SANSUI FR4060

ELECTRONIC AUTOMATIC TRANSCRIPTION TURNTABLE Stereo purists who still claim that only a manually-operated turntable can faithfully reproduce disc recordings without strain have some catching up to do. For here is a turntable—a fully automated transcription turntable—which performs with the ease and stress-free operation of a first-class manual but has the convenience and practicality of an automatic as well. The Sansui FR-4060 very effectively eliminates the one major disadvantage of the complicated "changer-type" turntable by employing a non-mechanical, purely electric device, the galvano-magnetic detection mechanism, to detect the end of a record and prepare the tonearm for automatic operation. It makes it possible for the tonearm to ride completely free of stress-producing mechanical linkage systems until it is time for the automatic lead-in, return, repeat or cut operations to take over. In this way, the stylus is protected from distortion-producing lateral thrust, your records are safeguarded just as they would be on a manual, and since the tonearm is free, it can be moved to any part of the record manually, even during automatic play.

The FR-4060 features an unusually sensitive S-shaped tonearm, a newly-developed Sansui SV27 magnetic cartridge with superb tonal characteristics, a special low-capacitance output cable, floating-mount base and platter design and many other original Sansui quality details. It is also fitted with a connection socket for the Sansui SRC-6 control unit (optional) for full remote control of all automatic functions.

Those stereo purists who maintain that a manual turntable is the epitome of perfection have only to check out the FR-4060. By adding the convenience of automatic operation to one of the finest precision manuals ever created, Sansui has come up with a turntable to fully satisfy your specific needs.

Sansui

Sansui's high-performance FR-4060:
No other turntable rivals it for tonal quality and ease-of-operation.

PRECISION PERFORMANCE

4-POLE SYNCHRONOUS MOTOR

The heavy, high-inertia platter of the FR-4060 is belt-driven from a 4-pole synchronous motor with *large drive torque*. Precision speed control is assured by matching motor rotation with line frequency, thus avoiding incorrect speeds due to changes in supply voltages. The motor and its mounting unit are designed for minimum vibration and wow-flutter and low power consumption. Heat, motor hum and other adverse conditions are avoided.

PRECISION FINISHED POLYURETHANE DRIVE BELT

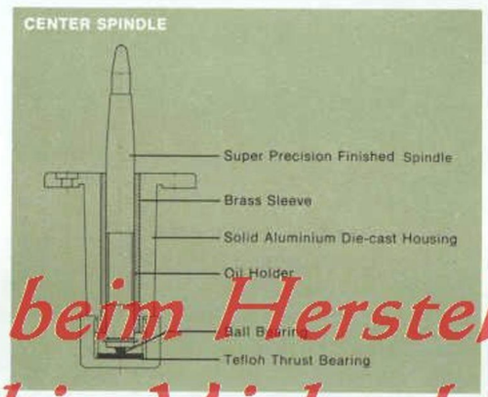
The belt-drive system, proven to be ideal for reducing motor vibration and wow-flutter levels, employs a super fine polyurethane belt of high dimensional accuracy, uniform thickness (0.5 mm) and excellent aging characteristics.

30CM DIECAST ALUMINUM ALLOY PLATTER

Any belt-drive system works best with a heavy, high inertia platter, such as the 1.7kg (3.8 lbs.) diecast aluminum alloy platter in the FR-4060. It eliminates low frequency vibration through strictly controlled balancing.

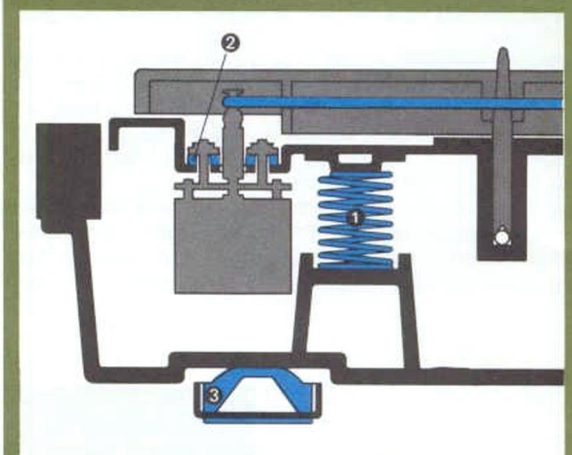
SUPER-PRECISION CENTER SPINDLE AND BEARINGS

The bullet-shaped tip of the center spindle provides maximum safety when handling records of varying center hole diameters. Precision machined for accuracy, first by centerless polishing then by roller finishing, the rigid spindle made of high-grade 18-8 stainless-steel operates within an aluminum bearing casing. Thrust bearing is a combination ball bearing and selflubricating, wear-proof fluoric resin. The turntable's high signal-to-noise ratio (higher than 50dB) is assured by the special lithium-based heavy duty lubricant sealed into the bearing housing.



IDEAL TRIPLE INSULATION

To protect the turntable from howling and any vibration, however small, which may affect its tonal quality in operation, the entire motor board is floated from the cabinet with coil springs. The motor itself is also floated from the motor board with special insulators of synthetic rubber lined with another type of synthetic rubber of a different elastic ratio to shut out motor vibration and ensure high S/N. A third insulation system is provided in the cabinet itself, preventing howling and other noise through its special combination of materials which have the elastic coefficients of natural rubber and an air cushion.



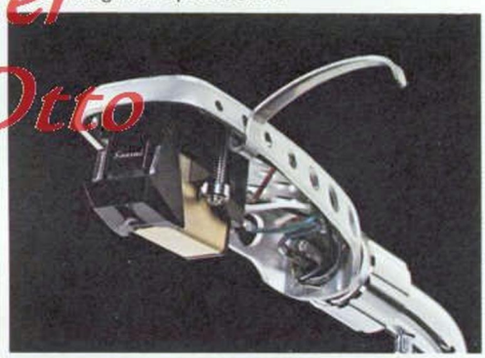
Three-Way Suspension System

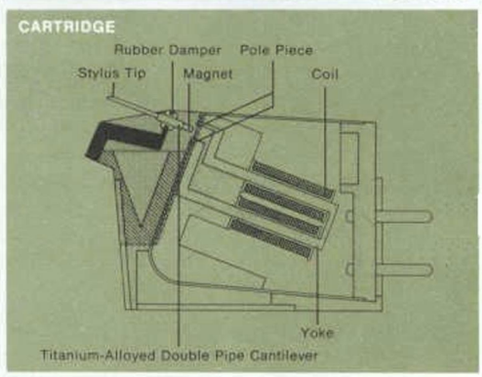
1. Coil spring for motor board suspention.
2. Double Synthetic Rubber Insulator which floats the turntable drive motor from the motor board.
3. Natural Rubber and Air Cushion Insulator for supporting the Plinth.

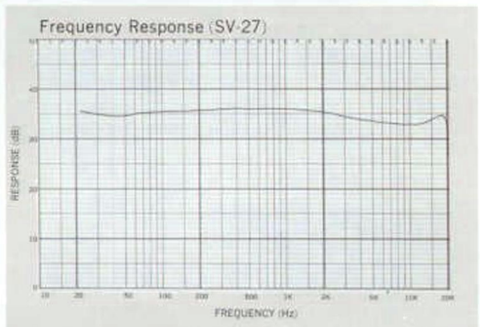
SUPERB TONAL QUALITY

NEW, LIGHT STYLUS-PRESSURE MM CARTRIDGE SV-27

The three most important factors for providing optimum tonal quality in a turntable are its frequency response, transient response and distortion characteristics. The FR-4060 provides excellent results in all three areas through the use of a new, super light stereo cartridge, special S-shaped tonearm and other quality details The Sansui SV-27 cartridge has been developed from extensive and comprehensive research. It provides uncolored, wide dispersion of source images over an extended frequency range. Remarkable improvements of rigidity and reduction of mass are achieved by the SV-27's dual pipe cantilever of titanium alloy and through the unique method of supporting the cantilever to provide stylus motion. The extended frequency response of the cartridge (10 to 23,000Hz) assures correct reproduction of all sounds, well beyond the audible ranges for wide marginal reproduction.

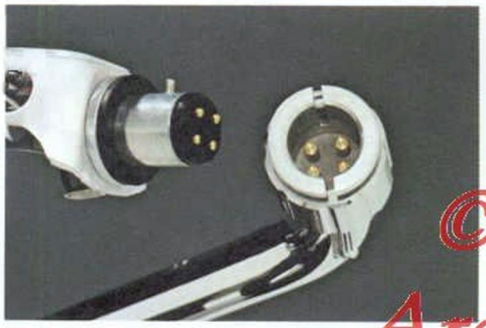






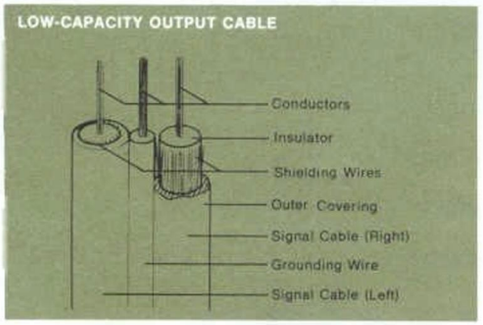
LOW MASS, PRECISION TONEARM

Unusually high sensitivity for both vertical and horizontal directions is provided by the lightweight, static balanced S-shaped tubular tonearm in the FR-4060. It is equipped with a dual counterbalance weight system for easy and continuous fingertip adjustment. Stylus pressure is easily read from the built-in, linear-graduated scale ranging from 0 to 3 grams in 0.5 gram steps. Its design is ideally suited for either 2-channel or 4-channel reproduction. Arm resonance is eliminated by the use of an elastical coupling of the counterweight. Tonearm support is received in a diecast aluminum housing for stability. The shell connector, a 4P EIA universal connector of the type used in many parts of the world, accepts almost all standard stereo cartridges. Gold-plated pin contacts guarantee low-noise and high-reliability performance.



LOW-CAPACITANCE OUTPUT CABLE

To prevent attenuation of high-frequency signals, the FR-4060 is equipped with a low-capacitance output cable which incorporates left and right signal cords and the ground connector. This is an indispensable requirement, especially for 4-channel reproduction. Static capacitance is held to a minimum (40 pF/m).



UNIQUE AUTO-MANUAL OPERATION

UNIQUE AUTO-MANUAL OPERATION

The automated operation of the FR-4060 is so designed as to free the tonearm and other essential parts from mechanical-type linkages during play. In effect, this allows the FR-4060 to be operated as a manual turntable during any stage of its performance. The oil-damped manual arm lifter can be used at any time to raise or lower the tonearm manually, even during automatic play.

CUE LEVER AND AUTOMATIC CONTROL

At the same time, the automatic operation of the FR-4060 can be called upon to save you the trouble of manual handling. When the cue lever is pulled gently toward the user, automatic playback operation begins, lifting the tonearm from its rest, moving it horizontally to a preset position (determined by the record size selector), and lowering it softly to the record surface. Play may be interrupted at any time simply by pulling the cue lever again. If the tonearm is allowed to track to the end of the record, the automatic mechanism is reengaged by means of the galvano-magnetic detector and the tonearm is lifted and returned to its rest. By pushing the cue lever forward to the REPEAT position, the entire lead-in, play and return process will be repeated automatically and continuously until the lever is reset to another position.

INTEGRATED INSIDE-FORCE CANCELLER

A separate control knob is provided to allow the user to set the built-in integrated inside-force cancelling mechanism to a position corresponding to the selected stylus pressure. The mechanism is free of such mechanical hazards as shifting weights and the like, using a precision spiral spring instead to provide the counterforce needed to compensate for varying inside force.

FREE-STOP HINGED DUST COVER

The attractive, smoked acrylic dust cover provided on the FR-4060 is dust and scratch resistant and is hinged in a unique manner to provide correct positioning and self support at almost any height. This feature is particularly handly when fitting the FR-4060 to custom-designed shelves or cabinets.

OTHER DELUXE FEATURES

The speed selector buttons (33⅓ and 45 rpm) are designed for positive action. The motor board and expensive wooden cabinet surfaces are designed for easy cleaning and eye-catching good looks. Lateral Balancer, Record Size Selector, Shell Stand, Sub-Weight and Sub-Weight Stand, 45 rpm Center Disc and other deluxe features are provided. In addition to these, a special socket is provided on the front side of the cabinet to allow connection of a Sansui SRC-6 remote controller, an optional extra which allows you to operate the turntable from a distance of up to 3 meters.

CONTROLS

1. Counter-Balance Weight with Direct Stylus Pressure Readout
2. Lateral Balancer
3. Aluminium Die-cast Housing
4. Inside Force Canceler
5. Manual Arm Lifter
6. Record Size Selector
7. Cue Lever

Since when does an automatic turntable rival a manual? Since Sansui created the FR-4060's auto mechanism.

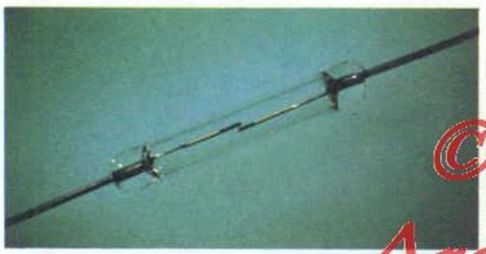
❶ Light-touch cueing lever that activates a geared motor in START/CUT/REPEAT modes.

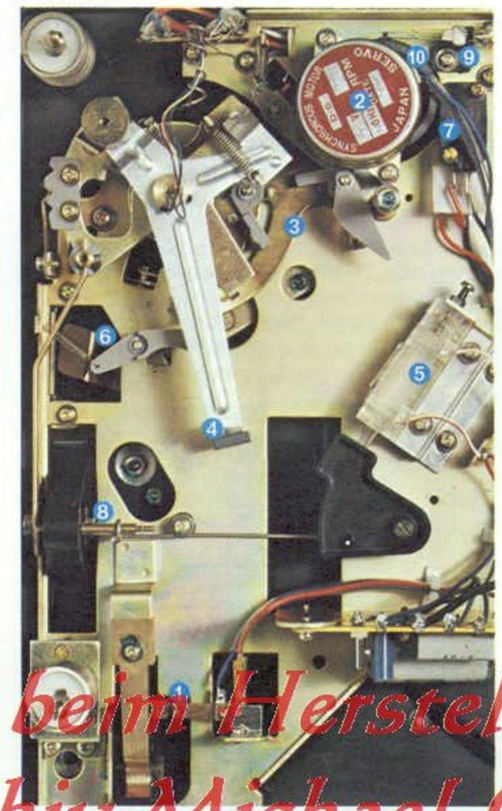
❷ Sixteen-pole (3-rpm) geared motor for driving automatic operation mechanism only.

❸ Rotary programming disc that operates the switches, arm lifter and arm shifter at appropriate timings.

❹ Miniature ferrite magnet coupled to the tonearm spindle.

❺ Elaborate magneto-sensitive reed switch for sensing tonearm position.





❻ Arm lifter to lower or elevate sensitive tonearm gently and smoothly.

❼ Mercury switches—one for activating the main motor and the other for activating the geared motor.

❽ Record size selector.

❾ Muting switch that suppress pop noise before and after lead-in and out operations.

❿ Cam to hold the mercury switches active while the record is playing.

SPECIFICATIONS

TYPE Two-speed, two motor, belt-driven automatic turntable

OPERATION MODES Manual, Automatic (lead-in, return/stop, repeat, cut)

SPEEDS 33⅓, 45rpm

PLATTER Aluminum alloy die-cast, diameter 300mm(12"), weight 1.7kg(3.8 lbs.)

MOTOR Four-pole synchronous for platter drive, 16-pole (3-rpm) geared synchronous for automatic operation

WOW & FLUTTER
Less than 0.06% (WRMS)

SIGNAL TO NOISE RATIO
Better than 50dB

TONEARM Statically balanced S-shaped tubular with universal shell connector

TONEARM LENGTH
220mm (8⅝")

OVERHANG
15mm (9/16")

TRACKING FORCE SETTING
Adjustable within 0—3g

APPLICABLE CARTRIDGE WEIGHT
4—20g

CARTRIDGE: Sansui SV-27
(External Moving Magnet Type)

FREQUENCY RESPONSE
10—23,000Hz

STYLUS COMPLIANCE
20 × 10^{-6}cm/dyne, static

OUTPUT VOLTAGE
3.5mV per channel
(1,000Hz 50mm/sec.)

OPTIMUM LOAD IMPEDANCE
50kΩ

PROPER TRACKING FORCE
1.5~2.0g

STYLUS 0.5 mil diamond, Sansui SN-27

CABINET Walnut finish wooden cabinet with hinged free-stop acrylic dustcover

ACCESSORY DEVICES
Inside force canceller by flat spiral spring, lateral balancer

ACCESSORIES
Sub counter weight, 45-rpm record spindle adaptor, spare headshell, spare capstan for alternative frequency, screwdriver, lubrication oil, polishing cloth, operator's manual

POWER REQUIREMENTS
120, 240V 50/60Hz

POWER CONSUMPTION
13W

DIMENSIONS
469mm (18½")W × 204mm (8")H × 381mm (15")D

WEIGHT 10.6kg (23.4 lbs.) Net

Design and specifications subject to change without notice for improvements.

SANSUI ELECTRIC CO., LTD. 14-1, 2-CHOME, IZUMI, SUGINAMI-KU, TOKYO 168, JAPAN/TELEPHONE: 323-1111/TELEX: 232-2076
SANSUI ELECTRONICS CORPORATION 55-11 QUEENS BLVD. WOODSIDE, NEW YORK 11377, U.S.A./TELEX: NEW YORK 422633 SEC UI
SANSUI AUDIO EUROPE S.A. DIACEM BUILDING, VESTINGSTRAAT 53-55, 2000 ANTWERP, BELGIUM/TELEX: ANTWERP 33538

Sansui

Printed in Japan(37003K)