



YAMAHA YP-D8

DIRECT DRIVE TURNTABLE WITH PHOTO ELECTRICAL SENCING AUTO STOP

OWNER'S MANUAL



Yamaha thanks and congratulates you on your purchase of the YP-D8 stereo turntable unit. Yamaha takes special pride in the direct drive system which insures quiet, precise drive of the YP-D8 heavyweight turntable by means of a powerful DC hall motor. This product is the results of Yamaha's tremendous resources in turntable technology: photo-electric detection for the auto-stop function, a high-sensitivity tonearm, heavyweight turntable platter, and a cabinet in which resonances have been suppressed. In order to obtain from your YP-D8 the long years of service of which it is capable, please read this instruction manual carefully.

Features

High Sensitivity Tonearm

This high sensitivity S-type arm, on its gimbal-type supports, has a vertical sensitivity of only 3 mg and still only 5 mg in the horizontal direction.

Large Acoustic Feedback Margin

The heavyweight tonearm support consists of an arm base and arm stand which together weight a full kilogram. In combination with the aluminum alloy diecast headshell, this protects the tonearm from sympathetic vibration and affords a large howling margin.

Heavyweight Turntable And Powerful FG Servomotor (DC)

Driven by a powerful FG servomotor (DC), the heavyweigh

2.7 kg, 1

diameter of 315 mm. The large-sized turntable falls within the heavyweight class and its drive motor is controlled by an FG (Frequency Generator) servo control circuit. This 12-pole, 24-slot DC motor packs sufficient power to drive the heavy turntable, because of its starting torque of

1.0Kg-cm.

Non-Contact Photo-Electric Speed Detection Auto-Stop

As the cartridge stylus enters the innermost groove, the tonearm and cueing lever are lifted automatically and the electrical power is switched off. The photo-electric detector and the auto-stop circuit used ensure smooth functioning.

Heavyweight Particleboard Cabinet With Excellent Seal

The quality of a cabinet is a key factor in the quality of the sound. This specially sealed cabinet is made of particleboard. Together with the large insulator, it protects the cartridge stylus tip from harmful outside jarring.

Others

The head shell and tonearm of contacts are gold plated, the push-button controls are large and easy to operate, and the unique Yamaha combination of superlative design and specially engineered easy-to-operate controls make the YP-D8 a pleasure to own and to use.

Caution; Read This Before Operating

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

IMPORTANT!

Please record the serial number of your unit in the space below

Model Name **YP-D8**

Serial No. _____

The serial number is located on the rear of the cabinet.

Retain this Owner's Manual in a safe place for future reference.

YP-D8

CAUTION; READ THIS BEFORE OPERATING YOUR YP-D8

1

The YP-D8 is a sensitive piece of precision audio equipment. This manual is required reading if you are to get the best from it.

2

Note carefully that, if you push the Speed Selector Push Switch when the plug is not plugged into an AC outlet, the OFF switch will not revert to its original position even after pressing. Once you plug into an AC receptacle, however, it returns to the original position and normal operation is resumed.

3

Be very careful not to drop or jar the YP-D8, particularly after it has been fully assembled and all adjustments made. If it is accidentally bumped, check carefully that nothing has gone out of adjustment, or readjust accordingly.

4

When the YP-D8 is installed beside your audio amplifier, avoid putting the tonearm assembly on the same side as the power transformer of the amp.

5

Locate the YP-D8 in a flat and level place, out of the direct rays of the sun, avoiding locations subject to vibration and excessive dust, heat, cold or moisture. Also avoid placing it directly in front of, or too close to – your speakers.

6

If the YP-D8 ever has to be relocated, carry it with extreme care. Better still, retain the original packing, and carefully re-pack it for transit.

7

Do not attempt to clean any accumulations of dirt with chemical solvents (such as alcohol or benzene). Wipe only with a clean, completely dry cloth.

8

Do not assume that your YP-D8 is faulty before reading the section on 'Trouble Shooting,' which details common operating errors.

9

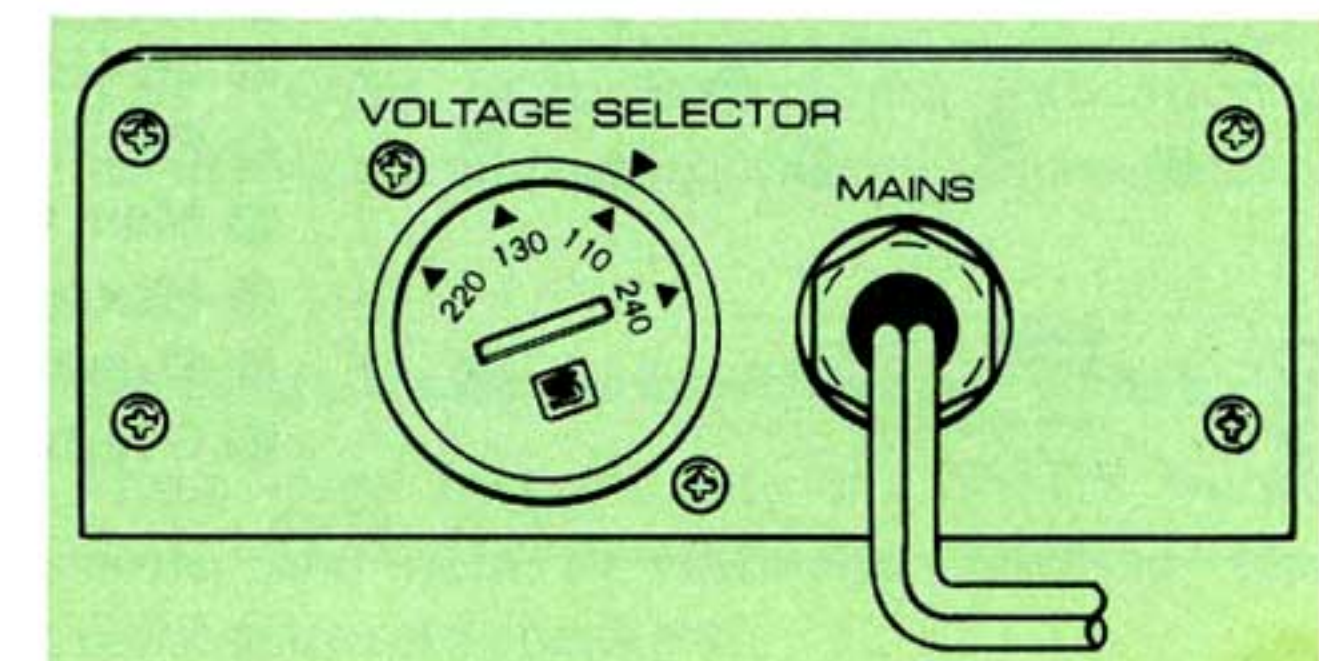
Keep this manual in a safe place for future reference, and refer to it frequently until you are fully familiar with your YP-D8.

10

Whichever high performance cartridge you buy for use with the YP-D8, be sure to keep the stylus tip free from accumulated dirt: this is the major single source of poor quality from records.

11

Voltage selector switch on the rear of the YP-D8 must be set for your local mains voltage *BEFORE* plugging in the AC main supply. Voltages are 110/130/220/240 V AC, 50/60Hz. U.S.A. and Canadian models are not provided with the voltage selector.



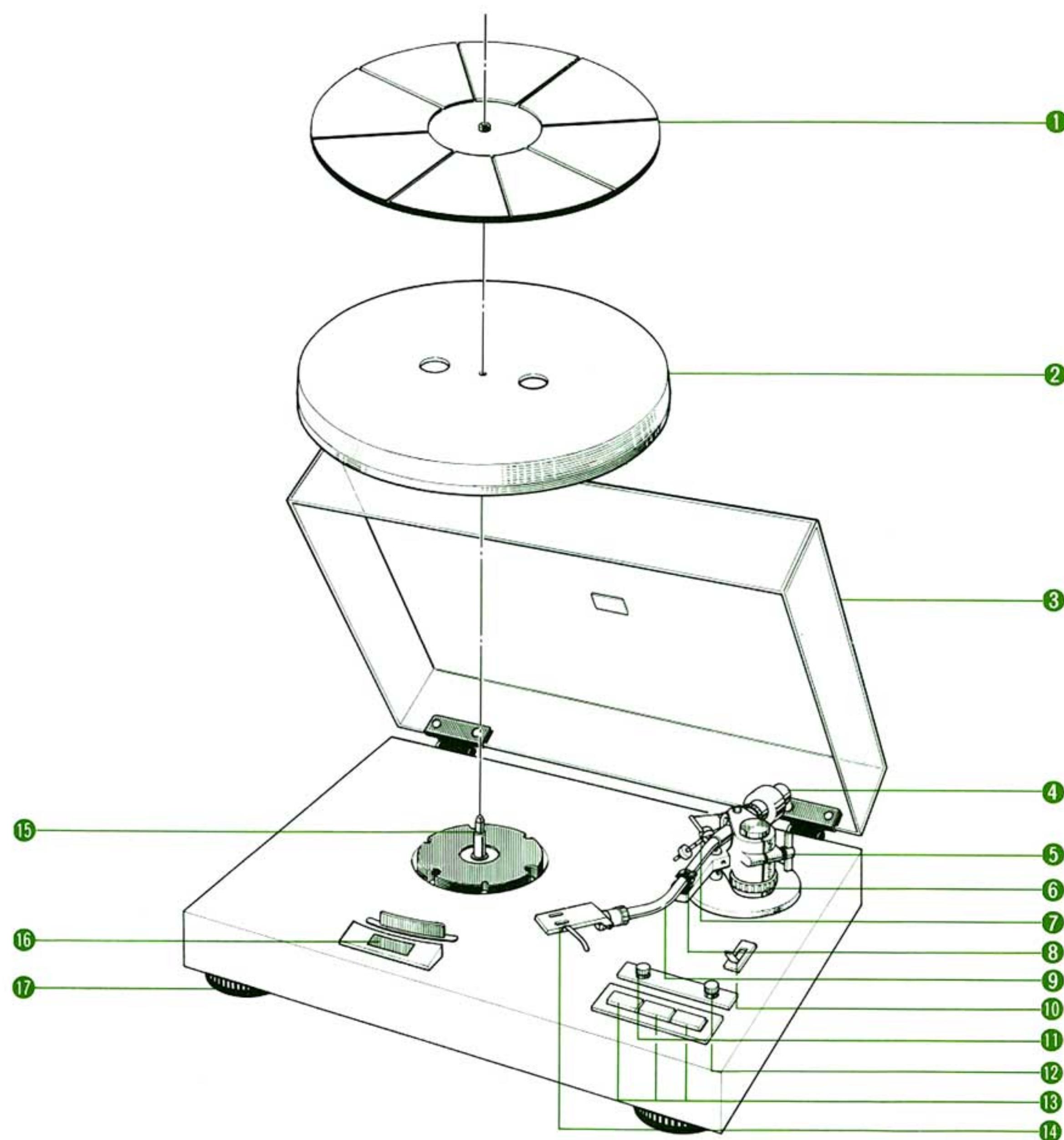
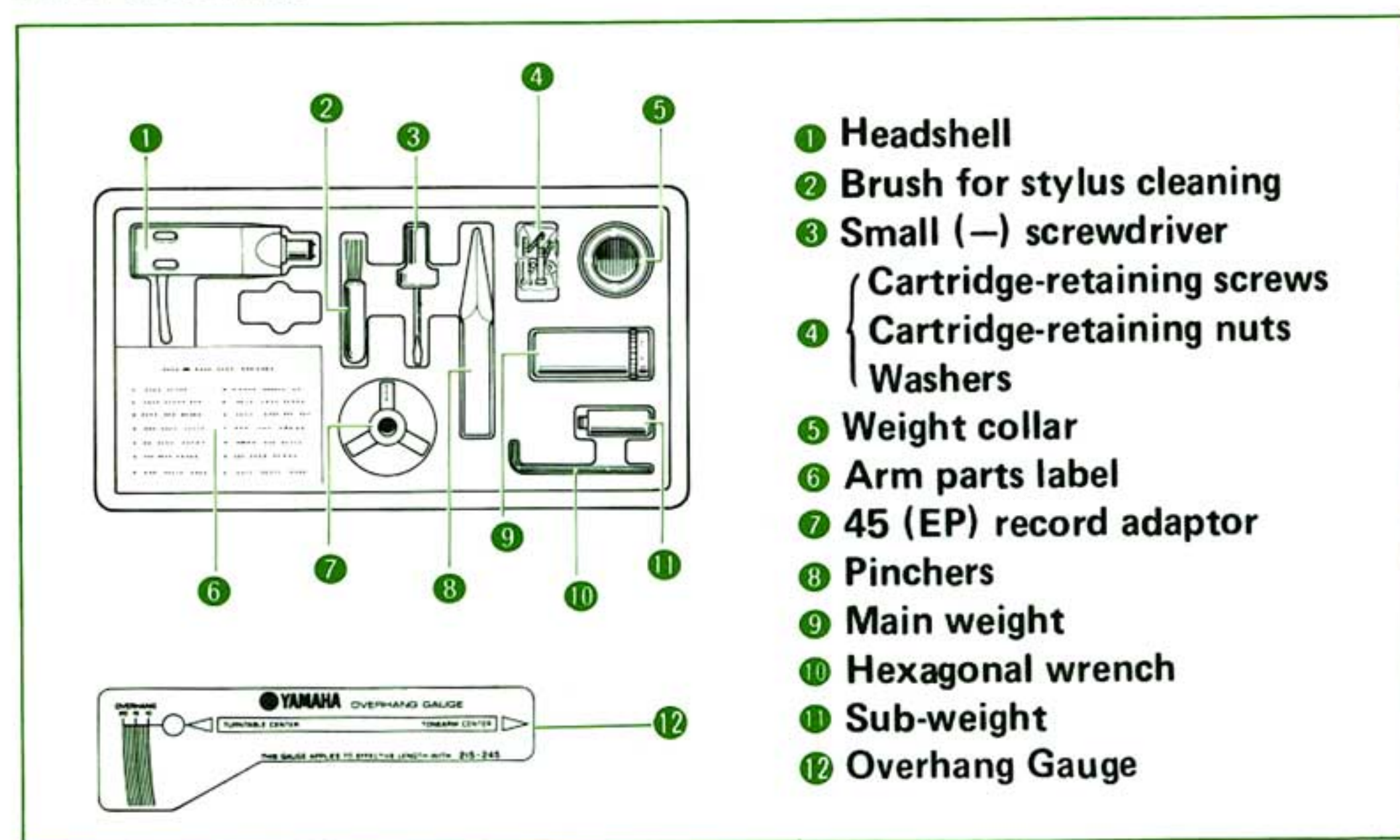
YP-D8

THE NAMES AND FUNCTIONS OF THE PARTS

THE NAMES OF THE PARTS

- | | |
|---|--|
| ① Rubber Mat | ⑪ Speed Adjusting Knob(for 45 rpm) |
| ② Turntable Platter | ⑫ Speed Adjusting Knob(for 33 $\frac{1}{3}$ rpm) |
| ③ Detachable Dust Cover | ⑬ Speed Selector/OFF Switches |
| ④ Main Counterweight | ⑭ Headshell |
| ⑤ Lock-nut | ⑮ Center Shaft |
| ⑥ Arm Height Adjusting Ring | ⑯ Strobe Scope |
| ⑦ Inside Force Canceler (Anti-Skating Device) | ⑰ Adjustable Insulator Foot |
| ⑧ Arm Rest | |
| ⑨ Tonearm | |
| ⑩ Cueing Lever | |

ACCESSORIES



① Rubber Mat

Specially designed to give the ideal support for records, damping their resonance and so improving overall bass response.

② Turntable Platter

Die-cast aluminum, this has been specially dynamically balanced for optimum flywheel smoothing effect, giving steady, even rotation.

③ Detachable Dust Cover

The beautiful transparent acrylic dust cover is fully detachable by free-setting hinges for maximum accessibility.

④ Main Counterweight

The whole counterweight assembly rotates to give easy selection and clear indication of accurate stylus tracking force settings. The assembly consists of long weight with indicating dial and weight collar.

⑤ Lock-nut

When adjusting the height of the tonearm, loosen this lock nut. Upon completion of adjustment, make sure to retighten the lock nut.

⑥ Arm Height Adjusting Ring

Adjust the tonearm height by the arm height adjusting ring when making adjustment for the height of the cartridge, so that the tonearm with cartridge is horizontal to the record surface.

⑦ Inside Force Canceler (Anti-Skating Device)

During record playing, the tonearm is drawn by inside force towards the inside of the disc. The

inside force canceler is employed to compensate for this undesirable phenomenon.

Note: During tonearm balance adjustment, be sure to deactivate the inside force canceler, by raising the bias lever to the vertical position.

⑧ Arm Rest


This provides a positive rest for the tonearm between record auditions.

⑨ Tonearm

The advanced S-type static balance arm used in the YP-D8 features special aluminum alloy pipe and high sensitivity gimbal-type supports, for top performance with all types of cartridge.

⑩ Cueing Lever

With this lever you can gently lift the cartridge from the record – and lower it back down just as gently – without any fear of jarring the delicate stylus or damaging precious records.

The tonearm is lowered to the disc at commencement of play by pulling the cueing lever. At the end of the record, the tonearm is raised automatically, the power is turned off and the cueing lever returns to the UP () position.

⑪ Speed Adjusting Knob (for 45 rpm)

This gives approximately $\pm 3\%$ adjustment in the speed of turntable rotation at 45 rpm. It does not affect the setting at 33-1/3 rpm.

⑫ Speed Adjusting Knob (for 33 $\frac{1}{3}$ rpm)

This is the corresponding control for the 33-1/3 rpm speed, and is also quite independent.

⑬ Speed Selector/OFF Switches

These push button switches are for selecting the desired speed. The unit is switched off by pressing the OFF switch.

⑭ Headshell

With gold-plated contacts for ultra-low contact resistance (enemy of top quality phono reproduction, this superior headshell accepts virtually all cartridge types.

⑮ Center Shaft

In the YP-D8 the central shaft is integral with the motor, which rotates at the actual speed of the turntable platter, reducing vibration and eliminating the need for intermediate mechanisms.

⑯ Strobe Scope

The YP-D8 features accurate indication of the turntable speed by stroboscopic illumination.

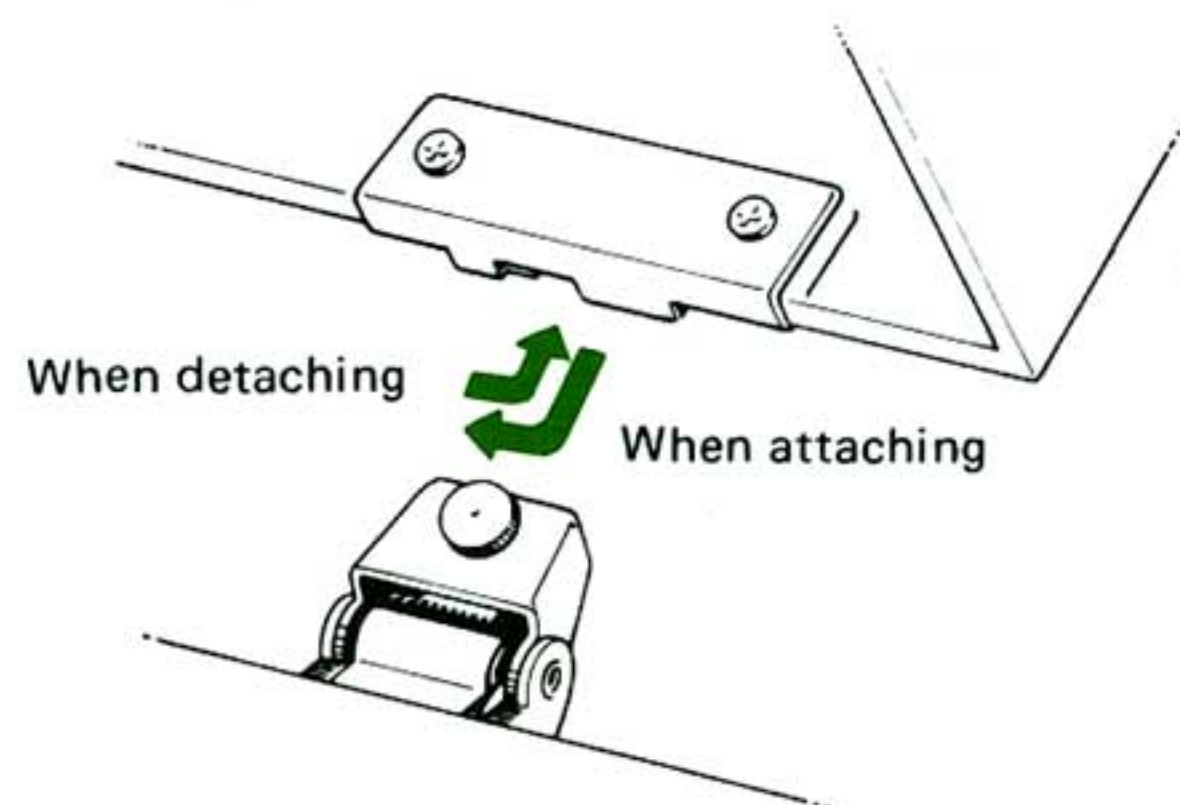
⑰ Adjustable Insulator Foot

These large feet insulate the YP-D8 from vibrations, and help to eliminate 'howling' (acoustic feedback from speakers).

DUST COVER

The dust cover may be freely attached and detached, so that you may use the YP-D8 without it if you wish. If you wish to attach it, follow the direction in Fig. 1, ensuring that the stud fits securely into the groove as shown. Reverse to detach.

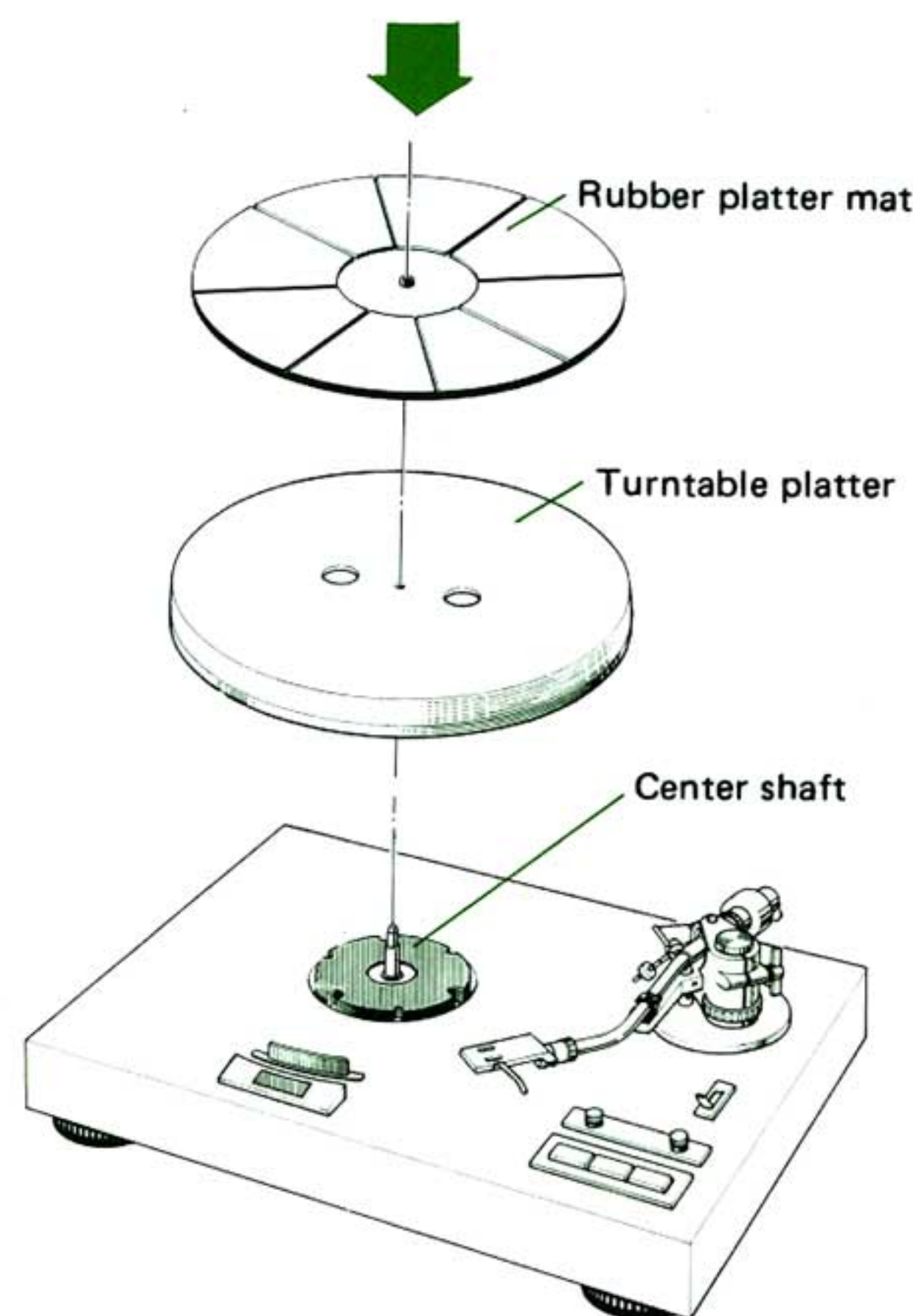
Fig. 1 Attaching and Removing the Dust Cover



FITTING THE TURNTABLE PLATTER

Take the turntable platter out from the protective wrapping and gently place it onto the center shaft as shown in Fig. 2. Place the rubber platter mat on it afterwards.

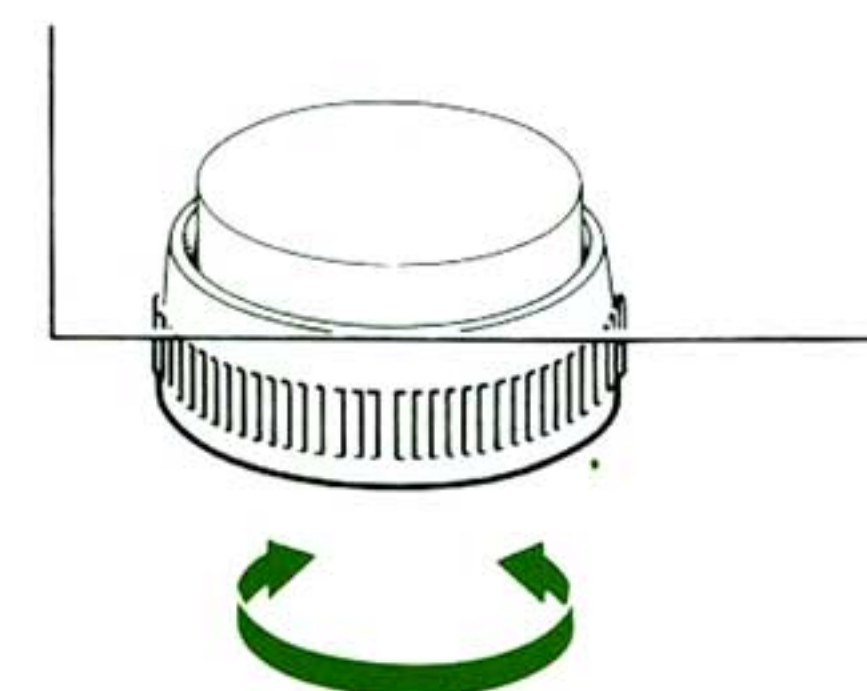
Fig. 2 Attaching the Turntable Platter



OBTAINING HORIZONTAL BALANCE

In installing the YP-D8 it is vitally important to ensure that it is flat and level. The cabinet is supported at its four corners by acoustic insulator feet which absorb vibration, and which can be adjusted for height. When the knurled ring around the feet is turned to left and right as shown in Fig. 3, they increase or decrease in height. Use them, with a spirit or other level device, to set the turntable surface level (horizontal).

Fig. 3 Height Adjustment



YP-D8

FITTING A CARTRIDGE & OVERHANG ADJUSTMENT

FITTING A CARTRIDGE

The YP-D8 comes without a cartridge. Please use the cartridge of your choice.

The weight of headshell provided with the YP-D8 is such that all cartridges with weights between 2 and 15 grams can be used (9 and 23 grams; with sub-weight).

A word on stylus life

Diamond is in general use for stylus tips. How fast the tip wears will depend on the state of the records it plays, but a diamond stylus will typically play for some 200 to 300 hours. Excessive wear results in damage to records, increasing distortion and surface noise, so you are strongly advised to replace your stylus in good time.

HOW TO ATTACH THE CARTRIDGE TO THE HEADSHELL

When attaching the cartridge to the headshell please be sure to join the leads from the cartridge to the correct pins on the headshell (see Fig. 4).

Again, as shown in Fig. 5, ensure that the stylus is aligned with the headshell overhang gauge mark to give an overhang of 16 mm.

Fig. 4 Headshell/Lead Wiring

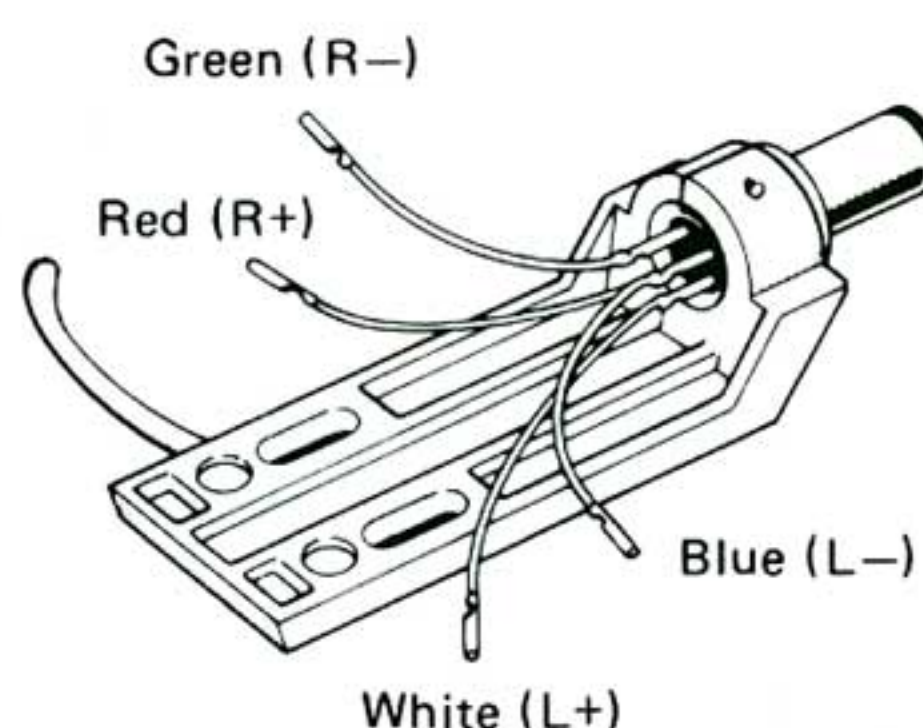
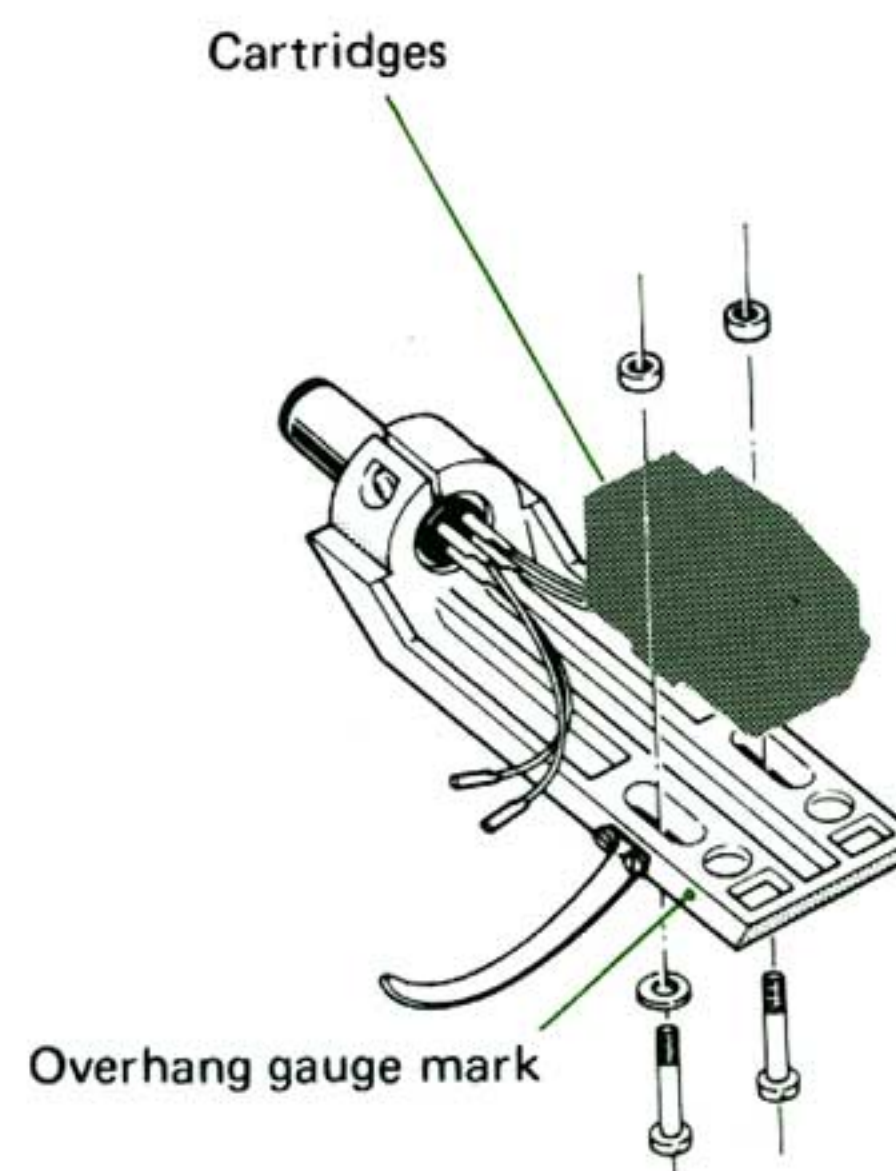
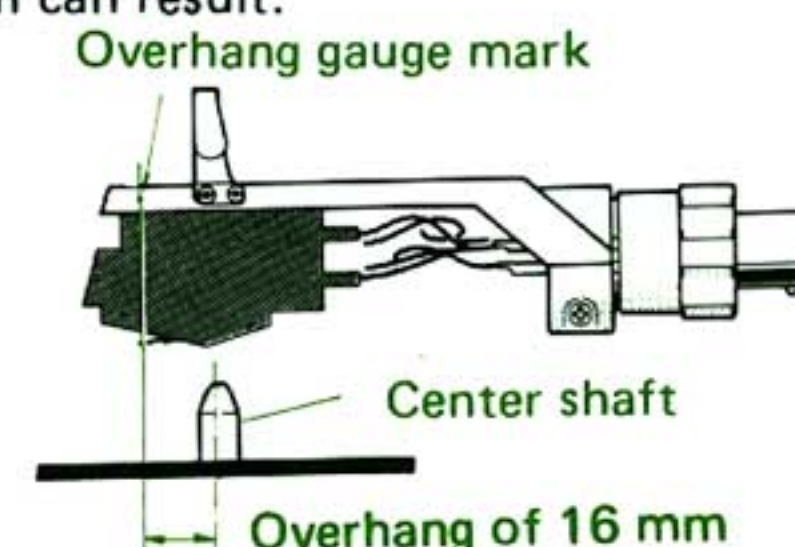


Fig. 5 Fitting a Cartridge



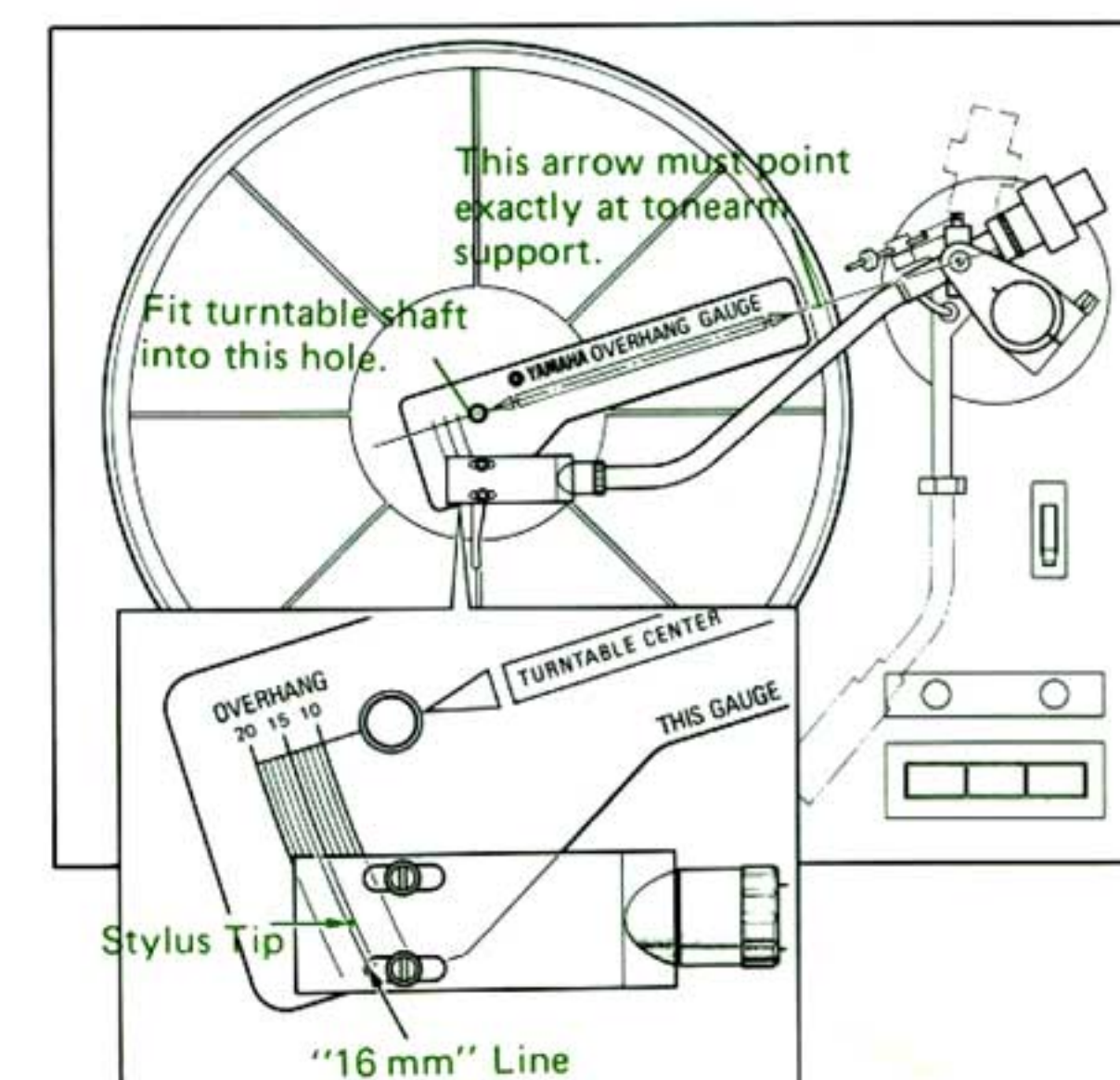
OVERHANG ADJUSTMENT

When using the YP-D8 headshell, there is an overhang gauge mark in front of the headshell finger grip which should be aligned so that it is directly over the stylus tip when viewed from the side. If the overhang distance is very different from that specified, increased distortion can result.



(Measure with the stylus tip, the center shaft, and the arm support in the same straight line).

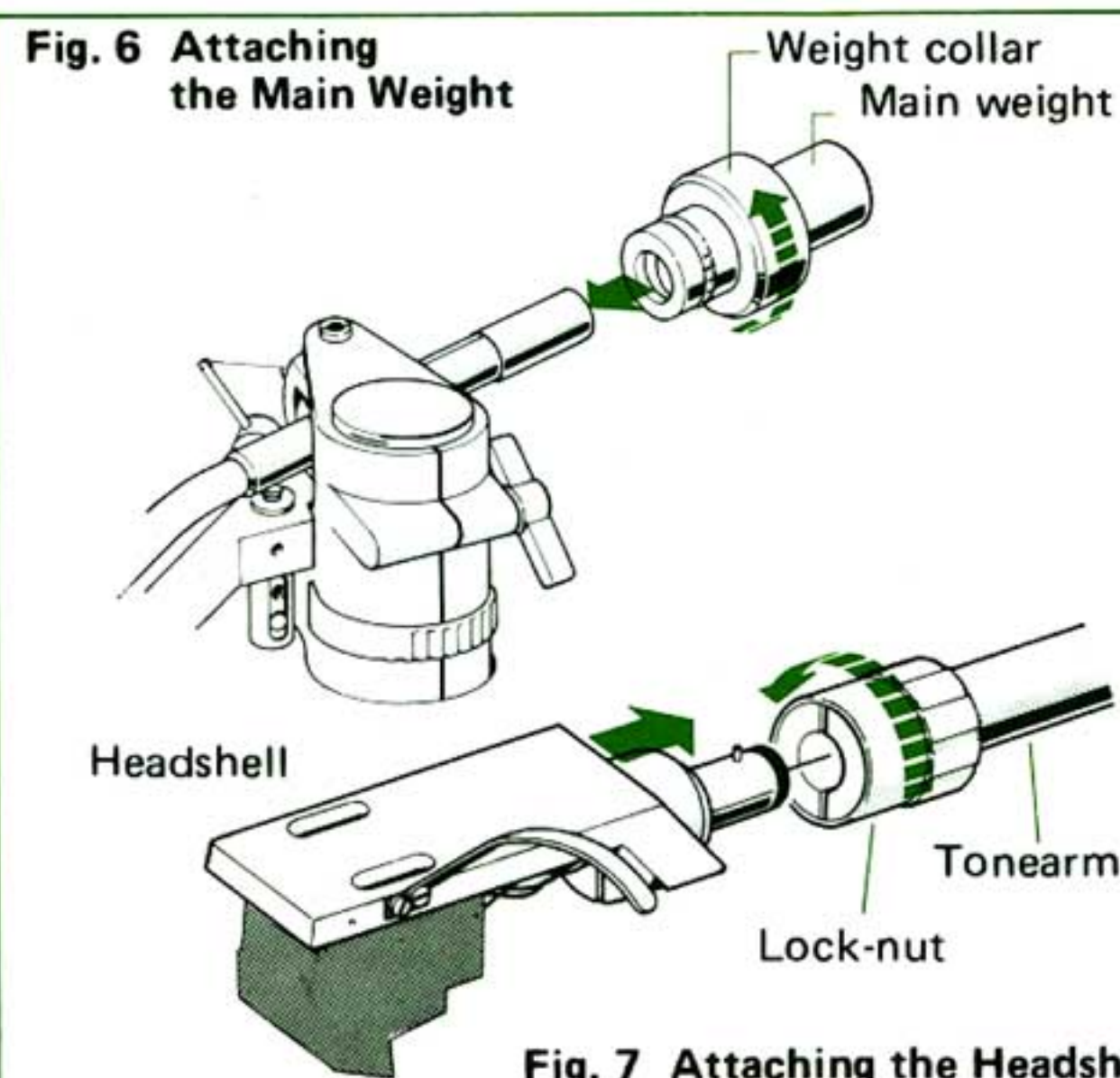
When using other than the headshell provided, set the standard-equipped overhang gauge plate on the turntable, as shown in the figure below. Install the cartridge on the headshell, bringing the tonearm to the plate indication with the stylus tip at "16 mm."



ASSEMBLING THE TONEARM

Note: The assembly of the tonearm unit is considerably simplified by first removing the dust cover.

- 1) Remove the main weight from its packing. Place the weight collar around the main weight in about the center, and then push the assembly gently onto the rear of the tonearm, turning slowly clockwise as you do so (see Fig. 6). The internal helical groove of the main weight will engage with the click stop on the rear of the tonearm. When viewed from the rear of the tonearm, clockwise rotation of the weight (to the right) will draw the weight forward, and counter-clockwise rotation (to the left) will move it to the rear.



- 2) Take the headshell to which the cartridge has already been fitted, and hold it with the locating pin upward, then gently push the assembly into the recess on the end of the tonearm. Finally, rotate the lock-nut until the headshell is firmly held in position. Undue force should never be used (see Fig. 7).

ADJUSTING THE TONEARM

When the assembly of the tonearm has been completed, proceed with;

- 1 Adjusting tonearm height, in that order.
- 2 Adjusting tonearm balance
- 3 Adjusting cartridge stylus tracking force
- 4 Adjusting the inside force canceler

1 Adjusting tonearm height

- 1) If your cartridge has a stylus guard, remove it:

if it is permanently hinged in position, lift it up.

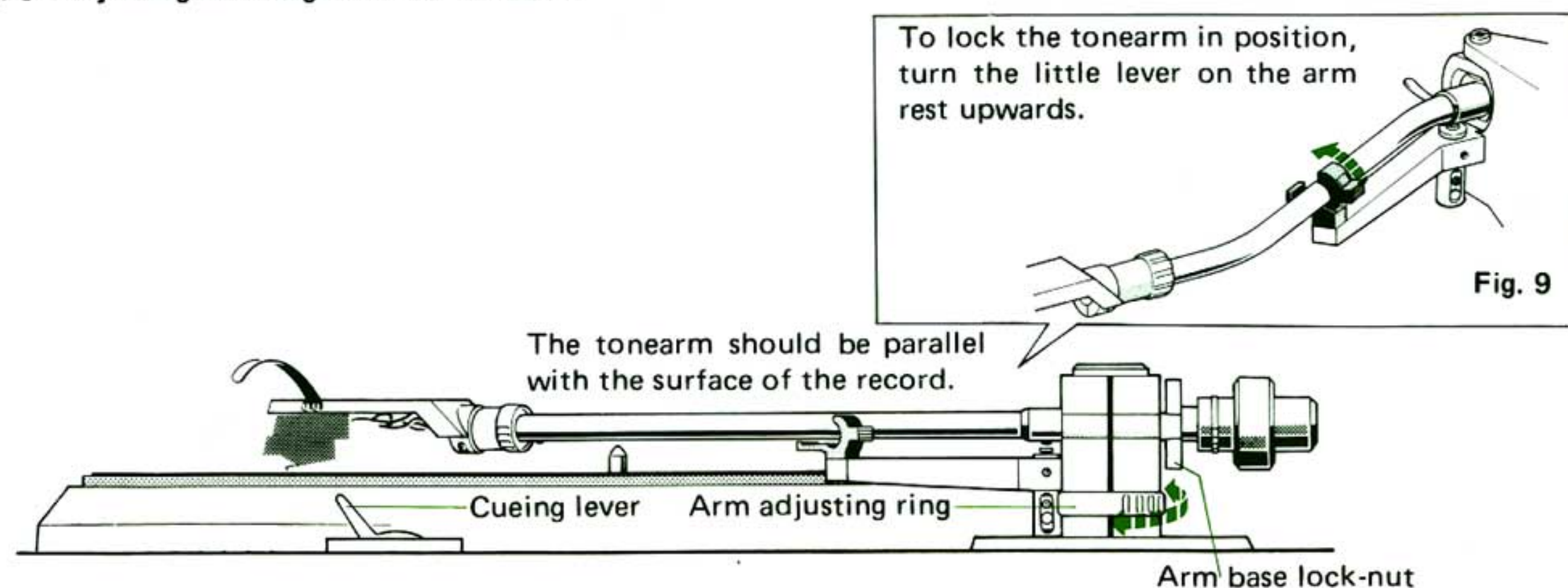
- 2) Place a record on the turntable platter, and lower the cueing lever to the DOWN (▼) position, so that the stylus tip rests on the record surface.

If the tonearm is not parallel with the record surface, slacken the winged arm-base lock-nut, and raise or lower the whole arm assembly by turning the arm adjusting ring to the left or right. Re-tighten the arm-base lock-nut once the tonearm and the record surface are parallel (see Fig. 8).

* Note: Carry this adjustment out very carefully, so that neither stylus nor record are damaged.

- 3) Once the tonearm height adjustment has been completed, return the tonearm to the arm rest. The arm rest is fitted with a locking device to retain the tonearm in position as shown in Fig. 9.

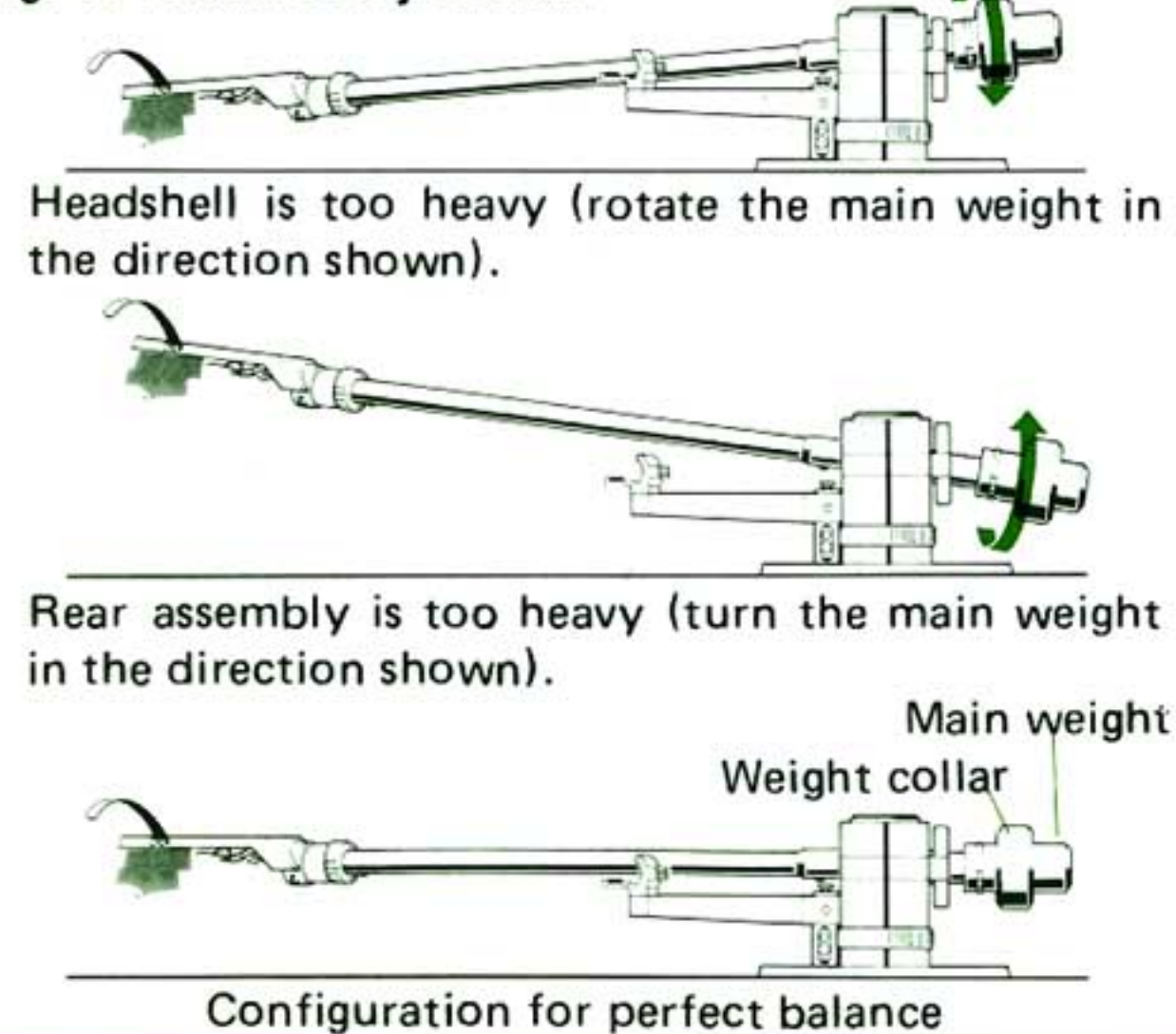
Fig. 8 Adjusting the Height of the Tonearm



2 Adjusting tonearm balance

- 1) Raise the bias lever to deactivate the inside force canceler.
- 2) With the tonearm retained by the arm rest, rise (if hinged) or remove (if detachable) the stylus guard if one is provided with your cartridge. [lower the cueing lever to the DOWN (▼) position.]
- 3) Remove the tonearm from the arm rest, and lightly support the finger-grip of the headshell. Now check the balance: the headshell will usually either tend to rise (if too light) or sink (if too heavy).
- 4) Refer to Fig.10, and move the main weight assembly either back or forwards by rotating it a very little at a time until the tonearm is in perfect horizontal balance.

Fig. 10 Balance Adjustment

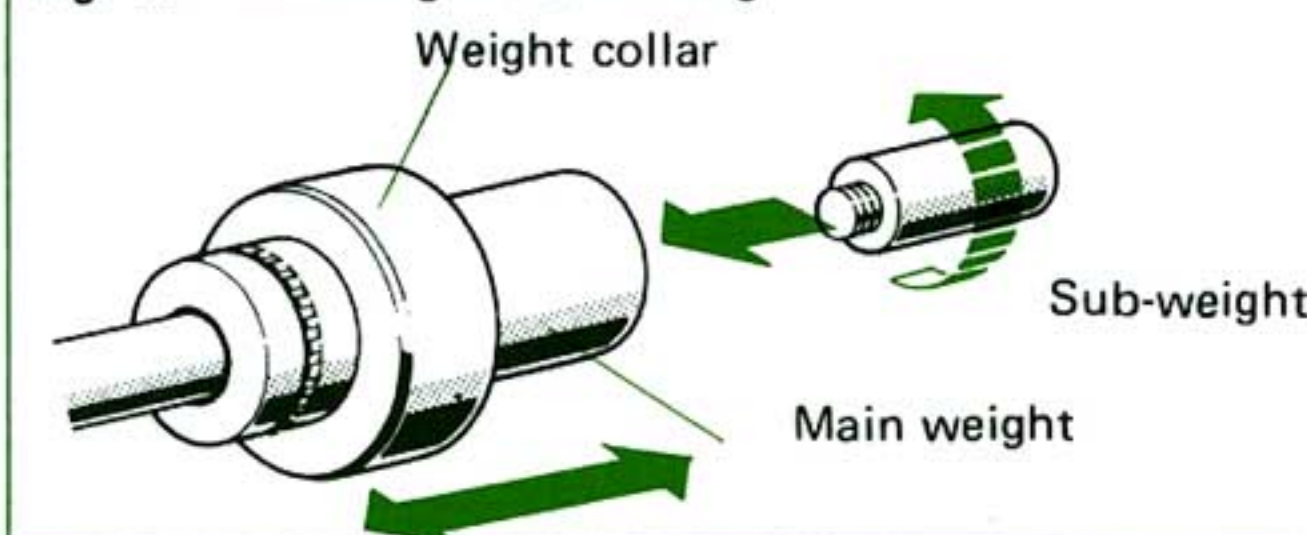


- 5) Replace the tonearm on the arm rest once balance has been obtained.
- 6) When no position of the main weight enables

you to obtain the correct balance, slip the weight collar to a different position along the main weight and try again (see Fig. 11).

- 7) When the cartridge is still too heavy for the correct balance to be obtained with any position of the weight collar, attach the accessory sub-weight at shown in Fig. 11. Cartridges up to 15 grams in weight can be accommodated.
- 8) Return the inside force canceler to its normal position.

Fig. 11 Attaching the Sub-Weight

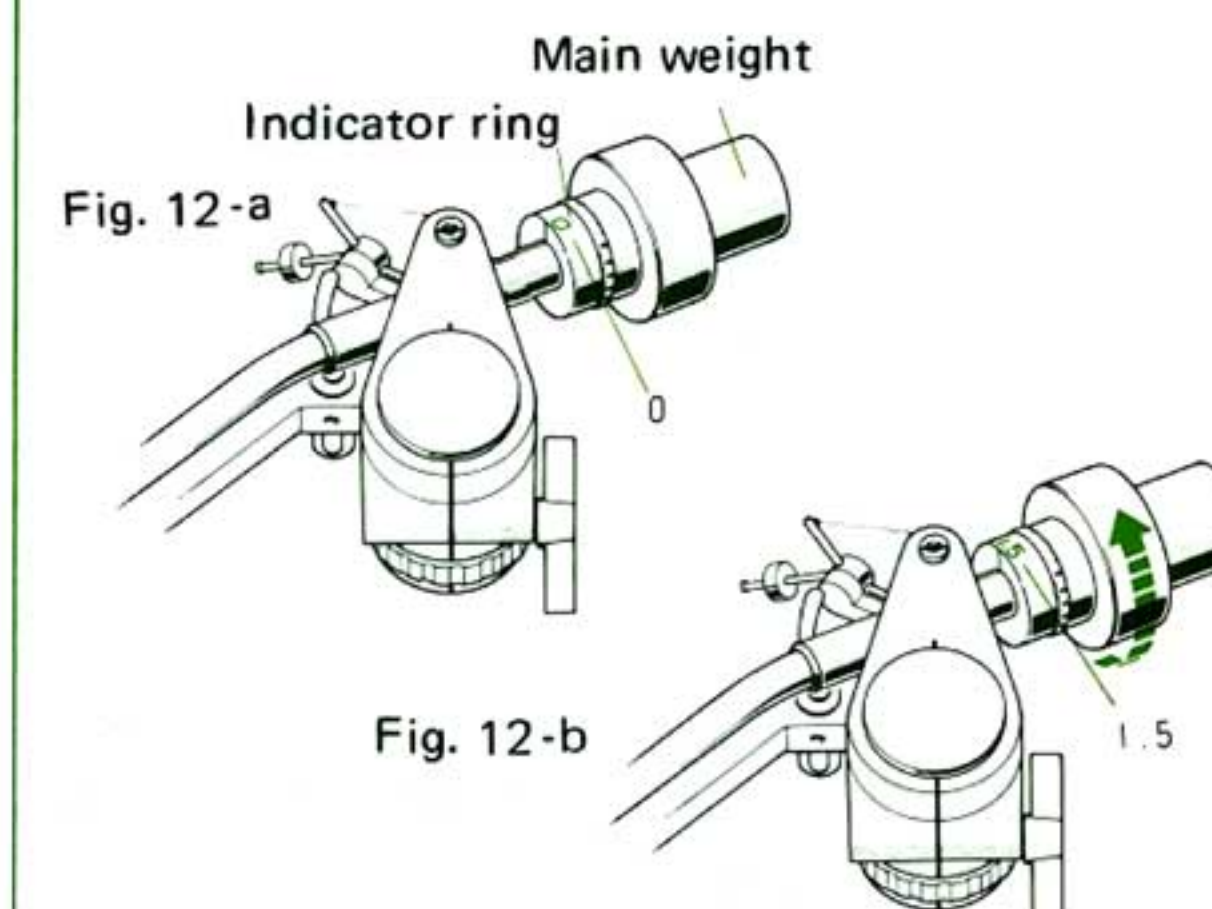


3 Adjusting cartridge stylus tracking force

- 1) Be careful not to move the main weight from the position at which perfect horizontal balance was obtained, and turn *only* the indicator ring on the front of the main weight until the zero ('0') is opposite the black hairline on the tonearm (see Fig. 12-a).
- 2) Rotate the main weight slowly in the direction shown in Fig. 12-b, and note that the indicator ring turns with it. Turn the main weight until the black hairline on the tonearm is opposite the recommended stylus tracking force for your cartridge. Each division on the indicator ring corresponds to 0.5 grams: one complete rotation gives a stylus tracking force of 3 grams. For example, if the

recommended tracking force (sometimes called stylus 'pressure') is 1.5 g, turn until '1.5' on the indicator ring is opposite the black hairline.

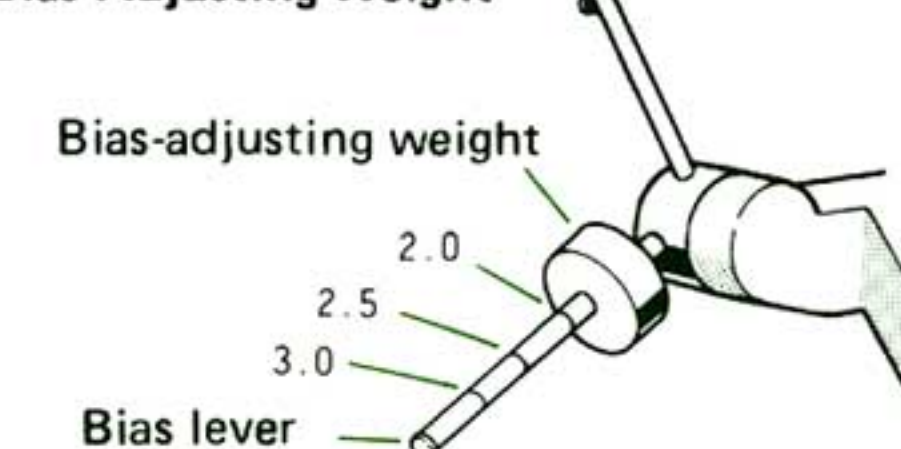
Fig. 12 Adjusting Stylus Tracking Force



4 Adjusting the inside force canceler

The bias-adjusting counterweight is positioned to correspond with the stylus tracking force. The bias-adjusting counterweight is located along the bias lever by light click-stops. The first click stop corresponds to a tracking force of 1.0 g, and thereafter by 0.5 g steps to a maximum of 3.0 g. If the recommended tracking force is 1.5 g, the bias-adjusting weight should be positioned at the '1.5' position on the bias lever (see Fig. 13).

Fig. 13 Bias-Adjusting Weight



USING THE CUEING LEVER

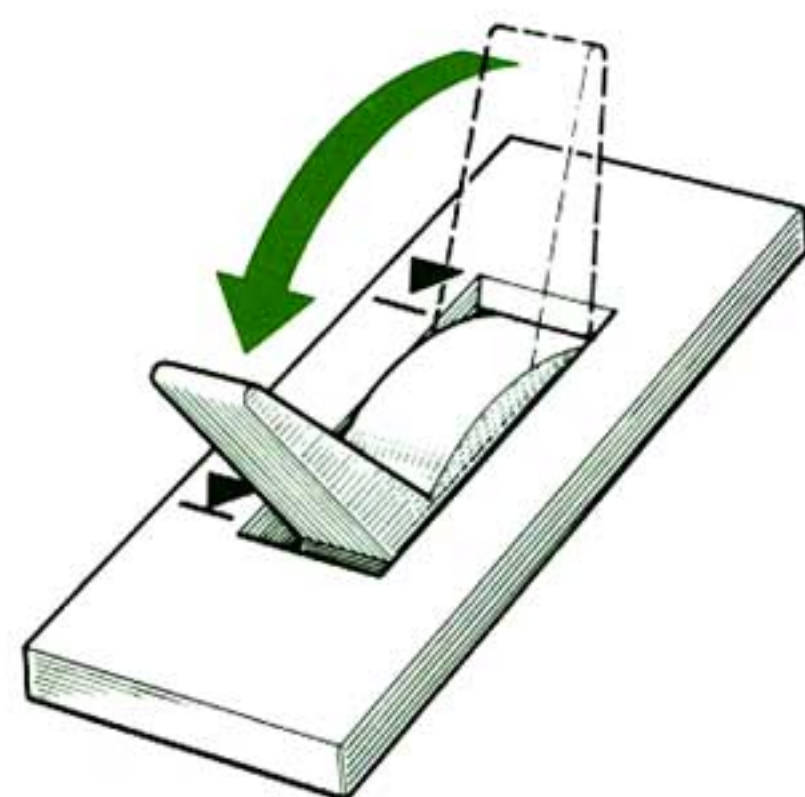
The cueing lever is used to lower the cartridge stylus to the record surface, and to lift it from the surface, without having to touch the headshell, so eliminating the danger of damage to stylus tip and record alike.

(1) When lowering the stylus

Place the cueing lever initially in the UP (∇) position, then put the stylus tip over the place on the record to which you wish to lower it. Then place the cueing lever in the DOWN (∇) position by moving it towards you (see Fig. 14).

The stylus tip will slowly descend to the record surface under the action of an oil-damped cylinder.

Fig. 14 Lowering the Stylus

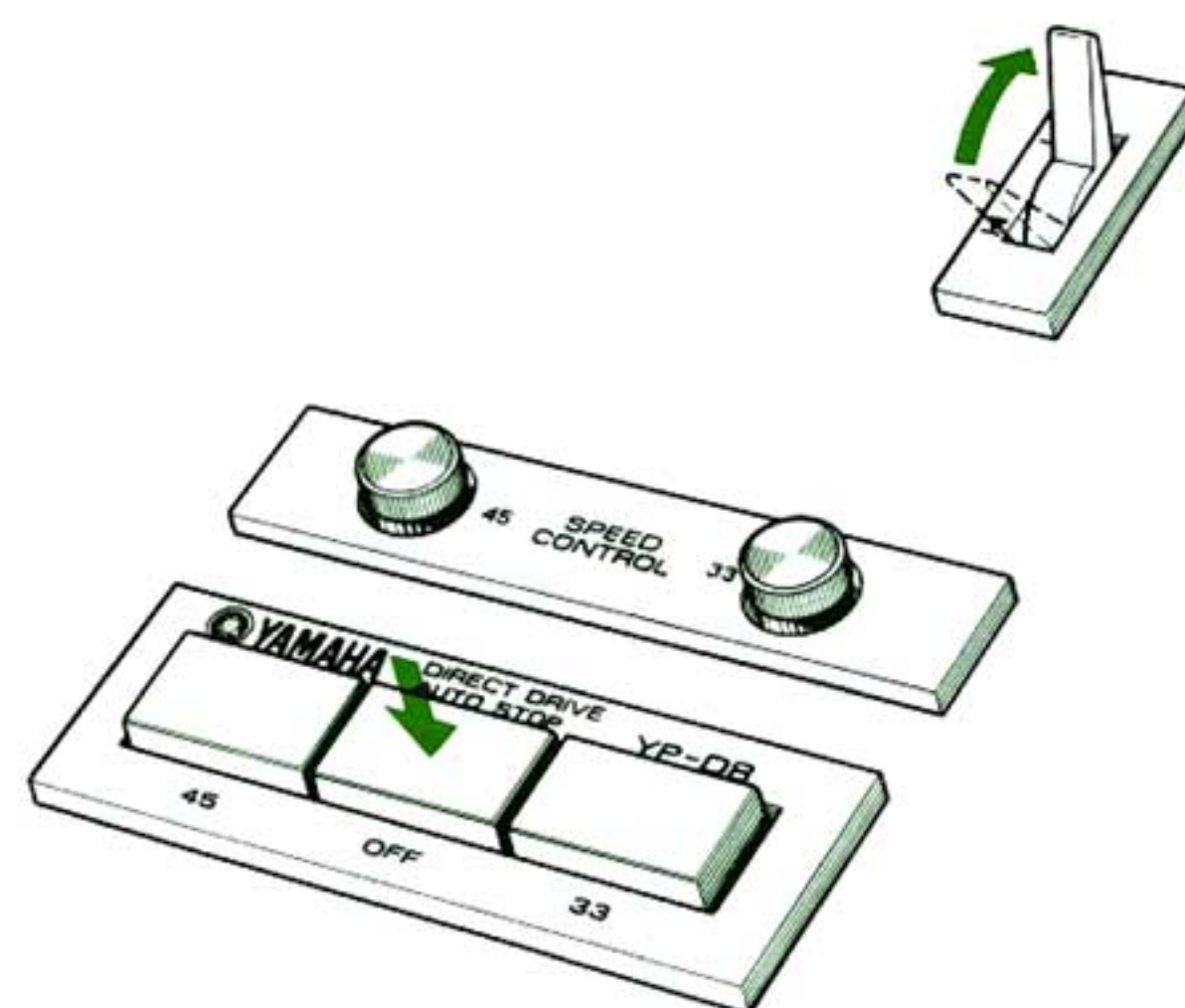


(2) When lifting the stylus

When record audition is over, and the stylus tip enters the innermost grooves, the cueing lever automatically returns to the UP (∇) position, and electrical power is disconnected. Again, if the OFF switch is pushed during record audition, the cueing lever will return to the UP (∇) position, and power will be disconnected (see Fig. 15).

Fig. 15 Lifting the Stylus

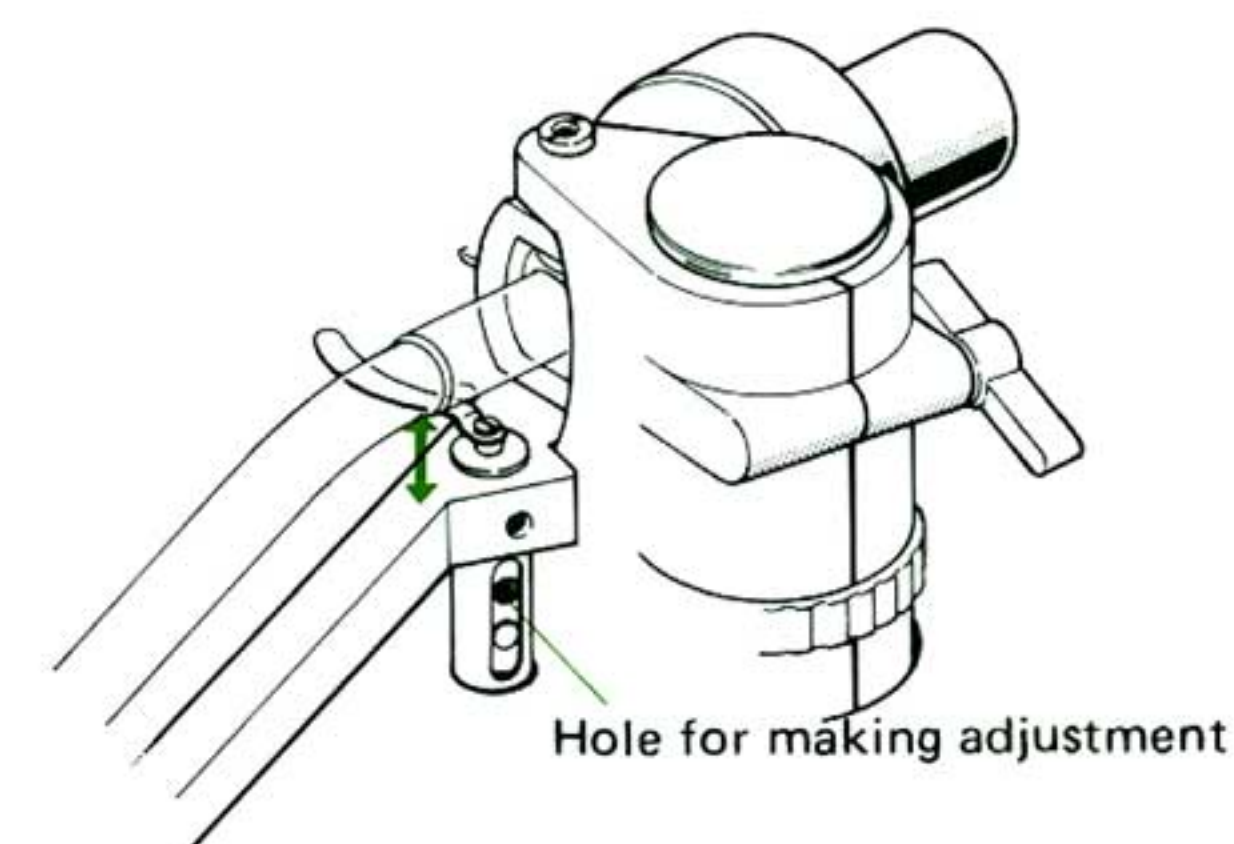
1. When record audition ends or the OFF switch is pushed . . . the cueing lever automatically returns to (∇) and power is disconnected.
2. The cueing lever can also be returned to (∇) manually: in this case the power is not disconnected.



Note:

1. The cueing lever will not return to the UP (∇) position if the AC power plug is pulled from the supply socket.
2. The cueing lever can be operated manually, but will not switch the power on or off.

Fig. 16 Arm Lifter Height Adjustment



When it becomes necessary to change the height of the arm lifter controlled by the cueing lever, for instance after changing cartridges, use the accessory hexagonal (Allen) wrench to adjust the height appropriately while raising and lowering the cueing lever.

Note: This adjustment is made at the factory before dispatch, and should not usually need any further adjustment.

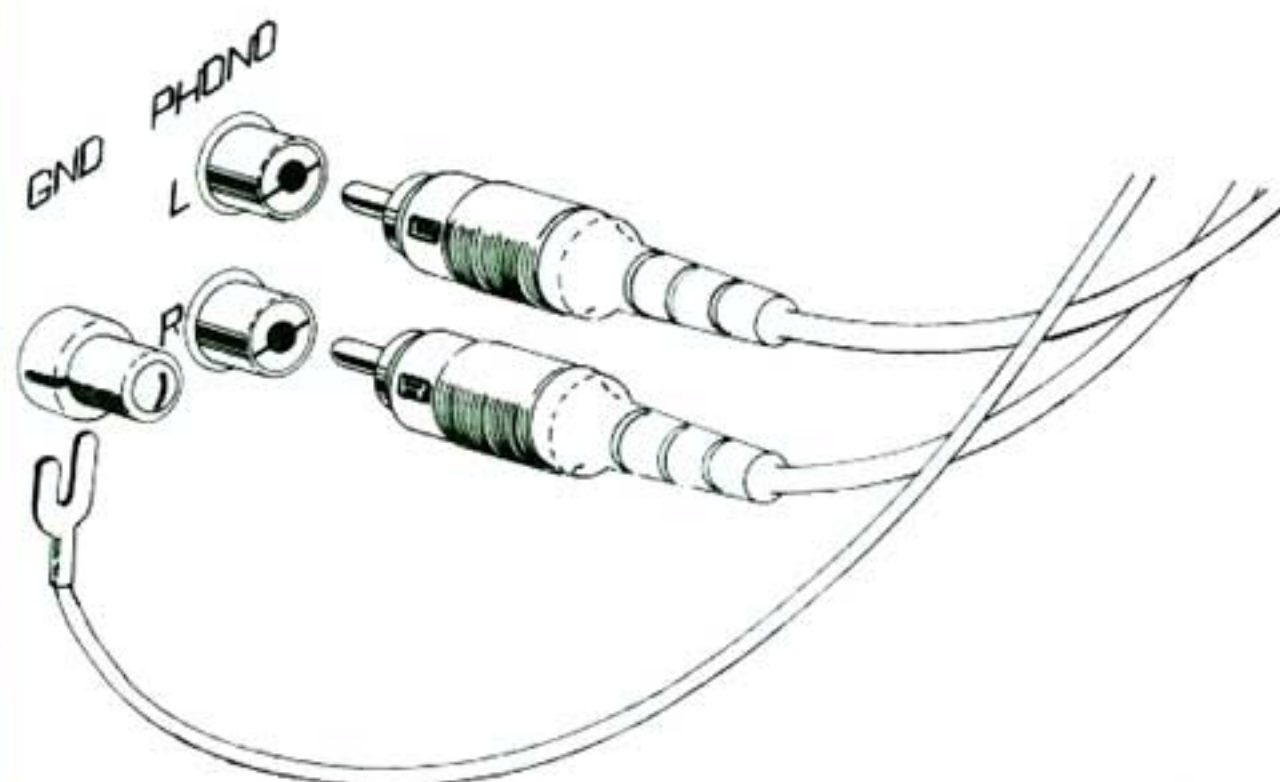
YP-D8

CONNECTIONS TO YOUR AMPLIFIER & ADJUSTING TURNTABLE SPEED

CONNECTIONS TO YOUR AMPLIFIER

- (1) The output leads projecting from the rear of the cabinet should be connected to the PHONO input jacks of your audio amplifier. Take care to connect the left- and right-hand channels correctly. The white lead is the left, and the red lead the right channel.
- (2) The black ground lead issuing from the output leads should be connected to the GND (ground) terminal on your amplifier (see Fig. 17). Certain amplifiers may give rather less hum and noise when no ground connection is made: you should do whichever gives you the lower hum and noise levels.
- (3) If your amplifier offers switched selection of input impedances, use the switch position which gives the input impedance closest to that recommended by the cartridge manufacturer.
- (4) Insert the AC plug of the YP-D8 either into a wall AC supply socket, or into a spare AC outlet socket if one is provided on the rear of your amplifier. If the latter, it is better to use an unswitched socket.

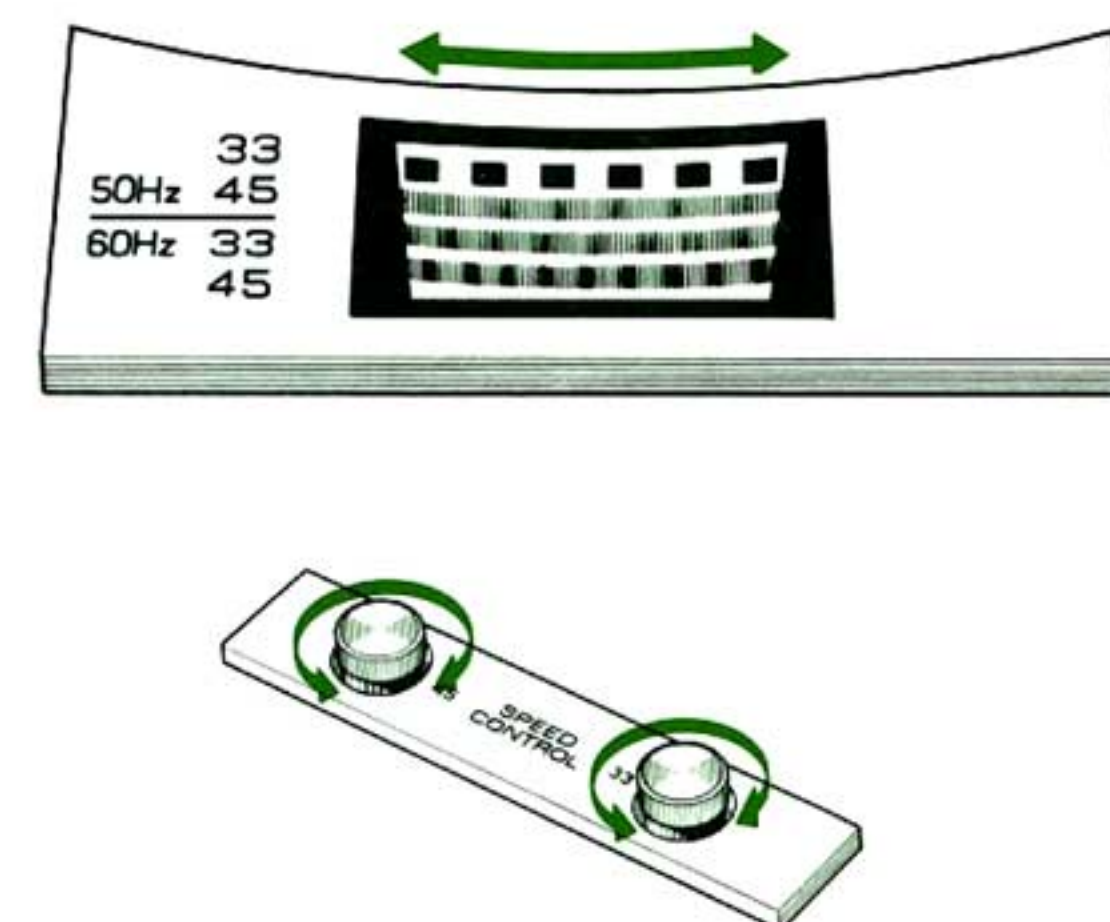
Fig. 17 Connections to an Audio Amplifier



ADJUSTING TURNTABLE SPEED

The YP-D8 reverts to frequency-generator servo-control, and the fine speed control knobs can be used to alter the speeds of rotation over a range of $\pm 3\%$. They can thus be used to give pitch control (see Fig. 18). As shown in Fig. 18, the engraved stroboscopic markings will appear to move when the speed control knobs are rotated to give non-standard speeds.

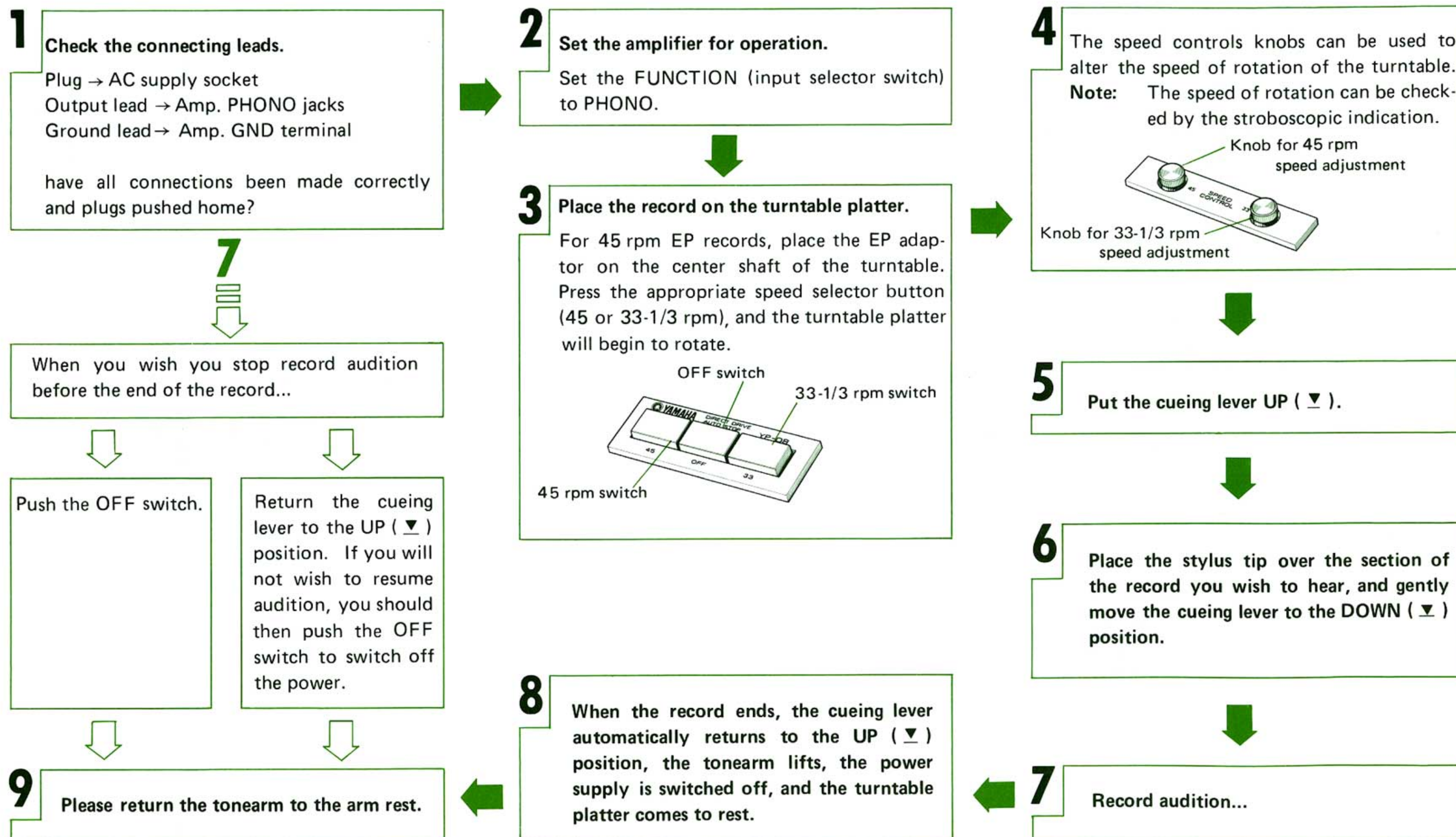
Fig. 18



When the strobe markings are:
 Moving to the left speed is fast,
 Moving to the right speed is slow,
 Stationary speed is correct.

PLAY RECORDS BY OPERATING IN THE FOLLOWING ORDER.

First make sure that you have completed assembly and adjustment of the turntable and tonearm, then carry out the following steps in this order.



If your YP-D8 ceases to function normally, check the following trouble-shooting list. Only if this fails to restore normal operation should you contact your local Yamaha dealer or service representative.

Fault	Cause	Cure
Turntable does not rotate, although switch is pushed.	Mains supply plug not firmly plugged into supply socket.	Plug fully home into the socket.
Turntable rotation is too fast (or slow).	The speed adjusting knob has not been adjusted correctly.	Adjust correctly using the speed-adjusting knob and the strobe indication.
Balance cannot be obtained after changing cartridges.	The cartridge is either too heavy or too light.	Repeat the adjustment with the main weight either further forward or back. Repeat the adjustment with the weight collar either further back or forward on the main weight. Repeat the adjustment with the sub-weight added (or removed if already attached).
The tonearm does not descend to the record surface.	The cueing lever is in the UP (▼) position.	Operate the cueing lever correctly, referring to the operating instructions given.
There is no sound although the stylus descends to the record surface.	Headshell connections faulty.	Polish the connector pins with a soft cloth.
	Amplifier function not set at PHONO.	Set the function control to PHONO correctly.
	Amplifier volume too low.	Raise the volume to a reasonable level.
	Turntable unit output leads not properly connected.	Check the connections to the rear panel of the amplifier.
The body of the cartridge catches on the record surface.	Stylus tracking force too high.	Check and readjust for correct stylus tracking force.
	Tonearm height is unsuitable	Adjust the tonearm height correctly.
The reproduced sound is distorted, with clicking or scraping sounds. High frequency reproduction is particularly badly affected.	Dust and dirt has accumulated on the stylus tip.	Wipe the stylus tip clean with the special stylus cleaning brush provided with the accessories.
	The turntable unit is not properly level.	Level it by adjusting the height of the insulator feet.
	The stylus tip is worn.	Replace the stylus.
	The record itself is damaged, or has accumulated dust and dirt.	Replace with a new record.
	Stylus tracking force is either too little or too great.	Readjust the tracking force for the cartridge to the recommended value.
	Amplifier treble response has been overemphasized.	Turn the treble control back to the flat position.

YP-D8

SPECIFICATIONS

TURNTABLE MOTOR SECTION

Drive System	FG Servo-control direct drive
Motor	12-Poles 24-slots DC Hall motor
Motor Torque	1000 g . cm
Turntable Platter	31.5cm (12-1/4'') die-cast aluminum. Weight, 2.7 kg (6 lbs) (including rubber mat)
Turntable Moment of Inertia	360 kg·cm ² (including rubber mat)
Speed	33-1/3 r.p.m. 45 r.p.m.
Signal-to-Noise Ratio	Better than 70dB (DIN-B)
Wow and Flutter	Less than 0.03% (wrms)
Fine Speed Adjustment	±3% (with strobe indicator)

TONEARM SECTION

Arm Type	S-type static balance arm with gimbal supports
Tonearm Effective Length	232 mm (9-1/8'')
Overhang	16 mm (1/4'')
Tonearm Stand Base/Weight	Diecast zinc/1,000 g (2.2 lbs)
Range of Tonearm Height Adjustment	±3 mm (1/8'')
Inside Force Canceler	Counterweight and string roller
Sensitivity	Vertical; 3mg, Horizontal; 5 mg.
Arm Lifter	Oil dump system
Auto-Up Stop	Non-contact photo-electric speed detector, linked with cueing lever and power OFF switch.
Effective Mass	24 g (with a cartridge of 6 g)

Headshell	Diecast aluminum alloy (interchangeable to EIA specs: weight 12 g)
Possible Cartridge Weights	2 ~ 15g, 9 ~ 23 g (with subweight)
GENERAL	
Power Supplies	120V AC 60 Hz (U.S.A. & Canada) 110/130/220/240 V AC 50/60 Hz (General) 110/130/220/240 V AC 60 Hz (Europe)
Power Consumption	6W (U.S.A. & Canada) 5W (Other Areas)
Cabinet	High density coniferous particle board Ebony finish
Dust Cover	Acrylic
Hinges	Free-setting, detachable
Acoustic Insulators	Large double-type insulators, with adjustable height
Dimensions (W x H x D)	470 x 163 x 378 mm (18-1/2" x 6-1/16" x 14-7/8")
Weight	15 kg (33 lbs 1 oz.)

Specifications subject to change without notice.

BLOCK DIAGRAM

