

Luxman

BELT DRIVE ANALOG PLAYER

PD-151

Owner's Manual

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Installation place

- Install this unit in a horizontal and stable place where the unit is less subject to external vibration.
- Do not install this unit near a television or color monitor. Keep this unit away from such devices as cassette decks that are subject to magnetism.

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

When moving this unit, be sure to turn off the power after stopping the turntable and removing the record. Next, unplug the power cable and phono cable, remove the turntable and rubber mat, and then move this unit.

Avoid the following locations for installation

- Locations exposed to direct sunlight
- Places subject to humidity and with less ventilation
- Places where are extremely hot or cold
- Places subject to strong vibration
- Places subject to dust
- Places subject to oil, steam, and heat (such as kitchens)

Do not put articles.

Do not put articles on this unit.

Avoid heat

Do not place this unit on such 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.

Dew 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.

Even in summer, dew condensation can occur if this unit is directly exposed to cool air from an air conditioner. In such a case, the installation place 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, benzene, insecticide, or the like. In addition, do not let this unit contact a rubber or plastic form 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 repairs and adjustments are needed, please consult with the dealer where you bought the unit.

Safety caution

Caution

- Exercise extra care when this unit is unpacked, assembled, transported, and installed because this unit is heavy.
- Be careful not to get your finger caught.



Be careful not to get your hands, clothing or hair closer to the motor pulley section when the turntable is rotating.

Please pay attention especially to children when they are around.

Please keep in mind that it can result in injury if fingers get caught between the motor pulley and the belt.

Features of This Unit

Belt drive

Belt drive system reduces vibration of the motor and rotation irregularity and also obtains smooth rotations.

Circuit configuration

PID control system measures rotation speed using the hall element of the motor and takes to the set rotation speed smoothly in a short time.

PID controller: Proportional-Integrated-Differential controller

High performance base clock

MEMS oscillator that is excellent in temperature characteristics for base clock for speed correction is used.

MEMS: Micro Electro Mechanical Systems

Rotation speed deviation indicator

The indicator lights in green when the rotation speed is matched with the set rotation speed. The indicator will flash in green when the rotation speed is slower than the set speed and flash in blue when it is faster than the set speed.

33 / 45 / 78 rpm selectable

In addition to 33 and 45 rpm, SP record of 78 rpm is supported.

Tone arm

A universal static balance tone arm for simple cartridge replacement is included as standard equipment.

Heavyweight platter

The platter weighs 4.0 kg (39 N), which is machined from aluminum metal to improve rotational accuracy.

Inertial moment of approx. 21.9 N·cm² is achieved.

High-rigidity chassis

Machined 10 mm thick top panel and thick metal plates are used for the exterior.

Vibration isolating performance is improved thanks to 2 mm thick metal plate used for the bottom plate to which the insulators are to be attached.

Large-sized spindle

This large-sized spindle with a diameter of 16 mm is made of stainless steel and equipped with ball bearing and thrust bearing formed by polyether ether ketone (PEEK) that support stable rotation.

Rubber mat

Vibration of record is prevented due to the adopted vibration absorbing rubber.

Floating mount

The power transformer and the motor are installed with the vibration absorbing rubber to prevent vibration transmitted to the top panel.

Large-sized insulator

Vibration absorbing rubber absorbs vibration of the chassis and unnecessary outside vibration such as from an audio rack and converts them to heat.

Magnesium alloy headshell

Magnesium alloy headshell with LUXMAN logo is supplied.

AC inlet

Power-cable-detachable AC inlet

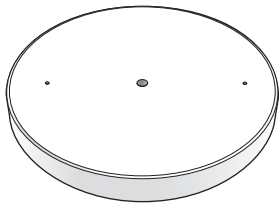
Before Use

Check the accessories.

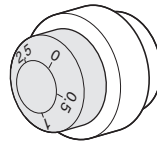
Make sure that all accessories shown below are in the package.

* No cartridge is included.

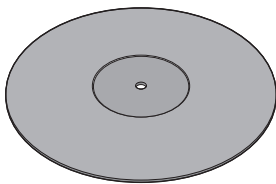
- Platter



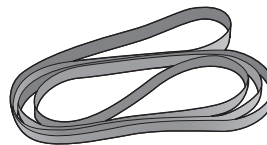
- Counterweight



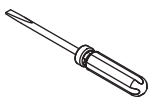
- Rubber mat



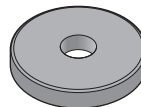
- Rubber belt



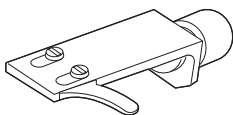
- Flathead screwdriver for rotation speed adjustment



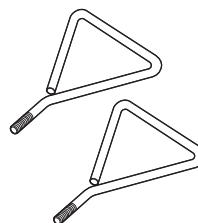
- EP adaptor



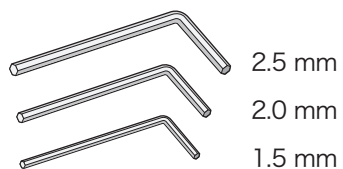
- Headshell



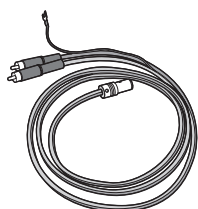
- Platter mount handle (2 pieces)



- Tone arm height adjustment wrench (2.5 mm)
Headshell cylinder adjustment wrench (2.0 mm)
Arm lifter height / arm rest height adjustment wrench (1.5 mm)



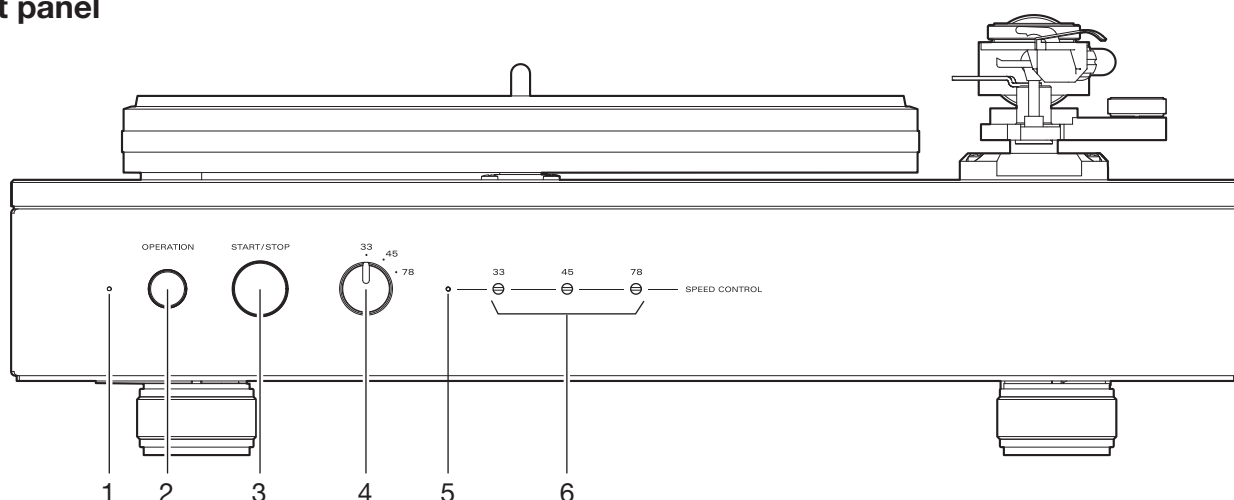
- Phono cable (ground cable equipped)
* This cable is connected to the main unit at shipment.



- Power cable
- Printed matters
Safety cautions
Owner's Manual (This document)

Names and Functions

Front panel





1. Operation indicator

This indicator lights up when the power is turned on.

2. Operation switch (OPERATION)

This switch turns on and off the power.

 : ON
 : OFF

3. Start/stop switch (START/STOP)

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

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

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

This switch toggles the rotation speed of the platter between 33, 45 and 78 rpm.

Select a rotation speed in accordance with a record to listen to.

5. Rotation speed deviation indicator

Adjust the rotation speed fine tuning volume to keep the indicator lit in green.

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

Though the rotation speed had been adjusted at the time of shipment, make adjustment with each volume in case that the rotation speed deviation indicator still flashes even after 5 seconds have passed from a moment when the start/stop switch is pressed.

33: Align the rotation speed selection switch to “33” and adjust to keep the indicator lit in green.

Align the tip of the provided flathead screwdriver to the groove matching with the tip of the screwdriver on the volume and then rotate to adjust.

When the rotation speed is faster than 33 1/3 rpm, the indicator will flash in blue. When it is slower than 33 1/3 rpm, it will flash in green.

45: Align the rotation speed selection switch to “45” and adjust to keep the indicator lit in green.

Align the tip of the provided flathead screwdriver to the groove matching with the tip of the screwdriver on the volume and then rotate to adjust.

When the rotation speed is faster than 45 rpm, the indicator will flash in blue. When it is slower than 45 rpm, it will flash in green.

78: Align the rotation speed selection switch to “78” and adjust to keep the indicator lit in green.

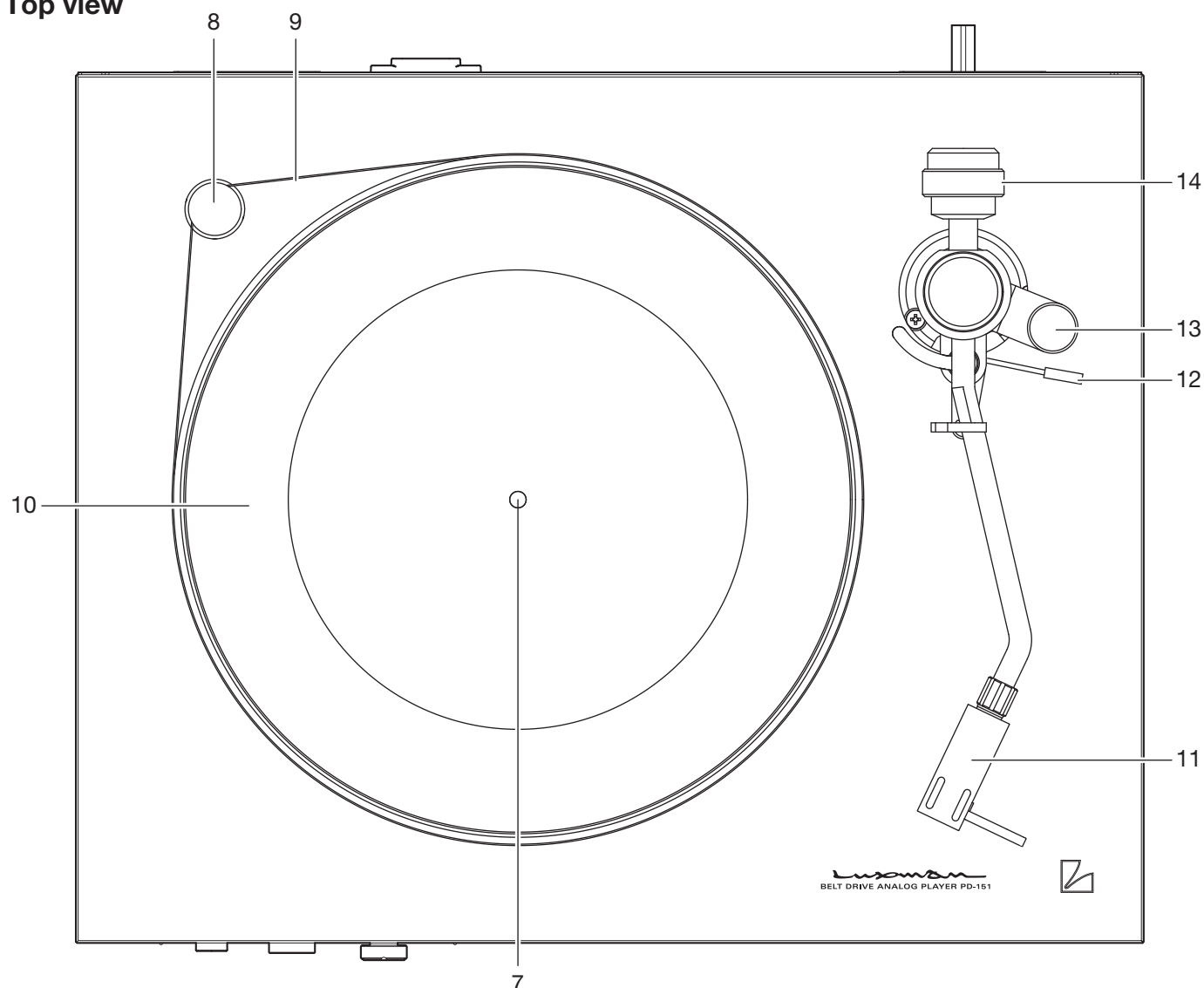
Align the tip of the provided flathead screwdriver to the groove matching with the tip of the screwdriver on the volume and then rotate to adjust.

When the rotation speed is faster than 78 rpm, the indicator will flash in blue. When it is slower than 78 rpm, it will flash in green.

Be sure to use the provided flathead screwdriver for rotation speed adjustment.

When using the screwdriver for adjustment, be careful not to scratch the panel with the tip of the screwdriver.

Top view



7. Center spindle

A guide for mounting a record.
For playing an EP record, mount the EP adaptor (provided) here.

8. Motor pulley

Transfers motor rotation to the belt.

9. Belt

Transfers motor rotation to the platter.

10. Rubber mat

Suppresses platter squeaks and brings a record into intimate contact with the platter.

11. Headshell

Couples a cartridge with the tone arm.

12. Arm lifter

Moves a cartridge upward and downward.

13. Anti-skating adjustment knob

Cancels the inward force applied to the tone arm during record playback.

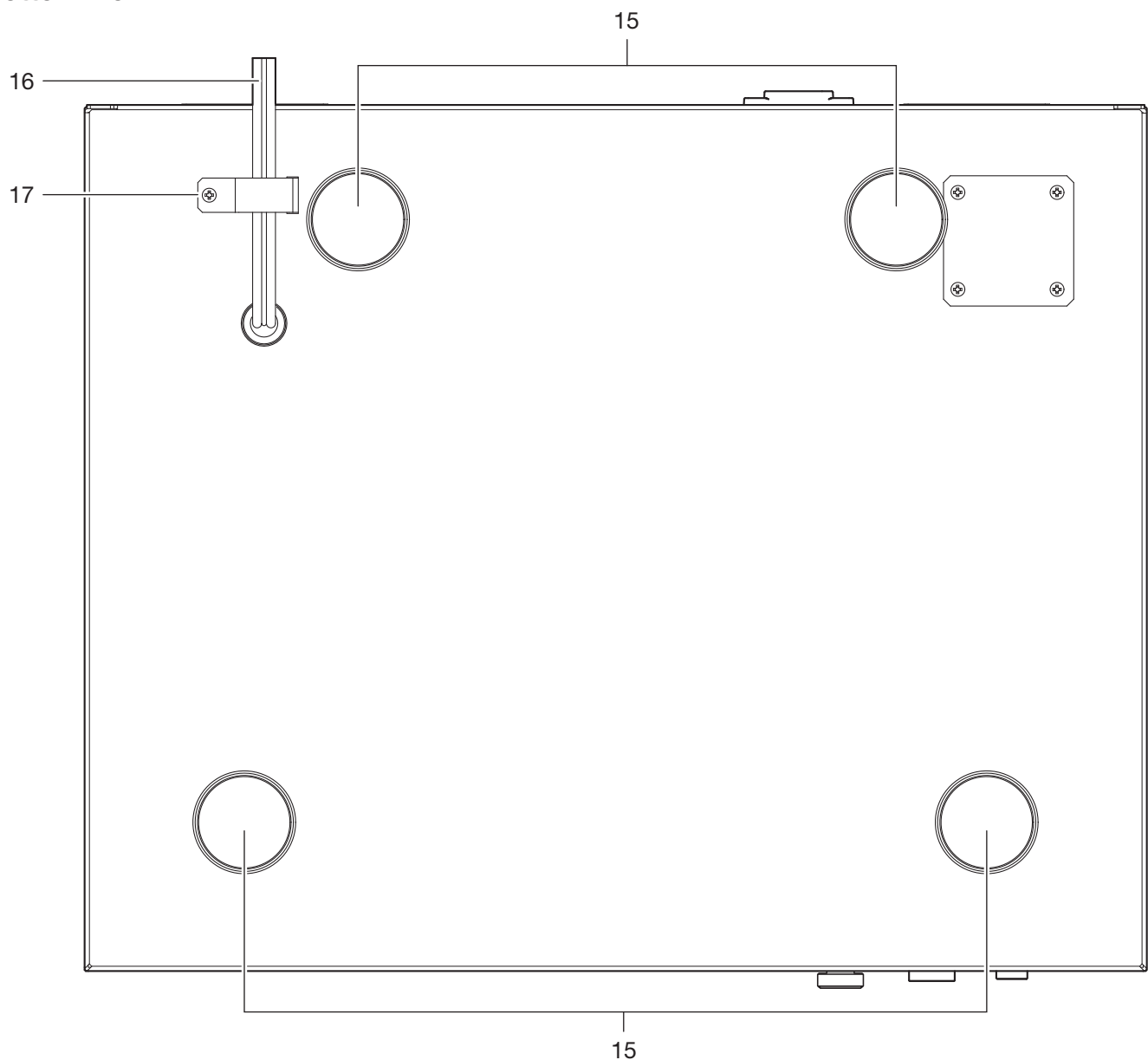
Adjust in accordance with stylus pressure of the cartridge in use.

14. Counterweight

Adjusts the stylus pressure of the cartridge.

Names and Functions

Bottom view



15. Insulators

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 5 mm.

Use these insulators for making this unit horizontal.

17. Cable holder

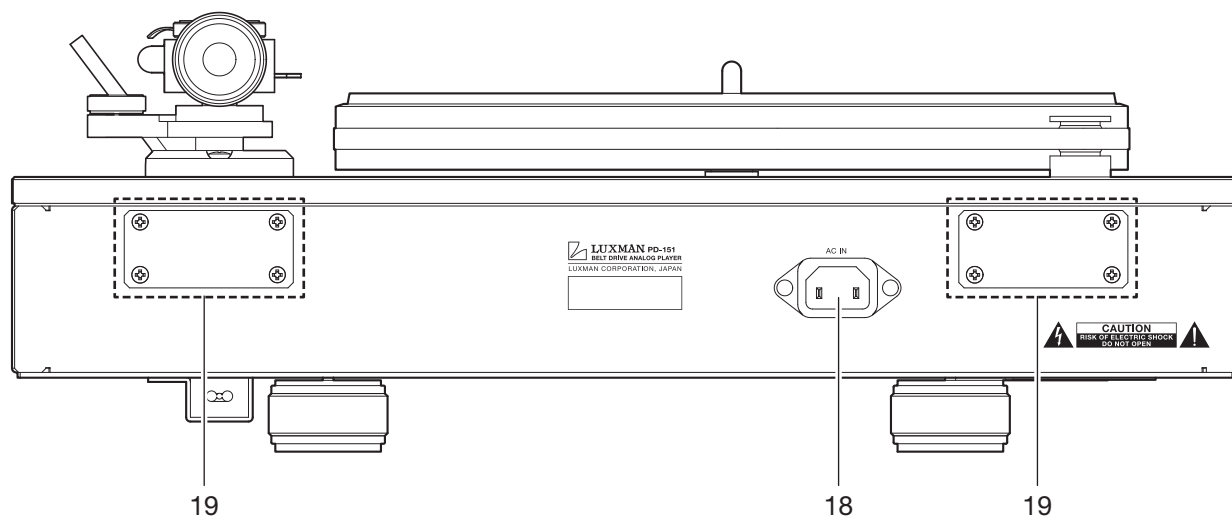
This holder fixes the phono cable.

16. Phono cable

This cable is connected to the DIN5P connector of the tone arm.

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

Rear view



18. AC inlet (AC IN)

Please connect the accessory power cable to supply the power from the AC outlet on the wall.

19. Hinge support bracket mounting sections

Mounting sections for an optional dust cover (OPPD-DSC151).

Screws for mounting of the hinge support bracket are attached.

When not using a dust cover, do not remove the screws.

How to assemble

Do not turn on the power until assembly is completed.

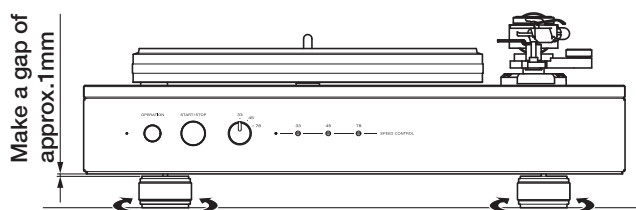
1. Installation of main body

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 corners of the bottom side to adjust the whole horizontal balance of the player.

When adjusting the horizontal balance, adjust after making a gap of approx.1 mm between the bottom of the player and the insulators.

After the adjustment, make sure that there is a gap between the bottom of the player and the insulators. This gap increases effect of the insulators and also improves playback sound quality.

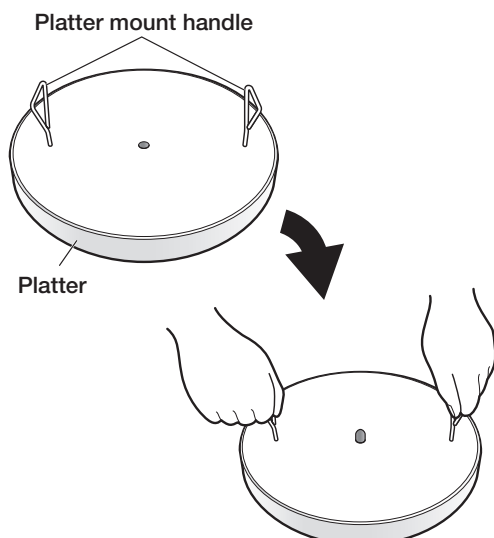


Counterclockwise for up, and clockwise for down

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 with extreme care not to apply any unreasonable force to the center spindle. After mounting the platter, remove the platter mount handles and store them.



Please be extra careful 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 sheet on the platter by aligning it with the center spindle.

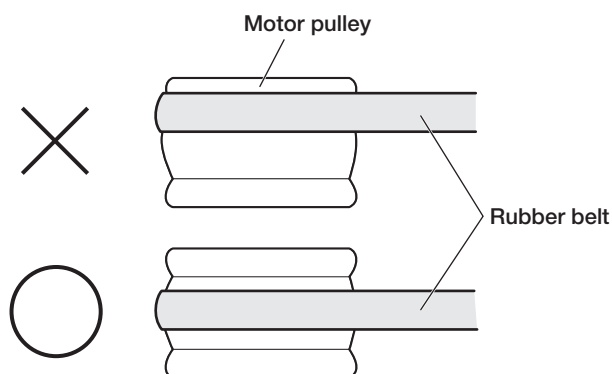
When the rubber mat is attached, the center part may sometimes float up.

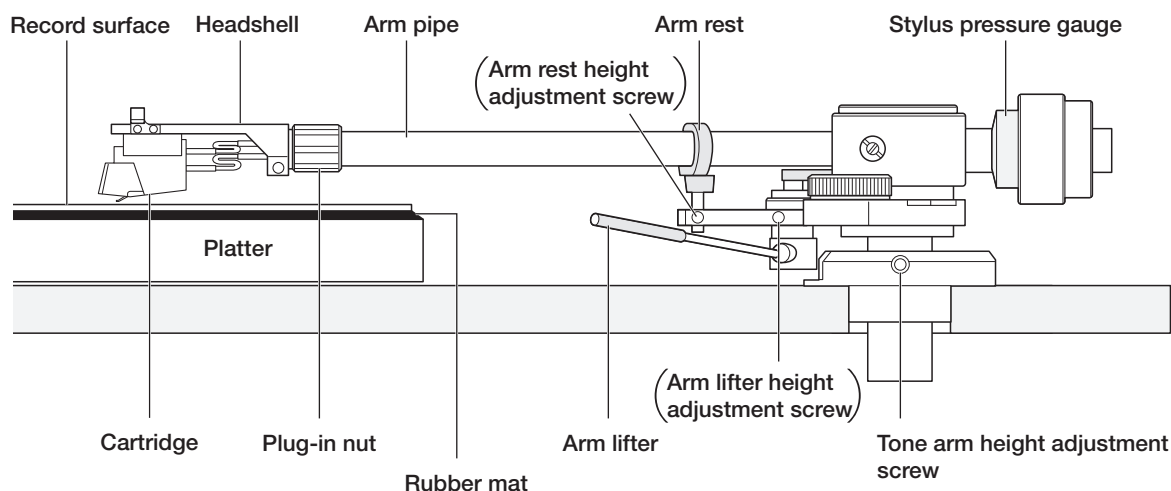
When it occurred, press the float with your finger and make the sheet adhere to the platter.

4. Belt wrapping

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

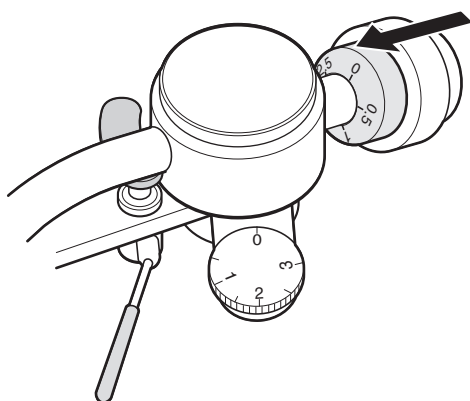
Rotate the turntable with your hand a few times, and check to see that the belt is wrapped around the correct position of the pulley.





5. How to mount counterweight

Face the stylus pressure gauge forward and insert the counterweight into the back side of the tone arm until it clicks.



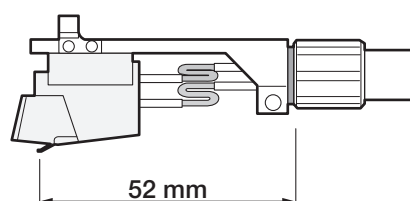
6. How to mount cartridge on headshell

No cartridge is included in this unit. Mount your cartridge on the headshell.

Connect the lead wires (see the table below) to your cartridge and firmly secure the cartridge to the headshell of this unit with the screws and nuts supplied with the cartridge. If the cartridge is loosely secured, hum noise may be generated. Refer to the operating instructions for your cartridge regarding terminals to be connected.

White	Lch+
Blue	Lch-
Red	Rch+
Green	Rch-

Mount your cartridge so that the distance from the connection face between the headshell and tone arm to the tip of the stylus is 52 mm. Secure the cartridge by moving the cartridge straight along the side face of the headshell and making the cartridge parallel to the headshell.



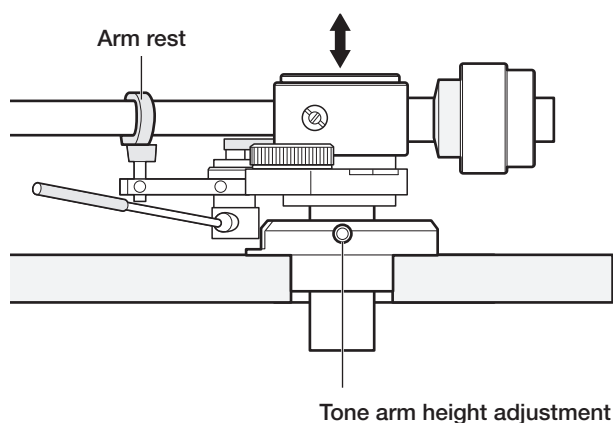
The overhang distance of the tone arm mounted on this unit is 15 mm.

How to assemble

7. Adjustment of tone arm height

Adjust to make the record surface and the arm pipe in parallel by changing height of the tone.

Loosen the screw placed at the arm base with the tone arm adjustment wrench and move the tone arm up and down, and then tighten the screw when the tone arm is at an appropriate position.



The tone arm is secured only with the screw placed at the arm base.

When the screw is loosened, be sure to put the tone arm in the arm rest and use your hand to support the entire tone arm to prevent it from dropping.

8. Adjustment of arm lifter height

Raise the arm lifter and adjust the gap between the tip of the stylus and a record from 5 to 10 mm by changing the position of the lifter by loosening the tone arm height adjustment screw with the arm lifter adjustment wrench. After the adjustment, lower the lifter and make sure that the tip of the stylus contact the record and then tighten the tone arm height adjustment screw.

Make sure that there is a gap between the lifter and the arm pipe when the tip of the stylus contacts the record.

9. Adjustment of horizontal balance

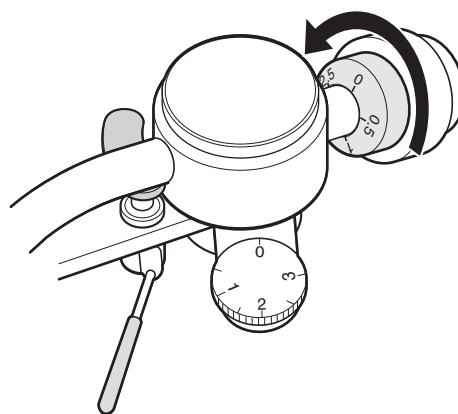
Take the tone arm out of the arm rest in a state that the anti-skating adjustment knob is aligned to "0" and leave it in a free state. Rotate the counterweight to minutely adjust the horizontal balance of the tone arm.

Be aware that the stylus tip of a cartridge is remarkably delicate. Therefore, exercise extra care not to apply unreasonable force to the stylus tip.

10. Adjustment of stylus pressure

Set the stylus pressure gauge to 0 while paying attention not to move the counterweight with the tone arm horizontally balanced.

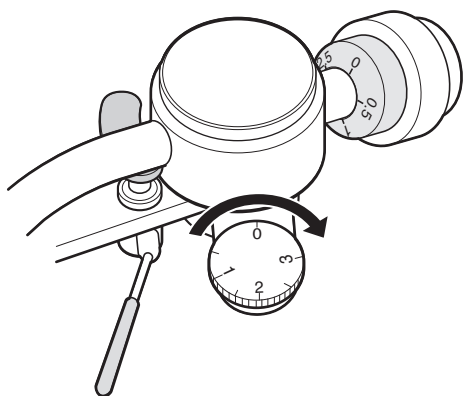
Secondly, set the stylus pressure to a required value by rotating the stylus pressure gauge in the arrow direction shown in the drawing below. Refer to the operating instructions for your cartridge regarding the optimal value. A cartridge weighing 4 to 12 g is suitable for this unit. For a heavyweight cartridge, use an optional heavy counterweight.



The stylus pressure gauge is free from the counterweight and rotatable freely.

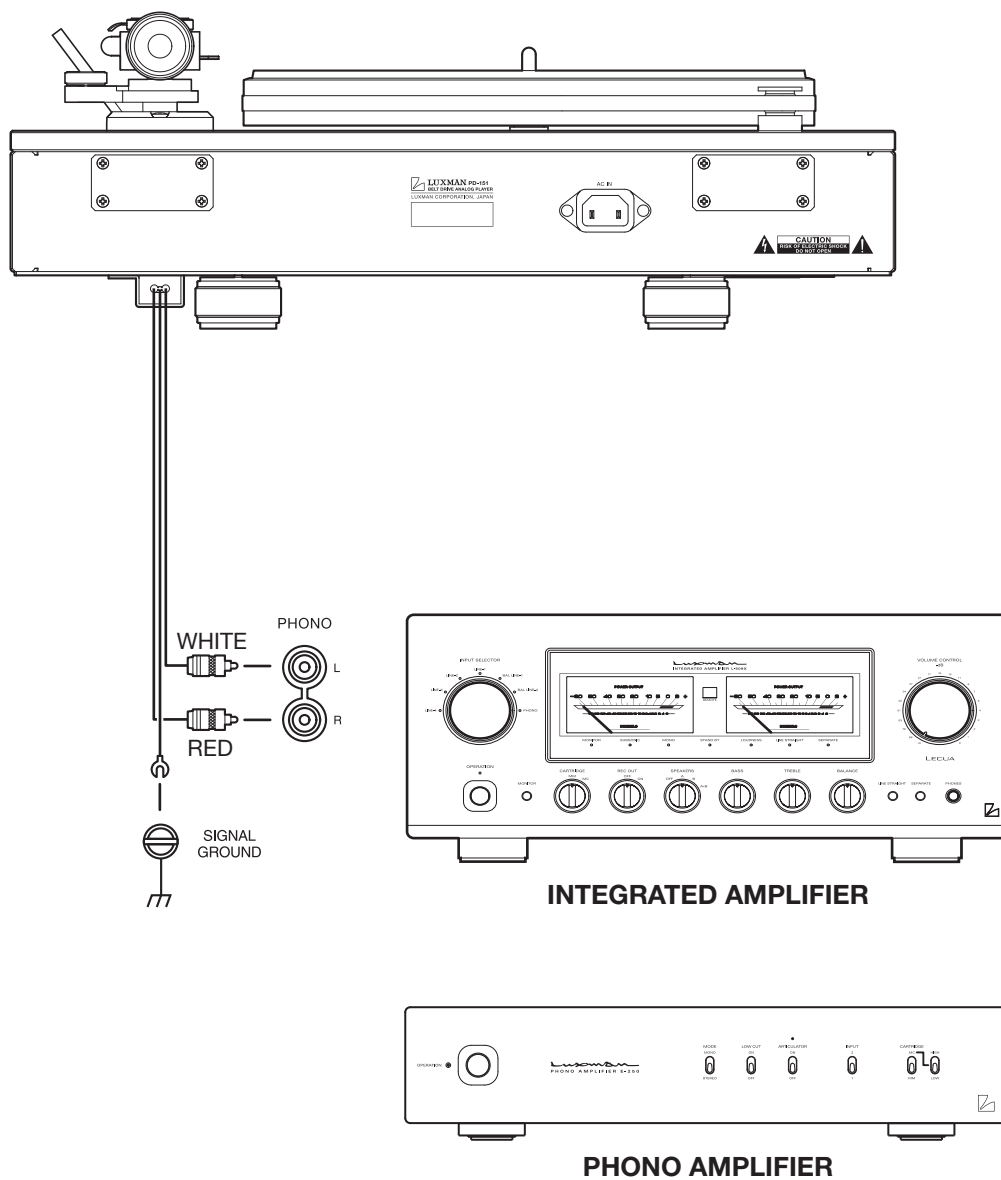
11. Adjustment of anti-skating

Rotate the anti-skating adjustment knob to set it to a value that is appropriate to the stylus pressure of your cartridge.



Anti-skating is also called as inside force canceler.

Connections



Before Connecting

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

Before connection is made, turn off the main power switch of this unit and the power of all other connected devices to prevent accidents due to noises generated unexpectedly.

How to connect power supply

Use the accessory power cable and insert the AC plug in an outlet on the wall in the room where the unit will be installed.

Connection with a phone equalizer amplifier or an integrated amplifier

Connect the pin plug of the phono cable to the phono terminal of a phono equalizer or integrated amplifier.

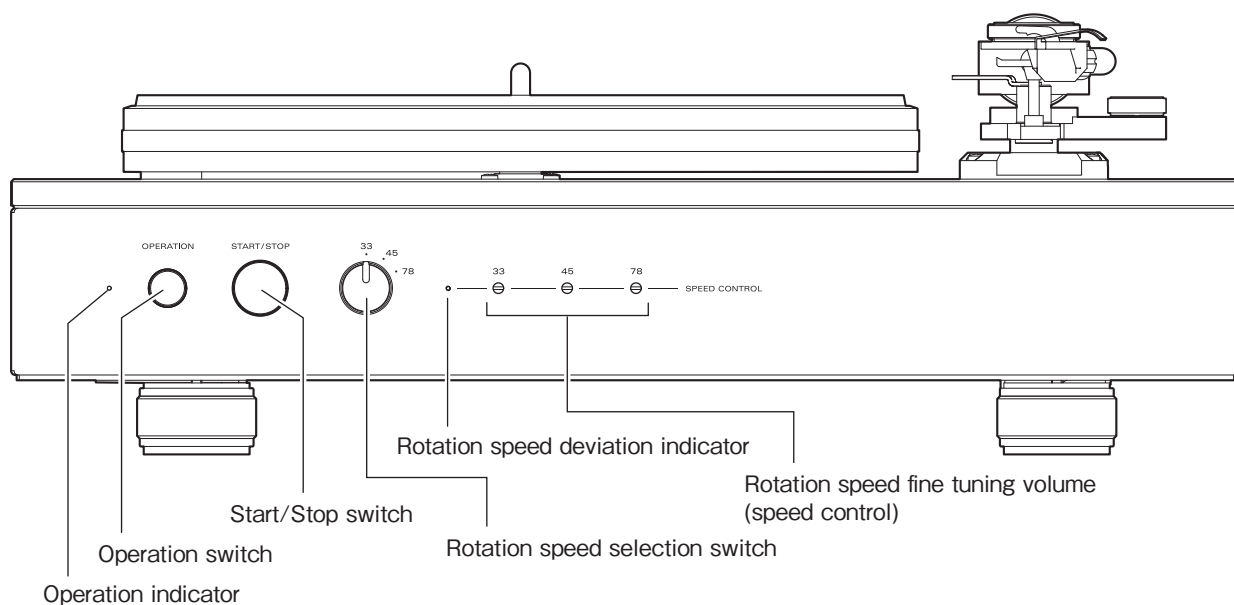
Connect the white pin plug to the Lch and the red one to the Rch.

Connection of grounding conductor

Connect the grounding conductor to the signal ground terminal of a phono equalizer or integrated amplifier to be used together.

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

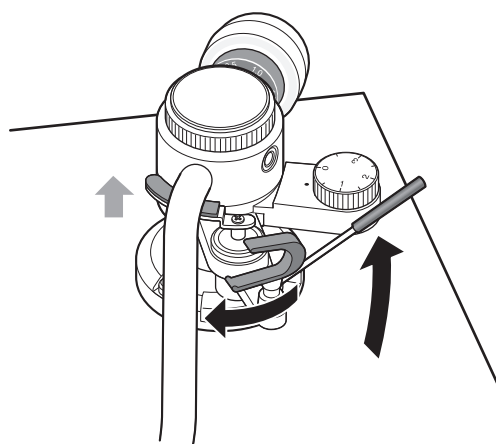
Operations



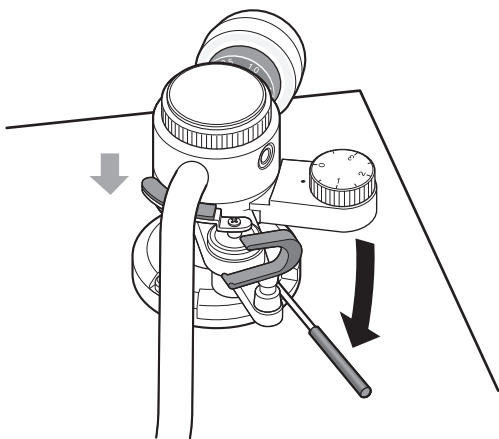
How to play

1. When the operation switch (OPERATION) is pressed and turned on, the operation indicator will light in 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. When the start/stop switch is pressed after setting the rotation speed (33/45/78) with the rotation speed selection switch in accordance with a record to be played, the platter will start rotating.
4. After several seconds, the rotation speed deviation indicator will light.
When the indicator is flashing, adjust the rotation speed finely. (see page 6)

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.



Increase sound volume of the amplifier after the tip of the stylus contacted a record. When the tip of the stylus contacts a record in a state that the volume is in a high position, a loud sound will come out from speakers.

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

To prevent the stylus tip and records from being damaged, be sure to use the arm lifter to raise or lower the tone arm.

Safety caution

Caution



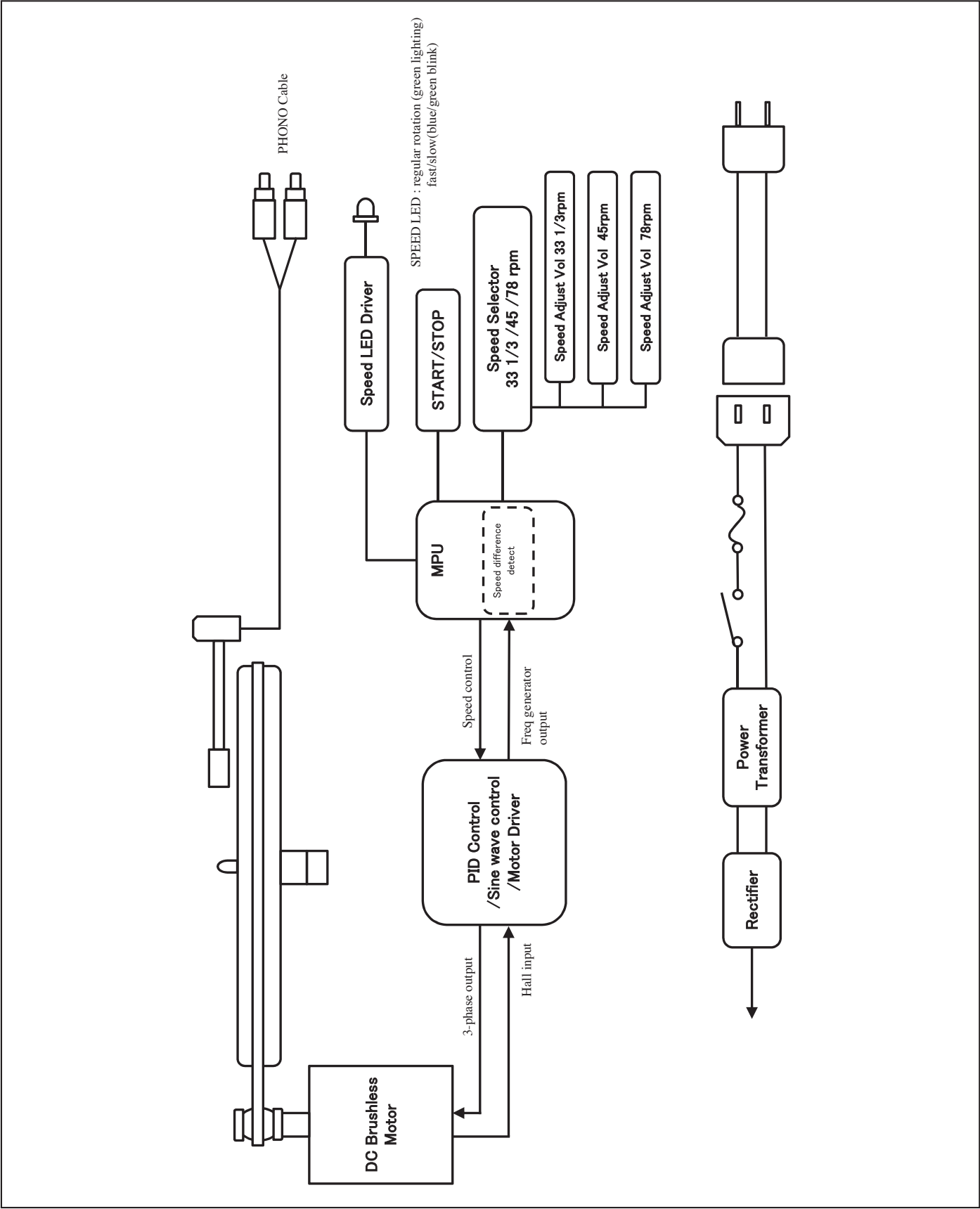
Moving
parts

Be careful not to get your hands, clothing or hair closer to the motor pulley section when the turntable is rotating.

Please pay attention especially to children when they are around.

Please keep in mind that it can result in injury if fingers get caught between the motor pulley and the belt.

Block Diagram



Specifications

Phono motor section	
Drive system	Belt drive system
Motor	PID control DC brushless motor
Platter	30 cm machined aluminum plate (weight 4.0 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 % (W.R.M.S.) or less
Tone arm section	
Type	Static balance, S-shaped
Effective length	229 mm
Tracking error angle	+1.9° to -1.1°
Overhang	15 mm
Applicable cartridge weight	4 to 12 g * 22 to 32 g when a heavy counterweight (option) is used
Adjustable height range	38 to 60 mm
Anti-skating	0 to 3 g
Attached equipment and others	
Attached equipment	[Front panel section]
	<ul style="list-style-type: none"> • Operation switch • Rotation speed selection switch • Rotation speed fine tuning volume (33 1/3 rpm, 45 rpm, 78 rpm)
	[Rear panel section]
Accessories	<ul style="list-style-type: none"> • AC inlet
	[Bottom section]
	<ul style="list-style-type: none"> • Insulator • Phono cable • Platter • Power cable • Headshell • Rubber belt • EP adaptor • Rubber mat • Phono cable (connect to the main unit) • Counterweight • Platter mount handle (2 pieces) • Tone arm height adjustment wrench (2.5 mm) • Headshell cylinder adjustment wrench (2.0 mm) • Arm lifter height / arm rest height adjustment wrench (1.5 mm) • Flathead screwdriver for rotation speed adjustment • Owner's Manual (This document) • Safety cautions
Power source	230 V ~ (50 Hz)
Power consumption	6 W
Weight	15.7 kg
Dimensions	465 (W) x 132.5 (up to top face of platter) (H) x 393 (D) mm
Ambient operating temperature / Ambient operating humidity	-5 °C to +35 °C / 5 % to 85 % (non condensing)

* Specifications and the appearance are subject to change without notice.

Before Asking for Repair Service

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.

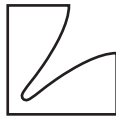
Problem	Cause	Solution	Ref. page
No power is supplied even though the operation switch is pressed.	<ul style="list-style-type: none"> The power plug is disconnected from the AC inlet or wall outlet, or it is not inserted firmly. 	<ul style="list-style-type: none"> Insert the power plug in the AC inlet and wall outlet firmly. 	15
The platter does not rotate.	<ul style="list-style-type: none"> The belt is not wrapped correctly. 	<ul style="list-style-type: none"> Wrap the belt correctly. 	10
	<ul style="list-style-type: none"> The operation switch is not turned on. 	<ul style="list-style-type: none"> Turn on the operation switch. 	16
	<ul style="list-style-type: none"> The start/stop switch is not pressed. 	<ul style="list-style-type: none"> Press the start/stop switch. 	16
The Indicator is flashing.	<ul style="list-style-type: none"> The rotation speed is not adjusted. 	<ul style="list-style-type: none"> Adjust the rotation speed using the rotation speed fine tuning volume (speed control). 	6
No sound is generated	<ul style="list-style-type: none"> Connection between lead wires and the cartridge or between the headshell and tone arm is incomplete. 	<ul style="list-style-type: none"> Make connections of lead wires firmly. Tighten the plug-in nut to secure the connection between the head-shell and tone arm. 	11
	<ul style="list-style-type: none"> Connection of the phono cable is not correct. 	<ul style="list-style-type: none"> Connect the pin plugs of the phono cable correctly. 	14~15
	<ul style="list-style-type: none"> Settings or connections of a phono equalizer and integrated amplifier are not correct. 	<ul style="list-style-type: none"> Check connections between the devices, 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.	<ul style="list-style-type: none"> The cartridge setting of the phono equalizer, integrated amplifier and others is not correct. 	<ul style="list-style-type: none"> Perform cartridge setting of 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.	<ul style="list-style-type: none"> The player body is inclined. 	<ul style="list-style-type: none"> Install this unit in a horizontal and stable place. Use insulators to make this unit horizontal. 	8, 10
	<ul style="list-style-type: none"> Anti-skating adjustment is inappropriate. 	<ul style="list-style-type: none"> Perform anti-skating adjustment appropriately. 	13
	<ul style="list-style-type: none"> The cartridge is not mounted horizontally. 	<ul style="list-style-type: none"> Adjust the horizontal balance. 	12

Problem	Cause	Solution	Ref. page
Playing speed is inappropriate.	<ul style="list-style-type: none"> The rotation speed is not adjusted appropriately. 	<ul style="list-style-type: none"> Select a rotation speed in accordance with a record on the turntable, and adjust the speed with the rotation speed fine tuning volume (speed control). 	6
Hum noise (hum sound) is generated.	<ul style="list-style-type: none"> The ground wiring is not connected. 	<ul style="list-style-type: none"> Connect the grounding conductor to a GND terminal. 	14~15
	<ul style="list-style-type: none"> Connection of the phono cable is not correct. 	<ul style="list-style-type: none"> Connect the phono cable correctly. 	8, 14~15
	<ul style="list-style-type: none"> The cartridge is not mounted securely on the headshell. 	<ul style="list-style-type: none"> Mount the cartridge on the headshell with screws and nuts securely. 	11
Sound skip occurs, or noise (cracking sound) is induced.	<ul style="list-style-type: none"> The stylus pressure is not adjusted appropriately 	<ul style="list-style-type: none"> Set the stylus pressure gauge to an appropriate value in accordance with your cartridge. 	12
	<ul style="list-style-type: none"> A scratch, a warp, or a stain is present on the record. The record is electrostatically charged. 	<ul style="list-style-type: none"> Do not play a record with a scratch or a warp on this unit. Clean the record with a commercially available cleaner. 	
	<ul style="list-style-type: none"> A stain is present on the stylus tip. 	<ul style="list-style-type: none"> Remove the stain from the stylus tip. 	
	<ul style="list-style-type: none"> This unit is installed in a vibrating place. 	<ul style="list-style-type: none"> 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.



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