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DENON

SERVO-CONTROLLED DIRECT DRIVE TURNTABLE SYSTEM

DP-59L

OPERATING INSTRUCTIONS



IMPORTANT TO SAFETY

WARNING:

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

2. **Handle the power supply cord carefully**
   Do not damage or deform the power supply cord. If it is damaged or deformed, it may cause electric shock or malfunction when used. When removing from wall outlet, be sure to remove by holding the plug attachment and not by pulling the cord.
3. **Do not open bottom cover**
   In order to prevent electric shock, do not open the bottom cover. If problems occur, contact your **DENON** dealer.
4. **Do not insert anything inside**
   Do not insert metal objects or spill liquid inside the record player. Electric shock or malfunction may result.

Model DP-59L Serial No. _____
Please record and retain the Model name and serial number of your set shown on the rating label.

ATTENTION:

1. **Afin d'éviter les incendies ou tout danger de décharge électrique, il ne faut pas exposer cet appareil à la pluie ou à l'humidité.**
2. **Manipulez avec soin le cordon d'alimentation.**
   N'abimez pas ou ne déformez pas le cordon d'alimentation. S'il est endommagé ou déformé, il risque de produire une décharge électrique ou un mauvais fonctionnement lors de son utilisation. Lorsque vous le débranchez de la prise murale, assurez-vous de la faire en tenant la fiche et non en tirant le cordon.
3. **N'ouvrez pas le couvercle du fond.**
   Afin d empêcher les décharges électriques, n'ouvrez pas le couvercle du fond. En cas de problème, contactez votre revendeur **DENON**.
4. **N'insérez rien à l'intérieur.**
   N'insérez pas d'objets métalliques ou ne renversez pas de liquides à l'intérieur de l'appareil, sinon vous risquez de produire un choc électrique ou de causer un mauvais fonctionnement.

ACHTUNG:

1. **Um Brand-und Kurzschluss gefahr zu vermeiden, schützen Sie das Gerät vor Regen und Feuchtigkeit.**
2. **Vorsicht im Umgang mit der Netzanschlußschnur**
   Die Netzanschlußschnur nicht verändern oder beschädigen, da es sonst zu Gefährdung durch elektrischen Schlag oder zu Störungen des Geräts kommen kann. Die Schnur immer am Stecker aus der Steckdose ziehen und nicht durch direktes Ziehen an der Schnur.
3. **Den Geräteboden nicht öffnen**
   Beim Offnen des Gerätebodens besteht die Gefahr eines elektrischen Schlags. Daher nicht selber öffnen, sondern bei Störungen an Ihren **DENON**-Händler wenden.
4. **Keine Fremdkörper in das Gerät einführen**
   Keine Metallgegenstände in das Gerät einführen oder Flüssigkeit in das Geräteinnere einsickern, da dies zu lassen Kurzschlüssen oder Betriebsstörungen führen kann.

IMPORTANT
(BRITISH MODEL ONLY)

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

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

FOR YOUR SAFETY
(AUSTRALIAN MODEL ONLY)

To ensure safe operation, the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring.
Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.
The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, contact a qualified electrician.

(UNDERWRITERS LABORATORIES INC. (UL) LISTED MODEL FOR USA ONLY.)



CAUTION

RISK OF ELECTRIC SHOCK

DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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Please check to make sure the following items, in addition to main body, are packed in the carton.

1. Turntable 1
2. Turntable platter 1
3. Dust cover 1
4. Weight rings 2
5. Straight type arm tube 1
6. Overhang gauge 1
7. Shell accessory 1
8. Screw driver 1
9. 45 rpm record adaptor 1

FEATURES

1. Electronic Q-damping (Dynamic Servo Tracer)

Low frequency resonance, dependent upon cartridge compliance and the effective mass of the tonearm, is electronically damped both horizontally and vertically to eliminate crosstalk and inter-modulation distortion. This optimizes the performance of the DP-59L's arm and results in record reproduction with outstanding stereo imaging characteristics and a minimum of noise or vibration.

2. Low-mass straight arm tube with lamination damped headshell

Dual construction of the arm tube greatly reduces headshell resonance. This, together with the low-mass straight arm tube improves tracing ability and further contributes to the DP-59L's clarity and stable stereo imaging.

3. Thick precision turntable platter exhibits superb acoustic characteristics

The use of a thick turntable platter to minimize vibrations transmitted from external sources is essential for clear sound reproduction.

4. Quartz-lock speed control

The system uses phase-locked loop speed control (PLL method) to increase/decrease the turntable speed precisely (within ±9.9%).

5. Excellent rotational characteristics

The DP-59L's high performance AC servo motor, magnetic record head speed detection system; quartz lock, bi-directional servo result in phenomenal performance specifications: 0.006% wrms (rotation system) wow and flutter; 82 dB (DIN-B) S/N ratio and rotational accuracy of 0.002%.

6. Auto-lift mechanism with non-contact end-of-record detection system

When the record is finished, the stylus automatically lifts off the record and the turntable stops rotation. This avoids unnecessary wear of the stylus tip.

7. Beautifully finished wood cabinet

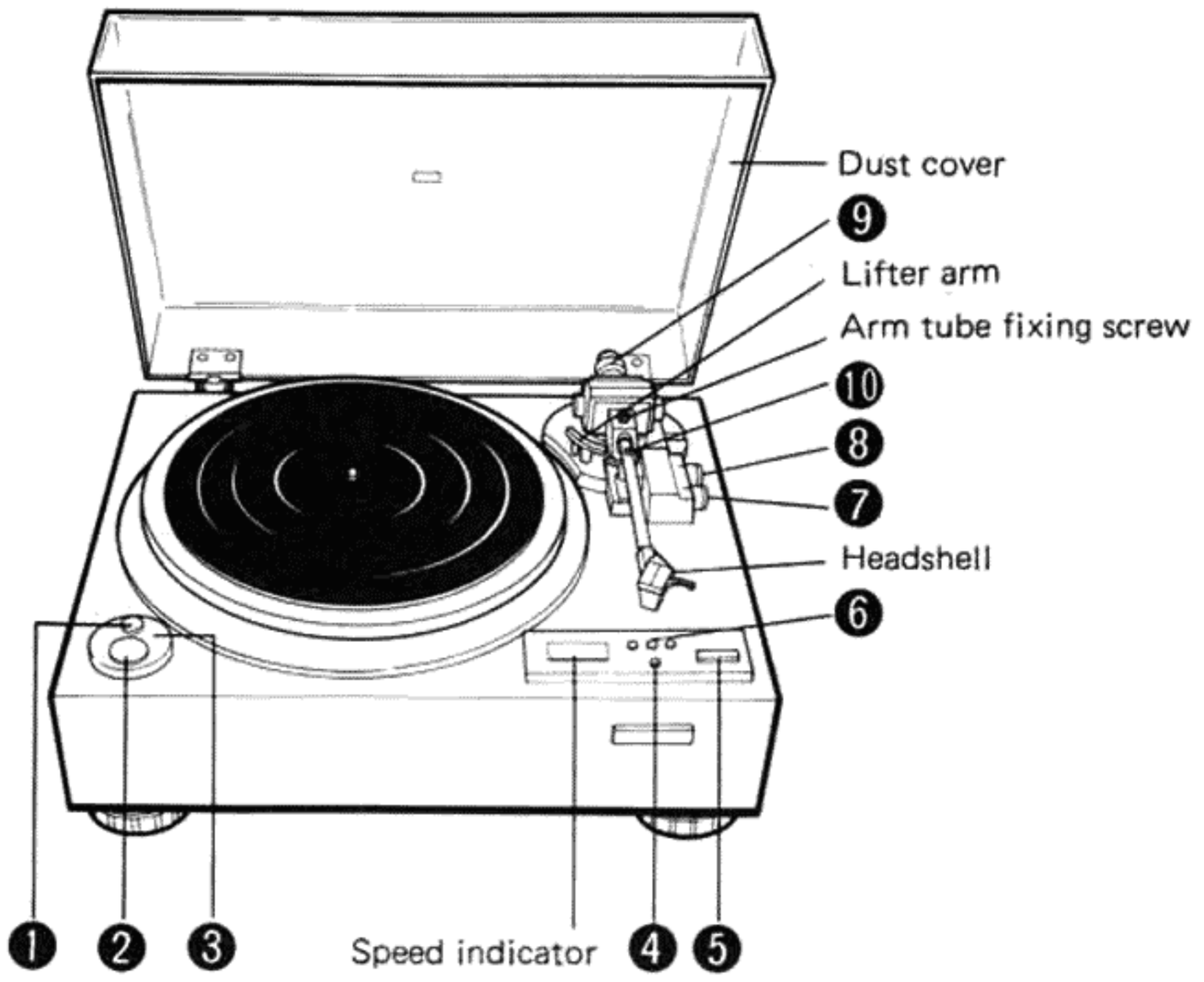
The cabinet has a mirror-finish surface, measures 110 mm in height, and uses a new insulator to prevent howling.

8. Interchangeable straight and S-shape arm tubes via standard 4P connectors

Optimum cartridge matching can be achieved quickly and easily through interchangeable tonearm tubes.

Note:
The S-shape arm tube and headshell are sold separately from the system.

PARTS NOMENCLATURE AND FUNCTIONS



1 Power switch POWER

Press the power switch (▬) to turn on the power supply, and the "LOCK" LED and "33 rpm 0.0%" are displayed on the speed indicator. If the power switch (▬) is pressed when the arm lift is in its lower most position, it will move up.

2 Start/Stop button START/STOP

If the start/stop button is pressed when the turntable is at rest, it will rotate, the arm lift will move down and the "DOWN" LED lights up. Pressing the button while the turntable is rotating causes the arm lift to move up and the "DOWN" LED goes off. The turntable stops when the arm lift reaches its uppermost position.

3 Lock indicator LOCK

The lock indicator will light when the turntable speed reaches the specified phase-lock state. It flickers when the turntable speed is in transition, such as when stopping, starting or changing speeds. It remains off during stop.

4 Speed button SPEED 33/45

When the power switch (▬) goes on, it automatically sets the turntable speed to 33-1/3 rpm. Press the speed button once to change the speed to 45 rpm, and once again to reset it to 33-1/3. Speed selection can be repeated this way.

5 Arm Lifter button LIFTER UP/DOWN

Each time the button is pressed, the arm lifter moves up/down. The lamp will light when the lifter is down.

6 Pitch control button PITCH CONTROL

The turntable speed can be increased or decreased precisely by the quartz-lock system.
The speed increases 0.1% every time the "HIGH" button is pressed, and automatically increases 0.4% per second if the button is kept pressed in. The speed can be increased up to a maximum of +9.9%, and it is displayed on the digital speed indicator. The "LOW" button decreases the speed up to (9.9% max.) in a similar way to the "HIGH" button.
Pressing the "NORMAL" button resets the speed which was changed by pressing either the "HIGH" or "LOW" button, to the predetermined value (0.0%).

7 Anti-skating knob

When a record is being played, a force which pulls the stylus towards the center of the turntable is generated. This force is compensated for by adjusting the Anti-skating knob.

8 Q damping knob Q DAMPING

The recommended amount of Q damping can be achieved by setting the Q damping knob to the same value as the stylus force.

9 Weight ring

Use this ring to obtain zero balance of the tonearm.

10 Arm rest

By holding the finger grip of the headshell and moving it to the left, the tonearm lock is disengaged. When locking the tonearm, push it in the opposite direction.

HOW TO ASSEMBLE

Do not connect the power cord until assembly is completed.

- **Mount the turntable platter**
  (1) Remove the two red transportation screws. (Fig. 1)
  (2) Install the turntable platter onto the motor shaft gently by holding the turntable through the two holes with your fingers, as shown in Fig. 1.

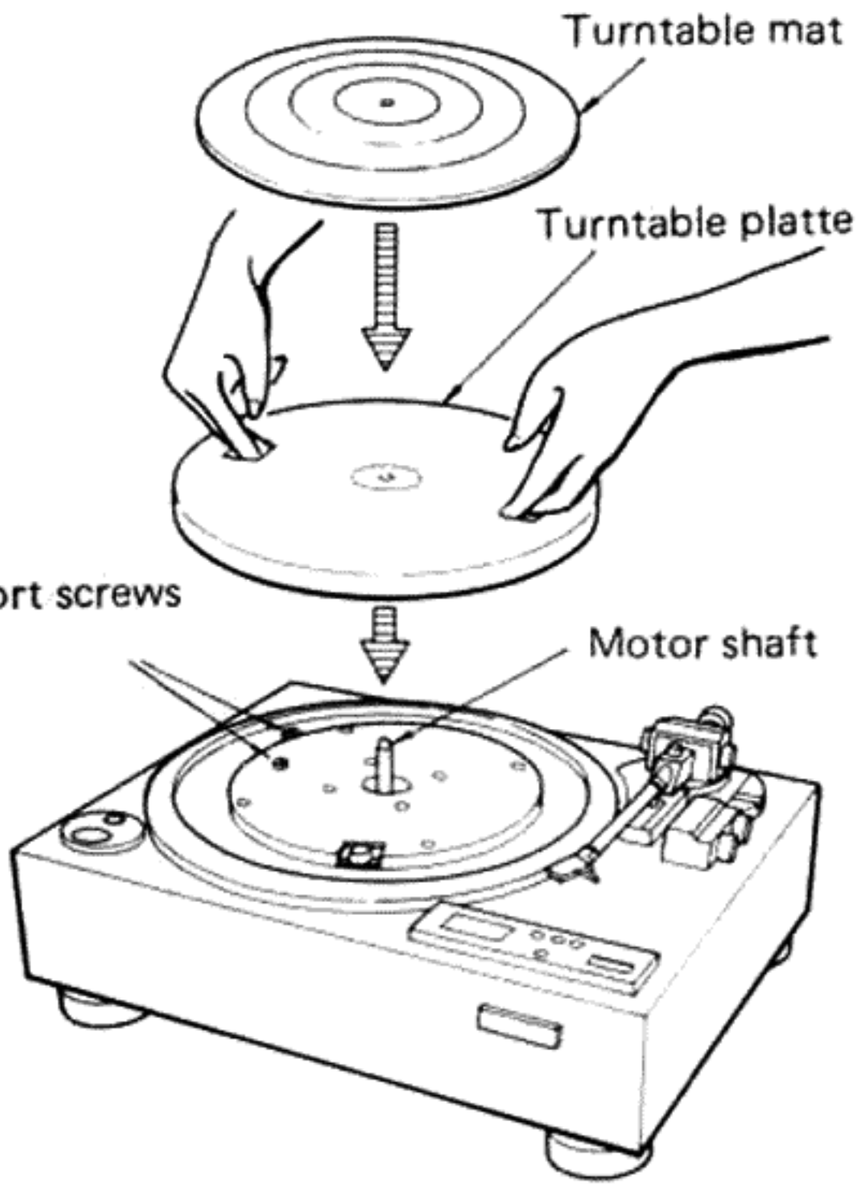


Fig. 1

Note:
The pulse signals for speed detection are recorded on the magnetic coating on the bottom inner surface of the platter (the black colored section). Be careful not to scratch this surface when handling the platter.

(3) After installing the turntable platter, place the turntable mat onto the platter, aligning it with the motor shaft.

- **Proper selection of the arm tubes**
  (1) Straight-type arm tube
  Almost all cartridges on the market can be used on this arm tube. When using multiple numbers of cartridges with the straight type arm tube, cartridge replacement can be performed easily by purchasing extra separately sold PCL-59 straight type arm tubes.
  (2) S-shape arm tube **(sold separately)**
  Use the S-shape arm tube when using an integrated headshell/cartridge or a universal headshell.
  (3) Matching cartridges with the cartridge weights.
  The appropriate weight rings for the straight type arm tube and the S-shape arm tube should be used. (Refer to the page on weight ring selection.)
  The relation between the usable cartridge weight (incl. headshells, etc.) and the arm tubes is shown in Chart 1.

Arm tube	Suitable weight range
Straight type arm tube	Approx. 3 – 14 g (incl. screws, nuts)
S-shape arm tube	Approx. 11 – 25 g (incl. headshell, screws, spacer, nuts)

Chart 1

Note:
The S-shape arm tube and headshell are sold separately from the system.

- **Tonearm assembly**

1. Attaching and detaching the arm tube

(1) When removing the arm tube, loosen the arm tube fixing screw half a rotation in the direction of the arrow, as shown in Fig. 2. Hold the connector section of the arm tube and pull it forward.

(2) When installing the arm tube, match the connector section guide of the arm tube to the guide groove of the arm main unit and insert. Tighten the arm tube fixing screw in the reverse direction of the arrow to secure the arm tube to the arm main unit.

Note:

Although this screw will come completely out of the arm main unit if unscrewed further, there is no need to do so. The arm tube can be removed by loosening the screw merely half a rotation.

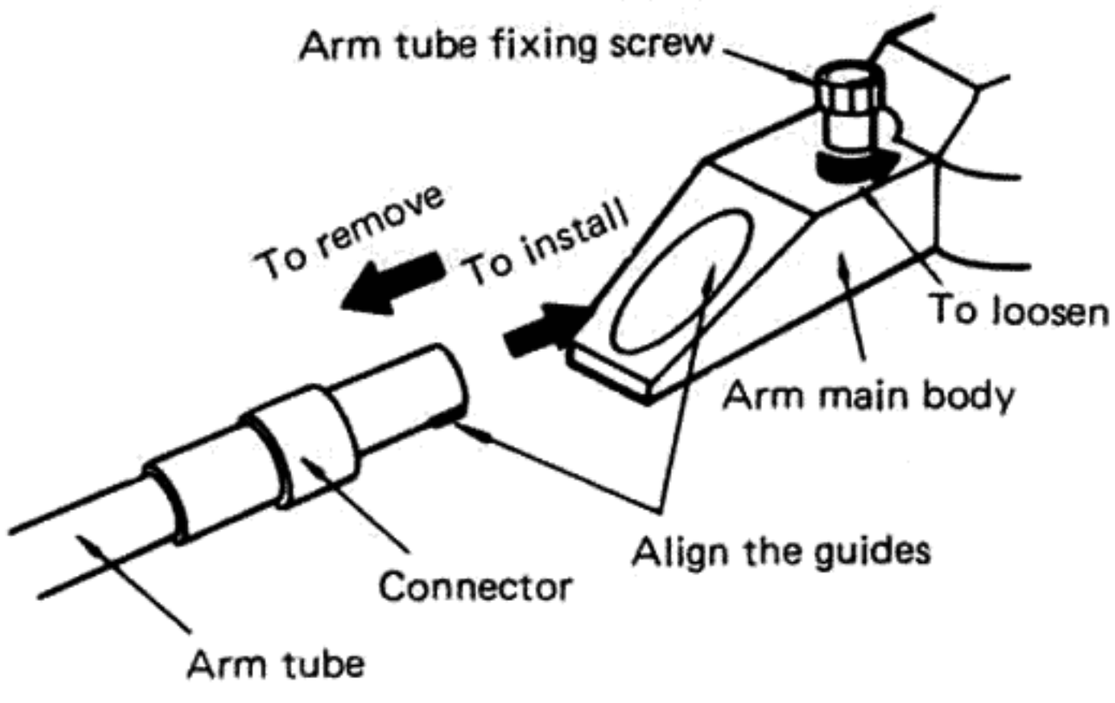


Fig. 2

2. Cartridge installation

(1) Remove the arm tube. Install the cartridge onto the headshell section by referring to Figs. 3-6.

Two types of fixing screws with different lengths are supplied; choose the screws of the appropriate length for your cartridge.

(2) When installing the cartridge, tighten the cartridge fixing screws lightly to allow the cartridge to move a little. Then, adjust the cartridge overhang, with the aid of the overhang gauge, by moving it forward or backward so that the stylus tip is positioned 50 mm away from the rear end of the headshell, as shown in Fig. 3. Next, align the cartridge with the headshell horizontally (Fig. 4) and vertically (Fig. 5). Tighten the screws fully to secure the cartridge.

(3) The lead wires of the head shell section are color coded as in Fig. 6. Referring to the markings on the cartridge or the cartridge instruction manual, connect the lead wires to the corresponding cartridge terminals carefully, using tweezers if necessary.

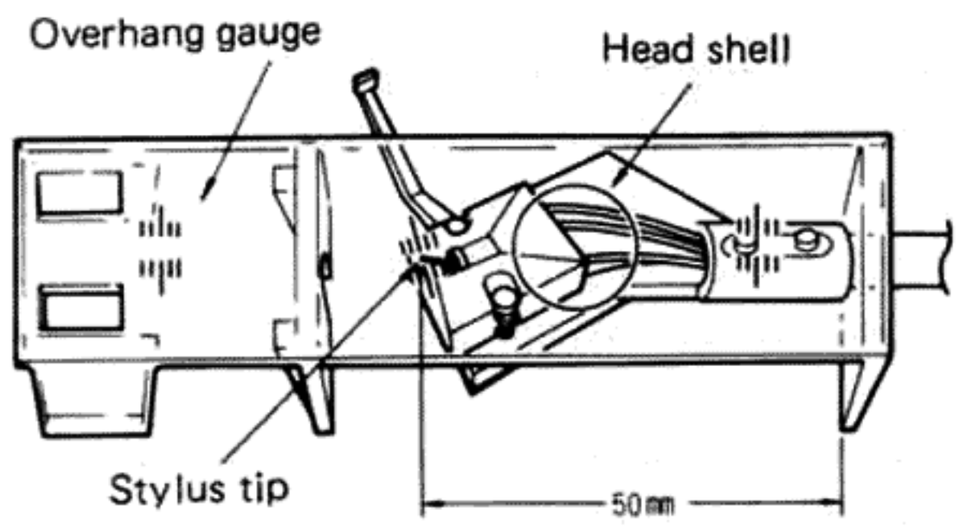


Fig. 3

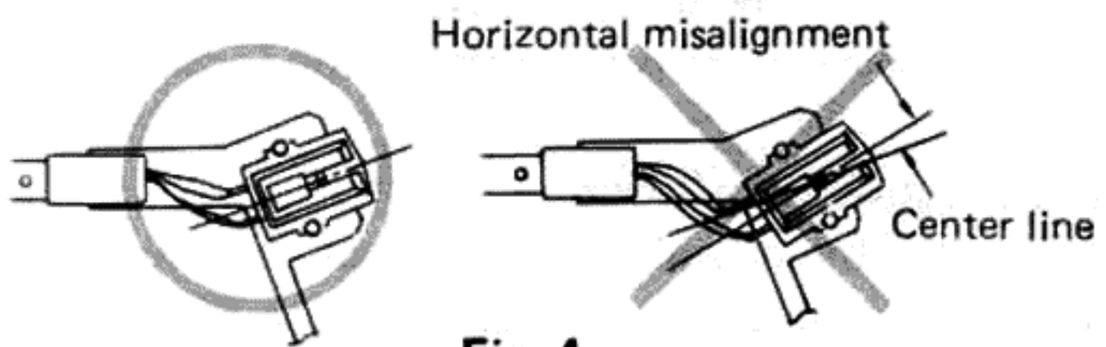


Fig. 4

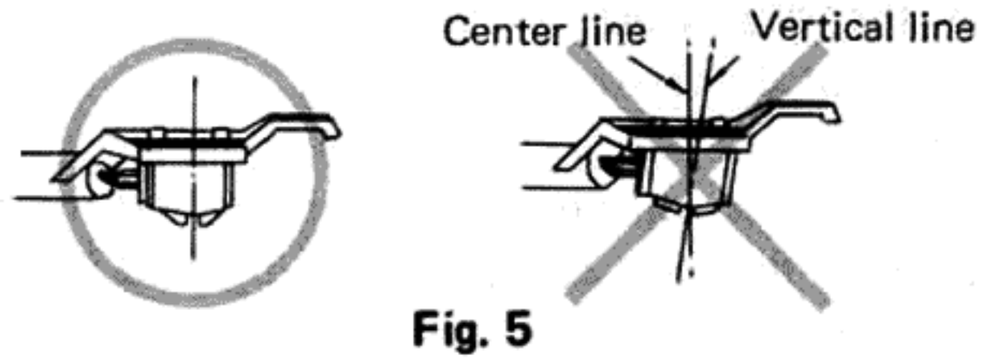


Fig. 5

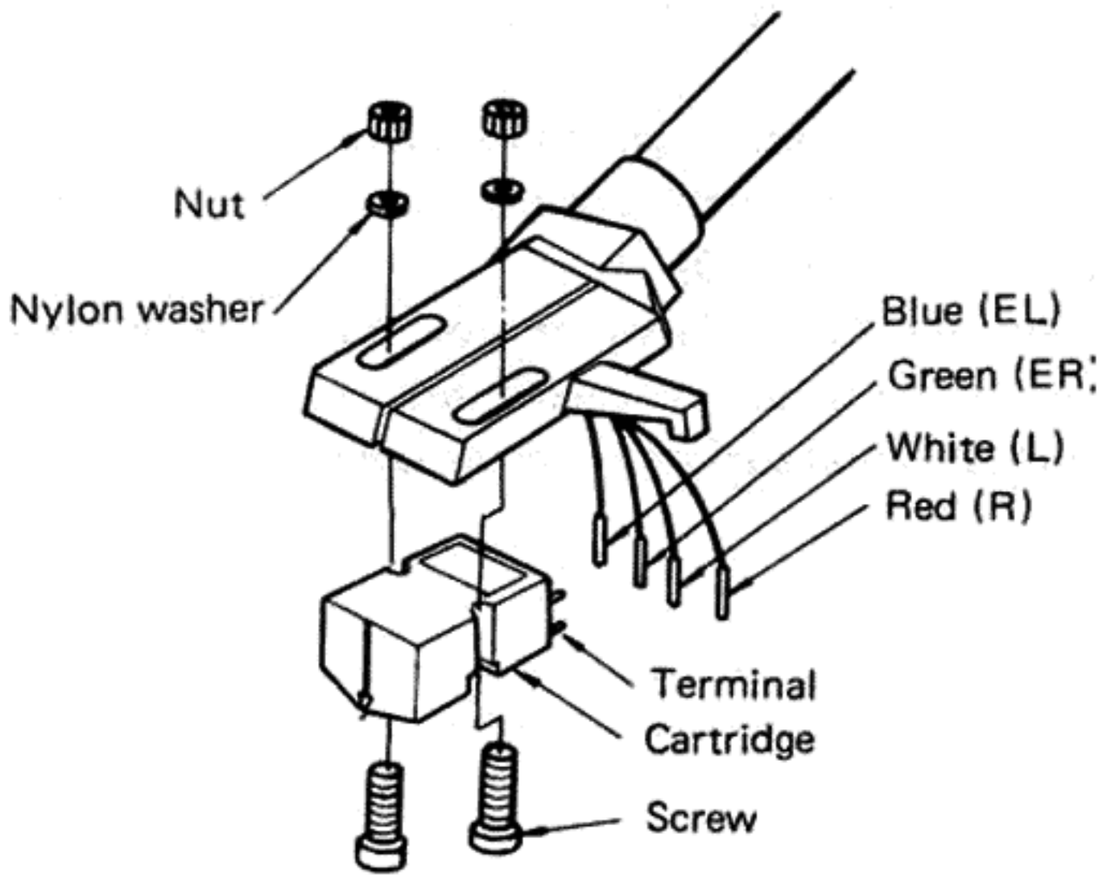


Fig. 6

3. Weight ring installation

(1) Two types of weight rings are supplied with this turntable as balance weights. Cartridge weights (incl. screws, nuts, spacers, etc.) and the appropriate balance weight rings are shown in the following chart.

Weight ring	Straight type arm tube
Small	Approx. 3 – 6 g (incl. screws, nuts)
Medium-small	Approx. 6 – 10 g (incl. screws, nuts)

Chart 2

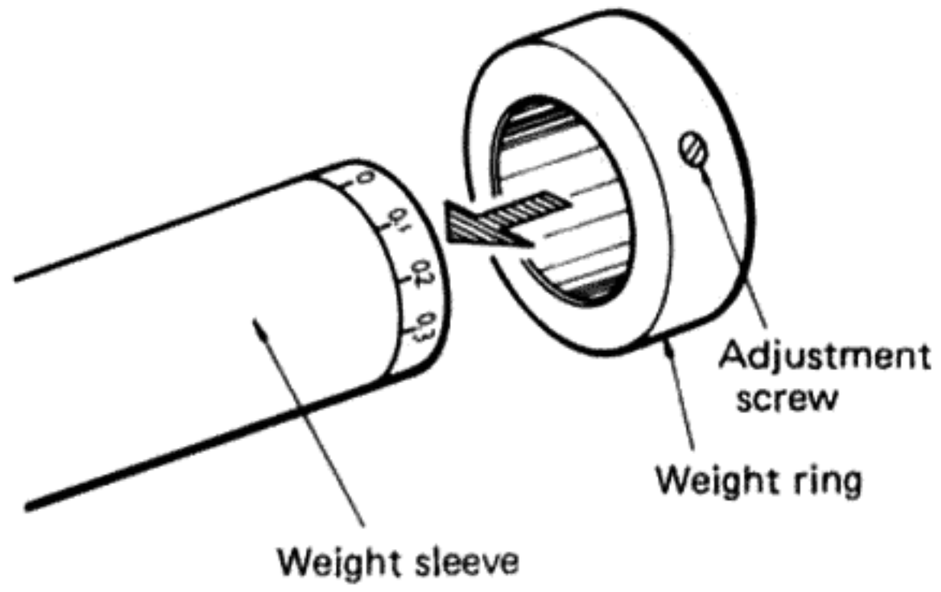


Fig. 7

Note:

Cartridges exceeding the weight shown in the chart above can be balanced by combining two weight rings.

(2) Insert the weight ring into the weight sleeve through the stylus force scale, as shown in Fig. 7.

(3) Although the weight ring is factory adjusted so that it slides smoothly on the weight sleeve, you may wish to adjust the friction adjustment screw with the supplied screw driver if the movement is too tight or too loose.

4. Dust cover installation

Align the metal mount grooves of the dust cover with the hinge projections and push in the direction of the arrow, as shown in Fig. 8. When removing, open the dust cover fully and pull in the reverse direction of the arrow.

Note:

The dust cover will not close completely if the metal mounts of the dust cover are not inserted fully into the hinges.

Grasp only the sections near the metal mount of the dust cover when installing or removing.

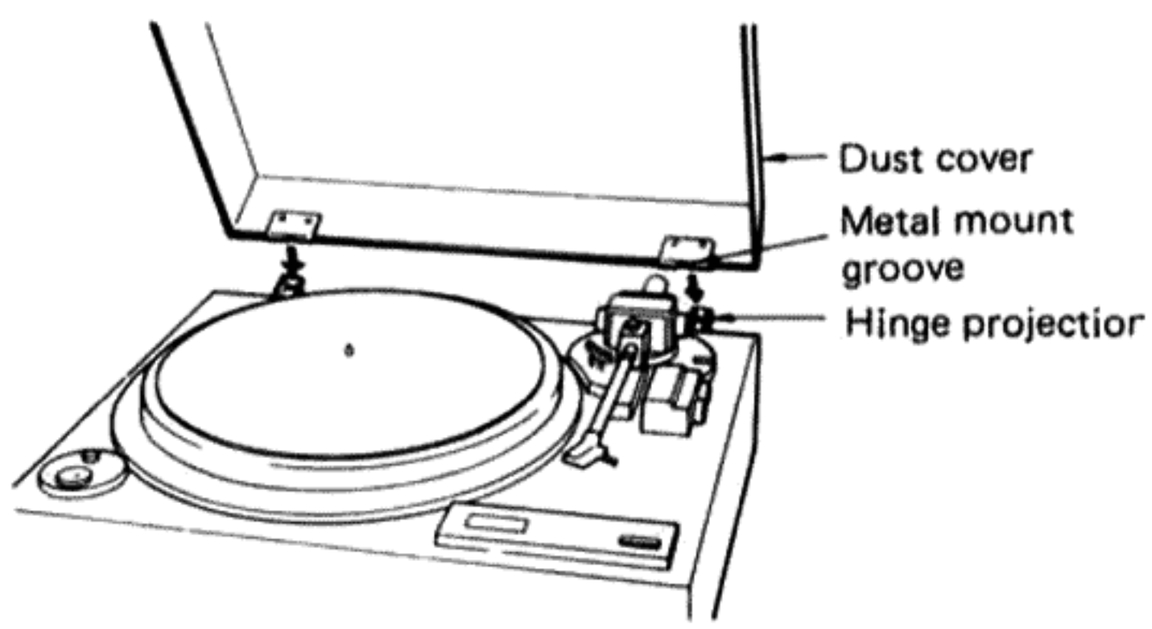


Fig. 8

5. Insulator feet height adjustment

The height of each foot can be adjusted by rotating it by hand. (Fig. 9)

Place the turntable where you intend to use it and adjust the height of each insulator foot so that the turntable mat surface becomes level.

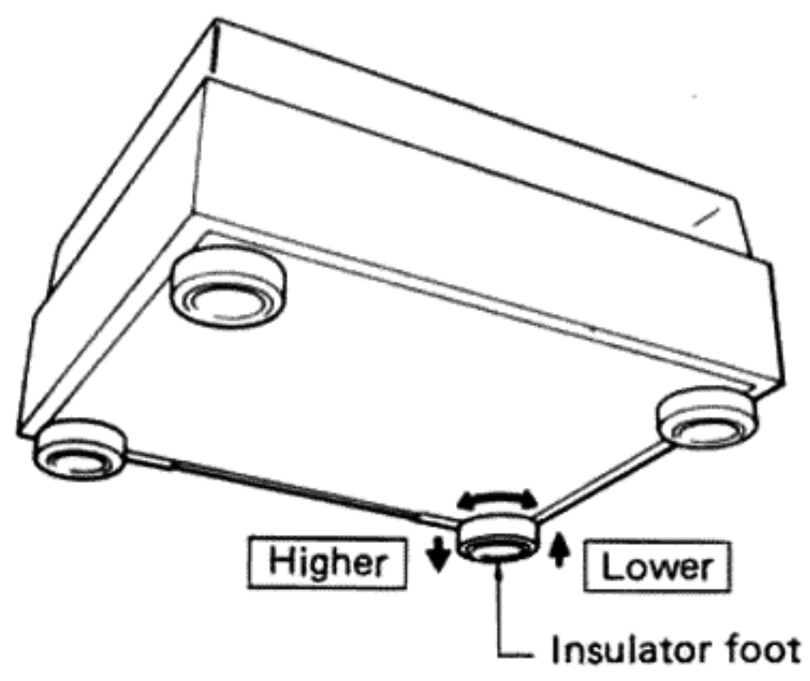


Fig. 9

HOW TO CONNECT

Make sure to turn OFF the power switch of the amplifier and make the connections, as shown in Fig. 10.

(1) Connect the red (R) and white (L) output cable pin plugs securely into the Right and Left PHONO terminal jacks of the amplifier.

Note:

Some types of cartridges require the use of step-up transformers or head amplifiers. Refer to the instruction manual of the amplifier and the cartridge in use.

(2) Secure the Y-shaped lug of the output cable ground wire to the GND (ground) terminal of the amplifier.

(3) Connect the power supply cord to the wall outlet or the AC outlet of the amplifier. When connecting the plug to the AC outlet of the amplifier, refer to the amplifier instruction manual to make sure the electrical capacity of the AC outlet is sufficient.

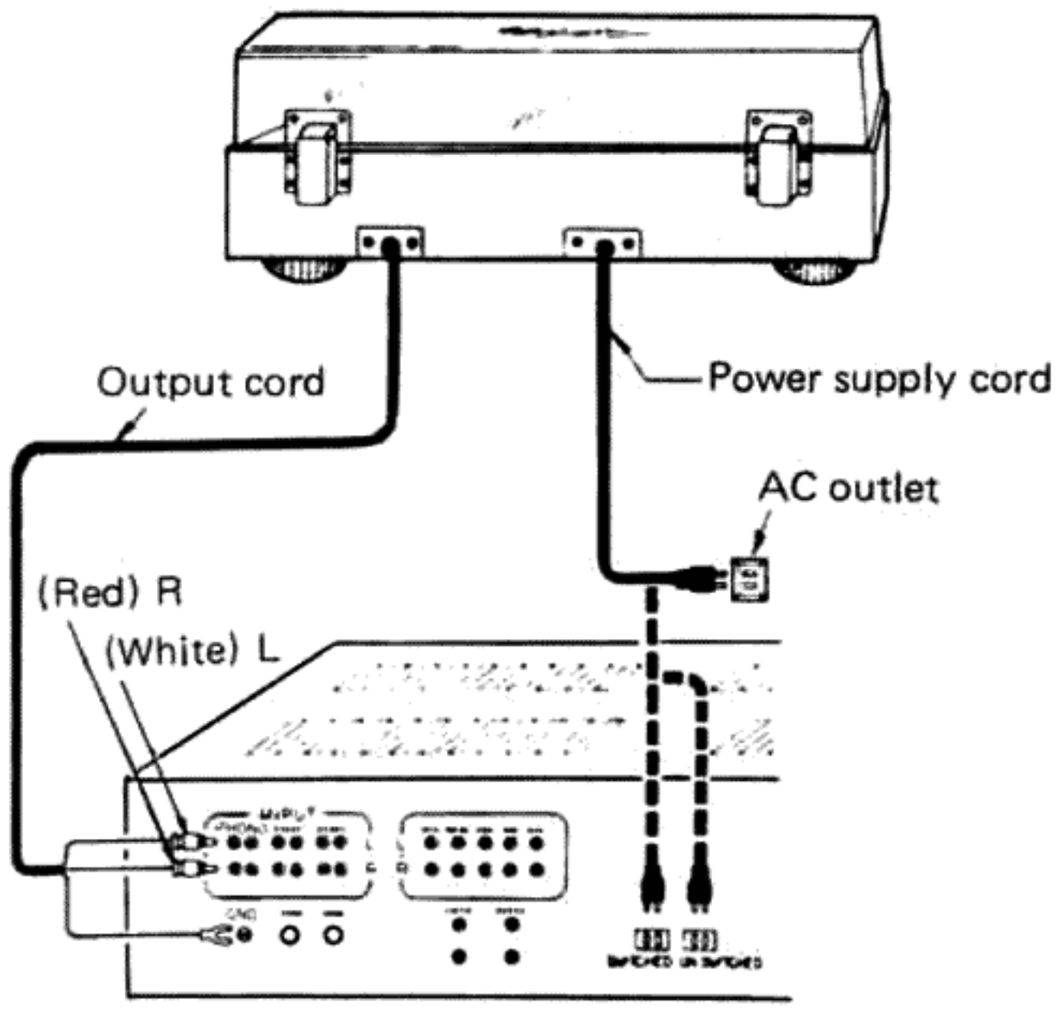


Fig. 10

HOW TO ADJUST

- **Tonearm height adjustments**

Adjust the height of the tonearm according to the cartridge to be used.

Lower the tonearm by pressing the lifter (cueing) button and observe the arm tube while the stylus is on the record disc. If the arm tube is not parallel to the record surface, first return the arm to the arm rest, and then adjust the tonearm height. Loosen the arm height setting screws (refer to Fig. 11) using the furnished screwdriver and adjust the tonearm main body height until the tunearm is parallel to the record surface.

Tighten the screws securely after adjustment.

Note:

The lifter arm is adjusted before shipping. However, depending on cartridge, it is possible that the stylus tip touches the record even when the lifter is raised or the stylus tip does not touch the record even when the lifter is lowered, even though the lifter arm is opsearing properly. In such cases, loosen the arm lifter height fixing screw, as shown in Fig. 12. Move the lifter up and down, adjusting the height so that the gap between the lifter arm and the arm main body is between 0.5 – 1.0 mm when the lifter is lowered and the stylus is touching the record.

After making these adjustment, securely tighten the screws which were loosened.

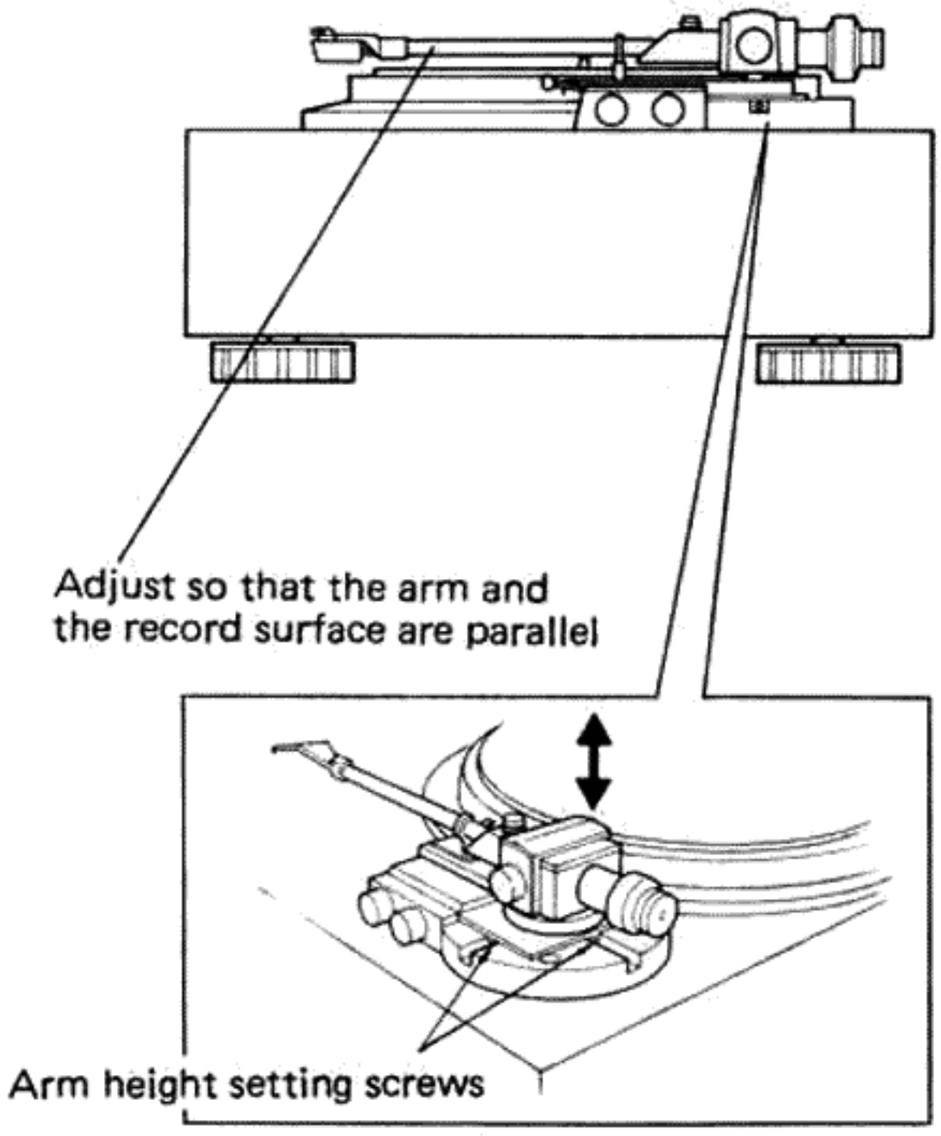
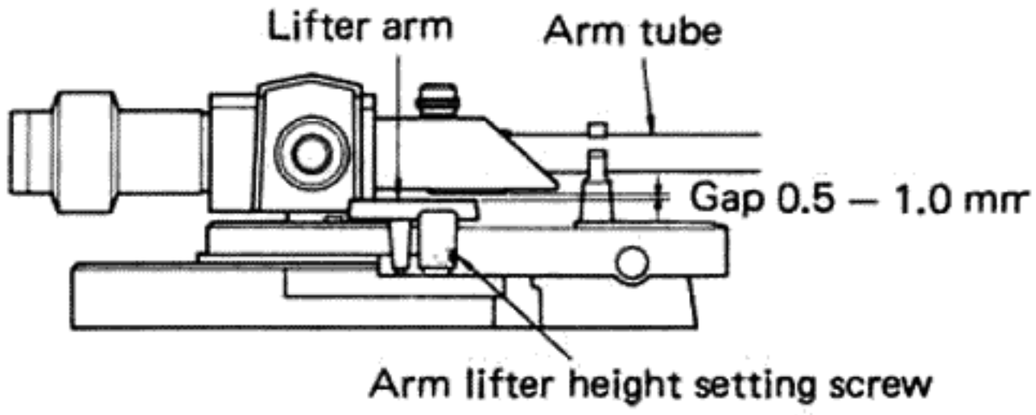


Fig. 11



Note:
The numeric values shown in the figure are for when the arm tube is above the record surface, away from the armrest.

Fig. 12

- **Stylus force adjustment**

Adjust the stylus force to the optimum level by following the procedures explained below. Both the straight-type and S-type arm tubes can be adjusted by the same procedures.

Note:

When using cartridges with removable stylus covers, take off the stylus cover before making adjustments.

(1) Set the anti-skating knob to "0". The stylus force scale rotates three turns. Rotate the stylus force scale in the reverse direction of the arrow in Fig. 14 and set it to the last alignable "0".

(2) Choose the appropriate balance weight ring for the weight of the cartridge to be used (refer to Chart 2) and install it according to the procedures explained previously. With the lifter arm lowered, remove the arm from the arm rest. Next, slide the balance weight ring back and forth precisely locating the position that neutrally balances the arm horizontally. (If the shell side tips down, shift the weight ring to the rear; if the shell side tips up, shift the weight ring forward.) (Fig. 13)

Note:

The arm may move to the left or right when the horizontal balance is adjusted. This is caused by the high-sensitivity bearings in the arm base and is not a malfunction.

(3) Rotate the stylus force scale knob in the direction of the arrow in Fig. 14, setting the reference line on the arm to the level corresponding to the optimum stylus force of the cartridge. One full rotation of the stylus force scale is equal to 1 g. Its limit is three rotations or 3 g of stylus force. For example, to set the stylus force to 2.5 g, rotate the stylus force scale twice and one-half turn move to bring 0.5 to the reference line.

- **Anti-skating adjustment**

Rotate the ANTI-SKATING knob to the same setting as the cartridge stylus force by aligning your setting with the reference line. Fig. 15 shows the anti-skating position when the stylus force is 1.5 g.

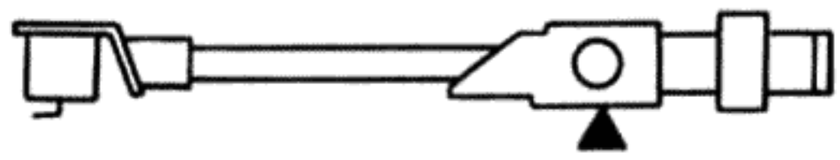
- **Q-damping adjustment (Dynamic Servo Tracer)**

Rotate the Q-DAMPING knob to the same setting as the cartridge stylus force by aligning your setting with the reference line.

*Although the optimum Q-damping value differs according to cartridge compliance, this turntable is designed so that the recommended optimum damping can be obtained by setting the knob to the same setting as the stylus force. However, if critical listening or specific cartridges require different Q-damping settings, this control is fully adjustable.



Slide the weight ring in the direction of the arr



Horizontally balanced condition



Slide the weight ring in the direction of the arr

Fig. 13

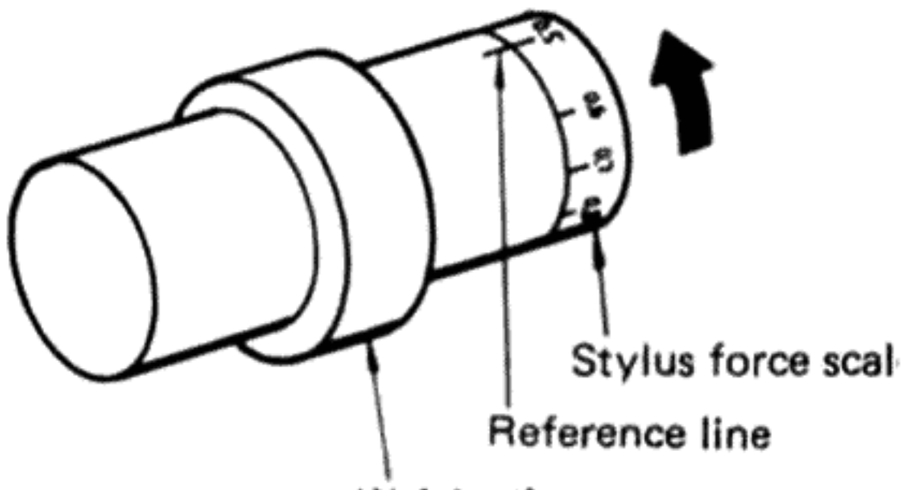


Fig. 14

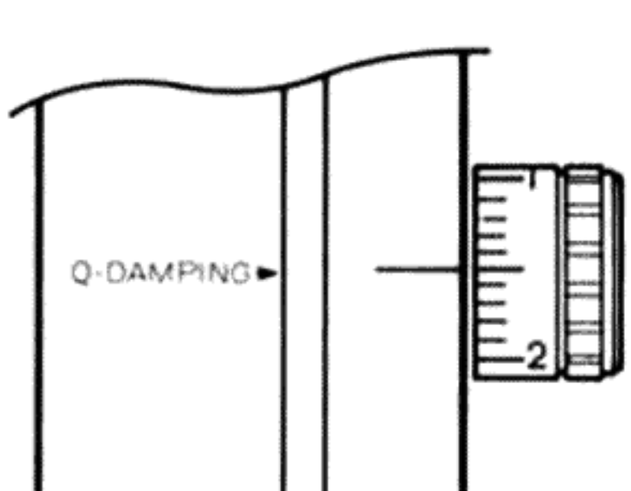


Fig. 15

HOW TO PLAY

1. To start play

(1) Press the speed button to select a turntable speed appropriate to the record. The selected speed is displayed in the digital speed indicator.

(2) Make sure the lifter indicator lamp is off. (If it is lit, press the lifter (cueing) button and raise the arm lifter.)

(3) Move the tonearm to the playing position and press the start button. The turntable will start to rotate, the arm lifter will be lowered, the stylus tip will come in contact with record and play will begin.

Note:

Press the start/stop button first to rotate the turntable and lower the arm lift if placing the stylus tip manually on the record.

2. Cue starting (standby start)

(1) Using the lifter (cueing) button, first lower the arm lifter.

(2) Place the stylus tip near the beginning of the music. You can locate the start of the music by rotating the turntable by hand.

(3) After finding the beginning of the music, rotate the turntable backwards 1/2 to 1-1/2 rotations.

(4) When the start button is pressed, the turntable will start to rotate and play the music at the selected speed.

3. To end play

When the record is finished, the auto lift mechanism operates. The arm lifter is raised automatically, the stylus tip is raised from the record surface and the turntable stops.

4. To stop play anytime (to interrupt play)

Press the start/stop button. The arm lift moves up, the "DOWN" LED goes off, then the turntable stops. To raise the stylus tip from the record while the turntable is still rotating, simply press the lifter button. The arm lifter is raised and the stylus tip will rise from the record surface.

TROUBLESHOOTING GUIDE

Make sure you have obscrued the following before you consider any problem a malfunction.

No sound:

- Are the cartridge and headshell connections properly made? . . . . . Refer to Fig. 6 on page 7
- Is the arm tube inserted properly? . . . . . Refer to Fig. 2 on page 7
- Are the output cables properly connected to the amplifier? . . . . . Refer to Fig. 10 on page 9
- Are the amplifier knobs and switches set to their proper positions? . . . . . Refer to the amplifier instruction manual

Hum noise:

- Is the ground wire connected to the amplifier? . . . . . Refer to Fig. 10 on page 9

Stylus skips:

- Is the stylus force set to the correct setting? . . . . . Refer to page 10
- Is the arm lifter touching the arm? . . . . . Refer to Fig. 11 on page 9
- Is the record warped or scratched? . . . . . Replace record
- Is there an excessive amount of dust on the stylus tip? . . . . . Clean the stylus tip

Arm stops moving forward halfway:

- Is the arm lifter height adjusted properly? . . . . . Refer to Fig. 12 on page 9
- Is the record scratched? . . . . . Replace record
- Is something hitting the arm? . . . . . Check for foreign objects placed around the arm

Stylus does not lower onto record:

- Is the stylus force adjusted properly? . . . . . Refer to page 10
- Is there a gap between the arm lifter and the arm tube? . . . . . Refer to Fig. 12 on page 9

Weak volume:

- Have the proper connections been made to the amplifier and are its settings proper for the type of cartridge (output) being used? . . . . . Refer to Fig. 10 on page 9

SPECIFICATIONS

Turntable motor

Drive method:	Servo controlled direct drive
Speeds:	33-1/3 rpm, 45 rpm
Wow and flutter:	less than 0.006% wrms (servo system) less than 0.02% wrms (JIS)
S/N ratio:	more than 82 dB (DIN-B)
Rise time:	Nominal speed within 1.6 seconds (at 33-1/3 rpm)
Turntable platter:	Aluminum die-cast, 325 mm diameter Moment of inertia 430 kg · cm^2 (incl. turntable sheet)
Motor type:	AC servo motor
Speed control method:	Speed servo via frequency detection and phase servo control
Load characteristics:	0% (stylus force 200 g, outermost groove)
Brake method:	Electronic brake
Speed deviation:	less than 0.002%

Tonearm

Type:	Static balance type tonearm with electronic damping mechanism (interchangeable tube section)
Effective length:	244 mm
Overhang:	14 mm
Tracking error:	within 2.5°
Stylus force range:	0 – 3 g (1 g per 1 rotation, 1 scale = 0.1 g)
Suitable cartridge weight range:	approx. 3 – 14 g (using the straight type arm tube, incl. screw, nuts)
Arm height adjustment range:	approx. 7 mm
Output cables:	Low capacitance type
Arm lifter:	Servo control via the angular control motor (Cueing device)

General

Power supply:	50 Hz/60 Hz compatible. The rated voltage is indicated on the rating label at the rear of cabinet.
Power consumption:	10 W
Dimensions:	490 x 219 x 410 mm (W x H x D) 19.3 x 8.6 x 16.1 in. (dust cover closed)
Weight:	15 kg 33 lb

*** For product improvement purposes, the above specifications are subject to change without notice.**