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## STEREO TURNTABLE

# **PIONEE**

KU

# **OPERATING INSTRUCTIONS**

Resin Cabinet

#### Thank you for buying this Pioneer stereo turntable.

Please read through these operating instructions and then you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

#### IMPORTANT NOTICE

The serial number for this equipment is located on the rear panel.

Please write this serial number on your enclosed warranty card and keep in a secure area. This is for your security.

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

## **CONTENTS**

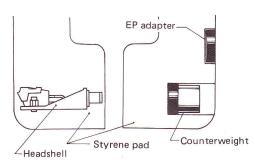
Assembly Procedure	2
Installation Precautions	3
Adjusting the Tonearm	4
Connections to Stereo Amplifier	5
Panel Facilities	6
Operation	8
Adjusting the Stylus Descent Position	10
Maintenance	10
Troubleshooting	11
Specifications	12



## **ASSEMBLY PROCEDURE** Dust cover Counterweight Center shaft-Anti-skate knob Rubber platter mat Platter Arm-elevation lever Cabinet Arm rest 900 Inter District Speed selecter It's an trent of receivant button Headshell Speed adjustment knob Record size selecter Locking collar Cartridge Repeat button Start/Cut button

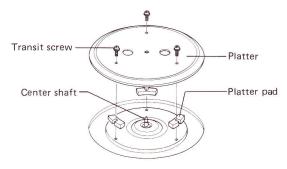
## **1. CHECK THE ACCESSORIES**

The styrene pad contains the parts shown in the figure. Check that they are all inside. The EP adapter is used for records with a large center hole.



## 2. REMOVING TRANSIT SCREWS

Remove three transit screws with a Phillips screwdriver as shown below. Then remove platter and three platter pads.



### 3. REMOVING DUST COVER

- 1. Fully open the dust cover.
- 2. Hold the dust cover, and lift it off by pulling it straight upward.

#### 4. MOUNTING THE PLATTER AND RUBBER PLATTER MAT

Refer to the assembly figure, and place both the platter and the rubber platter mat down over the center shaft. The platter is heavy, so use both hands to lift it horizontally over the shaft and into position.

#### 5. MOUNTING THE HEADSHELL

Insert the headshell (with the cartridge) into the end of the tonearm, and rotate the locking collar in the direction indicated by the arrow in the figure until it stops. Then secure it.

## 6. MOUNTING THE COUNTERWEIGHT

Slide the counterweight onto the counterweight shaft on the rear of the tonearm and push it forward. Then rotate it two or three turns in the direction of the arrow.

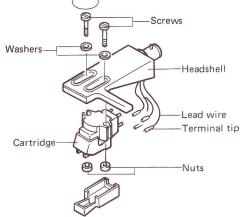
#### 7. MOUNTING THE DUST COVER

To install, insert the hinges of the dust cover into the hinge sockets of the cabinet, and push the dust cover downward.

#### WHEN ANOTHER CARTRIDGE IS USED

There are many different kinds of cartridge available today. You can attach any cartridge weighing between 4g and 9g to this tonearm provided that only the accessory headshell is used with it. Follow the instructions with each cartridge regarding connection and use. When another cartridge is to be used in the headshell supplied with this turntable, install the cartridge very carefully, as follows:

1. Remove the headshell from the tonearm, and remove the screws that hold the accessory PC-145 cartridge in place.



2. Remove the four lead wires from the cartridge itself. To protect the lead wires at this point, remove the terminal tips with pliers or the tip of the screwdriver.

3. The terminals on the accessory headshell are aligned according to the arrangement below. Check the location and polarity of each of the cartridge's terminal pins and then connect the lead wires, taking care not to get the polarities mixed up.

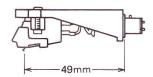
 Red:
 Right channel

 White:
 Left channel

 Green:
 Right channel ground

 Blue:
 Left channel ground

- 4. Attach the cartridge lightly to the headshell, using the screws, nuts, washers, etc.
- 5. Adjust the position of the cartridge so that the stylus and the connector section of the headshell are 49mm apart and tighten up the screws. Make sure that the cartridge does not tilt to one side when you attach it.



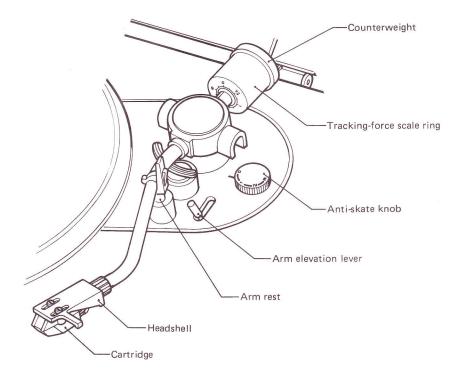
- 6. Attach the headshell to the tonearm.
- 7. Referring "ADJUSTING THE TONEARM" on page 4, re-adjust the tonearm with the new cartridge installed.

## **INSTALLATION PRECAUTIONS**

When installing this turntable, make sure that you avoid the following conditions:

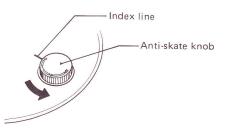
	Conditions to be avoided	Possible problems caused
(1)	Exposure to direct sunlight, high temperatures or high humidity.	(1) Can cause rust or interfere with insulation.
(2)	Unstable surfaces.	(2) Will interfere with normal operation of turntable (stylus will jump, etc.).
(3)	Dirty or dusty locations.	(3) Can cause scratches.
(4)	Exposure to heavy vibrations, such as on the top of speakers.	(4) Can cause howl.
(5)	Proximity to power transformer of the amplifier.	(5) Can cause hum.
(6)	Locations where alcohol, insecticides, or flammable sub- stances are frequently used.	(6) Can corrode dust cover or outside of cabinet.
sı M	the turntable is brought into a warm room from previously cold urroundings, or if the room temperature rises suddenly, moisture vill form on the operating sections and the turntable will not be ole to display its performance to the full.	In a situation like this, leave the turntable in its new environment for about an hour, or try and increase the room temperature grad- ually, before operation.

# ADJUSTING THE TONEARM



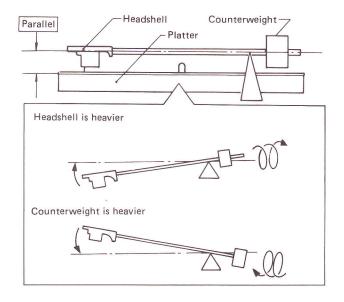
#### TRACKING FORCE ADJUSTMENT

1. Set the ANTI-SKATE knob to "0".



- 2. Remove the cartridge stylus cover.
- 3. Set the ARM-ELEVATION lever to the DOWN position.
- 4. Release the arm clamp and move the tonearm to the space between the arm rest and the platter, taking care not to damage the stylus.
- 5. Support the headshell's finger lift with one hand and attain the horizontal balance by turning the counterweight either clockwise or counterclockwise. "Horizontal balance" means that the tonearm is parallel to the record on the platter, and that the tonearm pipe, therefore, should not tilt toward the counterweight side or the headshell side (See figure).

Horizontally balanced state

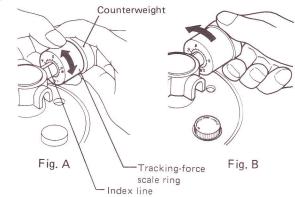


#### NOTE:

When the ANTI-SKATE knob is at the "0" position, the tonearm may move a little to the left or right. This is due to the enhanced sensitivity of the rotating section of the tonearm designed so that the tonearm traces the sound grooves on the record more efficiently during record play. This does not, therefore, interfere with play at all.

- 6. Return the tonearm to the arm rest and fasten the arm clamp.
- 7. Attach the stylus cover to protect the stylus.
- 8. Since the tracking force is zero when the tonearm is balanced horizontally, turn just the tracking-force scale ring in front of the counterweight, and set the "0" on the scale to the index line on the counterweight shaft (Fig. A).
- While turning the counterweight, set so that the "2" comes to the index line on the counterweight shaft (Fig. B).

The tracking-force scale ring has 0.5g steps, and one full turn of the counterweight will yield a tracking force of 3g.



#### NOTE:

When playing records at low temperatures or when playing records where the stylus is made to jump or the reproduced sound is distorted (records where part of the recording level is set at an extremely high level), adjust the tracking force to the optimum value (this cartridge has 2.3g) across the suitable range.

#### ANTI-SKATING ADJUSTMENT

To adjust the anti-skating mechanism, turn the ANTI-SKATE knob so that the number corresponding to the required tracking force comes to the index line.

The numbers on the ANTI-SKATE knob correspond to the same number of the tracking force.

When the tracking force is set to 2 grams for the PC-145, set the "2" on the knob adjacent to the index line on the panel.



## **CONNECTIONS TO STEREO AMPLIFIER**

# BEFORE CONNECTING, CHECK THE FOLLOWING:

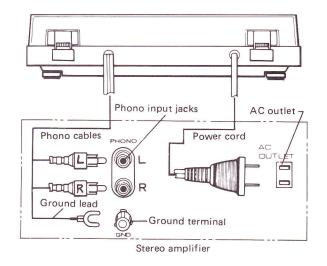
- Switch the power to the amplifier off to prevent damage to the speaker system.
- The cartridge furnished with your turntable is an IM type. Be sure to use a stereo amplifier which has PHONO input jacks for this type of cartridge.

#### NOTE:

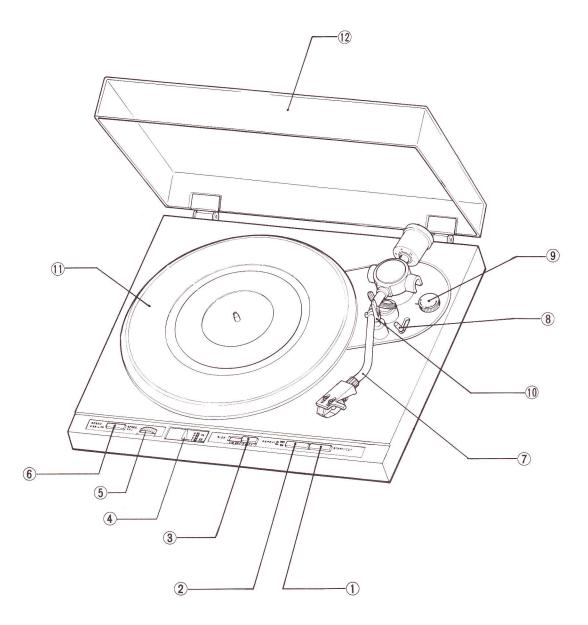
If you are using a low-output moving coil (MC) cartridge, you will need a special MC transformer or a head amplifier, or a stereo amplifier with a built-in MC amplifier.

### CONNECTION PROCEDURE

- Insert the phono cables (white and red) into the PHONO input jacks of the stereo amplifier (white for left channel into L jack, and red for right channel into R jack).
- 2. Connect the ground lead with the Y-shaped connector at the end to the ground terminal.
- Insert the power plug into the convenience AC outlet of the amplifier or a wall outlet.



# PANEL FACILITIES



6

#### **① START/CUT BUTTON**

When this button is depressed, the power is turned on to the turntable, the strobe light comes on and the platter starts to rotate. With the RECORD SIZE SELECTOR set at one of the positions -30, 25, or 17 – the tonearm moves automatically to the record disc as the platter starts rotating, thus starting record play (Refer to "AUTO-MATIC PLAY" on page 8.)

If this button is depressed while the record is playing, the tonearm automatically returns to the arm rest, and the power to the turntable is cut off.

#### **②** REPEAT BUTTON

Push this button when you want to listen to the same record again. Press the button once more to release.

#### NOTE:

All you have to do for repeat play is to press the REPEAT button. There is no need to push the START/CUT button again.

#### **③** RECORD SIZE SELECTOR

This selector selects the size of the record for automatic play.

- 7"17.... For the automatic play of 17cm (7-inch) LP and EP records.
- 10"25.... For the automatic play of 25cm (10-inch) LP records.
- 12"30.... For the automatic play of 30cm (12-inch) LP records.

## STROBE LIGHT/SPEED CHECKING WINDOW

This light comes on when the tonearm moves away from the arm rest toward the platter. It irradiates the stroboscope around the outside of the platter.

#### (5) SPEED ADJUSTMENT KNOB

Turn this knob when delicately adjusting the speed of the platter. The speed of platter will increase when the knob is turned clockwise, in the direction of "+"; it will decrease when turned counterclockwise, in the direction of "-". For detailed instruction, refer to the section "ADJUSTING THE SPEED OF THE PLATTER".

#### 6 SPEED SELECTOR BUTTON

- 45 . . . . When this button is depressed, the platter will rotate at 45rpm. Depress for playing 45rpm records, singles or EP's.
- 33 ..... When this button is set to the release position, the platter will rotate at 33-1/3rpm. Release for playing 33-1/3rpm records like LP's.

#### **⑦** TONEARM

This tonearm is designed to apply the correct tracking force to the cartridge and to keep this force at the precise level for faithful tracking of the record grooves. It also has the job of switching the power on to the turntable.

- When the tonearm is moved from the arm rest to the platter, the power comes on, the strobe lamp lights up, and the platter rotates.
- When the tonearm is returned to the arm rest, the power to the turntable is cut off, the strobe light goes off, and the platter stops rotating.

#### ⑧ ARM-ELEVATION LEVER

- DOWN (𝕎): When the lever is set to this position, the tonearm will be lowered. If it is set to DOWN for record play, the tonearm will be lowered onto the surface of the record, and play will begin.

#### 9 ANTI-SKATE KNOB

This knob is used to cancel out the harmful skating force which is generated during record play.

For further details, see "ANTI-SKATING ADJUST-MENT".

#### **10 ARM REST/CLAMPER**

The arm rest supports the tonearm when it is not being used. Set the tonearm on its rest when it is not playing records. Clamp it into position if you don't have any immediate plans to play records.

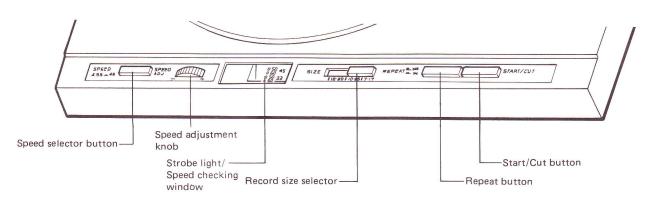
#### I PLATTER/RUBBER PLATTER MAT

When the tonearm is moved and power is supplied to the turntable, the platter will start rotating at the set rotation speed. The rubber platter mat stabilizes the records and also absorbs external vibration.

#### 12 DUST COVER

Keep this closed unless operating the controls or tonearm, or changing over records. This serves to keep dust from adhering to the records during record play. When fully opened and pulled straight up, this dust cover can be removed from the cabinet.

## **OPERATION**



# WHEN USING THE MODEL FOR THE FIRST TIME

When your model arrives, the vibrations sustained during transportation may have combined to make the auto mechanisms unstable. Make sure you proceed as follows when first using your model in order to make these mechanisms operate for correctly.

- 1. Set the arm elevation lever to the up position.
- 2. Move the tonearm from the arm rest to the platter. The platter will now start to rotate.
- 3. Depress the START/CUT button. The tonearm returns automatically to the arm rest from the platter, and the platter stops rotating.

#### AUTOMATIC PLAY

- 1. First, place the record on the platter.
- 2. Set the SPEED SELECTOR button to the speed at which the record is to be played.
- 3. Remove the stylus cover and release the arm clamp.
- 4. Set the ARM ELEVATION lever to the DOWN position.
- 5. Set the RECORD SIZE SELECTOR in accordance with the size of the record on the platter.
- Press the START/CUT button slowly (until you hear the sound of the start mechanism being actuated). The strobe light comes on and the platter rotates. When the platter rotates, the tonearm moves, the stylus tip settles down gently onto the lead-in groove of the record, and play begins.
- Check the rotating speed of the platter through the speed checking window. If the stroboscope markings appear to drift left or right, adjust the speed by referring to "ADJUSTING THE SPEED OF THE PLATTER" on page 9.
- Adjust the volume and tone controls on the amplifier to the preferred levels, and then sit back and enjoy your record.

- 9. After the record has been played, the auto-return mechanism is actuated and the tonearm returns to the arm rest. At the same time, the platter stops rotating and the power to the turntable is turned off.
- Secure the tonearm to the arm rest with the clamp and attach the stylus cover to protect the stylus.

#### MANUAL PLAY

- 1. Place the record on the platter.
- 2. Set the SPEED SELECTOR button to the speed at which the record is to be played.
- 3. Remove the stylus cover and release the arm clamp.
- 4. Set the ARM ELEVATION lever to the UP position.
- 5. Hold the headshell by the finger lift and move the stylus across the record to the track you want played.
- Check the rotating speed of the platter through the speed checking window. If the stroboscope markings appear to drift left or right, adjust the speed by referring to "ADJUSTING THE SPEED OF THE PLATTER" on page 9.
- Set the ARM ELEVATION lever to the DOWN position. The stylus will descend slowly to the record and play will begin.
- Adjust the volume and tone controls on the amplifier to the preferred levels, and then sit back and enjoy your record.
- 9. After the record has been played, the auto-return mechanism is actuated and the tonearm returns to the arm rest. At the same time, the platter stops rotating and the power to the turntable is turned off.
- 10. Secure the tonearm to the arm rest with the clamp and attach the stylus cover to protect the stylus.

#### **REPEAT PLAY**

Proceed as follows if you want to listen to the same record again and again:

- 1. Press the REPEAT button.
- 2. Press the START/CUT button and play will begin.
- After the record has been played, the auto-return mechanism is actuated, and the tonearm returns to the arm rest. A few seconds later the tonearm moves over to the record again, and play begins.

#### Releasing repeat-play mechanism

The repeat mechanism is released only when you push the REPEAT button during repeat play and then take your finger off the button. The turntable is then set to the normal auto play mode.

#### STOPPING RECORD PLAY

Press the START/CUT button gently (until you hear the sound of the return mechanism being actuated). The stylus will rise slowly from the surface of the record and the tonearm will return to the arm rest. The power to the turntable is turned off.

#### NOTE:

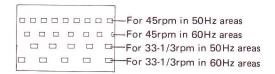
If you push the START/CUT button during repeat play, the tonearm will return to the arm rest and back again to the record for repeat play.

#### **OPERATION PRECAUTIONS**

- Always clean the stylus both before and after playing a record with a soft brush and make it a rule to clean the records with a good quality cleaner.
- When changing over the headshell, clamp the tonearm to the arm rest so that the tonearm shaft is not strained in any way.
- Be careful not to make the turntable vibrate while a record is playing since this can result in damage to the stylus and record.
- Place only one record at a time on the platter. If two or more records are stacked on the platter, the stylus will not make proper contact with the grooves, and this will impair the quality of reproduction.
- Do not disconnect the power cord while the stylus is still in a record groove as this may damage the stylus and record.
- Never obstruct the platter with the hand while it is rotating. This may cause damage.

## ADJUSTING THE SPEED OF THE PLATTER

 Observe the stroboscope through the speed checking window. Four different pitches of markings are used in the stroboscope. The pitch varies with the power line frequency and the rotating speed of the platter.



- Make sure one of the four types of stroboscope markings is set according to the line frequency and the platter speed, and turn the SPEED ADJUSTMENT knob to adjust.
  - When the markings appear to stand still: The platter is turning at the rated speed (33-1/3 or 45rpm), and no adjustment is required.
  - When the markings appear to move to the right: The speed of the platter is lower than the rated speed. Turn the knob clockwise until markings appear to stand still.
  - When the markings appear to move to the left. The speed of the platter is higher than the rated speed. Turn the knob counterclockwise until the markings appear to stand still.

When changing over the speed (from 33-1/3 to 45 rpm or from 45 rpm to 33-1/3 rpm), the stripes on the stroboscope may appear to flow slightly to the left or right. This does not, however, indicate that there is a malfunction. In cases like this, refer to the section entitled "AD-JUSTING THE SPEED OF THE PLATTER" and adjust so that the stripes appear to stand still.

## ADJUSTING THE STYLUS **DESCENT POSITION**

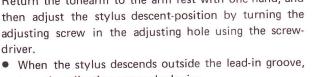
If the stylus does not descend onto the lead-in groove on the record during automatic play, adjust as follows:

- 1. Place a 30cm (12-inch) LP record on the platter.
- 2. Go through the operation for automatic play once (refer to page 8), and check the level and direction of the stylus' deviation from the norm.
- 3. Return the tonearm to the arm rest with one hand, and then adjust the stylus descent-position by turning the adjusting screw in the adjusting hole using the screwdriver.

  - When the stylus descends inside the lead-in groove, turn the adjusting screw counterclockwise.
  - Each half-turn of the adjusting screw moves the starting point about 18 mm.

#### NOTE:

Be very careful not to damage the record and the stylus when you are adjusting the position of the stylus descent.





## MAINTENANCE

### CABINET AND DUST COVER

When the cabinet or dust cover becomes dusty or dirty, wipe it clean with a soft dry cloth. Remember that the surfaces can be corroded by furniture wax, thinner, and benzine and also by insecticide sprays. The dust cover can be detached and cleaned.

#### LUBRICATION

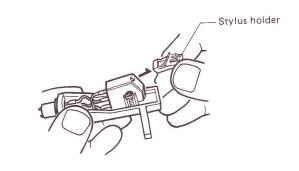
The motor shaft and bearings of this turntable employ oil-less bearings and so there is no need for lubrication. There is no need to lubricate the tonearm bearings, either.

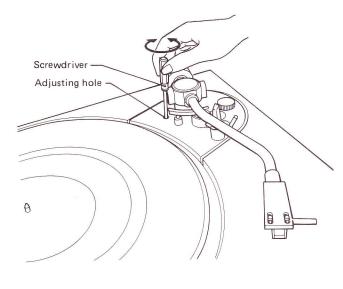
#### STYLUS

If the stylus tip is clogged with dust, the reproduced sound quality will be impaired. Use a soft brush to keep the stylus clean at all times. Be careful not to touch the tip since this may damage it. When using stylus cleaner (organic solvent), benzine or thinner to clean the stylus tip, take care not to allow any of the liquid to come into contact with the stylus holder. This may change the material.

#### PC-145 STYLUS REPLACEMENT

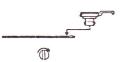
The life expectancy of the PC-145 stylus tip is 800  $\sim$ 1.000 hours. For the sake of maximum sound quality reproduction, Pioneer recommends replacement within the minimum time limit. The stylus tip is replaced by grasping the stylus holder and pulling it away from the body of the cartridge. The new stylus tip is then inserted by pushing it into the receptacle. The correct replacement tip is the PN-145. This may be obtained at your Pioneer dealer. Pioneer cannot guarantee performance or reliability if another type of stylus is employed.





Stylus descends outside the groove

Stylus descends inside the groove





# TROUBLESHOOTING

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

Symptom	Possible trouble	Remedy
Platter does not rotate.	Power cord is unplugged.	Plug cord securely into wall outlet.
No sound	1. Phono cables are not connected properly.	<ol> <li>Connect cables securely to the PHONO inpu jacks on the amplifier (see page 5).</li> </ol>
	2. Headshell is not properly attached.	<ol> <li>Firmly secure tonearm locking collar (see page 2).</li> </ol>
	3. Cartridge lead wires are loose.	<ol> <li>Attach lead wires inside headshell properly (sepage 3).</li> </ol>
	<ol> <li>Amplifier is not being operated properly. (Function switch, tape monitor switch, speaker switches, etc. are not set correctly).</li> </ol>	<ol> <li>Read the operating instructions that come win amplifier.</li> </ol>
Musical tempo is off.	1. Platter speed is not set properly.	1. Refer to "PANEL FACILITIES" and their us on page 7.
	2. SPEED ADJUSTMENT knob not set properly in accordance with the platter speed.	2. Refer to "ADJUSTING THE SPEED OF TH PLATTER" on page 9.
Excessive noise.	1. Ground lead is not connected.	<ol> <li>Connect properly to the amplifier's grour terminal (see page 5).</li> </ol>
	2. Tracking force is not correct.	2. Refer to tracking force adjustment on page
	3. Dust or dirt has collected on the stylus tip.	3. Clean the stylus tip with a soft brush.
	4. Dust or dirt has collected on the record.	4. Clean the record with a good quality cleaner.
Sound is distorted.	1. Dust or dirt has collected on the stylus tip.	1. Clean the stylus tip with a soft brush.
	2. Tracking force is not correct.	2. Refer to tracking force adjustment on page
	3. Stylus is worn.	3. Replace with new stylus.
	4. Amplifier's tone controls set too high.	4. Set tone controls to lower position.
Tonearm does not	1. ARM ELEVATION lever is set to UP position.	1. Set to DOWN position.
descend with auto play.	2. Tracking force is not correct.	2. Refer to tracking force adjustment on page
Tonearm does not move with auto play.	Arm clamp is still fastened.	Release arm clamp.
Intermittent sound.	1. Tracking force is not correct.	1. Refer to tracking force adjustment on page 4.
	2. Stylus is worn.	2. Replace with new stylus.
	3. Record is scratched or warped.	3. Replace record.
Stylus does not descend to correct position with auto-play.		See stylus descent-position adjustment on page 1

equipment which you are using in the vicinity of the turntable.

#### PIONEER

## **SPECIFICATIONS**

#### Motor and Turntable

Drive System Direct-drive
Motor
Turntable Platter
Moment of Inertia 150kg-cm <sup>2</sup> (including platter mat)
Speeds
Speed Control Range ±2%
Wow and Flutter Less than 0.025% (WRMS)
Signal-to-Noise Ratio More than 75dB (DIN-B)
(with Pioneer cartridge model PC-145)

#### Tonearm

Туре	Static-balance t	ype, S-shaped pipe arm
Effective Arm Length		221mm
Overhang		15.5mm
Usable Cartridge Weight		4g (min.) to 9g (max.)

#### Subfunctions

Full auto mechanism, Anti-skating force control, Stylus pressure direct-readout counterweight, Cueing device, Strobe light, Free stop hinges

#### Semiconductors

ICs	•	•	•	• •	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•			•	•	•	4	2
Transistors	•	•	•						v		•						•				•	•		•	•		•			•						-	2
Diodes		•	•							e		•	•	•	•	÷	•		•		•	•	•	•	÷	•		•	•	•	•	•	•	•		1	2
Hall Elements	•						•	•			•	•	•	•		•	•	•	•	•	•	-		•		•		•	•	-		-					3

#### Miscellaneous

Power Requirements AC120V, 50, 60Hz
Power Consumption
Dimensions
16-1/2(W) x 3-13/16(H) x 14-3/8(D)in.
Weight 6kg/13 lb 4 oz.

#### PC-145 Specifications

Type Induced magnet type
Stylus
Output Voltage 3mV (1kHz, 50mm/s Peak-velocity, LAT)
Tracking Force 1.5g to 2.3g (proper 2g)
Frequency Response 10 to 25,000Hz

#### Accessories

EP Adapter									•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	1
Operating In:	struc	ctio	ns									ł,	•	•	•	•		•	•	•	•	•	•	•		•	•		1

#### NOTE:

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

## SAFETY INSTRUCTIONS

- **READ INSTRUCTIONS** All the safety and operating instructions should be read before the appliance is operated.
- **RETAIN INSTRUCTIONS** The safety and operating instructions should be retained for future reference.
- HEED WARNING All warnings on the appliance and in the operating instructions should be adhered to.
- FOLLOW INSTRUCTIONS All operating and use instructions should be followed
- WATER AND MOISTURE The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc
- VENTILATION The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- HEAT The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- POWER SOURCES The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- POWER-CORD PROTECTION Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

- CLEANING The appliance should be cleaned. Only with a polishing cloth or a soft dry cloth. Never clean with furniture wax. benzine, insecticides or other volatile liquids since they may corrode the cabinet.
- NONUSE PERIODS The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
- **OBJECT AND LIQUID ENTRY** Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
- DAMAGE REQUIRING SERVICE The appliance should be serviced by Pioneer authorized service center or qualified service personnel when:
- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance: or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped, or the enclosure damaged. SERVICING The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be contacted nearest Pioneer authorized service center.

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