Technics SL-5200

Quartz-Phase-Locked Control Direct Drive Semi-Automatic Turntable

QUARTZ

Ease of Front-Panel Control Combined with Quartz-Phase-Locked Accuracy

The ultimate in rotational speed accuracy—because the SL-5200 direct drive system is quartz-phase-locked. The most rational, easiest to use controls—because everything is outside on the front panel, even the cueing lever. When you audition the SL-5200, you'll discover it's straight out of the Technics' tradition. Every new turntable we develop is based on a clear policy of design and performance requisites. These are:

1. Obtain the best basic performance possible, so the turntable rotates the disc accurately and quietly.
2. Eliminate undesirable resonance characteristics to assure pure phono reproduction with no internally or externally caused interference.
3. Aim for new and original solutions that enhance convenience and operability.
4. Make it look as good as it sounds,so appearance reflects performance.

The pursuit of these goals has resulted in some audio history making firsts, including the SP-10 and SP-10MKII which have become the standards of excellence for professional broadcasting applications. Ever since introducing the world's first hi-fi direct drive turntable we have gone on to make the system more reliable and versatile with highly sophisticated electronic circuit design, as in the quartz-synthesizer series which features digital pitch readout and the remarkable double isolated suspension design. The SL-5200 is a proud inheritor of these engineering breakthroughs. For even greater resistance to howling, newly developed anti-resonant material "TNRC" is employed for both the turntable base and main base. We've also put all controls on the front panel, completely outside the dust cover. You can even raise and lower the tonearm without ever exposing your records to dust and dirt.

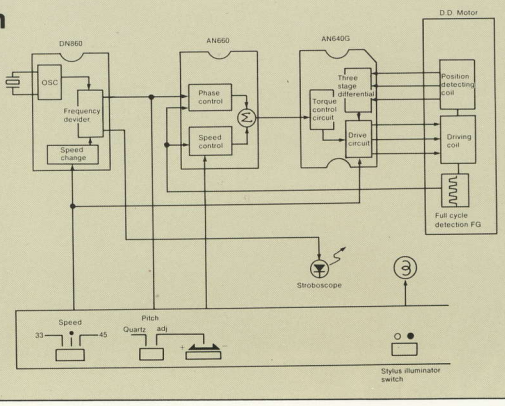
Furthermore we've incorporated a prism illuminator into the strobe lamp so you can better see the record grooves for more precise cueing operation. Needless to say, rotational accuracy and signal-to-noise ratio are virtually the best obtainable at any price. Wow & flutter are a miniscule 0.025% (WRMS). Rumble is an inaudible −78 dB (DIN B). Speed drift is a negligible ±0.002%.

Quartz-Phase-Locked Direct Drive Plus Full Cycle FG and Integral Rotor-Platter Motor

The incredible rotational precision of the SL-5200 starts with Technics' original integral rotor-platter direct drive motor which assures extremely high torque with virtually no torque ripple. A full cycle detection type FG servo system enhances rotational accuracy of the motor. All the servo circuitry is packed into three high density IC's, contributing the system's high performance and reliability. One of the major differences in performance between the Technics quartz-locked DD system and the variations and imitations available from other manufacturers is in the high torque generated by our original integral rotor-platter brushless DC motor configuration. Torque is so high (1.0 kg·cm) that it would take less than 0.7 sec. to reach the rated 33-1/3 rpm. No speed fluctuations are found up to 180 g of tracking force (that would be more than 90 tonearms with 2 g tracking force each) in the quartz-phase-locked control mode.

Another significant difference is our integral rotor/platter system. The rotor and turntable platter are a single unit, while the stator is structurally unified with the turntable base. With

Block Diagram



only one moving part, and structural unity, you are assured of incomparable stability of performance through many years of use.
You can even adjust the turntable speed, and therefore the pitch of disc playback, by up to ±6% by means of an easy to use control on the front panel.

All Front Panel Control Even Includes Cueing

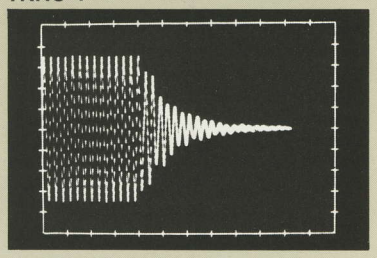
Operational convenience is enhanced by putting all controls, even cueing lever, in-line on the front panel, right where they should have been all along.
This design requires highly elaborate precision machining technique but pays off on more than convenience. It also gives your records added protection against dirt, dust, and accidents, since you never have to open the dust cover to get at the controls.

TNRC Base Material Shields Against Acoustic Feedback

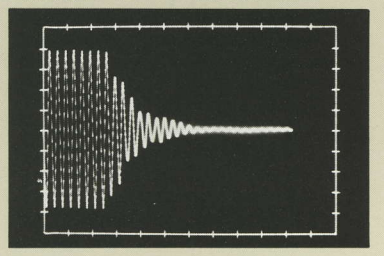
Any pickup system should be protected against undesirable vibrations. Otherwise you will hear all kinds of sonic garbage that can seriously interfere with your listening pleasure. That's why we developed "TNRC" (Technics Non-Resonant Compound), a unique blend of selected materials and inorganic compounds. TNRC attenuates vibrations much more effectively than conventional damping materials. We have employed TNRC-1 (extra-heavy) in the main base and TNRC-2 (precision-mold) in the turntable base of the SL-5200 to make it as acoustically dead as possible. So you get more protection against acoustic feedback even at high volume listening levels.

Attenuation Characteristics of Cabinet Materials

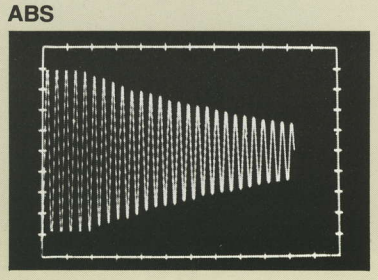
TNRC-1

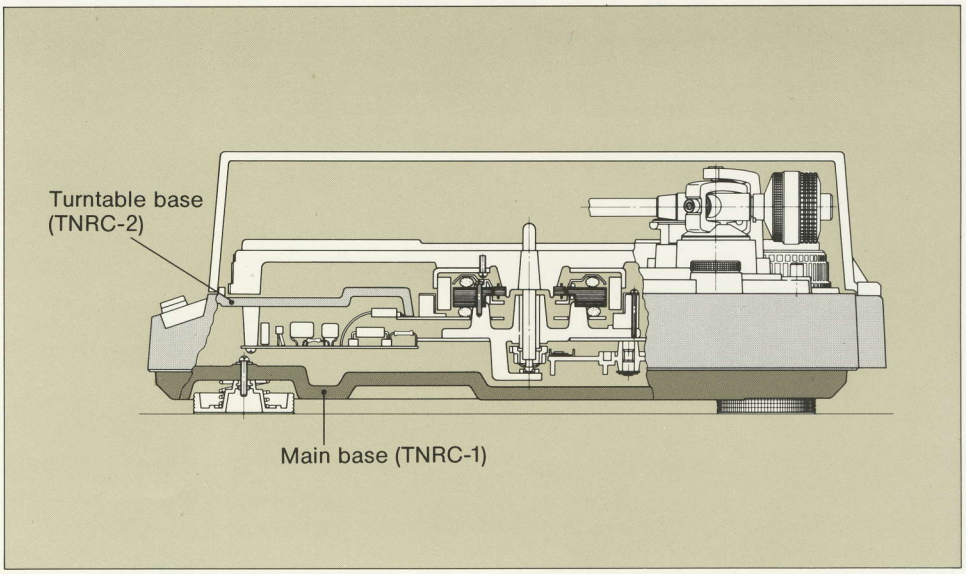


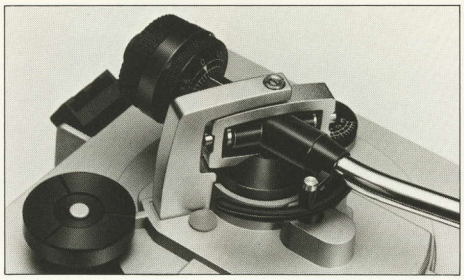
TNRC-2



ABS







High Sensitivity, Low Mass, Gimbal Suspension Tonearm

A tonearm is at least as important as a turntable in the complex process of obtaining audio information from record grooves. In the SL-5200 tonearm you'll discover the same engineering precision and attention to detail that we put into our incredible turntable drive system. The highly sensitive tonearm suspension features a genuine gimbal suspension, the rotational center of which clearly defined at one point. Bearings are finished to a tolerance of ±0.5 microns. This and extra-closeness of pivot center to bearings result in the minimum friction of 7 mg for both horizontal and vertical movement. Add to this the low 12-gram effective tonearm mass (including headshell without cartridge) and you have a tonearm compatible with the wide range of compliances found in today's cartridges. If you choose a popular high compliance MM cartridge, the low range resonance frequency will appear in the ideal area to avoid cartridge warp frequencies without entering the low end of the audio spectrum.
This tonearm is provided with a computer designed light-weight high-rigidity headshell made of single-piece diecast aluminum to prevent partial vibrations. The universal design allows headshell interchangeability. Contacts are gold-plated for optimum contact.
When the lead-out grooves are reached, the rapid movement of the arm is sensed electrically, rather than mechanically. And when the arm is raised either automatically or with the cueing lever, a muting circuit is activated to shut off output from the cartridge. Thus, irritating shock noise is prevented.

Automatic Tonearm Return

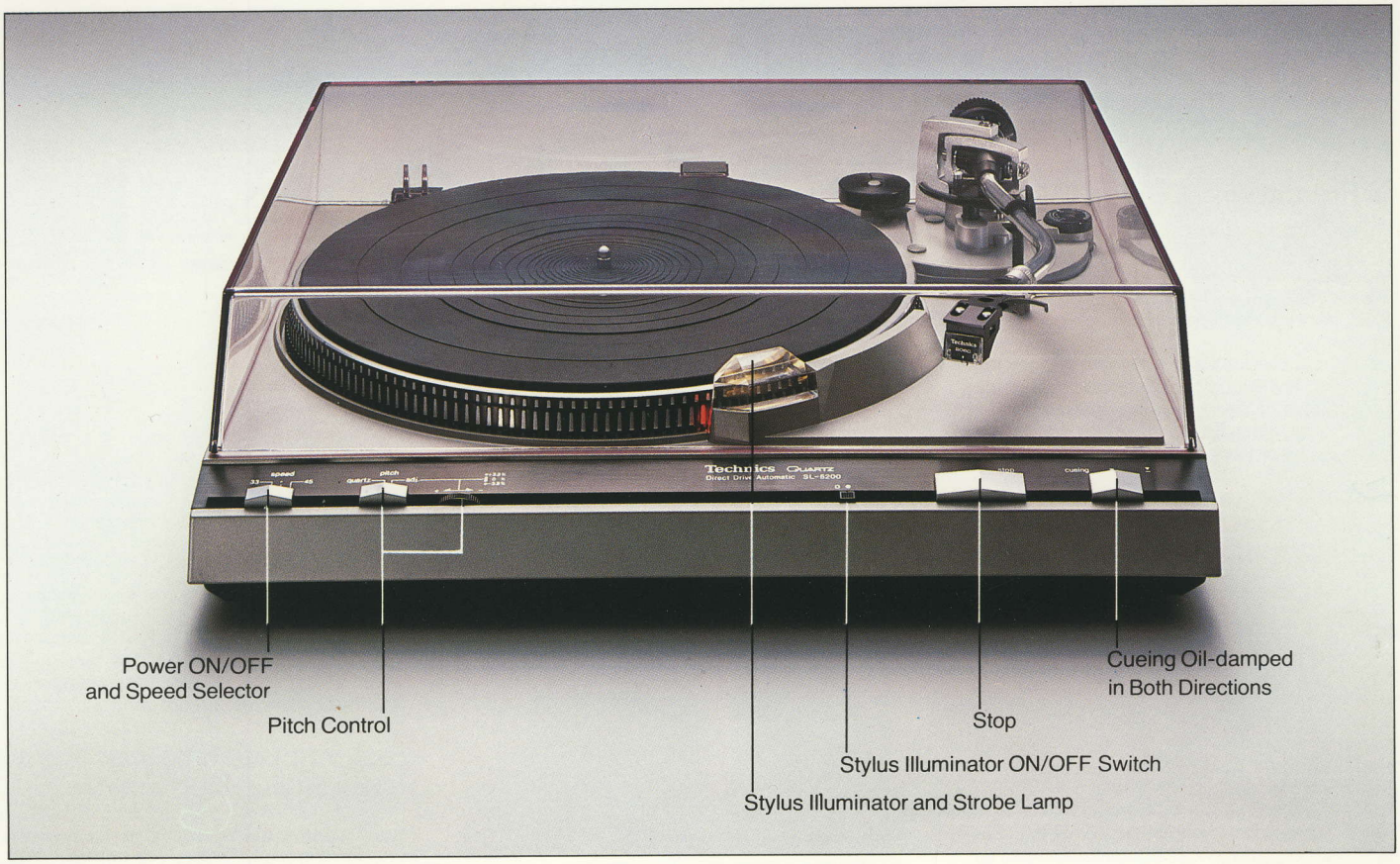
When the tonearm reaches the end of the record, it lifts off and smoothly returns to the arm rest. You can also trigger tonearm return before the end by pressing the "stop" switch. This convenient system prevents needless end-groove wear on both the stylus and record. With the SL-5200 you get just enough automation to enhance turntable operation without interfering with the freedom of manual control.

Easier to Use Stroboscope with Prism Stylus Illuminator

Now it's easier than ever to use the stroboscope to determine platter speed correctness. The strobe light itself is a bright LED and its pulsations are based on the quartz reference frequency, not on the unreliable AC frequency like conventional units. The platter markings are in three lines of dots with the middle line used for both 33-1/3 and 45 rpm. The upper line gives you +3.3% pitch adjustment; the lower line is used for −3.3% pitch adjustment. Therefore you know how fast the turntable is going even when you adjust the pitch. The Prism Stylus Illuminator is an innovation you'll appreciate particularly if you use the turntable in a mounting rack or under low light conditions. It casts a beam of bright light right across the surface of the record so you can see both the area between cuts and the stylus tip. This makes it much easier to lower the stylus exactly where you want it when cueing.

Other Fine Features:

- Technics exclusive turntable sheet (rubber mat) has high internal loss to soak up extraneous vibrations and damp ringing. Wide surface area grips platter and disc for more stable operation.
- Anti-skating control is fully adjustable for any stylus pressure. Dial system and convenience when changing cartridges.
- Viscous damped cueing in both directions.
- Hinged, detachable dust cover.



High Performance MM Stereo Phono Cartridge EPC-206C

The SL-5200 comes with Technics EPC-206C moving magnet stereo phono cartridge. The EPC-206C features "One-point suspension" with a disc-shaped magnet, using samarium-cobalt, the material with the highest known magnetic energy of all industrially produced magnets. The results are reduced effective stylus mass and less mechanical impedance to achieve the wide range of frequency response. Output voltage is a high 3.5 mV thanks to the powerful magnet. Excellent linearity is obtained with the one-point suspension system of the armature assembly, and laminated core design, an important characteristic for wide range of frequency response, superb channel separation, minimum harmonic and intermodulation distortion. The stylus is an elliptical diamond and, combined with low effective mass armature and single, clearly defined suspension point, can follow the record groove faithfully with very light tracking force. Deterioration in sound due to poor tracking has been eliminated. The cartridge has a unique stylus guard to protect the stylus from accidental damage when not in use.

Technical Specifications

TURNTABLE SECTION

Type	Quartz-phase-locked control direct drive semi-automatic turntable
Motor	Ultra-low-speed brushless DC motor
Turntable platter	Aluminum diecast diameter 30.4 cm (12")
Turntable speeds	33-1/3 and 45 rpm
Pitch controls	±6% adjustment range
Starting torque	1.0 kg·cm (0.87 lb·in)
Build-up time	0.7 sec (90° rotation) to 33-1/3 rpm
Speed fluctuation due to load torque (at quartz position)	0% within 0.9 kg·cm (0.78 lb·in) (up to 180 g tracking force)
Speed drift (at quartz position)	Within ±0.002%
Wow and flutter	0.025% WRMS (JIS C5521) ±0.035% peak (IEC 98A weighted)
Rumble	−56 dB DIN A (IEC 98A unweighted) −78 dB DIN B (IEC 98A weighted)

TONEARM SECTION

Type	Universal "S" shaped tubular arm, static-balanced type, with anti-skating force control device, oil-damped cueing device in both directions
Effective length	230 mm (9-1/6")
Overhang	15 mm (19/32")
Friction	7 mg (lateral, vertical)
Effective mass	12 g (including headshell, but without cartridge)
Tracking error angle	+0°32′ at the inner groove of record +2°32′ at the outer groove of record
Offset angle	22°
Adjustable tracking force	0~2.5 g
Cartridge range	6~9.5 g 3~6.5 g (with addition of included weight)
Headshell weight	7.5 g

CARTRIDGE SECTION

Type	Moving magnet stereo cartridge
Frequency response	20 to 25,000 Hz
Output voltage	3.5 mV at 1 kHz, 5 cm/sec, zero to peak lateral velocity (10 mV at 1 kHz, 10 cm/sec, zero to peak 45° velocity, DIN 45 500)
Channel separation	25 dB at 1 kHz
Channel balance	Within 2 dB at 1 kHz
Compliance	12×10^{-6} cm/dyne at 100 Hz
Recommended tracking force	1.25± 0.25 g
Load impedance	47 kΩ~100 kΩ
Stylus tip	Elliptical diamond, 0.3×0.7 mil (7.5×18μm)
Cartridge weight	6 g
Replacement stylus	EPS-206ED

GENERAL

Power supply	AC 110~120/220~240V, 50/60 Hz
Power consumption	12 W
Dimensions (W×H×D)	43.0×13.0×37.5 cm (16-59/64"×5-7/64"×14-49/64")
Weight	6.9 kg (15.2 lb)

Technics
Matsushita Electric

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