

Technics SL-1500

by Panasonic

Direct-Drive Turntable



An ingenious reworking of physical geometry in the basic direct-drive design concept has greatly simplified mechanical construction without any sacrifice in performance specifications. The result is a turntable that retains full DD performance capability, concentrates it in a sleekly styled, low-silhouette "compact," and makes it available at an affordable price.

We think of it as the direct-drive turntable for people who can't afford direct-drive turntables.

In earlier Technics direct-drive configurations, the platter rested on the motor rotor. In the SL-1500, the rotor is integrated directly into the platter. Together they form the only moving part in this ingeniously uncomplicated system.

Greater precision and simpler construction are simultaneously achieved internally. Additionally, the motor rotor is countersunk into the handsome aluminum diecast baseplate and control-panel surface to create a good-looking, low profile effect.

SL-1500 Direct-Drive Turntable

Styling

The space-saving inherent in the motor design has been put to good use in working out styling. With such negligible depth required, the total height of the SL-1500 from the bottom of its vibration-damping legs to its baseplate surface is only $3\frac{1}{8}$ " (8 cm). The result is a functional and elegantly slim appearance that is distinctive to Technics direct-drive design.

Efficiency and Reliability

As with all Technics turntables, less than 0.1 watt is consumed to drive the turntable platter compared, for example, to some AC motors that consume 100 times as much power. Total power consumption for the entire assembly—including circuitry, transformers and the strobe lamp—is less than 5 watts. The important thing is not the saving of a few pennies of electrical power, but the following: less heat, less vibration, less stress on the control circuitry and less evaporation of lubricants. The result is not merely longer motor life, which has been achieved in some other direct-drive motor designs, but longer life of the entire component assembly.

An important contributor to this longer life and substantial freedom from breakdown is the complete absence of belts and idlers or other such mechanical speed-transmission elements which are subject to wear. Unlike conventional high-speed motors, the DD motor rotates at the low speed of the platter, ensuring extremely long life without deterioration of performance.

Superb Specifications

Technics means uncompromised performance. Wow and flutter remain at the low figure of 0.03% W.R.M.S. that has been associated with direct-drive turntable

performance. Rumble figures continue to rank among the world's finest: depending on the system of measurement, -50 dB (DIN A), -70 dB (DIN B) or -60 dB (IEC B). Rotation accuracy of the servo-controlled direct-drive motor is completely unaffected by power-line frequency variations. In other words, the SL-1500 even compares favorably with specifications of the professional tape recorders and disc-cutting lathes.

Easy-View Strobe

Two sets of strobe markings appear on the tapered rim for 33-1/3 and 45 RPM, at both 50 and 60 Hz synchronization, with either type of AC source. The strobe lamp lights when power is turned on.

Two-Speed Selector plus Variable Pitch Controls

A rotary switch selects either of the two record speeds. In addition, separate variable pitch controls for each speed permit adjustment over a range of 10% for each speed without affecting the other.

Sensitive, Gimbal Suspension Tonearm

Two pairs of pivot bearings enhance the rotational sensitivity of the gimbal-suspended tonearm. Its free, gyroscopic movement ensures flawless balance during tracking. The effective (pivot-to-stylus) length of the tonearm is $9\frac{1}{16}$ " (230 mm), a principal factor in the arm's outstandingly low tracking error. The low error facilitates the design of the anti-skating control for precise and reliable tracking, unlike the erratic action of some systems. With this design a single anti-skating scale counteracts side thrust for all types of styli, eliminating the need for more than one set of calibrations. Effective arm mass has been kept very low to accommodate premium high-compliance cartridges with

optimum reproduction quality and without problems of low-frequency resonance. The precision-crafted, low-mass head shell is of diecast aluminum and employs the universal-type 4-pin connector. Gold-plated contacts prevent hum and other problems. The easy insertion adjustment for exact stylus overhang permitted by this design avoids the problems of slide-in type head shells. The SL-1500 accommodates cartridges weighing between 5 and 11 grams. Tracking force is adjustable between 0 and 3 grams in increments of 0.1 gram.



Other Features

HINGED, DETACHABLE DUST COVER

Operation is possible with dust cover closed or the cover may be removed altogether.

FEEDBACK-INSULATED LEGS

The four legs are audio-insulated to block outside vibration and prevent audible feedback.

LOW-CAPACITANCE PHONO CABLES

High-frequency audio losses are eliminated and discrete 4-channel (CD-4) discs can be played through a suitable cartridge with no deterioration in carrier frequencies.

VISCOUS-DAMPED CUEING LEVER

Technical Specifications

TURNTABLE SECTION

Type Direct-drive turntable
Motor Ultra-low-speed brushless DC motor
Turntable platter Aluminum diecast; 13" (33 cm) diameter
Turntable speeds 33 $\frac{1}{3}$ and 45 r.p.m.
Speed change method Electronic change
Variable pitch controls Individual adjustment controls, 10% adjustment range
Wow and flutter 0.03% (JIS C5221) W.R.M.S. $\pm 0.042\%$ (DIN 45507) w. zero to peak

Rumble -60 dB (IEC 179 B)
-50 dB (DIN 45539 A)
-70 dB (DIN 45539 B)

ONEARM SECTION

Type Universal "S" shaped tubular arm, static-balanced type, direct reading tracking force adjustment, with anti-skating force control device, cueing device
Effective length $9\frac{1}{16}$ " (230 mm)
Overhang $\frac{1}{8}$ " (15 mm)
Tracking error angle Within $+3^\circ$ (at the point $5\frac{1}{8}$ " or 150 mm

from the center), $+1^\circ$ (at the point $2\frac{3}{8}$ " or 55 mm from the center)

Offset angle 21.5°
Adjustable tracking force 0~3 g
Cartridge range 5~11 g
Tonearm friction 6~8 mg
Head shell weight 9.5 g

GENERAL

Power consumption 6.0 W
Dimensions (W x D x H) 17 $\frac{3}{8}$ " x 14 $\frac{3}{8}$ " x 5 $\frac{1}{2}$ " (45.3 x 36.6 x 13.9 cm)
Weight 12.6 lbs. (7.8 kg)

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