precision designed & engineered fidelity record playing equipment and accessories

MICRO SEIKI

BQX-500

OPERATING MANUAL

Ever since we first started devoting our talents to turntables, tonearms, cartridges and other products, we have won a reputation for reliablility as a specialist manufacturer.

Thank you for buying the DQX-500 direct drive turntable. We hope that it will satisfy your requirements for many years to come.

The DQX-500 is the result of our many years of experience in producing turntables and we think that it gives full rein both to this experience and to the basic design which we adopt for our models.

Please read through this operating manual. You will be able to assemble the parts and operate the model properly, thereby allowing you to enjoy the fullest sound from your records.

MICRO SEIKI CO., LTD.

Parts Nomenclature

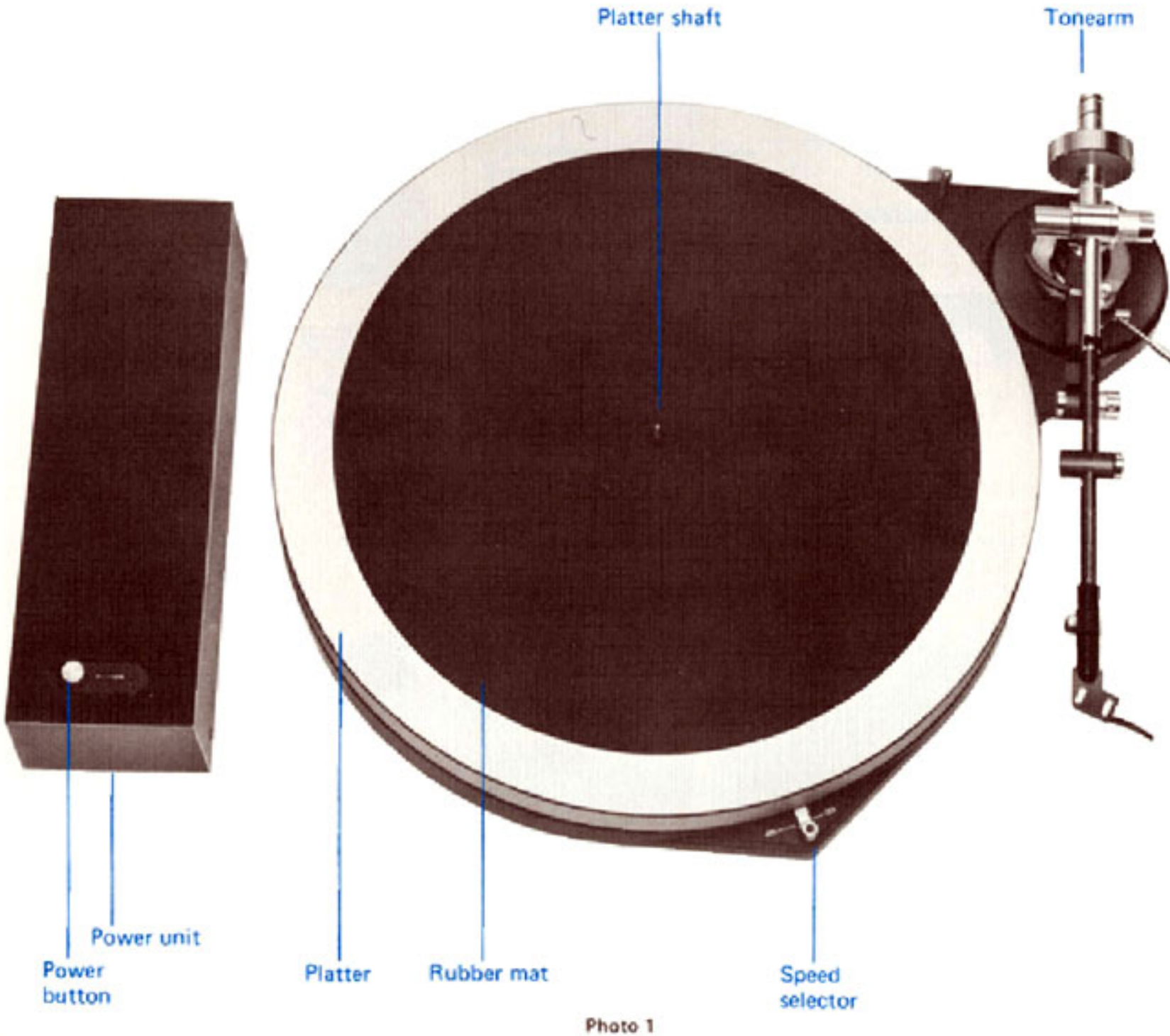


Photo 1

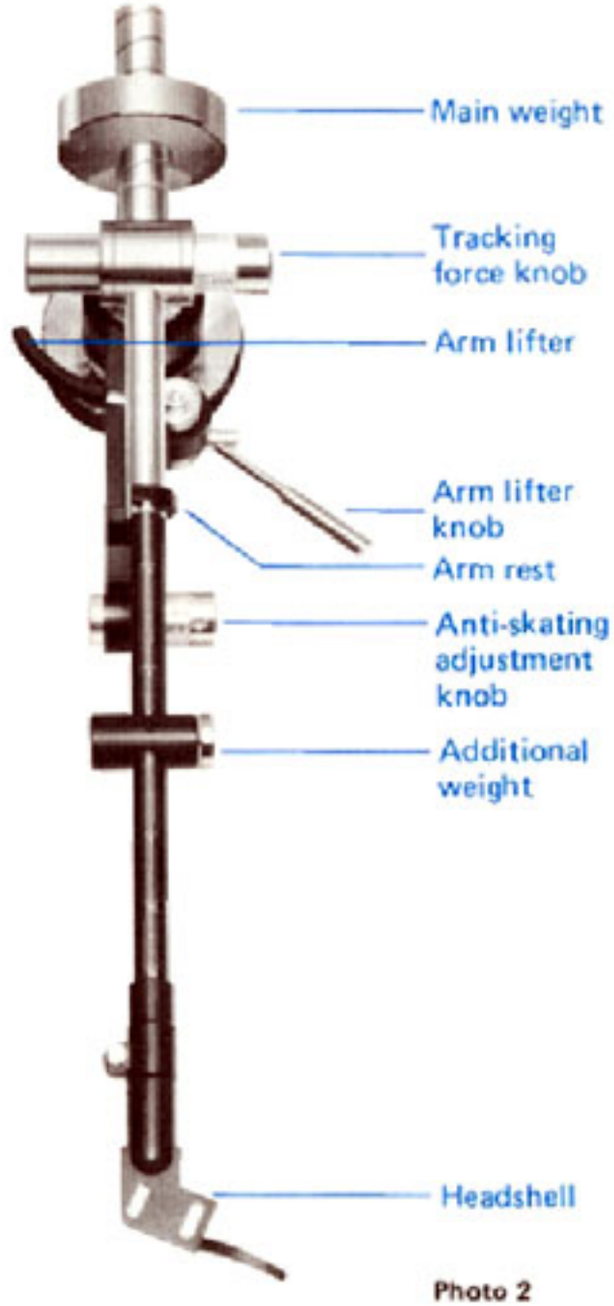
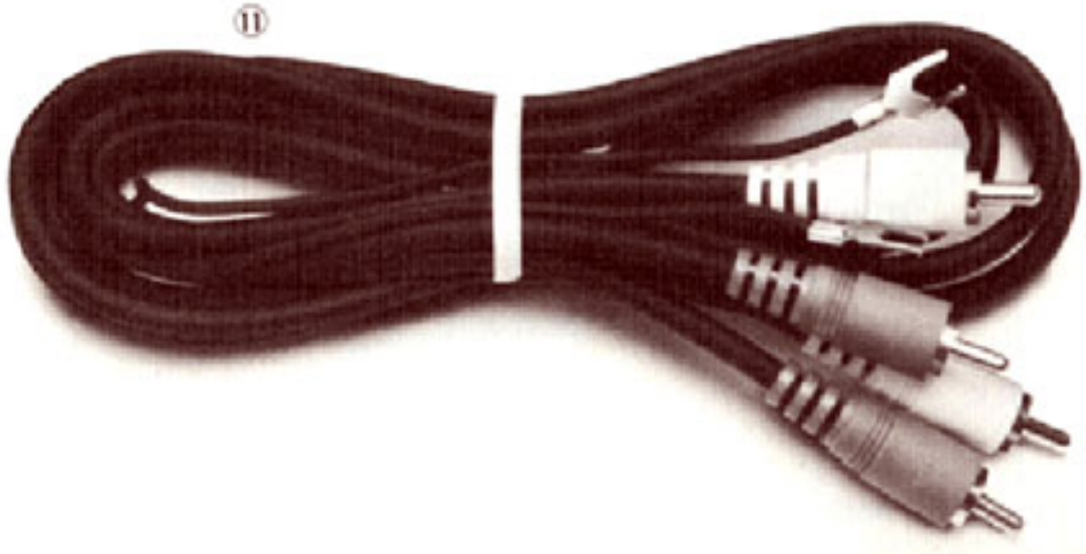


Photo 2

Warning: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

Accessory Components



Accessories

1. Platter
2. Rubber mat
3. Headshell
4. Main weight
5. Sub weight
6. Additional weight
7. Dust cover
8. Screwdriver
9. 45 rpm (EP) adapter
10. Overhang gauge
11. Output cords

Turntable & Tonearm Assembly

• Turntable assembly

Mount the platter on the center spindle and place the rubber mat on the platter.

Note: Never turn on the power unless the platter is placed on the motor spindle.

• Cartridge installation and adjustment

(1) Mounting the cartridge

The DQX-500 does not come with a cartridge. Attach the cartridge which you intend to use to the accessory headshell using a screw of the appropriate length (see Fig. 1).

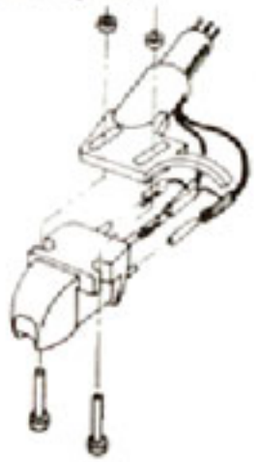


Fig. 1

(2) Connecting the leads to the cartridge

Use a pair of tweezers to connect the leads of the headshell to the cartridge. Make sure that you connect these leads properly since if you do not align their polarities correctly, no sound may be heard or you may hear hum instead. For your convenience, the leads are color-coded.

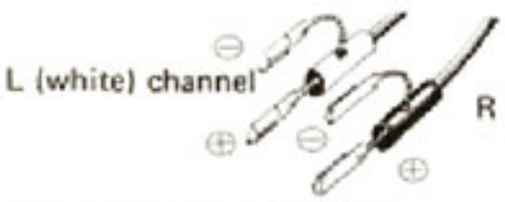


Fig. 2

(3) Gauging the overhang

The overhang is the distance from the center of the platter shaft to the stylus tip. The tonearm on the DQX-500 is designed so that the tracking error is at its minimum when the overhang is 15mm.

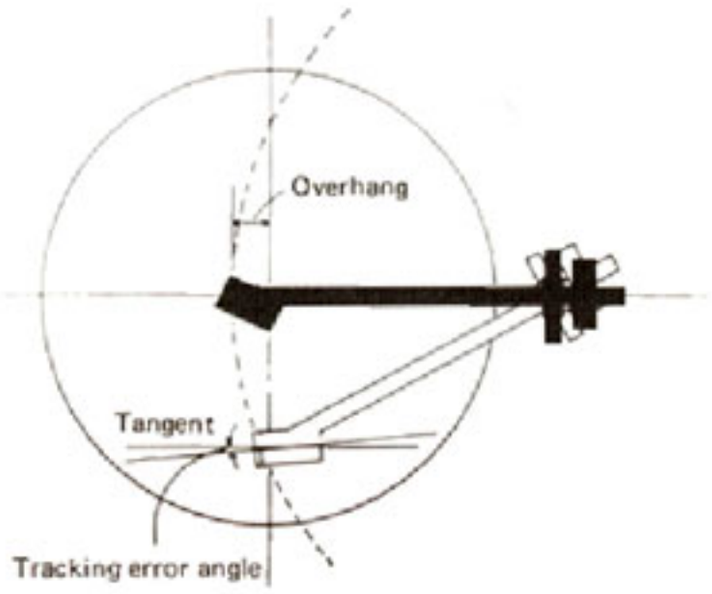


Fig. 3

As in Photo 3, set the accessory overhang gauge on the headshell, loosen the screw that secures the cartridge, move the cartridge either toward you or to the rear, and set so that the stylus tip is aligned with the center of the line on the overhang gauge.

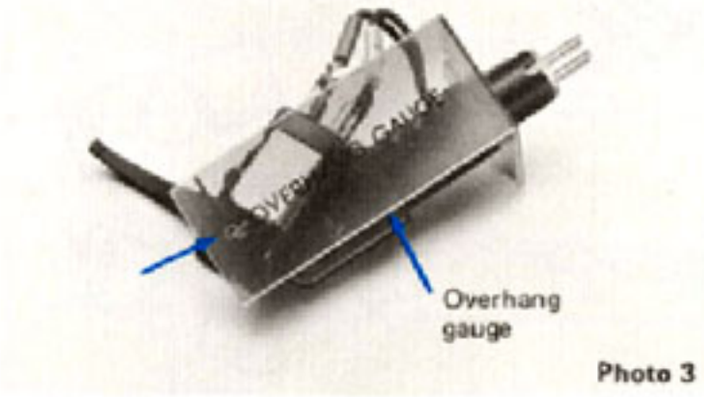


Photo 3

• Tonearm assembly

Secure the tonearm in the arm rest. Then plug the main weight onto the end of the tonearm shaft turning it in the direction shown by the arrow in Photo 4.

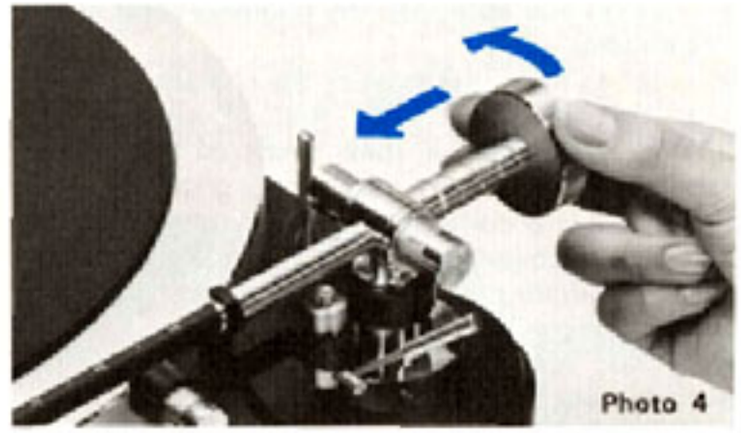


Photo 4

Now align the projection on the headshell with the cut-out in the end of the tonearm (see Fig. 4) and screw the headshell in. Secure it with the locking collar. (see Photo 5)

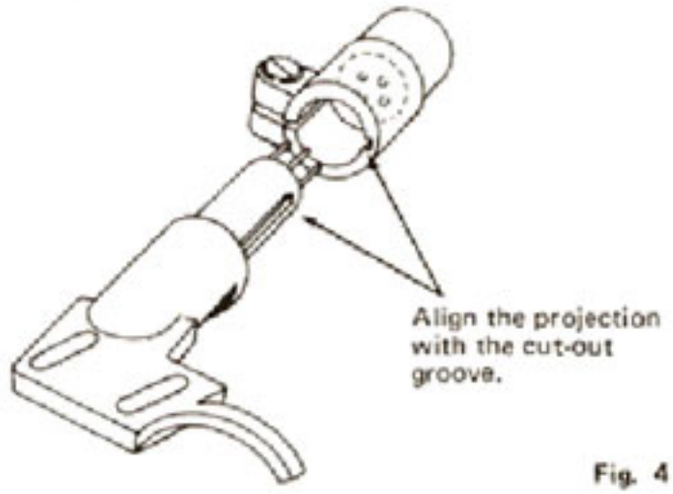


Fig. 4

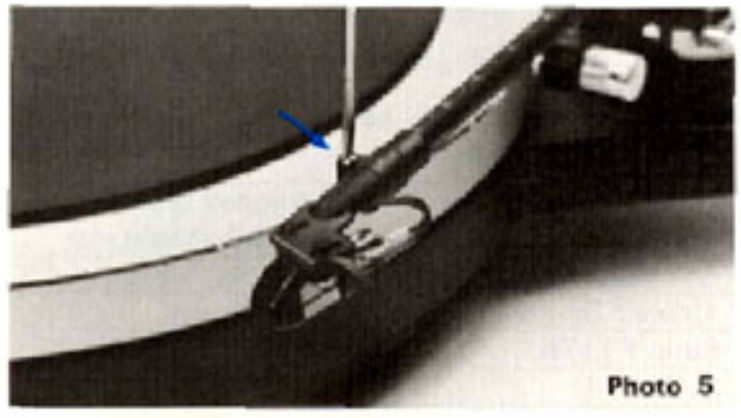


Photo 5

Tonearm Adjustment

• Varying and adjusting the effective mass of the tonearm

In order to make the most of the characteristics of your cartridge, you must first of all find out whether the effective mass (mass of the moving parts like the tonearm pipe, etc.) obtained when the cartridge is combined with the tonearm agrees with the compliance of the cartridge. For instance, if you combine a high compliance cartridge with a heavy tonearm, the resonance frequency (f_0) will be greatly reduced, the tracing capability of the cartridge will be impaired, rumble and howl will be produced, and you will not be able to get the most from your cartridge. The ideal resonance frequency is usually said to be around 10 Hz.

This particular turntable is designed so that the resonance frequency is about 10 Hz with a cartridge having a compliance ranging from medium to high (this includes virtually all moving magnet cartridges). This does not mean, however, that you cannot use a cartridge with a relatively low compliance. In cases like this, you can adjust the effective mass of the tonearm to the optimum level using the additional weight, and in this way make the most of the characteristics of your cartridge.

Compliance is indicated in the specifications of the cartridge, for instances, as 25 x 10^{-6} cm^2 dyne. The bigger the first value (in this case 25), the higher the compliance. However, the problem at present is that there is no standardization of the way in which the compliance is indicated. Usually, it is indicated as a static or dynamic value, and for further details it is a good idea to refer to the specifications given by individual cartridge manufacturers.

• Instances where it is better to make use of the additional weight

Cartridge	Recommended scale for additional weight
Ortofon MC20	9
Grace F8F	10
Satin F117E	10
JVC X1-II	10

• Using the additional weight

Loosen the setting knob on the additional weight and mount it on the tonearm pipe as indicated in the figure. Once you have set it to the optimum value, check that the additional weight is mounted horizontally and then tighten the setting knob. Always use the sub weight when you plan to use the additional weight.

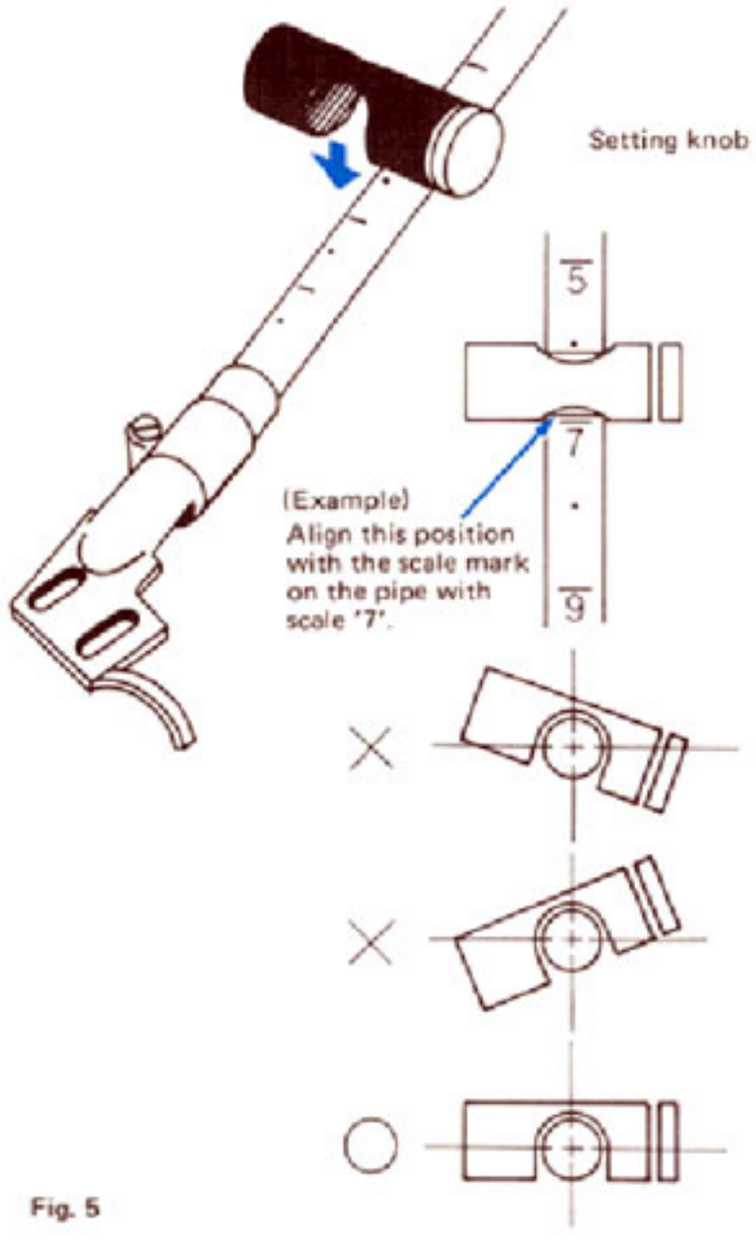


Fig. 5

• Sub weight

Always use the sub weight when you plan to make use of the additional weight in order to vary the effective mass. Set the sub weight by rotating it in the direction of the arrow until it will not go any further (see Fig. 6).

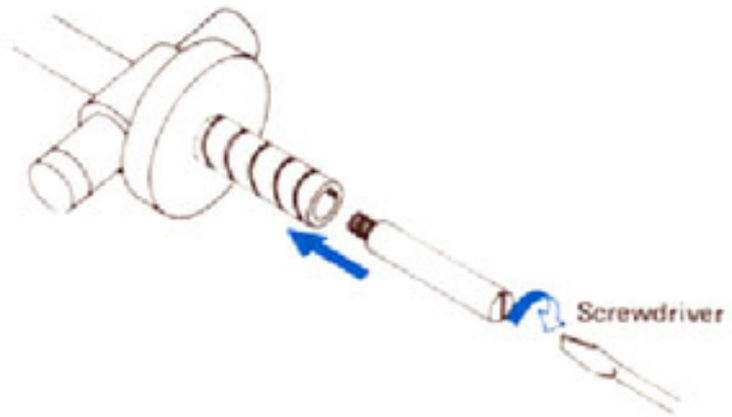


Fig. 6

- **Attaining the horizontal balance**

① Align the OFF mark on the tracking force knob to the tracking force index line (see Photo 6).

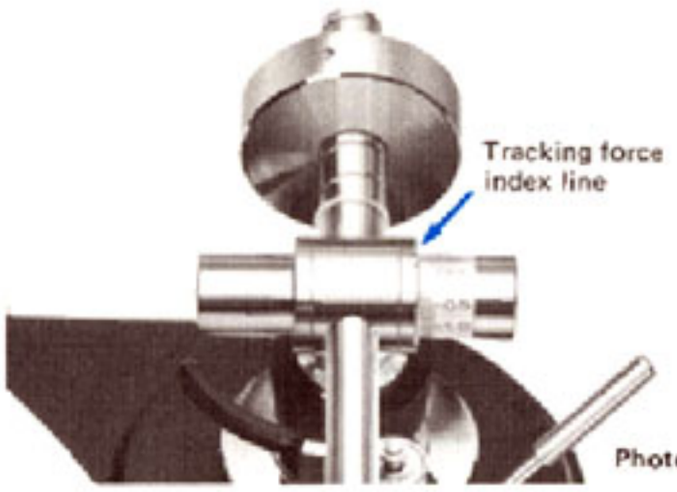


Photo 6

② Align the anti-skating adjustment knob OFF mark to the bias index line. (See Photo 7)

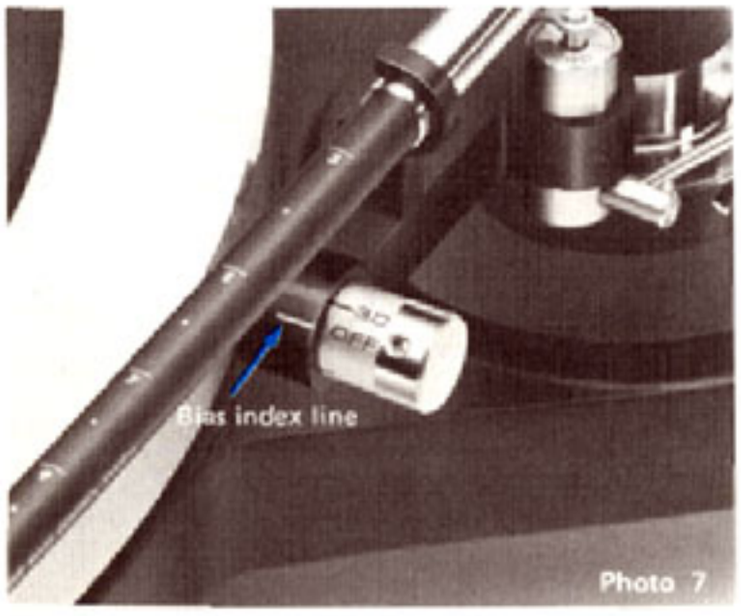


Photo 7

③ Lower the lifter lever as in Photo 8 and detach the tonearm from the arm rest.

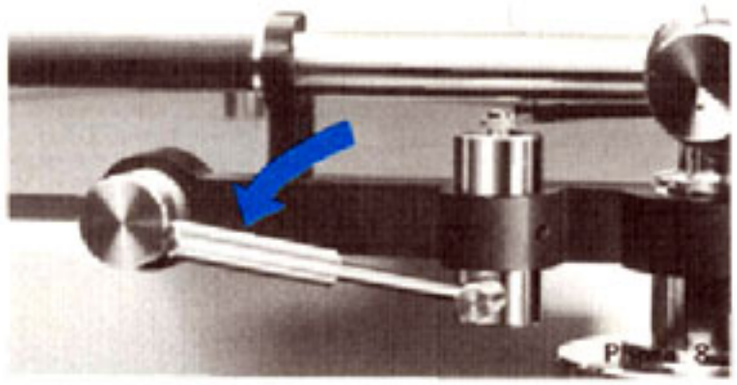


Photo 8

④ Support the headshell and the main weight lightly with your hand (see Photo 9), and then move the weight to the fore or to the rear, all the while rotating it, and attain the horizontal balance.

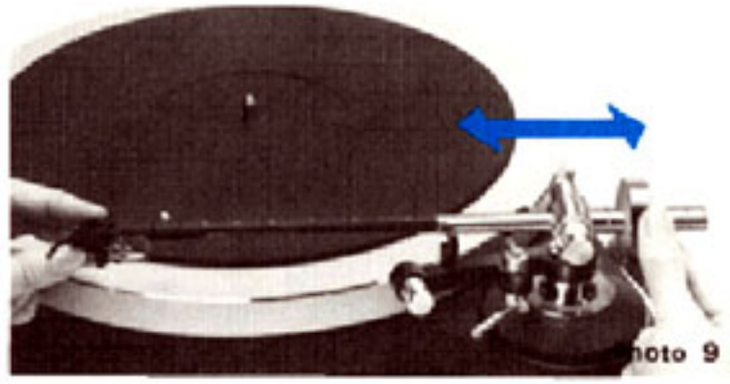


Photo 9

Horizontal balance is achieved when the weights of the main weight and the headshell are balanced, when the tonearm is allowed to float free.

Fig. 7

Tonearm is properly balanced.

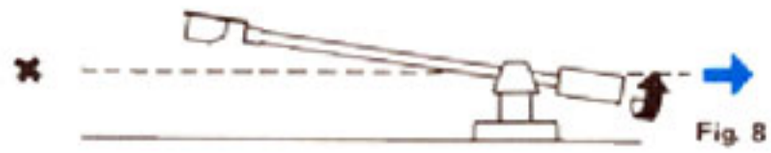


Fig. 8

Main weight is too heavy.
Rotate the main weight in the direction indicated by the arrow and slide it toward the tonearm stand to attain the balance shown in Fig. 7.

Fig. 9

Cartridge is too heavy.
Rotate the main weight in the direction indicated by the arrow and slide it away from the tonearm stand to attain the balance shown in Fig. 7.

Tonearm Adjustment

• Applying the tracking force

Rotate the tracking force knob in the direction of the arrow and align that value which corresponds optimally to the tracking force of the cartridge to the tracking force index line. If the correct tracking force of your cartridge is 1.5 g, rotate the knob until '1.5' lies opposite the index line.

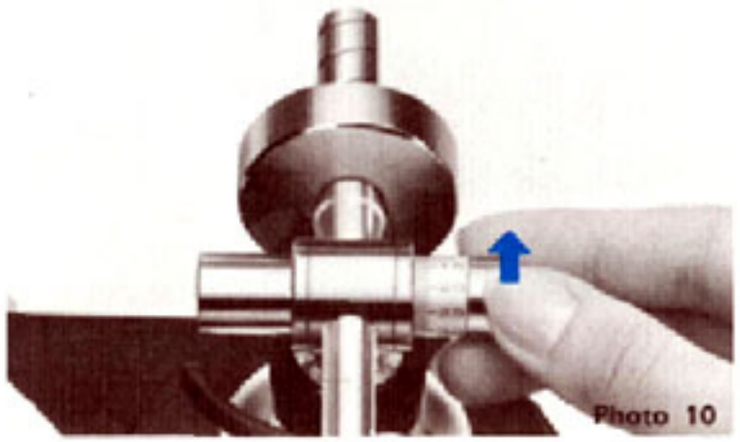


Photo 10

• Adjusting the anti-skating device

The anti-skating device serves to cancel out the force that pulls the tonearm to the inside of a record when the stylus is tracing the grooves, and it makes sure that an even tracking force is applied at all times to the left and right sides of the sound grooves on the record.

The DQX-500 features a system which cancels out this skating force in accordance with the tracking force, and so all you have to do is rotate the anti-skating adjustment knob until it shows the same value as the tracking force of your cartridge. Now align it with the bias index mark.

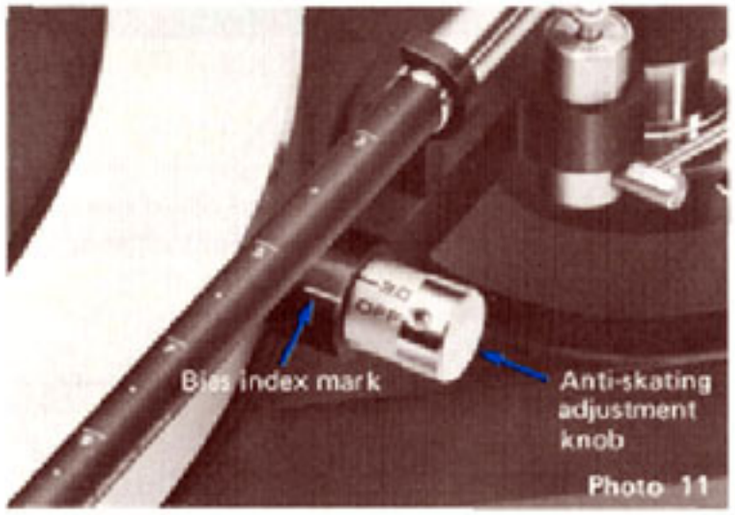


Photo 11

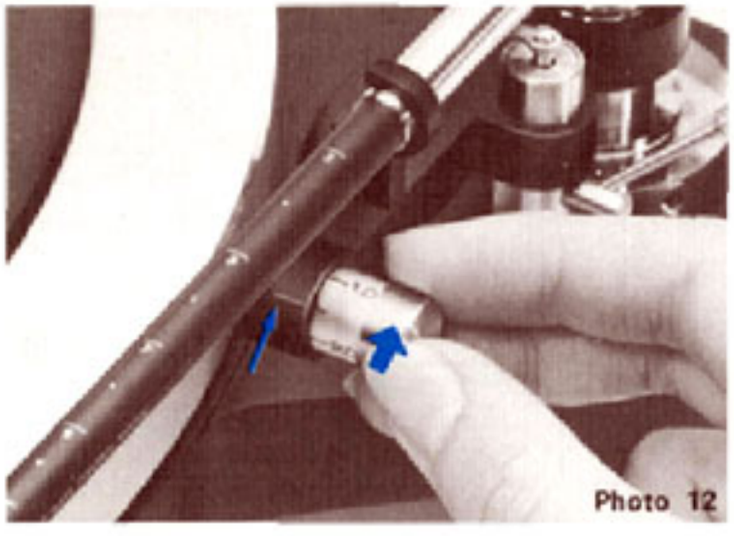


Photo 12

• Adjusting the tonearm height

You must now adjust the height of the tonearm in accordance with the height of the cartridge so that it is parallel to the surface of the record.

First place a record on the platter, bring the tonearm over to the surface of the record and lower the arm lifter. View the turntable from the right, and loosen the height adjustment screw. Adjust the screw so that the tonearm is made parallel with the surface of the record. (See Photo 13)

Note: Loosen the adjustment screw after you have deposited the tornearm on the arm rest. If you loosen it before doing so with the tonearm on the record, you may damage the stylus when the tonearm drops.

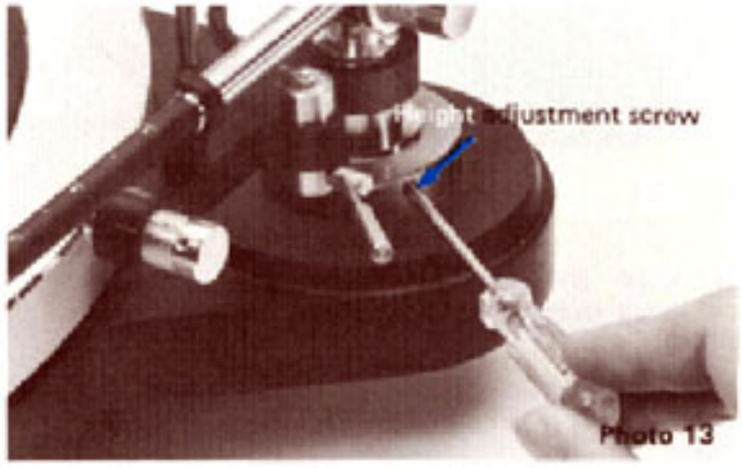


Photo 13

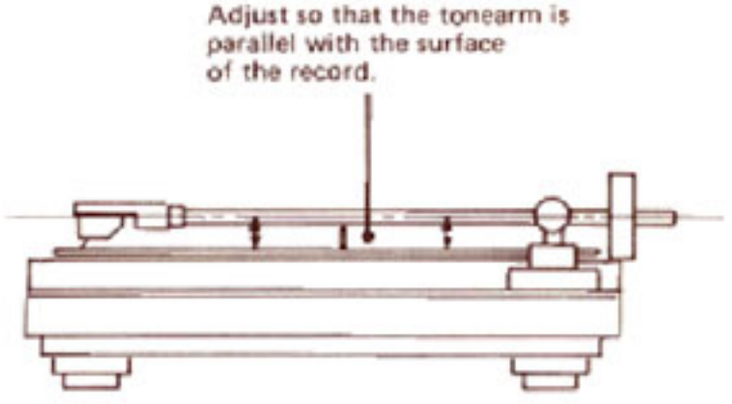


Fig. 10

Height Adjustment of the Arm Lifter

• Adjusting the operating range of the arm lifter

Raise the lifter lever. If the stylus is too close to the surface of the record or too far away when the tonearm is brought over the surface of the record, loosen the lifter height adjustment screw (see Photo 14), and adjust the height of the lifter proper so that the distance between the stylus and the surface of the record is about 1 cm.

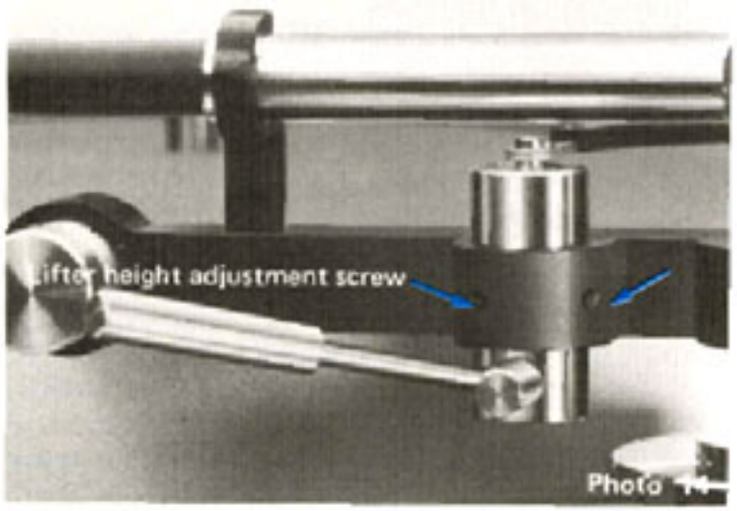


Photo 14

Dust Cover Attachment and Adjustment

• Mounting the dust cover

Align the two dust cover holes with the center shaft and the guide shaft as shown in the photo, and slide the dust cover into position.

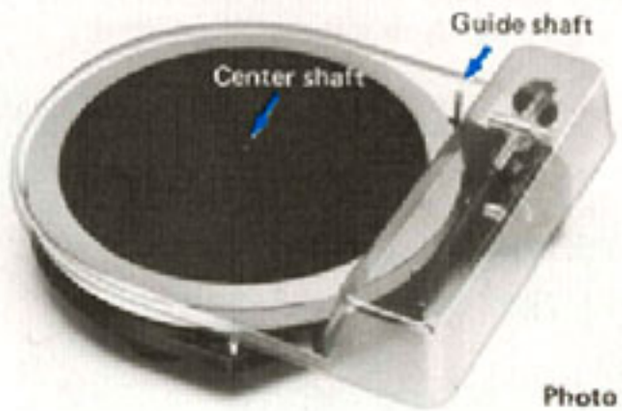


Photo 15

Connections

• Connecting the model to an amplifier or receiver

Use the output cords (see Fig. 12) to connect the output terminals on the tonearm and the PHONO (MAG) and G (ground) terminals on the amplifier or receiver.

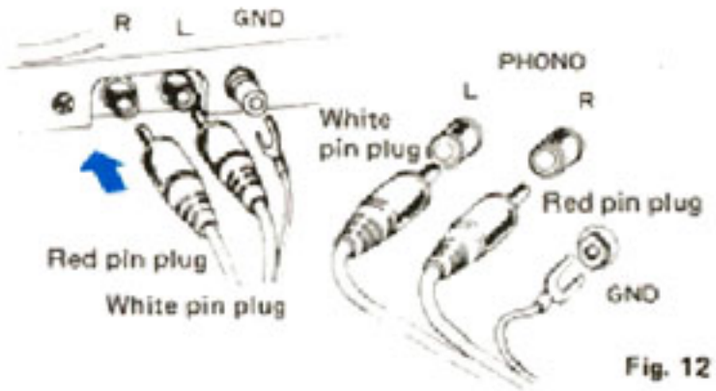


Fig. 12

• Connecting the main unit to the power unit

Connect the connector from the power unit to the main unit as show in Fig. 11.
Make absolutely sure that the power is OFF.

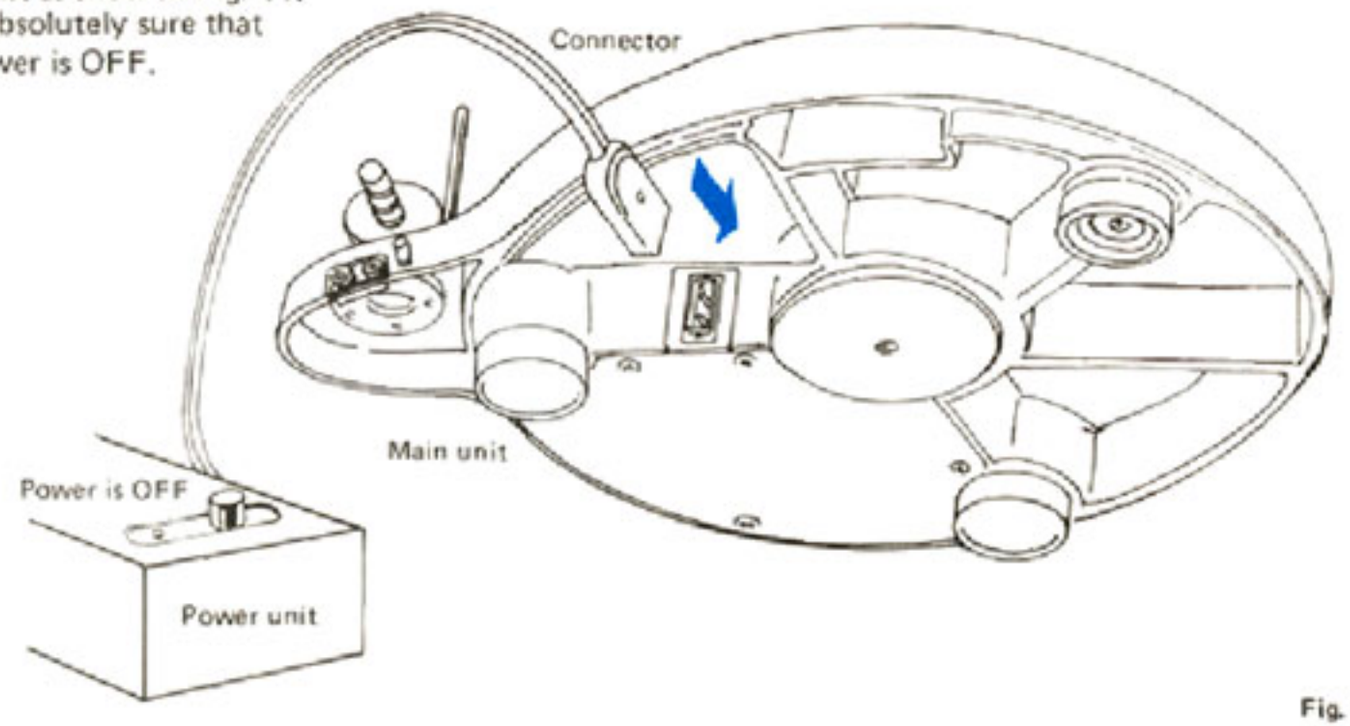


Fig. 11

Operating the turntable

• Standby lamp

The DQX-500 employs a platter with a high inertial mass and so it takes a few moments for the platter to reach the specified speed. The standby lamp comes on until the specified speed is reached, and it goes off when the platter is rotating at that speed. (See Photo 16)

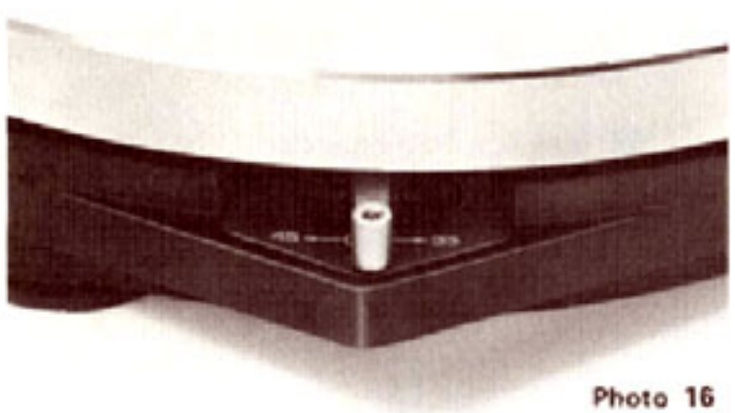


Photo 16

• Playing records

① Place the record on the platter and set the power button to ON.
② Set the speed selector in accordance with the specified speed of the record.
③ Raise the lifter lever as in Photo 17 and then bring the tonearm across to the record.

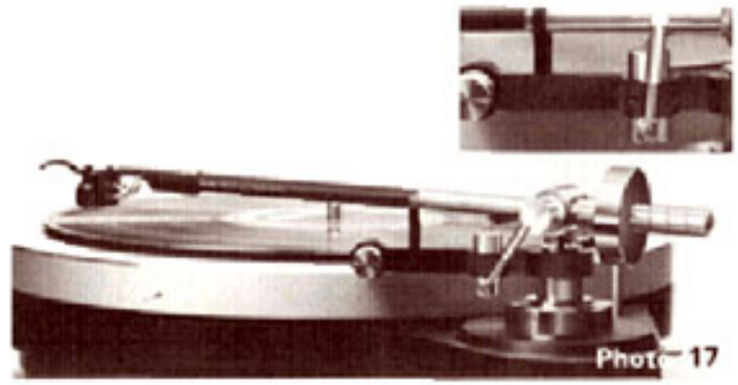


Photo 17

④ When the lifter lever is lowered, the tonearm will descend gently onto the surface of the record and play will begin. (See Photo 18)

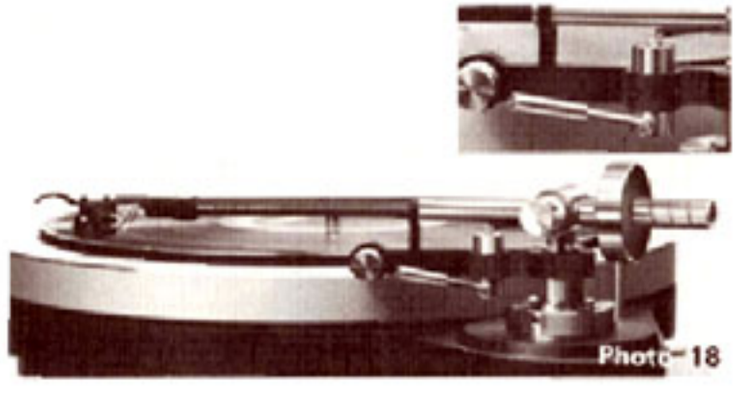


Photo 18

⑤ After the record has been played, raise the lifter lever and cause the tonearm to rise.
⑥ Bring the tonearm back to the arm rest, return the speed selector to the OFF position, and set the power button to OFF. (Even after the power has been switched off, the platter will continue to rotate for a short while due to inertia. This does not therefore indicate a failure.)

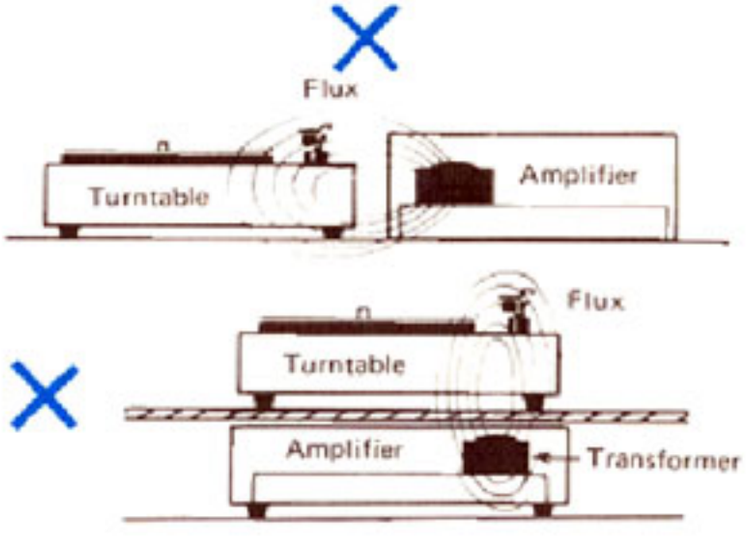
• Rotational speeds

The DQX-500 employs a quartz lock PLL servomotor. This means that there is absolutely minimal variation in the speed due to drift (both time and temperature), and that the speed deviation is of the order of less than ±0.002%. The rated speeds of 33 rpm and 45 rpm are therefore maintained with precision and there is no need to adjust the speed.

• Installing the turntable

① If you install your turntable near an amplifier or another piece of equipment using a transformer, it will be affected by the flux and hum may be generated. MC cartridges are particularly susceptible to the effects of flux and so install your amplifier as far away from the turntable as possible.
② Turntables do not take kindly to vibration and so keep your turntables as far away as possible from the front of speakers (where it will be directly exposed to sound waves), and walls, etc. Also, remember not to place it on the top of a speaker. Poor installation is often the cause of howl.
③ Do not install the turntable where it will tilt but always make sure that it is on the horizontal.

(Examples of poor installation locations)



• These Symptoms Do Not Indicate a Failure or Breakdown

Symptom	Cause	Remedy
• Platter does not rotate even when power switched on.	• No current being supplied to motor.	• Check whether current is being supplied. • Check whether power plug is firmly inserted in the power outlet.
• No sound	• Output cords not connected properly. • Leads inside headshell are not properly connected to cartridge terminals or to headshell terminals.	• Insert pin plugs of output cords securely. (See output cord connections section.) • See lead wire connections section.
• Hum	• Ground wire not connected properly. • Leads inside headshell are not properly connected to cartridge terminals or to headshell terminals. • Effect of flux from amplifier, tuner or other piece of equipment containing power transformer.	• Re-connect ground wire to ground connector. (See output cord connections section.) • See lead wire connections section. • Change installation location of turntable.
• Platter cannot be removed from shaft.	• Platter and center shaft wedged together.	• Place both hands in both holes on platter, try to lift up and knock the center shaft gently with a mallet or the wooden part of a screwdriver.
• Sound of record distorted.	• Cartridge tracking force is not correct. • Dust adhering to stylus.	• Re-check the adjustment of the tonearm's horizontal balance and tracking force. (See adjusting the tonearm section.)
• Cartridge clings to surface of record even when arm lifter is set to UP.	• Incorrect arm lifter height adjustment.	• Adjust the height or the arm lifter. (See adjusting the height of the arm lifter section.)

SPECIFICATIONS

• Turntable

- Drive system. . . .Direct drive
- Motor . . . . . .Quartz locked PLL DC servo motor
- Speeds. . . . . .33-1/3, 45 rpm
- Turntable platter. . . . . .35 cm (13-3/4 inch) diameter aluminum diecast platter, weighting 2.6 kg (5.72 lbs)
- Moment of inertia. . . . . .600 kg·cm^2
- Wow & flutter. . .Less than 0.02%
- S/N ratio . . . . . .More than 63 dB (JIS) 75 dB (DIN-B)
- Power . . . . . .U.S.A. & Canada 117 V, 60 Hz other areas 220–240 V, 50 Hz 5W

• Tonearm

- Type. . . . . .Dynamic balance
- Effective length. .237 mm (9-3/8 inch)
- Overhang . . . . .15 mm (19/32 inch)
- Maximum tracking error . . . . . .Less than 1.5°
- Usable cartridge weight. . . . . .4 –12 g (0.14 – 0.42 oz)
- Range of tracking force adjustment. . . . . .0 – 3 g
- Dimensions . . . .(W) 410 x (D) 350 x (H) 139 mm, 16-1/8 x 13-3/4 x 5-1/2 inch
- Weight. . . . . .7.0 kg (15.4 lbs)

* Design and specifications are subject to modification without notice.

MICRO SEIKI CO., LTD. TOKYO JAPAN

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