

STEREO TURNTABLE

# PL-10

OPERATING INSTRUCTIONS

NBT  
PVT



Thank you very much for your purchase of Pioneer model PL-10. 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 turntable. 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.**

## FEATURES

### POPULAR BELT-DRIVE SYSTEM

The Pioneer belt-drive system built into this unit owes its popularity to the superior rotation speed stability and improved signal-to-noise ratio provided by the polyurethane belt. This system is unaffected by changes in temperature and humidity and is one of the reasons behind the outstanding performance of the PL-10.

### HIGH-QUALITY MOTOR

The 4-pole synchronous motor which drives the PL-10's precision-formed die-cast aluminum alloy platter assures new levels of smooth, rumble-free performance with no speed variations.

### 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

The light-weight and light-tracking tonearm is shaped for almost perfect geometry and minimum tracking error.

### DIRECTLY READABLE TRACKING FORCE ADJUSTMENT

The tracking force is adjustable over a wide range so that practically any cartridge (with standard EIA plug) can be accommodated.

### GOOD DESIGN — A JOY AT LOOK AT

The main panel's matted finish lends a soft, subdued touch to the overall design; it is complemented by the smoked dust cover.

The PL-10 is a smart, modern addition to any listening room.

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## TYPICAL STEREO SETUP

The PL-10 is a first-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 or 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-10.

#### The Amplifier

There are many types available: Integrated stereo amplifiers, AM/FM Receiver, 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 fully-close type cabinets, full-range, 2-way, 3-way, and other type 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-10, make sure your amplifier has the capability of accepting this type of input signal.

## 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.

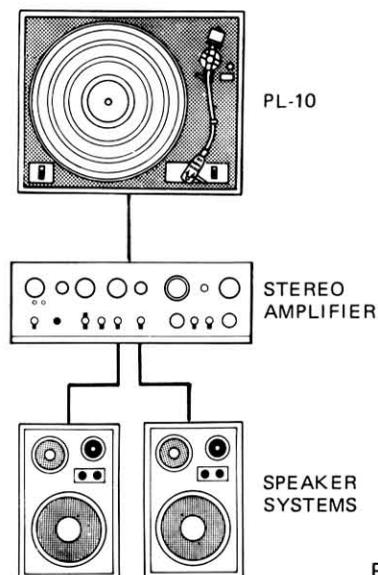


Fig. 1

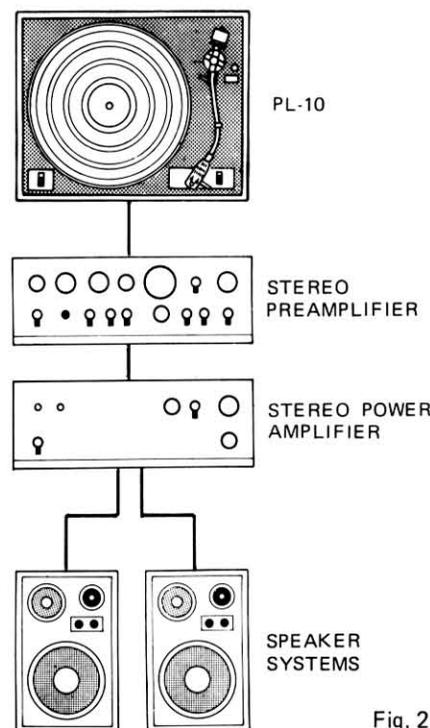
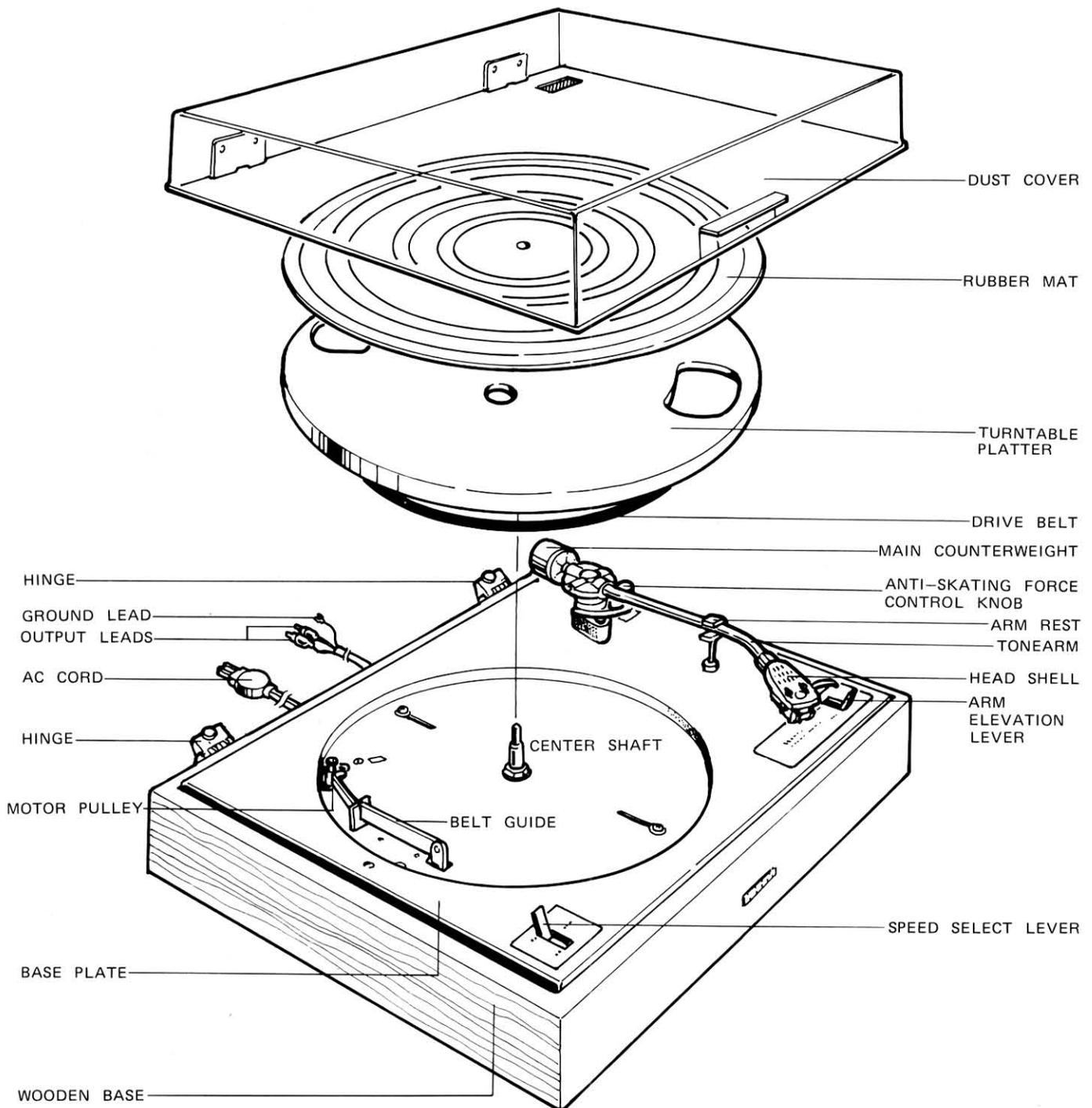


Fig. 2

# PARTS IDENTIFICATION



# 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).

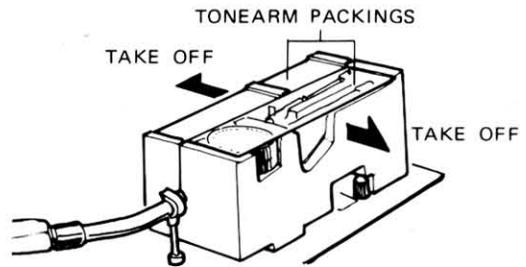


Fig. 3

## CHASSIS SUSPENSION

For protection from possible damage in transit, 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).

## MOUNTING OF TURNTABLE PLATTER

The turntable platter and rubber mat are packed separately. Take them out. First put the turntable platter on the center shaft (Fig. 6).

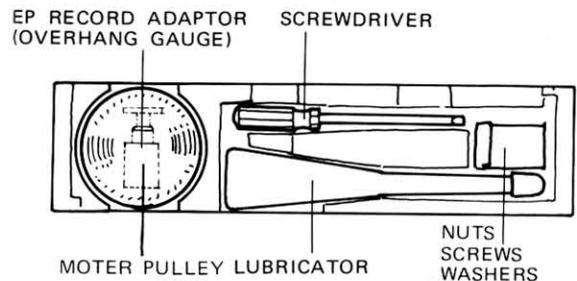
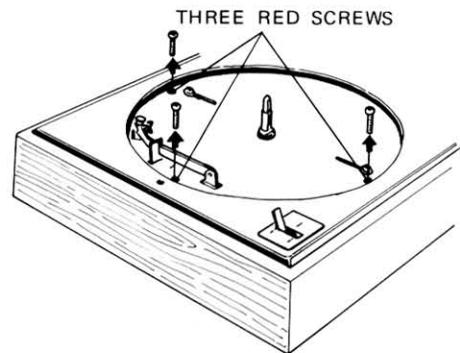


Fig. 4

## SETTING THE BELT ON THE MOTOR PULLEY

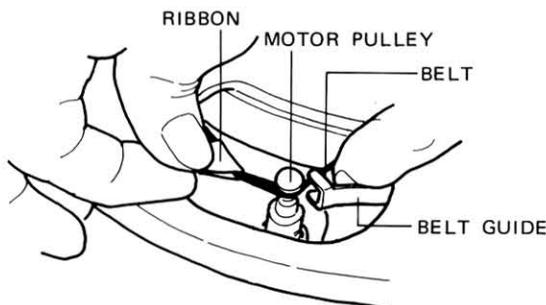
Set the SPEED SELECT lever to the 33 rpm position.

Pulling the ribbon attached to the drive belt, lead the belt through the belt guide and set it on the smaller diameter position (the upper portion) of the motor pulley. After the belt has been properly set on the motor pulley, remove the ribbon (Fig. 7) and place the rubber mat.



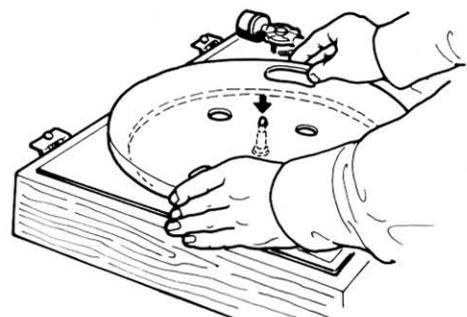
REMOVE THE THREE RED SCREWS

Fig. 5



HOW TO SET THE BELT

Fig. 7



PLACE THE TURNTABLE PLATTER

Fig. 6

# ATTACHING A PHONO CARTRIDGE

Before attaching a phono cartridge, you should untighten the locking collar, and remove the head shell.

The color-coded pin connectors in the head shell conform to the international EIA standard.

Attach the cartridge according to drawing (Fig. 8). After connection of pin connectors, plug the head shell into the tonearm and tighten firmly locking collar.

## OVERHANG ADJUSTMENT

After mounting cartridge, you must adjust overhang length. At first, plug out AC cord from AC outlet, set the EP record adaptor provided with overhang gauge onto the center shaft.

If it is difficult to lead the tonearm to that place, remove the main counterweight from the rear end of the tonearm.

Bring the head shell to the point of the overhang gauge and regulate stylus tip to 15.5 mm index line explained in Figs. 9 and 10.

When overhang adjustment is over, tighten the cartridge-held screws.

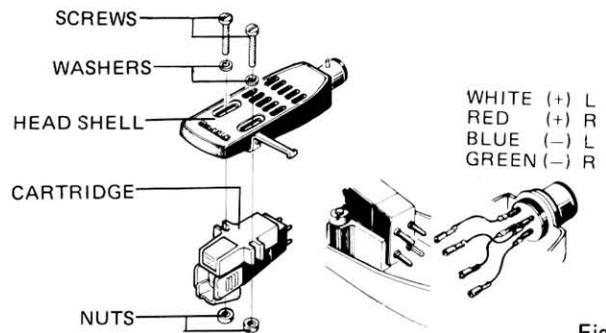


Fig. 8

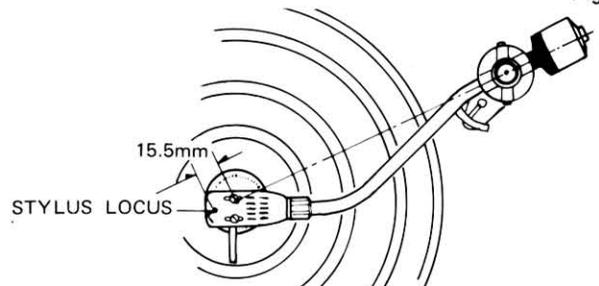


Fig. 9

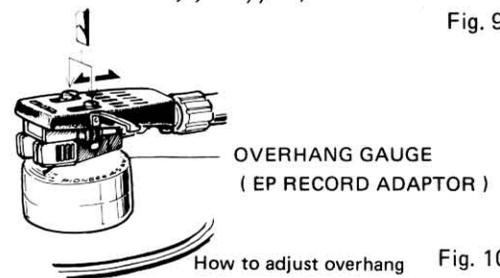


Fig. 10

# TRACKING FORCE ADJUSTMENT

## HORIZONTAL BALANCING

1. Set the anti-skating force control to "0" (Fig. 13).
2. Remove the stylus protection cover from the cartridge.
3. Free the tonearm from the armrest.
4. Set the arm elevation 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 zero aligns with the white index line on the tonearm (Fig. 11).

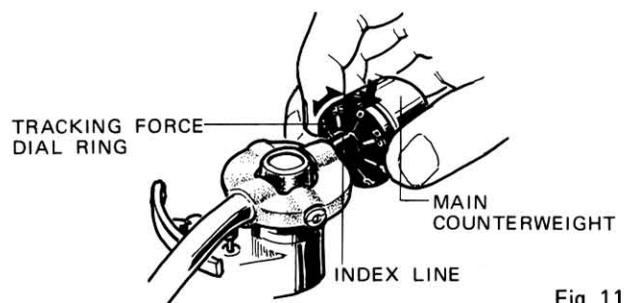


Fig. 11

## TRACKING FORCE ADJUSTMENT

After the horizontal balancing is complete, the tonearm is at "0" tracking force. Turn the whole main counterweight (with which the tracking force dial ring will turn) until the gauge reads the correct force for the cartridge (Fig. 12). The gauge is graduated between 0.5 and 4.0 grams.

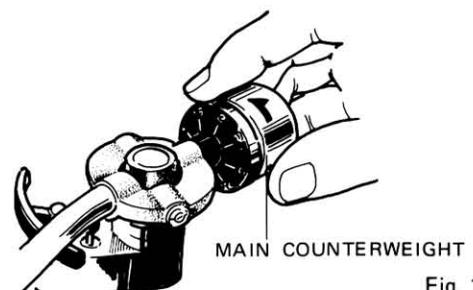


Fig. 12

### ANTI-SKATING ADJUSTMENT

The anti-skating force control knob should be adjusted to the same setting as that required for the tracking force (Fig. 13).

For example, if the tracking force of the cartridge is 2 gram, set the anti-skating knob to 2.

#### 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.

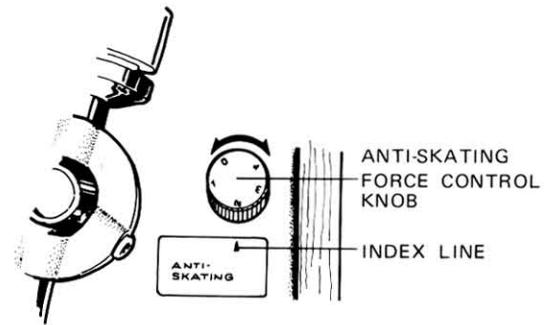


Fig. 13

### ATTACH THE DUST COVER

1. Hold dust cover vertically (Fig. 14-A).
2. Slip cut-outs in cover hinges over pins on base hinges.
3. Push dust cover about 5mm to the left (as seen front to secure hinges (Fig. 14-B).

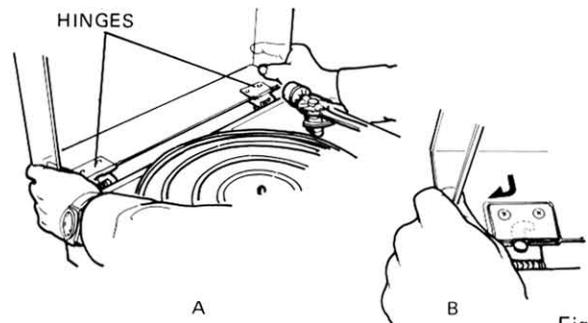


Fig. 14

### STEREO AMPLIFIER CONNECTIONS

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

- With moving magnet or induced magnet type cartridge:  
Connect to the PHONO MAG inputs on amplifier.
- With low-output moving coil type cartridge:  
Connect to the 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 black wire (the ground wire) with the split lug on its end can be connected 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.

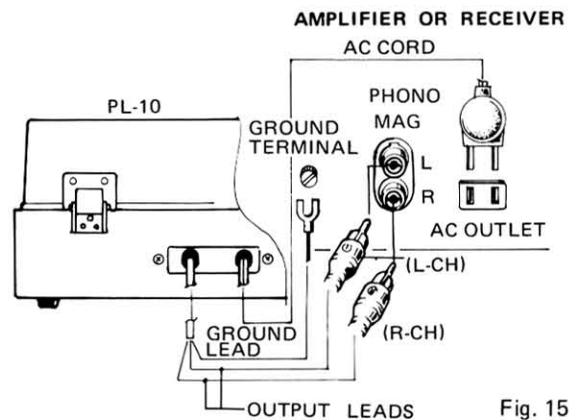


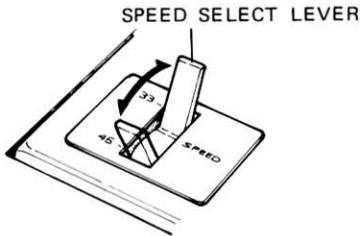
Fig. 15

# OPERATION

## Speed Select Lever

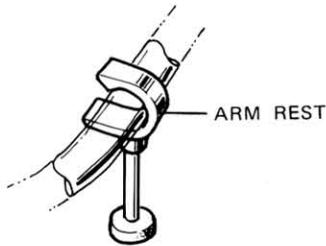
The PL-10 is a two-speed type: 33-1/3 rpm and 45 rpm.

Speed must be reset only while turntable platter is rotating.



## Arm Rest

The arm rest supports the tonearm when not in use.

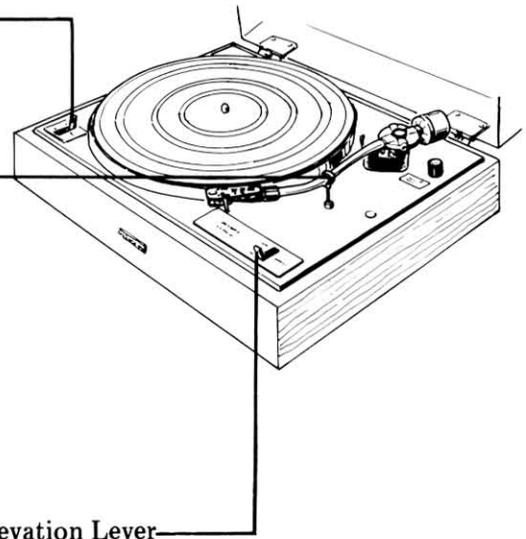


## EP Record Adaptor

An EP record adaptor is supplied in the accessory group, which permits 45 rpm records with large center holes to be played.



EP RECORD ADAPTOR



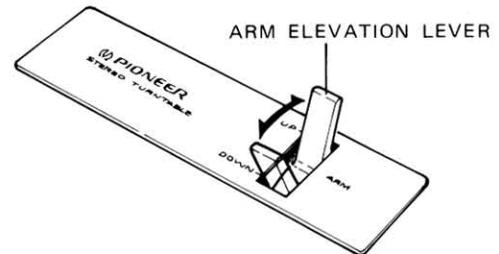
## Arm Elevation Lever

This is a lever for controlling the up-and-down movement of the tonearm.

“UP” ..... Tonearm will quietly float the arm head up from the record.

“DOWN” .... Tonearm will quietly float the arm head down on the record.

This is a convenient device for cueing in any portion of the record without fear of scratching the record surface.



# HOW TO OPERATE THE TURNTABLE

1. Put the record to be played on the turntable.
2. Remove the stylus protection cover.
3. Bring the tonearm by hand above the cueing position on the record. This operation will simultaneously cause the turntable platter to rotate.
4. Set the speed select lever at the correct position: 33 or 45 rpm.
5. Set the arm elevation lever to “DOWN”. Then the tonearm will quietly float down on the record.
6. At the end of the record, move the arm elevation lever to “UP”. Then the tonearm will float up from the record surface and stay there. Return the tonearm by hand to the arm rest.

## IMPORTANT: OBSERVE CAREFULLY

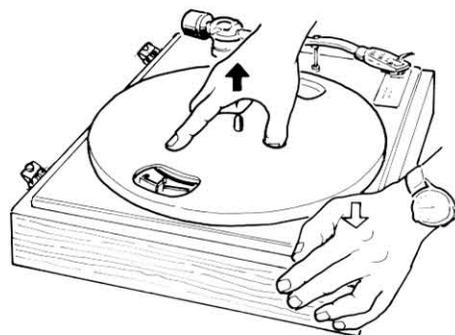
1. Never touch the SPEED SELECT lever unless the turntable is rotating.  
The speed can be changed only while the turntable is rotating.
2. Never obstruct the turntable by hand while it is rotating.  
This may cause damage.
3. Always keep the stylus clean. Remove dust with a soft brush.
4. Always keep your records scrupulously clean, too. Clean them with a commercially available record cleaner or cloth.
5. Never touch the stylus with your finger. Hands off.

## 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. 16).

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.



REMOVE THE TURNTABLE PLATTER

Fig. 16

### 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 for professional purposes. Apply one or two drops to the base of the center shaft Fig. 17. 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.

### WHEN LUBRICATION IS OVER ...

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

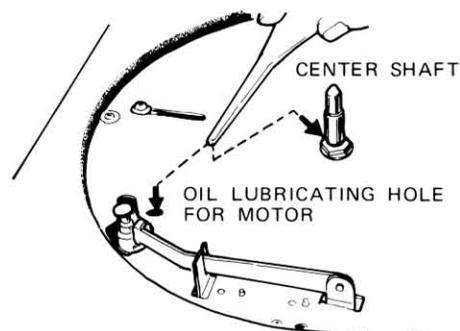


Fig. 17

# LINE VOLTAGE AND FREQUENCY

## LINE VOLTAGE

The PL-10 is available in two models: one model operates only on 220V, and the other either of two line voltages; 120V (110V to 130V area) and 240V (220V to 240V area). If your PL-10 is the latter model, set the unit to the proper line voltage as follows:

1. Loosen 2 metal plate-held screws with which the base plate is fastened, then move the screws toward the center shaft (Figs. 18, 19).
2. Lift the base plate, now you can see the **LINE VOLTAGE SELECTOR SWITCH** and the metal stopper. Remove the screw, to free the metal stopper. Set the switch to your local line voltage, hold the switch in position with the metal stopper, and tighten the screw (Fig. 20).
3. Place the base plate in position again, then move 2 metal plate-held screws and tighten them.

## AC FREQUENCY

The speed of the motor depends upon the frequency (cycles) of the AC power supply, which can be either 60Hz (USA, etc.) or 50Hz (most European countries, etc.). The turntable is, of course, factory-adjusted for the AC frequency of the country to which it is being shipped. So, no readjustment is usually required if you use the unit in the same country or area where you bought it. If you move to another country or region, however, please find out if the AC frequency is the same as at your former place of residence — if so, no problem. If it is different, your turntable must be readjusted as follows:

1. Remove the turntable platter. Now the motor pulley is accessible. The pulley is fastened to the motor shaft by one little screw. Remove this with the supplied screwdriver, and remove the pulley.
2. Set the speed selector lever at 33 rpm position.
3. Attach the supplied spare motor pulley and fasten it with the screw removed in step 1. Do not tighten the screw firmly, yet. Then set the turntable platter on the unit and lead the drive belt around the pulley.
4. The belt should be positioned in the belt guide and around the center of the upper (smaller) part of the motor pulley. To achieve this, it may be necessary to loosen the pulley once more and adjust its height. Fig. 21.
5. Turn the unit on and confirm that the belt travels smoothly through the belt guide and around the pulley.

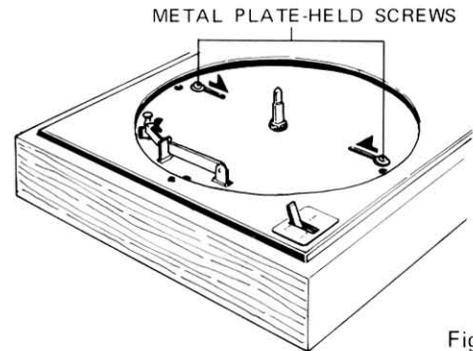


Fig. 18

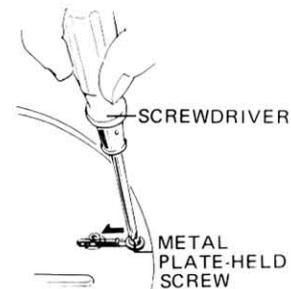


Fig. 19

### LINE VOLTAGE SELECTOR SWITCH

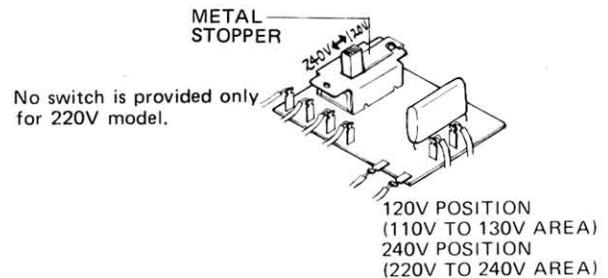


Fig. 20

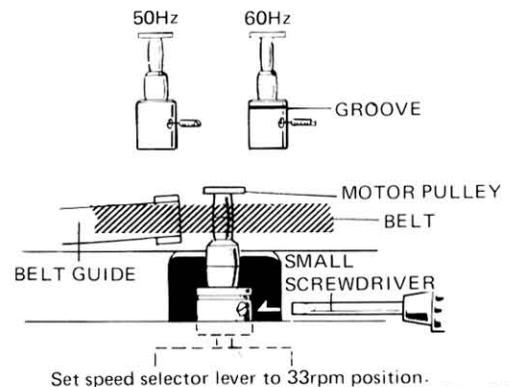


Fig. 21

#### NOTE:

The motor pulleys can be distinguished as follows:  
 Pulley for 50Hz AC: larger diameter  
 Pulley for 60Hz AC: smaller diameter, also has a groove in its lower part.

## TROUBLESHOOTING

### WOW AND FLUTTER

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

Caution: Never use other solvents.

### HOWLING

"HOWLING" 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 pronging noise, often 60Hz or 50Hz, resulting from a loose connection of the ground lead. If hum occurs:

- Check the connection of the PL-10 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-10 is running near the power transformer of your amplifier. Changing the position of the PL-10 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 motor
Turntable:	Belt-driven
Speed:	Two speeds: 33-1/3 rpm, 45 rpm
Speed accuracy:	1.0% or less
Wow and flutter:	0.1% (WRMS) or less
S/N:	47dB or more (in case of use Pioneer cartridge PC-30)
Turntable platter:	12" (30cm) diameter aluminum alloy die-cast

### Tonearm

Tonearm type:	Static balance type, pipe arm (S-shaped)
Effective arm length:	221mm
Usable cartridge weight:	4.0~8.5g
Available of any cartridge conforming to EIA standard.	

### Subfunctions

Anti-skating force control  
Head shell plug-in type  
Hydraulic cueing device

### Accessory group

Lubricator	1
Screwdriver	1
Cartridge mounting nuts	2
screws	2
washers	2
Motor pulley	1
EP record adaptor	1
Operating instructions	1

### Miscellaneous

Power requirement:	AC220 - 240V/110 - 130V (switchable) or 220V 60Hz or 50Hz
Power consumption:	10W MAX.
Dimensions:	430(W) x 339(D) x 166(H)mm 16-15/16(W) x 13-11/32(D) x 6-17/32(H) in.
Weight:	7.5kg (16lb 8oz)

### NOTE:

Specifications and the design subject to possible modifications without notice due to improvements.

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# CAUTION

This stereo turntable has been set for operation in area where line voltage is somewhere between 220V and 240V. If the unit is to be used in the area where line voltage is somewhere between 110V and 130V, set the line voltage selector switch to 110~130V position.

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