



YAMAHA YP-D71

DIRECT DRIVE TURNTABLE WITH QUARTZ PLL SPEED CONTROL

OWNERS MANUAL



Yamaha thanks and congratulates you on your purchase of the YP-D71 stereo turntable unit. The YP-D71 uses a PLL circuit (phase-locked loop) with an integral quartz crystal oscillator for the servo control which is the heart of a direct drive turntable. The YP-D71 represents the ultimate both in accuracy of the speed of rotation and in realism of the reproduction which it gives.

It represents a combination of all Yamaha's tremendous resources in turntable-unit construction technology: photo-electronic detection for the auto-up function, a high-sensitivity tonearm, heavy weight turntable platter, and a cabinet in which resonances have been suppressed.

To ensure a long service life from your YP-D71, please read this owner's manual carefully.

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FEATURES

Quartz Oscillator Phase-Locked Loop Control

This system (often abbreviated to Quartz PLL) controls the speed of rotation of the motor by using a quartz crystal oscillator, 'locking' it for a dramatic increase in accuracy.

A Yamaha-Developed PLL IC

The integrated circuit (IC) used in the YP-D71 gives the highest possible accuracy in speed, with freedom from temperature-induced drift. This unique element was specially developed by Yamaha.

Non-Contact Photo-Electronic Speed Detection Auto-Up

As the cartridge stylus enters the innermost groove, the tonearm lifts automatically and the power is switched off.

The photo-electronic detector and the auto-up circuit ensure smooth functioning.

Heavyweight Turntable Platter and Mat

The turntable platter is heavy, 1.8 kg (4 lb), and has a high moment of inertia (230 kg-cm² including the rubber platter mat). This ensures the minimum possible wow and flutter and smooth rotation.

High-Sensitivity Tonearm

This highly sensitive S-shaped tonearm features ideal lateral balance and uses a dynamic damping system that together with a zinc die-cast arm base holds resonance to a minimum. Excellent tracking characteristics mean you hear all the music, without distortion.

IMPORTANT!

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

Model Name YP-D71

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.

Special Instructions for British-Standard Model

IMPORTANT

THE WIRES IN THE MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

BLUE: NEUTRAL

BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

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CAUTION-READ THIS BEFORE OPERATING YOUR YP-D71

1

The YP-D71 is a sensitive piece of precision audio equipment. For best results, read this manual carefully before use.

2

Do not drop or jar the YP-D71, particularly after it has been fully assembled and all adjustments made. If it is accidentally bumped, check all functions and readjust accordingly.

3

When installing your YP-D71, avoid putting the tonearm assembly on the same side as the mains transformer of the audio amplifier.

4

Install the YP-D71 in a flat and level place, out of the direct rays of the sun, and avoiding locations subject to vibration and excessive dust, heat, cold or moisture. Do not place it directly in front of, or too close to your speakers.

5

When moving the YP-D71, use the original packing and carefully re-pack it for transit.

6

Do not attempt to clean it with chemical solvents (such as alcohol or benzene). Wipe only with a clean dry cloth.

7

When problems occur, consult the section on 'Trouble Shooting', which details common operating errors.

8

Keep this manual in a safe place for future reference, and refer to it frequently until you are familiar with your YP-D71.

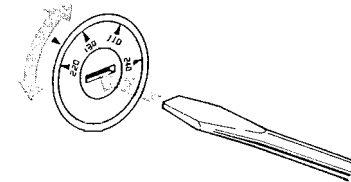
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Whichever high performance cartridge you use with the YP-D71, be sure to keep the stylus tip free from accumulated dirt: this is the major single reason for poor quality from records.

10

The voltage selector switch on the bottom of the YP-D71 must be set for your local mains voltage *BEFORE* plugging in the AC main supply. Voltages are 110/130/220/240 V AC, 50/60 Hz. (General Model only)

Voltage Selector Setting



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

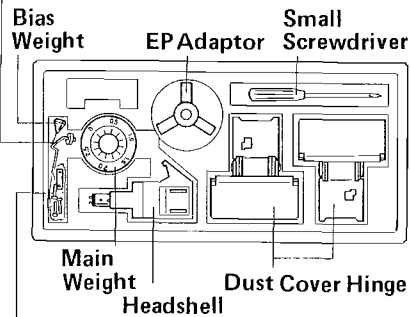
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THE NAMES AND FUNCTIONS OF THE PARTS

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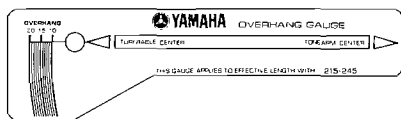
ACCESSORIES

Inside Force Canceler Roller Stand



Cartridge — retaining screws
Cartridge — retaining nuts
Washers

Overhang Gauge



Rubber Mat

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

Turntable Platter

Built of die-cast aluminum, it has been specially dynamically balanced for optimum flywheel smoothing effect, giving steady, even rotation.

Dust Cover

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

Center Shaft

In the YP-D71 the center shaft is integrated with the motor and rotates at the actual speed of the turntable platter, reducing vibration and eliminating the need for intermediate mechanisms.

POWER/SPEED Switch

This switch serves power ON/OFF and speed functions.

ON/33 . . Set this switch to ON/33 to play a 33-1/3 r.p.m. disc.

OFF . . . Set the switch to OFF position when the turntable is not used. When set to the OFF position, the tonearm lifts and the turntable stops.

ON/45 . . Set this switch to ON/45 to play a 45 r.p.m. disc.

LOCKED Indicator

This indicator lights up when the turntable attains the correct and normal revolutions and is locked by Quartz PLL.

Tonearm

The advanced S-shaped static balanced arm used in the YP-D71 features special aluminum alloy pipe and high sensitivity gimbal-type supports, for top performance with all types of cartridges.

Armrest

Provides a secure rest for the tonearm between record playings.

Inside Force Canceler

The hanging string-weight type with a roller allowing bias adjustment.

Main Weight

The whole main weight assembly rotates to give easy selection and clear indication of accurate stylus tracking force settings.

Lock Nut for Tonearm

When adjusting the height of the tonearm, loosen this lock nut. After adjustment, retighten the lock nut.

MOTOR/CUE Switch

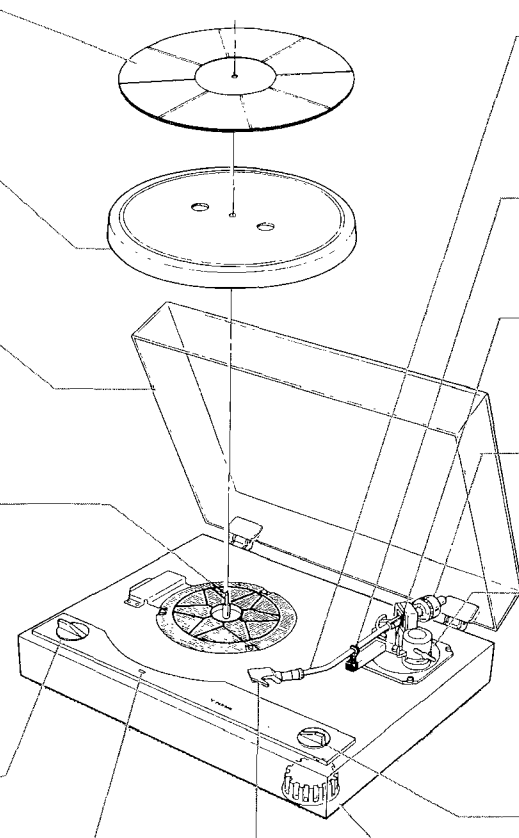
- PLAY . . . When set to this position, the turntable starts rotating and the stylus gently lowers itself onto the disc surface.
- CUT . . . Set the switch to this position when you want to discontinue disc play. The tonearm is lifted and the turntable is stopped.

Headshell

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

Insulator

These wide legs insulate the YP-D71 from vibrations and help to eliminate 'howling' (acoustic feedback from speakers).

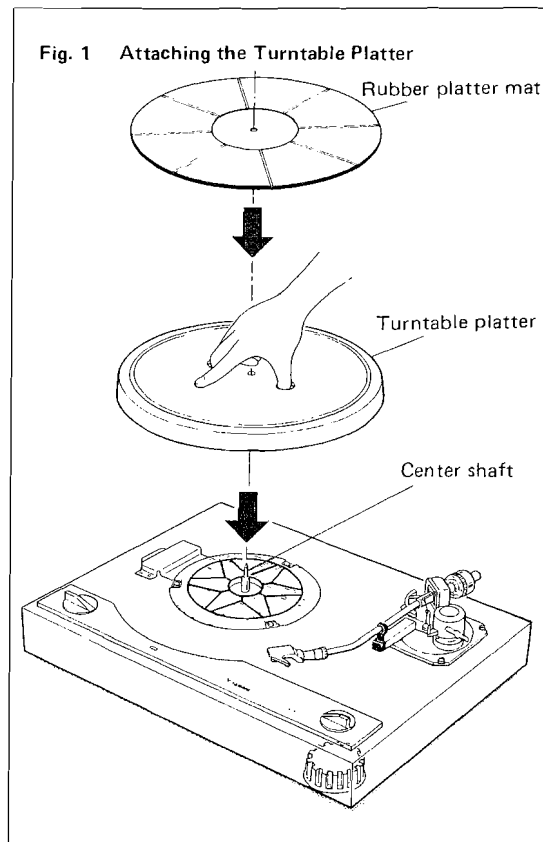


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ASSEMBLING THE TURNTABLE UNIT

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. 1. Place the rubber platter mat on the turntable platter.



FITTING A CARTRIDGE

The YP-D71 comes without a cartridge. Choose a high quality cartridge.

All cartridges with weights between 3 and 12 grams can be used.

When attaching the cartridge to the headshell, be sure to join the leads from the cartridge to the correct pins on the headshell. (See Fig. 2)

Ensure that the stylus tip overhangs the center spindle by 15mm, as shown in Fig. 3.

Fig. 2 Headshell/Lead Wiring

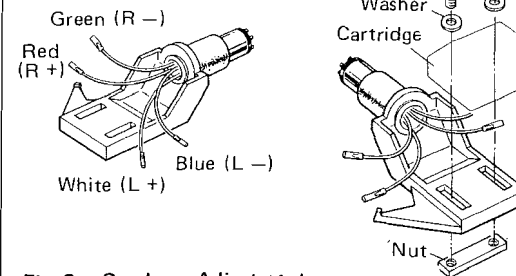
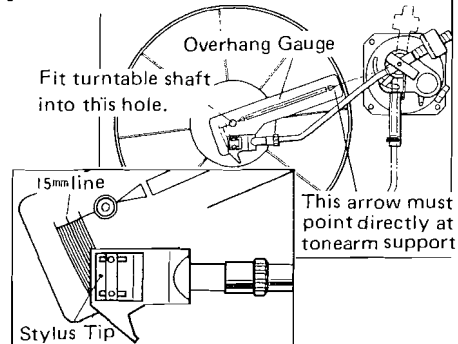


Fig. 3 Overhang Adjustment



ASSEMBLING THE TONEARM

1) Push the separately wrapped balance main weight onto the rear of the tonearm, rotating it at the same time in the direction shown (See Fig. 4).

2) When the helicoidal groove on the inside of the main weight engages with the projecting stopper on the front of the tonearm, further rotation of the main weight in counterclockwise direction (i.e. to the right when viewed from the rear of the tonearm) draws the main weight forward, and clockwise rotation draws it backward.

To connect the headshell to the tonearm, insert the headshell pin in a correct way into the slit on the end of the tonearm and tighten the lock nut firmly by turning it counterclockwise. (See Fig. 5)

Fig. 4 Attaching the Main Weight

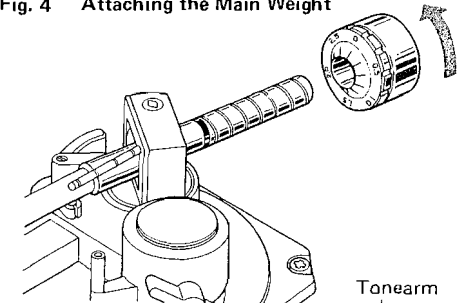
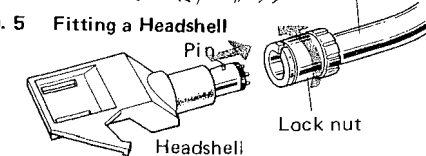


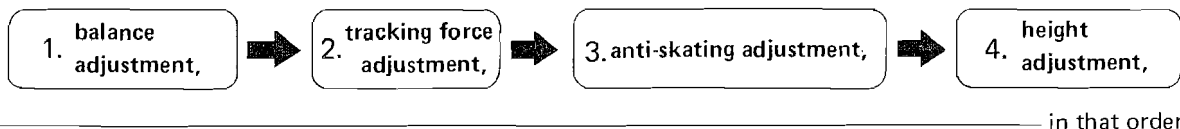
Fig. 5 Fitting a Headshell



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ASSEMBLING & ADJUSTING THE TONEARM

After completing tonearm assembly, proceed with

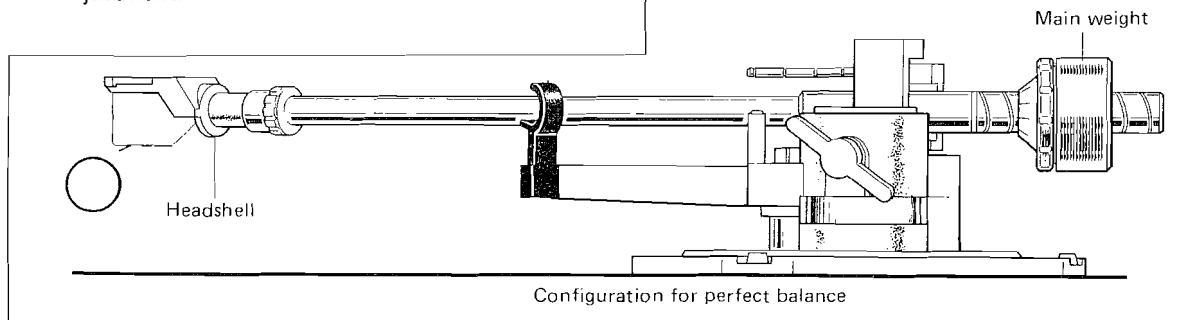
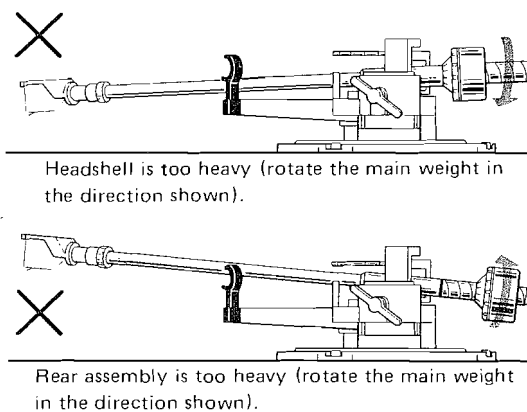


(1) Adjusting tonearm balance

- 1) Set the POWER/SPEED switch either to the ON/33 or ON/45 position.
- 2) Remove the tonearm from the armrest, and keep it between the armrest and the turntable. Raise (if hinged) or remove (if detachable) the stylus guard if one is provided with your cartridge.
- 3) Set the MOTOR/CUE switch to the PLAY position.
- 4) Now check the balance: the headshell will usually either tend to rise (if too light) or sink (if too heavy).
- 5) Refer to Fig. 6, and move the main weight assembly either back or forwards by rotating it slightly until the tonearm is perfectly balanced.
- 6) Replace the tonearm on the armrest after adjustment.

Note: When making balance adjustment, pay attention to the tip of needle as the turntable is rotating.

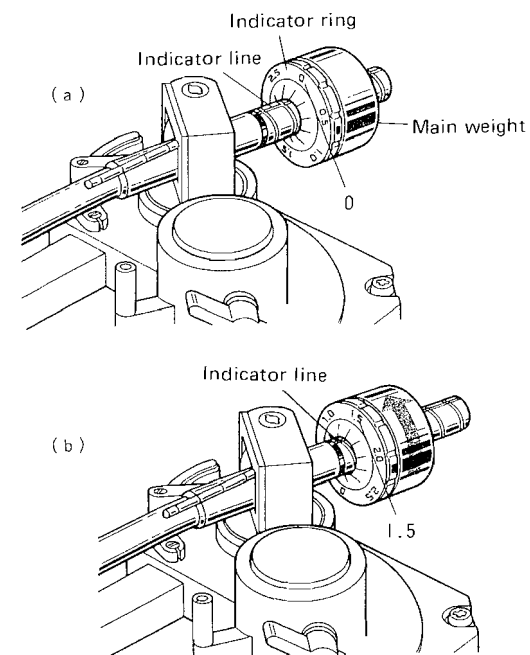
Fig. 6 Balance adjustment



(2) Adjusting cartridge stylus tracking force

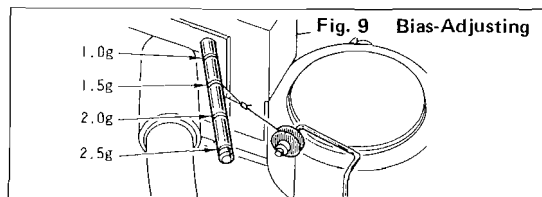
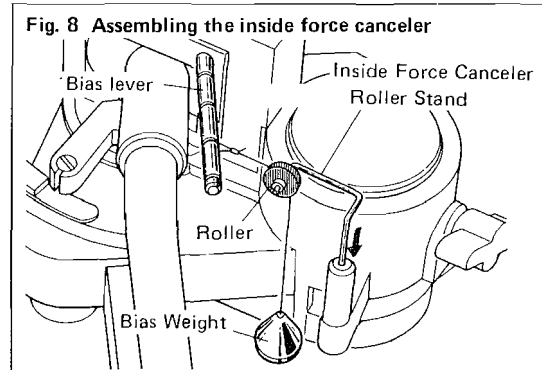
- 1) Be careful not to move the main weight after balance adjustment, and turn *only* the indicator ring on the front of the main weight until the zero ('0') comes opposite the center line on the tonearm (See Fig. 7-a).
- 2) Rotate the main weight slowly in the direction shown in Fig. 7-b, and note that 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.

Fig. 7 Adjusting Stylus Tracking Force



(3) Adjusting the Inside Force Canceler

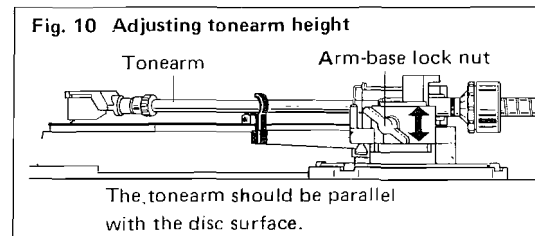
- 1) To install Inside Force Canceler, secure the tonearm to the armrest.
- 2) Insert the Inside Force Canceler roller stand, an accessory, into the post as shown in Fig. 8.
- 3) Hang the string, connected to the bias-weight, over a groove on the bias lever (this hanging position will be adjusted later) and place the string over the roller.
- 4) The string position on the bias lever is decided by the stylus tracking force. The first groove corresponds to 1g and other grooves provide 0.5g step increases, the end groove thus corresponding to 2.5g. Select the groove to meet your stylus force. For example, hang the string over the third groove (from the end) for 1.5g cartridge stylus force. (See Fig. 9).



(4) 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 disc on the turntable platter. Set the POWER/SPEED switch either to ON/33 or ON/45 position, then lower the stylus tip on to the disc surface. If the tonearm is found failing to parallel the disc surface at this time, puts the tonearm back to the armrest once. And, while keeping the tonearm in the arm rest, loosen the arm-base lock nut, and gently move the tonearm proper (upward or downward) so that it becomes parallel with the disc surface. After this adjustment, place the stylus tip once again on to the disc surface and see if parallelism in question has been attained. Should it be still found otherwise, repeat the above same adjustment to finally bring the tonearm completely parallel with the disc surface.

Make sure to tighten the lock nut firmly to the arm-base when adjustment is completed. NOTE: During adjustment of tonearm height, the turntable keeps turning. Therefore, be careful so as not to give damage to the stylus tip or a disc.

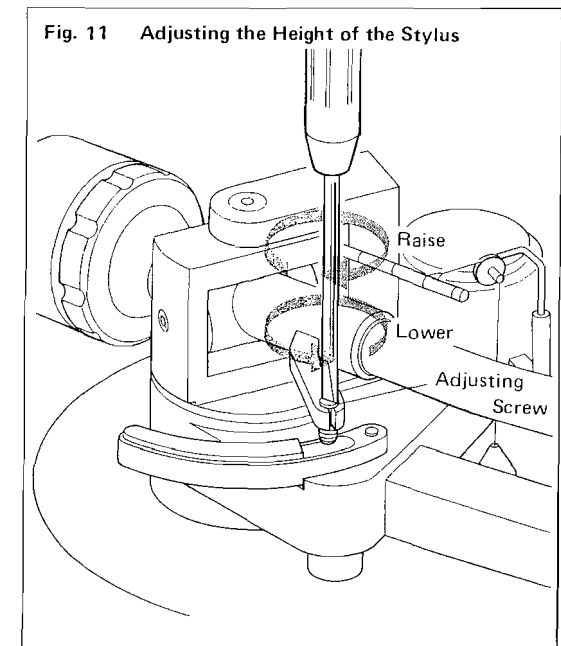


- 3) Once the tonearm height adjustment has been completed, secure the tonearm to the armrest.

Adjusting stylus height

In case the position of the stylus tip comes to differ due to cartridge replacement, adjust the stylus height as shown in Fig. 11 by means of the adjusting screw and accessory screwdriver.

- 1) Turn MOTOR/CUE switch to CUT position.
- 2) Bring the tonearm over the disc surface.
- 3) To raise the stylus, turn the screw clockwise.
- 4) To lower the stylus, turn the screw counter-clockwise.
- 5) Adjust stylus height between 4mm to 10mm with this screw.



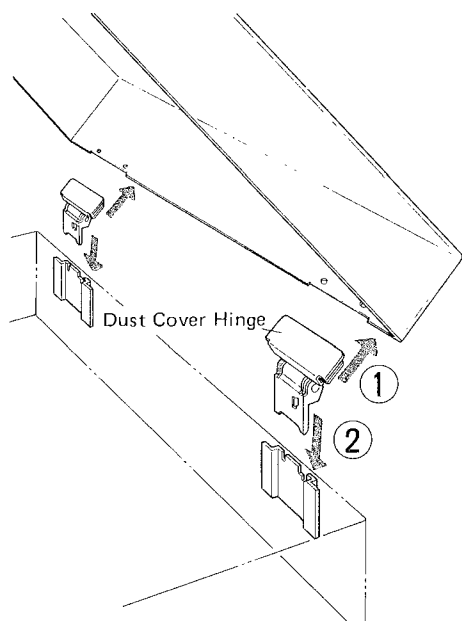
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ASSEMBLING THE DUST COVER & CONNECTIONS TO YOUR AMPLIFIER

DUST COVER

The dust cover can be freely attached and detached. When attaching, follow directions in Fig. 12, ensuring that the stud fits securely into the grooves as shown. Reverse to detach.

Fig. 12 Attaching and Detaching the Dust Cover

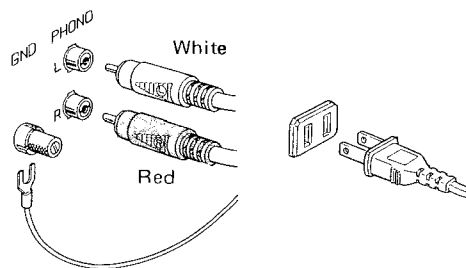


The dust cover will remain open at an angle of 40 degrees or larger.

CONNECTIONS TO YOUR AMPLIFIER

- 1) The output leads projecting from the rear of the cabinet should be connected to the PHONO input terminals on your audio amplifier. Ensure the left- and right-hand channels are connected correctly. The white lead is the left, and the red lead the right channel. (See Fig. 13).
- 2) The black ground lead issuing from the output leads should be connected to the GND (ground) terminal on your amplifier (see Fig. 13). Certain amplifiers have less hum and noise when no ground connection is made: employ whichever gives the lower hum and noise levels.
- 3) Insert the AC plug of the YP-D71 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. 13 Connections to an Audio Amplifier



TIMING ADJUSTMENT ON AUTO-UP

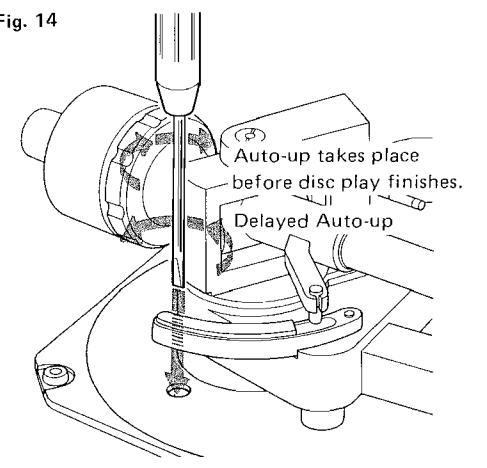
Please avoid unnecessary adjustment on Auto-up as it is factory-adjusted before shipment.

If the Auto-up timing is off, adjust by means of the adjusting screw and the accessory screw driver.

- 1) Secure the tonearm to the armrest and remove the rubber cap from the adjusting screw.
- 2) If Auto-up takes place before disc play finishes, turn the adjusting screw clockwise.
- 3) If the tonearm remains on the disc even after the finish of the disc play, turn the adjusting screw counter-clockwise.

Note: This adjusting screw allows two-step shifting both in the right and left directions.

Fig. 14

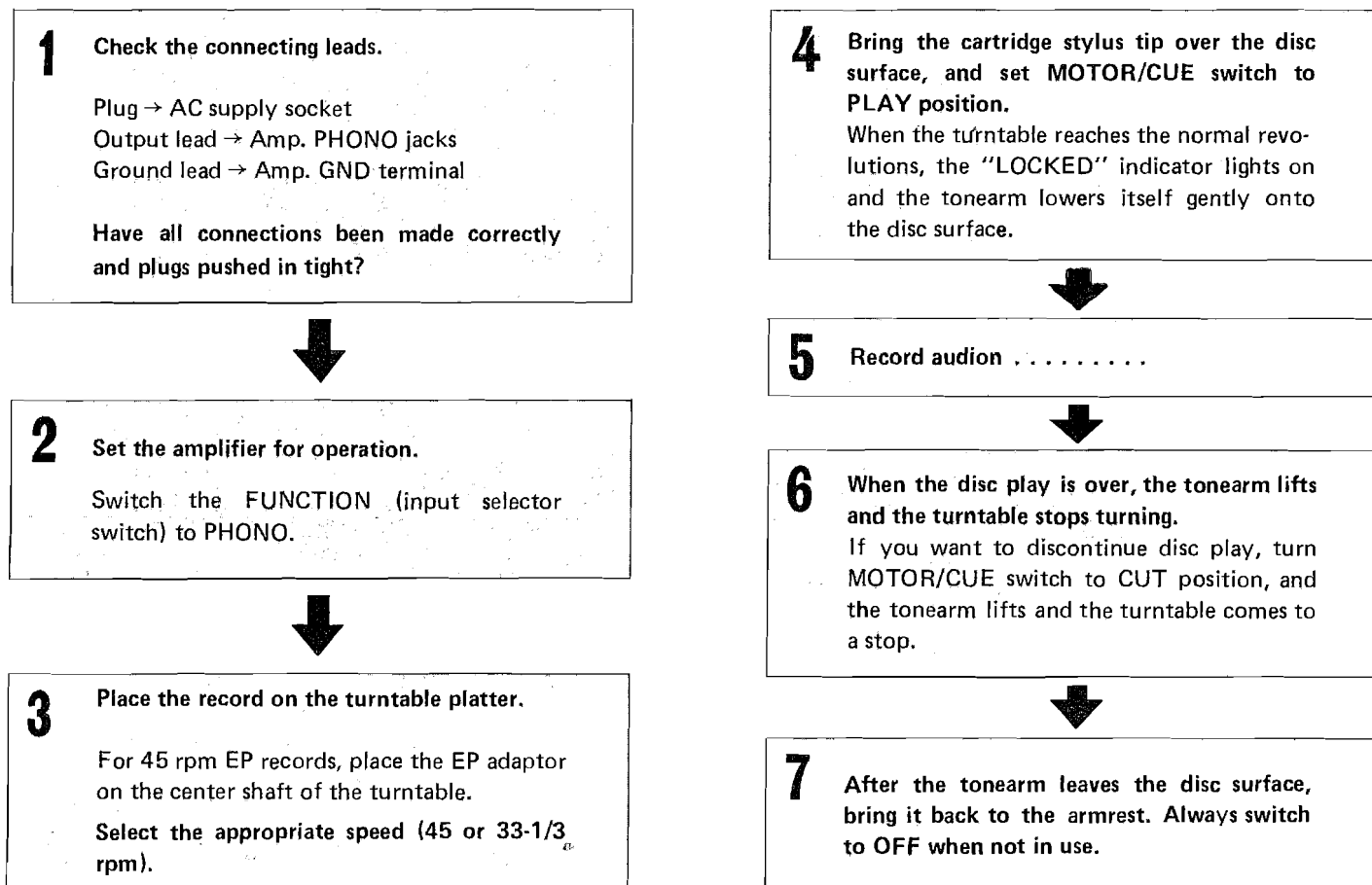


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HOW TO PLAY RECORDS

PLAY RECORDS BY FOLLOWING THE INSTRUCTIONS BELOW.

After having completed assembly and adjustment of the turntable and tonearm, carry out the following steps in this order.



YP-D71

SPECIFICATIONS

TURNTABLE MOTOR SECTION

Drive System	Direct drive
Motor	Coreless DC Hall Motor
Servo System	Quartz Locked (PLL)
Start up Torque	1 kg-cm
Turntable Platter	31 cm (12-1/4") die-cast aluminum. Weight, 1.8 kg (4 lbs). Moment of inertia, 230 kg-cm ² including rubber platter mat.
Speed	33-1/3, 45r.p.m.(with quartz locked-indicator)
Wow and Flutter	0.025% (WRMS), $\pm 0.035\%$ peak (IEC 98A weighted)
Signal-to-Noise Ratio	77 dB (IEC 98A weighted)

TONARM SECTION

Arm Type	S-shaped static balanced arm with gimbal supports
Tonarm Total Length	318 mm (12-1/2")
Tonarm Effective Length	242 mm (9-1/2")
Overhang	15 mm
Off-set angle	21° 15'
Stylus Tip Equivalent Mass	15 g
Tracking Error Angle	+2° 30', -1°
Tonarm Stand Base	Die-cast zinc
Inside Force Canceler	String/weight Hanging type
Height Adjust	± 4 mm
Tracking Force	Counter Ring type 0.25 g step
Cueing	Oil damping type
Auto-Up Stop	Non-contact photo-electronic speed detector, linked with cueing mechanism and power ON/ OFF switch.
Headshell	Forged pure aluminum (interchangeable to EIA standard: weight 9 g)
Possible Cartridge Weights	3 ~ 12 g
Output Leads	NEGLEX 2496 Low Impedance biaxial cable

GENERAL

Power Supplies	120V AC, 60 Hz (U.S. & Canadian Models) 220V AC, 50 Hz (European Model) 240V AC, 50 Hz (British & Australian Models) 110/130/220/240V AC, 50/60 Hz (General Model)
Power Consumption	13W
Cabinet	U.S. & Canadian Models Ebony Particle board with polyvinyl chloride finish Other Area Models American Walnut Particle board with polyvinyl chloride finish
Dust Cover	Acryl
Hinges	Free-setting, detachable
Acoustic Insulators	Large double-folded insulators
Dimensions (W x H x D)	470 x 150 x 373 mm (18-1/2" x 6" x 14-11/16")
Weight	11 kg (24 lbs 4 oz)

Specifications subject to change without notice.

YP-D71

TROUBLE SHOOTING

If your YP-D71 malfunctions, first check the following trouble-shooting list. If this fails to correct the problem, contact your local Yamaha dealer or service representative.

Fault	Cause	Cure
Turntable does not rotate, although switch is set ON.	Mains supply plug not firmly plugged into supply socket.	Push plug firmly into the socket.
Balance cannot be obtained after changing cartridge.	The cartridge is either too heavy or too light.	Repeat the adjustment with the main weight either further forward or back.
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 to PHONO.	Set the function control to PHONO.
	Amplifier volume too low.	Raise the volume slowly.
	Turntable unit output leads not properly connected.	Check the connections at 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 wrong.	Adjust the tonearm height correctly.
The reproduced sound is distorted, with clicking or scraping sounds. High frequency reproduction is particularly 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 stylus tip is worn.	Replace the stylus.
	The record itself is damaged, or is dirty.	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.

When installing the YP-D71, never fail to keep the level. If not, the rotation of motor and the movement of tonearm will be adversely affected.

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