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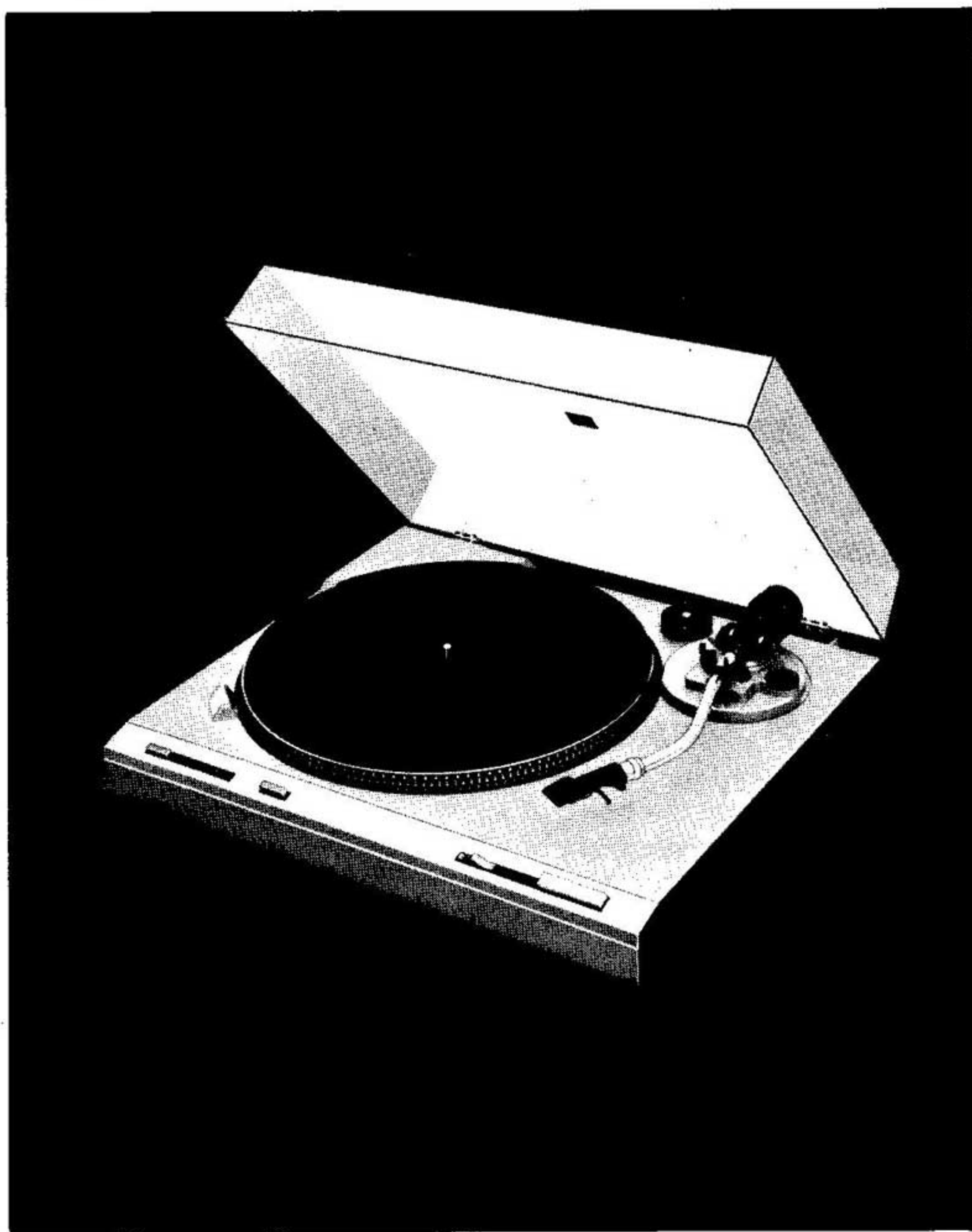
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Technics

Turntable System

SL-B303

Operating instructions



The model number of this product may be found on the back of the unit, and the serial number on the bottom of the unit.

Please note the model and serial numbers of this unit in the space provided below and retain this booklet as a permanent record of your purchase to aid identification in the event of theft.

MODEL NUMBER **SL-B303**

SERIAL NUMBER

Before operating this set, please read these instructions completely.

Thank you for choosing the SL-B303.
For optimum performance and safety, please read these instructions carefully.

Dear Stereo Fan

Technics. The science of sound. Our name represents over 100 high quality audio products, in every price range. From our revolutionary direct drive turntables to our highly acclaimed linear phase speakers, Technics quality and value have become almost legendary among audio enthusiasts. Our truly complete selection of turntables (including belt-drive, direct-drive, and quartz-locked models with varying degrees of automation) now includes an exciting line of linear tracking turntables with zero tracking error. Another innovation, direct drive cassette decks, is available in both slim and micro formats. In fact, with Technics micro series, you can assemble

an entire system of the highest quality with truly compact dimensions. And our receivers, which combine new class A amplification with quartz synthesizer tuning, have created tremendous excitement among reviewers and customers alike. Amps, tuners, headphones, microphones, cartridges, open-reel decks, sound processors—we are proud of all our high quality equipment and we are constantly seeking to improve our products, in terms of performance and handling ease. In addition, our confidence in the reliability of our merchandise (demonstrated by our warranties) and the reasons for our enormous and rapid growth become obvious.

Before use

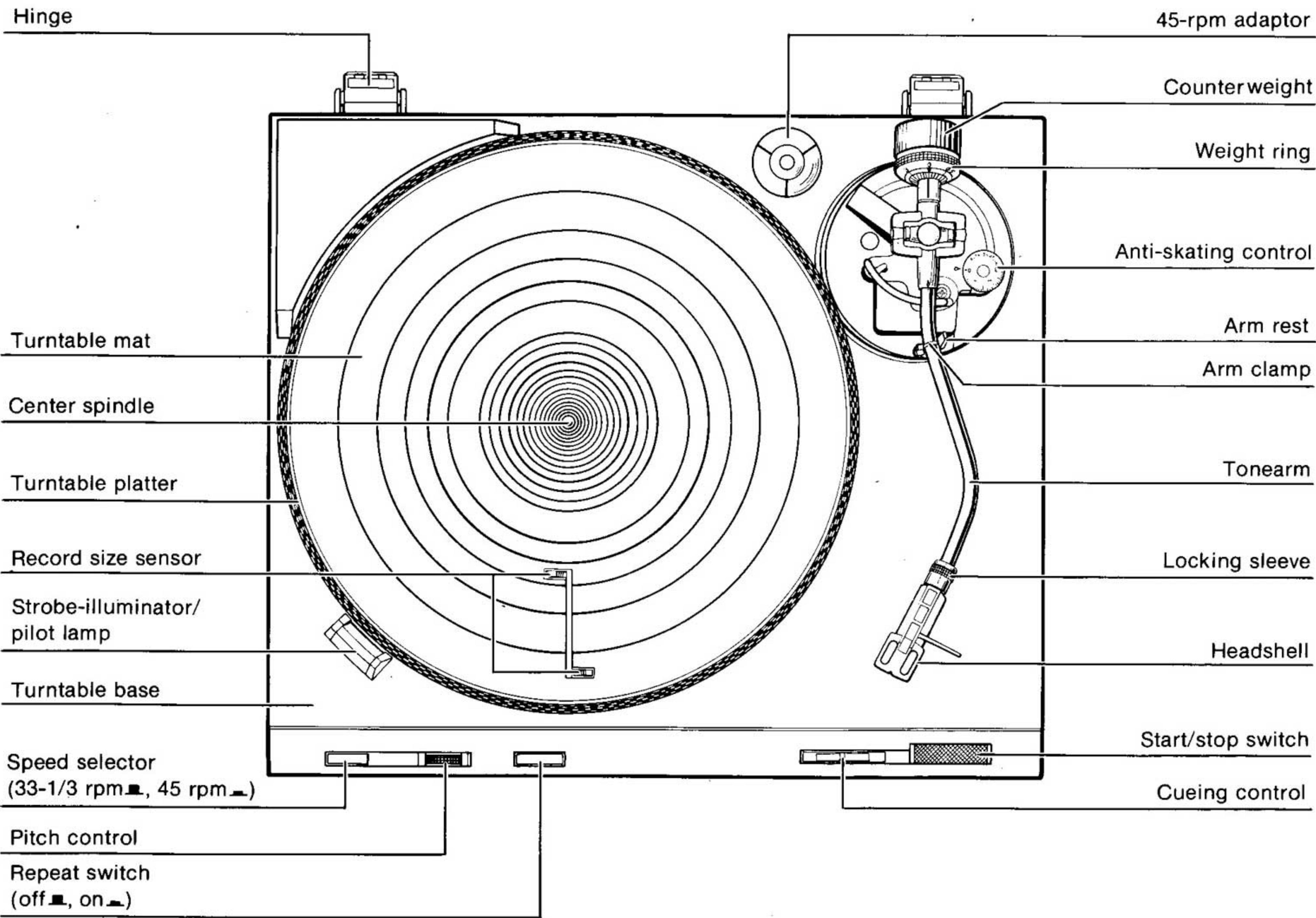
Caution:

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

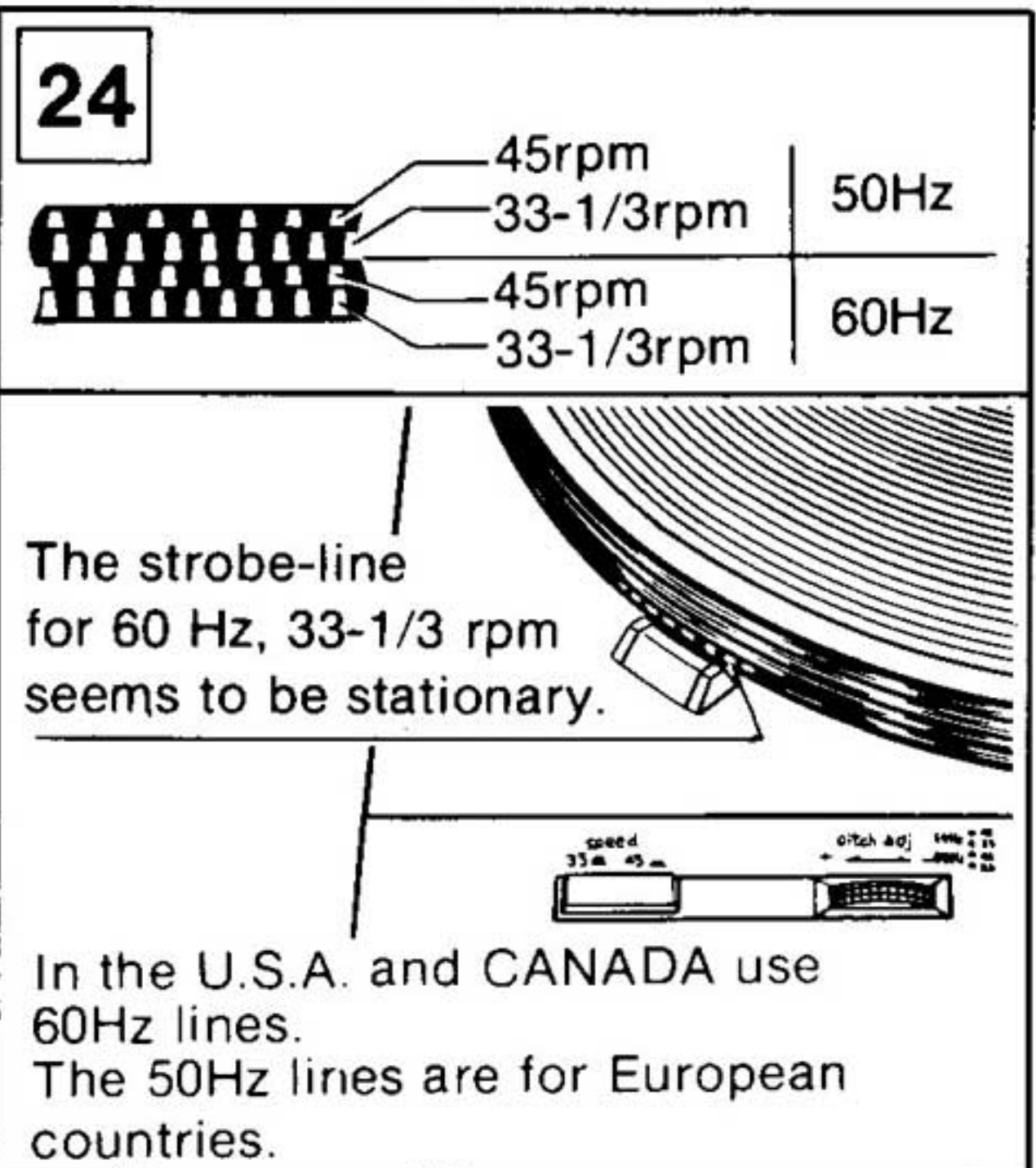
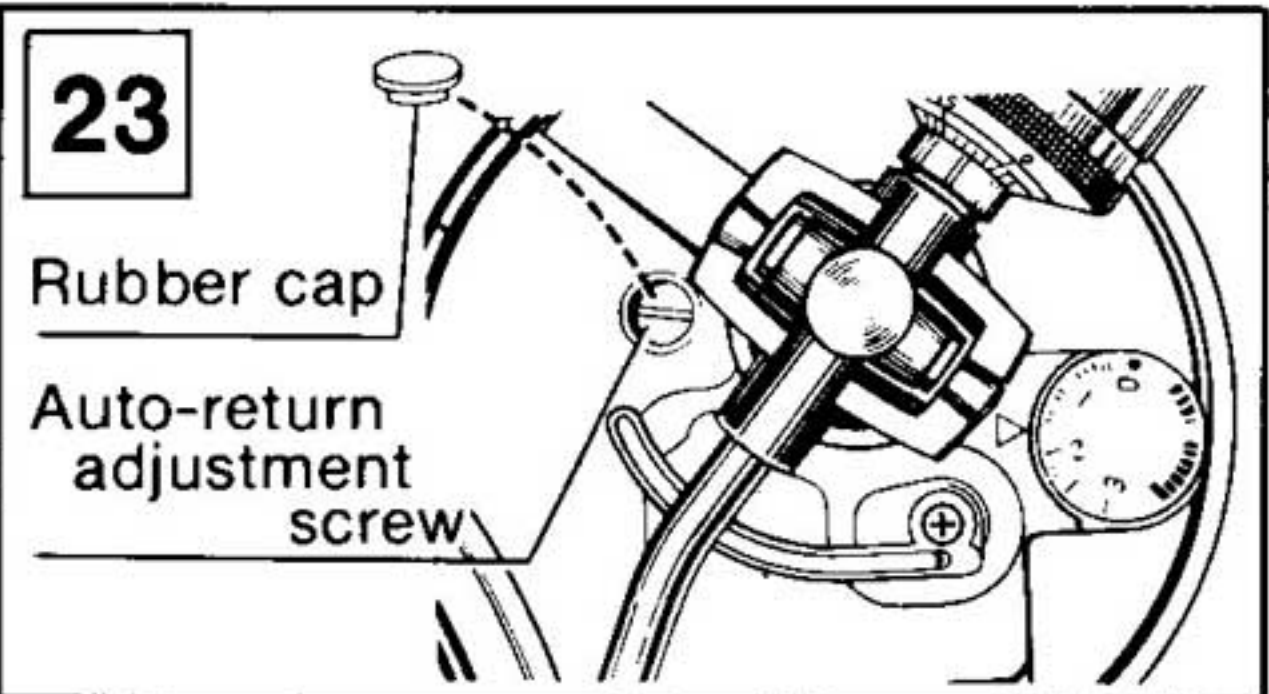
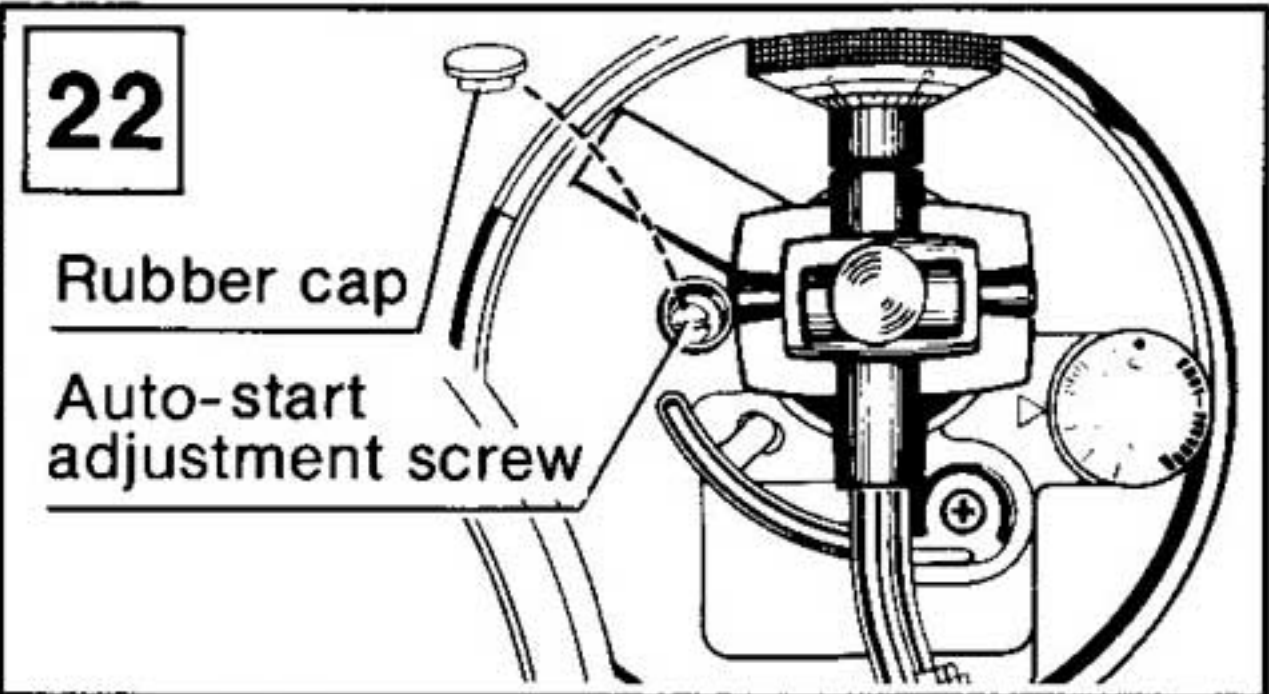
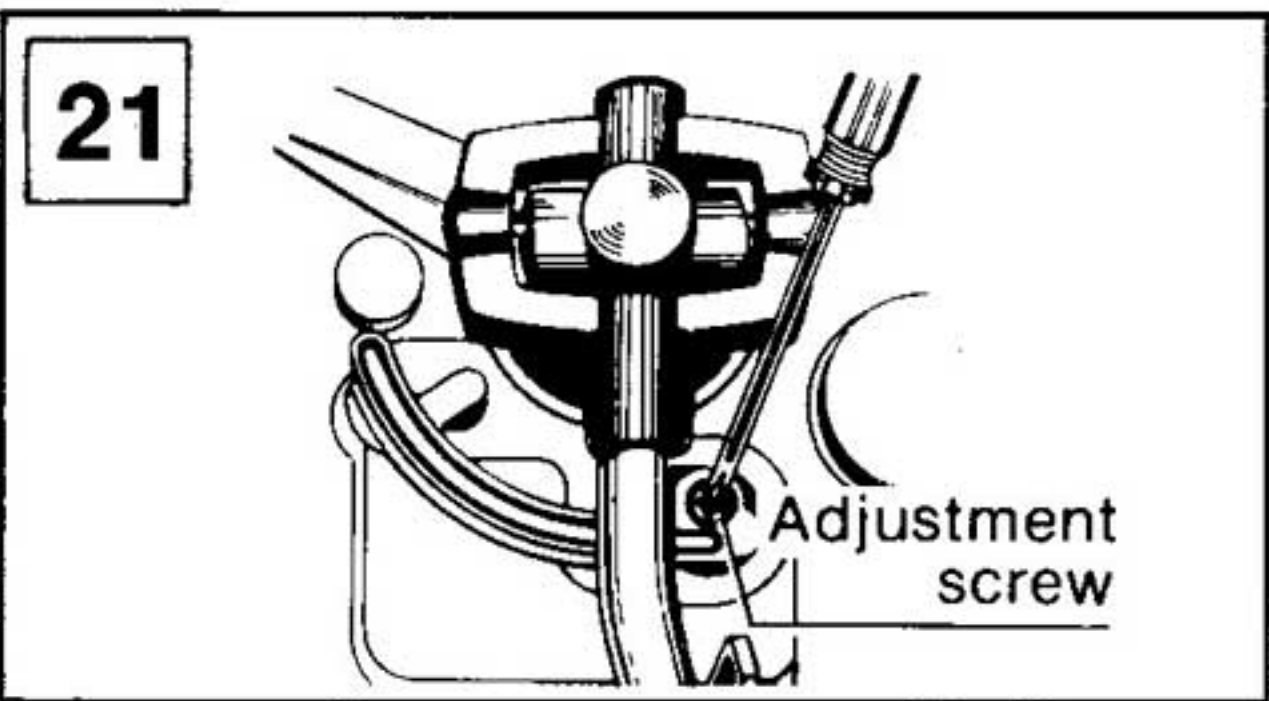
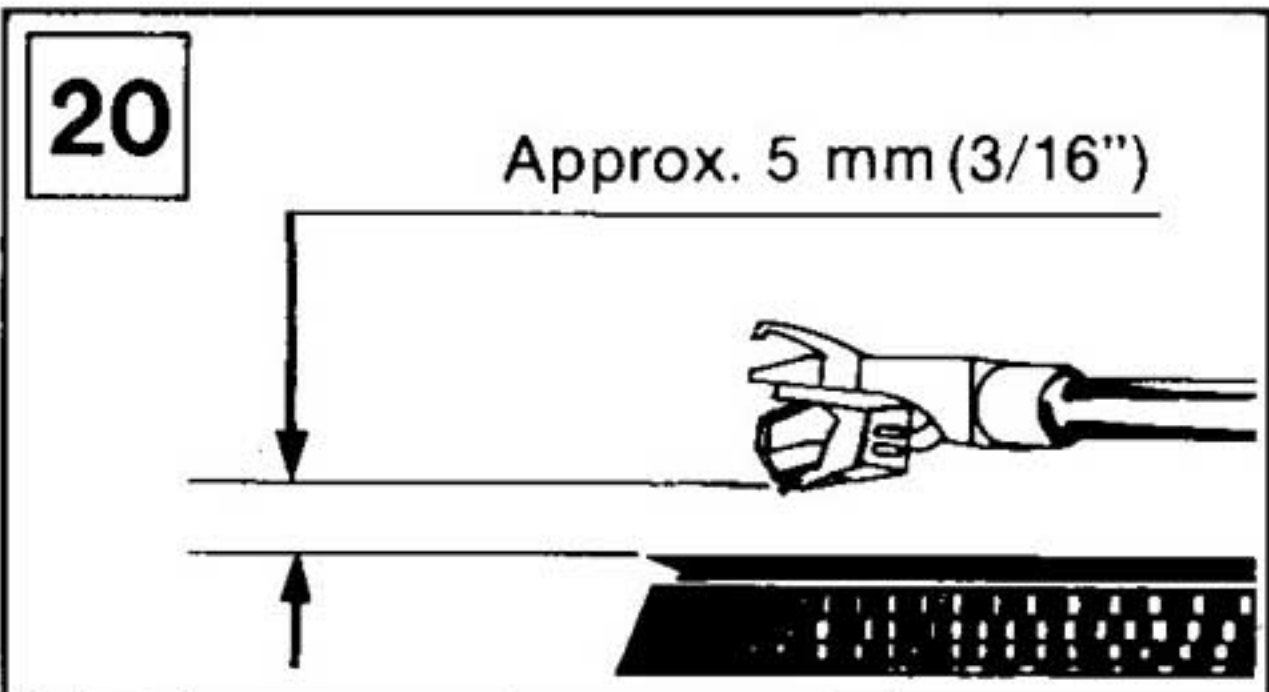
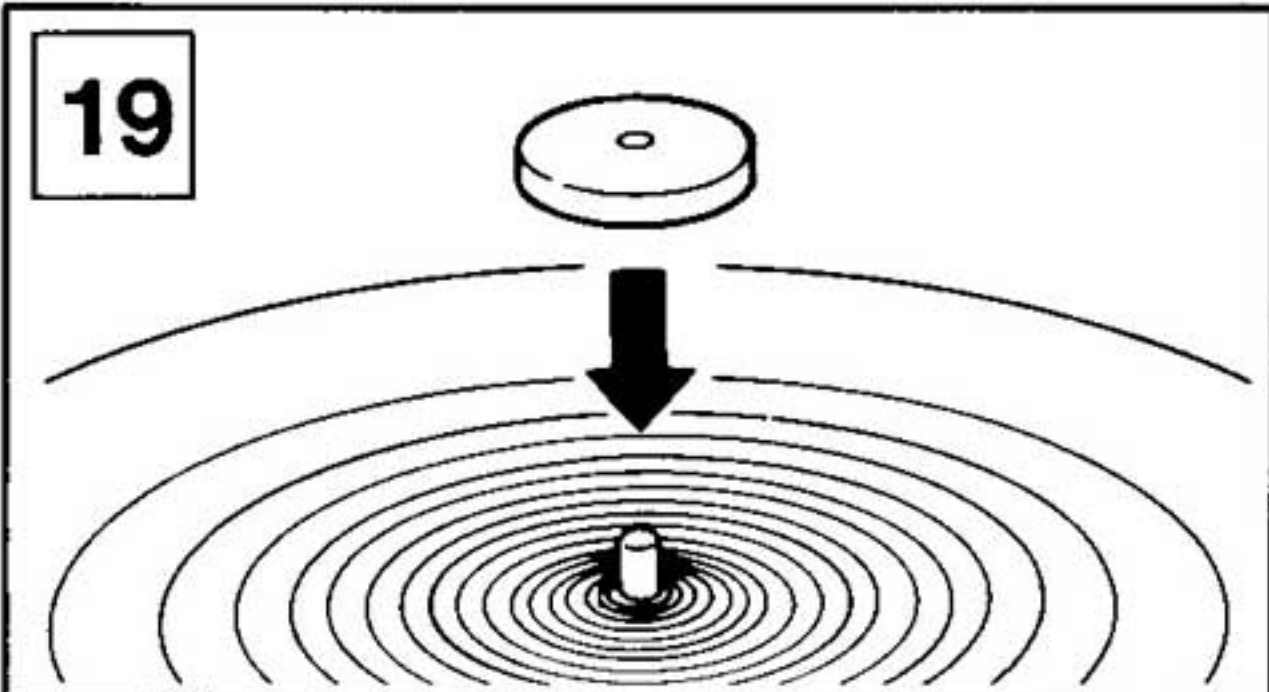
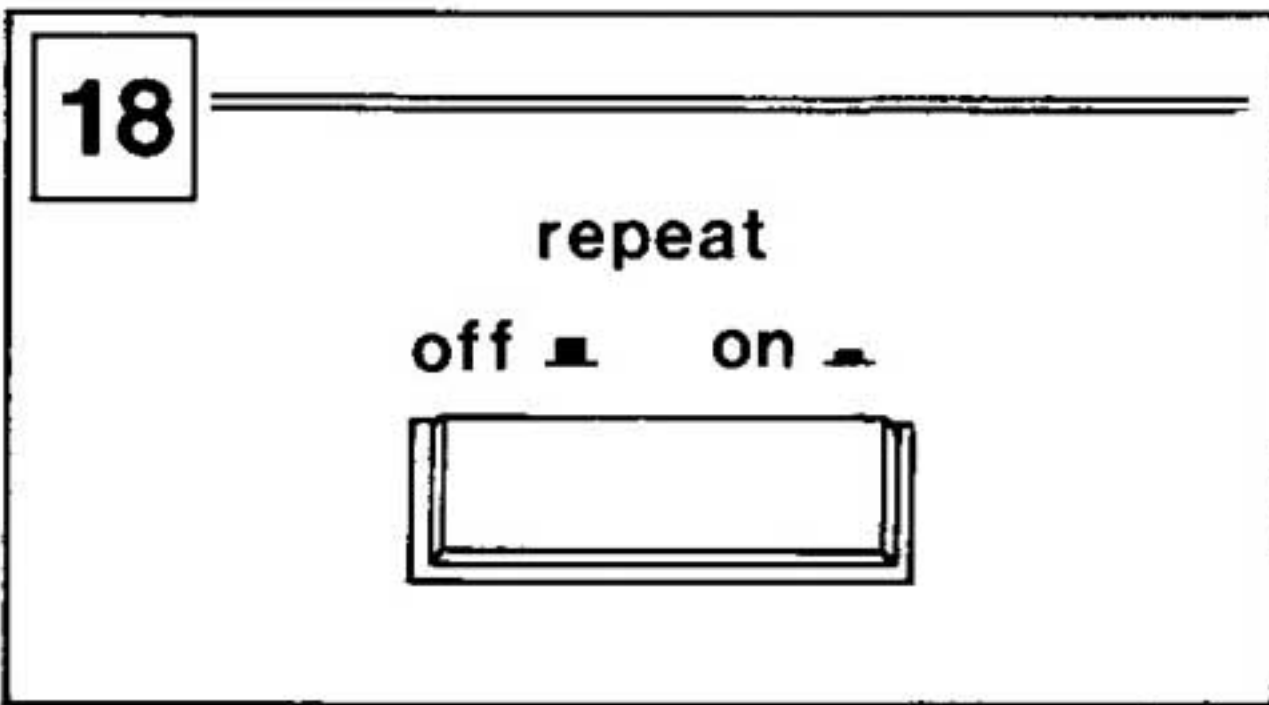
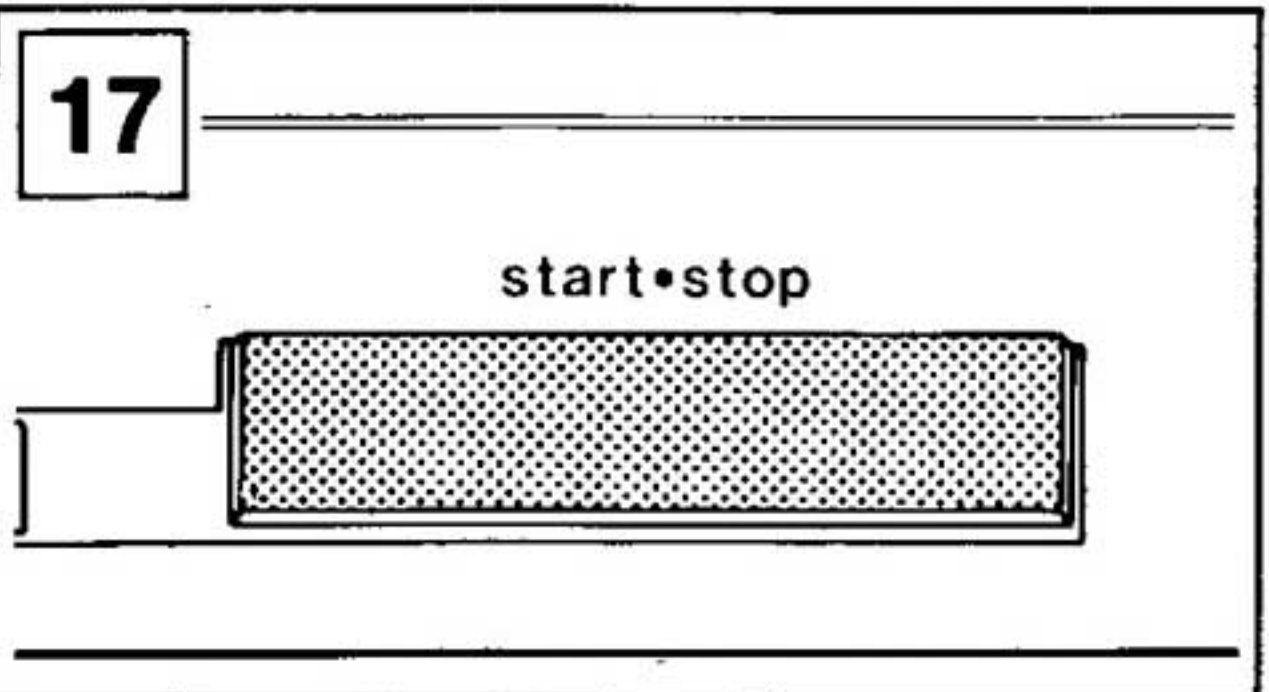
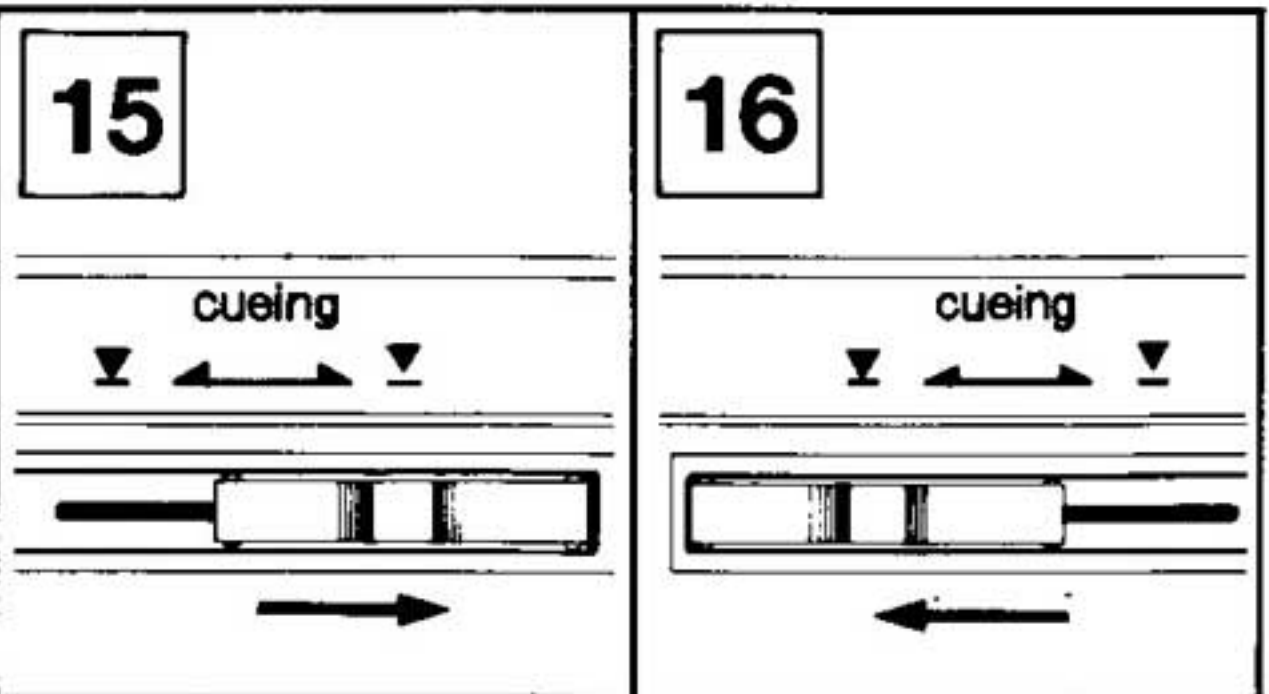
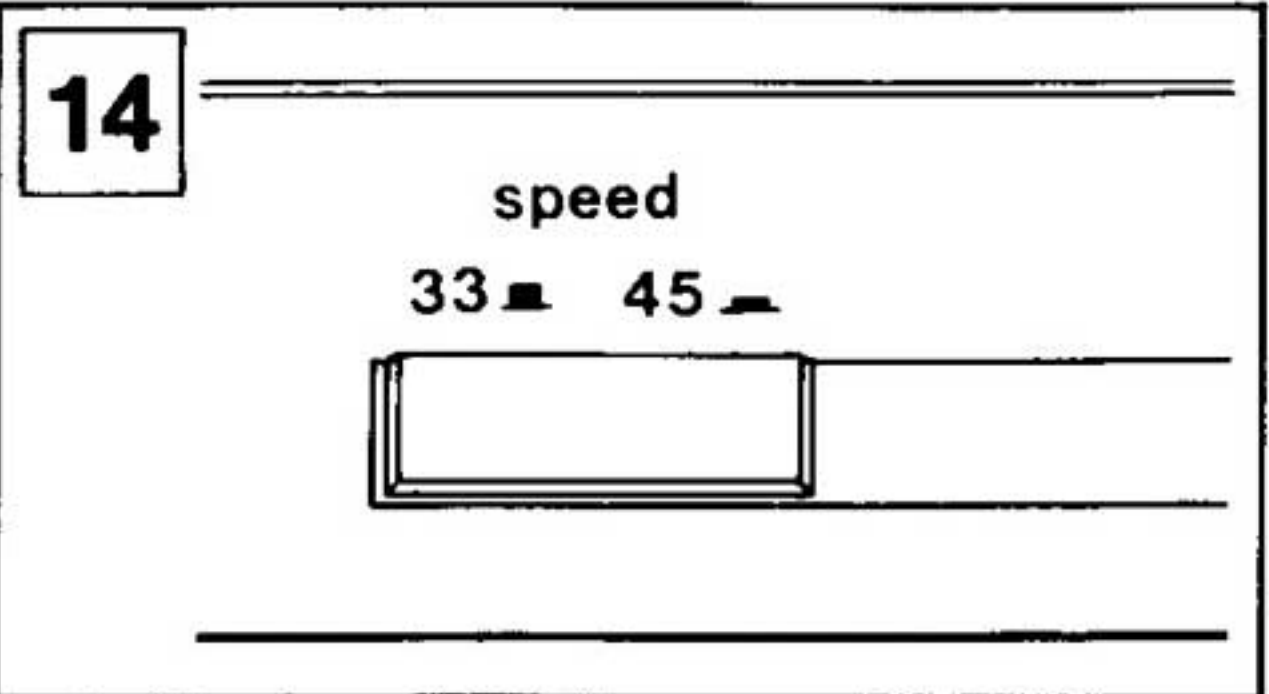
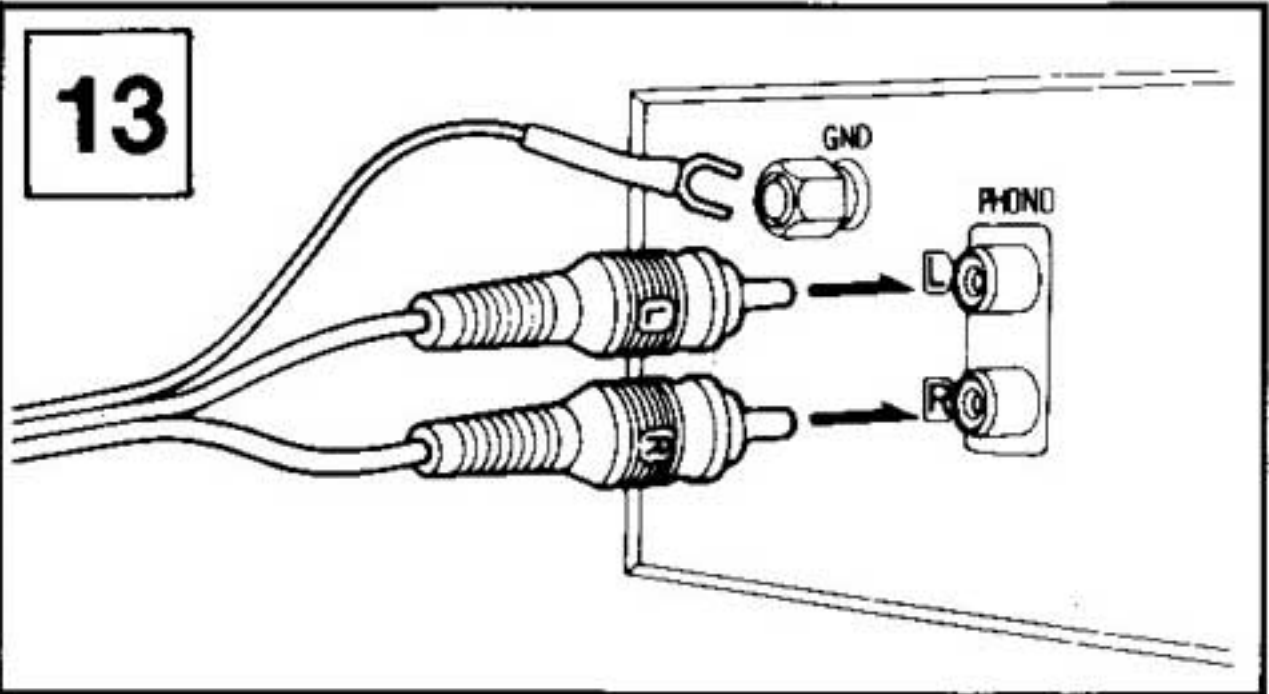
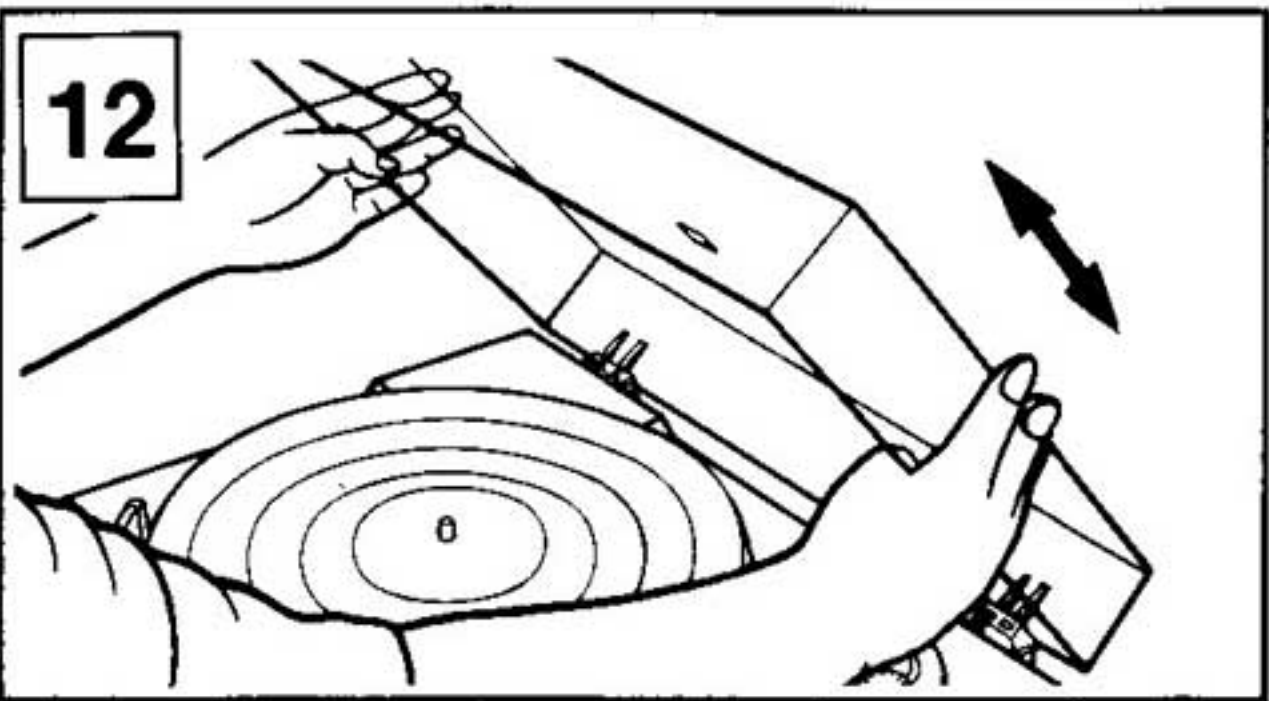
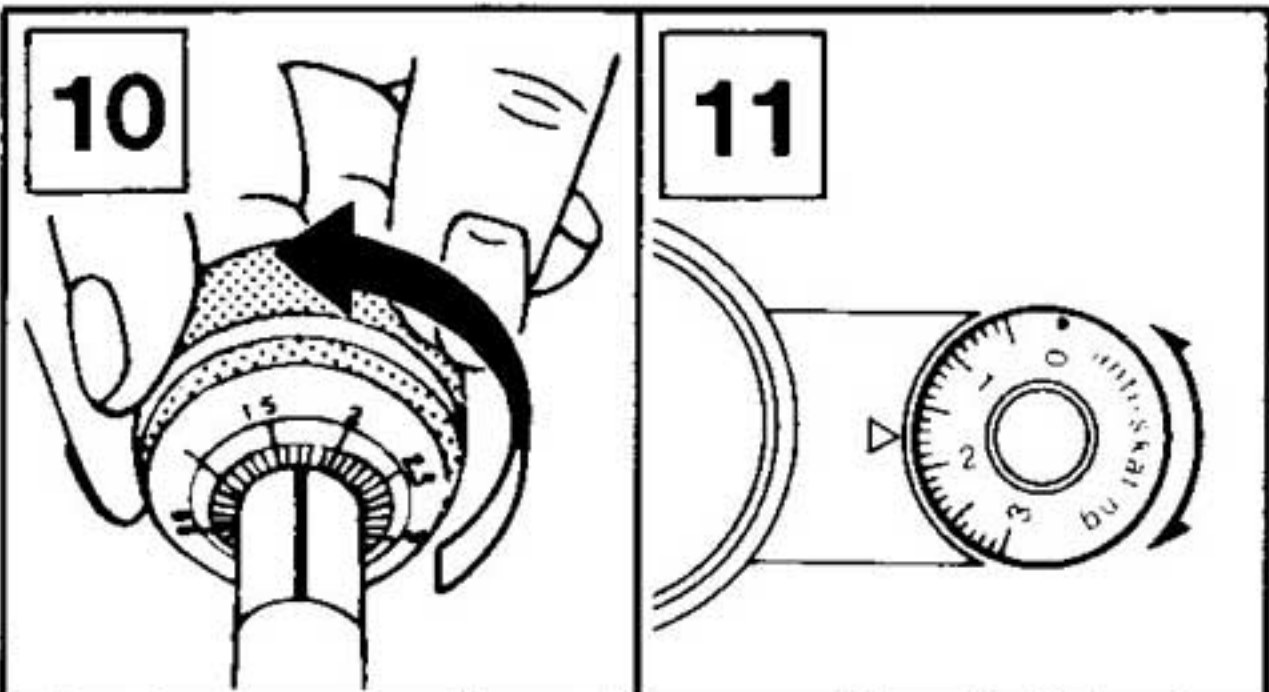
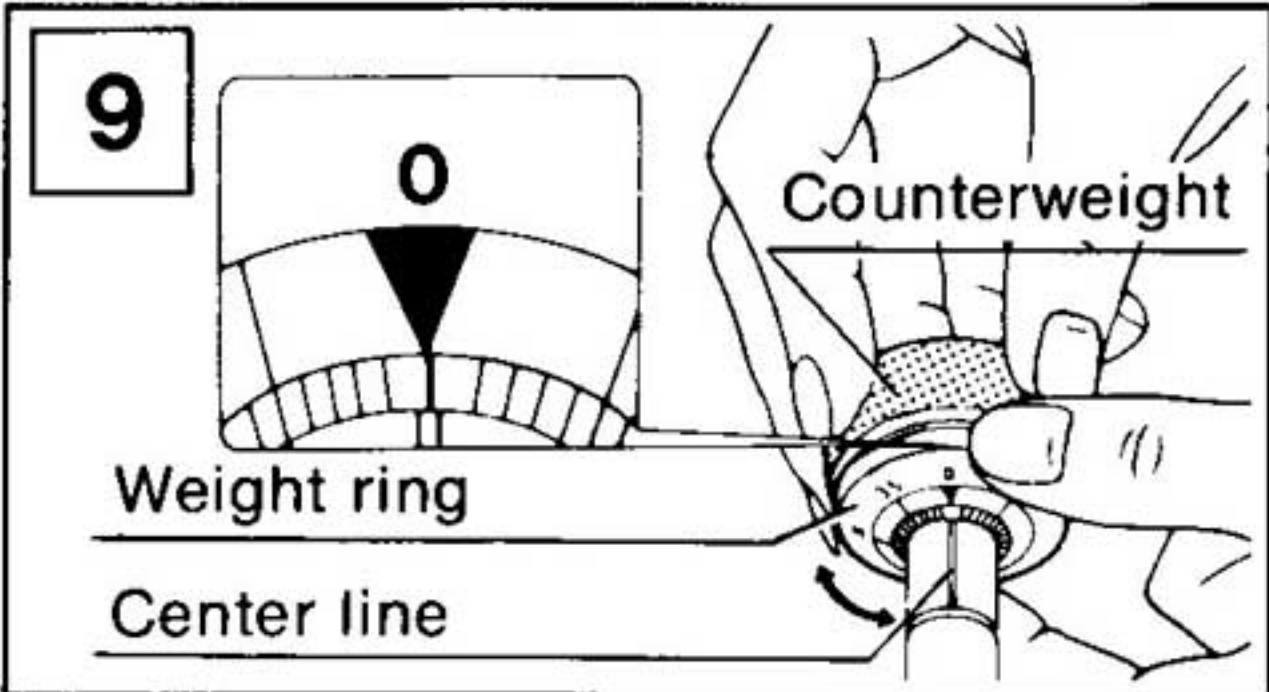
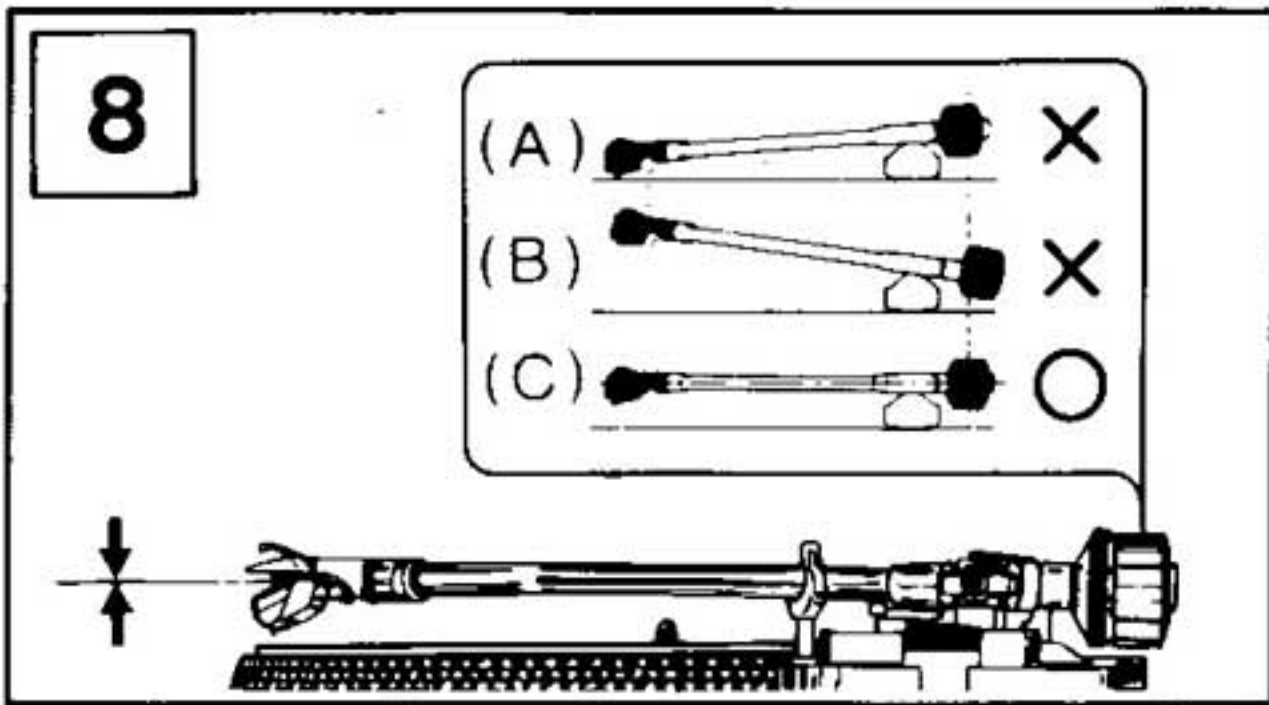
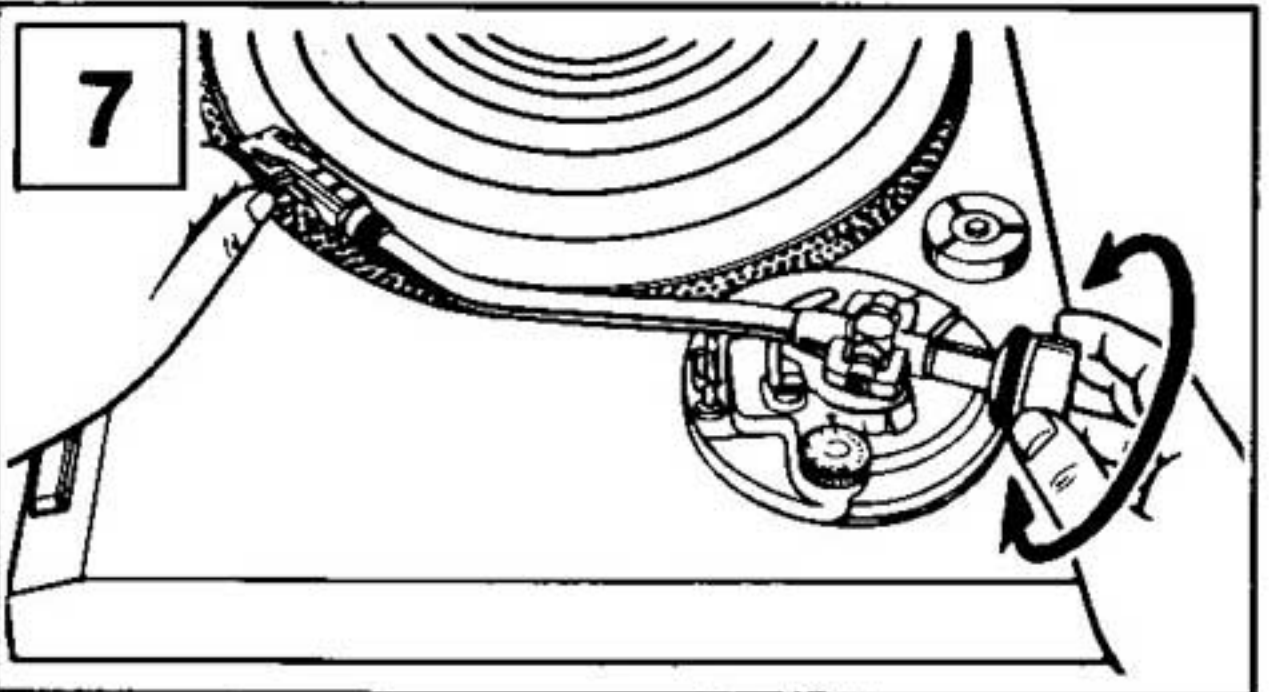
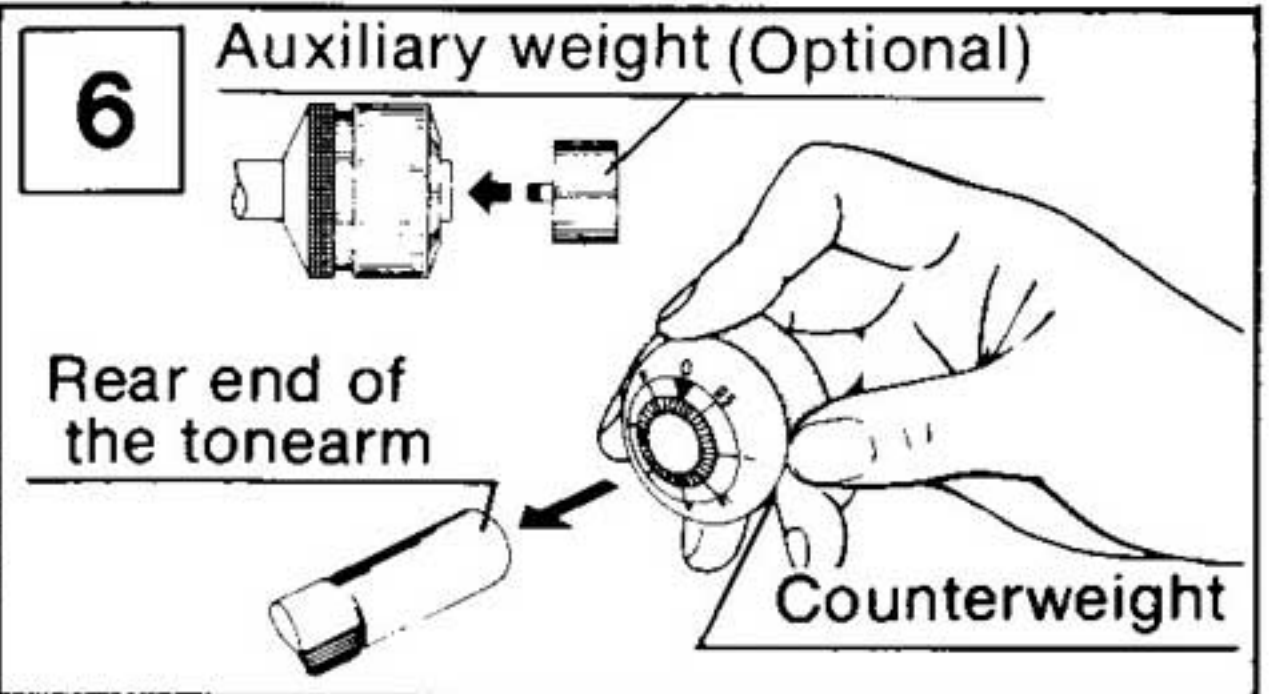
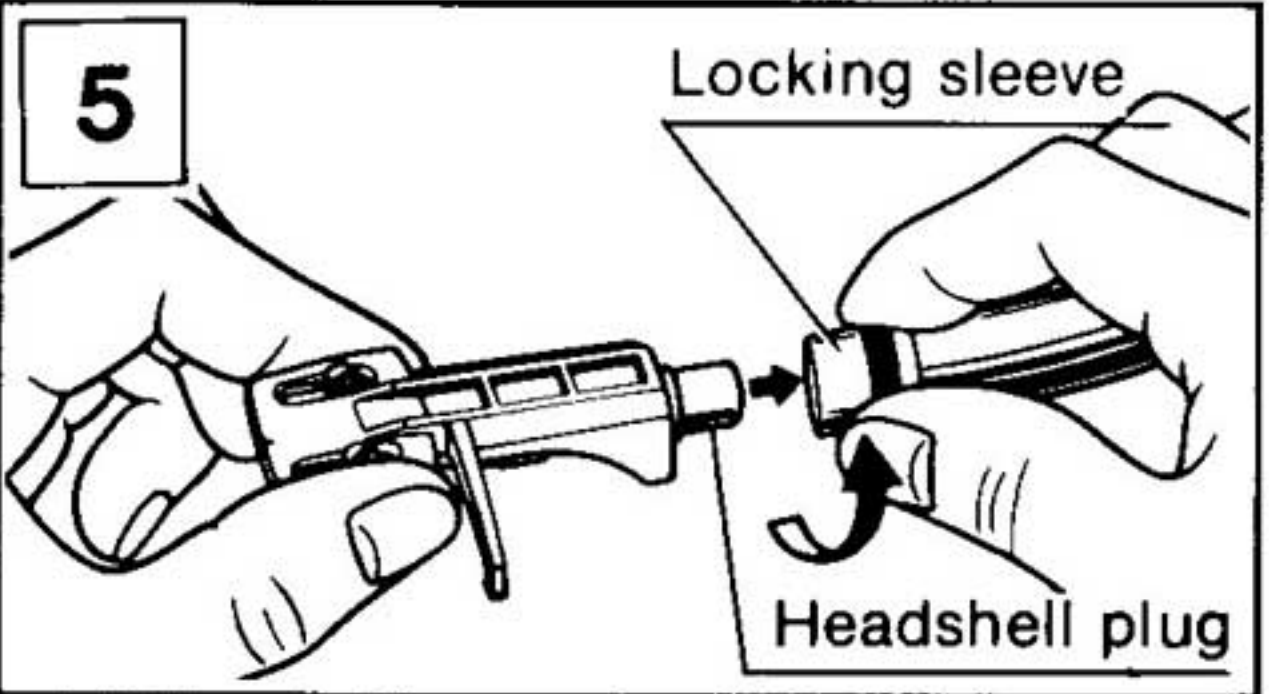
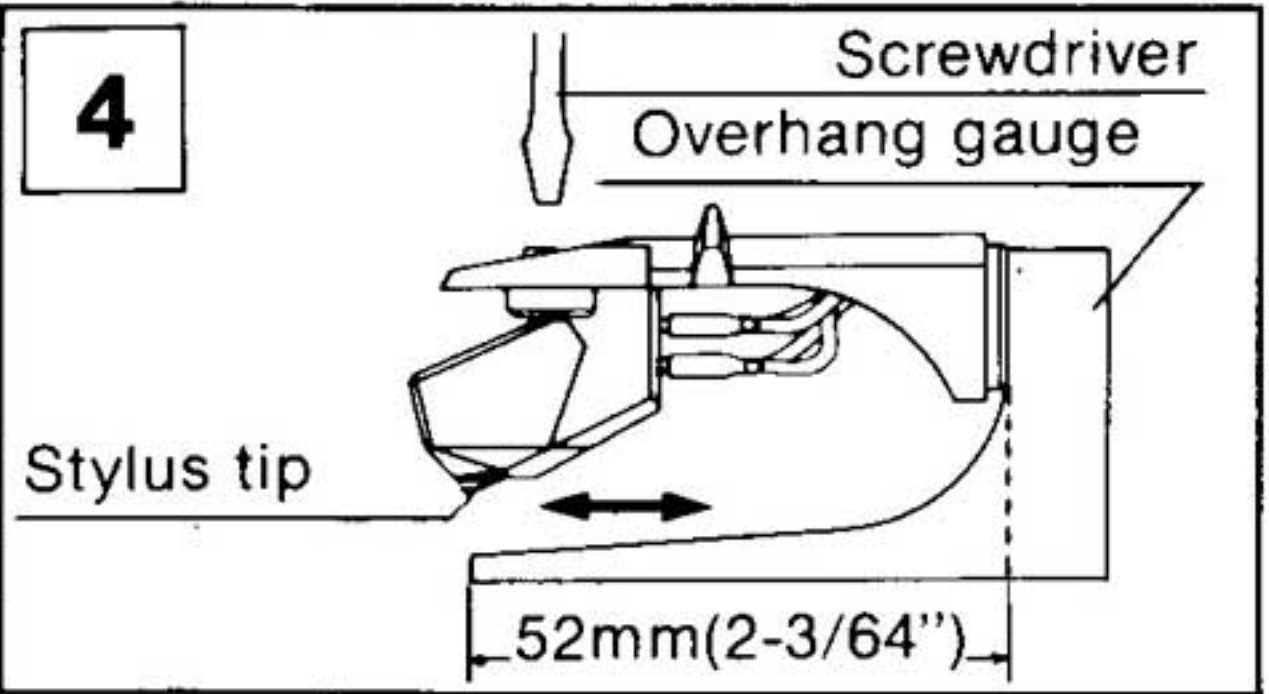
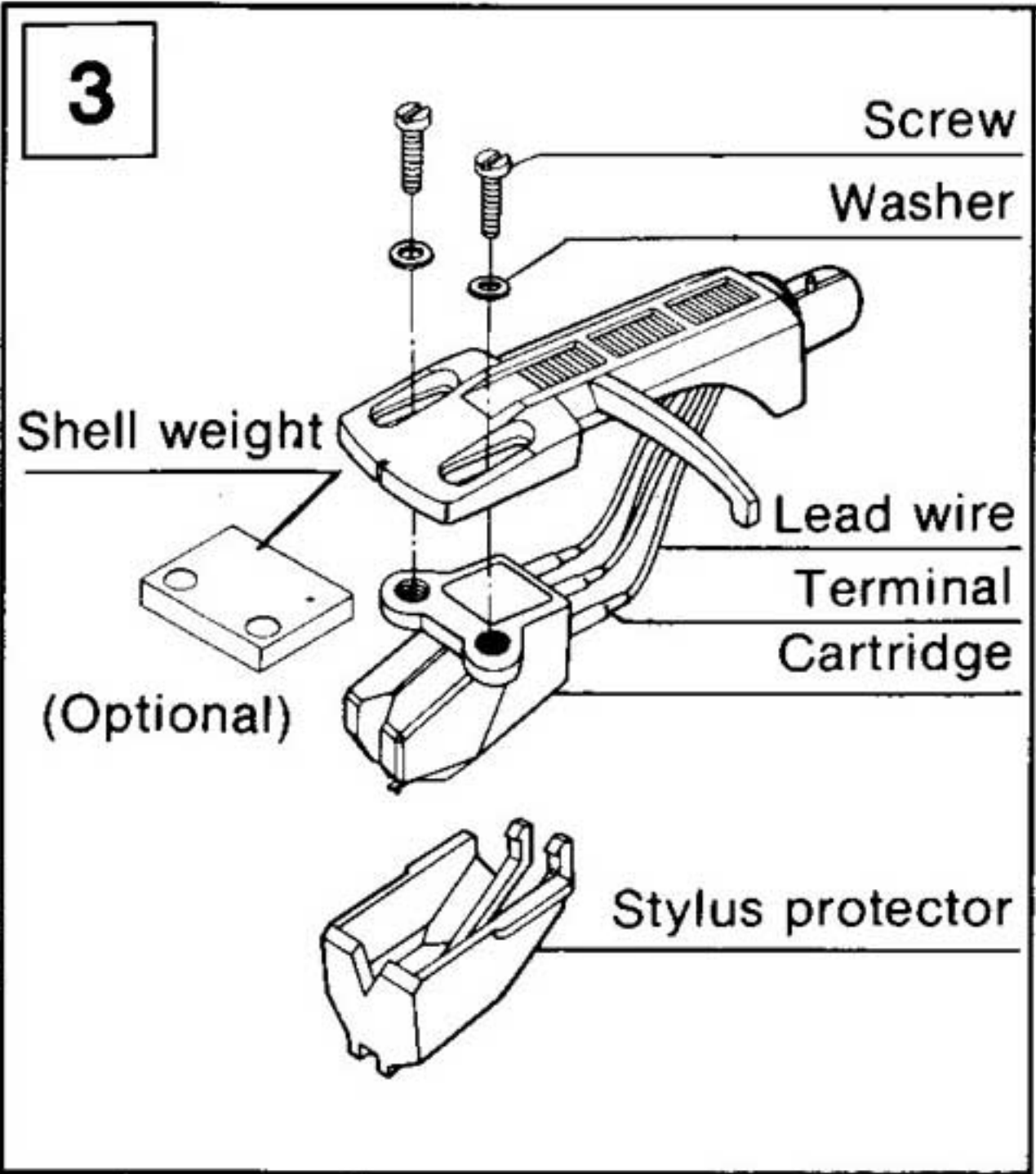
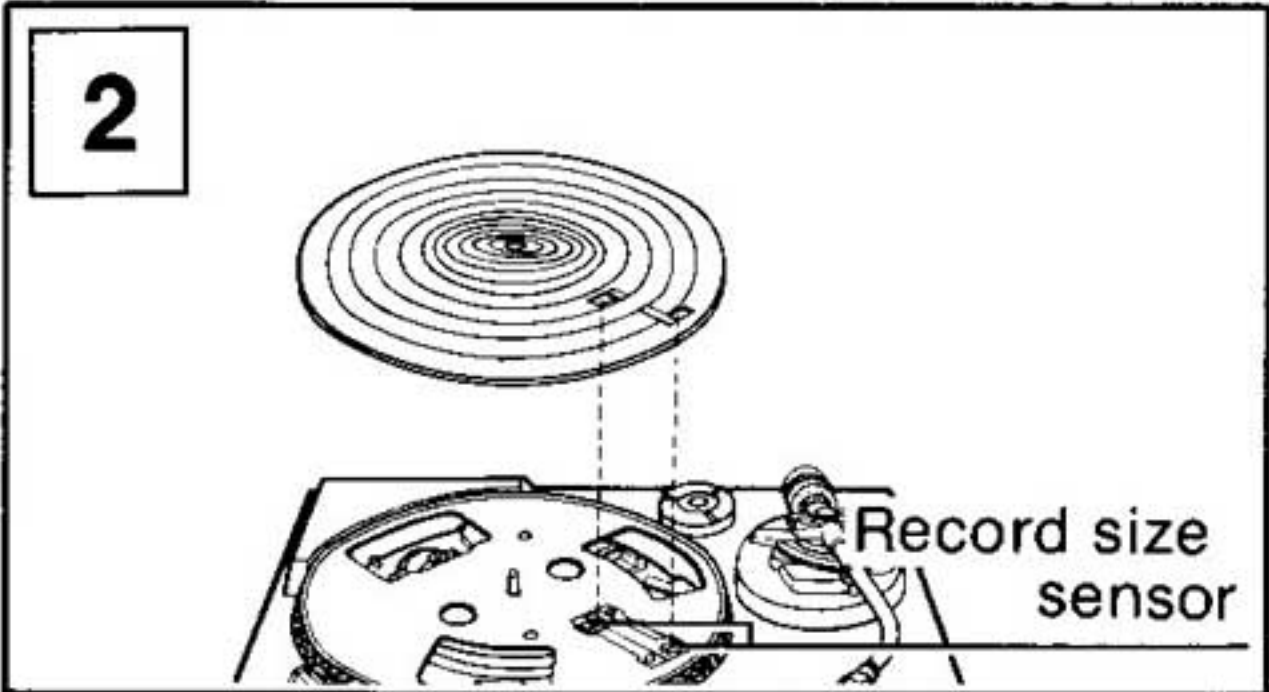
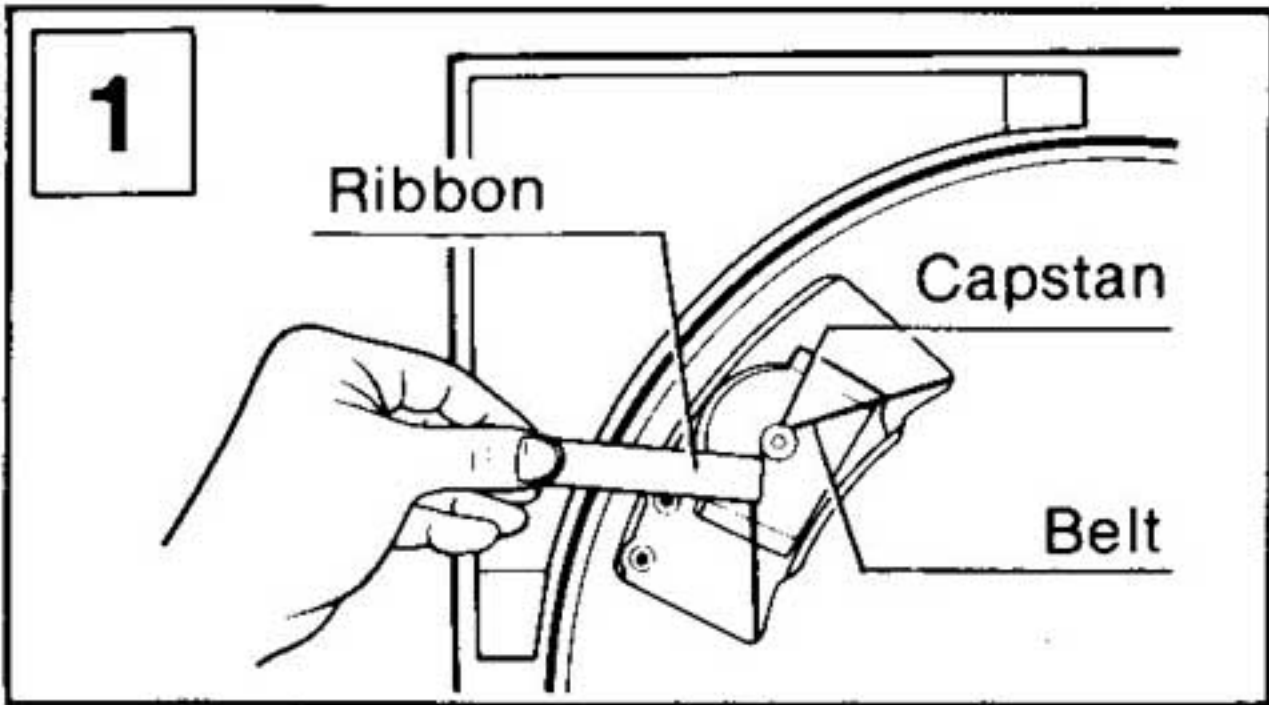
■ **Checklist of parts**

Turntable unit	1
Turntable platter	1
Turntable mat	1
Dust cover	1
45-rpm adaptor	1
Counterweight	1
Headshell	1
Overhang gauge	1

Parts identification



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



Assembly

Keep page 2 folded out while reading the instructions.

■ Installing the turntable platter

1. Place the platter on the center spindle.
2. Holding the belt by the ribbon, fit the belt over the capstan. Then remove the ribbon. (Fig. 1)
3. 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. 2)

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.

■ Cartridge installation

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. (Fig. 3)

■ Overhang adjustment (Fig. 4)

1. Insert the headshell in the gauge.
2. Loosen the screws and move the cartridge forward or backward until the stylus tip lines up with the edge of the gauge.
3. Tighten the screws without moving the cartridge.

Note:

Your cartridge is now adjusted for lowest tracking error and minimum distortion.
This gauge is exclusively designed for this tonearm.

■ Attaching the headshell (Fig. 5)

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.

■ Attaching the counterweight (Fig. 6)

Fit the weight onto the rear end of the tonearm.

■ About cartridge weight: (See chart below.)

Cartridges weighing between 5 and 7.5 g can be used on this tonearm.

If you purchase the optional auxiliary weight (part number: SFPWG17202), or shell weight (part number: SFCZB 30505), cartridges weighing up to 10.5 g can be used.

Supplied headshell in combination with other parts.		Allowable cartridge weight. (Included the cartridge mounting screws)	
A)	 Headshell only (8 g) (Optional)		
B)	 Shell weight (2 g) (SFCZB30505)		
C)	 (Optional) (Optional) Auxiliary weight (SFPWG17202)		
D)	 (Optional)		
Note: • Attach the shell weight between the headshell and the cartridge. (Fig. 3)		• Attach the auxiliary weight to the rear end of the tonearm. (Fig. 6) • 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 or call the toll-free number shown on the Directory of Authorized Servicenters (included with this unit) to locate the nearest Authorized Panasonic Parts Distributor.

■ Balancing the tonearm and adjusting stylus pressure (tracking force)

1. If your cartridge has a detachable stylus protector, remove it. 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. 7 and 8)

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. 9)
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. 10)
(Follow the cartridge manufacturer's recommendation.)
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.

■ Adjusting the anti-skating control (Fig. 11)

Set the anti-skating control to the same value as the stylus pressure.

Note:

When a cartridge with integral dust brush is used, follow the cartridge manufacturer's recommendation for adjusting both stylus pressure and anti-skating control.

■ Attaching the dust cover (Fig. 12)

Hold both sides of the cover and lower it into the hinge slots. To remove the cover, open it and pull upward.

Note:

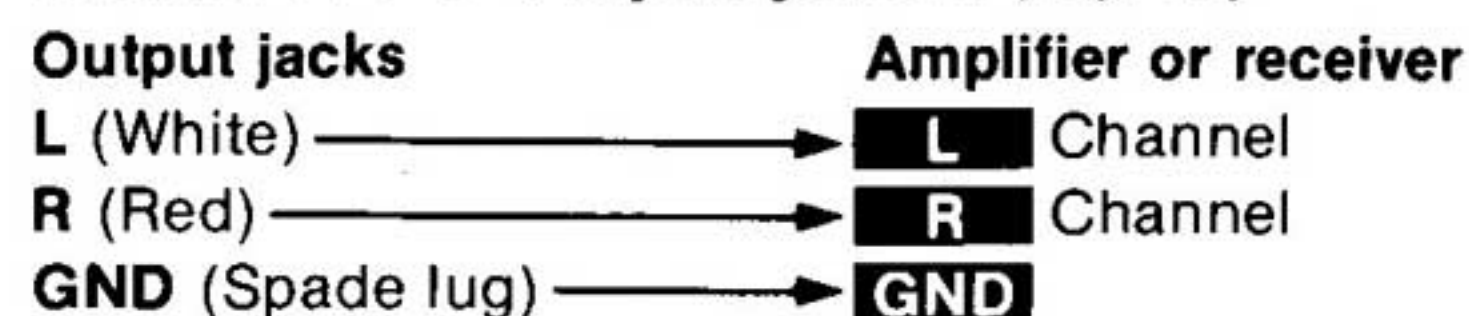
Opening or closing the cover during play may cause vibrations and groove skipping.
If you must open the cover during play, do so very gently.

Placement

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

Connections

■ Connect the output jacks. (Fig. 13)



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. (120 V, AC)

Operation

■ Manual play

1. Put a record on the turntable mat.
2. If the cartridge has a detachable stylus protector, remove it.
3. Release the arm clamp.
4. Push the speed selector to the correct speed. (Fig. 14)
5. Set the cueing control to the "▼" position. (Fig. 15)
6. Move the tonearm over the record. The strobe-illuminator/pilot lamp will light up and the platter will rotate.
7. Set the cueing control to the "▼" position. (Fig. 16)
The tonearm will descend and play will begin.
At the end of the record, the tonearm will automatically return to the arm rest and the turntable will stop.
8. Securing the tonearm helps avoid damage to the stylus tip.
The stylus protector should be attached for the same reason.

■ Automatic play

1. Perform steps 1—4 of manual playback.
2. Push the start/stop switch. (Fig. 17)
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 once or twice but tonearm will not move toward the center spindle.

■ Repeat play

1. Push the repeat switch. (Fig. 18)
To stop repeat play, push the repeat switch again.

Note:

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

■ Stopping the turntable

Push the start/stop switch.
The tonearm will return to the arm rest and the turntable will stop.

■ Temporarily interrupting play

Set the cueing control to the "▼" position. (Fig. 15)
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. 19)
Push the speed selector for 45-rpm (—).

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. 20)

If the clearance is too narrow or too wide (because of different cartridge dimensions, for example), turn the adjustment screw clockwise or counterclockwise. (Fig. 21)

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. 22)

Note:

The auto-start and auto-return adjustment screws are located together. (Fig. 22)

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. 23)

Auto-start position is the point where the stylus starts playing the record during automatic operation. Adjust with a 30 cm LP record on the platter.

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

1. Clamp the tonearm to the arm rest.
2. Take the rubber cap off.
Turn the screw with a screwdriver, clockwise or counterclockwise as necessary.
3. If the stylus lands too far in, turn counterclockwise.
4. If the stylus descends outside 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. 23)

(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 play has finished,

—turn counterclockwise.

If the tonearm fails to return after the final groove,

—turn clockwise.

■ Speed adjustment (pitch control) (Fig. 24)

There are strobe-lines cut on this turntable platter to indicate correct rotational speed.

If the strobe-line appears to be moving as the turntable rotates, adjust while playing a record.

1. Set the speed selector to the speed to be adjusted.
2. Watch the dot pattern on the side of the platter. Turn the pitch control one way or the other until the dots appear to stand still. This is the correct speed.

Turning the pitch control in the “+” direction increases the speed.

Turning the pitch control in the “-” direction decreases the speed.

Note:

Strobe dot pattern

This unit's strobe illuminator operates at the AC line frequency which generally has a 0.2% fluctuation.

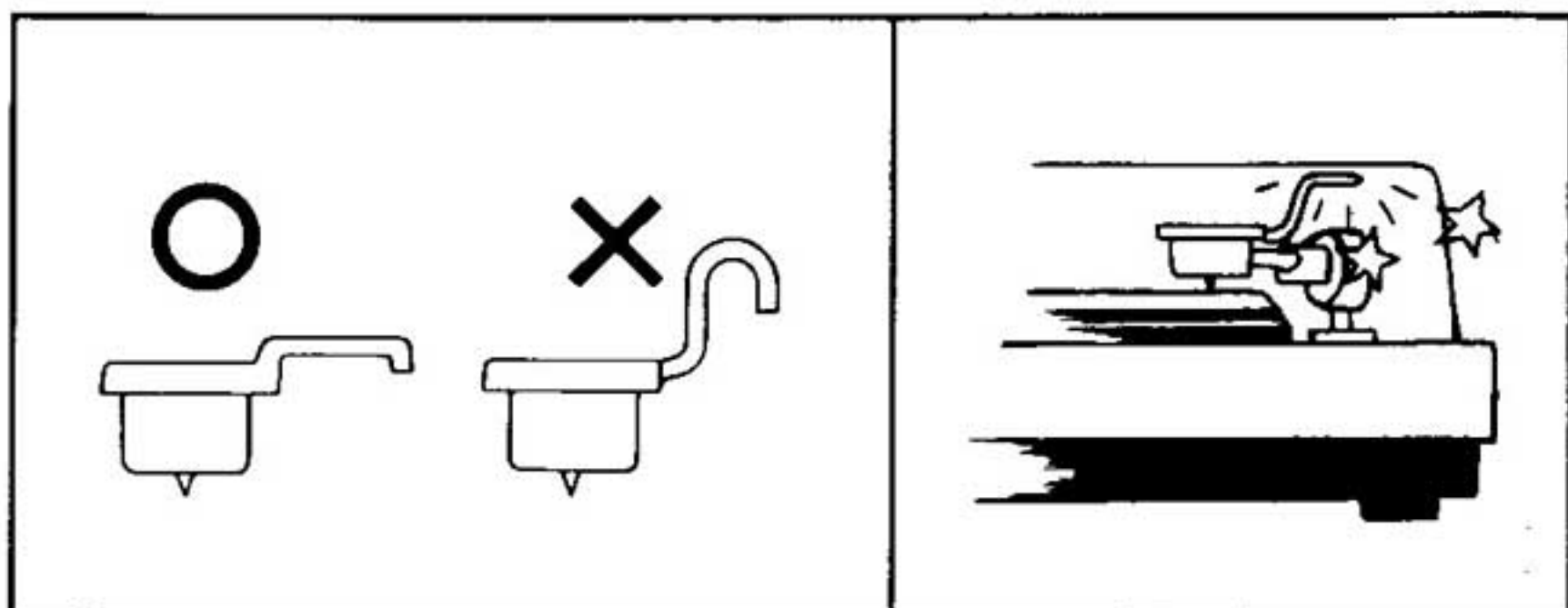
This fluctuation, when present, may make the strobe pattern appear to change. However, actual turntable speed does not change, because the DC motor is not affected by AC power line frequency.

Notes and maintenance

- **Do not touch or hold the tonearm during automatic operation (auto-start, auto-return).**

- **Avoid pressing on the platter while it is rotating.**
Do not try to hold it stationary.

- **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.

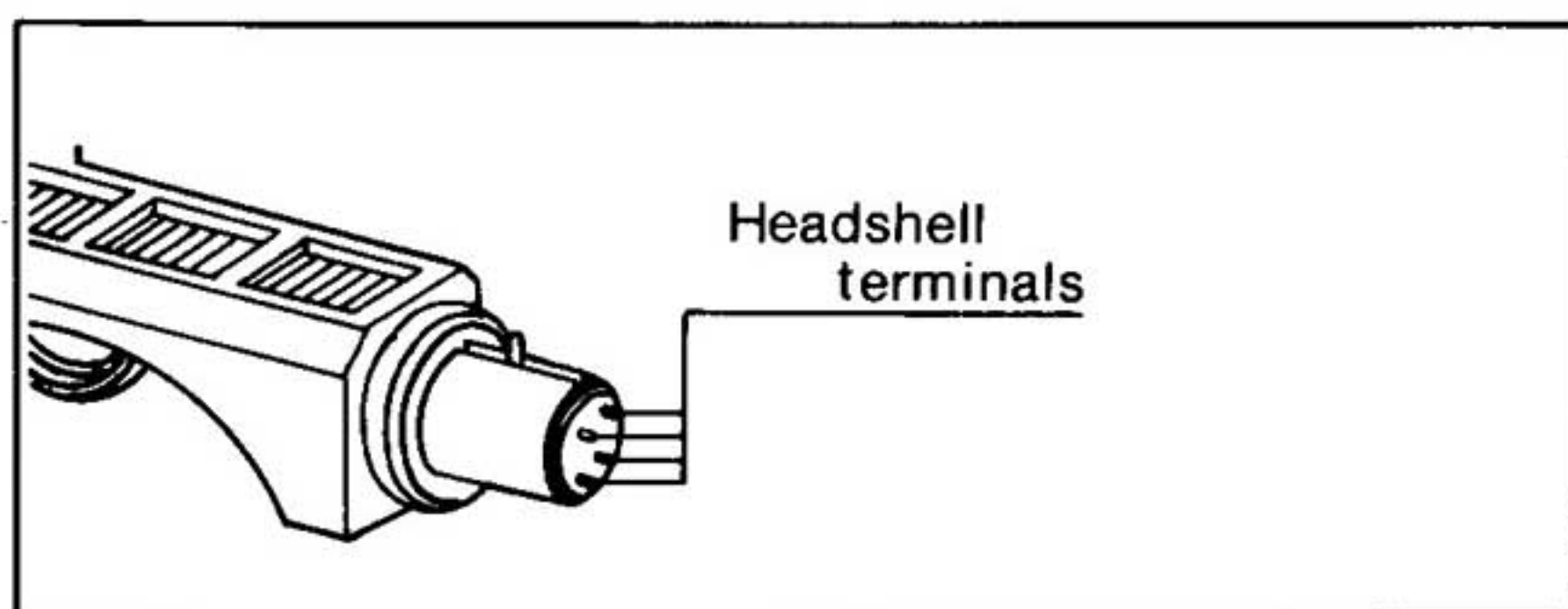


- **Before detaching or attaching a headshell, be sure to turn off the power on the amplifier or receiver.**

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.

- **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.
Do not use chemically treated dust cloths. Do not expose the cover to insecticide spray.
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.

- **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.
- 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.**

Follow "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 size (EIA, IEC, DIN, JIS) are 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.
- Badly warped records.

- **How to remove and install the turntable platter.**

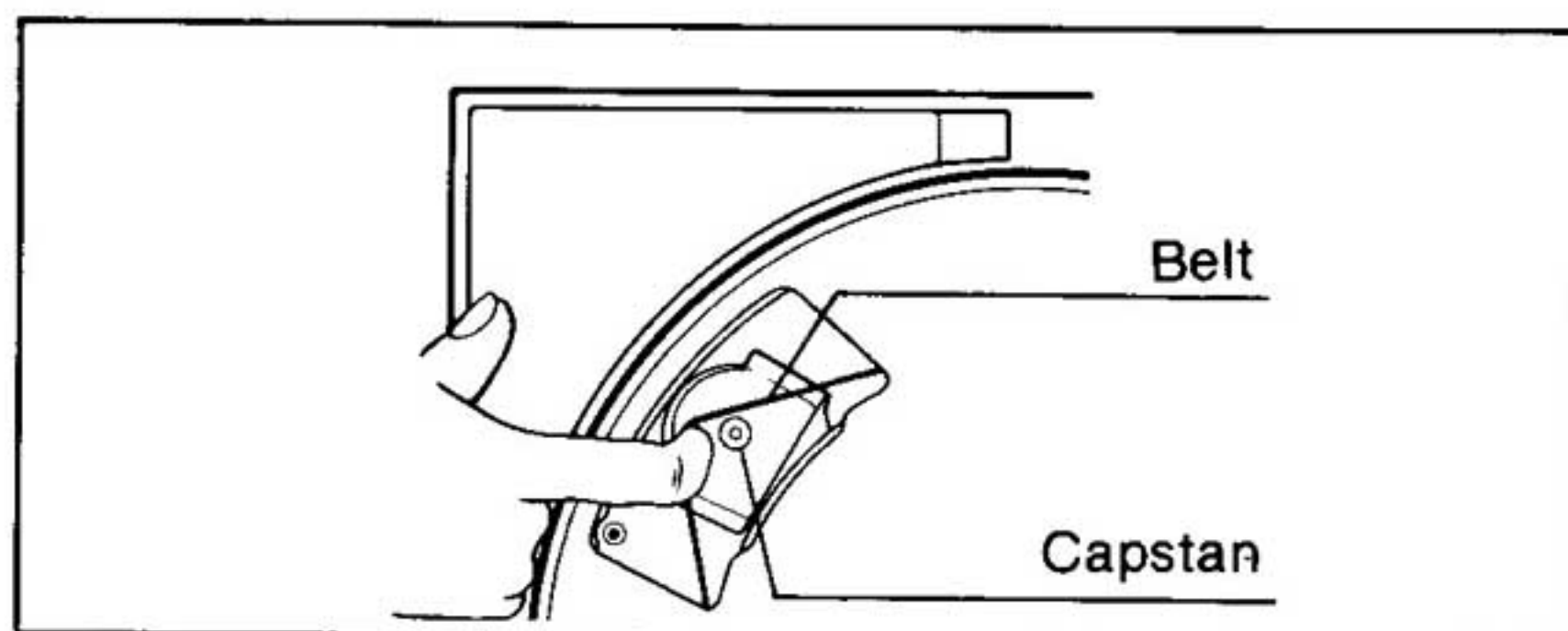
The belt is connected to the capstan and the inner drive arm of the platter.

Before removing the platter, release the belt from the capstan.

When reinstalling the platter, lower it over the turntable shaft and then put the belt onto the capstan.

Note:

Be careful not to let oil or grease contact the belt.
If grease inadvertently contacts the belt, disconnect the AC power plug first and wipe the belt clean with alcohol.



Troubleshooting guide

Problems	Causes	Solutions
■ Unit does not rotate. (The strobe-illuminator/pilot lamp does not light up.)	<ul style="list-style-type: none"> • Power cord not plugged in. • The amp is not turned on. (This applies when the unit is plugged into amp's "switched" AC outlet.) 	<ul style="list-style-type: none"> • Check all connections. • Turn on amp.
■ There is no sound during record play.	<ul style="list-style-type: none"> • Speaker cords are disconnected. • Phono output cords are disconnected from amp's phono input jacks. • Amp's tape monitor switch is set to "tape" position. • Amp's input source selector is set to "tuner" or "aux". • Amp's speaker selector is at "off" position. • Amp's volume is turned all the way down. 	<ul style="list-style-type: none"> • Connect speaker cables. Check correct polarity (+ and -). • Connect phono output cords. Check correct L and R connections. • Set to "source" when not playing tapes. • Set to "phono". • Set to "main" or "remote". • Turn up volume.
■ Auto-play does not begin when start/stop switch is pushed.	<ul style="list-style-type: none"> • The tonearm is secured with the arm clamp. 	<ul style="list-style-type: none"> • Release the arm clamp.
■ Volume is too low.	<ul style="list-style-type: none"> • Amp muting is on. 	<ul style="list-style-type: none"> • Set to 0 dB or off.
■ There is a hum.	<ul style="list-style-type: none"> • Ground is not connected. 	<ul style="list-style-type: none"> • Connect to amp's GND terminal. • Try reversing the AC power plug in the wall socket. • Place the turntable further away from the power amp (or integrated amp).
■ Stylus skips grooves.	<ul style="list-style-type: none"> • Record is warped. • Turntable is placed where it easily picks up vibrations. • Dust or dirt is on the stylus tip. 	<ul style="list-style-type: none"> • Check for warps and try another record. • Set the turntable in a position where it will be less susceptible to external vibrations. • Set the stylus pressure to the maximum recommended value for the cartridge. • Clean stylus tip with a brush.
■ Record sounds scratchy and/or muffled.	<ul style="list-style-type: none"> • Record is scratched or damaged. • Record is dusty or dirty. • Stylus tip is dusty. • Stylus tip is worn. 	<ul style="list-style-type: none"> • Adjust amp's tone controls to cut out high-frequency noise. • Use a record cleaner to remove dust and dirt from grooves. • Use the brush to clean stylus tip. • If there is still noise when a good new record is played, you should replace the cartridge or stylus.
■ During auto-play, the stylus does not drop into the lead-in grooves.	<ul style="list-style-type: none"> • The record diameter does not conform to industry standards. • The record of diameter is 25 cm (10"). 	<ul style="list-style-type: none"> • Follow manual play. • Automatic size selection does not function for 25 cm (10") record.
■ Tonearm does not automatically return to the arm rest at the end of record.	<ul style="list-style-type: none"> • Record does not conform to industry standard dimensions. 	<ul style="list-style-type: none"> • Push the start/stop switch.

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. Do not allow water or any foreign object to get inside this unit.

Do not 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.

Do not 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 on or 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 source.

Be sure to connect the unit only to the type of power source 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, crushed or frayed. 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 an extended period of time:

Be sure to disconnect the power cord from the wall outlet.

11. Maintenance

Refer to the operating instructions for details.

12. Never attempt repairs yourself:

- If the power cord or plug is damaged.
- If a foreign object or liquid falls into the unit.
- If the unit is exposed to rain.
- If the unit does not function normally, or if operation shows a distinct change in performance.
- If the unit has been dropped and the cabinet or chassis are damaged. . . etc.

Unplug the power cord and have it checked by a qualified technician (or the dealer from whom the unit was purchased or the nearest servicer).

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 servicer).

Specifications

■ General

Power supply:	120 V, AC, 60 Hz
Power consumption:	3 W
Dimensions: (W×H×D)	43 × 10.6 × 37.5 cm (16-15/16" × 4-7/32" × 14-3/4") (Maximum height when top (dust cover) is open.) 43 × 37 × 42 cm (16-15/16" × 14-9/16" × 16-17/32")
Weight:	4.3 kg (9.5 lb.)

■ Turntable section

Type:	Automatic turntable Auto start Auto return Auto stop Repeat play Manual play
Drive method:	Belt drive
Motor:	DC motor
Drive control method:	F G servo control
Turntable platter:	Aluminum die-cast Diameter 30.4 cm (12 inches)
Turntable speeds:	33-1/3 rpm and 45 rpm
Pitch control:	6% adjustment range
Wow and flutter:	0.045% WRMS (JIS C5521) ±0.06% peak (IEC 98A Weighted)
Rumble:	-70 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
Offset angle:	22°
Stylus pressure	
adjustment range:	0—2.5 g
Applicable cartridge	
weight range:	(See page 3)
Headshell weight:	8 g

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

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