



Technics

QUARTZ

SL-1501

Quartz-Phase-Locked Control
Direct Drive Turntable



SL-1501 Quartz-Phase-Locked Control Direct Drive Turntable



Quartz-Locked Accuracy in the Technics Tradition

Enter the satisfying world of precision: precision drive, precision suspension, and a precision tonearm. And discover that striking quality — call it high fidelity — that makes your records sound their best. Because now quartz-phase-locked accuracy can be yours at a more accessible price than ever, and without cutting any corners.

The SL-1501 is our latest direct drive turntable with all the remarkable features you've come to expect from Technics. And they add up to specifications we like to boast about — speed drift $\pm 0.002\%$, wow and flutter 0.025% WRMS, rumble -73dB (DIN B). How do we do it?

By choosing only the best components and by developing what other manufacturers can only dream about. Starting with our unbeatable Hetero-pole direct drive motor, we add Quartz-Phase-Locked servo control with an extra-heavy precision machined platter mounted in a diecast base with our double isolated suspension system. Then we top it all off with a super-sensitive gimbal suspension high compliance tonearm.

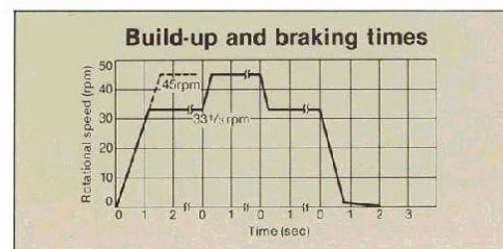
Compare this system with that of any other manufacturer at any price. We think you'll agree that there's no comparison.

Quartz-Phase-Locked Direct Drive

You know that quartz-locked direct drive is the best turntable drive system available today. Because we developed the world's first direct drive turntable, the original SP-10. And added the elaborate quartz-phase-locked control circuitry completing the epoch-making professional turntable, SP-10MKII. The result is incredible rotational precision. And this time-keeping accuracy can be verified in the specifications of other manufacturer's quartz-locked turntables — not just ours. But what you'll also discover in the SL-1501 if you compare specs, is that only Technics can guarantee $1.0\text{kg}\cdot\text{cm}$ of torque... without torque ripple. This remarkable torque gives Technics alone a build-up time of 1.3 seconds. It also means no speed variation with up to 180g (90 tonearms at 2g each) tracking force. What's more, to bring this rotating wonder to a smooth quick stop, we've built in an electric braking system. Perhaps we're overdoing it. But in the long run it adds up to greater reliability and satisfaction. And that's a Technics tradition you can depend on.

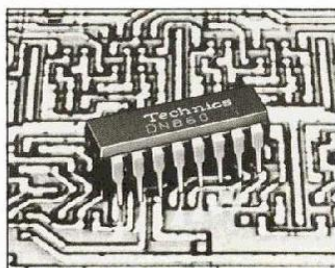
Complete Servo Control in Three IC's
Technics' Hetero-pole direct drive motor is governed by a full cycle integration type push-pull 91 gear FG servo system with the three-phase full-wave bi-directional DC drive. The reference frequency is provided by a quartz oscillator, the most reliable device possible.

All the servo circuitry is packed into three IC's with a combined complexity equal to over 1100 ordinary circuit components. In fact, these integrated circuits are the same ones used in our top-of-the-line SL-1300MK2 with the exception of its special synthesizer based digital pitch control IC.



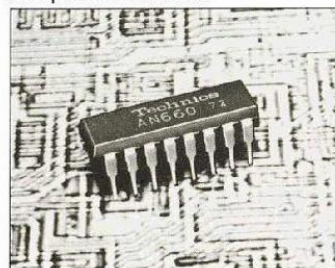
DN 860 (380 elements)

I²L-ECL equipped frequency divider



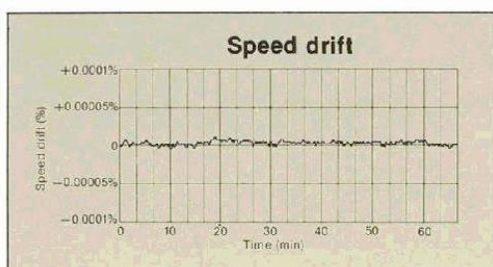
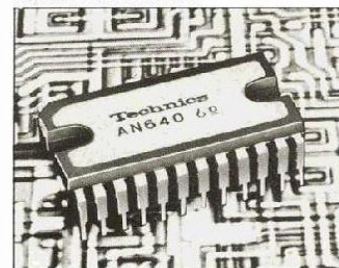
AN 660 (427 elements)

Phase and speed control via sample hold circuits



AN 640 (340 elements)

Three-phase full-wave bi-directional drive





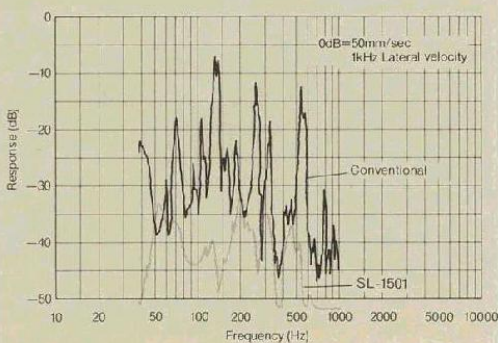
Precision Crafted Highly Sensitive Gimbal Suspension Tonearm

After coming up with such an outstanding turntable we had to build a tonearm to match. Technics designed this gimbal suspension tonearm with total performance in mind. That is, no one feature—such as rigidity—is sacrificed for another—such as effective mass. The effective mass is neither too high nor too low. So you can use a wide variety of high compliance cartridges without worrying about tonearm resonances. The suspension system is a masterpiece of engineering. With a gimbal configuration employing Technics-built ball bearings finished to

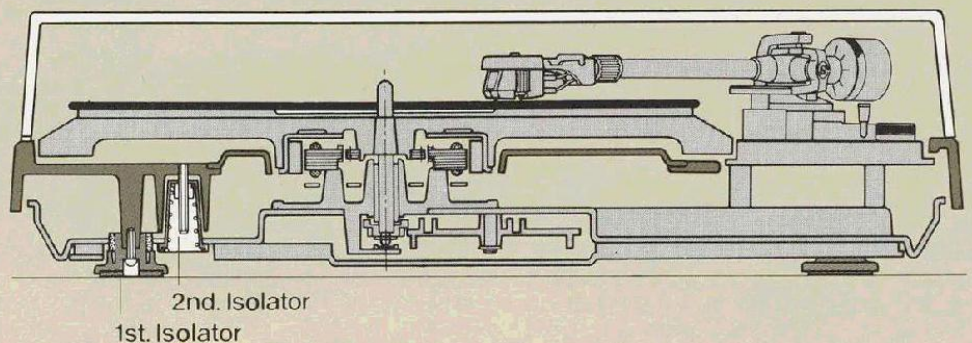
a tolerance of $\pm 0.5\mu$, the tonearm will respond to as little as 7mg of force in *both* vertical and lateral directions. We've even covered details like the headshell terminals—gold plated for optimum contact. And the base—precision zinc diecast to protect against vibrations. Furthermore, our S-shaped tonearm features superb lateral balance, universal headshell and cartridge interchangeability. The S-shaped arm may cost a bit more, and is a bit more difficult to produce. But you'll discover it's well worth the difference.



Vibration analysis of floating system vs. non floating system



Cross section of SL-1501



Double Isolated Suspension System for Less Acoustic Feedback

Acoustic feedback, keeps its distance from the SL-1501 thanks to Technics' double isolated suspension system. It's different from ordinary systems because we use *two* separate isolation stages. The first stage effectively damps harmful external vibrations which may reach the unit through the surface upon which it rests. Then a second stage supports and protects the

all-important turntable, motor, and tonearm assembly. These isolators are carefully designed with anti-resonant materials and springs of tuned elasticity to absorb external vibrations traveling both through the air and through solid materials. Your ears, and your component system are spared the ruinous effects of acoustic feedback even at high volume levels.

Diecast Turntable Base

Maybe we could get away with using a cheap, jerry-built turntable base. But then we wouldn't be Technics. Instead we chose quality. You'll appreciate the difference in appearance, improved resonance characteristics and of course durability.



Technical Specifications

TURNTABLE SECTION

Type	Quartz-phase-locked control direct drive manual turntable
Motor	Ultra-low-speed brushless DC motor
Turntable platter	Aluminum diecast, diameter 33cm (13"), weight 2.2kg (4.86 lb.), moment of inertia 310kg·cm ² (106 lb·in ²)
Turntable speeds	33-1/3 and 45 rpm
Starting torque	1kg·cm (0.87 lb·in)
Build-up time	Within 1.3 sec.
Speed fluctuation due to load torque	0% within 0.9kg·cm (0.78 lb·in)
Speed drift	Within ±0.002%
Wow and flutter	0.025% WRMS (JIS C5521) ±0.035% weighted zero to peak (DIN 45507)
Rumble	-50dB (DIN 45539A) -73dB (DIN 45539B)

ONEARM SECTION

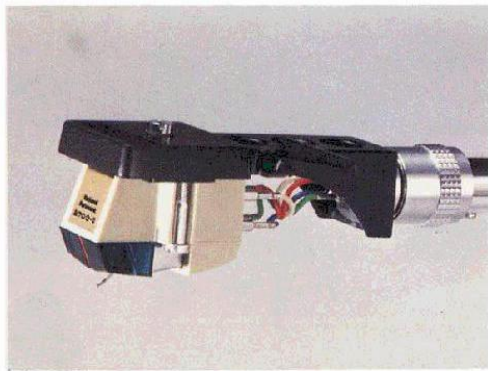
Type	Gimbal suspension universal S-shaped tubular arm, static-balanced type, with anti-skating force control device, oil-damped cueing device in both directions
Effective length	230mm (9-1/16")
Overhang	15mm (19/32")
Tracking error angle	+1° at the inner groove of record +3° at the outer groove of record
Friction	7mg (lateral, vertical)
Effective mass	22g (with a cartridge weighing 6.0g at 1.75g tracking force)
Offset angle	21.5°
Adjustable tracking force	0 ~ 3g
Headshell weight	9.5g
Cartridge weight range	5 ~ 11g

GENERAL

Power consumption	9.5W
Power supply	AC 110-120/ 220-240V, 50/60Hz
Dimensions (W×H×D)	45.3×12.5×36.9cm (17-45/64"×4-59/64"×15-7/64")
Weight	9.2kg (20.3 lb.)

New Type MM Cartridge

The EPC-270C-II moving magnet cartridge employed in the SL-1501 features the new CKS magnetic material, a low effective mass, elliptical diamond stylus tip and high compliance matched with good stability and linearity, assuring accurate tracing. While this high performance moving magnet stereo cartridge is supplied with your turntable in some countries, the unit comes without any cartridge in other countries. Check with your Technics dealer.



Type	Moving magnet stereo cartridge
Frequency response	20 to 25,000 Hz
Output voltage	3.2mV at 1kHz, 5cm/sec, zero to peak lateral velocity
Channel separation	25dB at 1kHz

Channel balance	Within 2dB at 1kHz
Recommended tracking force	1.75 ± 0.25g
Load impedance	47kΩ to 100kΩ
Stylus tip	Elliptical diamond
Cartridge weight	6.0g
Replacement stylus	EPS-270ED



Technics
Matsushita Electric