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Technics

QUARTZ

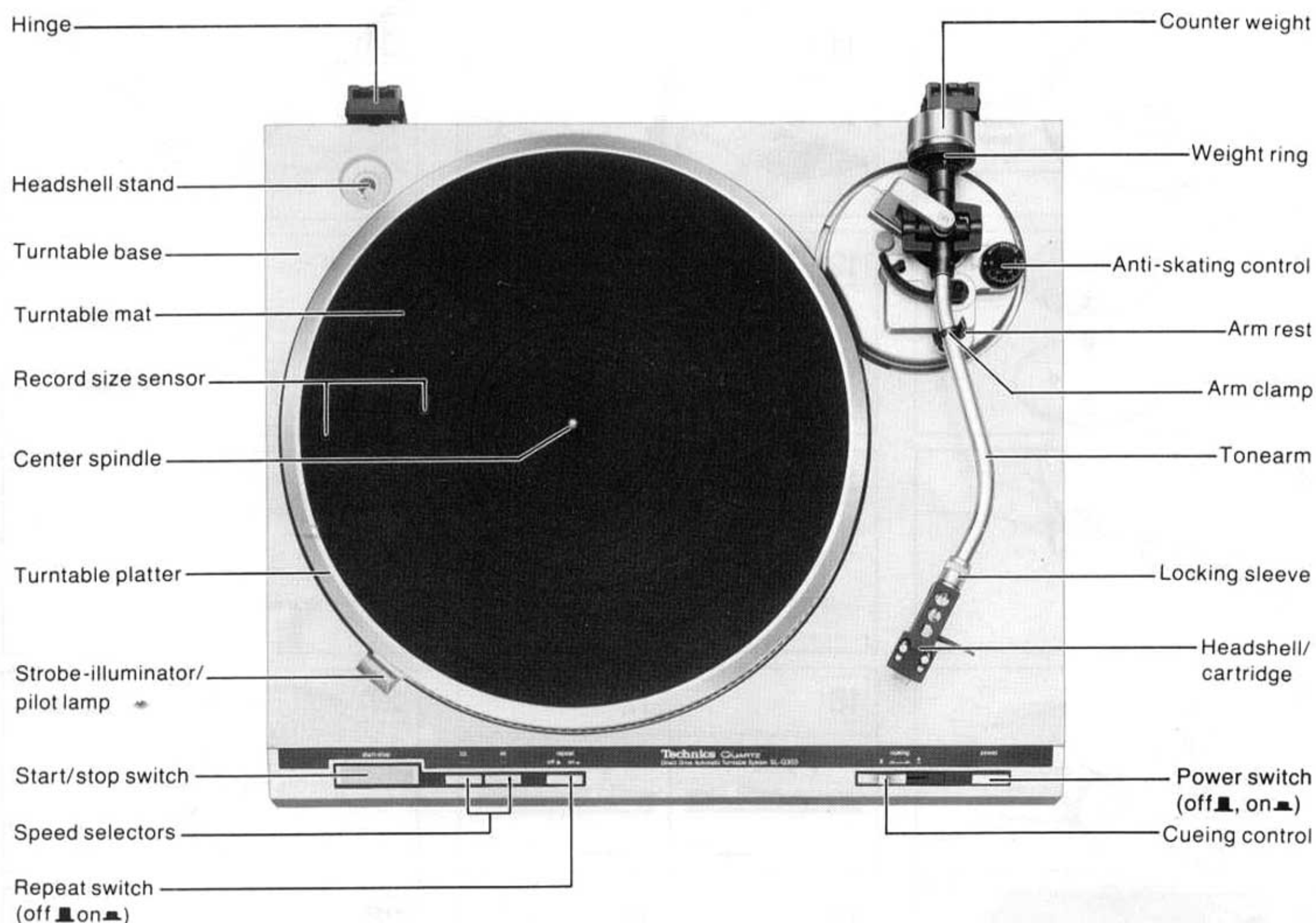
Turntable System

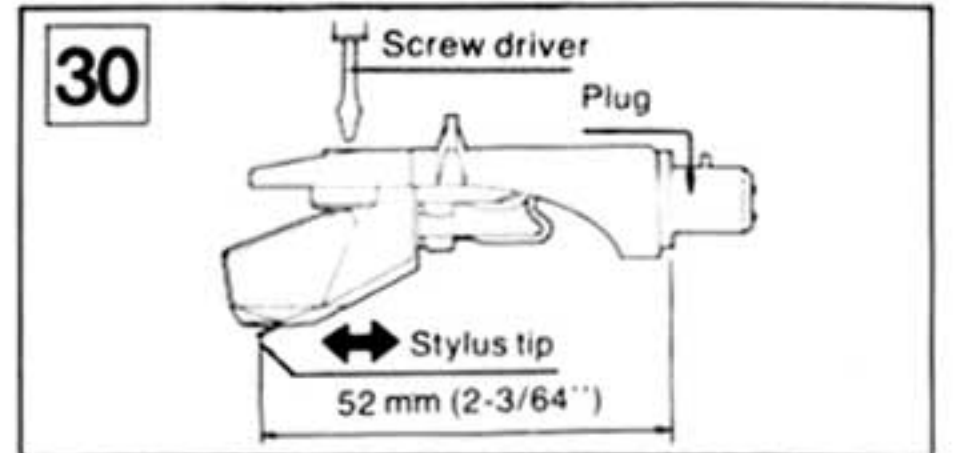
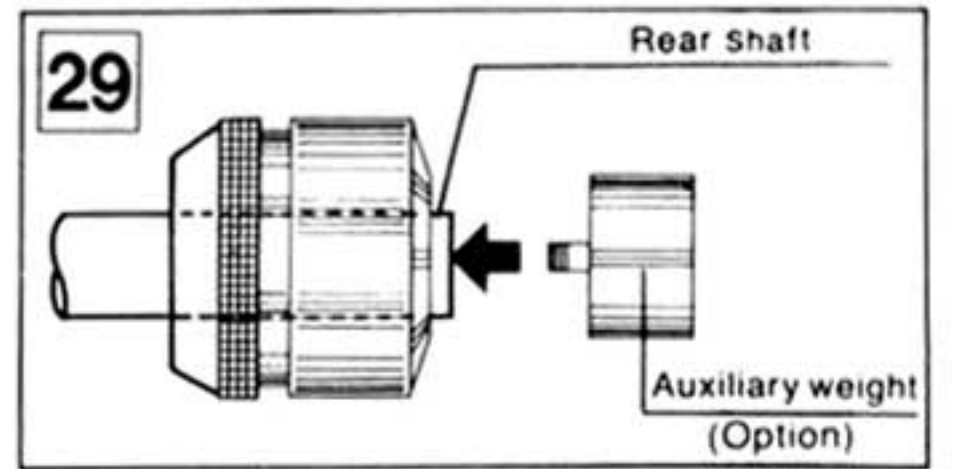
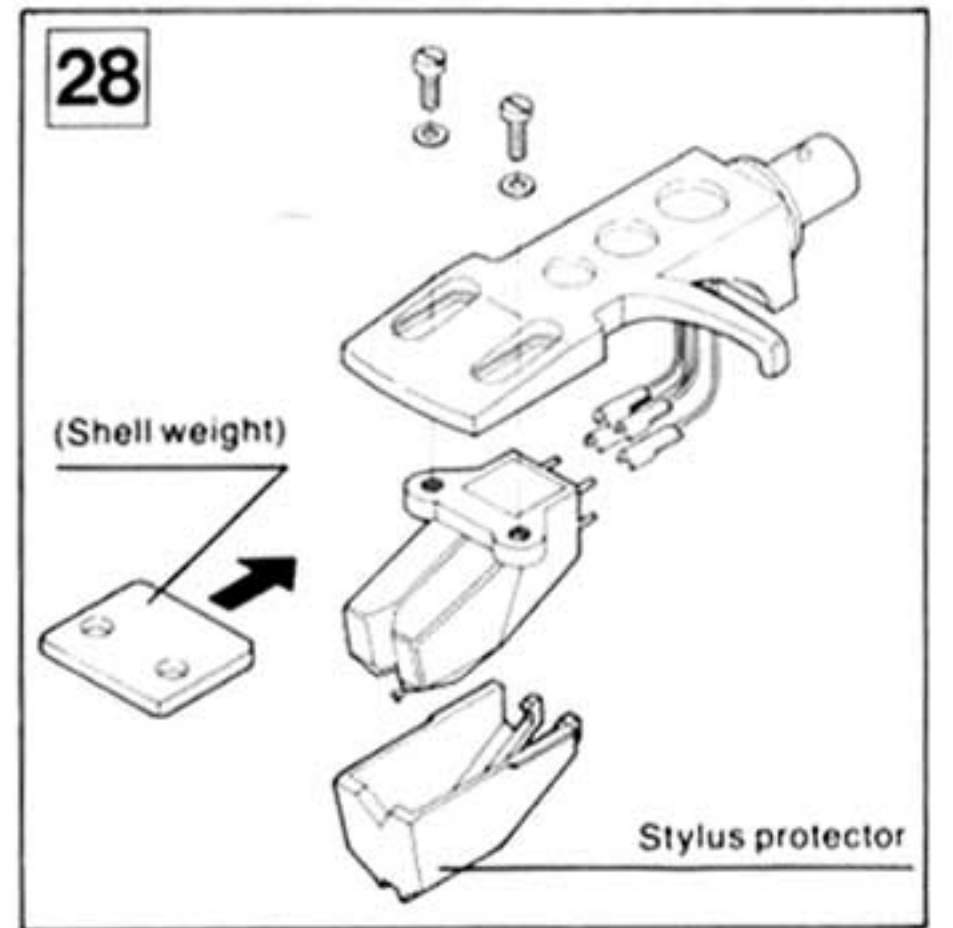
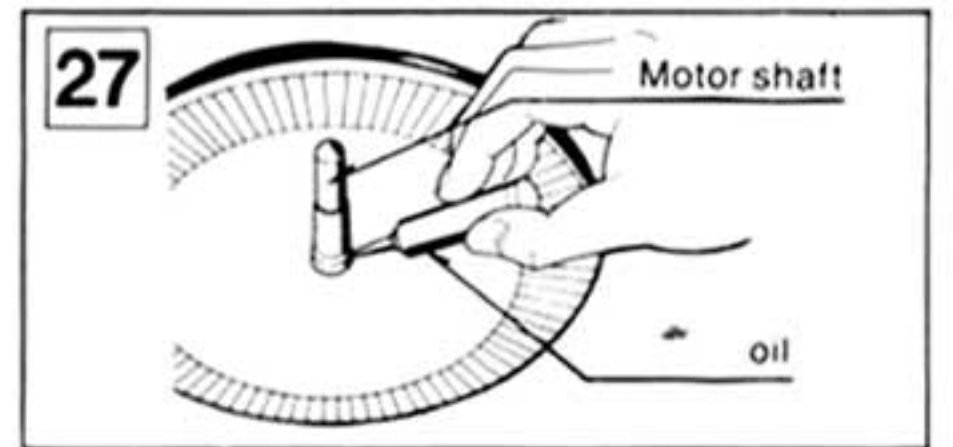
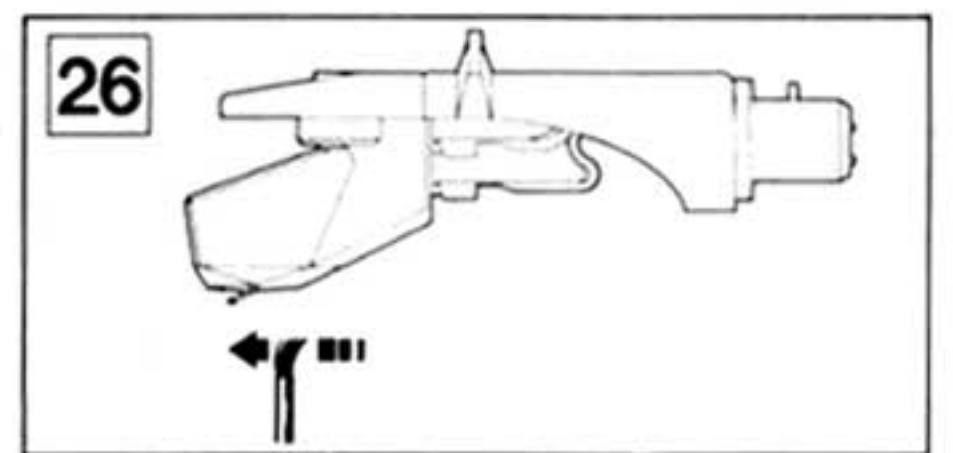
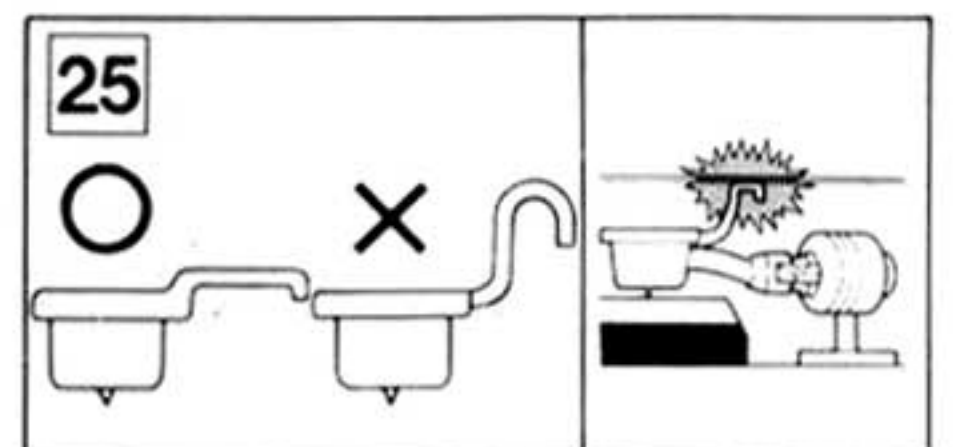
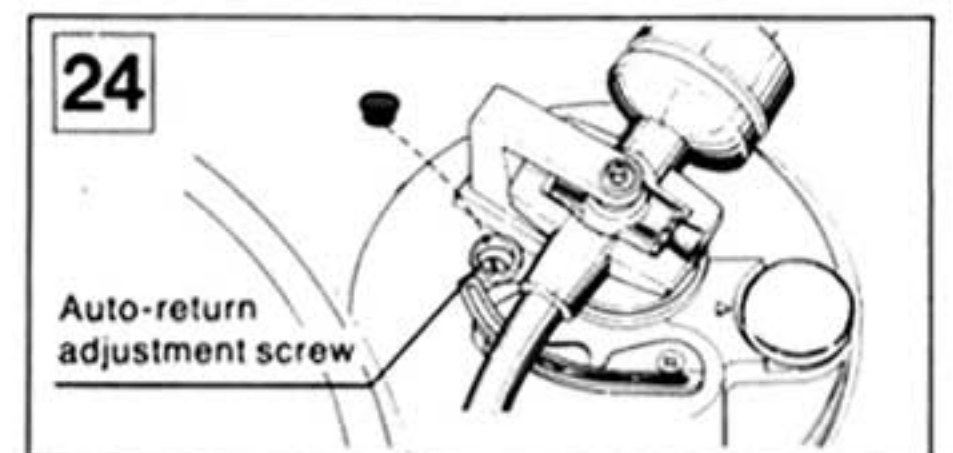
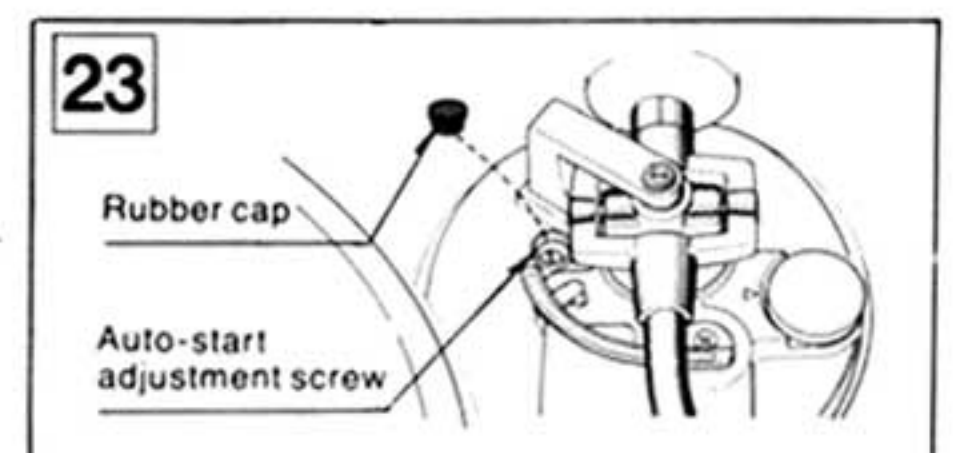
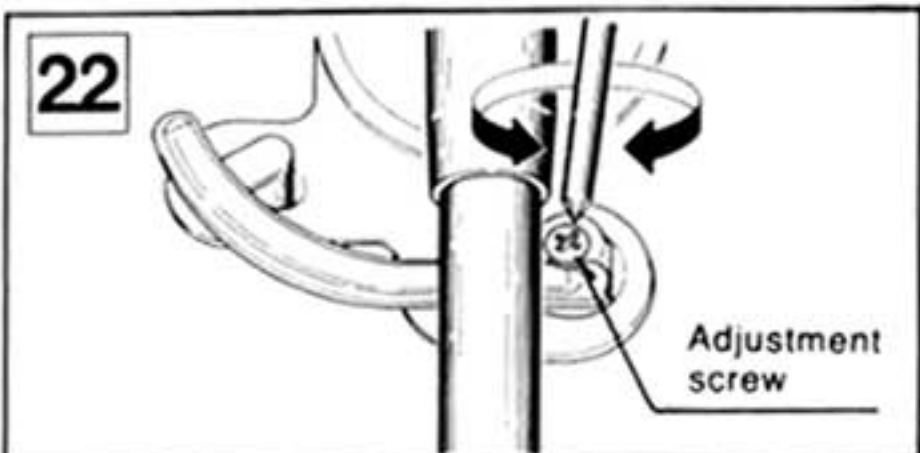
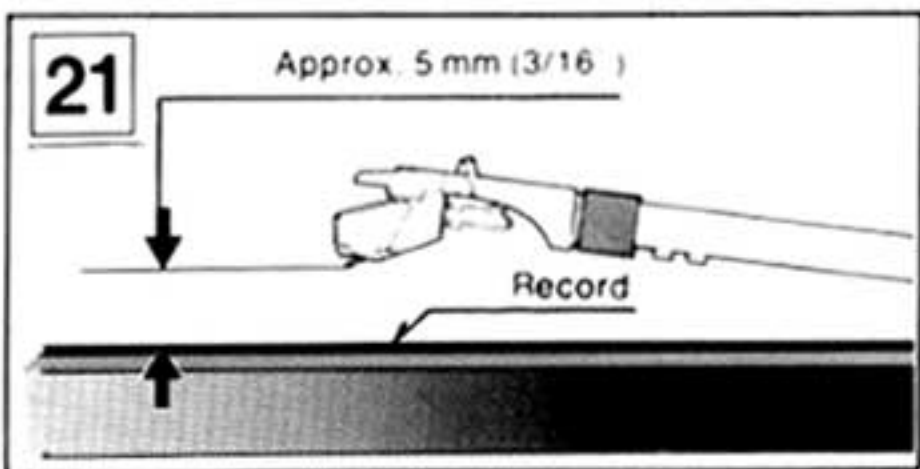
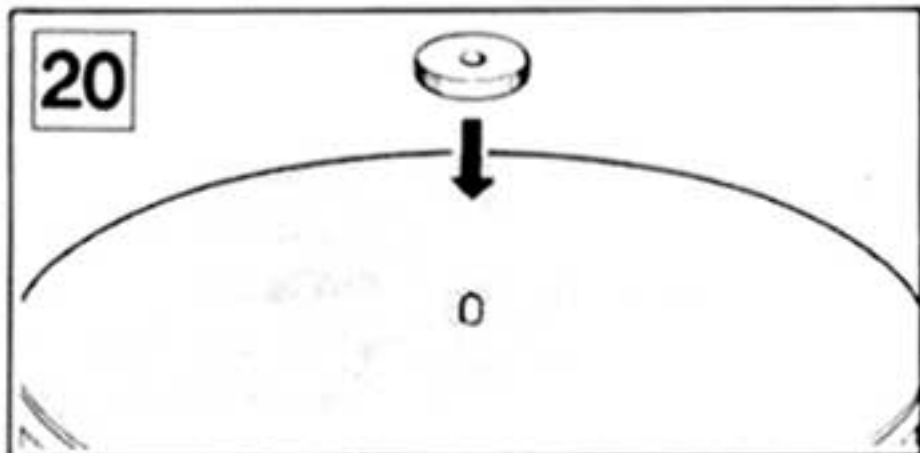
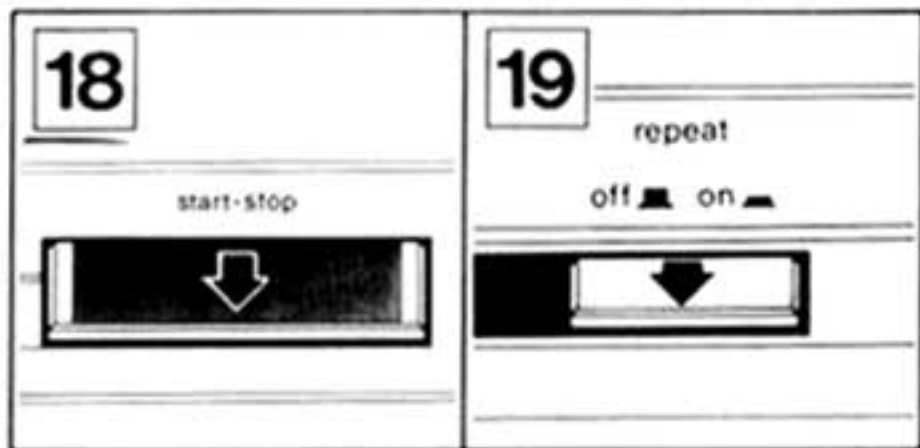
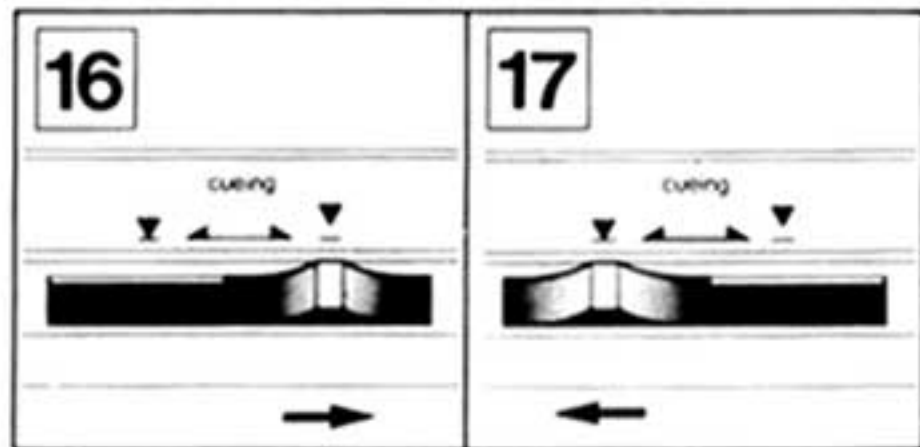
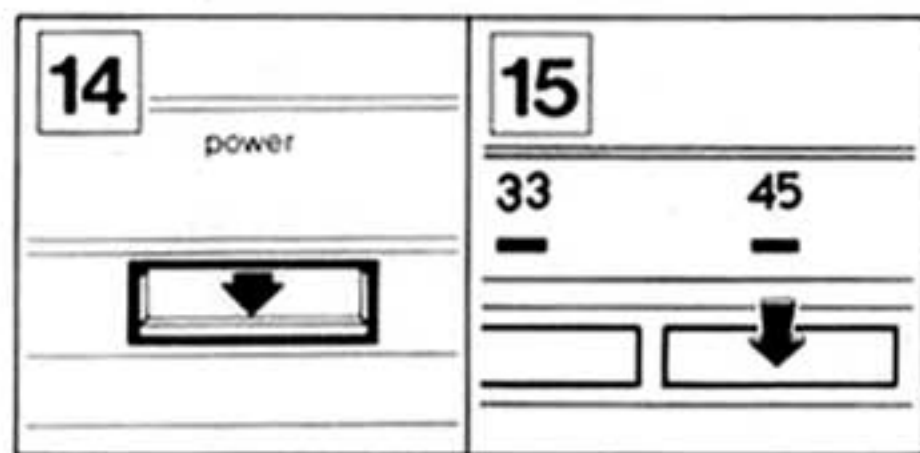
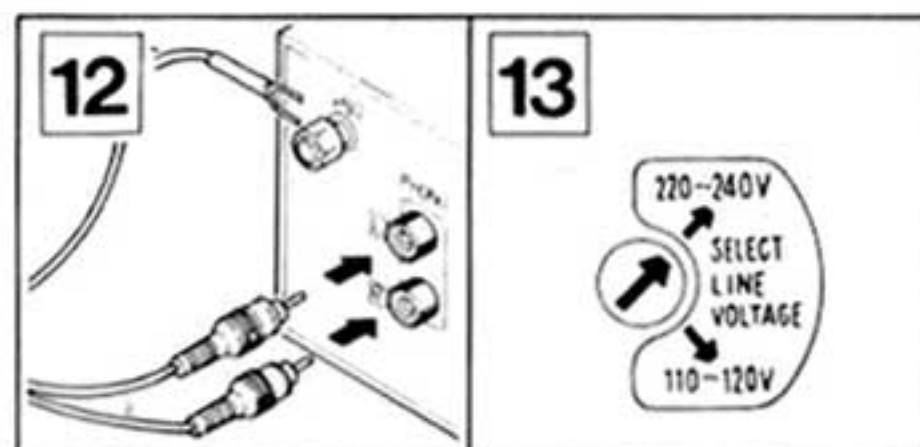
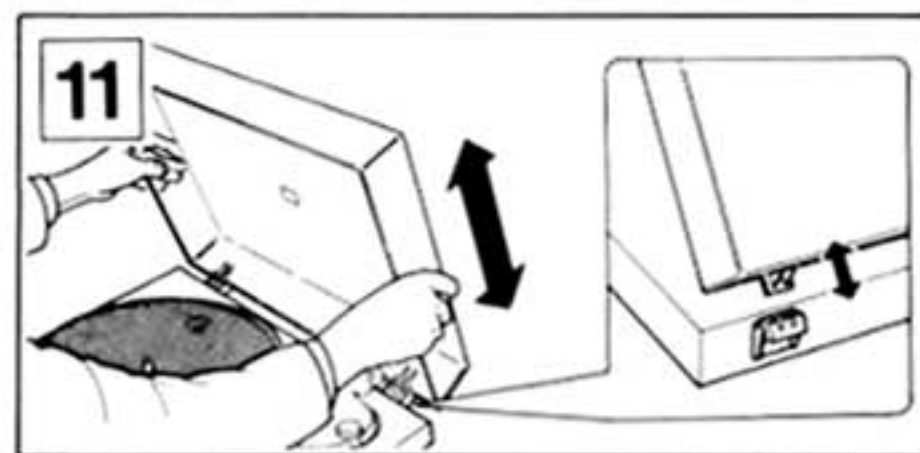
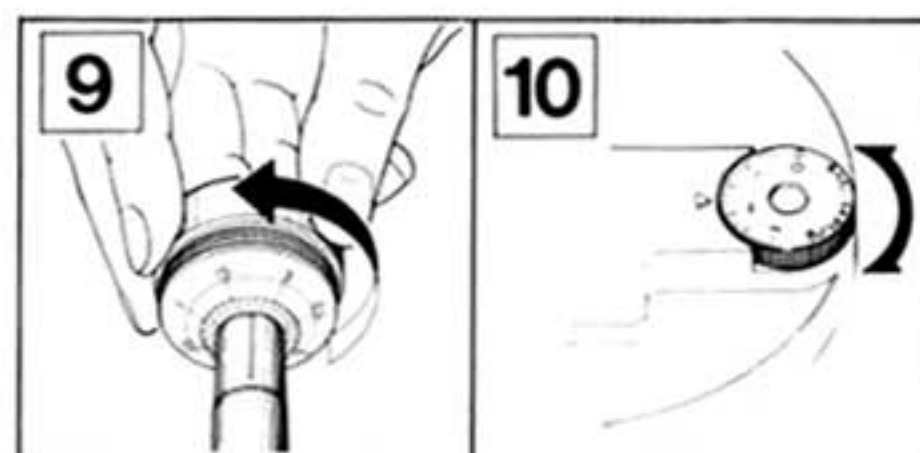
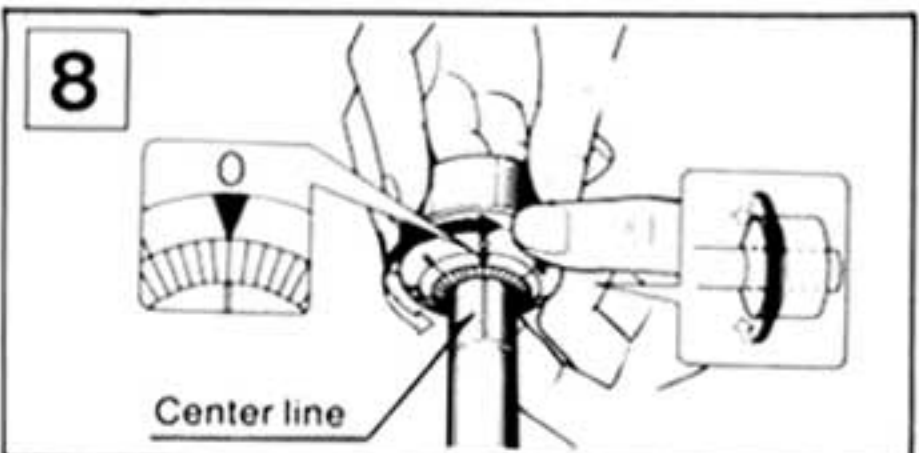
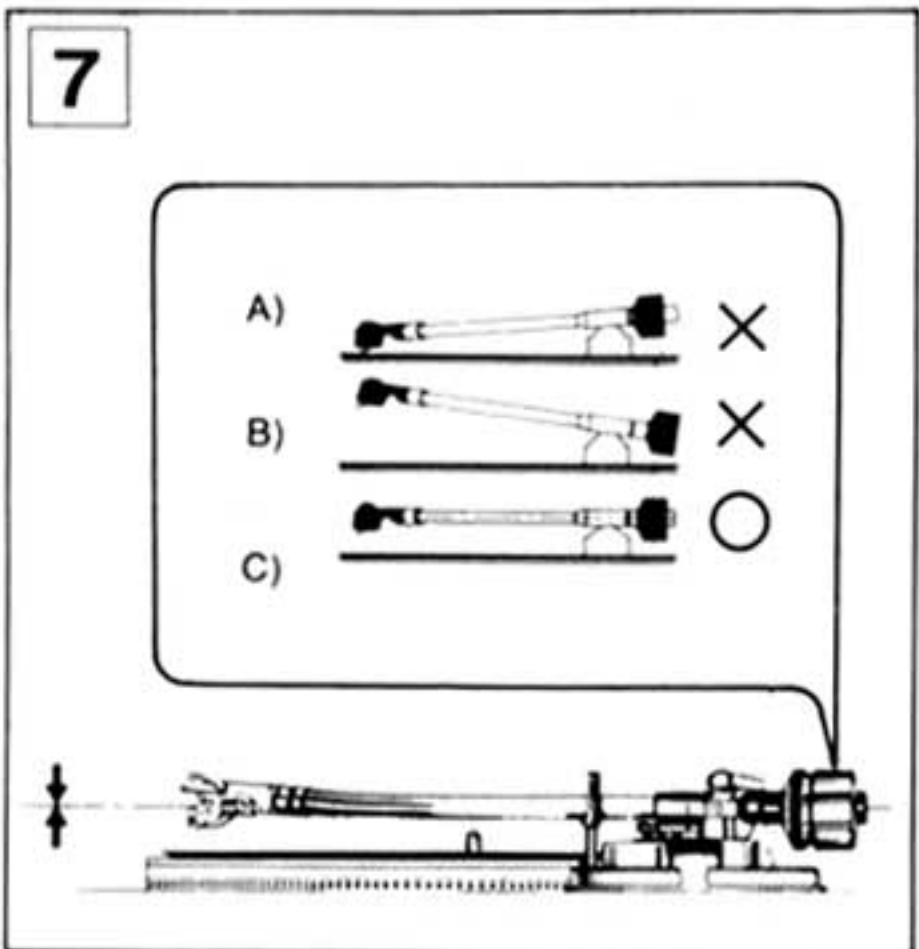
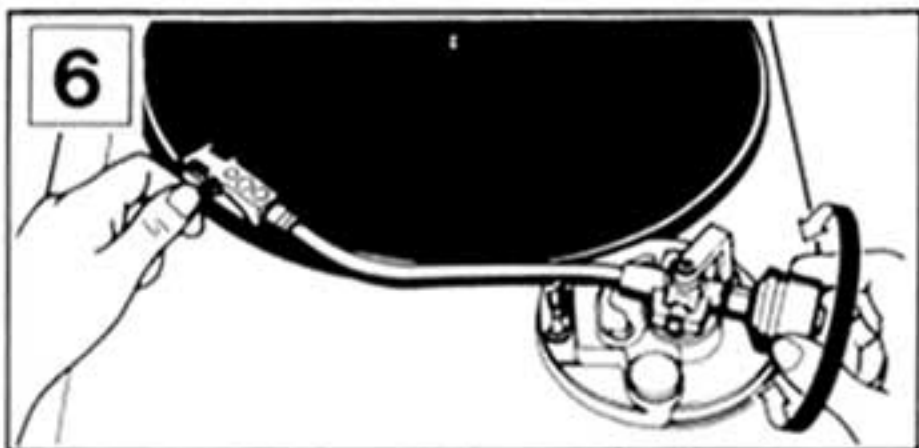
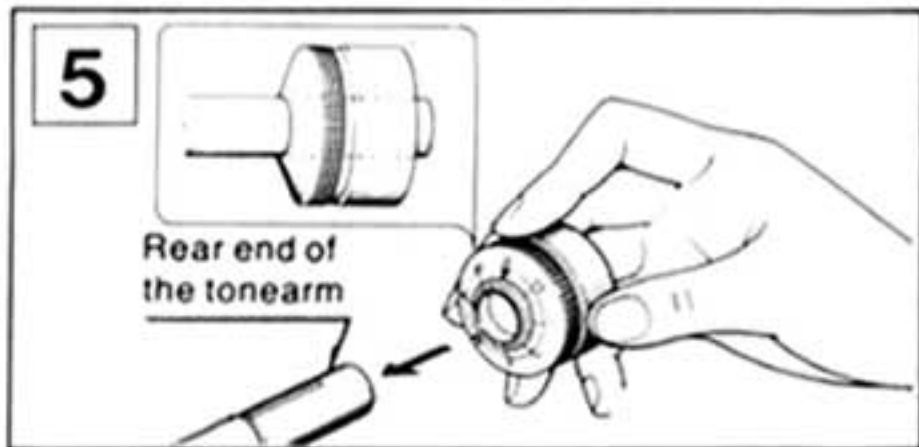
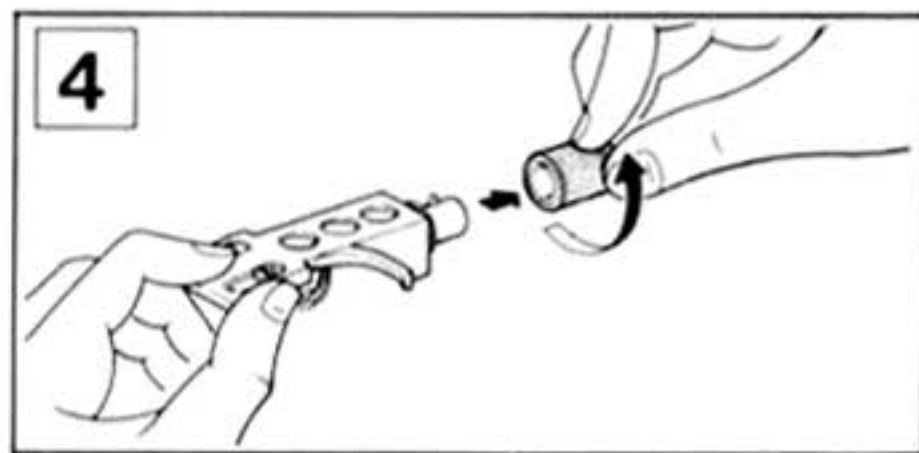
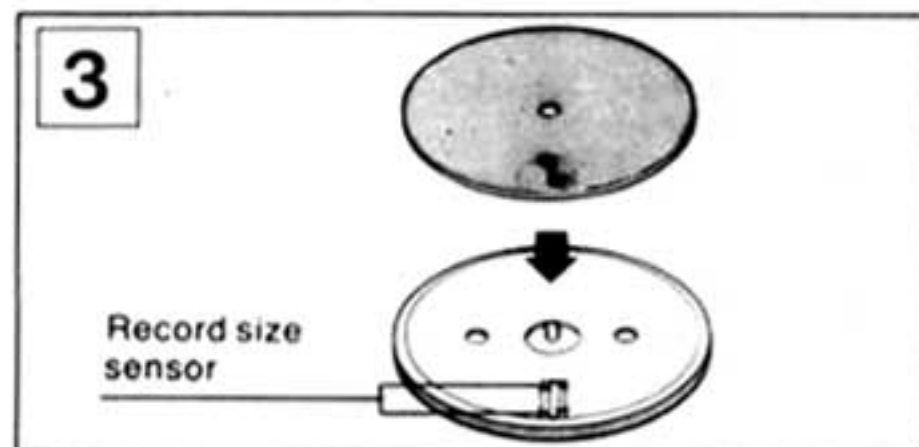
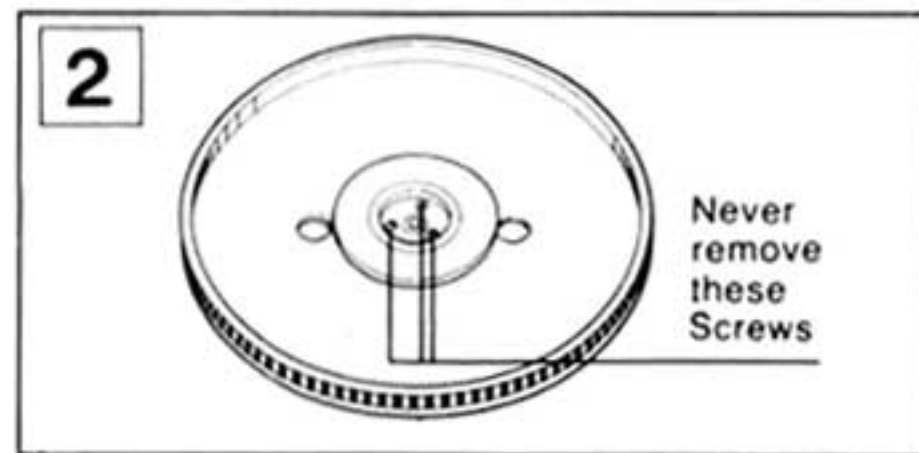
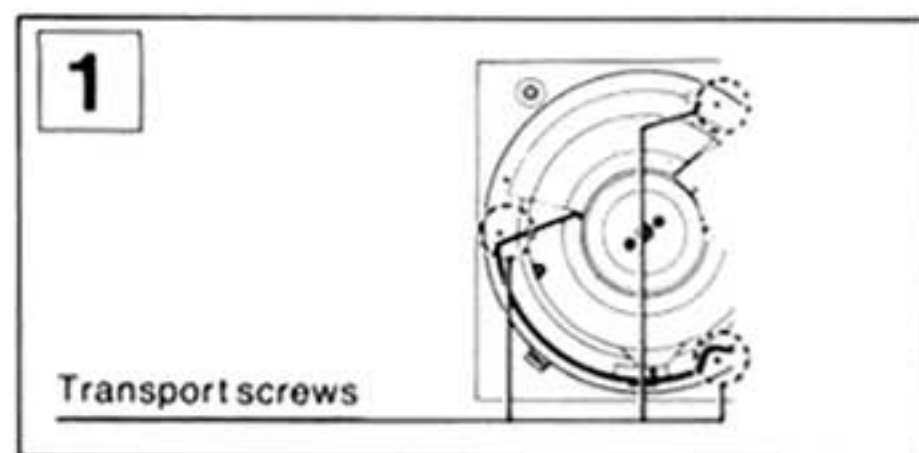
SL-Q303

Operating instructions



Parts identification





Thank you for choosing the SL-Q303.
For optimum performance and safety, please read these instructions carefully.

These instructions apply to units of different color.
Keep page 2 folded out while reading the instructions.

Before use

Caution:
Do not plug in the AC power plug before completing assembly.
Attach the dust cover last to make assembly and adjustments easier.

- **Removing the transport screws**
Remove transport screws. (Fig. 1)
Save for future use.

■ Checklist of parts	
Turntable unit	1
Turntable platter	1
Turntable mat	1
Dust cover	1
45-rpm adaptor	1
Counterweight	1
Headshell/cartridge	1
Shell weight	1

- **Attaching the counterweight (Fig. 5)**
Fit the weight onto the rear end of the tonearm.

- **Balancing the tonearm and adjusting stylus pressure (tracking force)**
 1. Remove the stylus protector.
Be careful not to touch the stylus tip.
 2. Release the arm clamp and lift the tonearm away from the arm rest.
 3. Turn the counterweight clockwise or counterclockwise until the tonearm is balanced horizontally so it floats freely. (Figs. 6 and 7)

Note:
(A): Weight advanced too much. Move backward.
(B): Weight not advanced enough. Move further.
(C): Properly balanced.

- While balancing the tonearm, be careful not to let the stylus contact the turntable mat or base.
4. After balancing the tonearm, clamp the tonearm into the arm rest.
 5. While holding the counterweight stationary rotate the weight ring so that the "0" on the ring scale is lined up with the center line on the tonearm shaft. (Fig. 8) -
This completes tonearm balancing (horizontal zero balance).
 6. Turn the counterweight in the direction of the arrow so that the weight ring shows the correct stylus pressure number lined up with the center line. (Fig. 9)
(1.75 g is the recommended stylus pressure for this cartridge.)
When the counterweight is turned, the weight ring moves with it. Stylus pressure is indicated by the number on the scale aligned with the center line.

Note:
Set the stylus pressure to the maximum recommended value for your cartridge in cases where the record has an extremely high recording level, or where the unit is operated in a room at low temperature, or in places in which the unit is subjected to vibrations.
(Maximum stylus pressure is 2 g for this cartridge.)

- **Adjusting the anti-skating control (Fig. 10)**
Set the anti-skating control to the same value as the stylus pressure.

- **Attaching the dust cover (Fig. 11)**
Hold both sides of the cover and lower it into the hinge slots.
To remove the cover, open it and pull upward.

Note:
Opening or closing the cover during play may cause vibrations and groove skipping.
If you must open the cover during play, do so very gently.

Assembly

- **Installing the turntable platter**
 1. Place the platter on the center spindle.

Note:
In our direct drive system, the motor's rotor-magnet is attached to the underside of the platter. Handle the platter carefully during assembly and be sure the rotor-magnet does not get dusty or attract iron filings.
Do not remove or loosen the rotor-magnet screws. Tampering with the rotor-magnet may interfere with motor performance. (Fig. 2)

2. Place the turntable mat on the platter.
Be sure the depression in the mat is over the protrusion (record size sensor) on the platter. (Fig. 3)

Note:
After placing the mat on the platter, turn the platter clockwise about ten full rotations by hand.
This is necessary to assure correct operation of the automatic mechanism.

- **Attaching the headshell (Fig. 4)**
Insert the headshell plug into the end of the tonearm and turn the locking sleeve clockwise (viewed from the rear) while holding the headshell horizontal.

Placement

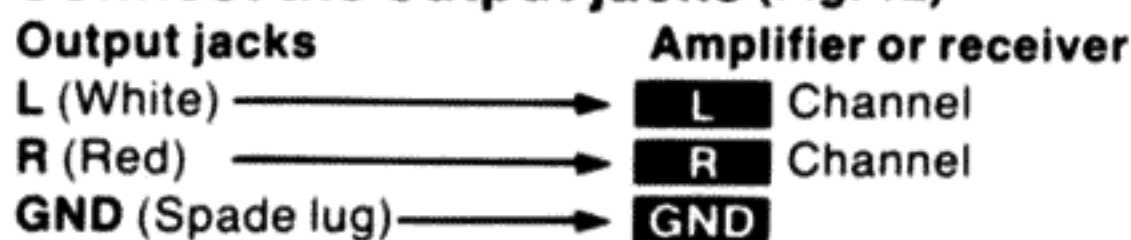
- **Place the unit in a stable and horizontal position where there is little or no vibration.**

This unit features double-isolated suspension system. To take maximum advantage of this feature, place the unit on a stable, level surface. Do not put anything between the turntable base and the surface on which it is placed.

- **Place the unit away from the speakers so that it will be subject to as little direct sound radiation as possible.**
- **Do not place the unit where it will be exposed to direct sunlight, dust, moisture or heat.**
- **Place it in a well ventilated location.**
- **If you try to listen to a radio near the turntable while it is turning, you may hear some interference.**

Connections

- **Connect the output jacks (Fig. 12)**



Note:

To avoid hum, be sure to make a secure ground connection between turntable and amplifier or receiver.

- **Plug in the AC power plug**

Plug the AC power plug into an AC wall socket.

Caution:

Never plug into a DC socket.

Make sure the turntable's AC line-voltage selector is matched to your local voltage before plugging in the AC power plug.

If the pre-selected voltage is different from your local voltage, turn the AC line-voltage selector with a screw-driver so that it corresponds to your local voltage.

(Fig. 13)

The AC line-voltage selector is on the bottom of base.

Operation

- **Manual play**

1. Put a record on the turntable mat.
2. Push the power switch to the "on" position (■). (Fig. 14)
The 33 (33-1/3 rpm) speed indicator will light, so will the strobe illuminator/pilot lamp.

Note:

33-1/3 rpm is selected automatically whenever the power switch is pushed. Remember to push the 45 rpm selector to play 45s. (Fig. 15)

3. Remove the stylus protector.
4. Release the arm clamp.
5. Set the cueing control to the "▼" position. (Fig. 16)
6. Move the tonearm over the desired groove.
The platter will start tuning.
7. Set the cueing control to the "▼" position. The tonearm will descend slowly and play will begin. (Fig. 17)
At the end of the record, the tonearm will automatically return to the arm rest and the turntable will stop.
8. When play is finished, push the power switch to the off (■) position.

- **If the unit is not to be used for some time**

Secure the tonearm with the arm clamp.

Put the stylus protector on the cartridge.

Close the dust cover.

- **Automatic play**

1. Perform steps 1–4 of manual playback.
2. Push the start/stop switch. (Fig. 18)
3. The tonearm automatically selects the record size (for 30 cm and 17 cm records only) and begins record play.
At the end of the record, the tonearm will automatically return to the arm rest and the turntable will stop.

Note:

- The record size sensor does not operate for 25 cm (10") records and other records of non-standard sizes. Operate the turntable manually in such cases.
- When there is no record on the turntable mat, the platter will rotate several times but tonearm will not move toward the center spindle.

- **Repeat play**

Push the repeat switch. (Fig. 19)

Note:

- To stop repeat play, push the repeat switch again.
- Do not push the repeat switch during automatic operation (auto-start, auto-return).

- **Stopping the turntable**

Push the start/stop switch. (Fig. 18)

The tonearm will return to the arm rest and the turntable will stop.

- **Temporarily interrupting play**

Set the cueing control to the "▼" position.

This will make the tonearm rise off the record.

- **Playing 45-rpm records having large center holes**

Put the 45-rpm adaptor over the center spindle. (Fig. 20)

Push the "45" speed selector.

Adjustments

■ Arm-lift height adjustment

The arm-lift height (distance between the stylus tip and the record surface when the cueing control is at the "▼" position) has been adjusted at the factory to approximately 5 mm (3/16"). (Fig. 21)

If the clearance is too narrow or too wide (because of different cartridge dimensions, for example), turn the adjustment screw clockwise or counterclockwise. (Fig. 22)

Clockwise rotation

—distance between the record and stylus tip is decreased.

Counterclockwise rotation

—distance between the record and stylus tip is increased.

■ Adjustment of automatic start position (Fig. 23)

Caution:

The auto-start and auto-return adjustment screws are located together. (Fig. 23)

When the tonearm is in or near the arm rest, the auto-start adjustment screw is visible; when the tonearm is near the center of a record, the auto-return adjustment screw is visible. (Fig. 24)

If the stylus does not land in the lead-in groove, adjust as follows.

1. Clamp the tonearm to the arm rest.
2. Remove the rubber cap.
Turn the screw with a screwdriver, clockwise or counterclockwise as necessary.
3. If the stylus tip sets down too far in the recorded groove, —turn counterclockwise.
4. If the stylus tip sets down outside of the record, —turn clockwise.
5. Adjust so the stylus tip lands 1~2 mm in from the edge of the record.

■ Adjustment of automatic return position (Fig. 24)

(Remove the rubber cap.)

1. Put the stylus protector on the cartridge.
2. Remove the tonearm toward the center of the record.
Then, the auto-return adjustment screw will appear.
If the tonearm tends to return to the arm rest before the record has finished, —turn counterclockwise.
If the tonearm fails to return after the final groove, —turn clockwise.

Notes and maintenance

■ Do not touch or hold the tonearm during automatic operation

■ Be careful when using differently shaped headshells.

With some headshells, the finger grip may strike the dust cover during automatic operation. Should this occur, leave the cover open during play. (Fig. 25)

■ Before detaching or attaching a headshell, be sure to turn off the power on the amplifier or receiver.

Speakers may be damaged if a headshell is attached or detached when the volume is turned up.

■ Carefully remove dust and dirt from records and stylus.

Dust and dirt degrade sound quality and cause excessive wear of the stylus and grooves. (Fig. 26)

■ Wipe the headshell terminals from time to time.

Dirty terminals can cause noisy reproduction. If severe, there may be no sound at all. Use a soft dry cloth to clean the headshell terminals.

■ Wipe the dust cover and turntable base with a soft, dry cloth.

Never use volatile cleaners such as alcohol, benzine or thinner.

To remove stubborn spots, first pull out the AC plug and detach the cover.

Then wipe the cover with a soft cloth slightly moistened with a mild soap and water solution.

Do not wipe the cover during play, or the tonearm may be attracted toward the cover due to the generation of static electricity.

■ Using a stabilizer is not recommended because it may interfere with the performance of the double-isolated suspension cabinet.

■ Do not turn on the power without the platter mounted on the unit.

■ Lubricating the motor shaft (Fig. 27)

Apply 2 or 3 drops of oil after every 2000 hours of operation. Note that the interval between lubrication is much longer than for conventional motors (200–500 hours).

Be sure to use only special oil (part number SFWO 010) available from your audio dealer.

■ About the strobe

This unit's strobe illuminator LED is synchronized with the quartz crystal oscillator frequency.

Use the strobe as a reference for precise speed rotation.

Note:

Unlike conventional units, the strobe illuminator is not synchronized with fluorescent lamps.

■ Transporting and shipping the turntable

Pack the unit in the reverse order from unpacking. Use the original packing material if possible. Otherwise, take these steps:

- Remove the platter and mat and wrap them together with sufficient protection for the motor-rotor on the underside of the platter.

- Tape or tie the tonearm to the arm rest so it cannot shake free.
- Remove the counterweight and wrap it carefully. Remove the headshell with cartridge and wrap it carefully.
- Wrap the turntable base with a blanket or soft paper to avoid scratches or damage.

■ Playing special records

Follows "Manual play" for playing the following types of records. (Special records may interfere with correct automatic operation.)

This is not a malfunction of the turntable.

- Non-standard size records [standard sizes (EIA, IEC, DIN, JIS) and 17, 25 and 30 cm].

(However, 25 cm (10") records can not be selected automatically by the record size sensor.)

- Sono-sheets, or light and thin records.
- Bably warped records.

Stylus replacement and cartridge installation

■ Stylus replacement

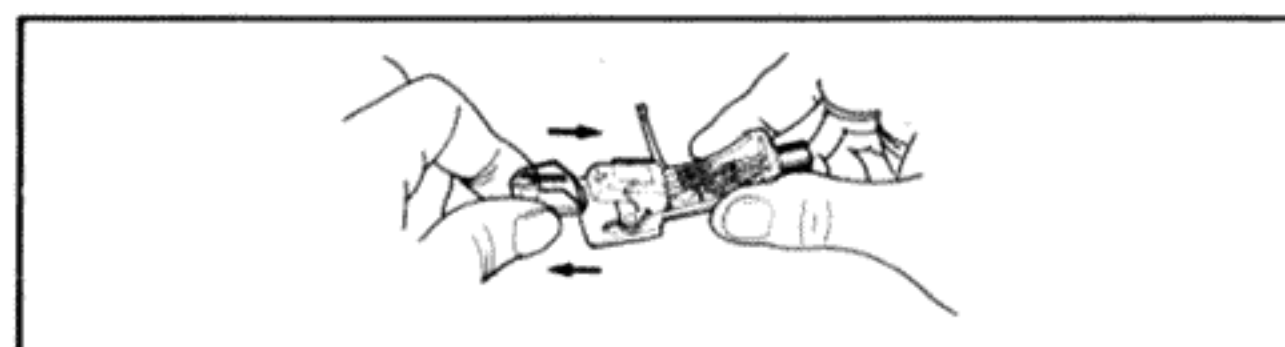
The cartridge has a diamond stylus.

Replace the stylus at the first sign of wear or after about 1000 hours of use. Correct stylus pressure (tracking force) and proper record and stylus care will help extend stylus life. Stylus life varies with the conditions of use.

Noise or scratchiness may indicate a worn or damaged stylus.

To avoid damaging records, do not use a stylus that seems worn. Replace it immediately.

1. Loosen the tonearm locking sleeve to remove the headshell and cartridge.
2. Hold the headshell firmly, and with your other hand pull out on the stylus assembly in the direction of the arrow.
3. Being careful not to touch the stylus tip, install the new stylus assembly in the reverse order from removing.



■ Cartridge installation (Figs. 28 and 29)

When installing a cartridge, follow the instructions that came with the cartridge.

1. Connect the lead wires to the cartridge terminals.
The terminals of most cartridges are color coded. Connect each lead wire to the terminal of the same color.
White (L+) Left channel +
Blue (L-) Left channel -
Red (R+) Right channel +
Green (R-) Right channel -
2. Mount the cartridge in the headshell using the screws provided with the cartridge.

■ Overhang adjustment (Fig. 30)

15 mm is the correct overhang for this tonearm.

Loosen the screws and move the cartridge forward or backward until the distance between the stylus tip and the plug becomes 52 mm (2-3/64").


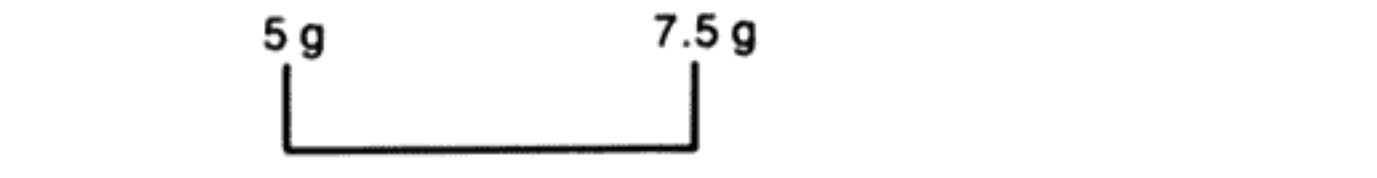
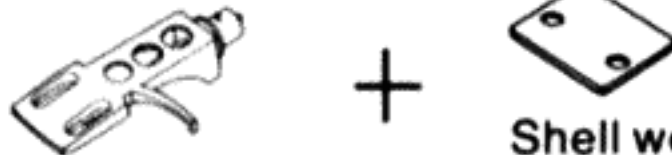
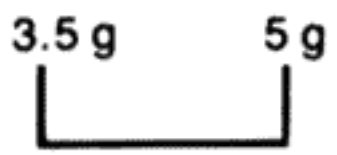

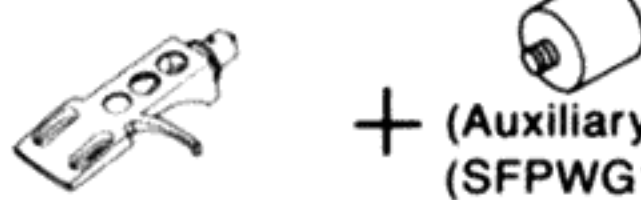

Tighten the screws without moving the cartridge.

Adjust the horizontal zero balance, stylus pressure and arm-lift height whenever you change the cartridge.

■ About cartridge weight:

Cartridges weighing between 3.5 and 7.5 g can be used on this tonearm (with the headshell and accessory shell weight supplied). If you purchase the optional auxiliary weight (part number: SFPWG17202), cartridges weighing up to 10.5 g can be used.

See chart below.

Supplied headshell in combination with other parts.	Allowable cartridge weight. (Included the cartridge mounting screws.)
A)  Headshell only (7.5 g)	
B)  Shell weight	
C)  (Optional) D)  (Auxiliary weight) (SFPWG17202)	
Note: Attach the auxiliary weight to the rear end of the tonearm. (Fig. 29)	When attached, the auxiliary weight bumps against the dust cover, so remove the cover during play.
To purchase any of the optional accessories indicated in this book, please contact your nearest audio dealer.	

Suggestions for safety

Before using this unit, be sure to read applicable items of the operating instructions and these safety suggestions carefully; and afterwards keep them handy for future reference. Take special care to follow the warnings indicated on the unit itself as well as in the operating instructions.

1. Avoid places where there is water or humidity.

Do not use this unit near a bathtub, washbasin, swimming pool, or the like. Damp basements should also be avoided.

2. Don't allow water or any foreign object to get inside this unit.

Don't place small metal objects or anything containing liquid on or near the unit.

3. Avoid placement of the unit where it will be exposed to the direct rays of the sun, or where ventilation is inadequate.

Don't place this unit in a bookcase or between cabinets, unless proper ventilation is provided, or where curtains or furniture may obstruct the ventilation holes.

4. Place this unit away from heat-emitting appliances.

Never place this unit near a radiator, heat register, stove, or any other heat-emitting equipment. (Including Amplifiers.)

5. Placement

Place the unit on a stable, vibration-free, level shelf or stand.

6. Use of a cart or stand.

When deciding on a cart or stand, be sure to use only with the cart or stand recommended by the manufacturer.

7. Wall or ceiling installation.

If the unit is to be mounted on a wall or ceiling, be sure to do so only as recommended by the manufacturer.

8. Check the voltage rating of this unit before connecting the unit to a power supply.

Be sure to connect the unit only to the type of power supply indicated in the operating instructions, or as indicated on the unit itself.

9. Care of the power cord and plug.

Take care that the cord is not bent sharply (especially near its connection to the unit or near the plug), that nothing is placed on it, and that it is not pinched, or crushed. Never take hold of the plug or cord if your hand is wet, and always be sure to grasp the plug body when connecting or disconnecting it.

10. If the unit will not be used for a long period of time:

Be sure to disconnect the power cord.

11. Maintenance

Refer to the operating instructions for details.

12. Never attempt repairs yourself:

- (a) If the power cord or plug is damaged.
- (b) If a foreign object or liquid falls into the unit.
- (c) If the unit is exposed to rain.
- (d) If the unit does not function normally, or if operation shows an unusual change.
- (e) If the unit has been dropped and the cabinet or chassis is damaged . . . etc.

Unplug the power cord and consult with a qualified technician (or the dealer from whom the unit was purchased or the nearest servicenter).

13. Repairs

Except for adjustments explained in the operating instructions, do not attempt any repairs yourself. Be sure to request service from a qualified technician (or your dealer or nearest servicenter).

Specifications

■ General

Power supply: ~ 110–120/220–240V, 50 or 60 Hz

Power consumption: 7 W

Dimensions: 43×10.6×37.5 cm
(16-15/16"×4-3/16"×14-3/4")
43×37×42 cm
(16-15/16"×14-9/16"×16-17/32")
Maximum height when top
(dust cover) is open.

Weight: 6.5 kg (14.3 lb.)

■ Turntable section

Type: Quartz direct drive
Automatic turntable
Automatic start
Auto return
Auto stop
Repeat play
Manual play

Drive method: Direct drive

Motor: Brushless DC motor

Drive control method: Quartz-phase-locked control

Turntable platter: Aluminum die-cast
Diameter 31.2 cm (12-9/32" inches)

Turntable speeds: 33-1/3 rpm and 45 rpm

Wow and flutter: 0.012% WRMS*
0.025% WRMS (JIS C5521)
±0.035% peak (IEC 98A Weighted)

*This rating refers to turntable assembly alone, excluding effects of record, cartridge or tonearm, but including platter. Measured by obtaining signal from built-in frequency generator of motor assembly.

Rumble: –56 dB (IEC 98A Unweighted) *
–78 dB (IEC 98A Weighted)

■ Tonearm section

Type: Universal tonearm
"S" shaped tubular arm
Static balanced type

Effective length: 230 mm (9-1/16")

Overhang: 15 mm (19/32")

Tracking error angle: Within 2°32' at the outer groove of 30 cm (12") record
Within 0°32' at the inner groove of 30 cm (12") record

Friction: Less than 7 mg (lateral, vertical)

Effective mass: 11 g (without cartridge)

Stylus pressure
adjustment range: 0–2.5 g

Applicable cartridge
weight range: (See page 6)

Headshell weight: 7.5 g

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■ Cartridge section

Type:	Moving magnet
Frequency response:	10 Hz~35 kHz 20 Hz~10 kHz ± 1 dB
Output voltage:	2.5 mV at 1 kHz 5 cm/s. zero to peak lateral velocity (7mV at 1 kHz 10 cm/s. zero to peak 45° velocity [DIN 45 500])
Channel separation:	22 dB at 1 kHz
Channel balance:	Within 1.8 dB at 1 kHz
Compliance (dynamic):	10×10^{-6} cm/dyne at 100 Hz
Stylus pressure:	1.75 ± 0.25 g (17.5 ± 2.5 mN)
Load impedance:	47 k Ω to 100 k Ω
Weight:	5 g (cartridge only)
Replacement stylus:	EPS-25CS (Equivalent replacement stylus) (EPS-25ES (Elliptical stylus).)

Specifications subject to change without notice.
Weight and dimensions shown are approximate.