

Technics SL-1015

● **R&B** series

Quartz Synthesizer
Direct Drive Turntable System



QUARTZ

Excellent Turntable System Components Carefully Designed for Each Other

The Technics SL-1015 is a high-performance turntable system consisting of the SP-15 Quartz Synthesizer Direct Drive Turntable, the SH-15B1 anti-resonant Turntable Base, and the EPA-500 System Tonearm with arm base and electronic stylus pressure gauge. The System Tonearm has special significance to the audiophile because of its interchangeable arm assembly. Optional arm units of various masses can be purchased and used to accommodate virtually any cartridge compliance. Discriminating audiophiles will be pleased with this turntable system that brings together a turntable with selectable, quartz pitch control adjustable in three speeds in 0.1% steps to $\pm 9.9\%$ (for a total of 597 possible steps), a single molded, heavy-rubber material base, and a tapered, tubular System Tonearm. The sum of these components adds up to a very remarkable turntable system—even more remarkable than an examination of its individual parts might suggest.

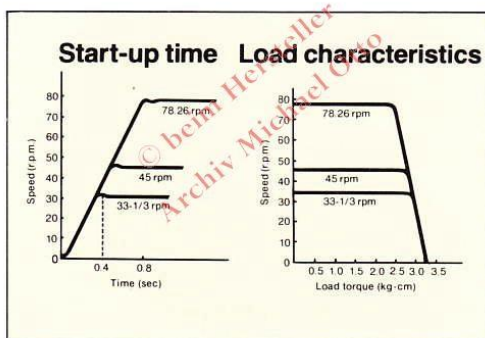
Quartz Synthesizer with Digital Display and Precise Pitch Control in 0.1% Steps to $\pm 9.9\%$

The SL-1015 adopts the quartz synthesizer pitch control system developed for the SL-1300MK2 series. With this quartz-locked pitch control, precise variation of all three standard speeds is possible for a total of 597 different speeds. You can expand or

compress the playing time of a record, change pitch in very small increments, and match the pitch to instruments and make musical notations of a record. The amount of pitch control you select is clearly shown by a bright LED digital display.

Instant Starts (0.4 sec.) and Stops (0.4 sec.) Thanks to High-Torque (3 kg·cm) Direct-Drive Motor

The SL-1015 uses a high-torque, integral rotor-platter direct-drive motor for a start-up torque of 3 kg·cm. At 33-1/3 rpm the large heavy platter starts in 0.4 seconds and stops in the same insignificant amount of time. Thanks to the double braking system—mechanical and electronic—stops are sure and instantaneous. In fact, load torque is so outstanding that speed deviation would be 0% even with an unbelievably high tracking force of 500 g.



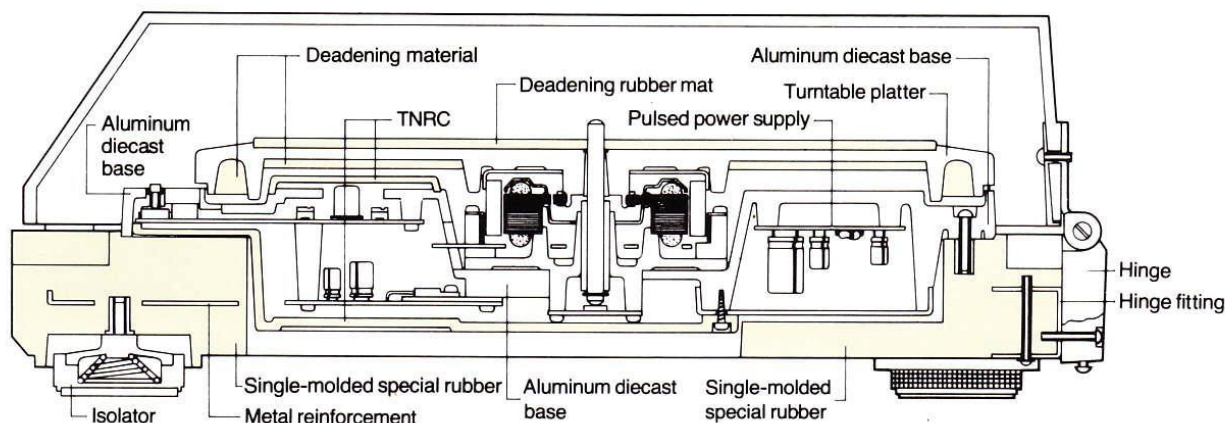
Large Turntable Platter with Threefold Damping

To cancel resonance and damp out external vibrations, the large aluminum diecast turntable platter of the SL-1015 is damped at three points. Rubber matting is placed in the underside, rim, and top surface of the turntable platter for threefold damping. This damps out platter resonance and external vibrations so that acoustic feedback is suppressed even at high pressure levels. The large 33.9 cm diameter platter weighs 2.7 kg and has a very high moment of inertia of 380 kg·cm².

Single Molded, Heavy Rubber Turntable Base for Isolation from External Vibrations

The single molded turntable base employs a combination of special rubber material and insulators to cut vibration and to provide outstanding anti-resonance characteristics. The base material itself is actually an insulator; and the main parts of the turntable, tonearm, and mounting base are specially isolated with visco-elastic material (heavy rubber). The hinges for the dust cover are coupled with heavy rubber material, and spring-loaded feet are used to further suppress the transmission of vibrations. The surface of the base is finished in an attractive simulated rosewood veneer.

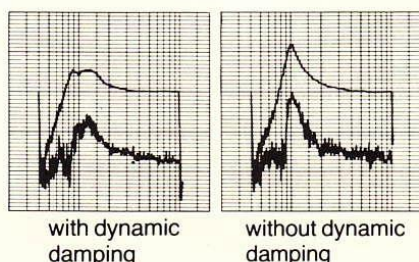
Cross section of the SL-1015



For Precise Matching to Different Cartridges: A System Tonearm with a Titanium Nitride, Tapered Tubular Arm Including a Dynamically Damped Counterweight

The Technics EPA-500 System Tonearm employs a specially designed counterweight at the rear of the interchangeable arm. This counterweight is equipped with a dynamic damping device that provides a very effective means of damping the bass resonance peak produced by a cartridge-tonearm combination. This system causes

Low frequency range response



no increase in low-frequency range mechanical impedance. The tapered tubular arm is made of nitrogen-hardened titanium (Titanium Nitride). In order to reduce the effective mass of the arm, it is tapered toward the headshell for an actual effective mass of 8 g (without cartridge) to provide precise matching when using a high-compliance cartridge. Easy arm-unit interchangeability is a feature audiophiles will love for two reasons. First, it permits cartridges to be pre-mounted in arm units and exchanged easily (as with the universal type S-shaped tonearms). Second, Technics has designed arm units and counterweights that match the compliance characteristics of different cartridges for faithful disc reproduction.

The standard tonearm unit in the SL-1015 system is the model EPA-A501H. This is ideal for cartridges ranging from 5~7 grams in weight, having a compliance of $10 \sim 14 \times 10^{-6}$ cm/dyne (100 Hz, dynamic). The following optional tapered tubular arm units are also available and can be quickly and easily interchanged: EPA-A501M for use with medium compliance cartridges; EPA-A501L for use with low compliance cartridges; EPA-A501E for use with extra-high compliance cartridges; EPA-A501G for use with heavy-weight, low compliance cartridges.

Arm Base with Precision Gimbal Suspension

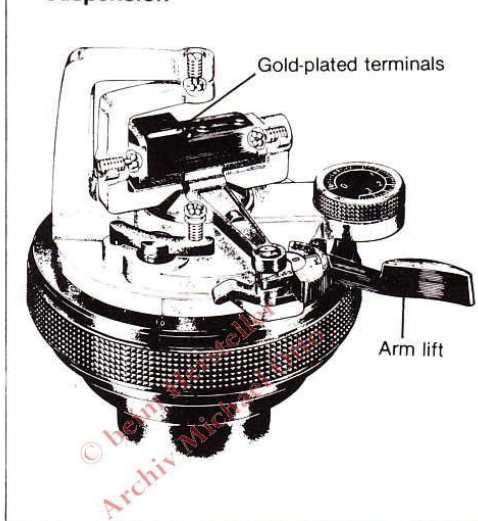
The arm base of the SL-1015 is equipped with a true gimbal suspension system of extremely low friction in both planes. Four high-precision ball bearings, two each for the horizontal and vertical axes of

rotation, pivot the arm in such a way that it is effectively supported at one single point. Arm sensitivity is extremely high thanks to a bearing friction of only 7 milligrams or less in both axes.

The interchangeable arm unit is fastened to the base by a slide-in connector.

By using a 12-spiral helicoid, precise tonearm height adjustment of up to 20 mm is possible.

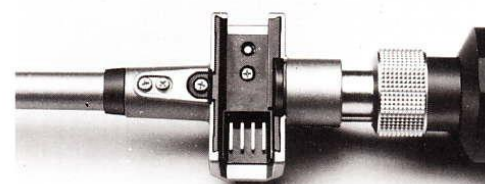
Internal construction of gimbal suspension



Supplied with Electronic "Stylus Pressure Gauge"

A very valuable accessory, the Technics Stylus Pressure Gauge, is supplied with this turntable system. Operating on the semi-conductor strain gauge principle, this purely electronic device employs two semi-conductor strain gauge elements and two transistors to give highly accurate readings on a large meter.

The gauge is very sensitive to slight variations in tracking force so that you can obtain the adjustment that is just right for each of your cartridges.



Other Features

- Full cycle detection frequency-generator and integral rotor-platter direct-drive motor.
- Very efficient pulsed power supply circuit.
- Good connection between arm unit and arm base thanks to a slide-in, self-cleaning connector with gold-plated terminals.
- Low capacitance (41.5 picofarads per meter) and low resistance (39.5 milli-ohms per meter) phono cable.
- Pitch lock device for locking speed selector and pitch controls.

Matching Table of Arm Units, Cartridge Compliances, Cartridge Weights.

Cartridge Arm units	Type	(H) High compliance	(M) Medium compliance	(L) Low compliance	(E) Extra high compliance	(G) Heavy weight, low compliance
	Weight (g)	5 ~ 7	5 ~ 7	5 ~ 7	5 ~ 6.5	7 ~ 11
	Compliance ($\times 10^{-6}$ cm/dyne)					
	Dynamic (100Hz)	10 ~ 14	7 ~ 10	5 ~ 7	14 ~ 25	6 ~ 10
	Static	20 ~ 28	14 ~ 20	10 ~ 14	28 ~ 50	12 ~ 20
EPA-A501 H		⊙	○	○		
EPA-A501 M		○	⊙	○		
EPA-A501 L				⊙		
EPA-A501 E					⊙	
EPA-A501 G						⊙

⊙: Optimum Match ○: Suitable Match



Technical Specifications

TURNTABLE SECTION

Type	Quartz Synthesizer Direct Drive
Motor	Ultra-low-noise, brushless, heteropole DC motor
Control method	Quartz-phase-locked control
Turntable platter	Aluminum diecast, diameter 33.9 cm (13-11/32"), weight 2.7 kg (5.9 lb) (including rubber matting) moment of inertia 380 kg·cm ² (130 lb·in ²) (including rubber matting)
Speeds	33-1/3, 45, 78.26 rpm
Speed adjustment range	±9.9% in 0.1% steps (digital read-out)
Starting torque	3 kg·cm (2.61 lb·in)
Start-up time	0.4 sec. (to 33-1/3 rpm from standstill)
Braking time	0.4 sec. (at 33-1/3 rpm)
Braking system	Combination of electronic and mechanical brakes
Speed fluctuation due to load torque	0% within 2.5 kg·cm (2.2 lb·in) load torque (up to 500 g tracking force)
Wow and flutter	0.008% WRMS* 0.025% WRMS (JIS C5521)
Rumble	±0.035% peak (IEC 98A weighted) -78 dB DIN B (IEC 98A weighted) -56 dB DIN A (IEC 98A unweighted)

*This rating refers to turntable assembly alone, excluding effects of record, cartridge or tonearm, but including platter.
Measured by obtaining signal from built-in frequency generator of motor assembly.

TONEARM SECTION

Type	System Tonearm interchangeable arm unit with dynamic damping device
Suspension	Gimbal suspension
Arm tube	Titanium-Nitride tapered pipe
Effective length	250 mm
Rear stub length	68~85.5 mm (from point of suspension)
Range of height adjustment	42~62 mm (from mounting surface to arm tube center) (20 mm at helicoid part)
Overhang	15 mm
Lateral tracking error angle	+1°6' at the inner groove +2°6' at the outer groove
Friction	7 mg or less (lateral, vertical)
Effective arm mass	8 g (without cartridge)
Suitable cartridge compliance	10~14×10 ⁻⁶ cm/dyne (100 Hz, dynamic) 20~28×10 ⁻⁶ cm/dyne (static)
Suitable cartridge weight	5~7 g
DC resistance of phono cable	39.5 mΩ/m

Capacitance of phono cable	41.5pF/m
Pitch of mounting screws	Standard 12.7 mm (1/2")
Headshell pins	1.2 mm diameter, 4 pins
Diameter of arm mounting hole	62 mmØ

STYLUS PRESSURE GAUGE SECTION

Type	Stylus pressure gauge
Principle	Electronically controlled semiconductor strain gauge with zero and gain calibration
Power supply	DC 3 V (2 silver oxide dry cells)
Measuring range	0.5~3 grams tracking force
Semiconductor elements	2 semiconductor strain gauge elements, 2 transistors, 1 LED
Dimensions (H×W×D)	2.4 cm×14.7 cm×5.2 cm
Weight	125 g
GENERAL	
Power supply	AC 120V, 50/60 Hz
Power consumption	11 W
Dimensions (H×W×D)	17 cm×56.6 cm×46.5 cm (6-1/32"×22-1/64"×18-1/64")
Weight	23.5 kg (51.7 lb)

Technics
R&B series

Panasonic Company
Division of Matsushita Electric Corporation of America
R & B Division
One Panasonic Way, Secaucus, New Jersey 07094 (201) 348-7000