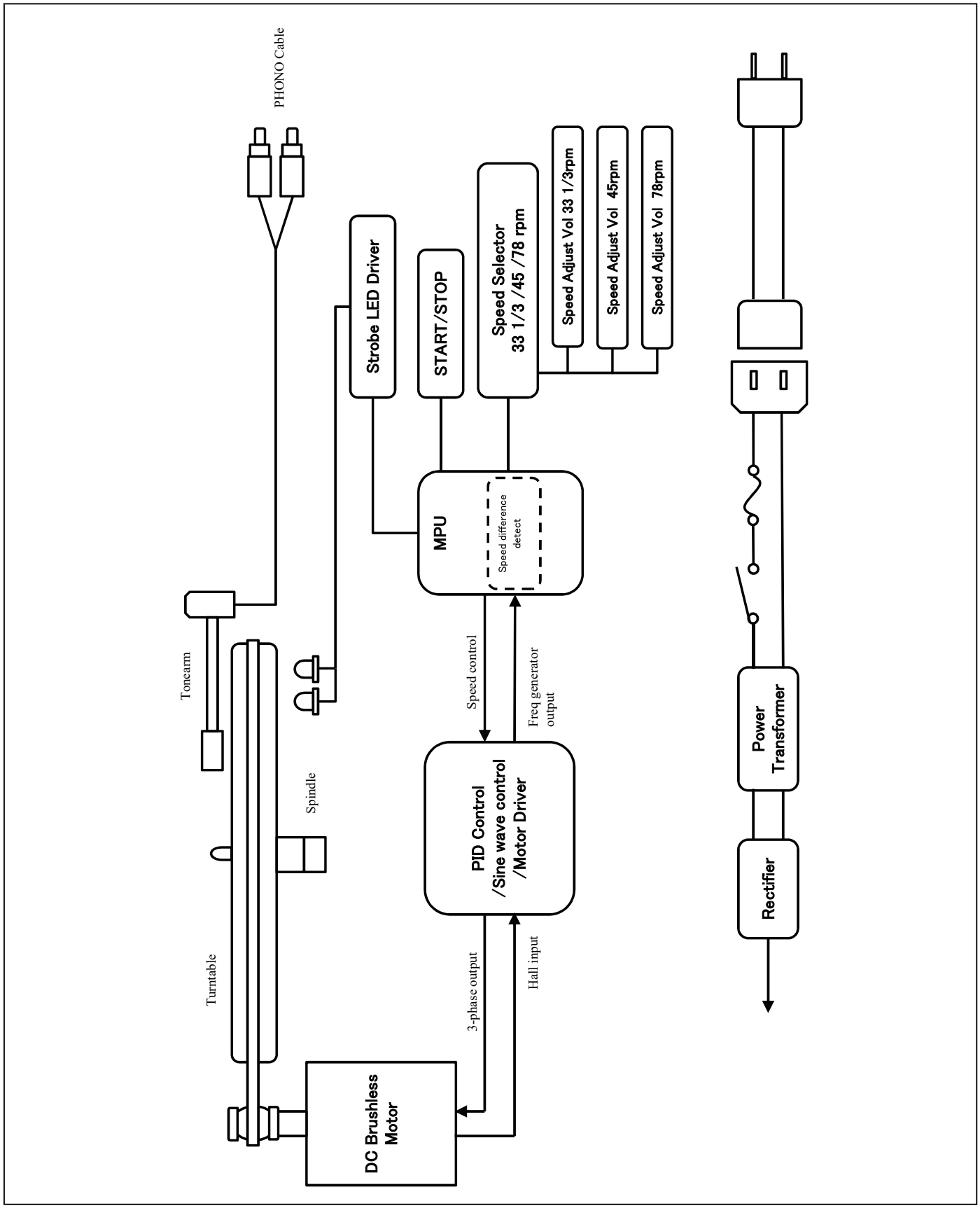
- Tone arm vertical adjustment
- Overhang adjustment
- Lateral balance adjustment
- Anti-skating adjustment
  (It is also called inside force canceler)
- Stylus pressure adjustment

Safety cautions

Caution

- Exercise extra care when this unit is unpacked, assembled, transported, and installed because this unit is heavy.

Block Diagram



Specifications

Phono motor section	
Drive system	Belt drive system
Motor	PID controlled brushless DC motor
Platter	30 cm machined aluminum plate (weight: 5.2 kg)
Revolution	33 1/3 rpm, 45 rpm, 78 rpm (3 speeds selectable)
Revolution adjustment range	±6% (each rotation speed adjustable independently)
Wow and flutter	0.04 % or less (W.R.M.S.)
Tone arm section	
Type	Static balance, S-shaped
Overall length	256 mm
Tracking error angle	+1.07° to -1.52°
Overhang	16 mm
Weight of compatible cartridge	4 g to 11 g (17 g to 24 g including headshell)
Vertical adjustment range	22 mm (arm pipe center to panel top face)
Anti-skating	0 - 4 g
Attached equipment and others	
Attached equipment	[Top panel section] • Operation button • Start/stop button • Rotation speed selection switch • Stroboscope • Rotation speed fine tuning volume (33-1/3/45/78) • Tone arm (arm base mounted) [Rear panel section] • AC inlet [Bottom section] • Insulator • Phono cable
Accessories	• Platter • Power cable • Headshell • Rubber belt • EP adaptor • Pulley cover • Phono cable (mounted to main unit) • Rubber mat • Platter mount handle (2 pieces) • Counter weight • Anti-skating weight • Arm lifter vertical adjustment wrench (1.3 mm) • Tone arm vertical adjustment wrench (2.0 mm) • Arm base cover removal wrench (3.0 mm) • Phono cable securing cushion (3 types) • Overhang Gauge • Owner's Manual (this document) • Safety cautions
Power supply	230 V ~ (50 Hz)
Power consumption	6 W
Weight	24.8 kg
Dimensions	491 (W) × 128 (up to top face of platter) (H) × 399 (D) mm
Ambient operating temperature/ Ambient operating humidity	–5 °C to +35 °C/5 % to 85 % (non condensing)

* Design and specifications are subject to change without notice.

Before Asking for Repair

While in use, this unit may display phenomena which may be confused as malfunctions. Before contacting your country's official LUXMAN distributor for repair services, please read the operating instructions and operating instructions for any connected input and through output devices and check the troubleshooting table below. If the cause of the malfunction cannot be identified, please contact your dealer. After LUXMAN's representatives have accepted your request for repair services, inspection fees and transportation expenses may be claimed, even though the unit may be found to be operating normally.

Problem	Cause	Solution	Ref. page
No power is supplied even though the operation button is pressed ON.	• The power plug is disconnected from the AC inlet or wall outlet, or it is not inserted firmly.	• Insert the power plug in the AC inlet and wall outlet firmly.	16
The platter does not rotate.	• The belt is not wrapped correctly.	• Wrap the belt correctly.	10
	• The operation button is not turned on.	• Turn on the operation button.	17
	• The start/stop button is not pressed.	• Press the start/stop button.	17
The number in the stroboscope moves.	• The rotation speed is not adjusted.	• Adjust the rotation speed using the rotation speed fine tuning volume (speed control).	7
No sound is generated.	• Connection between lead wires and the cartridge or between the headshell and tone arm is incomplete.	• Make connections of lead wires firmly. Tighten the plug-in nut to secure the connection between the headshell and tone arm.	11
	• Connection of the phono cable is not correct.	• Connect the phono cable correctly.	8, 15 - 16
	• Settings or connections of the phono equalizer, integrated amplifier, or others are not correct.	• Check connections among devic-es, power supplies of the phono equalizer, integrated amplifier, and others, the volume position, selector positions, etc.	
The sound volume is too low or too high.	• The cartridge setting at the phono equalizer, integrated amplifier, and others are not correct.	• Perform cartridge setting at the phono equalizer, integrated amplifier, and others in accordance with your cartridge (MC/MM).	
Sound images are shaky, or sound balance between right and left is not favorable.	• The player body is inclined.	• Install this unit in a horizontal and stable place. Use insulators to make this unit horizontal.	8, 10
	• Anti-skating adjustment is inappropriate.	• Adjust anti-skating correctly.	13
	• The cartridge is not mounted horizontally.	• Adjust the horizontal balance.	12
Playing speed is inappropriate.	• The rotation speed is not adjusted appropriately.	• Select a rotation speed in accordance with a record on the platter, and adjust the speed with the rotation speed fine tuning volume (speed control).	7

Problem	Cause	Solution	Ref. page
Hum noise is generated.	• The ground wire is not connected.	• Connect the ground wire of to the GND terminal.	15 - 16
	• Connection of the phono cable is not correct.	• Connect the phono cable correctly.	8, 15 - 16
	• The cartridge is not mounted securely on the headshell.	• Mount the cartridge on the headshell with screws and nuts securely.	11
Sound skip occurs, or noise (cracking sound) is induced.	• The stylus pressure is not adjusted appropriately.	• Adjust the stylus pressure gauge in accordance with your cartridge.	12
	• A scratch, a warp, or a stain is present on the record. The record is electrostatically charged.	• Do not play a record with a scratch or a warp on this unit. Clean the record with a commercially available cleaner.	
	• A stain is present on the stylus tip.	• Remove the stain from the stylus tip.	
	• This unit is installed in a vibrating place.	• Install this unit in a horizontal and stable place to avoid sound skip caused by external vibration.	

This unit may not work normally when the unit is subject to external influence such as static electricity.
In such a case, the unit can work normally by unplugging the power cable once and plugging it again.
This unit does not work normally even after that, please contact your dealer.

MEMO

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