Technics SL-1200

by Panasonic

Direct-Drive High Fidelity Turntable

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Technics offers a revolutionary new development in turntable technology. The sophisticated, highly-praised direct-drive turntable.

Technics has achieved the ultimate in mechanical simplicity with only one moving part—the combined motor/turntable structure. The SL-1200's 3.86 lb. cast aluminum platter, 13" 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-1200 comes with a matching high performance tone-arm and impressive cast aluminum base, weighing 22.1 lb. in total. A stroboscope is molded around the platter to precision check the correct speed of rotation. With the SL-1200 you have added the definitive component to your high-fidelity system. Complete with a deluxe plexiglass dust cover.

Direct-Drive Brushless DC Motor

The SL-1200's brushless DC motor rotates at precisely the same speed as the record you're playing—33⅓ rpm or 45 rpm—which heretofore was mainly available only with professional equipment. Whereas conventional AC turntable motors, rotating as much as a few thousand revolutions per minute (rpm), need idler wheels and belts to transfer rotating motion through a step-down speed pulley to the turntable platter, the SL-1200 eliminates these extraneous parts with a direct-drive system. In doing so, imprecise turntable speed caused by parts construction imperfections and contact slippage in even the finest of these components is wholly eliminated. Further, there are no belts and idler wheels to wear out over the years to lower initial performance characteristics. Thus, discerning audiophiles can at last be assured of excellent speed constancy. With "Wow" and "Flutter" measurements guaranteed to be less than 0.03% WRMS, SL-1200 owners are spared the anguish of hearing wavering of pitch on sustained piano notes which is caused by slow turntable speed changes ("Wow") on lesser machines, or a "bubbly" quality from an oboe's soundings, caused by more rapid changes of speed ("Flutter").

Cross-sectional view of Technics brushless DC motor

Automatic Electronic Speed Control

Another cause of speed inaccuracy—voltage fluctuation—is prevented from affecting the SL-1200's pinpoint speed by a built-in solid-state, electronic analog feedback speed control system. This noteworthy servo system, automatically varies the amount of voltage fed to the motor whenever voltage from an electrical outlet varies, maintaining the rotation of the SL-1200's DC motor at a constant speed. And in the event of an extreme supply voltage change, such as experienced during a power "brownout", when voltage is extremely low or when a high voltage surge occurs, the SL-1200 has fingertip provision for varying the playing speed separately on 33⅓ rpm and 45 rpm speeds up to 5% in either direction. A built-in stroboscope light indicator shows you when you have dialed the correct speed. In addition, it enables one to know if the turntable speed is incorrect at any time, perhaps due to the heavy friction drag of a record cleaning device or to match the user's sense of perfect pitch.

Ultra-Silent Operation

With the advent of stereophonic and quadraphonic discs, vertical as well as horizontal "rumble" must be minimized to ensure that it is not heard as a low-pitched roar through today's breed of extended-bass loudspeaker systems. Since rumble is generally initiated by motor vibrations transmitted through the drive system to the turntable platter, onward to the record and the pickup stylus, a very-low-speed motor such as incorporated in the SL-1200 produces only a fraction of the vibration exhibited by a conventional high-speed motor. Thus, it is not surprising that the Technics SL-1200 displays an extraordinarily low rumble figure in excess of −50 dB (DIN A), −70 dB (DIN B). These exceptional figures render playback rumble inaudible, as well as permitting reproduction of unusually clean, low bass notes through finer loudspeaker systems. The generation of "hum" has always plagued AC motors in the proximity of magnetic cartridges. This problem has been eliminated in the SL-1200 through use of its brushless DC motor, thereby eliminating another high fidelity offender. Additionally, the SL-1200 has a non-magnetic turntable platter, an aluminum diecast, dynamically balanced 13-inch platter whose 3.86 pounds provide a speed-smoothing flywheel effect.

Fast Startup Speed

Move the speed selector of the SL-1200 and the turntable will come up to its selected speed before you can place the stylus in a record's starting groove. Fast startup speed means within one-half revolution at 33⅓ rpm, substantially faster than conventionally designed turntables. This is due to the specially designed DC motor, which employs Technics' barium ferrite permanent magnet for high magnetic flux density, resulting in specially high starting torque.

Precision Engineered Tonearm

The SL-1200's tonearm is a light, precision machined tubular arm shaped like an S; this shape is ideal in regard to lateral balance—vertical movement of the arm as caused by warped records will not move the arm sideways.

Eminently suitable for light tracking with modern phono cartridges, the arm permits easy tracking force adjustments from 0 to 4 grams, in increments of 0.5 grams. The tracking force is adjusted by means of a rack & pinion control. With the arm in floating condition, pull the knob out, and the tracking force scale returns to 0. Then turn the knob to apply the desired tracking force—it's a matter of seconds.

Other tonearm features include an viscous-damped cueing device which lifts and lowers the arm much more gently than you could ever do it by hand, protecting stylus and records from dangerous shock.

For compensation of the skating force—the weak force thattends to pull the arm inward—simply set the anti-skating knob at the number that corresponds with the selected tracking force.

Rack & pinion tracking force control instantly returns to 0.

Adaptable for Discrete 4-Channel (CD-4) Records

All you need to adapt the SL-1200 for playing discrete (CD-4) 4-channel records is a phono cartridge that will track supersonic frequencies up to 45 kHz. The phono cables of the SL-1200 will convey these high-frequency signals without any appreciable loss, because special low-capacitance cables have been selected.

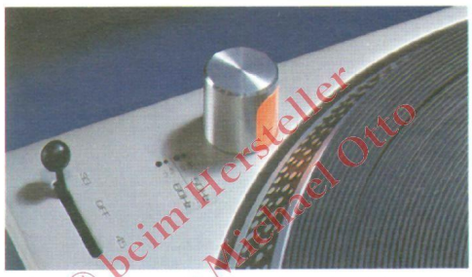
These high frequency signals are then fed into a CD-4 demodulator (model SE-405) where four original signals are recovered.

① 13" Aluminum Diecast Turntable Platter

Weight 1.75kg, moment of inertia 105.9 lb.-in^2—pronounced flywheel effect contributes to steady rotation without wow or flutter. Each platter is dynamically balanced with high precision.

② Built-in Strobe Light

Fluorescent lamp illuminates strobe markings on rim. Apparent stand-still of markings indicates that turntable is revolving at exactly rated speed—33-1/3 or 45 rpm.



Built-in strobe light for easy speed control and fine tuning

③ Combined On/Off Switch and Speed Selector

For 33-1/3 rpm, move lever to the left, for 45 rpm, to the right. Center position means off. Convenient, error-free operation.

④ Variable Pitch Controls

Two controls for fine speed adjustments at 33-1/3 and 45 rpm, respectively. Fine adjustment possible by ±5%—especially useful for tuning to a musical instrument. Individual pre-setting possible at both rpm's. Speed control is effected electronically.

⑤ Strobe Markings on Tapered Platter Rim

Four rings of embossed strobe markings—for 33-1/3 and 45 rpm, at 50 Hz and 60 Hz AC. Tapered rim makes for easy viewing from any position.

⑥ Sound-Absorbing Legs

Prevent vibrations (footsteps, etc.) and acoustic feedback from reaching the cartridge via the base, keeping the sound free from extraneous noise even at top volume level. Height of legs is adjustable to obtain perfect horizontal balance.

⑦ Aluminum Diecast Base

Sturdy, rigid, and finished in professional-looking grey.

⑧ Plug-in Head Shell with Gold-Plated Contacts

Gold plating of contact points assures perfect electrical contact, helps prevent hum and other problems.

Low-Capacitance Phono Cables—Ready for CD-4 Discs

Low capacitance means that no loss is incurred in super-high frequency range.

⑨ S-shaped Tonearm Needs No Lateral Balance Adjustment

S-shape assures perfect lateral balance under all operating conditions. Precision-machined tubular arm permits light-weight tracking.

⑩ Viscous-Damped Cueing Device

Lifts and lowers the tonearm gently. Protects stylus and records from shock.

⑪ Anti-Skating Force Control

No threads or weights—simply turn the knob in accordance with the tracking force to obtain perfect compensation of tonearm sidethrust ("anti-skating").

⑫ Easy Horizontal Balance and Tracking Force Adjustment

When tonearm is in horizontal floating position, pull rack-and-pinion knob out. This returns tracking force scale to 0 instantly. Then simply turn control to apply desired tracking force.

⑬ Removable Dust Cover Stays Open at Any Angle

Cover will stay open at any opening angle. Easy to remove from its hinges.

Low-Capacitance Phono Cables—Ready for CD-4 Discs

Low capacitance means that no loss is incurred in super-high frequency range.

Discrete 4-channel discs (CD-4) can be played by using a suitable cartridge with frequency response up to 45,000 Hz.

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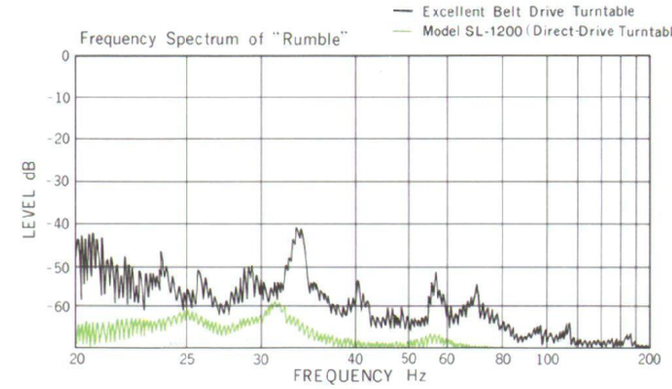
Specifications

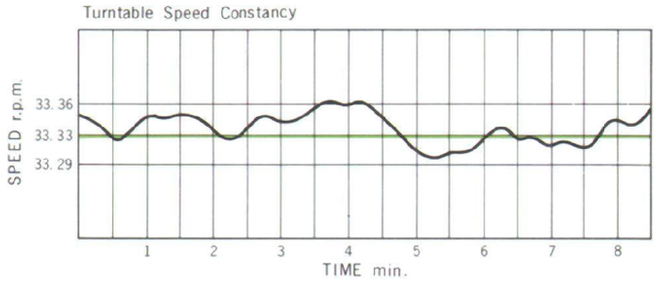
Turntable Section

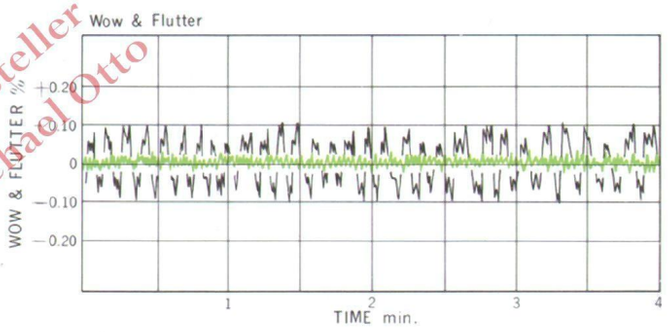
Type:	Direct-drive turntable
Turntable platter:	Aluminum diecast, 13" diameter, dynamically balanced, 105.9 lb.-in² inertial moment, 3.86 lb. weight
Turntable speed:	33-1/3 and 45 r.p.m.
Motor:	20 poles (rotor), 15 poles (stator), ultra-low-speed electronically commutated motor
Power supply:	50, 60 Hz, AC 110, 120, 220, 240V
Power consumption:	4W
Speed change method:	Electronic change
Variable pitch control:	Individual adjustment by variable resistor, ±5% adjustment range
Wow and flutter:	Less than 0.03% WRMS
Rumble:	Better than −50 dB (DIN A) −70 dB (DIN B)
Build-up time:	Within 1/2 rotation at 33-1/3 r.p.m.
Dimensions:(W×H×D)	16-9/32" × 7-3/32" × 13-29/32"
Weight:	22.1 lb. with dust cover
Base:	Aluminum diecast with audio insulated legs

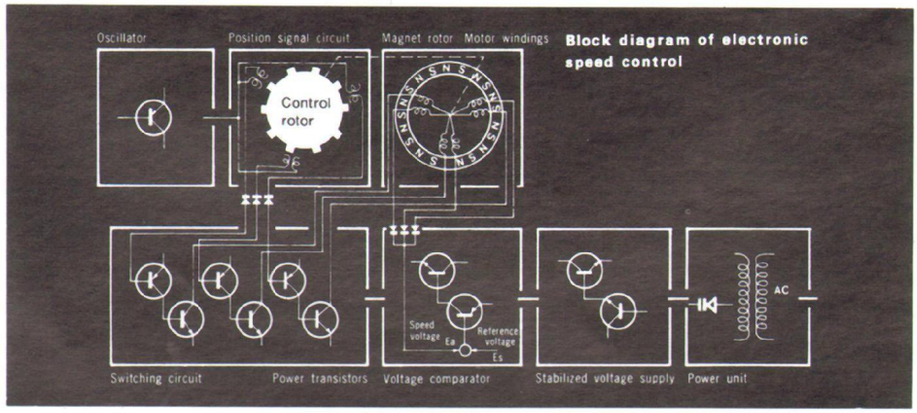
Tonearm Section

Type:	Direct-reading tracking force adjustment, static-balanced type, universal head shell, anti-skating force device
Effective length:	8-21/32"
Overhang:	9/16"
Tracking error angle:	Within ±2.0°
Tracking force:	0～4g









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