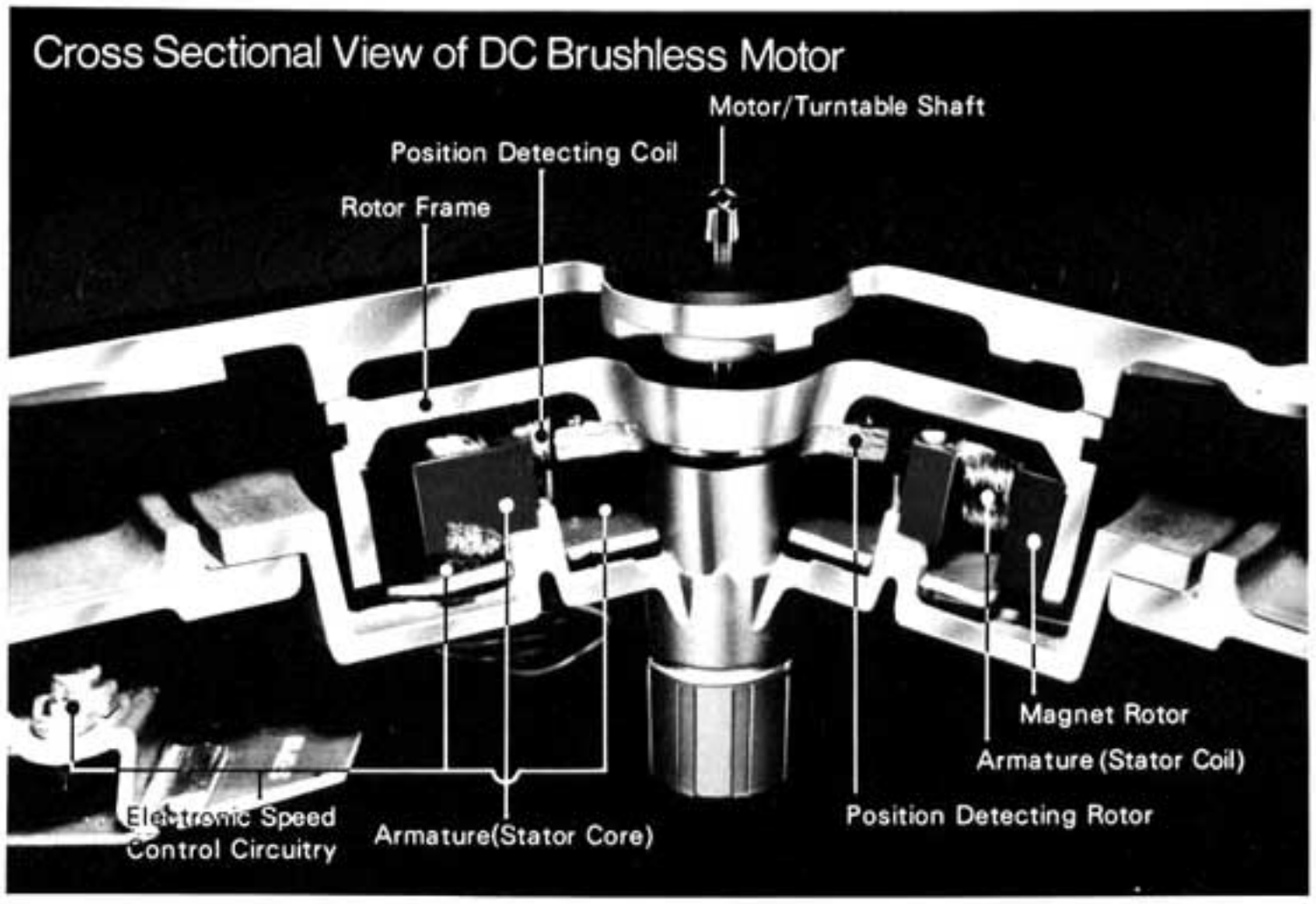
Technics SL-1100AC

by Panasonic

Direct-Drive Turntable

SL-1100AC
Direct-Drive Turntable

For Those Who Want
Professional Performance
at Moderate Cost



Technics by Panasonic offers a revolutionary new development in turntable technology. The sophisticated, highly-praised direct-drive turntable—SL-1100AC. Technics by Panasonic has achieved the ultimate in mechanical simplicity with only one moving part—the combined motor/turntable structure. The SL-1100AC's 4.4 lb. cast aluminum platter, $13\frac{25}{32}$" in diameter, is mounted directly on the shaft of the motor. No stepped shafts, idlers, or belts are used in the system. And this explains why the turntable rotates practically without a trace of vibration, wow or flutter. Because only a single moving part is employed, wear is practically nil, and the turntable maintains its initial performance just about indefinitely.

The SL-1100AC comes with a matching high performance tone-arm and impressive cast aluminum base, weighing 26 lb. 4 oz. in total. Stroboscope markings are molded around the platter to precision check the correct speed of rotation. A strobe lamp is included. With the SL-1100AC you have added the definitive component to your high-fidelity system. Complete with a deluxe plexiglass dust cover. CSA approved.

Direct-Drive System

The heart of this unique record playback system is an ultra-low speed DC brushless motor that rotates at exactly the same speed as the records you're playing—$33\frac{1}{3}$ or 45 rpm. Thus, Technics by Panasonic has done away with turntable parts that create trouble in performance and in servicing. Parts like belts and idler wheels, which deteriorate over the years, making it difficult to maintain the initial performance characteristics of even the best conventional turntable. And parts like conventional AC motors, with their built-in hum problem.

Rumble, another problem of the conventional turntable, is practically non-existent. It's usually caused by vibration of the motor, transmitted to the turntable through the drive system and motor housing. When a motor rotates at high speed, it transfers vibrations, no matter how effective the motor mounting may be in trying to absorb it. This vibration is transmitted through the turntable platter to the record and the pickup stylus, which passes it along with the music as a low-pitched roar. Because the SL-1100AC motor rotates exactly at the speed of the records you're playing, there's barely a trace of the vibration produced by high-speed motors—hence, virtually no rumble. In fact, the rumble of the SL-1100AC is in excess of −65dB (DIN A), −70 dB (DIN B). Hum, always a problem with AC motors and power lines, has been eliminated by use of the DC brushless motor. AC motors have magnetic flux leakage, while ordinary DC motors using a brush and commutator create their own brand of electrical noise caused by sparking.

Multi-Pole DC Brushless Motor

The multi-pole DC brushless motor is fed by an internal adaptor which converts ordinary 60 Hz AC current to 20 V DC. A built-in electronic analogue feedback speed control system maintains exactly the proper speed you've selected. A 50 kHz signal is fed into the first coil of each of the three pairs of control signal pickup coils wound in the stator. The control rotor, a toothed wheel rotating with the motor rotor, varies the coupling of the pair of coils to produce changes in the output voltage of the second coil of each pickup coil. The outputs from three pairs of control signal pickup coils are then fed back into the electronic circuit to keep the rotation of the motor constant. Neither the frequency nor fluctuation in the voltage of AC mains influences the rotation of the motor—an important feature when one considers the ever increasing brownouts and voltage fluctuations caused by commercial power suppliers.

The SL-1100AC starts immediately because the DC motor and the exclusive Technics by Panasonic barium-ferrite permanent magnet employed in the rotor have high magnetic flux density, which means high starting torque, or reaching playing speed much faster than conventionally-designed turntables—within one-half revolution at $33\frac{1}{3}$ rpm, in fact. And because of its high torque, rotation won't stop even if you press your dust cleaner onto a record hard to wipe off dust. At the same time, though, power consumption is extremely small—only 4.0 watts (DC motor itself consumes only 0.1 watt).

As the machine does not employ belts nor idler wheels, it suffers no damage even if you stop the turntable with your hand while it's on. The SL-1100AC is, therefore, tamper-proof.

Variable Pitch Controls

Variable pitch controls let you vary playing speed separately on $33\frac{1}{3}$ and 45 rpm up to 5% in either direction, enabling you to play all of your records at perfect pitch. And once you set the pitch control, there is no need for re-adjustment. If you prefer a high pitch, you can enhance the sound brilliance up to almost semi-tone by this device.

Stroboscope Speed Indication

Stroboscope markings are molded around the platter to check the correct speed of rotation. They are used in coordination with the variable pitch controls. A strobe lamp is included.

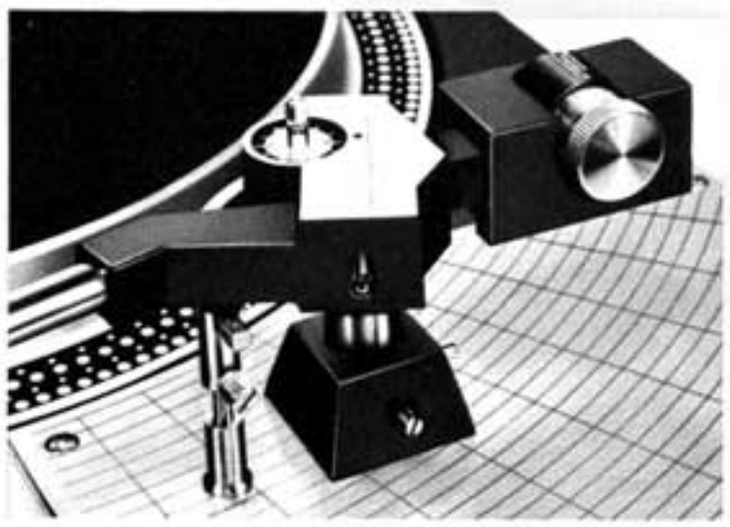
Dynamically-Balanced Turntable Platter

Some turntables maintain their balance when they are in a static position, but they lose their balance as rotation starts. With Technics by Panasonic SL-1100AC this never happens. Each turntable platter is dynamically balanced by a dynamic-balancing machine, so that accurate balance is ensured at any time. This contributes immensely to the high performance of SL-1100AC, The turntable platter weighs 4.4 lb. And boasts large inertial moment of 109.5 lb. -in^2

Precision-Engineered Tonearm

Accurate cast aluminum and miniature bearings are employed in the essential part of the tonearm where precision scaling is hard to maintain structurally. Various adjustments centre around the upper portion of the tonearm for your convenient handling.

Easy Balancing and Tracking Force Control



By the smooth movement of rack-and-pinion, the balance-weight can be easily adjusted. After you get the balance, pull the balancing knob outward, and the scale will return to zero instantly. Now you can add any amount of tracking force you desire by directly reading the scale on the knob, a special device developed for convenient operation. For those who prefer to use more than one cartridge, this is it.

Feather-Touch Cueing Control

Feather-touch cueing is viscous-damped in both directions for smooth and even descent and ascent. Protects stylus and records from shock.

Anti-Skating Device

Skating force is created by the contact between the stylus tip and the disc groove. In accordance with the geometrical position of the tonearm, the stylus will be attracted inwardly. Thus the imbalance of contact force between the stylus tip and two groove walls will cause increased distortion, deteriorated tracking force. With Technics by Panasonic SL-1100AC, all you have to do is to turn the anti-skating force control knob to the same scale as the tracking force. Precision control is ensured by this simple operation.

Detachable Arm Panel

The metal arm panel can be easily detached just in case you decide to change the arm.

Pin-Jack Terminals

Allow you to freely choose the length of the cord to your amplifier. This is essential for discrete 4-channel record playback, where low capacitance cord is recommended.

Adaptor for 45 rpm

Equipped for your extra fun with "donut style" records.

Two AC Outlets

On the turntable underneath the adaptor for 45 rpm there is an AC outlet for such special conveniences as a strobe lamp or stylus illumination light. The other AC outlet is provided on the rear panel of the turntable.

Deluxe Plexiglass Dust Cover

Provided for extra care of the record playback system.

Audio Insulated Legs

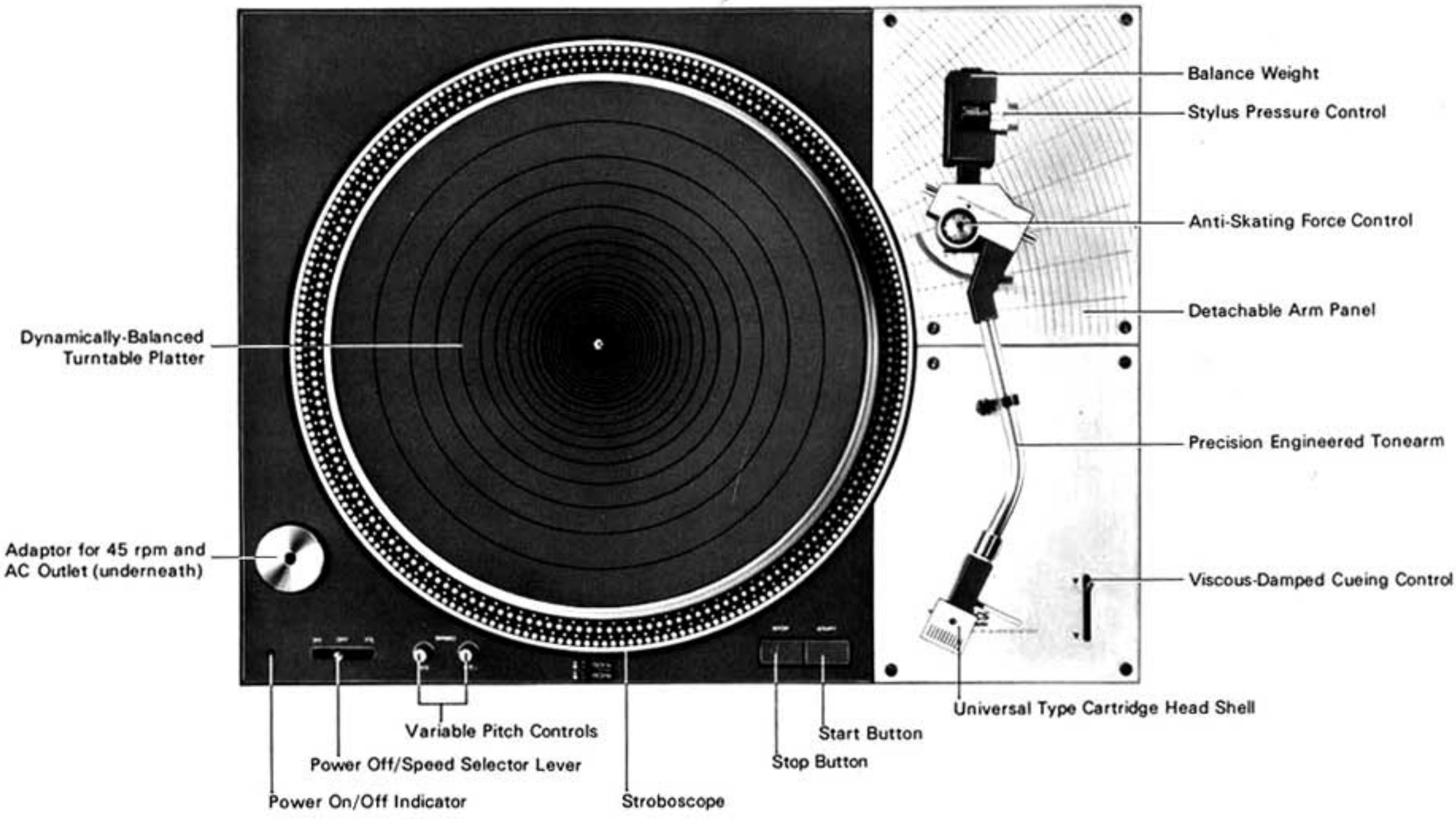
Together with 26 lb. 4 oz. of the turntable system, they help keep acoustic feedback to a very minimum. By rotating the legs, you can adjust the horizontal level of the turntable.

Easy-to-Operate Switches

On the left side of the turntable deck is the power off/speed selector lever. To its right, lie two variable pitch controls for $33\frac{1}{3}$ and 45 rpm's. At the centre towards the right are Start and Stop buttons. Once you set the speed, the turntable is ready to go at a finger touch.

Impressive Cast Aluminum Base

The turntable base that supports the system is made up of cast aluminum, weighing 26 lb. 4 oz. in total. Turntable and base are coordinated into one unit, for the best results of Direct-Drive performance.



Deluxe walnut wood skirt (model SH-11B1) is optionally available.

Specifications

Turntable Section

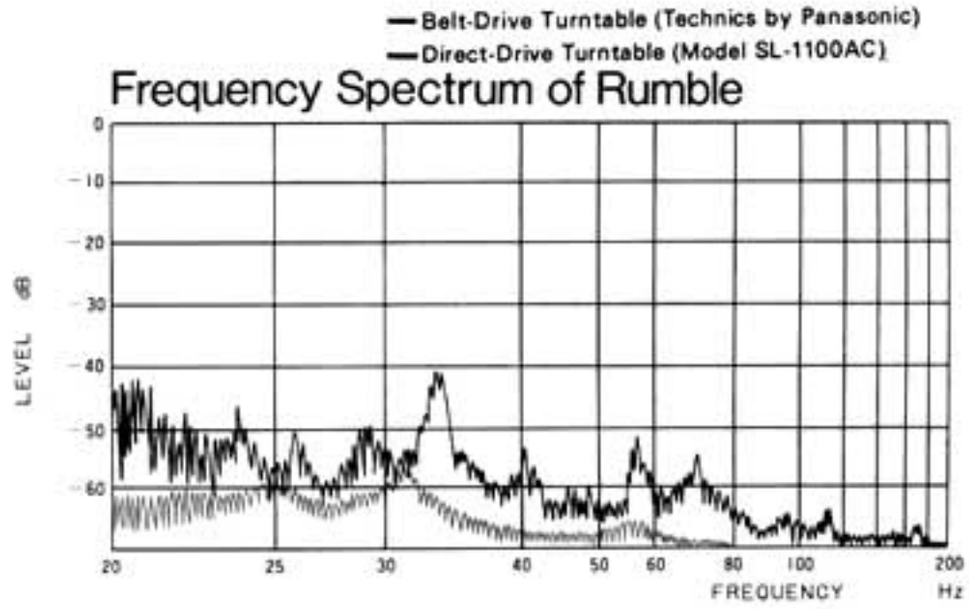
Type:	Direct-drive turntable
Turntable	
Material:	Dynamically-balanced aluminum diecast
Diameter:	$13\frac{25}{32}$"
Inertial Moment:	109.5 lb. $-in^2$
Weight:	4.4 lb.
Turntable Speed:	$33\frac{1}{3}$ and 45 r.p.m.
Motor:	20 poles (rotor), 15 poles (stator), ultra-low-speed DC brushless motor
Speed Change Method:	Electronic change
Variable Pitch Control:	±5% adjustment range, individual adjustment by variable resistor
Wow and Flutter:	Less than 0.03% WRMS
Rumble:	Better than −65 dB (DIN A), −70 dB (DIN B)
Build-up Time:	Within $\frac{1}{2}$ rotation at $33\frac{1}{3}$ r.p.m.

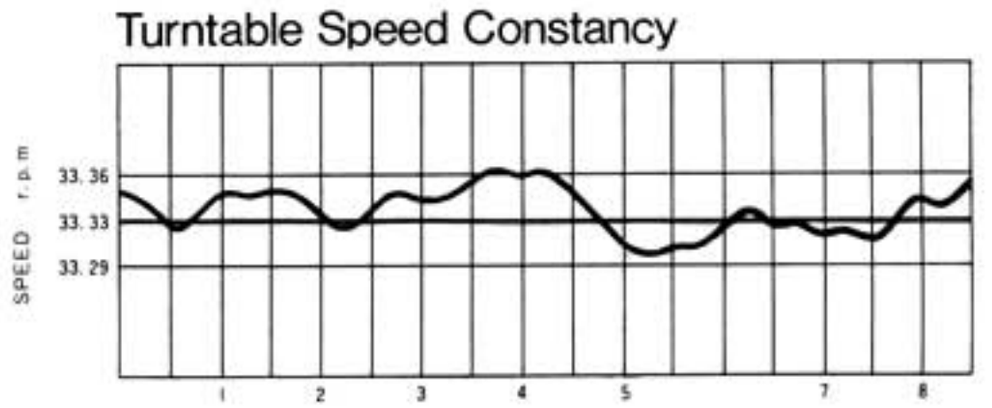
Tonearm Section

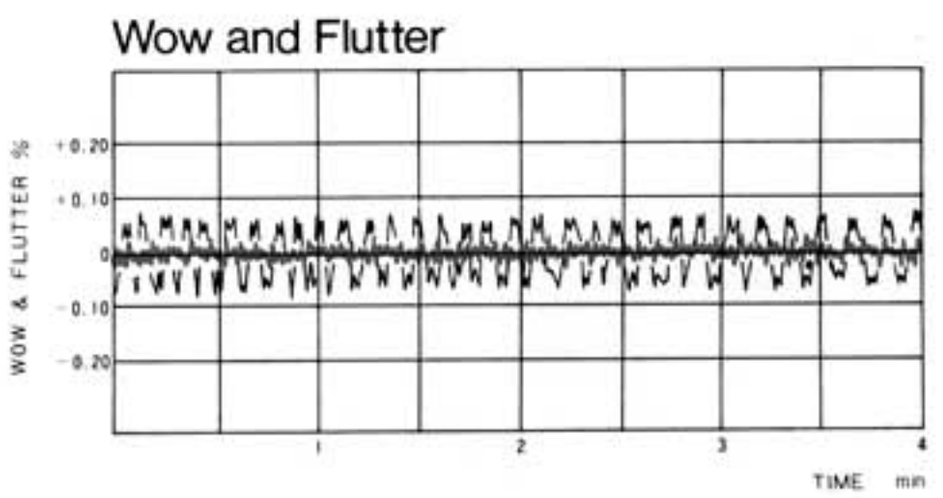
Type:	Static-balanced tubular
Tracking Force Control:	0∼5 grams, direct reading type
Anti-Skating Device:	Yes
Cueing Control:	Viscous-damped
Cartridge Head Shell:	Universal type
Effective Length:	$9\frac{1}{4}$"
Overhang:	$\frac{35}{64}$"
Tracking Error Angle:	Within ± 1.75°

General Specifications

Power Consumption:	4.0 W
Power Supply:	AC 120 V, 60 Hz
Player Base:	Aluminum diecast with audio insulated legs
Dimensions:	$7\frac{11}{16}$"(H) ×$20\frac{3}{32}$"(W) ×$15\frac{9}{16}$"(D)
Weight:	28.7 lb. (including dust cover)







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