

SANSUI SR737

FULLY AUTOMATIC PLL-SERVO DIRECT-DRIVE TURNTABLE



Sansui engineers did a complete turnaround in creating the SR-737. Most fully automatics are built for user convenience first, accuracy second. Other makers tack on all the gadgets first, *then* try to raise performance quality to passable levels. In a daring departure from conventional turntable technology, Sansui started with the near-absolute platter rotation accuracy, such as found in our most expensive SR manuals.

Then we added *only* what was necessary to give you fully automatic operation at the touch of only one master control. Ours is a different approach—one that pays off in more dependable hi-fi performance.

Platter rotation accuracy is never compromised by changes in load. We developed an FG (Frequency Generator) direct-drive servomotor, and a PLL (Phase-Locked Loop) servosystem to keep it spinning with

astonishing $33\frac{1}{3}$ rpm/45rpm constancy. For the all-electronic end-of-play detection device we use LEDs and Cds cells, thus avoiding direct mechanical linkages in order to preserve the sensitivity of the Sansui-exclusive MCF or Mass Concentrated Fulcrum tonearm. Learn what the SR-737 can do, and why it does it so well. Then hear it in action at your Sansui showroom, where it's *all* hi-fi.

Only hi-fi, everything hi-fi.

Sansui

THE SANSUI SR-737

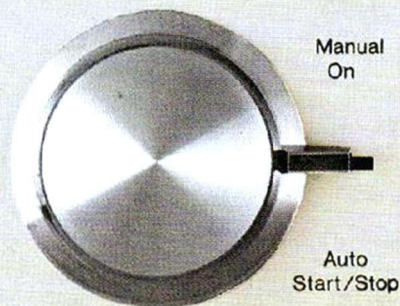


A One-Touch Automatic with Astonishing PLL-Servo Accuracy

FULLY AUTOMATIC OPERATION

Electronic End-of-Play Detection

At no time during play is the automatic-return device on the Sansui SR-737's tonearm support in contact with the tonearm itself. Why is this important? It's because such contact would—and does in less carefully designed turntables—compromise the sensitivity of the tonearm and cause the eventual degradation of musical quality in reproduced records. How is it prevented? With the use of LEDs (Light-Emitting Diodes) and Cds cells. When the stylus tracks the lead-out groove of your record, the circuit sends a trigger signal to energize the drive amp and activate the auto return mechanism. The arm is lifted smoothly and sent gently to its rest; power then switches off automatically.



IC TURNTABLE SR-737

One-Knob Operation

One control for all automatic functions. It permits both manual and automatic action: MANUAL ON, OFF, and AUTO START/STOP. Pull it into the AUTO START/STOP position after you've placed a record on the platter: the arm lifts, moves to the lead-in groove, lowers to the record surface and play begins. The auto-return mechanism takes over when the record ends. If you want to interrupt play, simply pull the control lightly again in the direction of the AUTO START/STOP position and the same automatic end operation takes place. In the MANUAL mode you can move the tonearm freely as when you want to cue on a desired band in a record. As in the AUTO mode, the tonearm returns to its rest when the stylus enters the lead-out groove, triggering the auto-return function. A cueing lever is provided to make it unnecessary to touch the tonearm by hand in MANUAL mode.

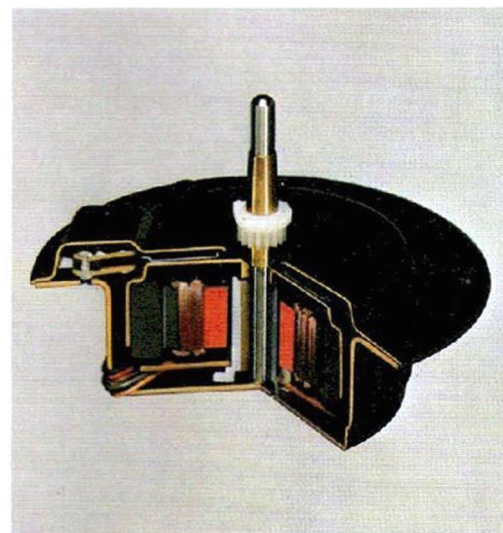
Auto Repeat/Infinite Replay

Located just behind the 3-positioned Record Size Selector is the REPEAT control, with positions for OFF through 5 automatic repeat plays and one marked ∞ for infinite replays. This offers distinct advantages over those automatic turntables which permit infinite replay only.

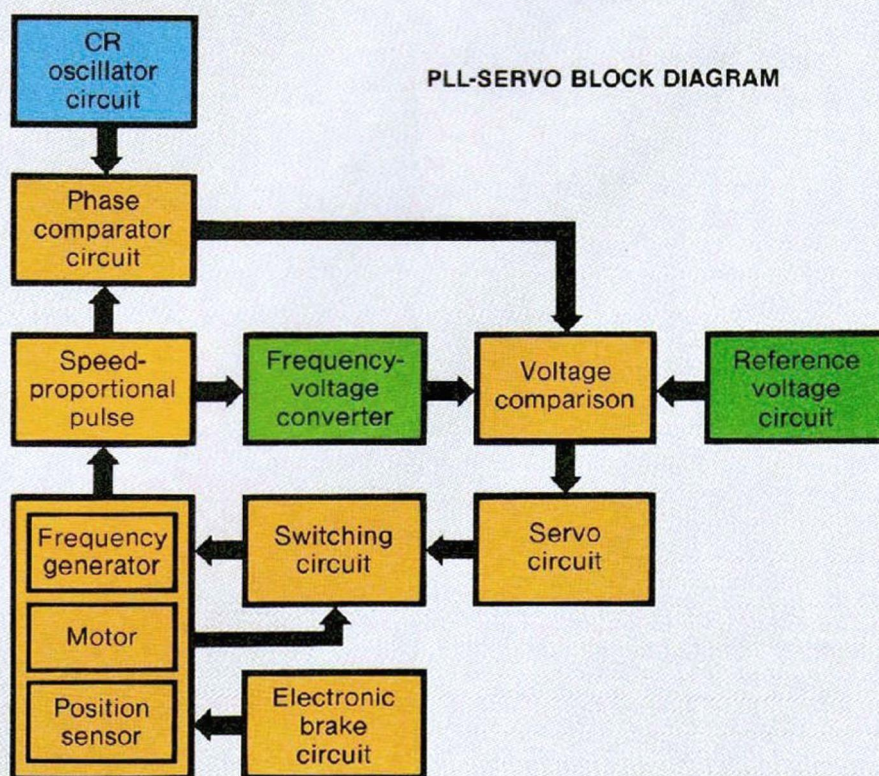
PLL-SERVO DIRECT DRIVE

High-Torque FG Servomotor

At the heart of the Sansui SR-737 is a 20-pole, 30-slot brushless motor featuring high-torque generation. The rotor-position sensor mechanism, coupled with the bias-controlled saturable core (Sansui Pat. Pend.) inside the motor, eliminates speed drift effectively. Speed accuracy is assured through



PLL-SERVO BLOCK DIAGRAM



the frequency generator mounted directly on the motor itself. It generates speed-proportional pulses to be compared for phase difference with those generated by a CR oscillator which is part of the SR-737's PLL circuit (see below).

Motor components are designed and finished with extreme mechanical precision for absolute reliability. Motor shaft/spindle parts are of specially-finished stainless steel: the sleeve is mirror-finished to reduce friction and the thrust bearing is of tough, elastic material, a type of strong synthetic polyamide. This pays off in the almost infinitely long life of the motor and its parts.

Finally, the heavy 1.6kg die-cast aluminum platter also contributes to speed accuracy because of its excellent inertia characteristics and precision concentricity. Wow/flutter is a low 0.03%. Rumble is better than 70dB. Best of all, these superb specifications are maintained over long years of use thanks to Sansui's close attention to every detail of design and manufacture.

Accurate PLL-Servosystem

The PLL-servosystem in the SR-737, with its built-in CR oscillator of high precision, works like this: a speed-proportional signal is continuously received in the PLL from the FG or frequency generator attached to the motor. The frequency of that signal is compared in the PLL with that from the CR oscillator. Once the FG frequency is locked with the CR frequency, no reasonable increase (or decrease) in platter load can possibly cause deviations in platter speed.

Electronic Brake

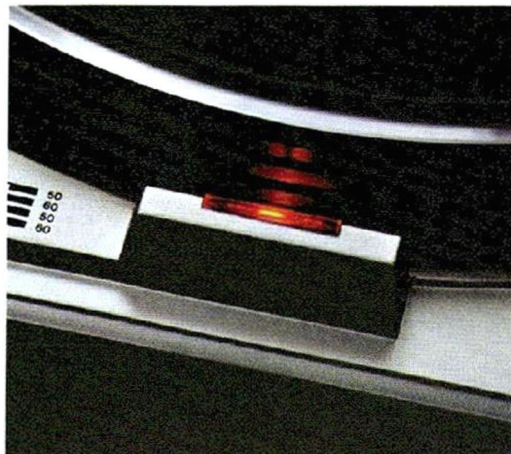
The electronic brake exerts no physical pressure on the rotating parts, as would a mechanical brake like that on a bicycle or car wheel. Instead, the motor is instantly slowed by reverse drive torque. This is applied electronically when you switch from 45rpm to 33 $\frac{1}{3}$ rpm, for instance.

The PLL-servo generates a reverse drive current, sends it to the motor, and your speed change is accomplished almost quicker than your eye can perceive. It's another demonstration of the long-term dependability of the Sansui SR-737.

Strobe and Fine Speed Control

Once you have selected the 33 $\frac{1}{3}$ or 45rpm platter speed and, if necessary, brought the strobe pattern on the edge of the platter into proper "focus," rotational accuracy is maintained by the FG/PLL unless and until the turntable is subjected to excessive environ-

mental change or unreasonable platter loads. The fine speed controls, one for each speed, have a control range of $\pm 2.5\%$.



MCF STABILIZED TONEARM

Mass Concentrated Fulcrum

Sansui's exclusive MCF or Mass Concentrated Fulcrum system makes the SR-737 still more of a fine performer. The system highlights a heavy, pure-brass cylinder which serves as the holder for the tonearm, and



as a 2-pivoted horizontal support. This unique construction reduces the moment of inertia for the arm, while concentrating its mass on the support. The fulcrum of the tonearm is thus very well defined and record reproduction is improved. Further, the wide cylindrical support prevents the tonearm from twisting, however slightly.

You benefit in two major ways with the MCF system. One, it permits the mounted cartridge/stylus to follow the undulations of the record groove with increased accuracy, even when those undulations contain excessively complex musical information. Two, it ends your worry about inaccurate reproduction of the low and high ends of the musical spectrum: trebles are clear and clean and bass response is tight, resolute and rich with nuance.

Low-Resonance Design

Unwanted resonance in the mechanical and frictional interfaces of the tonearm and its related parts can never harm your music in the SR-737. Arms which permit mechanical or sound-caused vibrations to influence the movement of the cartridge/stylus are arms which will cause your records to sound "muddy" or "fuzzy." This can't happen in the SR-737 because of the following:

- **Solid Aluminum Die-Cast Headshell**—Because it's essentially an integral part of the arm we've made it solid, sturdy and non-resonant.
- **Damped Tonearm Pipe**—Filled with a Sansui-exclusive acoustic absorbent. (Sansui Pat. Pend.)
- **Balance Weight Decoupling**—A rubber damper completely isolates the weight shaft from the tubular arm.

Other Tonearm Features

- **ZINC-ALLOY DIE-CAST ARM BASE**—This high-mass base secures the arm to the cabinet firmly, 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 3.0 gram range.
- **HEADSHELL TILT ADJUSTMENT**—Vertical stylus alignment can be optimized with a twist of the screw.
- **GOLD-PLATED CONNECTION PINS**—Maximum electrical transfer is always assured.
- **OIL-DAMPED ARM LIFTER**.
- **DIRECT-READOUT ANTI-SKATE KNOB**.

CABINET & CONTROLS

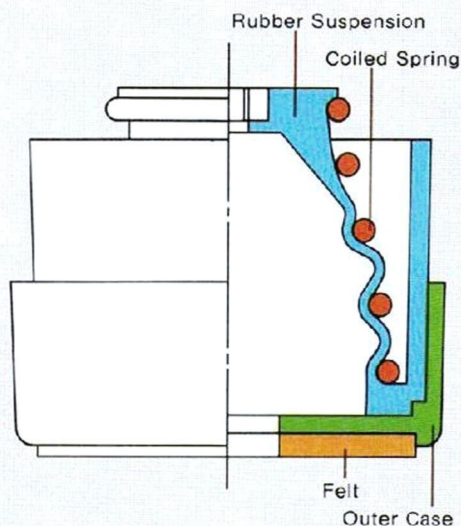
Silver-Metallic Cabinet

You'll never grow tired of listening to your SR-737—nor looking at it, either! The uncluttered, silver-metallic appearance suggests both precision and quality, virtues which indeed it has. Construction is sturdy and the design is proven to reduce the chance of acoustic howling. The automatic control section has a sub-chassis all its own, mounted on the cabinet with a rubber decoupling material.

Effective Complex Suspension

Large amounts of feedback can cause audible howling, as everyone knows. But few people are aware that even a tiny bit can influence bass response and do damage to sound-image reproduction. We've suspended the cabinet of the SR-737 in a newly-developed, effective system using a complex rubber/coiled-spring construction to absorb all feedback and other vibrations, whatever their frequencies.

Cross Section Diagram of the Cabinet Suspension



Operational Ease

The "one-touch" simplicity and fully automatic convenience of the SR-737 is introduced in previous paragraphs. We'd like to add here that the most frequency adjusted controls—REPEAT, RECORD SIZE and the extra-large MANUAL/AUTO control itself—are located so that they fall naturally right under your fingers as you operate them.

Free-Stop Hinged Dust Cover

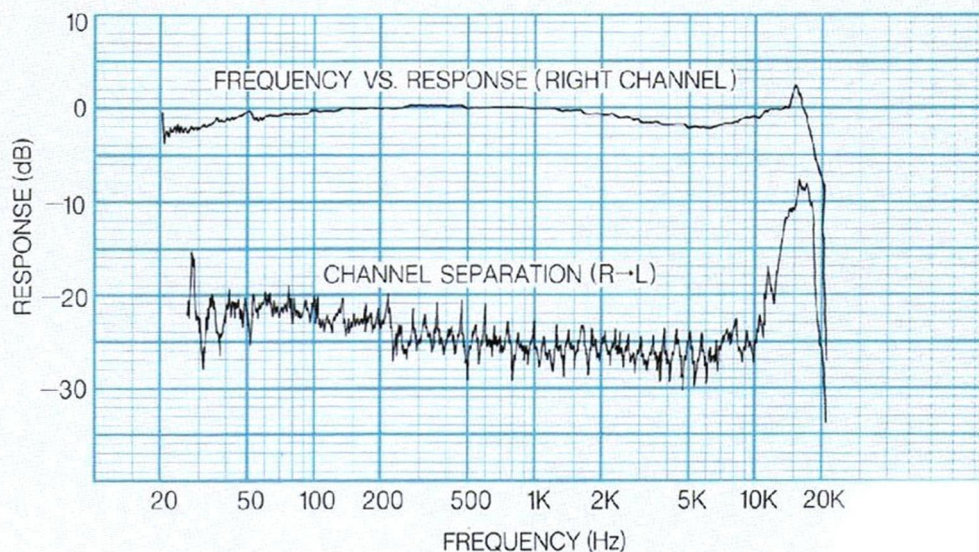
The hinges for the dust cover are on the cover itself, not on the cabinet. This allows more clearance behind the cabinet when the cover is removed. The cover is thick and solid, with exceptionally good anti-resonance characteristics, and further enhances the appearance of the fully automatic SR-737 from Sansui, where it's *all* hi-fi.

Other Features

- 45rpm record adaptor.
- Headshell storage recess.
- Adaptor recess.
- Platter mat with new contour pattern.
- Low-Capacitance Connection Cables.

WIDE-RANGE DUAL-MAGNET CARTRIDGE

The PLL-Servo direct-drive SR-737 turntable is equipped with a special Dual-Magnet cartridge, Sansui SV-43. This amazing cartridge employs the smallest moving magnets possible to manufacture. Because it has a magnet-coil assembly for each channel, irregularities are eliminated and a flat response is achieved over a very wide frequency range (10Hz to 20kHz) to assure a brilliant and accurate high fidelity reproduction of all disc records.



SPECIFICATIONS

TYPE	Two-speed, PLL-servo direct-drive automatic turntable
MOTOR	20-pole, 30-slot DC brushless type with built-in Frequency Generator
DRIVE SYSTEM	Direct spindle drive, PLL-servo controlled
PLATTER	318mm (12 $\frac{3}{16}$ ") aluminum die-cast, weighing 1.6kg (3.5lbs.)
PERFORMANCE	
WOW & FLUTTER	less than 0.03% (WRMS)
SIGNAL TO NOISE RATIO	better than 60dB (IEC-B)
RUMBLE	better than -70dB (DIN-B)
PLATTER SPEEDS	33 $\frac{1}{3}$, 45rpm
FINE SPEED ADJUSTMENT	$\pm 2.5\%$
TO NEARM	Statically-balanced S-shaped resonance-free M.C.F. tonearm with two-point pivot support, and with vertical stylus alignment device
LENGTH	220mm (8 $\frac{11}{16}$ ") pivot to stylus tip
OVERHANG	17.5mm ($\frac{9}{16}$ ")
OFFSET ANGLE	24.5°
MINIMUM TRACKING FORCE SETTING	0.5g (when using cartridge guaranteed to operate at 0.5g stylus pressure)
ACCEPTABLE CARTRIDGE WEIGHT	4 to 10g
CABINETRY	Slim-line cabinet with anti-howling insulators and hinged free-stop dust cover
CARTRIDGE	SV-43
TYPE	Dual Magnet type*
FREQUENCY RESPONSE	10 to 20,000Hz
OUTPUT VOLTAGE	3.3mV per channel (1,000Hz, 50mm/sec.)
OPTIMUM LOAD	47k ohms
TRACKING FORCE	2g
STYLUS	0.5 mil diamond spherical (SN-43)
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 9 watts (rated)
DIMENSIONS	460mm (18 $\frac{1}{8}$ ") W 166mm (6 $\frac{5}{16}$ ") H 370mm (14 $\frac{3}{16}$ ") D
WEIGHT	9.6kg (21.1lbs.) Net 11.5kg (25.4lbs.) Packed
ACCESSORIES	45rpm record spindle adaptor

*TM Audio-Technica Corp.

No cartridge is provided on units sold in the U.S.A., Canada or the U.K.

Design and specifications subject to change without notice for improvements.

