DENON

SERVO-CONTROLLED DIRECT DRIVE TURNTABLE SYSTEM

DP-67L/DP-72L

OPERATING INSTRUCTIONS
MODE D'EMPLOI
BEDIENUNGSANLEITUNG



Please read this instruction manual carefully. It explains the correct operation of your new turntable ensure optimum performance and many years of trouble-free listening pleasure. Please keep this manual handy for future reference.

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

1. Turntable mat 1
2. Turntable platter 1
3. Dust cover 1
4. Weight rings 4
5. Straight type arm tube 1
6. S-type arm tube 1
7. Accessory shell 1
8. Screw driver 1
9. 45 rpm record adaptor 1

Prière de lire attentivement cette bróchure. En effet, elle explique le mode d'emploi à suivre pour que cette table de lecture puisse délivrer son rendement optimal afin que le plaisir d'écoute soit maximum. Nous conseillons de le laisser à proximité de l'appareil afin d'y trouver la réponse à d'éventuels problèmes ultérieurs.

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Commencer par vérifier si les pièces suivante sont bien présents dans l'emballage:

1. Tapis de plateau 1
2. Pleateau 1
3. Capot anti-poussière 1
4. Contrepois 4
5. Tube de bras de lecture rectiligne 1
6. Tube de bras de lecture en S 1
7. Embout de bras 1
8. Tournevis 1
9. Centreur pour disque 17 cm 1

FEATURES

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-67L's/DP-72L's arm and results in record reproduction with outstanding stereo imaging characteristics and a minimum of noise or vibration.

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-67L's/DP-72L's clarity and stable stereo imaging.

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.

Excellent rotational characteristics
The DP-67L's/DP-72L's high performance AC servo motor; magnetic record head speed detection system; quartz lock, bi-directional servo result in phenomenal performance specifications: 0.008% wrms (rotation system) wow and flutter; 82dB (DIN-B) S/N ratio and rotational accuracy of 0.002%.

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.

Beautifully finished wood cabinet
DENON's tradition of products superbly crafted from the finest materials is continued with the DP-67L/DP-72L.

Interchangeable straight and S-type arm tubes via standard 4P connectors.
Optimum cartridge matching can be achieved quickly and easily through interchangeable tonearm tubes.

BEFORE USE

Please take note of the following precautionary steps before using your new turntable.

When moving the turntable
To avoid short circuits and wire disconnections, always unplug the power supply cord and other audio connections before moving the turntable.

Before turning the power ON
Check once more to make sure that there are no improper connections and that all cords and cables are in good working order. Always switch the unit OFF before connecting or disconnecting cords or cables.

When noise interferes with the tuner
If any tuner interference occurs while the turntable is in use, it may be necessary to move the units further apart from one another.

Permanent Lubrication
The motor bearings are treated with a special oil; there is no need to oil the motor at any time.

Retain this instruction manual
After reading this manual, keep it handy for future reference.

Some illustrations may differ from the actual turntable unit.

PRECAUTIONS FOR SAFE USE

Avoid high temperatures
Avoid placing the turntable in direct sunlight or near a room heater for long periods of time. Also, place turntable at least 10cm away from the wall to
4. [illegible] for proper ventilation.
5. Tube a[illegible]

Insecticides and chemically treated rags
If insecticides, benzene or paint thinner comes into contact with the cabinet, discoloration or deformation of the base may occur. Use a soft cloth to wipe off dust; do not use chemically treated rags.

Humidity, water and dust are detrimental
When the turntable is placed in a humid or dusty environment, malfunctions may occur. As a precaution, do not place a vase or other objects containing water near the unit; water may cause short circuits, leading to fire or shock hazards.

Handle the power plug with care
Handle the power plug gently; avoid scratching it, because a damaged power plug or cord is highly dangerous. Always hold the plug, when removing the power cord from the outlet.
The rated supply voltage is shown on the rating label at the rear of the base. Always plug the unit into the specified voltage outlet. Never attempt to use different power supply voltages.

Do not insert foreign objects in the turntable
Avoid placing metallic objects, such as needles, hairpins and coins on the turntable. They may fall into the motor and cause malfunctions or electric shocks.

Never open the cabinet
Do not open the cabinet or the bottom plate; you may be exposing yourself to danger.
If malfunction occurs, pull the power plug out immediately and call your DENON dealer.

Do not place objects on or near the vents
When the vents are blocked by objects (such as cassette cases) the inside temperature will rise and may cause a malfunction.

When leaving your home
When the turntable will not be used for extended period, such as when you are away on a trip, always remove the power plug from the socket.

PARTICULARITES

Amortissement électronique (servo dynamique)
Les résonnances de basses fréquences, induites par le coefficient d'élasticité de la cellule phonolectrice et la masse utile du bras de lecture, sont amortie électroniquement en sens horizontal et vertical pour éliminer efficacement la diaphonie et la distortion d'intermodulation. Ceci permet au bras de lecture à faible de masse de déliver son meilleur rendement afin que l'image stéréo soit excellente et que le bruit et les vibrations soient les plus faibles possible.

Bras rectiligne à faible masse avec embout amorti par lamination
La résonnance de l'embout a été très nettement réduite grâce à sa configuration double. Ceci, avec la forme rectiligne du bras, garantit une excellente tenue de sillon pour que l'image stéréo soit stable et le son clair.

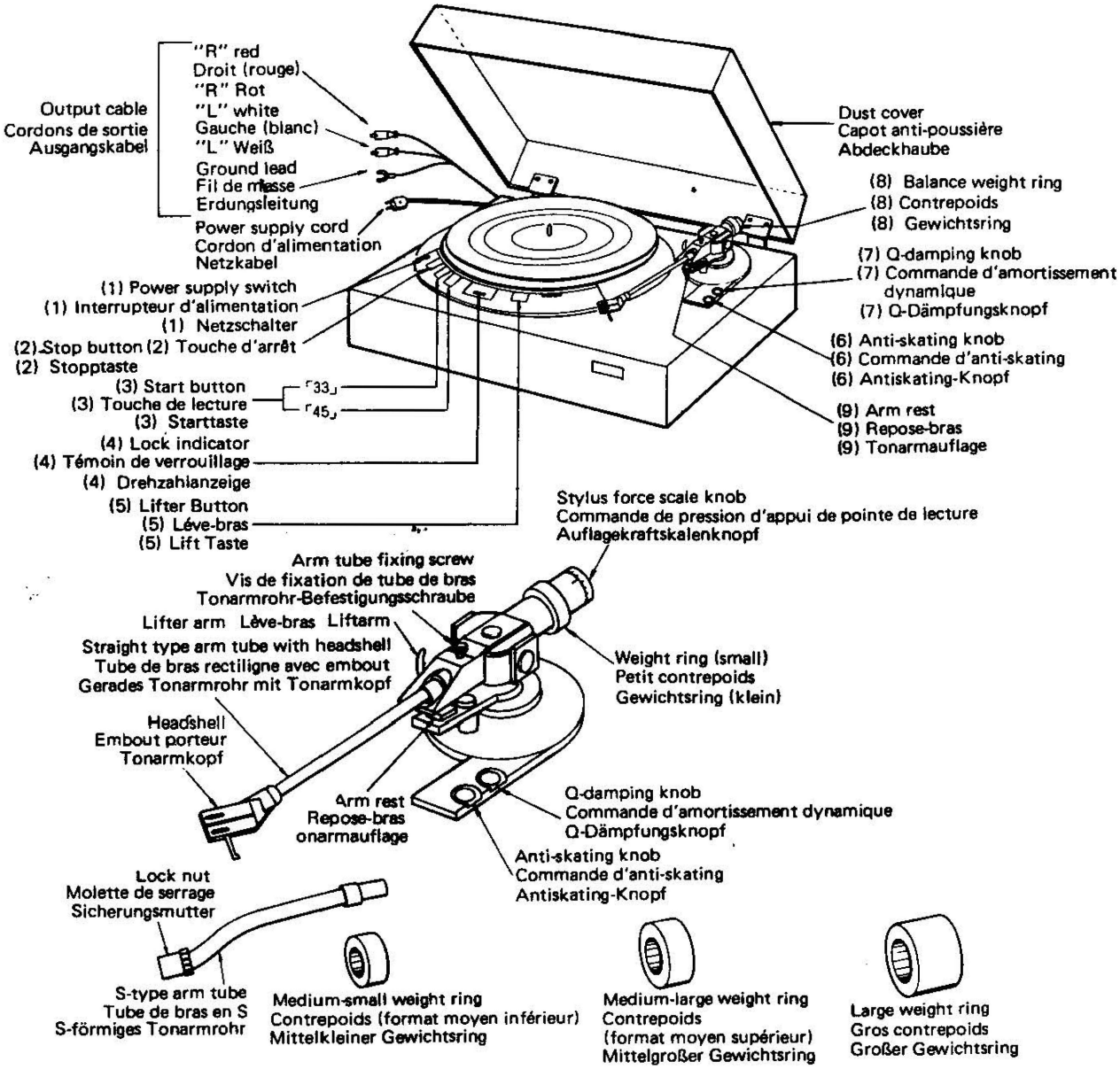
Plateau épais aux caractéristiques acoustiques fantastiques
Le plateau de très forte épaisseur réduit les vibrations induites par les sources extérieures afin que le son soit toujours clair.

Excellente régularité de rotation
Grâce au rendement optimal du servo-moteur CA, à la détection de vitesse de rotation par magnétisme (système exclusif à DENON), au verrouillage au quartz et au servo bi-directionnel, le pleurage et scintillement n'est que de 0,008%, le rappor S/B s'élève à 82 dB (normes DIN) et la précision de rotation est de 0,002 %.

Levée de bras automatique avec détection de fin de disque sans contact
Le bras se relève automatiquement à la fin du disque. Le circuit de levage automatique arrête aussi la rotation du plateau afin que la pointe de lecture ne s'use pas inutilement.

Magnifique finition bois

Interchangeabilité avec bras en S à fishe quadripolaire



PARTS NOMENCLATURE AND FUNCTIONS

1 Power switch

When the switch is pressed (ON —), the power is turned ON and the stop button will light. When the switch is pressed again (OFF ▬), the power is turned OFF and the lamp is turned OFF. If the power switch is turned ON (—) while the arm lifter is lowered, the tonearm will rise.

2 Stop button

When this button is pressed, the lifter button lamp is turned OFF. The arm lifter rises and after a short pause, the "33" or "45" button lamp is turned OFF, the stop button lamp will light and the turntable will then stop.

3 Start button 33-START-45

Press "33" for 33-1/3 rpm records, "45" for 45 rpm records.

When the start button is pressed, the button lamp will light and the turntable will start to rotate.

The lifter button will light and the arm lifter is lowered.

4 Lock indicator

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.

5 Lifter up/down (cueing) button

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

6 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.

7 Q damping knob

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

8 Weight ring

Use this ring to obtain zero balance of the tonearm.

9 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.

NOMENCLATURE ET FONCTIONS DES ORGANES

1 POWER **(Interrupteur d'alimentation)**

La table de lecture est alimentée et le témoin s'allume lorsque cet interrupteur se trouve en position appuyée (ON ▬). L'actionner de nouveau (OFF ▲) pour mettre hors tension (la lampe-témoin s'éteint). Le bras de lecture remonte si l'interrupteur est actionné (position ON) alors qu'il se trouve sur son support.

2 STOP **(Touche d'arrêt)**

Lorsque cette touche est actionnée, la lampe-témoin intégrée à la touche de lève-bras s'éteint. Le bras se relève et, après un court temps d'arrêt, la lampe-témoin "33" ou "45", selon le cas, s'éteint. La lampe-témoin de la touche d'arrêt s'allume et le plateau s'arrête de tourner.

3 33-START-45 **(Touche de lecture)**

Appuyer sur "33" pour écouter un disque de 33-1/3 tr/mn et sur "45" pour un disque 45 tr/mn. Lorsque cette touche est actionnée, la lampe-témoin qui y est intégrée s'allume et le plateau commence à tourner. Le témoin de lève-bras s'allume et le bras est abaissé.

4 Témoin de verrouillage

Le témoin de verrouillage s'allume dès que le plateau tourne à la vitesse verrouillée en phase spécifiée. Lors des transitions telles que pendant la montée à la vitesse nominale en début de lecture ou avant que le plateau ne se soit arrêté, ce témoin clignote.
Il s'éteint dès que le plateau ne tourne plus.

5 LIFTER **(Touche de lève-bras)**

Le bras de lecture est levé ou abaissé pour chaque pression sur cette touche. La lampe-témoin qui y est intégrée s'allume.

6 Commande d'anti-skating **(compensation de la force centripète)**

Lorsqu'un disque tourne sur le plateau, la force centripète tend à tirer le bras de lecture vers le centre. Cette commande sert à compenser la force centripète.

7 Q-DAMPING **(Commande d'amortissement)**

Pour que la valeur d'amortissement soit optimale, amener cette commande sur la même graduation que celle de force d'appui de pointe de lecture.

8 Contrepoids

Sert à l'équilibrage horizontal du bras de lecture.

9 Repose-bras

Pour débloquer le bras de lecture, il suffit de tenir l'ergot de l'embout et de le pousser vers la gauche. Pour verrouiller, agir en sens opposé.

Nomenklatur und Funktionen

1 Netzschalter **(POWER)**

Durch Drücken dieses Schalters (ON ▬) wird der Strom eingeschaltet, und die Stopptaste leuchtet. Wird der Schalter erneut gedrückt (OFF ▲), ist das Gerät abgeschaltet, und die Lampe geht aus. Wenn der Netzschalter eingeschaltet wird (▬), während der Tonarmlift abgesenkt ist, steigt er.

ASSEMBLY

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.

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.

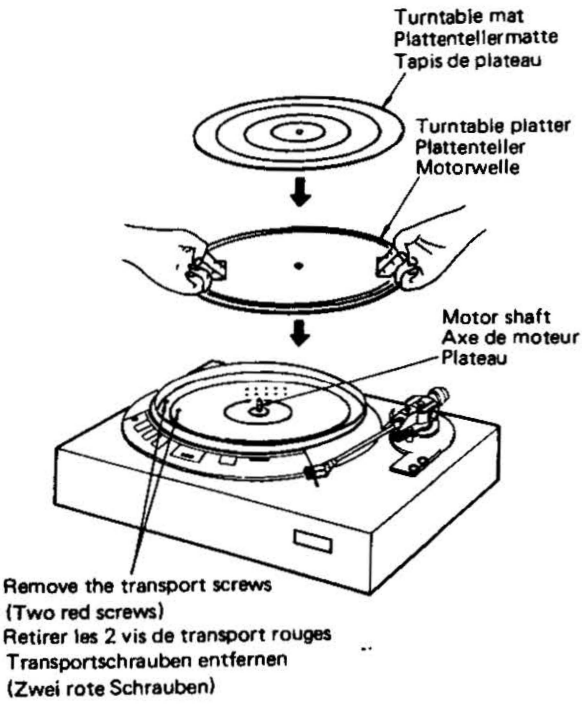


Fig. 1
Abb. 1

- **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-67 straight type arm tubes. The tube (black finish) of the PCL-67 is made of HT pipe, a heat tempered special light alloy, which has excellent acoustic properties. (Contact your DENON dealer for ordering information.)

(2) S-type arm tube

Use the S-type 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-type 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. 4 – 15 g (incl. screws, nuts)
S-type arm tube	Approx. 11 – 20 g (incl. headshell, screws, spacer, nuts)

Chart 1

- **Tonearm assembly**

Straight type arm tube

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.

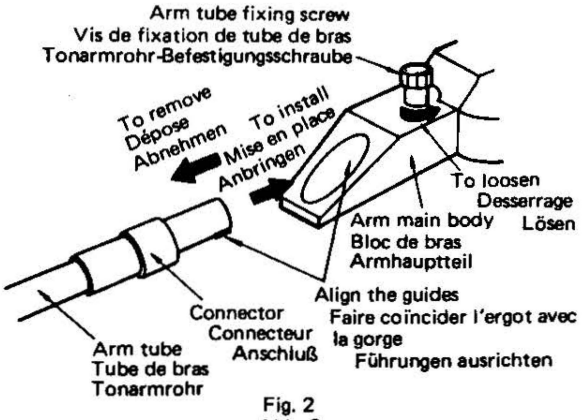


Fig. 2
Abb. 2

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, first loosely fix the screws so that some movement is possible. Adjust the position of the cartridge so that the stylus tip is located 50mm from the end of the headshell, as shown in Fig. 3.
Next, adjust the cartridge so that it is parallel (Fig. 4) and vertical (Fig. 5) to the headshell. Tighten the screws further to secure the cartridge to the headshell.

Note: No deterioration in performance will occur even if the stylus position is shifted 1mm or so during these adjustments.

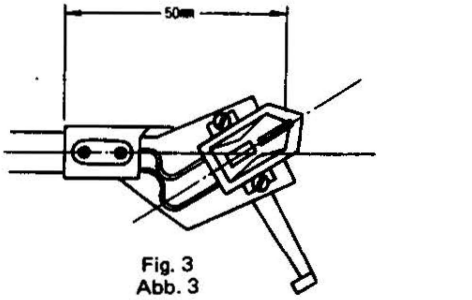


Fig. 3
Abb. 3

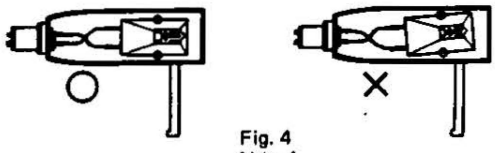


Fig. 4
Abb. 4

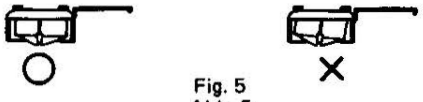


Fig. 5
Abb. 5

(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.

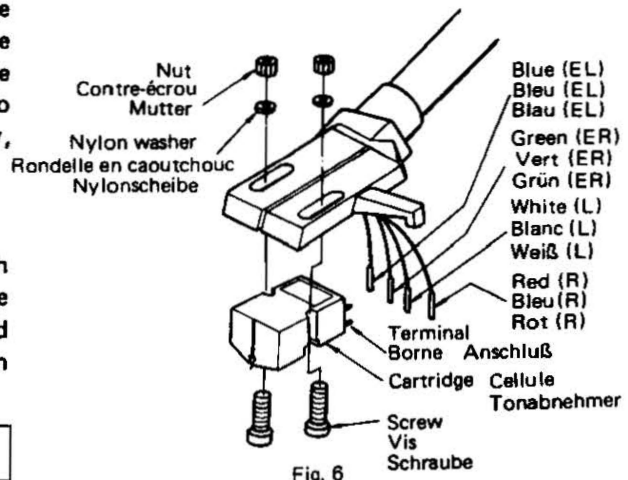


Fig. 6
Abb. 6

3. Weight ring installation

(1) Four 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	S-type arm tube
Small	Approx. 4 - 6 g (incl. screws, nuts)	
Medium-small	Approx. 6 - 10 g (incl. screws, nuts)	
Medium-large	Approx. 10 - 15 g (incl. screws, nuts)	Approx. 11 - 15 g (incl. headshell, screws, spacer, nuts)
Large		Approx. 15 - 20 g (incl. headshell, screws, spacer, nuts)

Chart 2

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.

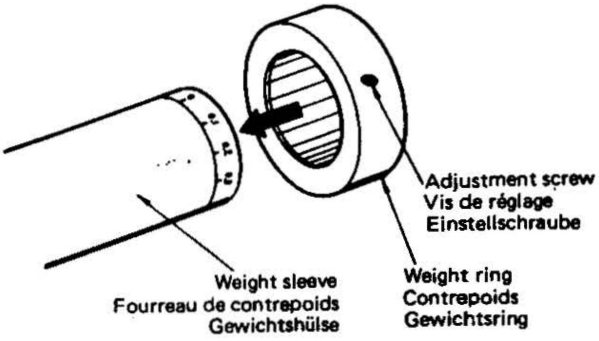


Fig. 7
Abb. 7

S-type arm tube

1. Attaching and detaching the arm tube

Refer to the page on attaching and detaching the straight type arm tube.

2. Headshell and cartridge installation

When installing the cartridge onto the headshell, adjust the position of the cartridge so that the stylus tip is positioned 50mm from the headshell neck (including the rubber washer), as shown in Fig. 8. Next, adjust the cartridge so that it is parallel and vertical to the headshell and tighten the screws to secure the cartridge.

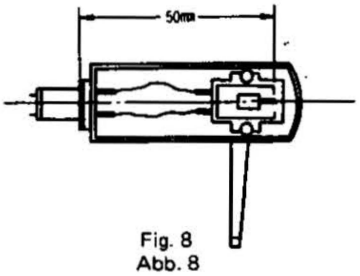


Fig. 8
Abb. 8

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.

ADJUSTMENTS

- **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. 13) using the furnished screwdriver and adjust the tonearm main body height until the tonearm 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 operating properly. In such cases, loosen the arm lifter height fixing screw, as shown in Fig. 14. 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 – 1.0mm when the lifter is lowered and the stylus is touching the record.

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

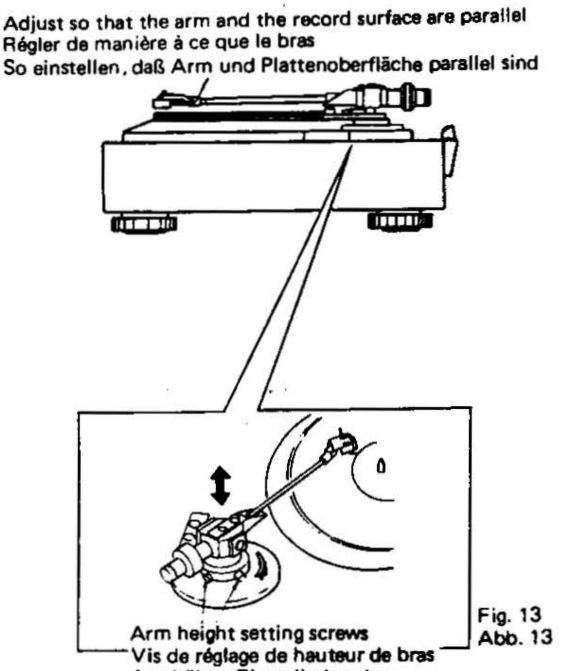


Fig. 13
Abb. 13

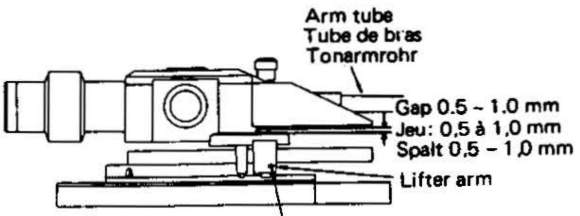


Fig. 14
Abb. 14

3. Attaching and detaching the headshell

(1) Align the guide pin of the headshell connector to the slit at the end of the tonearm and insert, as shown in Fig. 9.

(2) Secure the headshell to the arm securely by tightening the lock nut in the direction of the arrow until it stops, as shown in Fig. 9. When tightening the lock nut, avoid applying excess force to the arm pivots.

(3) When detaching the headshell, rotate the lock nut in the reverse direction of the arrow and pull out gently.

(4) Weight ring installation
Refer to the page on weight ring installation for straight type arm tube balance weight installation procedures. (Chart 2)

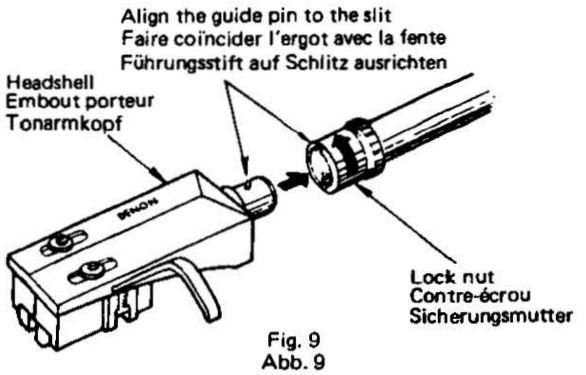


Fig. 9
Abb. 9

4. Weight ring installation

Refer to the page on weight ring installation for straight type arm tube balance weight installation procedures. (Chart 2)

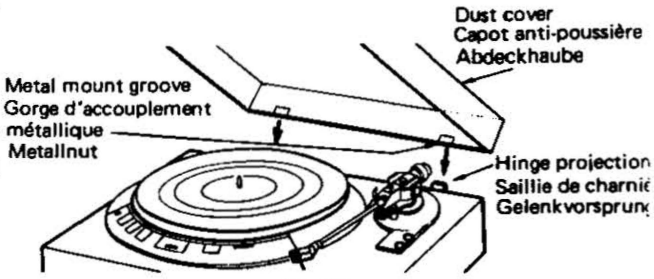


Fig. 10
Abb. 10

- **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. 10. 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.

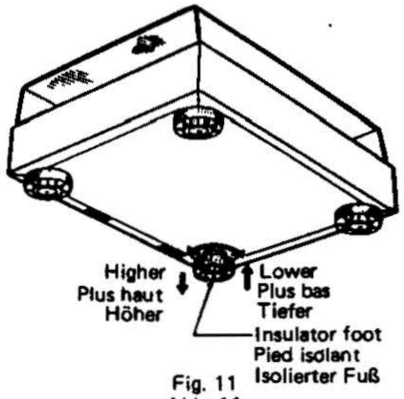


Fig. 11
Abb. 11

- **Insulator feet height adjustment**

The height of each foot can be adjusted by rotating it by hand. (Fig. 11)
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.

CONNECTIONS

Make sure to turn OFF the power switch of the amplifier and make the connections, as shown in Fig. 12.

(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

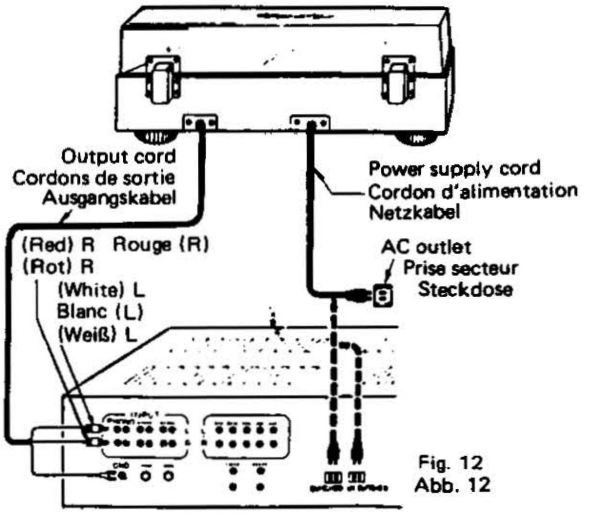


Fig. 12
Abb. 12

- **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.

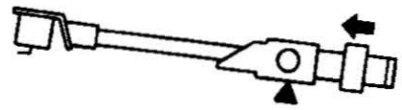
Note: When using cartridges with removable stylus covers, take off the stylus cover before making adjustments.

(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. 16 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. 15)

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.

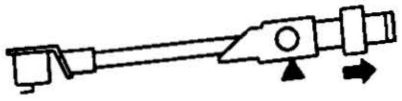
(3) Rotate the stylus force scale knob in the direction of the arrow in Fig. 16, setting the reference line on the arm to the level corresponding to the optimum stylus force of the cartridge. One full rotation of the stylus force scale is equal to 1g. Its limit is three rotations or 3g of stylus force. For example, to set the stylus force to 2.5g, rotate the stylus force scale twice and one-half turn move to bring 0.5 to the reference line.



Slide the weight ring in the direction of the arrow
Faire coulisser le contrepoids dans le sens de la flèche
Gewichtsring in Pfeilrichtung schieben



Horizontally balanced condition
Bon équilibre horizontal
Horizontal ausbalanciert



Slide the weight ring in the direction of the arrow
Faire coulisser le contrepoids dans le sens de la flèche
Gewichtsring in Pfeilrichtung schieben

Fig. 15
Abb. 15

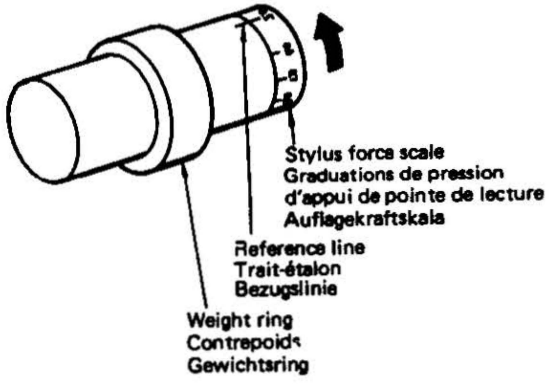


Fig. 16
Abb. 16

- **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. 17 shows the anti-skating position when the stylus force is 1.5g.

• **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.

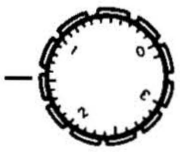


Fig. 17
Abb. 17

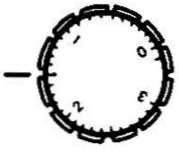


Fig. 18
Abb. 18

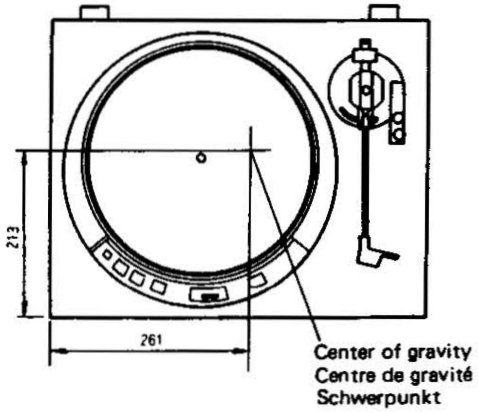
HOW TO PLAY

1. To start play

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

(2) 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: When lowering the stylus tip onto the record by hand without using the cueing device, first press the start button.



2. Cue starting (standby start)

(1) Using the lifter (cueing) botton, 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 STOP button. When the arm lifter rises and the stylus tip rises from the record surface, after a slight pause, the stop button lamp will light and the turntable will stop.

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 15.
- Is the arm tube inserted properly? . . . . . Refer to Fig. 2 on page 13.
- Are the output cables properly connected to the amplifier? . . Refer to Fig. 12 on page 17.
- 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. 12 on page 17.
- Is the headshell secured properly with the lock nut? . . . . . Refer to Fig. 9 on page 17.

Stylus skips

- Is the stylus force set to the correct setting? . . . . . Refer to page 21.

SYMPTOMES SOUVENT PRIS POUR DES PANNES

Avant de conclure que la table de lecture est en panne, prière de commencer par vérifier les points suivants.

Absence de son

- La cellule est-elle bien branchée sur l'embout ? . . . . . Voir la fig. 6 de page 15
- Le tube de bras a-t-il été bien monté ? . . . . . Voir la fig. 2 de la page 13
- Les cordons de sortie sont-il bien branchés sur l'amplificateur ? . . . . . Voir la fig. 12 de la page 17
- Les commandes de l'amplificateur ont-elles été convenablement manipulées ? . . . . . Se reporter au mode d'emploi de l'amplificateur

Bourdonnement

- Le fil de masse est-il bien raccordé à l'amplificateur? . . . . . Voir la fig. 12 de la page 17
- La molette de fixation d'embout est-elle bien serrée? . . . . . Voir la fig. 9 de la page 17

La pinte de lecture saute

- La pression d'appui est-elle bien réglée ? . . . . . Voir la page 22

Störungsbeseitigung

Gehen Sie bitte im Störungsfall zuerst die folgende Checkliste durch, bevor sie den Kundendienst verständigen.

Kein Ton

- Sind Tonabnehmer und Tonarmkopf richtig angeschlossen? . . . . . Siehe Abb. 6, Seite 15
- Ist das Tonarmrohr richtig eingesetzt? . . . . . Siehe Abb. 2, Seite 13
- Sind die Ausgangskabel richtig an den Verstärker angeschlossen? . . . . . Siehe Abb. 12, Seite 17
- Sind alle Verstärkerregler richtig eingestellt? . . . Siehe Bedienungsanleitung für Verstärker.

Brummen

- Ist die Erdungsleitung an den Verstärker angeschlossen? . . . . . Siehe Abb. 12, Seite 17
- Ist der Tonarmkopf richtig mit der Sicherungsmutter befestigt? . . . . Siehe Abb. 9, Seite 17

Nadel springt

- Ist die Auflagekraft richtig eingestellt? . . . . . Siehe Seite 22

- Is the arm lifter touching the arm? . . . . . Refer to Fig. 14 on page 19.
- 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. 14 on page 19.
- 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 21.
- Is there a gap between the arm lifter and the arm tube? . . . . . Refer to Fig. 14 on page 19.

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. 12 on page 17.

- Le lève-bras touche-t-il le bras? . . . . . Voir la fig. 14 de la page 19
- Le disque n'est-il par rayé ou gondolé? . . . . . Changer de disque
- La pointe de lecture n'est-elle pas poussiéreuse? . . . . . Nettoyer la pointe

Le bras s'arrête à mi-chemin

- Le hauteur du lève-bras est-elle bien réglée? . . . . . Voir la fig. 14 de la page 19
- Le disque n'est-il pas rayé? . . . . . Changer de disque
- Le bras ne rencontre-t-il pas d'obstacle . . . . . Vérifier s'il n'y a pas de corps étrangers

La pointe de lecture ne descend pas sur le disque

- La pression d'appui est-elle bien réglée? . . . . . Voir la page 22
- N'y a-t-il pas de jeu entre le lève-bras et le tube de bras? . . . . . Voir la fig. 14 de la page 19

Volume trop faible

- Les branchements avec l'amplificateur sont-ils bons? Le réglace convient-il à la cellule employée (tension de sortie)? . . . . . Voir la fig. 12 de la page 17

- Berührt der Tonarmlift den Arm? . . . . . Siehe Abb. 14, Seite 19
- Hat die Platte Kratzer oder ist sie verzogen? . . . . . Die platte wechseln.
- Ist die Abtastnadel stark verstaubt? . . . . . Die Abtastnadel reinigen.

Arm stoppt bei halber Vorwärtsbewegung

- Ist die Tonarmlifthöhe richtig eingestellt? . . . . . Siehe Abb. 14, Seite 19
- Hat die Platte Kratzer? . . . . . Platte wechseln.
- Stößt irgendetwas gegen den Arm? . . . . . Auf Fremdkörper um den Tonarm überprüfen.

Nadel senkt sich nicht auf die Platte

- Ist die Auflagekraft richtig eingestellt? . . . . . Siehe Seite 22
- Ist ein Spalt zwischen Tonarmlift und Tonarmrohr? . . . . . Siehe Abb. 14, Seite 19

Wiedergabe zu leise

- Stimmen die Anschlüsse an den Verstärker? Ist der Verstärker auf den Tonabnehmertyp richtig eingestellt? . . . . . Siehe Abb. 12, Seite 17

SPECIFICATIONS

Turntable motor

Drive method:	Servo controlled direct drive
Speeds:	33-1/3rpm, 45rpm
Wow and flutter:	less than 0.008% wrms (servo system) less than 0.02% wrms (JIS)
S/N ratio:	more than 82dB (DIN-B)
Rise time:	Nominal speed within 1.3 seconds (at 33-1/3rpm)
Turntable platter:	Aluminum die-cast, 300mm diameter Moment of inertia 280kg · 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 200g, 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:	244mm
Overhang:	14mm
Tracking error:	within 2.5°
Stylus force range:	0 – 3g (1g per 1 rotation, 1 scale = 0.1g)
Suitable cartridge weight range:	approx. 4 – 15g (using the straight type arm tube, incl. screws, nuts) approx. 11 – 20g (using the S-type arm tube, incl. headshell, screws, nuts)
Head connector:	Standard 4P connector (S-type arm tube)
Arm height adjustment range:	approx. 6mm
Output cable:	Low capacitance type
Arm lifter:	Servo control via the angular control motor (Cueing device)

General

Power supply:	50Hz/60Hz compatible. The rated voltage is indicated on the rating label at the rear of cabinet.
Power consumption:	15W
Dimensions:	485 x 195 x 410mm (W x H x D) 19.1 x 7.7 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.

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