SANSUI SR838

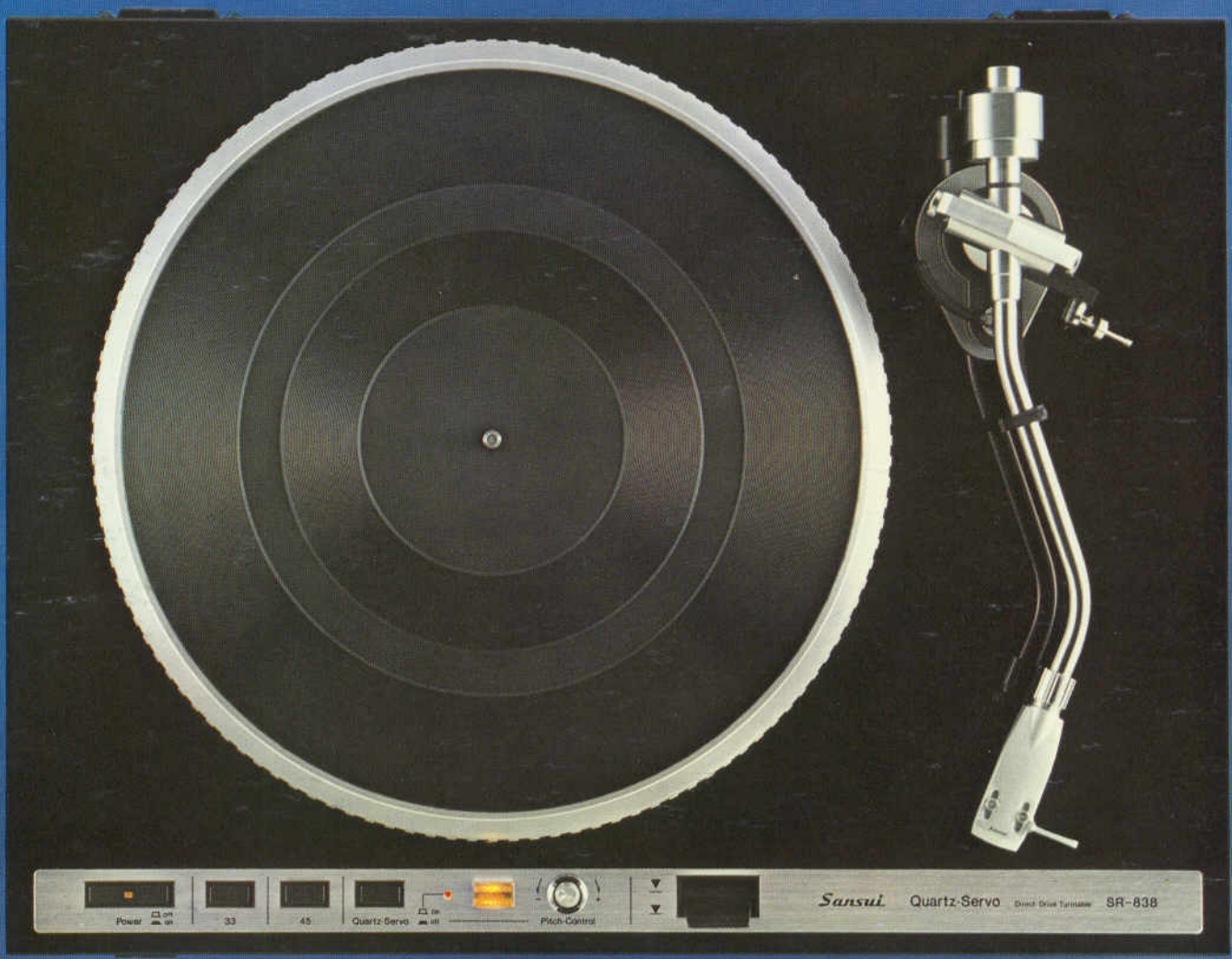
QUARTZ-SERVO DIRECT-DRIVE MANUAL TURNTABLE

Sansui doesn't expect you to go for the SR-838 Quartz-Servo turntable just because of its high technology. You can't *hear* technology. What our all hi-fi technology offers is ultimate musical performance, pure and simple.

Quartz control is new, but Sansui is not the only maker to use it. How the quartz crystal oscillator in the SR-838 differs is that its constant reference signal is used for phase control in a highly-stable PLL servo to maintain platter speed accuracy even in the face of increased loads or ambient changes. The SR-838 exhibits far less speed deviation and thermal drift, and far superior load characteristics, than conventional direct-drives—especially important to delicate nuances of music.

Sansui's new 20-pole, 30-slot direct drive motor has high torque, exceptionally low 0.025% wow/flutter and an impressively good 72dB rumble. Other big advantages include the Sansui-exclusive MCF tonearm, damped cabinet, up-front controls and much more. If learning more about Sansui technology will help your buying decision, please read on. Or, let your ears make the ultimate choice after auditioning the all-new SR-838 at your Sansui showroom, where it's *all* hi-fi.

Only hi-fi, everything hi-fi. Sansui


Power
33
45
Quartz-Servo
Pitch-Control
Sansui
Quartz-Servo
SR-838

The Sansui SR-838–Uncanny Speed Accuracy, New MCF Mass Concentrated Fulcrum Tonearm and Up-Front Controls

QUARTZ-SERVO DIRECT-DRIVE

Precision Quartz Oscillator

Platter speed deviations in the SR-838 are kept within 0.002%—an increase or decrease of musical pitch of only one/five-thousandths of a whole tone. Such a tiny difference is undetectable by any human ear. Record groove information is reproduced with practically *absolute* accuracy.

The Sansui secret of this accuracy lies in the quartz crystal oscillator in the SR-838. As you know from the extensive use of quartz elements in expensive and highly trusted timepieces, a quartz crystal can be made to emit a frequency whose accuracy *never* varies in time or from ambient changes. In the SR-838 we've taken advantage of this stability: the reference signal from the crystal is entirely unaffected by changes in the temperature of other circuits by warm-up, and remains dependable over long hours of use.

Responsive PLL Servo

PLL stands for Phase-Locked Loop—a kind of circuit technique finding increasing use in high fidelity. Quartz oscillators alone do not assure state-of-the-art performance in turntables. But the Quartz-PLL combination in the Sansui SR-838 does.

The system includes a frequency generator mounted on the motor. It generates speed-proportional pulses which are compared for phase difference with those generated by the quartz oscillator. The phase difference is then converted into voltages which, in turn, control the platter speed.

The platter of the SR-838 never slows under any conceivable extra load—such as that applied by a record cleaner or that caused when the stylus tracks grooves storing heavy amplitude music. Since the PLL servo circuit is contained in a reliable IC, platter speeds are accurately locked in no matter how long you use the turntable.

PLL Fine Speed Control

You can switch out the quartz servo to make fine adjustments in platter speed. In this mode the PLL section is still in operation while a precision CR oscillator provides the reference signal. Therefore, the exceptionally fine load characteristics and drift performance of the SR-838 are still yours to enjoy. Speed or pitch adjustment with the provided control is within the ±2.5% range, a practical range to let you tune your record to the pitch of your musical instrument.

Quartz-Locked Strobe

The precise strobe pattern appearing at the edge of the platter is illuminated by a built-in strobe lamp whose frequency is locked to that of the quartz oscillator. Since the strobe illumination is always synchronized with a servo frequency, not with the AC power frequency, only one stroboscopic pattern is needed.

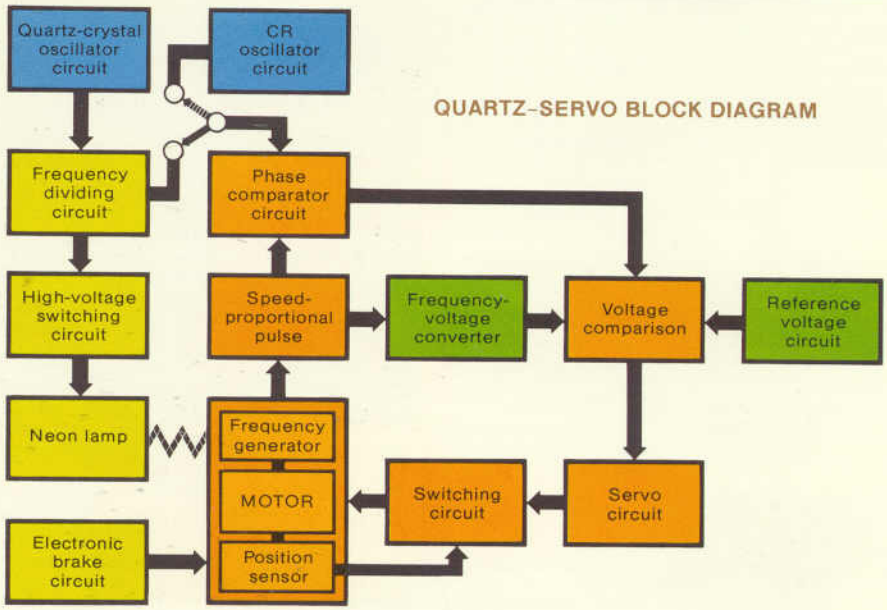
Electronic Brake

The instant you change speeds from 45 rpm to the slower 33⅓ rpm, the SR-838 platter begins to rotate at the regulated speed. A special circuit in the servo system generates a reverse drive current for the reverse drive torque which accomplishes this practical feat. Since speed switching is all electronic, operation is dependable.

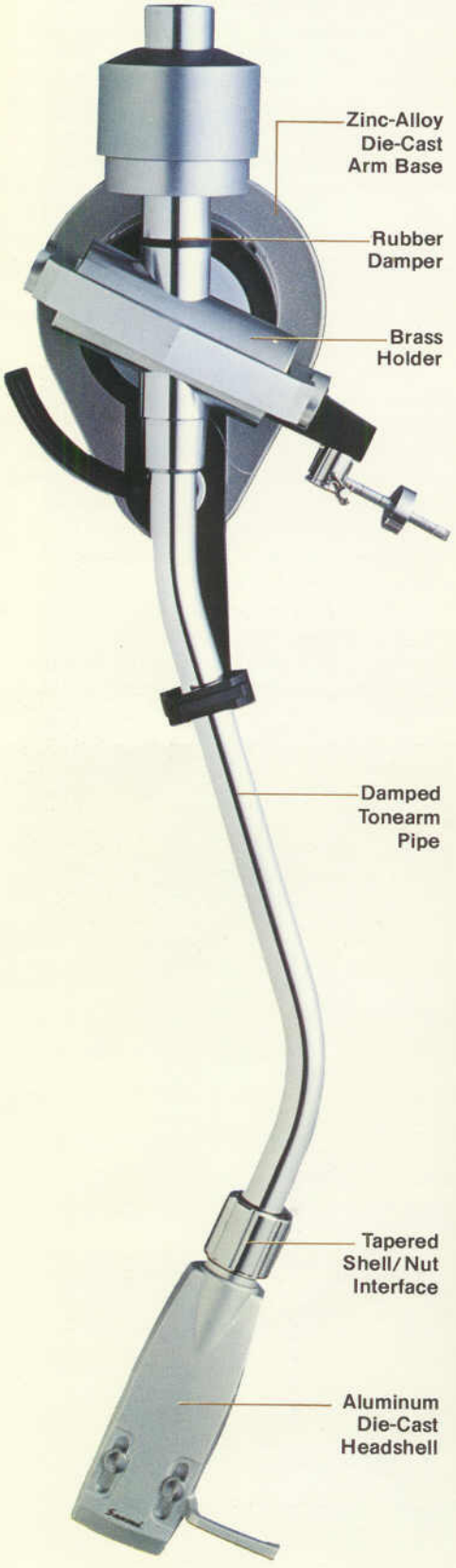
High-Torque FG Servomotor

A high-energy 20-pole ferrite magnet and a 30-slot core are featured in the SR-838 motor—a FG servo type with superb load characteristics and high torque generation. The motor is coupled with an FG or Frequency Generator formed of a periphery-slotted disc, an LED or light-emitting diode, and a photo-transistor. Because of the accuracy of the FG, in combination with the constant quartz reference frequency and the PLL servo, the motor in the SR-838 is driven with exceptionally smooth and constant speed.

Here are a few more highlights that improve performance. The center spindle is of a special stainless steel which is first sintered then micro-finished to reduce friction. The thrust bearing too is micron-finished so that rotational accuracy is maintained always. A large and heavy platter, 318mm across and 1.7kg. in weight, helps keep wow/flutter to a low 0.025% and rumble to a high 72dB (DIN-B) even after long years of operation.



QUARTZ-SERVO BLOCK DIAGRAM



MCF STABILIZED TONEARM

Mass Concentrated Fulcrum

Sansui research into tonearm technology never ends. The new MCF or Mass Concentrated Fulcrum system is an example of how our research benefits you. This new tonearm is arranged in a heavy-duty brass holder of extra width. The holder in turn is coupled to the support bracket by a horizontal pivot/bearing system. It is from here that the name Mass Concentrated Fulcrum is derived, since the mass of the support system is highest at the fulcrum.

What are the advantages? First, while holding the arm with extra strength, Sansui's unique new support features a low moment of inertia and therefore a stable fulcrum point. This greatly improves tonal quality. Then the extended pivot-to-pivot width prevents dynamic torsion, often caused when the stylus is tracking complex groove contours. The stylus maintains its vertical angle to the record surface all the time, resulting in still better sound reproduction.

Low-Resonance Design

Tonearms which allows spurious coloration to spoil the delicate nuances of recorded music are gone forever at Sansui. We've designed a resonance-free arm which features the following:

- Solid Aluminum Die-Cast Headshell—Because the headshell is essentially an integral part of the arm, we've taken extra care to make this one solid, sturdy and non-resonant.
- Tapered Shell/Nut Interface—Connection is complete and firm. (Pat. Pend.)
- Damped Tonearm Pipe—Filled with a Sansui-exclusive acoustic absorbent (Pat. Pend.).
- Balance Weight Decoupling—A rubber damper completely isolates the weight shaft from the tubular arm.

The results of this Sansui technology include not only the fact that resonance peaks are effectively damped but that the resonance frequencies of the arm components are staggered to further avoid harmful resonance.

Other Tonearm Features

- ZINC-ALLOY DIE-CAST ARM BASE—This high-mass base secures the arm to the cabinet firmly, thus improving bass response.
- DIRECT READOUT TRACKING FORCE DIAL—Precision-calibrated markings every 0.25 grams let you apply tracking force accurately; one rotation covers the 0 to 3-gram range.
- HEADSHELL TILT ADJUSTMENT—Vertical stylus alignment can be optimized.
- LOCKABLE ARM REST—Accepts and locks the tonearm. No undue force is applied to the arm support.
- GOLD-PLATED CONNECTION PINS—Maximum electrical transfer is always assured.
- ARM HEIGHT ADJUSTMENT—The wide ±3.5mm range lets you use any cartridge, whatever its height.
- LEVER/WEIGHT ANTI-SKATE DEVICE.
- OIL-DAMPED ARM LIFTER.

CABINET AND CONTROLS

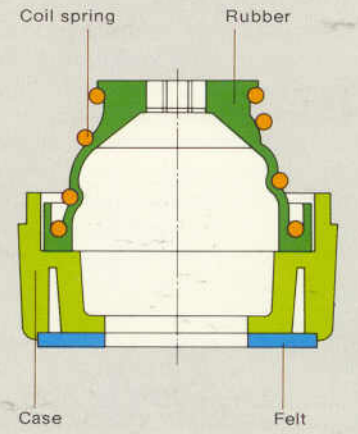
Lacquerlike Luster in Black

We've used solid, high-density particleboards 40mm (1½") thick to further reduce cabinet resonance in the SR-838. The outside cabinet is solidly mounted on its base to form an ideally heavy, non-resonance unit. Then we've selected a rich, lacquerlike finish in high-luster black, contrasting it with the aluminum pipe tonearm and silver-colored control panel.

Effective Complex Suspension

Sound waves in your listening room are the major potential cause of "howling" or acoustic feedback in turntables. Heavy feedback, of course, causes infinitely-amplifying oscillation and is to be avoided at all costs. But even a small amount of feedback can deteriorate the quality of musical reproduction, muddying bass response and harming the resolution of sound images. These problems no longer threaten your music with the SR-838 as we've suspended the cabinet in a newly-developed, effective system using a complex rubber/coiled spring construction. The rubber and springs work as a team to absorb all feedback and other vibrations whatever their frequencies, and gently cushion the cabinet/bass of the SR-838.

INSULATOR: CROSS SECTION



UP-Front Controls

All operation controls on the SR-838 are grouped on the front panel (see photo) for maximum ease of operation. They include separate buttons for Power On/Off, Speed Selection 33⅓ and 45, Quartz Servo On/Off, a knob for Pitch Control and an easy-to-use lever for the arm lifter. The latter is positioned, you'll notice, so that when you move the tonearm over the record to the desired band with you right hand, it is easier to operate the lever to let it descend gently to the record surface.

Free-Stop Hinged Dust Cover

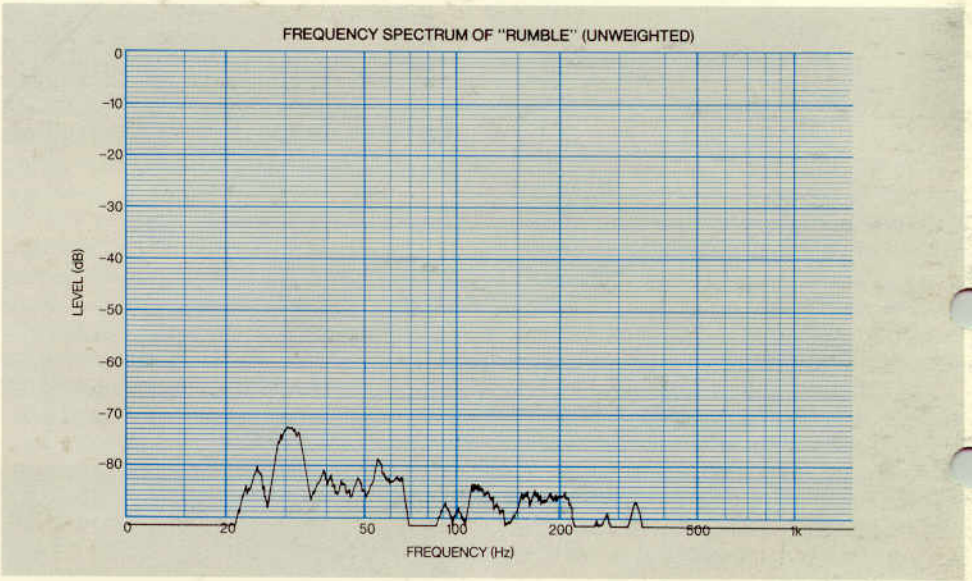
Extending the "human engineering" design still further, we've put the hinges for the dust cover on the cover itself, not on the cabinet as is usually the case. This allows more clearance behind the cabinet when the cover is removed. The cover itself is thick and solid, with exceptional anti-resonance characteristics, and further enhances the smart looks of the SR-838 Quartz-Servo Direct-Drive Manual Turntable from Sansui, where it's *all* hi-fi.

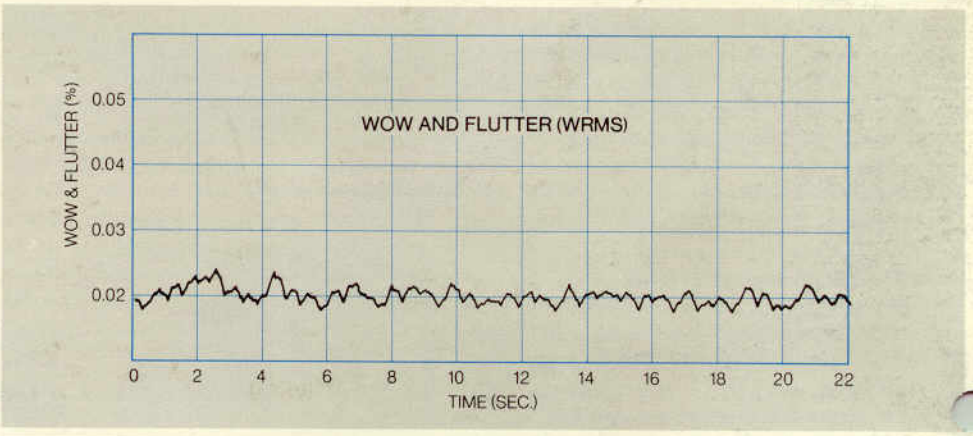
SPECIFICATIONS

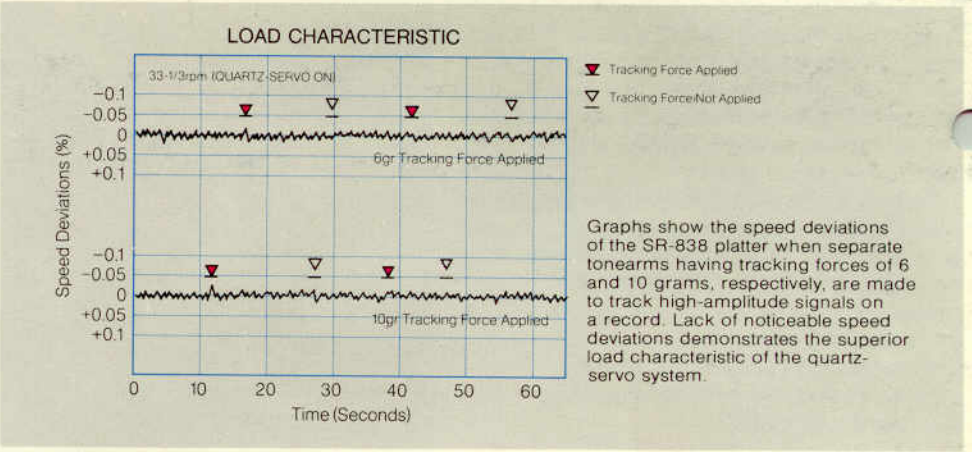
TYPE	Two-speed, quartz-servo direct-drive manual turntable
MOTOR	20-pole, 30-slot DC brushless type with built-in Frequency Generator
DRIVE SYSTEM	Direct spindle drive, quartz-servo controlled
PLATTER	318mm (12⁹⁄₁₆") aluminum die-cast, weighing 1.7kg (3.7 lbs.)
PERFORMANCE	
WOW & FLUTTER	less than 0.025% (WRMS)
SIGNAL TO NOISE RATIO	
	better than 64dB (IEC-B)
RUMBLE	better than −72dB (DIN-B)
PLATTER SPEED DEVIATION	
	less than 0.002% (QUARTZ-SERVO ON)
TEMPERATURE COEFFICIENT	
	less than 0.00003%/°C (QUARTZ-SERVO ON)
LOAD CHARACTERISTICS	
	0% (QUARTZ-SERVO)
	0% (PLL SERVO)
PLATTER SPEEDS	33⅓, 45 rpm
FINE SPEED ADJUSTMENT	
	±2.5% (QUARTZ-SERVO OFF)
TONEARM	Statically-balanced S-shaped resonance-free M.C.F. tonearm with height-adjustable two-point pivot support, and with vertical stylus alignment device
LENGTH	230mm (9¹⁄₁₆") pivot to stylus tip
OVERHANG	16.1mm (1¹⁄₁₆")
OFFSET ANGLE	22.5°
MINIMUM TRACKING FORCE SETTING	
	0.5g (when using cartridge guaranteed to operate at 0.5g stylus pressure)
ACCEPTABLE CARTRIDGE WEIGHT	
	4 to 11g
	11 to 20.5g (using sub counterweight)
MAXIMUM HEADSHELL/CARTRIDGE WEIGHT	
	32g (using sub counterweight)
CABINETRY	Slim-line cabinet with anti-howling insulators and hinged free-stop dust cover
POWER REQUIREMENTS	
	100V, 120V, 220V, 240V 50/60Hz
	U.S.A. and Canada models: 120V, 60Hz
	European models: 220V, 240V 50Hz
	UK models: 220V, 240V 50Hz
POWER CONSUMPTION	
	less than 6 watts (rated)
DIMENSIONS	490mm (19⁵⁄₁₆")W
	167mm (6⅝")H
	390mm (15⅜")D
WEIGHT	12.8kg (28.2 lbs.) Net
	14.8kg (32.6 lbs.) Packed
ACCESSORIES	45 rpm record spindle adaptor
	Overhang gauge
	Sub weight
	Hexagon wrench keys

The SR-838 is not provided with a cartridge: it will accept any quality cartridge, light or heavy, you select.

Design and specifications subject to change without notice for improvements.







Graphs show the speed deviations of the SR-838 platter when separate tonearms having tracking forces of 6 and 10 grams, respectively, are made to track high-amplitude signals on a record. Lack of noticeable speed deviations demonstrates the superior load characteristic of the quartz-servo system.

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