

YAMAHA TT-400U *RS*

*Natural Sound Full-automatic Belt Drive Turntable
Precisely Adjusted Tracking Force and ANTI-SKATE
Plug-in Cartridge Connector Capability
Convenient Front Panel Operation
Auto Record Size Sensor*

Thank you for purchasing the YAMAHA TT-400U belt drive turntable.

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CENTER

OWNER'S MANUAL



IMPORTANT!

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

Model: **TT-400U**

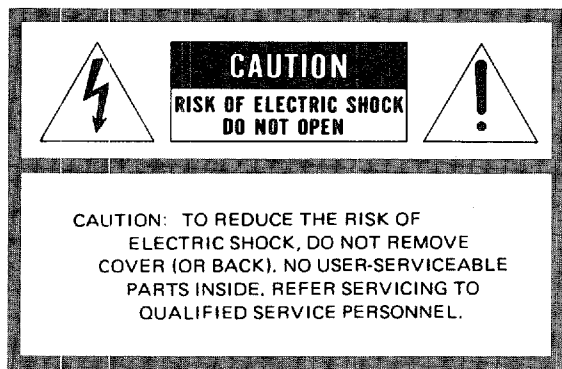
Serial No.:

The serial number is located on the rear of the unit.
Retain this Owner's Manual in a safe place for future reference.

WARNING

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

SAFETY INSTRUCTIONS



• Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

1 Read Instructions – All the safety and operating instructions should be read before the appliance is operated.

2 Retain Instructions – The safety and operating instructions should be retained for future reference.

3 Heed Warnings – All warnings on the appliance and in the operating instructions should be adhered to.

4 Follow Instructions – All operating and other instructions should be followed.

5 Water and Moisture – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink; laundry tub, in a wet basement, or near a swimming pool, etc.

6 Carts and Stands – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



7 Wall or Ceiling Mounting – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.

8 Ventilation – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

9 Heat – The appliance should be situated away from heat sources such as radiators, stoves, or other appliances that produce heat.

10 Power Sources – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

11 Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

12 Cleaning – The appliance should be cleaned only as recommended by the manufacturer.

13 Nonuse Periods – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

14 Object and Liquid Entry – Care should be taken so that objects do not fall into and liquids not spilled into the inside of the appliance.

15 Damage Requiring Service – The appliance should be serviced by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged; or
- B. Objects have fallen, or liquid has been spilled into the appliance; or
- C. The appliance has been exposed to rain; or
- D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
- E. The appliance has been dropped, or the cabinet damaged.

16 Servicing – The user should not attempt to service the appliance beyond those means described in the operating instructions. All other servicing should be referred to qualified service personnel.

TT-400U

**CAUTION: READ THIS BEFORE
OPERATING YOUR TT-400U**

1

The TT-400U is a sophisticated full-automatic belt drive turntable. To ensure proper operation for the best possible sound reproduction, please read this manual carefully.

2

Treat the TT-400U with the utmost of care, as it is extremely easy to jar fine settings such as tonearm tracking force out of adjustment. If the unit is bumped, it is important that all settings be re-checked.

3

Avoid installing the tonearm side of the TT-400U next to the power transformer of your amplifier.

4

Be sure to locate the TT-400U in a flat and level place, out of the direct rays of the sun. Also avoid 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.

5

If it becomes necessary to relocate the TT-400U do so with extreme care. If possible; repack the unit in its original packing for transportation.

6

Do not attempt to clean the TT-400U with chemical solvents as the unit is coated with a mat lacquer. Use a clean, dry cloth.

7

It is extremely important that the stylus tip be kept free of dirt. Regular cleaning ensures the best possible sound reproduction.

8

Keep your records clean. Dirty records reduce the life of the stylus. A stylus with a diamond tip should be replaced after every 200 – 300 hours of use.

9

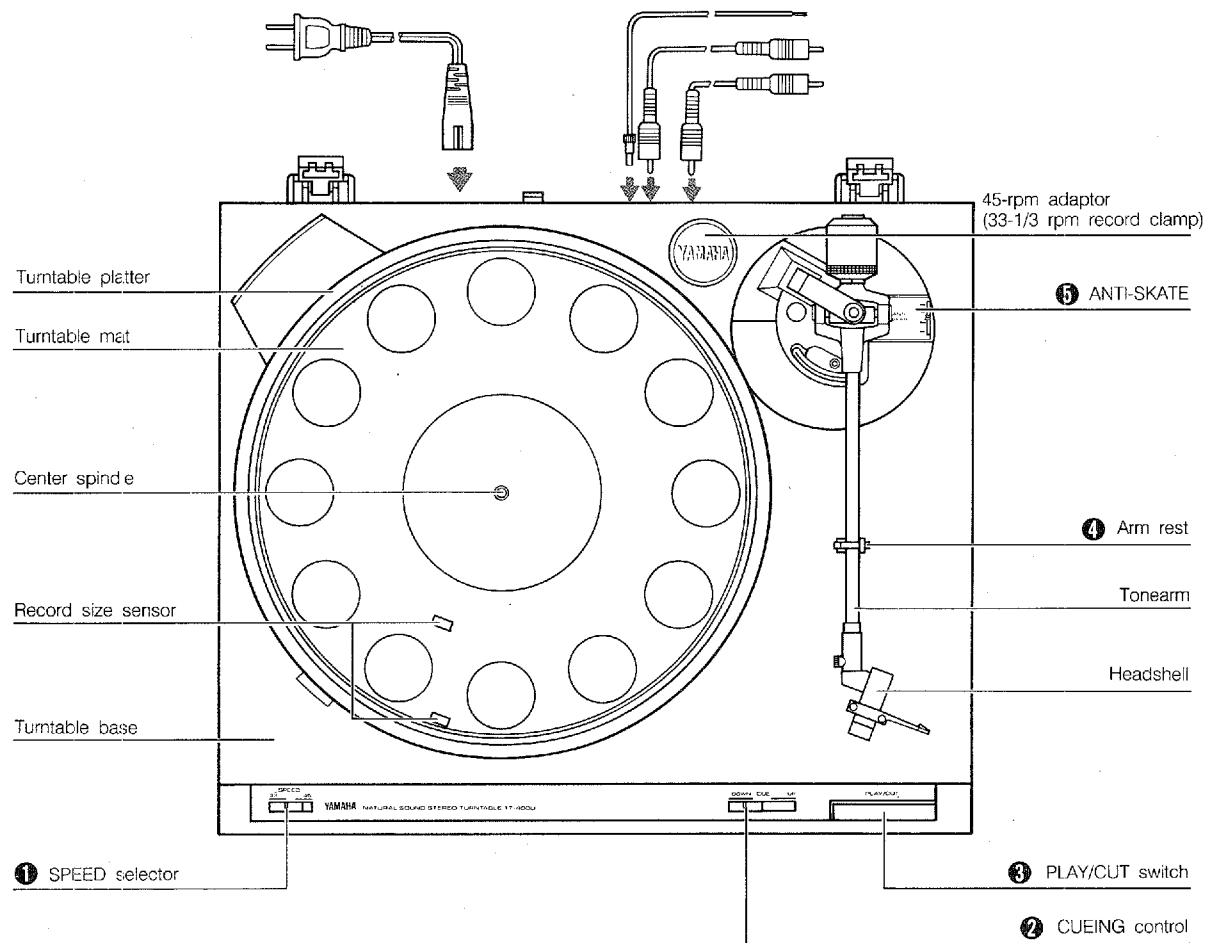
Be sure to read the "troubleshooting" section for advice on common operating errors before concluding that your TT-400U is faulty.

10

Keep this manual in a safe place for future reference.

TT-400U

NAMES OF THE PARTS AND THEIR FUNCTIONS



1 SPEED SELECTOR

This selector is used to select the turntable speed.

* When playing a 33-1/3 rpm record, set to "33", and when playing a 45 rpm record, set to "45".

2 CUEING CONTROL

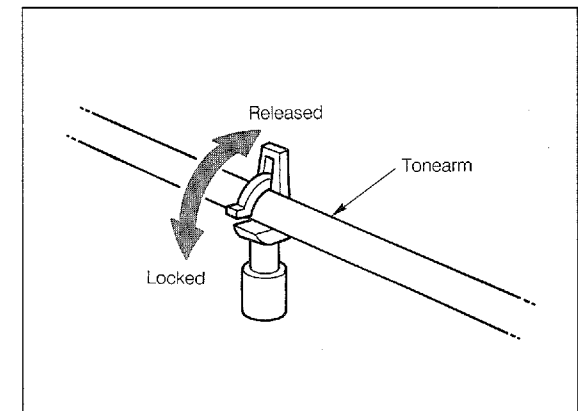
The tonearm rises when set to the UP position, and descends when set to the DOWN position.

3 PLAY/CUT SWITCH

When this switch is pressed, the tonearm moves to the place where play starts, and automatic play begins, press this switch once again when you want to stop the play.

4 ARM REST

When transporting the turntable, be sure that the tonearm is secured to the arm rest.



5 ANTI-SKATE

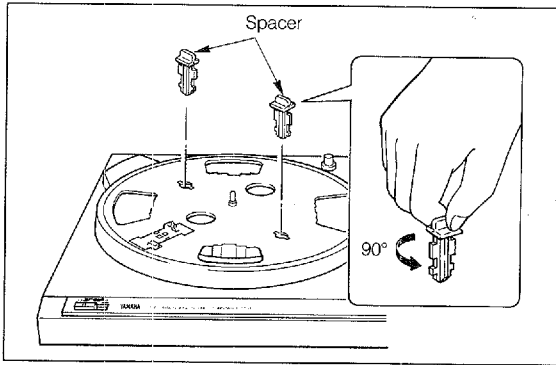
Refer to "ADJUSTING THE ANTI-SKATE" on page 8.

TT-400U

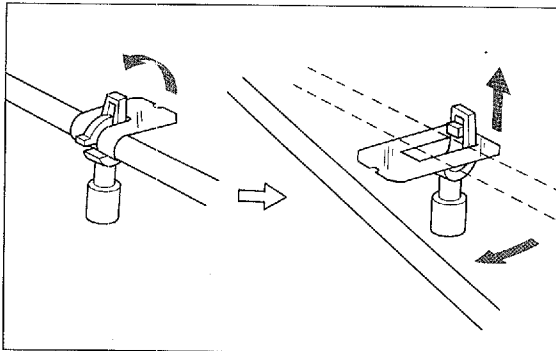
BEFORE USE

In order to avoid damage due to vibration or shock incurred during shipment, this unit is packed with protective materials. Be sure to remove these before use. Keep these materials for reuse if it is necessary to transport the unit again.

- Remove the packing materials.
- Remove the turntable spacers.



- Remove the holder that holds the tonearm.

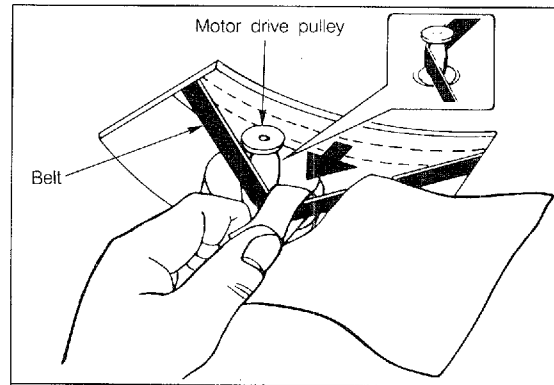


ASSEMBLY

Be sure to disconnect the power cord from the AC power outlet until assembly has been completed.

- Attach the drive belt.

As shown in the figure, pull the piece of paper attached to the belt and attach the belt to the motor drive pulley.

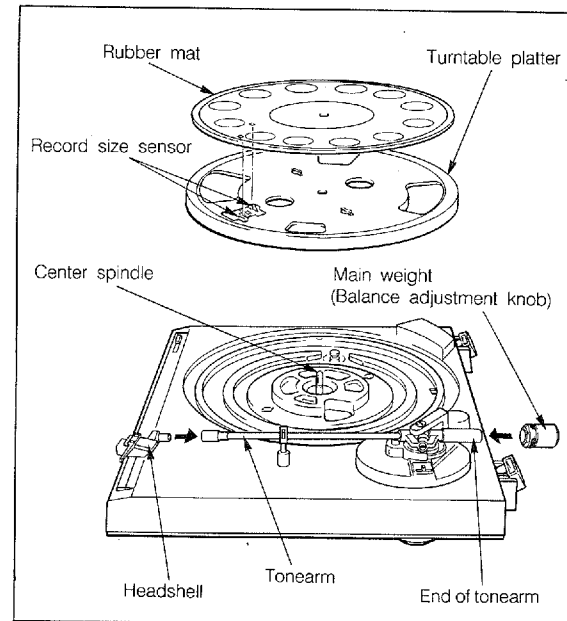


- MOUNTING THE TURNTABLE PLATTER

1. Insert your fingers into the two holes in the turntable platter and then securely position it over the shaft. Check to make sure that the platter is securely positioned.
2. Place the rubber mat on top of the turntable platter.
 - * When placing the rubber mat on the turntable, be sure that the detection part of the sensor is at the hole in the mat.

- MOUNTING THE MAIN WEIGHT

1. To mount the main weight, thread it onto the tonearm, turning it to the right.

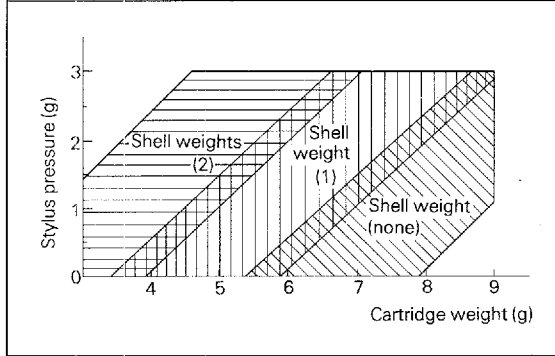


TT-400U

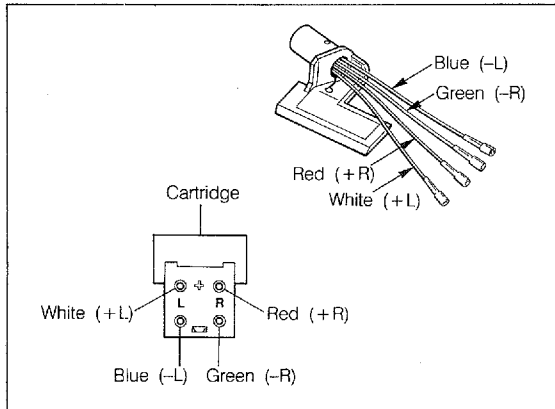
MOUNTING THE CARTRIDGE

Determine the proper number of shell weights according to the cartridge weight and stylus pressure.

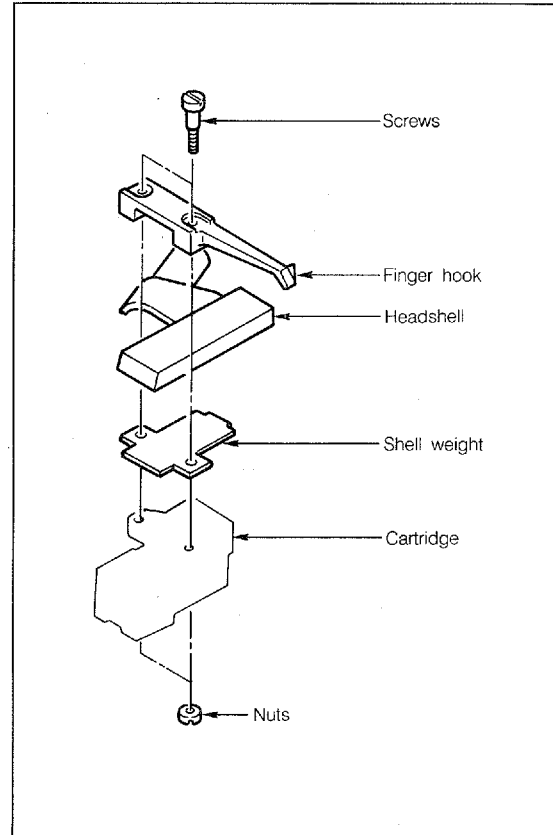
* Cartridges with weights ranging from 4 to 9 grams may be used with this turntable.



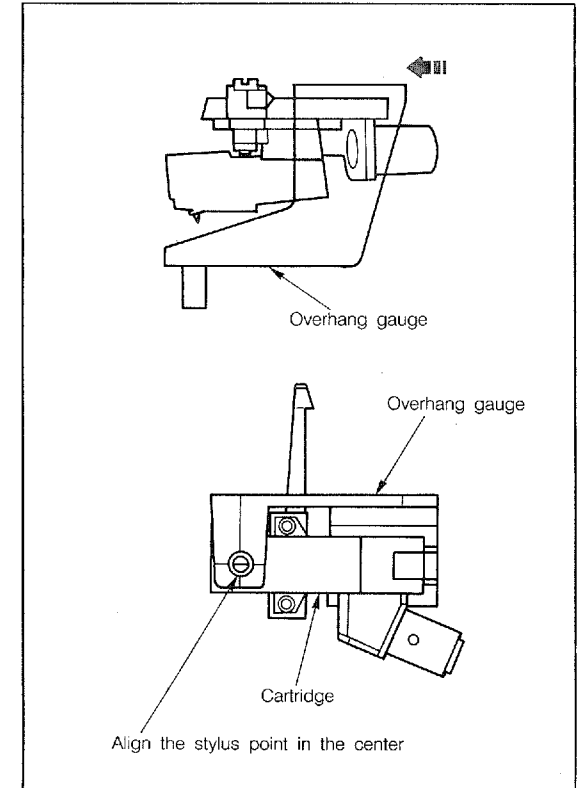
1. As shown in the figure, connect the color-coded headshell lead wires to the corresponding pins of the cartridge.



2. Loosely mount the cartridge to the headshell with the cartridge mounting screws.

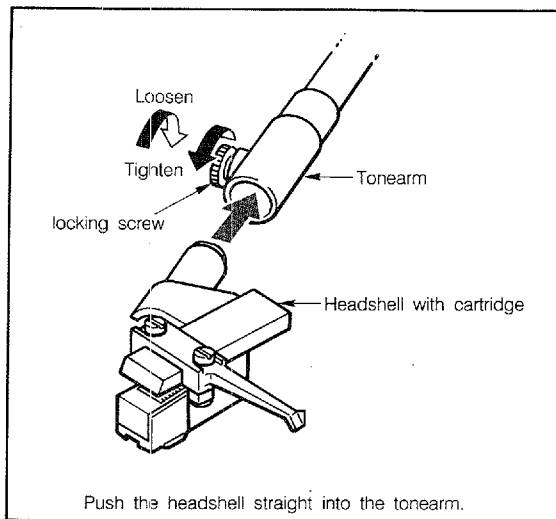


3. Align the stylus with the accessory overhang gauge and, after adjusting the overhang, secure the cartridge mounting screws. Overhang is correct when the stylus point on the overhang gauge is aligned with the tip of the stylus.



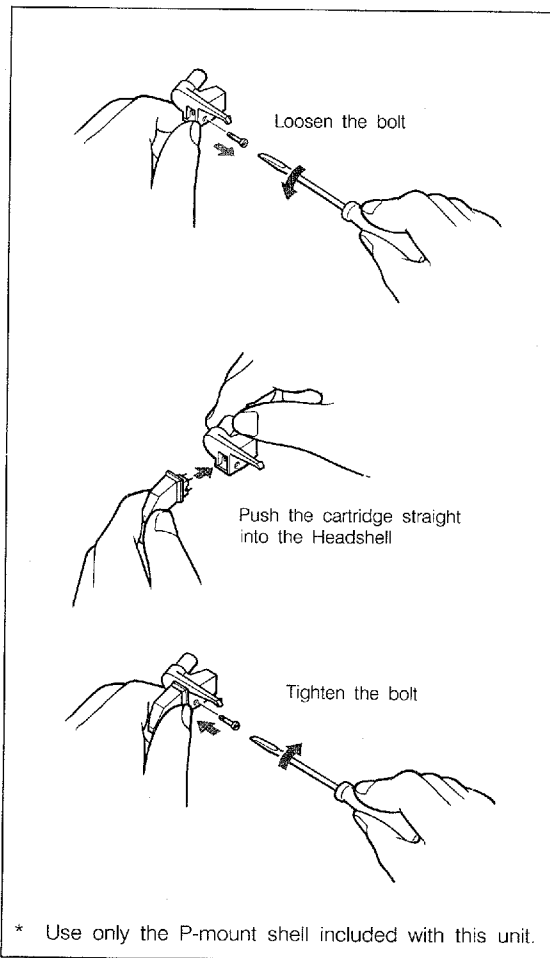
MOUNTING THE HEADSHELL

To mount the headshell, loosen the headshell locking screw and insert the headshell with the phono cartridge in place. Next securely tighten the locking screw. Be sure to keep the headshell straight when inserting it into the tonearm as it is very easy to damage the four contact pins inside the headshell.



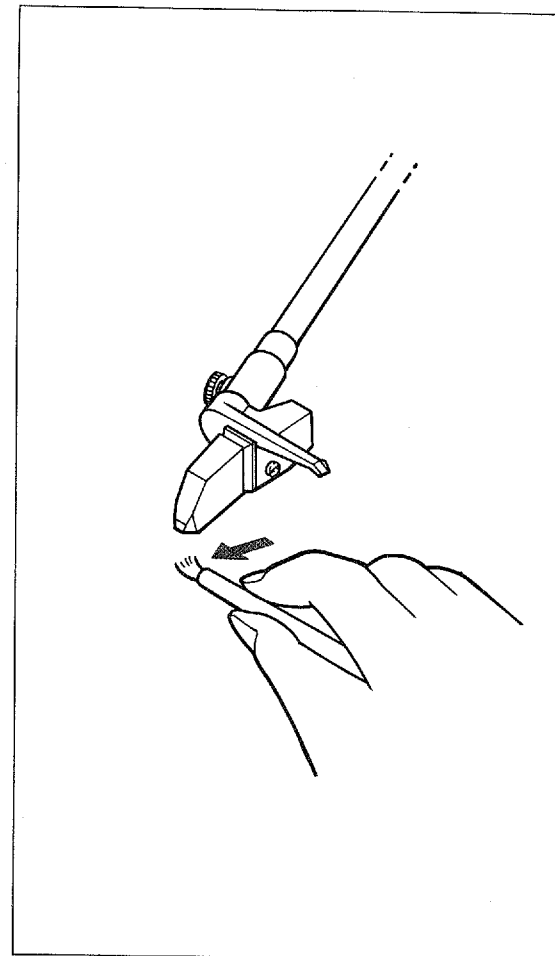
■ P-Mount Cartridge

P-mount headshell is only for P-mount cartridge.



MAINTENANCE

Dust and dirt degrade sound quality and cause excessive wear of the stylus tip and grooves.

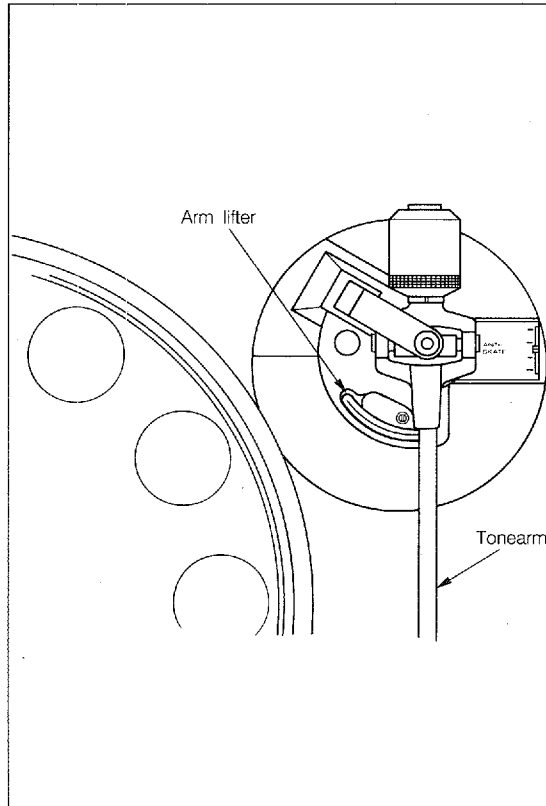


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ADJUSTING THE TONEARM BALANCE

Proceed with the balance adjustment after mounting and installing the tonearm assembly. Disconnect the power supply to prevent turntable rotation. Also, be sure to set the ANTI-SKATE knob to "0"

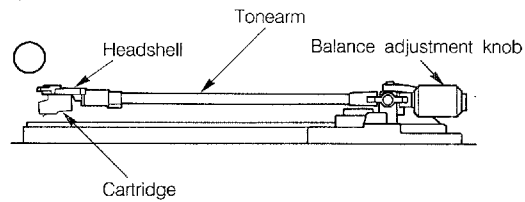
1. Set the CUEING control to the DOWN position and depress the arm lifter.
2. First release the arm lock. Then bring the tonearm away from the arm rest.



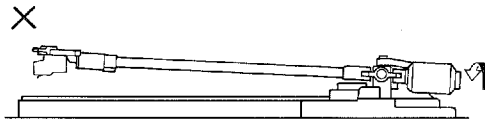
A Headshell assembly is too heavy (rotate the black knob in the direction of the arrow)



B Tonearm is balanced perfectly



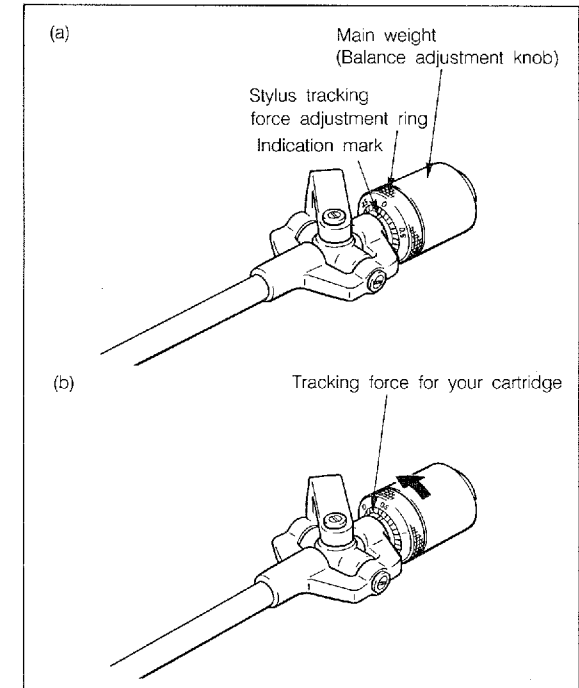
C Rear assembly is too heavy (rotate the black knob in the direction of the arrow)



ADJUSTING THE CARTRIDGE STYLUS TRACKING FORCE

Be careful not to move the main weight after balance adjustment, and turn only the stylus tracking force adjustment ring on the front of the main weight until the zero ('0') comes opposite center of the indication mark on the tonearm (See Fig. (a)).

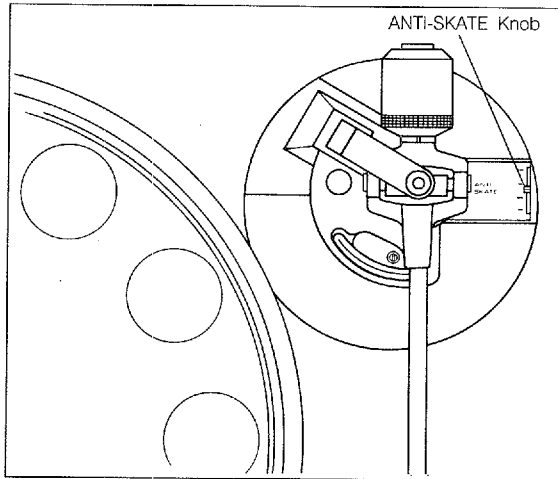
Rotate the balance adjustment knob slowly in the direction shown in Fig. (b), and note that the stylus tracking force adjustment ring turns with it. Turn the balance adjustment knob until indication mark on the tonearm is opposite the recommended stylus tracking force for your cartridge.



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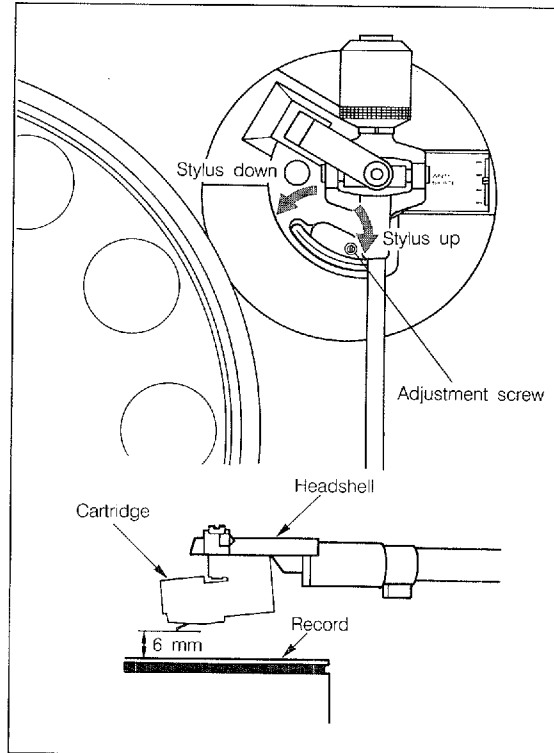
ADJUSTING THE ANTI-SKATE

Align the index mark on the ANTI-SKATE knob with the scale marking which corresponds to the rated tracking force of your cartridge.



ADJUSTING THE STYLUS HEIGHT

When the tonearm is in the up position, the height of the stylus above the record should be about 6 mm. If it is more or less than this, loosen the adjustment screw on the arm lifter, and adjust the height of the arm lifter so the distance of the stylus to the record is 6 mm.



ADJUSTING THE AUTOMATIC-START POSITION

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

1. Clamp the tonearm to the arm rest.
2. Turn the screw with a screwdriver, clockwise or counterclockwise as necessary.

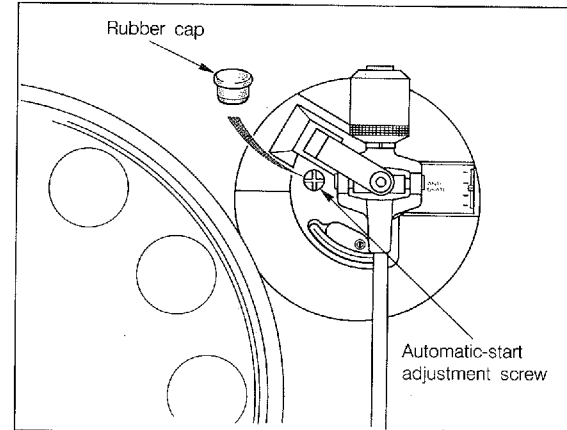
If the stylus tip descends too far in the recorded grooves,

— turn counterclockwise.

If the stylus tip descends outside of the recorded grooves,

— turn clockwise.

Adjust so the stylus tip descends 1–2 mm in from the edge of the record.



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USING THE CUEING CONTROL

In normal operation the CUEING control is set in the DOWN position.

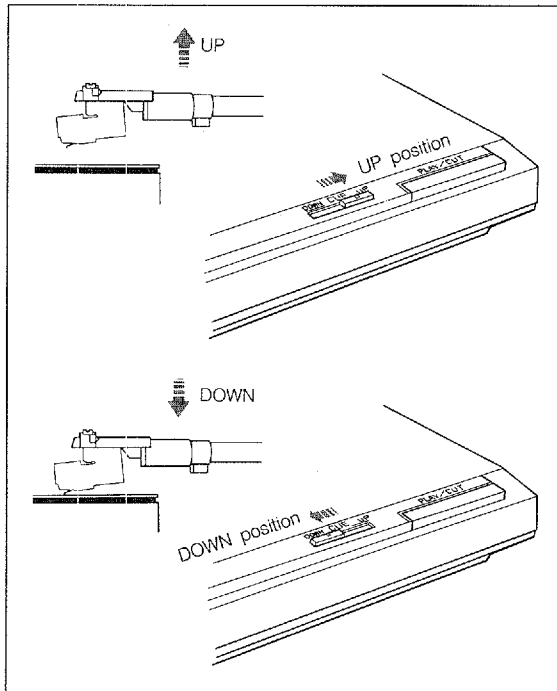
However, if you wish to interrupt record play in order to play a different track, the CUEING control can be used to gently raise and lower the stylus tip.

1. Raising the stylus tip:

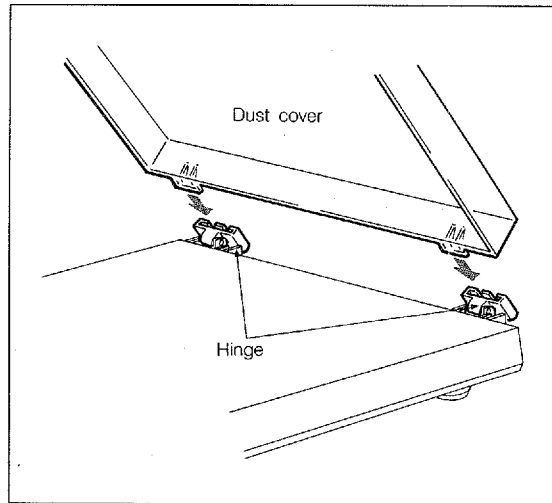
Set the CUEING control to the UP position. The stylus tip will immediately rise from the record.

2. Lowering the stylus tip:

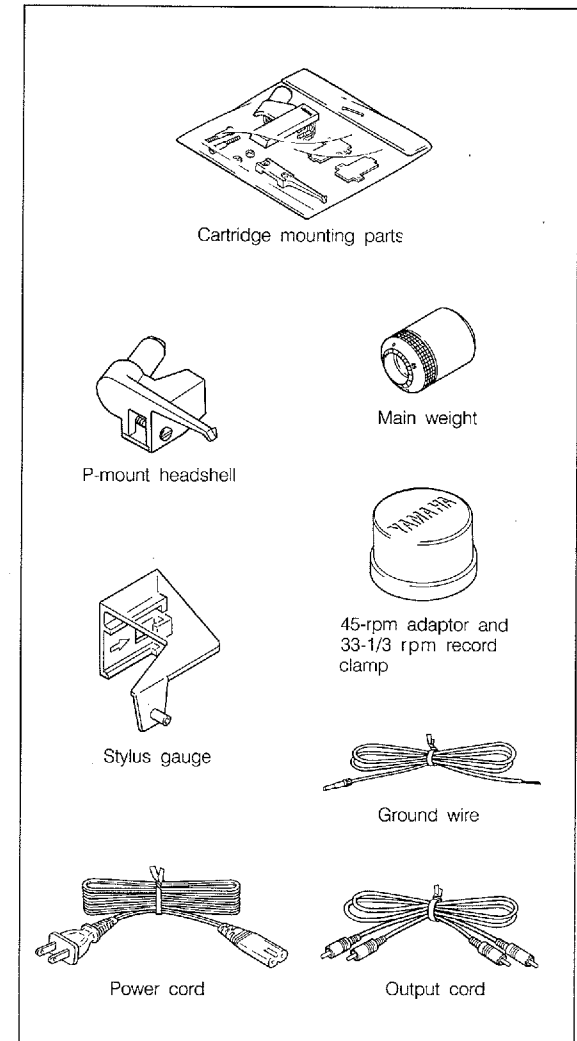
Set the CUEING control to the DOWN position. The stylus tip will then descend to the record and play will begin.



MOUNTING THE DUST COVER



ACCESSORIES

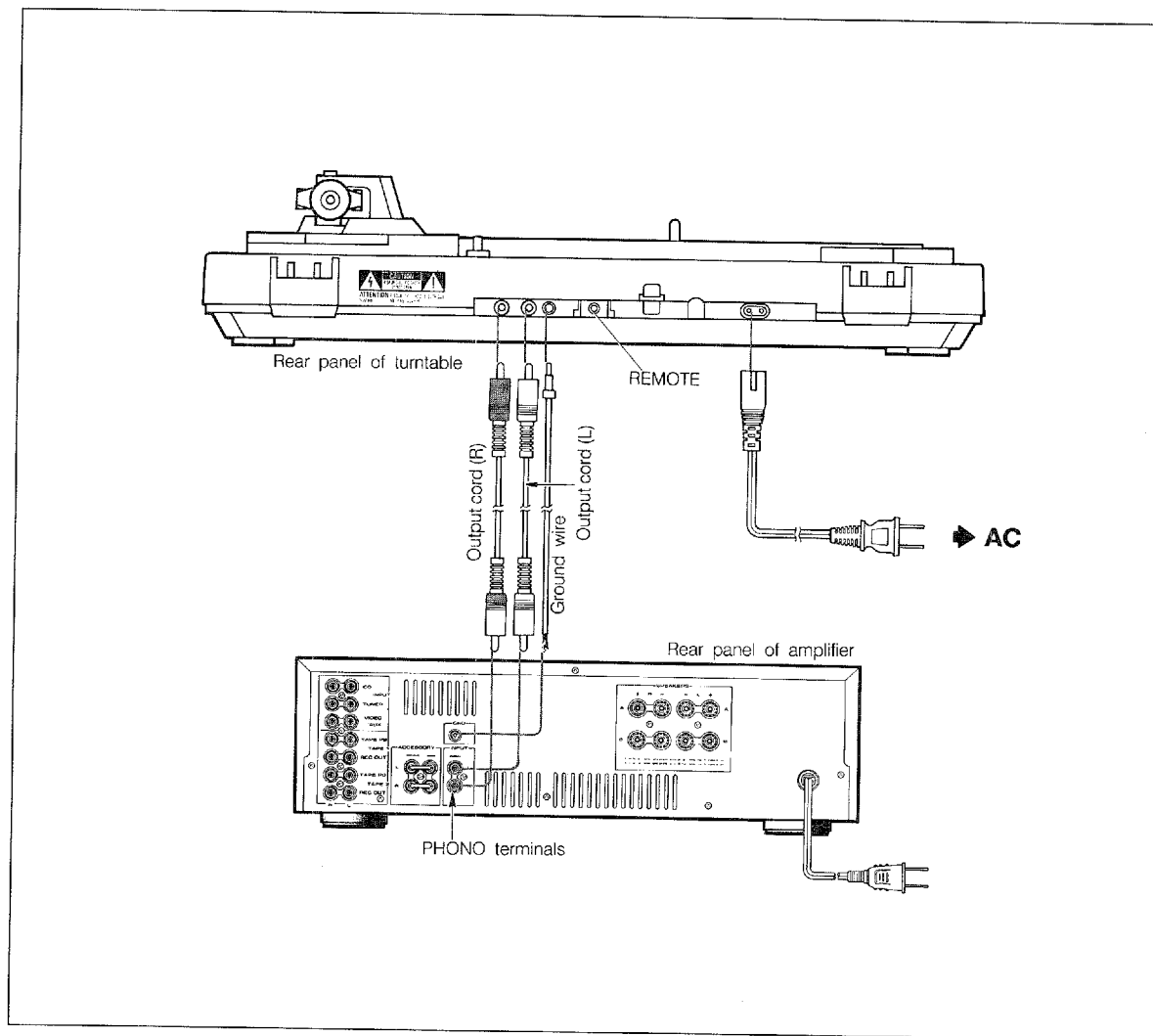


CONNECTION TO AN AMPLIFIER

1. Connect the output cords from the rear-panel of the unit to the PHONO terminals on the amplifier. Make sure that the left and right channels are properly matched. The white is for the left (L) channel and the red is for the right (R) channel.
2. Connect the black ground wire from the rear-panel of the unit to the GROUND (GND) terminal on the amplifier. Depending on the amplifier, better sound is sometimes obtained by not connecting the ground wire.
3. Connect the power plug to the AC wall outlet or to an auxiliary outlet on the amplifier.

REMOTE terminal

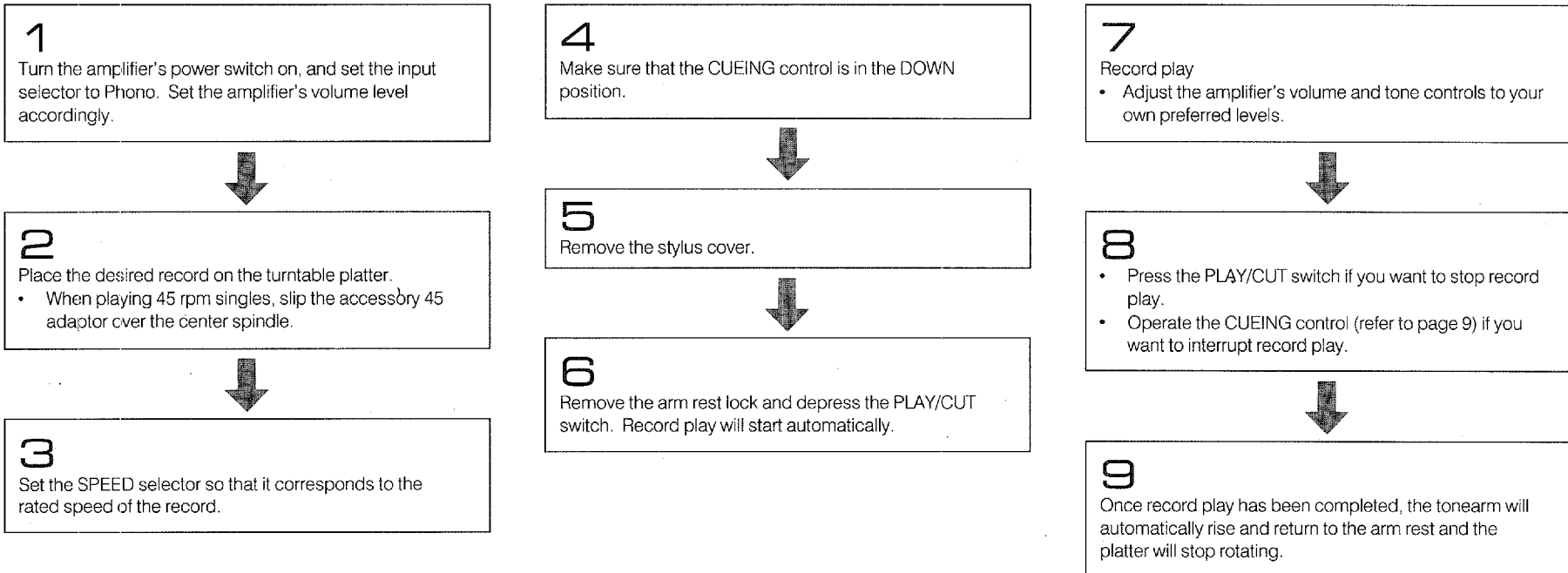
With the REMOTE terminal on the rear of the TT-400U, system remote control is possible through the amplifier (AVC-50 etc.) with **RS** mark.



TT-400U

PLAYING RECORDS

After you have assembled the turntable, made the necessary adjustments and connected the turntable to the audio amplifier, you are ready to start playing records. Proceed as follows.



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TROUBLESHOOTING

Before assuming that your turntable is faulty, check the following troubleshooting list which details the corrective action you can take yourself without having to call a service engineer. If you have any doubts or queries, get in touch with your nearest YAMAHA dealer.

Fault	Cause	Cure
Turntable doesn't turn although tonearm is brought over record.	Power cord is not firmly plugged into AC power outlet or into auxiliary power outlet of amplifier.	Connect the power cord securely to the AC power outlet or to the amplifier's auxiliary power outlet.
	Drive belt not installed correctly.	Reinstall
There is no sound or low sound although the stylus descends to the record surface.	Poor connector pin connections.	Mount the cartridge firmly onto the tonearm.
	Amplifier's volume control is at lowest position.	Turn up the volume control to the required position.
	Poor amplifier and turntable output cord connections.	Check the connecting terminals on the rear panel of the amplifier and turntable.
Reproduced sound is distorted and unpleasant, particularly the treble, with a clicking or scraping noise.	Turntable is not set horizontally.	Install the turntable horizontally.
	Dust on stylus.	Clean the stylus with a stylus cleaning brush.
	Worn stylus.	Replace the stylus.
	Damaged or dusty, dirty record.	Replace with a new record, or clean a record.
	Amplifier's treble control is turned up too high.	Try returning the treble control to the FLAT position.
Reproduced sound quivers and a howl (acoustic feedback) is heard.	Installation locations of speaker systems and turntable are too close together or turntable is unstable and vibrations are being transmitted to cause resonance.	Move the turntable to a stable location, move it some distance from the speakers, or change the speaker locations (in particular, avoid installation in corners).
A loud humming sound is heard during record play.	Poor amplifier and turntable output cord connections.	Check the connecting terminals on the rear panel of the amplifier and turntable.
	Poor connector pin connections.	Mount the cartridge properly onto the tonearm.
	Poor earth connection.	Check the connecting terminals on the rear panel of the amplifier.

TT-400U

SPECIFICATIONS

■ TURNTABLE MOTOR SECTION

Drive System	Belt drive
Motor	DC motor
Platter	Aluminum diecast
Speed	33-1/3 & 45 rpm
Signal-to-Noise Ratio	70 dB
Wow and Flutter	0.045 % wrms

■ TONEARM SECTION

Arm Type	Static balance Straight tonearm
Effective Length	230 mm (9-1/16")
Overhang	16 mm (5/8")
Effective Mass	9.5 g (without cartridge)
Tracking Force	0-3g, 0.1g step
Offset Angle	23°
Permissible Cartridge	
Weight	4-9g

■ GENERAL

Power supplies	120 V AC 60 Hz
Power Consumption	2 W
Dimensions (W x H x D)	430 x 110 x 375mm (16-15/16" x 4- 5/16" x 14-3/4")
Weight	4.0 kg (8 lbs. 13 oz.)

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

YAMAHA

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