PIONEER PL-300

AUTO-RETURN QUICK-START QUARTZ-PLL DC DIRECT-DRIVE TURNTABLE

PIONEER

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Smooth Auto-Return/Shutoff & World's Thinnest Motor

- **Ultra-Thin "Stable Hanging Rotor" Quartz-PLL DC Motor**
- **High-Precision Automatic Tone Arm Return/Shutoff**
  Mass Concentrated Arm, Slim-Line Cabinet, Coaxial Suspension

*Metal-like resin cabinet.

QUARTZ-PLL DC MOTOR

U.F.O.—Unusually Faithful Operation

Unlike most motors, Pioneer's new "Stable Hanging Rotor" DC motor has a *non-rotating* motorshaft atop which the platter/motor-rotor assembly is balanced *at the center of gravity.* In systems which put the main bearing/pivot point *below* the whole rotating structure, even the tiniest tipping of the axis of shaft and spindle is magnified to result in a slanting/wobbling of the platter—something like what airplane (and spacecraft) pilots call "yaw." With ours, yaw is eliminated for out-of-this-world stability.

We avoid excessive friction and stress on the main bearing so that the motor runs quieter, more efficiently and for a longer lifetime. We eliminate wobble and tilt so that the platter turns truer, more steadily and with improved inertial characteristics. In fact, one of the most brilliant aspects of this Pioneer design is that the platter itself serves a sort of gyrostatic function in the rotating assembly, smoothing out speed errors before they can occur. And if there's a thinner turntable motor of this type, we'd like to see it. Ours is at least 50% less massive than the conventional direct-drive DC motor, and this has meant great savings in space inside the cabinet of the PL-300.

Still more accurate with Quartz-PLL

To bring speed constancy to even finer degrees, we also use a sophisticated servo-system with a quartz oscillator as a timing reference, a PLL circuit as a comparator, a Hall element motor position detection system and a 200-pulse Periphery-Integrated FG (Frequency Generation) platter-speed detection system. Wow/flutter is *never* more than 0.025% (WRMS), which the knowledgeable will recognize as being *below* the point where pitch changes can be detected by ear.

Specific advantages are: (1) There can be no detection error whatsoever when it comes to letting the PLL know the exact speed of the motor, even if the physical placement of the magnetic poles around the bottom of the rotor is minutely inaccurate. This is because the output is peripherly integrated. (2) There can be no radio interference or other noise generated in the system itself since the printed coil, Hall elements and all other active parts are of low impedance design.

One-Stripe Strobe

No more searching for the right stripe of strobe dots! Conventional strobes are timed by the power-line frequency (50Hz or 60Hz) and thus needed several different calibration rows. Ours is timed by the built-in quartz crystal oscillator for easier reading. It glows in a soft cherry red to indicate power-on and to confirm speed accuracy.

AUTO-RETURN & TONE ARM ANTI-HOWL CABINET

Mass Concentrated Tone Arm is Pioneer exclusive

Newton said it best: "...bodies at rest tend to stay at rest." Likewise, as he observed, bodies in motion *will not stop of their own accord.* Thus inertia must be strictly controlled if the side-to-side and up-down motions of your stylus are to reflect the undulations in the record groove and not outside vibrations. We've outfoxed inertia with our MASS CONCENTRATED design. By shortening the distance between the support and the counterweight on the tone arm of the PL-300, and reducing the mass at the stylus tip, we have reduced cross-modulation distortion, improved separation tracking accuracy and prevented the reinforcement of all forms of extraneous vibrations and resonance. With the addition of an extra-solid tone arm base, and a special headshell designed for low-resonance performance and formed of high density polyesters plus glass fibers, the arm on the PL-300 is as steady, sensitive and resonance free as you will ever find in any price range (and that's why we use exactly the same design on our more expensive models, too).

How to use the PL-300—as if you didn't know...

You simply use the CUE lever to lift the arm, guide it by hand over the lead-in groove of your record, lower the CUE lever and play begins. When the stylus enters the lead-out groove, a special Pioneer detection system takes over, lifts the arm and returns it gently to its rest. Then power is automatically shut off.

To stop play and return the arm at any time, simply use the CUT button. Use the CUE lever when you want to temporarily interrupt play without stopping the turntable.

By the way, you may have noticed that there's no START control on the PL-300, This is because it has what we call our QUICK-START feature: simply lift the tone arm manually, move it in the direction of the platter edge, and the motor/platter will begin to rotate before you can say "how 'bout that for convenience!"

Profile of cabinet is 20% slimmer.

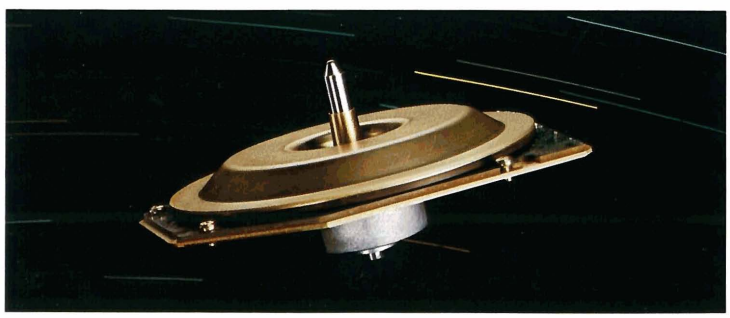
The overall height of the Pioneer PL-300, *including the cover,* is only 96mm (about 3-3/4-inch)! Even measured up against our closest competition, this is a full 20% thinner and, therefore, 20% less likely to suffer "howling" caused by sonic bombardment. The depth (cover open) of the PL-300 is only 380mm (about 15-inch) or approximately 10% less than the average. This allows you to position the turntable much closer to a wall or the back of a cabinet for still more savings in space.

Our COAXIAL SUSPENSION smooths out the shocks

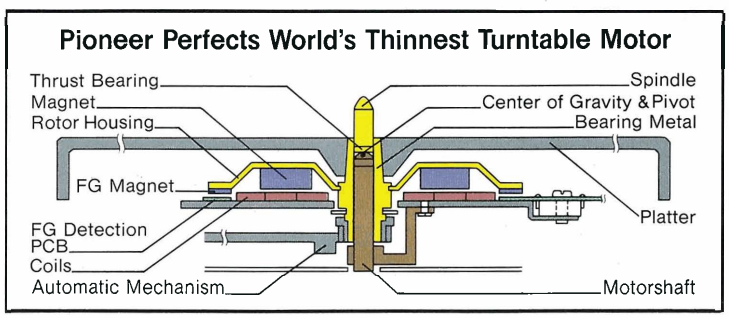
Short of weighing a turntable down with sandbags and bricks, the most effective way to dampen vibration is with our COAXIAL SUSPENSION SYSTEM, a Pioneer development used on our finest turntables. The external cabinet is suspended independently on four insulators; inside is a second independent structure supporting the base on which the motor and arm are mounted, and this is suspended on springs which share a common axis with the insulators. Any vibrations reaching the cabinet are disbursed laterally before they can multiply to cause noticeable resonance in the sound reproduction.
(See illustration on back page.)

Other Useful Features

- FRONT-PANEL ARRAY is simple and clean, with SPEED and CUT buttons and the one-stripe STROBE in view and ready for use even with the free-stop cover fully closed.
- COUNTERWEIGHT/TRACKING FORCE DIAL is designed for quick and easy setting; weight is "decoupled" from arm shaft to lower mutual resonance.
- ANTI-SKATE DIAL is used to match the tracking force setting and prevent "skating" of the arm toward the spindle.



Pioneer Perfects World's Thinnest Turntable Motor



PL-300 SPECIFICATIONS

MOTOR AND TURNTABLE

Drive System:	Quartz-PLL direct-drive System
Motor:	Quartz-PLL Stable Hanging Rotor hall-motor
Speeds:	33-1/3 and 45 rpm
Wow and Flutter:	No more than 0.025% (WRMS)
Signal-to-Noise Ratio:	More than 75dB (DIN B)

TONE ARM

Type:	Static-balanced S-shaped pipe arm
Effective Arm Length:	8-11/16-inch (221mm)
Overhang:	5/8-inch (15.5mm)
Usable Cartridge Weight:	4g (min.) to 9g (max.)

OTHER FEATURES

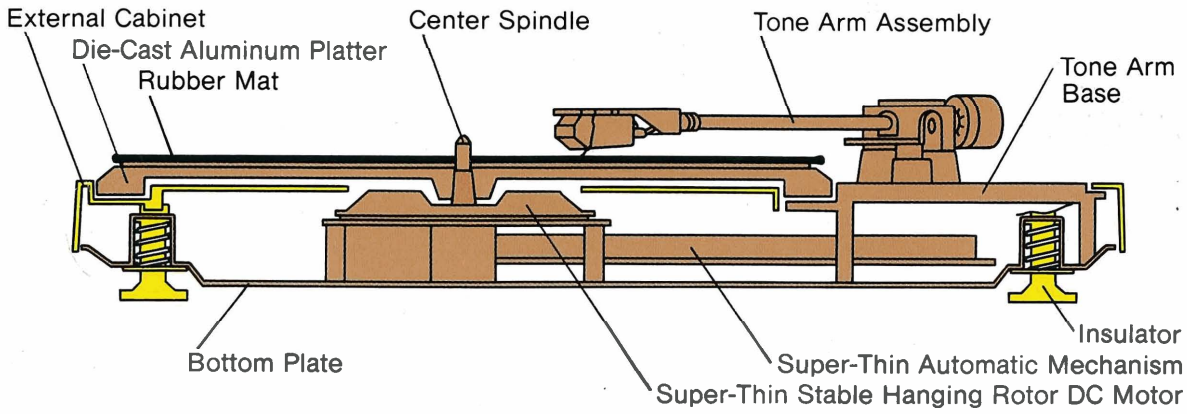
Auto-return, Auto-shut-off tone arm system,
Quick Start system,
Built-in strobe illumination light,
Oil-damping cueing device,
Anti-skating,
Free-hinged acrylic cover

MISCELLANEOUS

Power Requirement:	120V 60Hz only
Power Consumption:	8 watts
Dimensions:	without package **16-9/16(W)×3-3/4(H)×14-3/16(D)** inches 420(W)×96(H)×360(D)mm
Weight:	without package 14 lb. 5 oz./6.5kg

240.00
w/shl & 50² cartridge

Cross Section of Coaxial Suspension System



NOTE: Specifications and design subject to possible modification without notice.

PIONEER®

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