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STEREO TURNTABLE

# PL-12D-II

OPERATING INSTRUCTIONS

YPT  
NBT  
HVT



 **PIONEER**

Thank you very much for your purchase of Pioneer model PL-12D-II. You will get many years of pleasure from this quality stereo turntable. To get the most from this easy-to-use turntable, please read the operating instructions and follow the directions indicated. For the psychological benefit of those who still want to use their optional phono cartridges, no phono cartridge is equipped with this. The first thing you have to do is to attach your option to a head shell referring to "Attaching a phono cartridge" in the instructions.

Before using this turntable, you should lubricate the oil holes while reading "LUBRICATION".

Because this unit may fall short of oil during the shipments.

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## FEATURES

### PRECISION-ENGINEERED BELT DRIVE SYSTEM

The motor drives the turntable platter not via a system of trouble-prone idlers but via the tried-and-true Pioneer belt transmission, shutting out motor vibrations and rumble while improving the overall signal-to-noise ratio. The belt, made of durable polyurethane, resists temperature changes as well as age remarkably well.

### SYNCHRONOUS MOTOR FOR ACCURATE, CONSISTENT SPEED

The 4-pole synchronous motor features highly accurate and stable speed and revolves with practically no vibrations. Stability is further improved by the fine machining of the aluminum alloy platter.

### ANTI-SKATING DEVICE ENSURES PERFECT TRACKING

To keep the stylus tracking perfect along the center of the record groove (In other words, to compensate for the inward thrust of the tonearm), a specially developed spring-activated anti-skating device is provided. Its effect is to guarantee fine channel separation when playing stereo records.

### S-SHAPED TONEARM WITH LATERAL BALANCE WEIGHT

The light-weight and light-tracking tonearm is shaped for almost perfect geometry and minimum tracking error. What's more, it is equipped with an adjustable lateral balance weight so that vertical stylus movements will not lead to lateral unbalances.

### CONVENIENT OPERATION AND ADJUSTMENTS

The tonearm is raised and lowered by an oil-damped lifter which is controlled via the three-position function lever. For easy adjustment of the exact overhang for practically any phono cartridge, a retractable overhang gauge is built in. The head shell conforms to international standard specifications and can be detached from the tonearm, which greatly facilitates cartridge mounting and stylus replacement.



# INSTALLATION

- The place must be well-ventilated and free from humidity and dust.
- The unit should not be exposed to direct sunlight.
- The unit should not be placed near any source of heat.
- The unit should be placed as far from the speaker system as possible.

## TYPICAL STEREO SETUP

The PL-12D-II is a quality stereo turntable and can provide its full performance only when combined with other components of equal quality, so you should select other quality components comparable to this turntable, set up the system as shown in Fig. 1 and Fig. 2.

### A WORD ABOUT COMPONENTS

Be sure to select the rest of your system with an eye to achieving sufficient performance and response so that you can make the most of your PL-12D-II.

#### The Amplifier

There are many types available: Integrated stereo amplifiers, AM/FM Receivers, Stereo preamplifiers and Stereo power amplifiers. You can take your choice of systems, making sure the one you choose will blend well with the speakers you select. Look for high performance and stability in an amplifier.

#### The Speakers

Here there are also many possibilities. You have a choice of bass-reflex type cabinets, full-range, 2-way, 3-way, and other types of speaker component combinations, and bookshelf, floor type or omnidirectional, etc. styling. With all these choices, your main guide should be how well the speakers sound with the rest of your system.

#### The Phono Cartridge

There are magnetic (moving coil, moving magnet and induced magnet types) cartridge as well as semi-conductor types and optical types.

If you use a moving coil (MC) type cartridge with the PL-12D-II, make sure your amplifier has the capability of accepting this type of input signal.

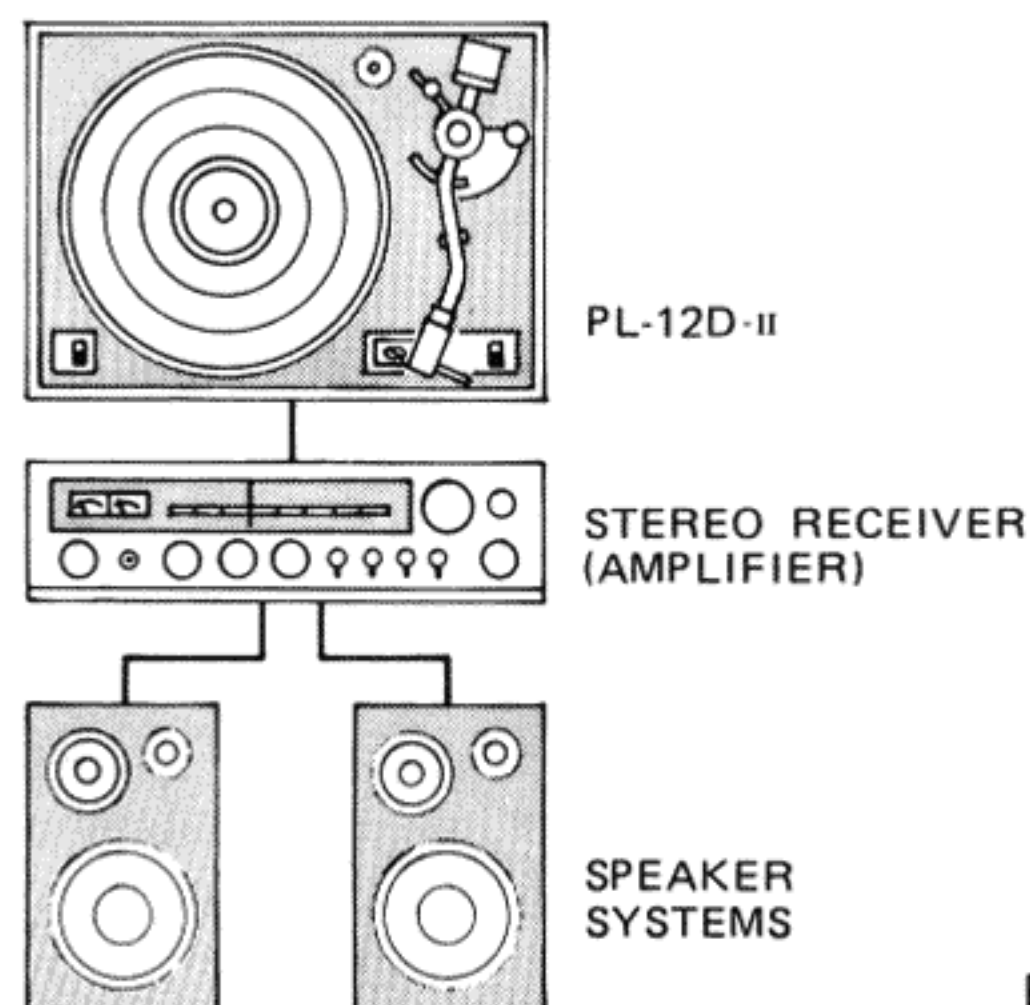


Fig. 1

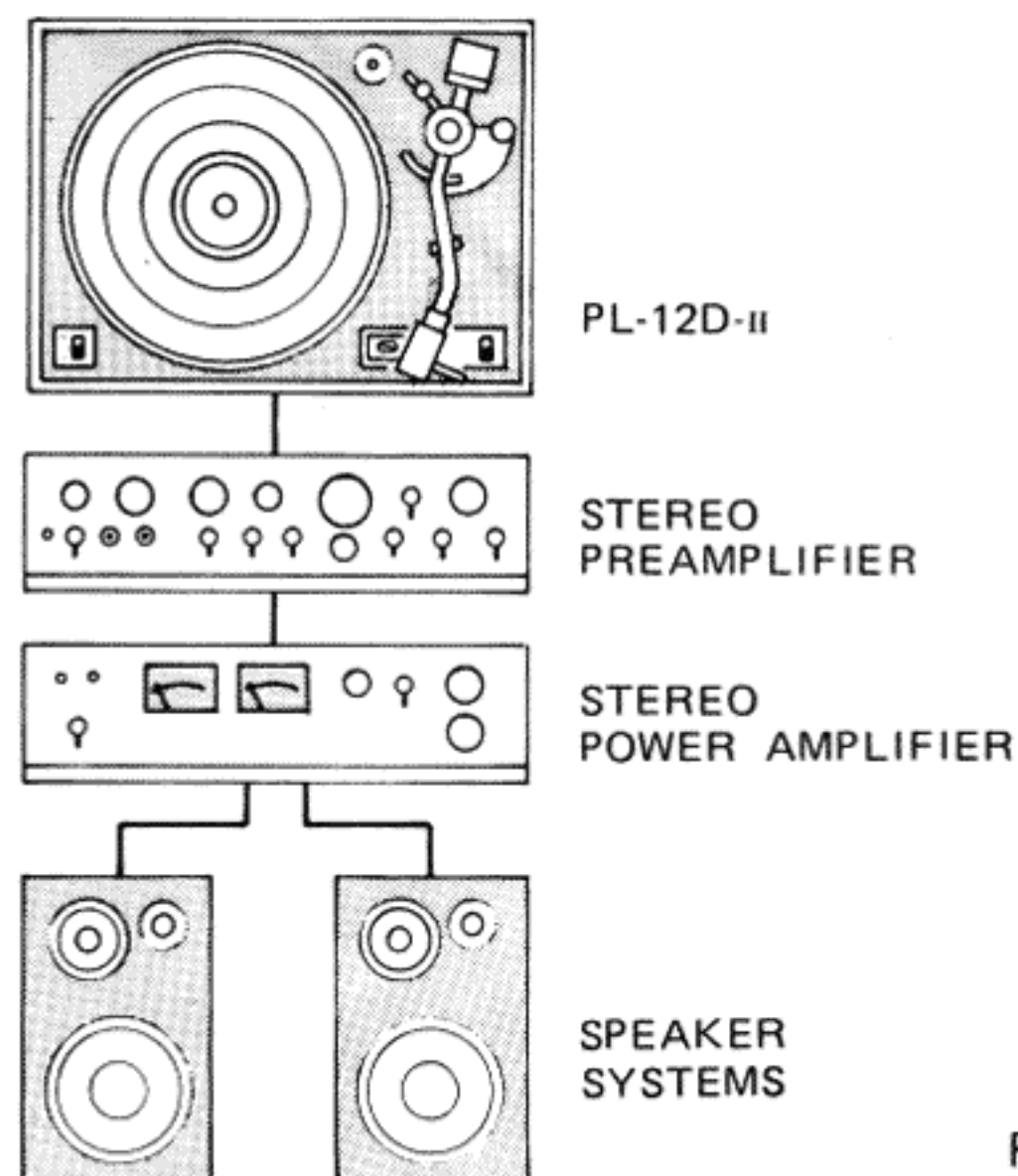


Fig. 2

# ASSEMBLY

The turntable platter and precision parts are packed separately from the wooden base in the same packing case.

When you unpack the packing case, take them out with care so as not to scratch or break them, and assemble them as follows:

## REMOVING THE TONEARM PACKING

Check and remove the accessories stored in the polystyrol packing on the tonearm (Fig. 3). Then remove the packing.

Accessories stored there: (Fig. 4).

## CHASSIS SUSPENSION

For protection during shipment, the chassis is secured to the base with the three red screws. These must be removed before assembling the turntable. The chassis will then float on its vibration-absorbing spring suspension (Fig. 5).

## ATTACHING A PHONO CARTRIDGE

As shown in Fig. 6, free the head shell from the tonearm.

The color-coded pin connectors in the head shell conform to the international EIA standard. Attach the cartridge according to the drawing (Fig. 7).

### Overhang Adjustment

For optimum performance, the cartridge should be adjusted to obtain proper stylus overhang.

Place the tonearm on its rest. Loosen the two cartridge-held screws a little, and move the cartridge back and forth in the head shell so that the stylus tip comes exactly over the white line in the "OVERHANG CHECKER."

For easier checking, this "OVERHANG CHECKER" can be pulled up (Fig. 8).

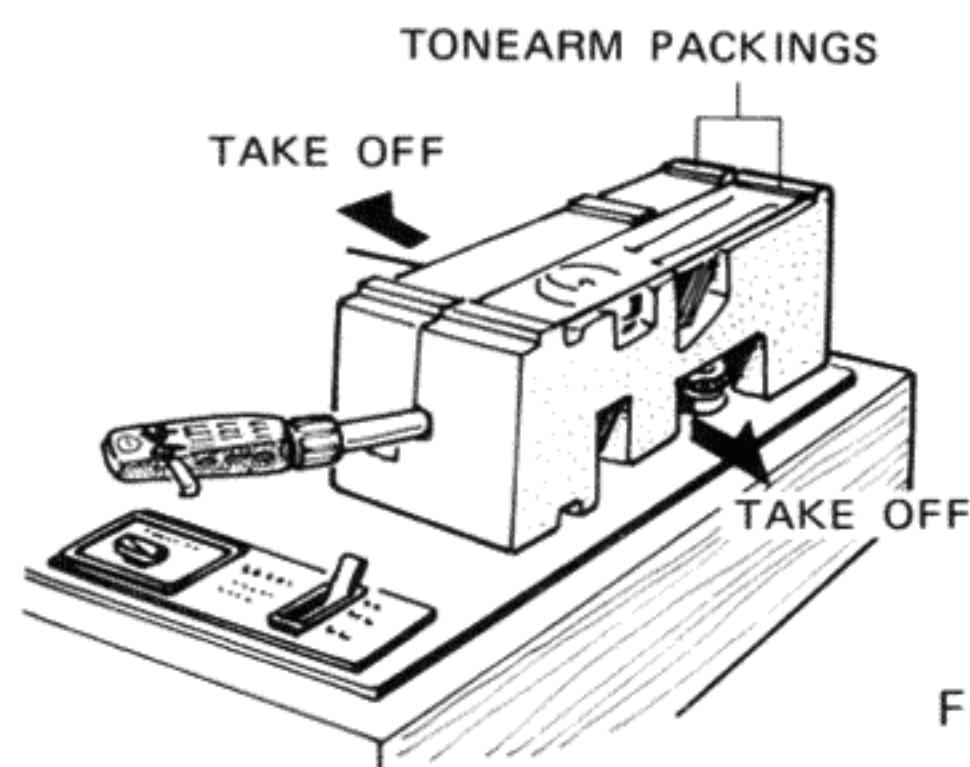


Fig. 3

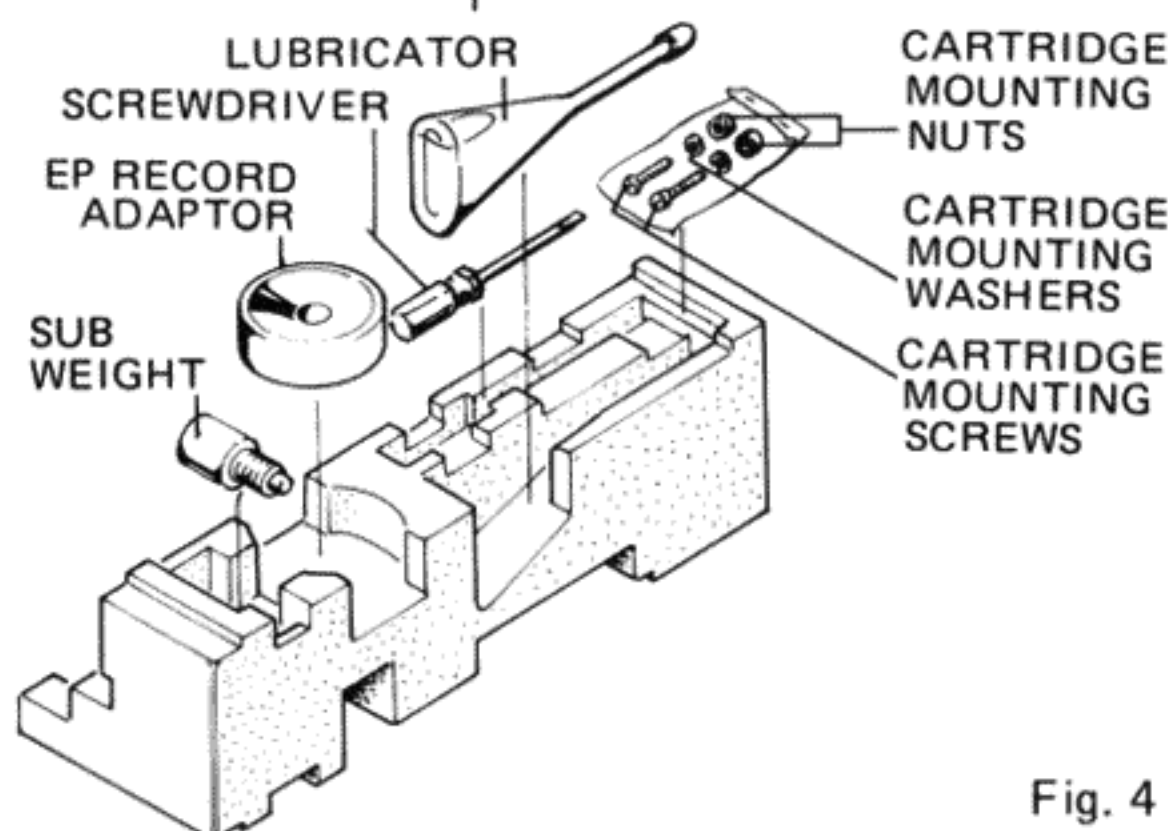


Fig. 4

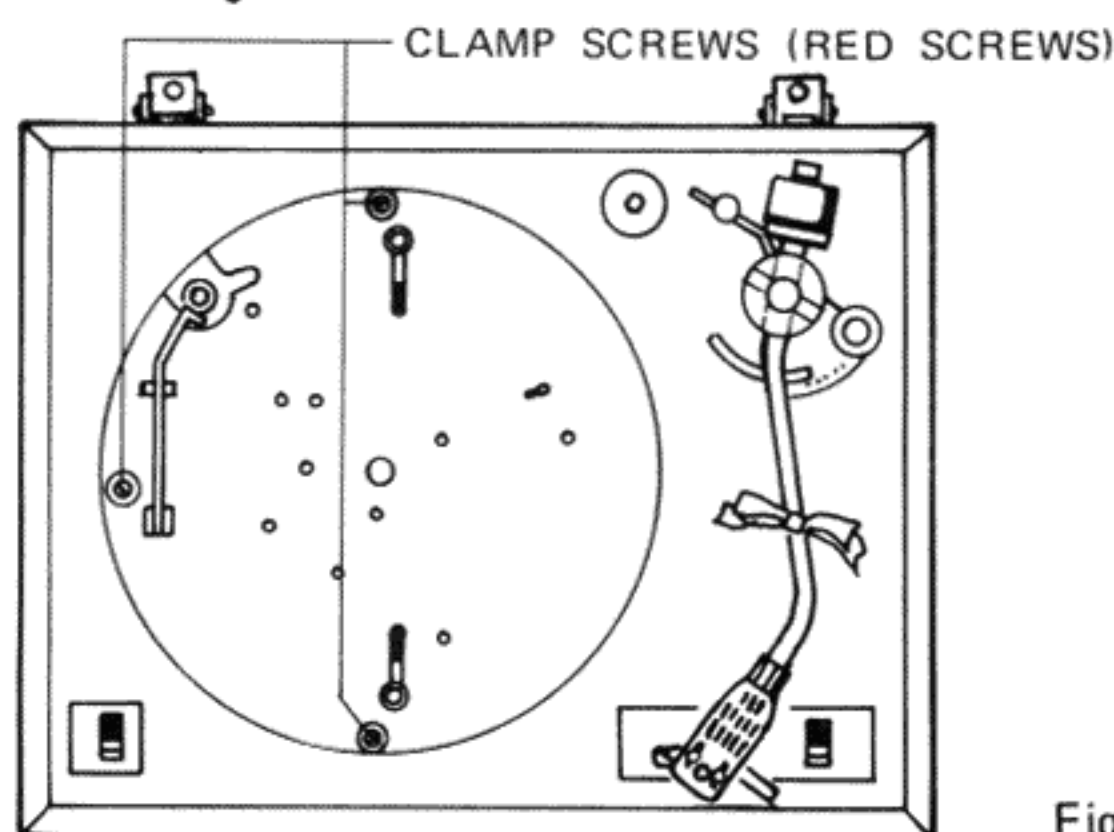


Fig. 5

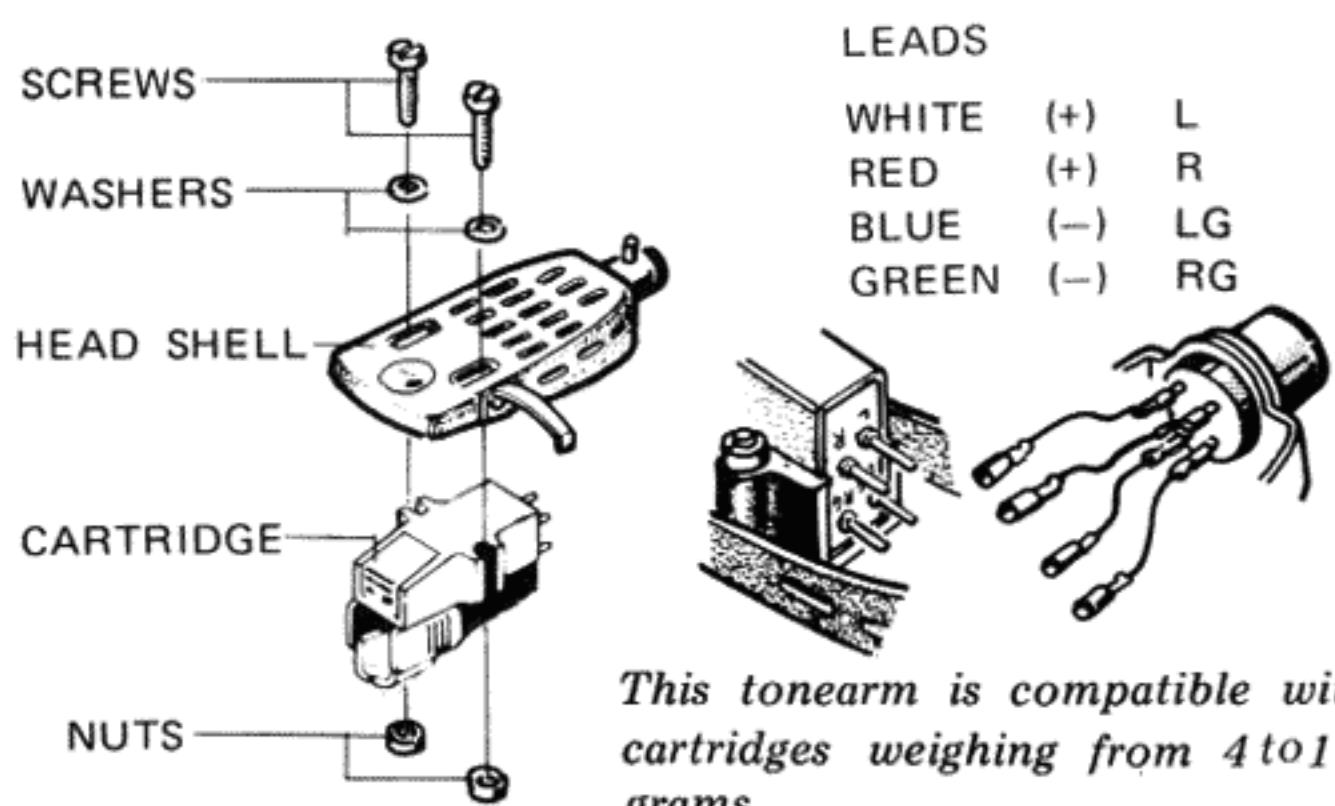


Fig. 7

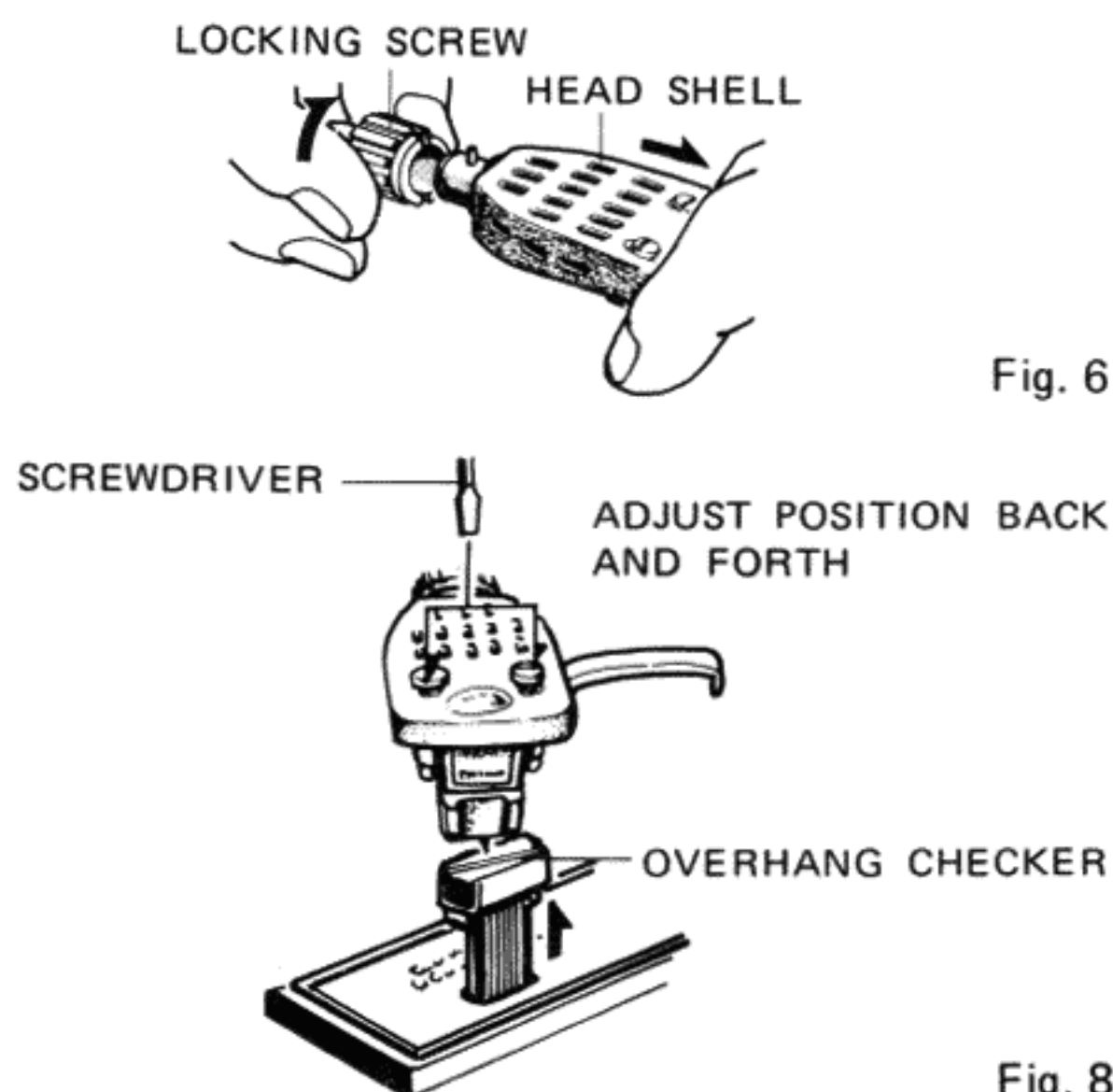


Fig. 8

## MOUNTING THE TURNTABLE PLATTER

The turntable platter and rubber mat are packed separately. Take them out. First put the turntable on the center shaft. After the drive belt has been set on the motor pulley, place the rubber mat on the platter.

## SETTING THE BELT ON THE MOTOR PULLEY

Set the speed selector lever to the 33 rpm position. Pulling the ribbon attached to the drive belt, lead the belt through the belt guide and set it on the smaller diameter portion (the upper portion) of the motor pulley. After the belt has been properly set on the motor pulley, remove the ribbon (Fig. 9).

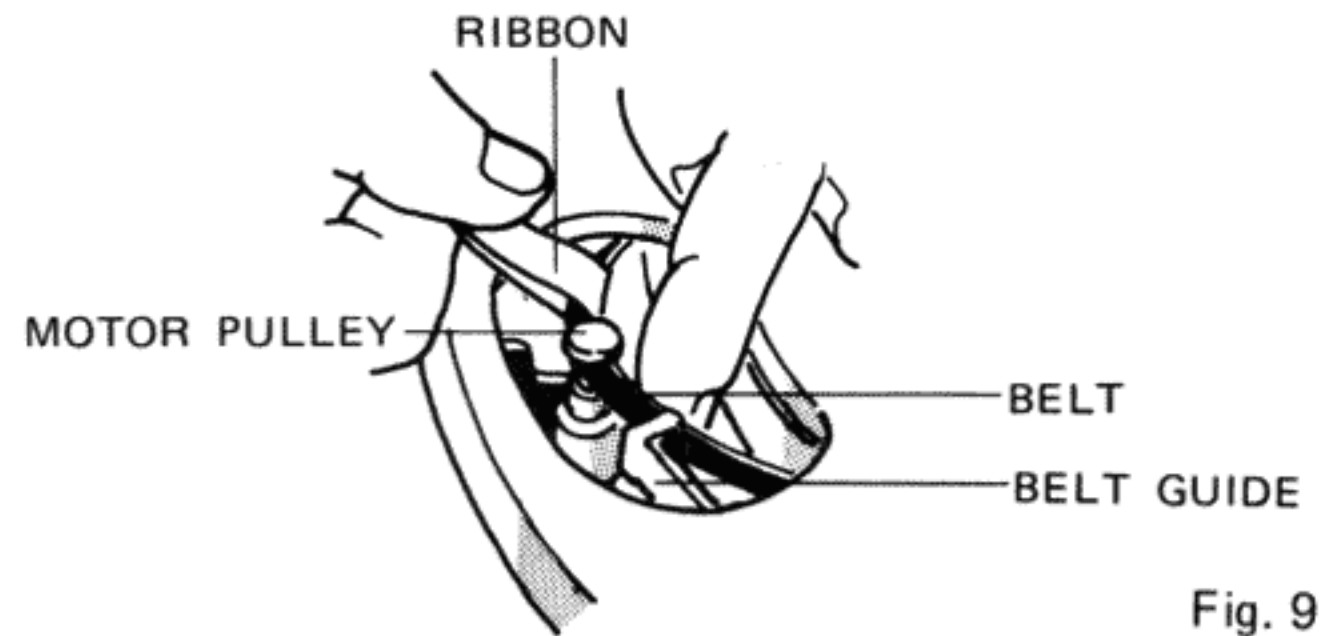


Fig. 9

## STEREO AMPLIFIER CONNECTIONS

The phono inputs on the amplifier to which the turntable should be connected must be chosen in accordance with the type of phono cartridge to be used. (Fig. 10).

- With moving magnet or induced magnet type cartridge:  
Connect to PHONO MAG inputs on amplifier.
- With low-output moving coil type cartridge:  
Connect to PHONO MC inputs. If these are not provided on your amplifier, a step-up transformer will be required.

In either case, connect the red output plug from the turntable to the amplifier's right channel input, the white plug to the left channel input. The third wire (black) with the split lug on its end is the ground wire. Connect this to the GROUND or GND terminal of your amplifier.

Do not forget to make this connection, because it is vital for avoiding hum and noise.

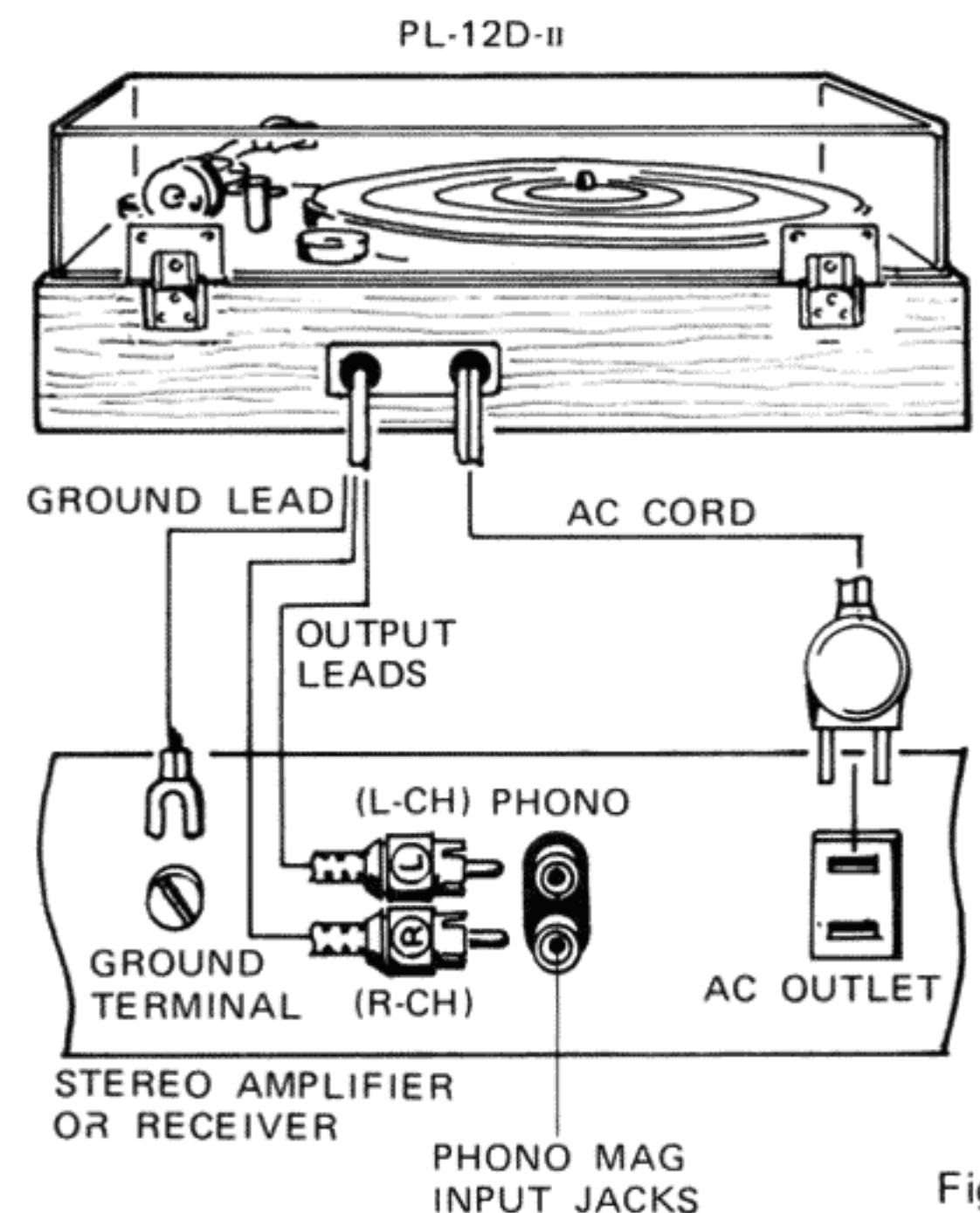


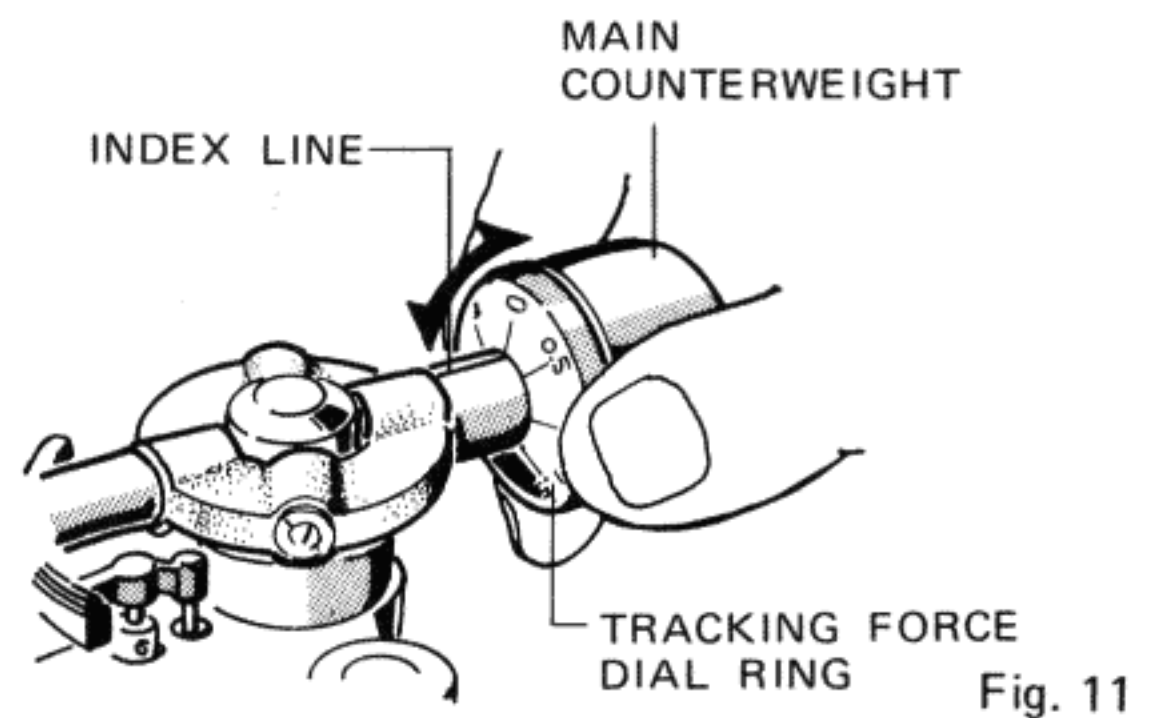
Fig. 10



# TONEARM ADJUSTMENTS

## HORIZONTAL BALANCE ADJUSTMENT

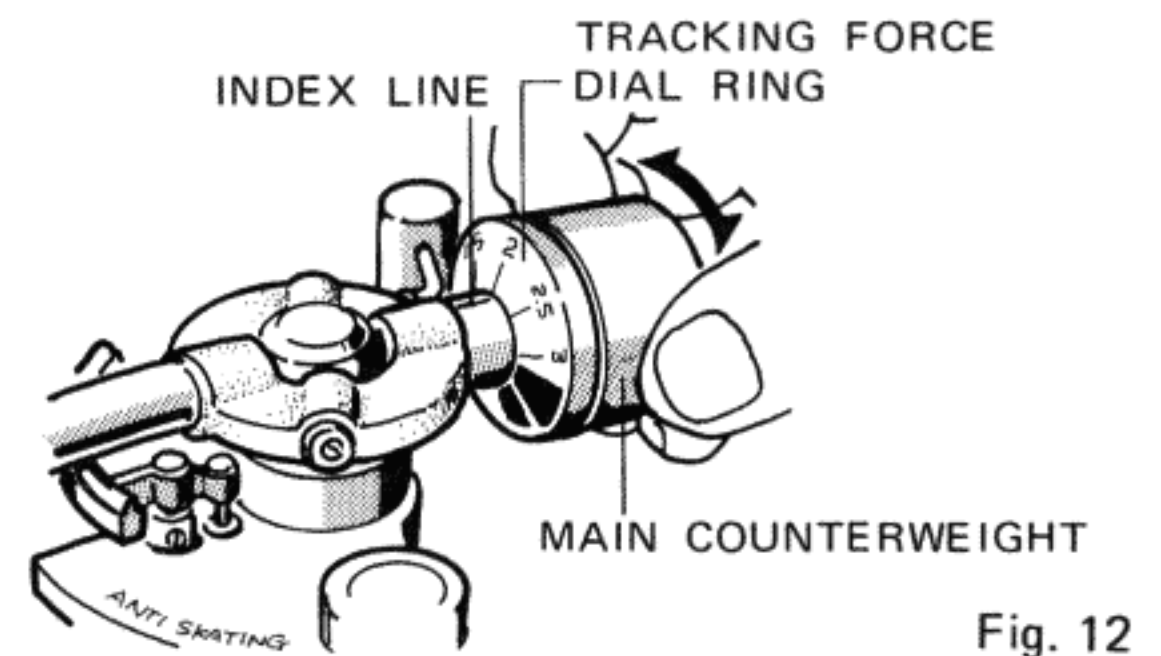
1. Set the anti-skating force control to "0" (Fig. 14).
2. Remove the stylus protection cover from the cartridge.
3. Free the tonearm from the arm rest.
4. Set the function lever to "DOWN."
5. Move the main counterweight slowly back and forth (by turning it) until the tonearm floats in horizontal position.
6. Keeping the weight in this position, turn only the tracking force dial ring so that the 0 aligns with the black index line on the tonearm (Fig. 11).



## TRACKING FORCE ADJUSTMENT

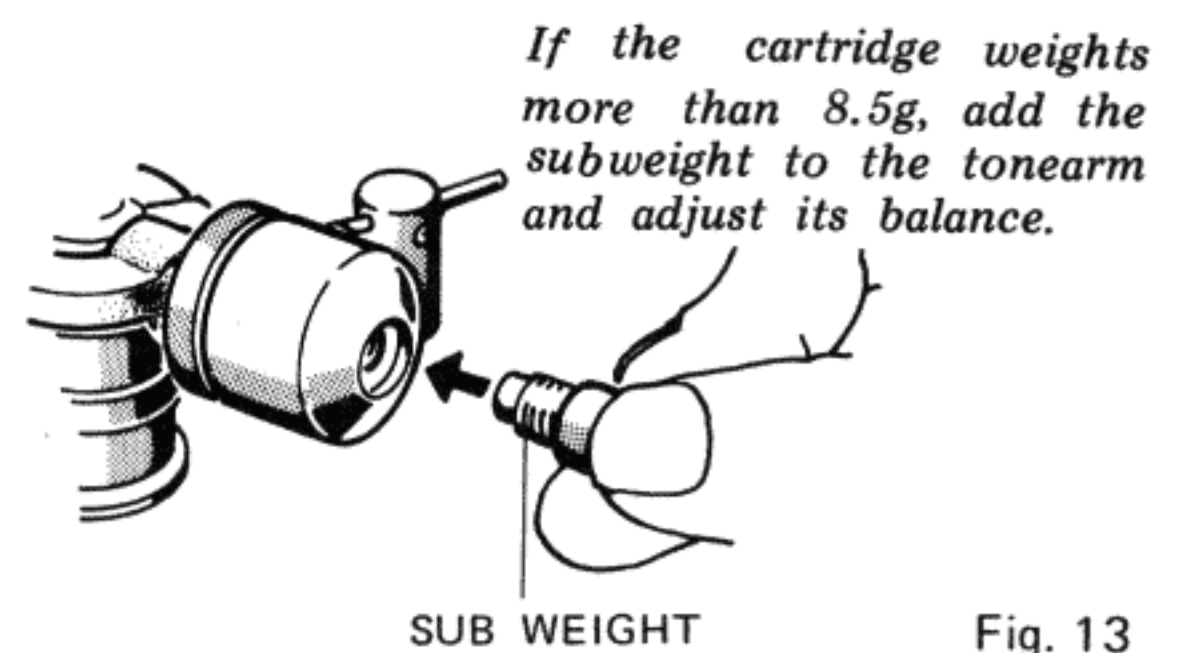
After the horizontal balance adjustment (the tracking force: aligned with the 0 reading), turn the main counterweight together with tracking force dial ring [which is direct reading up to 4 grams in 0.5 increments (Fig. 12)].

Be careful to adjust your phono cartridge to the tracking force specified in the instruction manual which comes with the cartridge.



## IN CASE OF USING SUB WEIGHT

If your optional phono cartridge is too heavy to keep balance horizontal, add the supplied sub weight to the rear end of the tonearm (Fig. 13), then adjust horizontal balance and tracking force adjustment.



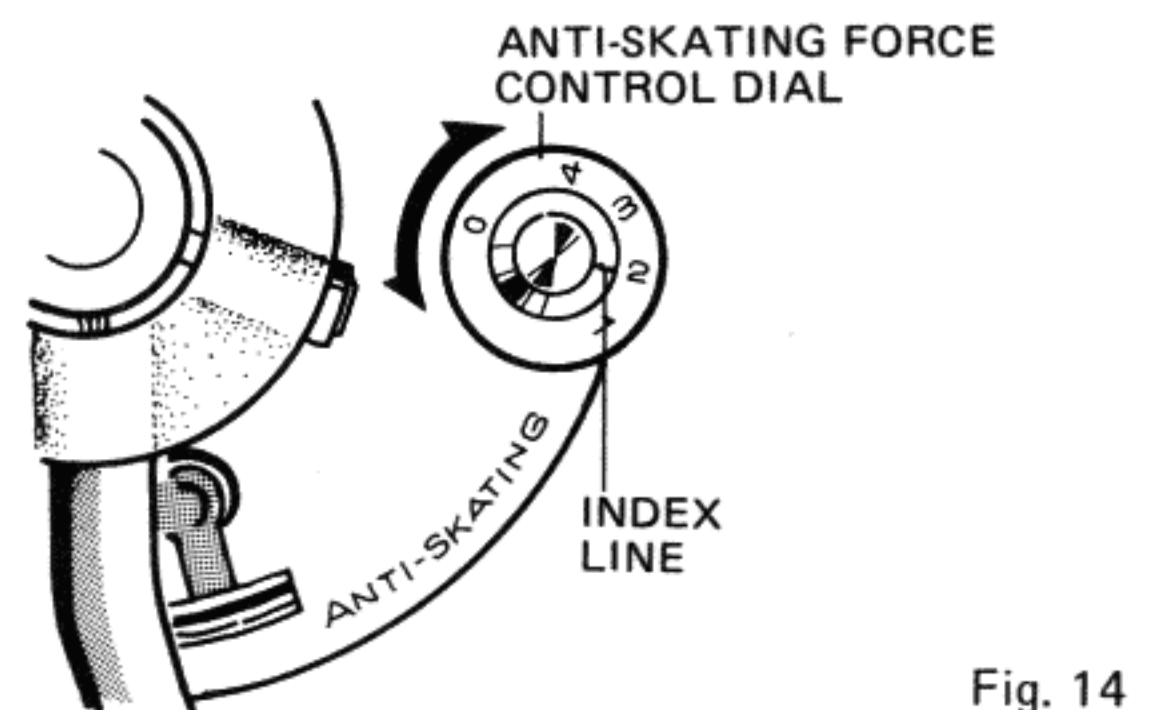
## ANTI-SKATING ADJUSTMENT

The anti-skating force control dial should be adjusted to the same setting as that required for the tracking force (Fig. 14).

### What is "Anti-skating"?

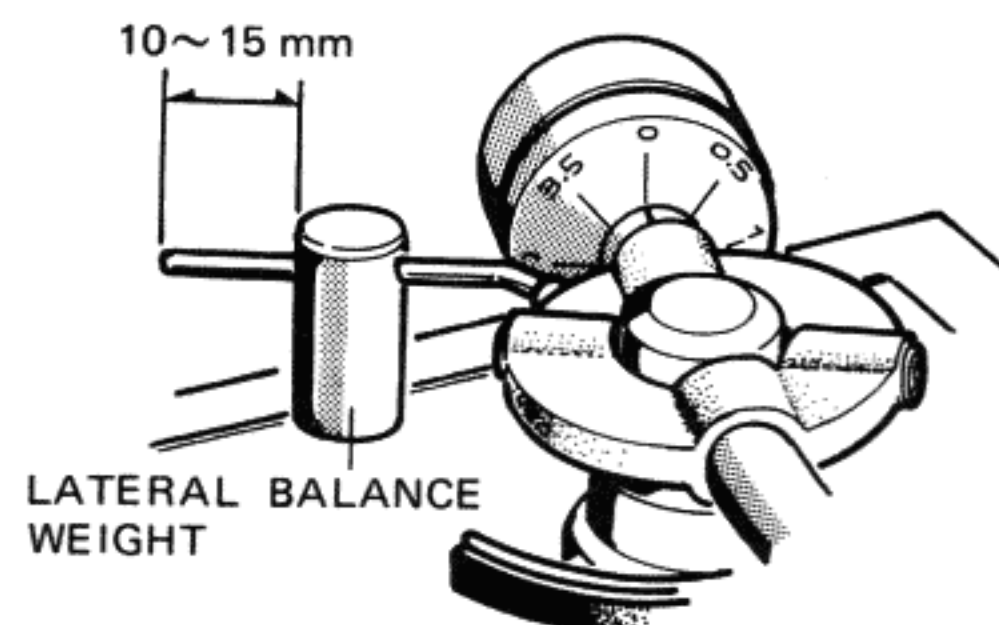
As the record groove moves in relation to the stylus it exerts a force on the stylus which pushes it toward the center of the record. This is called "skating force" and will actually cause the stylus to jump out of the groove and "skate" if it is too strong. Even when this does not occur, the force distorts the sound response.

The anti-skating device is designed to cancel this force.

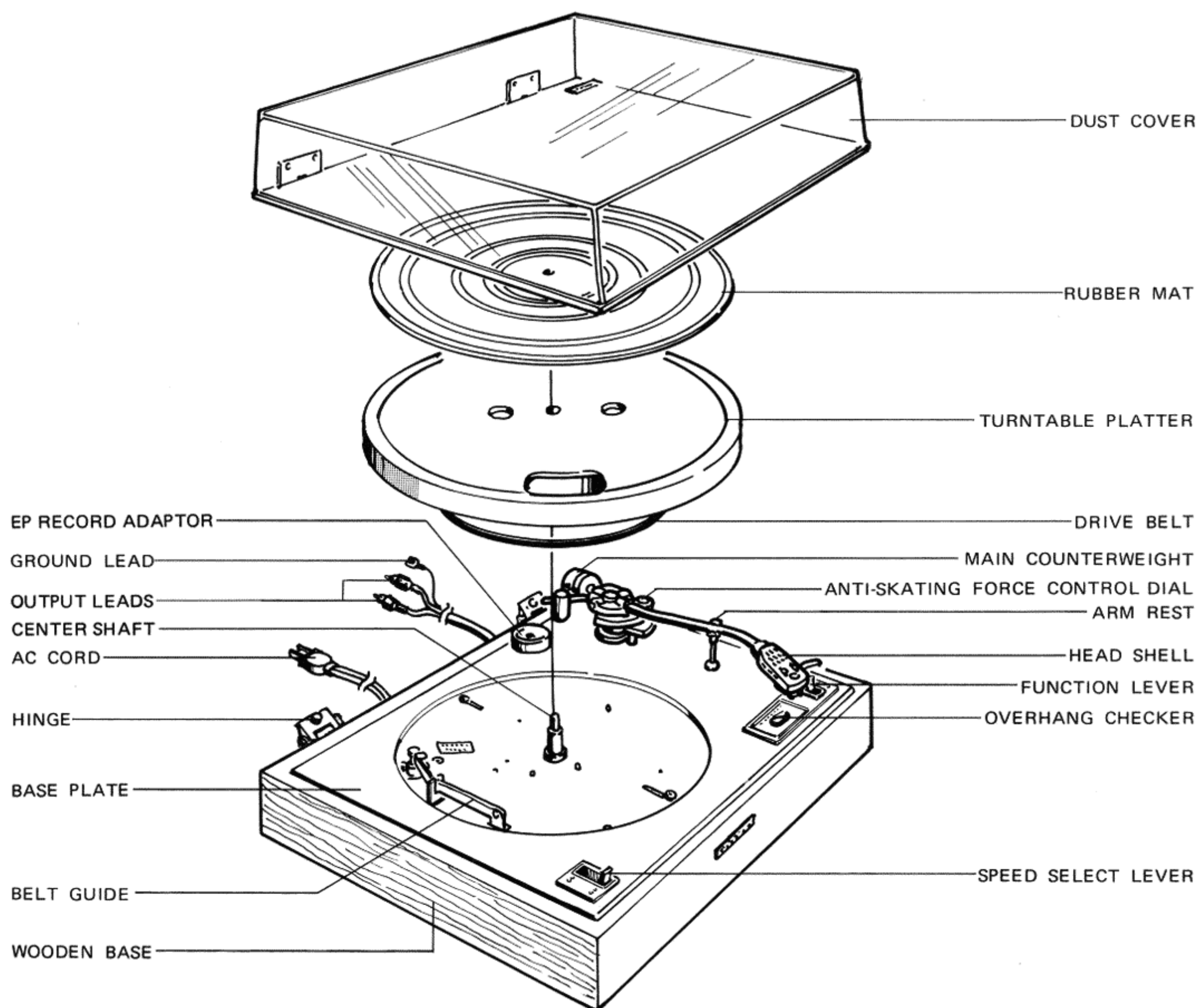


## LATERAL BALANCE ADJUSTMENT

Adjust the lateral balance weight, as shown in Fig. 15, so that the left end of the weight is 10 ~ 15 mm from the end of its shaft. Then retighten its screw. The screw should be on the rear side.



## PARTS IDENTIFICATION



## ATTACH THE DUST COVER

1. Hold the dust cover vertically (Fig. 16).
2. From behind, slip cut-outs in cover hinges over pegs on base hinges.
3. Push the dust cover about 5mm to the right (as seen from the back) to secure hinges (Fig. 16).

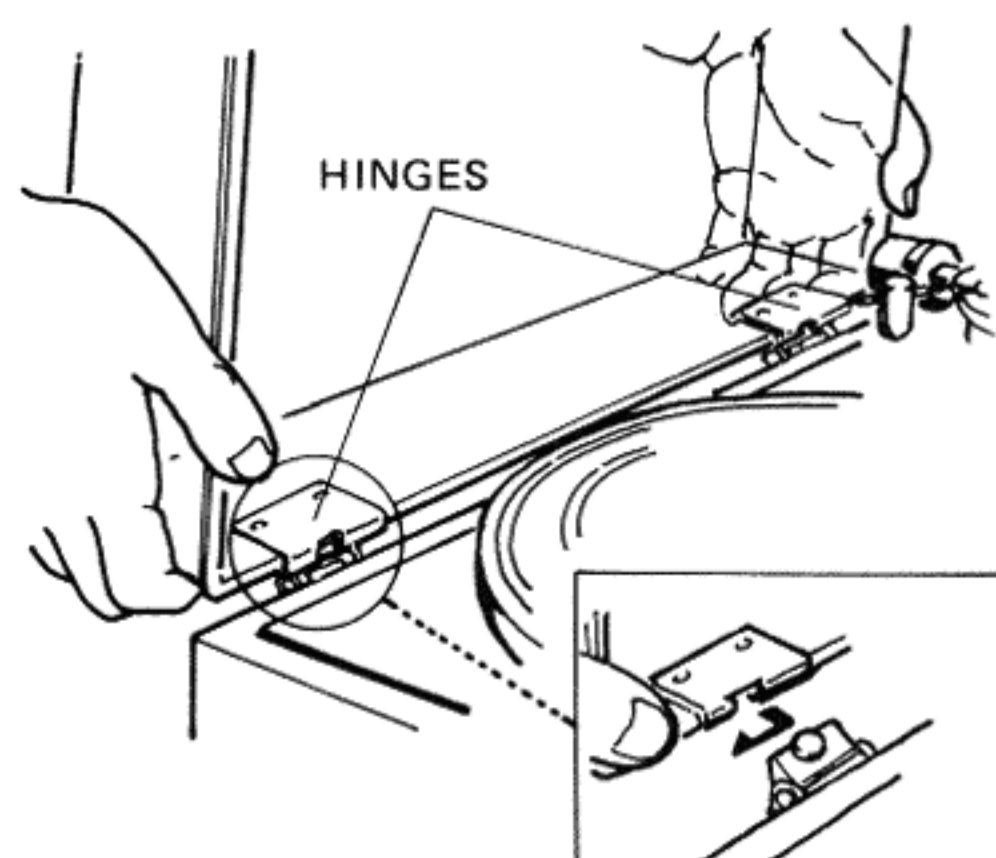


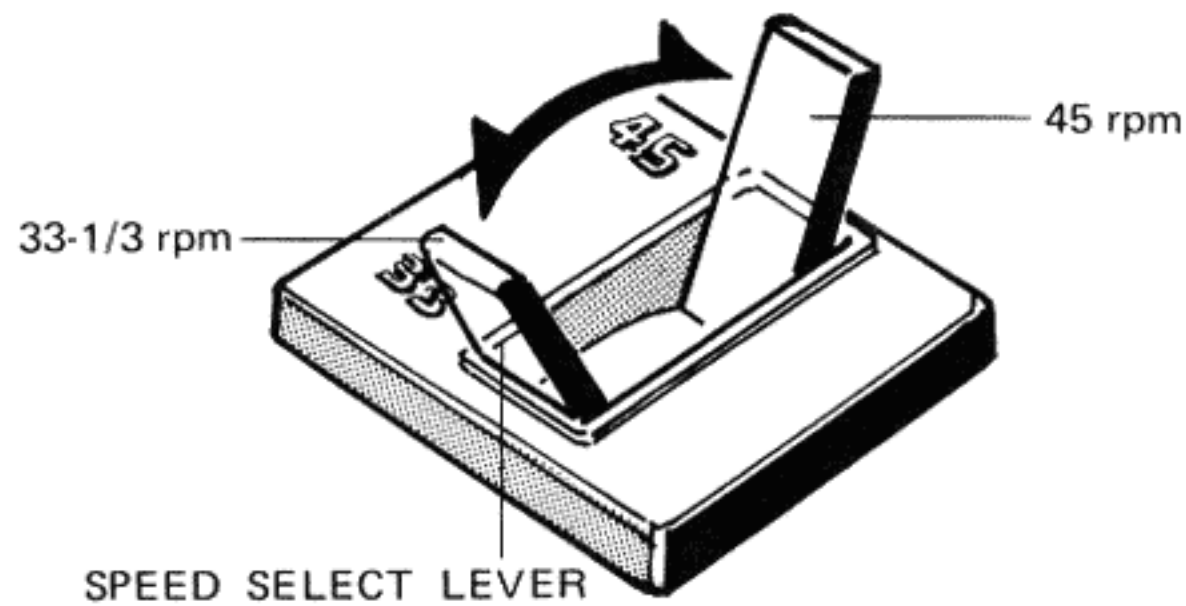
Fig. 16



# OPERATION

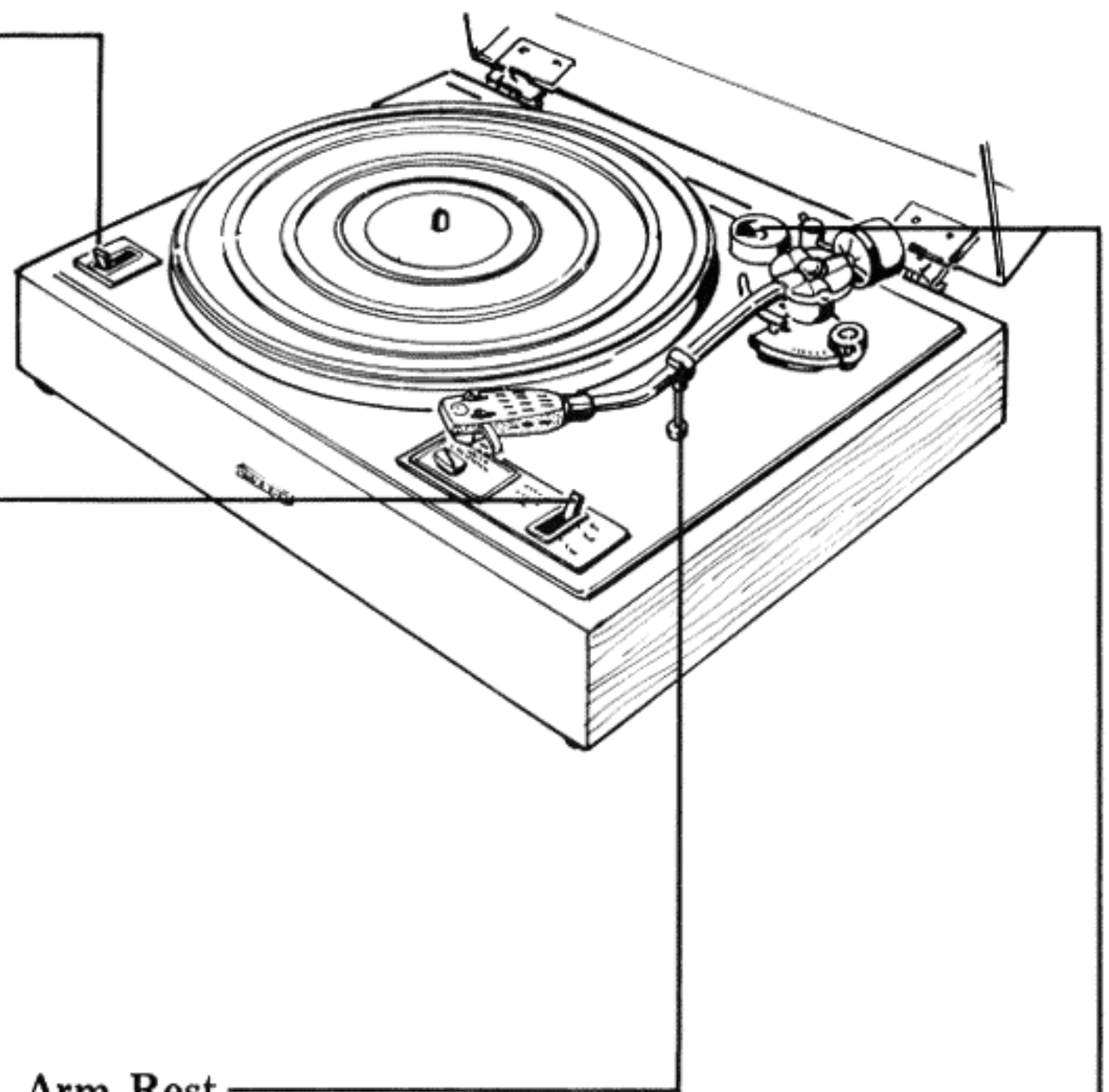
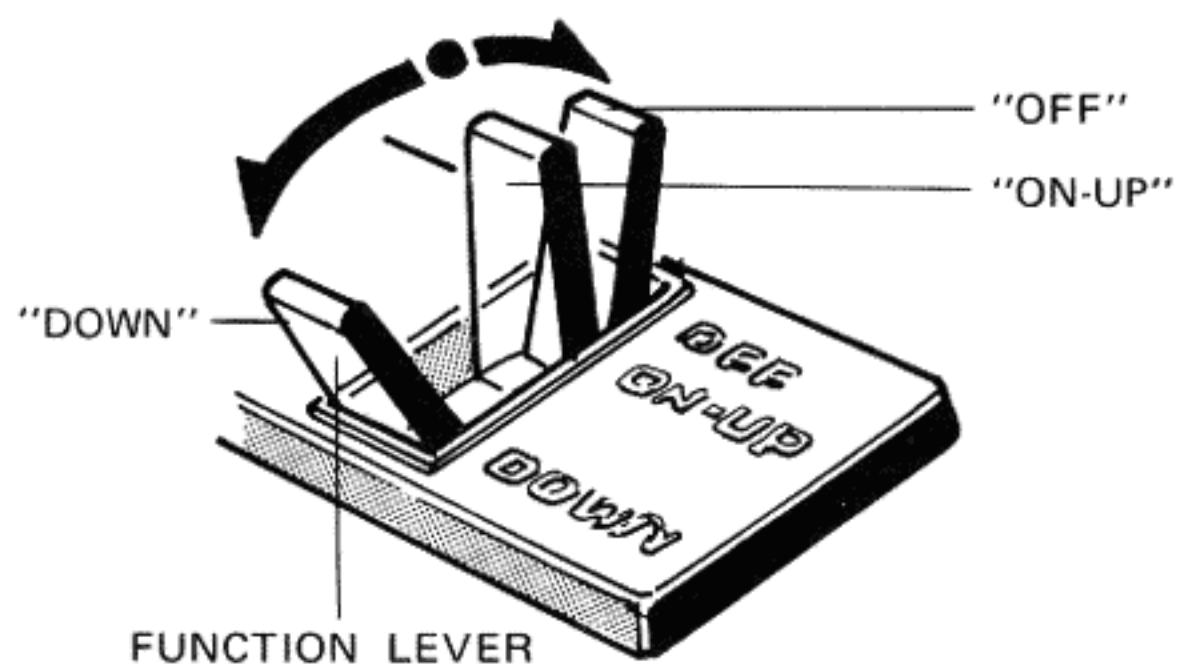
## Speed Select Lever

The PL-12D-II is a two-speed type: 33-1/3 rpm and 45 rpm. Setting the lever to either speed position will automatically set the turntable for operation at that speed.



## Function Lever

OFF ..... Tonearm is lifted off the record.  
Motor is turned off.  
ON-UP ..... Tonearm is lifted off the record.  
Motor is operating.  
DOWN ..... Tonearm floats down gently upon  
the record. Motor is operating.

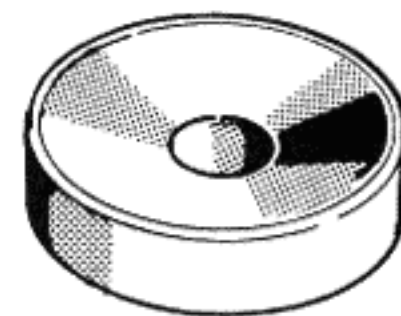


## Arm Rest

The arm rest supports the tonearm when not in use.

## EP Record Adaptor

An EP record adaptor is supplied in the accessory group, which permits 45 rpm records with large center holes to be played. When the adaptor is not in use, keep it on the pin located in the upper right of the base plate.



EP RECORD ADAPTOR

## PLAYING A RECORD

There is nothing difficult about playing a record, but the following procedure should be used:

- Place the record on the turntable platter.
- Remove the stylus protector cover.
- Move the function lever to position ON-UP; the platter will begin to revolve.
- Set the desired speed with the speed select lever.
- Slide the tonearm over the outside edge of the record.
- Move the function lever from position ON-UP to position DOWN. The tonearm will gently lower until the stylus meets the record, and play will begin.
- When the record has played, or any time during play, the tonearm can be lifted by sliding the function lever from position DOWN to position ON-UP. Then the tonearm will gently rise.

## WHEN THE RECORD IS OVER

Move the function lever from position DOWN to position ON-UP.

Return the tonearm onto its rest and slide the function lever to position OFF. Then the turntable will be shut off.

## MASTERING THE FUNCTION LEVER

The function lever can be switched between positions DOWN and ON-UP for quickly selecting your favorite music and songs only on the same side of an LP disc, when you do not want to play through all the music and songs.

### NOTE:

*Be very careful to move the tonearm when the function lever is in position DOWN; otherwise, the stylus may damage the record and be damaged itself if it is dropped or slid.*

# PRECAUTIONS DURING OPERATION

## DO NOT HOLD BACK THE TURNTABLE PLATTER

While the platter is turning, do not stop it or slow it down with your hand. This can cause the belt to slip and can damage the motor and mechanism.

## ALWAYS KEEP THE STYLUS CLEAN

- If dust collects on the stylus it will noticeably affect the tone quality during record play. Keep it clean with a soft brush.
- Record surfaces should also be kept very clean. If dirty, use a commercially available record cleaner to clean.
- If the stylus is rubbed with the finger it can be damaged, so be extremely careful when handling the tonearm and head.

## CHANGE SPEEDS ONLY WHILE THE TURNTABLE PLATTER IS ROTATING

The PL-12D-II is a belt drive type and therefore rotation speed should be changed only after the function lever is set to position ON-UP and you have verified that the platter is actually turning.

## FULLY GROUND THE TURNTABLE

If the set is not fully grounded, a very unpleasant hum will occur during record play. Be sure there is a secure connection between the turntable ground terminal and that on the amplifier.

## LUBRICATION

Before applying oil to the turntable, remove the turntable platter by using the following procedure:

1. Return the tonearm onto the arm rest, then protect the stylus protector cover.
2. Remove the drive belt with fingers from the motor pulley.
3. Pull the turntable platter straight up with two fingers inserted into the turntable platter's two openings (Fig. 17).

If the turntable platter should not be removed easily, pull it up with stronger force, with care taken not to damage any part of the turntable.

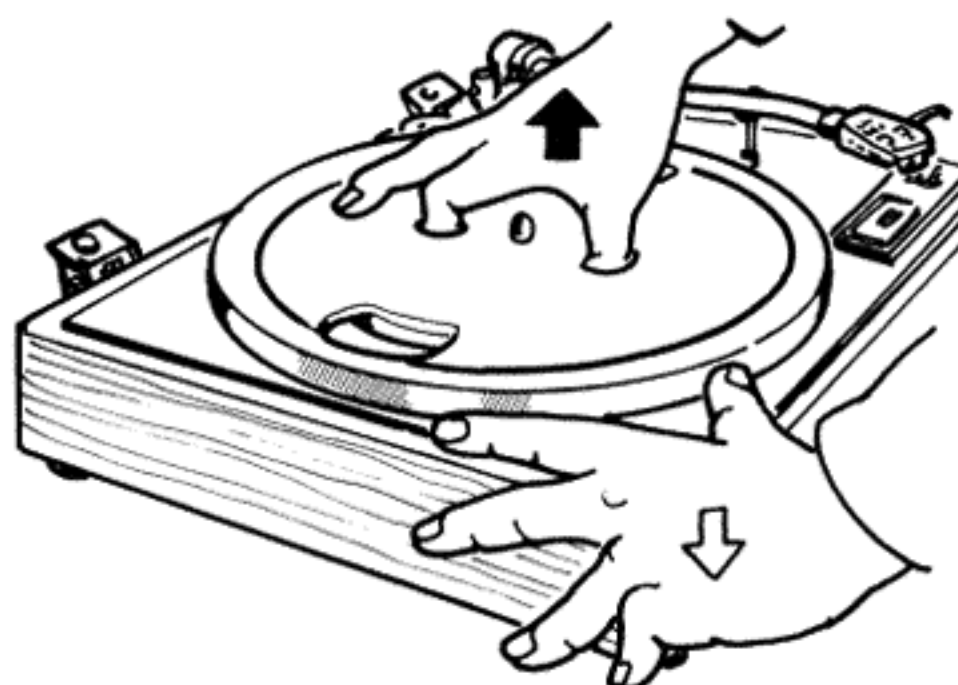


Fig. 17

### WHEN LUBRICATION IS REQUIRED . . .

Mechanical noises and wow and flutter usually result from the lack of lubricant in rotating parts. Lubricate the specified spots at least once every two months if your turntable is used for home entertainment, and two to three in a month if used more frequently. Apply one or two drops to the base of the center shaft Fig. 18. When lubricating, be careful not to let oil adhere to such parts as the motor pulley, belt, or inner rim. If oil should adhere to these parts, wipe it off with a cloth moistened with pure alcohol.

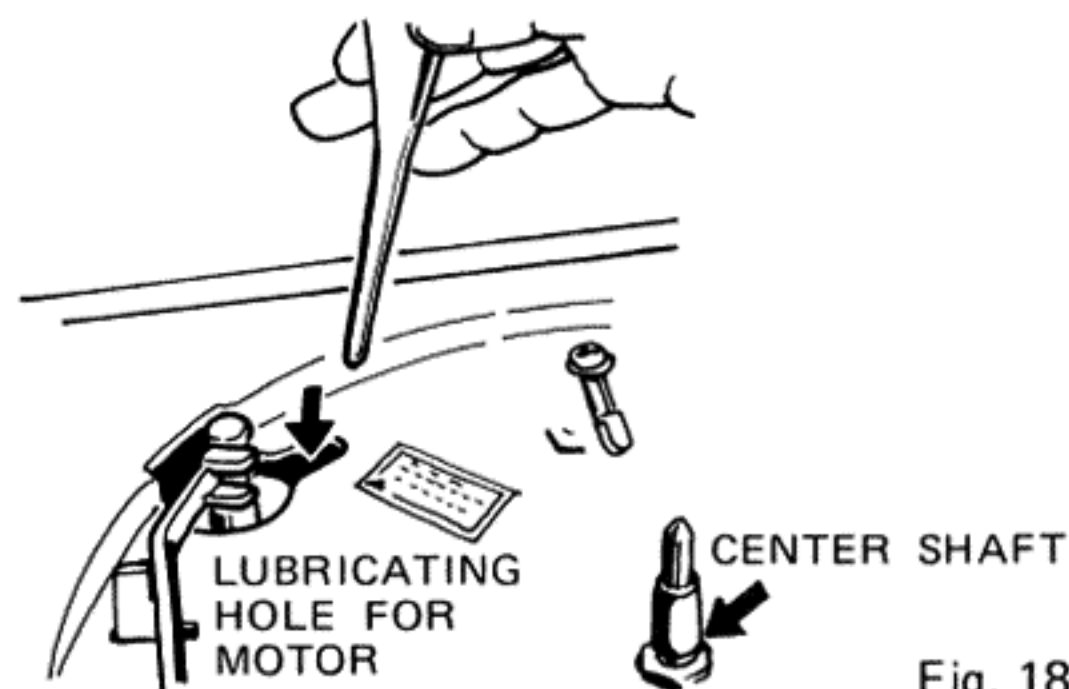


Fig. 18

### WHEN LUBRICATION IS OVER . . .

Replace the turntable platter on the center shaft, then reset the drive belt around the motor pulley.

## TROUBLESHOOTING

### WOW AND FLUTTER

Wow and flutter usually result from oil on the motor pulley or inner turntable rim. Check the surfaces of the motor pulley and belt, and wipe them clean with a soft cloth dampened with pure alcohol.

Caution: Never use other solvents.

### HOWLING

"HOWLING," a high-pitched audio tone, is acoustical feedback from speakers to the turntable unit. Increasing the distance between the speakers and the turntable, or even better, laying a soft cushion beneath the turntable will eliminate howling.

### HUM

"HUM" is a low-pitched droning noise, often 60Hz or 50Hz, resulting from a loose connection of the ground lead. If hum occurs:

- Check if the connection of the PL-12D-II ground lead (the black lead with a split lug) to your amplifier. If it is loose, connect it firmly.
- Check if the output leads of the PL-12D-II is running near the power transformer of your amplifier. Changing the position of the PL-12D-II in relation to the amplifier will often eliminate hum.
- Reversing of the AC cord may occasionally eliminate hum.



# SPECIFICATIONS

## Motor and Turntable

Motor:	4-pole synchronous
Turntable driver:	Belt-driven
Speed:	Two speeds: 33-1/3, 45rpm
Wow and flutter:	0.08% (WRMS) or less
S/N:	48dB or more
Turntable platter:	30cm (12 in.) diameter die-cast aluminum alloy
Tonearm:	Static balance type pipe arm
Effective arm length:	22.1cm
Usable cartridge weight:	4 to 10g

## Subfunctions

Anti-skating device  
Lateral balance  
Viscous-damped arm elevation  
Plug-in type light aluminum head shell  
Counterweight with tracking force adjustment gauge  
Overhang checker

## Miscellaneous

Power requirements:	AC 220/240V, 50Hz or AC 220V, 50Hz 240V, 50Hz
Power consumption:	11 W
Dimensions:	430(W) x 167(H) x 349(D)mm 17(W) x 6-9/16(H) x 13-3/4(D) in.
Weight:	7.5kg, 16 lb 8 oz.

## Accessories

Lubricator	1
Screwdriver	1
EP record adaptor	1
Sub weight	1
Cartridge mounting screws	2
Cartridge mounting washers	2
Cartridge mounting nuts	2
Operating Instructions	1

If this model is used in a different frequency area, contact your Pioneer dealer from whom a replacement motor pulley will be able to be bought.

Please note:

*Models employ 3-conductor mains leads. Please read the WARNING, IMPORTANT notice below and operate correctly.*

**WARNING: THIS APPARATUS MUST BE EARTHED.**

## IMPORTANT

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

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

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

*The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  $\equiv$  or coloured green or green-and-yellow.*

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

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

## NOTES:

- Above specifications refer to combination of turntable PL-12D-II with the Pioneer phono cartridge PC-30.
- Specifications and the design subject to possible modification without notice due to improvements.

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