

FR-D35/D25

Sansui Auto-Return/Shutoff Direct- and Belt-Drive Turntables with Up-Front Operation and Slim Design.



Two new turntables from Sansui—the FR-D35 direct drive and FR-D25 PLL-servo-controlled belt drive. Their specs are first-class, yet you'll find them in a price range you can easily afford. Turntable controls are all positioned on the front panel—just like front-loading cassette decks. No longer do you have to pull up the cover completely to play a record, nor do you have to leave a foot (30cm) clearance above the turntable. You'll appreciate this feature most if you organize your hi-fi system into a rack or shelf, but even if you place it elsewhere, you'll be happier with front-panel operation. It makes turntable operation close to luxurious. From Sansui, where it's *all* hi-fi.

High-Torque Direct-Drive Motor (FR-D35) and Highly-Responsive PLL Servo (FR-D25): The goal is the same: impeccable speed accuracy.

The higher-priced FR-D35 features a time-tested Sansui-exclusive motor, a 20-pole, 30-slot brushless DC motor

with a saturable core. This responsive motor is guided—moment-to-moment—by a highly effective servo control to ensure impeccable accuracy, and minimum long-term drift and wow. Its high torque smooths out even the slightest flutter.

In the FR-D25, a dependable belt-drive motor design—with a surprising Sansui twist—keeps wow low and vibrations effectively shut out. The surprise is a PLL (Phase-Locked Loop) servo control. It's proven to be one of the most effective ways of controlling a belt-drive motor (as well as costlier direct-drive motors, where it's more commonly found). In this Sansui design, a speed error detection device produces an output proportionate to the speed error (if any), which is

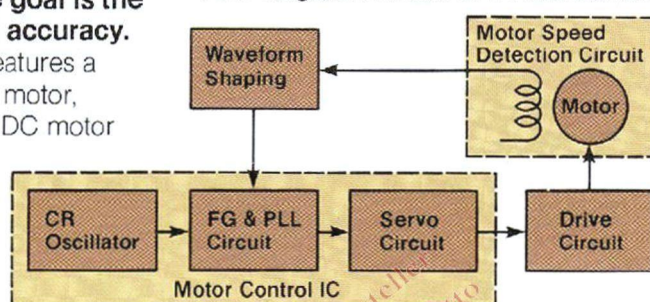
compared for phase difference with a reference signal provided by a precise CR oscillator. The servo then reduces the difference between the two signals to zero, and locks accurate platter speed in for rotational steadiness rivalled only by the Planet Earth's. This level of accuracy will be maintained over long years of use.

Sansui Tonearm: Low mass, low friction, high sensitivity.

Ideally, the tonearm on a turntable should hold the cartridge without subjecting it to stress or friction. Sansui's tonearm comes close to achieving this ideal thanks to its high sensitivity and its ability to track at a force as low as 1.0 grams. Also noteworthy are its low-mass design, the low-friction balls in the pivot bearings, and, of course, the precision machining. Sansui products are famous for.

Tonearm resonance—the source of unwanted coloration—has been overcome with: one, Sansui-exclusive "fishbone" sound absorbent material, and, two, a rubber damper which decouples the weight shaft from the tonearm tube. A solid headshell with a universal joint for quick and easy cartridge replacement tops this advanced design off.

Block Diagram of Motor Drive Mechanism



Automatic Tonearm: Simple, smooth, safe.

Put a record on the platter and cue the tonearm onto the lead-in groove with the smooth-acting Cue lever; the automatic mechanism takes care of the rest. At end of play, the arm is automatically lifted and returned—gently—to its rest. Power is then shut off. Safe record handling is one big advantage of this design; clean hi-fi performance is another.

Convenient Up-Front Controls: "Touch" Operation.

All of the controls (except the "Cue" lever) are positioned up front for maximum access. This means that you can control operation without lifting up the cover all the way, thus decreasing the amount of



"clearance" space necessary. You'll find this feature—and the slim design—especially convenient if you place the FR-D35 or D25 in an audio rack, cabinet or shelf. Speed-switching and other operations are accomplished simply by pushing a button.

Disc-Hugging Mat: No resonance, no slips, no slurs.

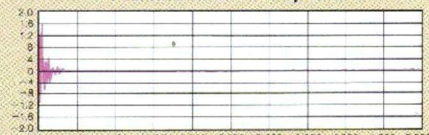
Did you know that today's long-playing records are tapered from the center to the edge at a gradient of 1:350? That's too slight a "slope" to be seen by the naked eye, but it's more than a slight threat to high-quality record reproduction if the mat under the record assumes it doesn't exist. That's why Sansui provides a mat cupped at the same 1:350 ratio. It hugs your records to prevent slips and slurs and to cancel any dead space under the record that might cause resonance.

And we haven't forgotten:

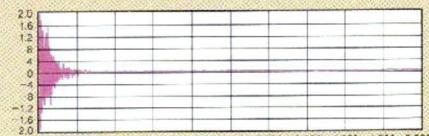
- A Direct Readoff Strobe—allows you to read the strobe pattern directly off the illuminated platter rim.

- Anti-Skating Device—an accurate lever and weight system prevents uneven stylus wear and channel imbalance.
- Large (315-mm) Platter with Tapered Skirt—for quick and secure record placement.
- Arm Elevation ("Cue") Lever—for safe lifting and lowering of your stylus during manual operation.
- Electronic Speed Switching—for fast, smooth changes from 33 $\frac{1}{3}$ rpm to 45 rpm or vice versa.
- Pitch Control—with a range wide enough ($\pm 3\%$) for perfect tuning with musical instruments.

Attenuation Response

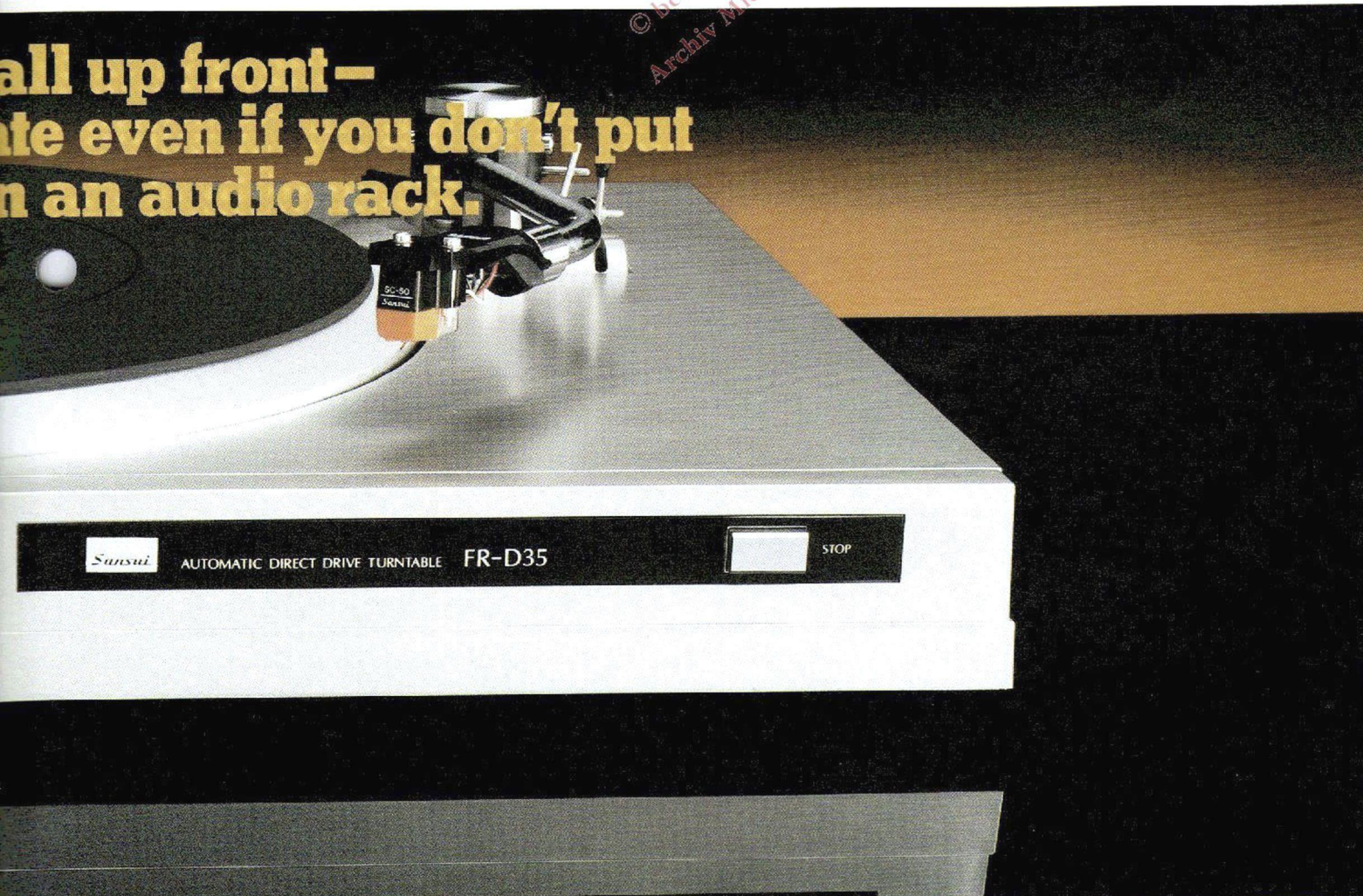


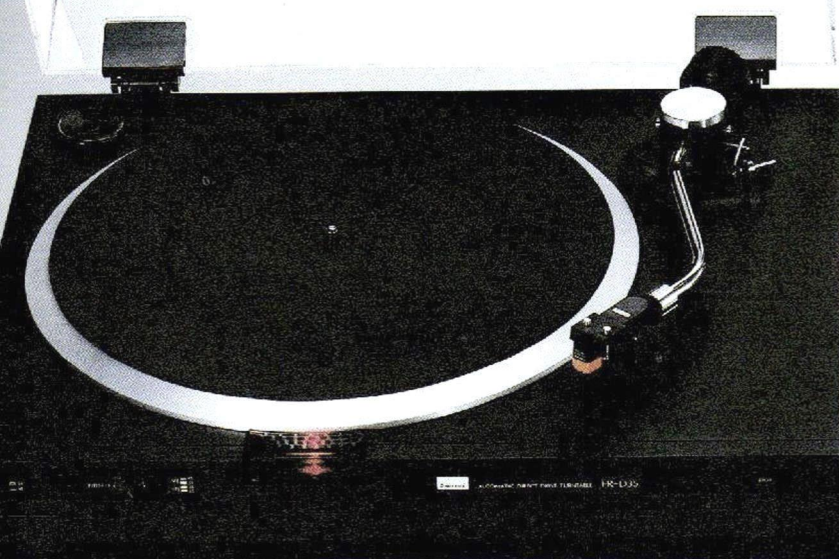
FR-D35/D25 cabinet made of specially mixed resin



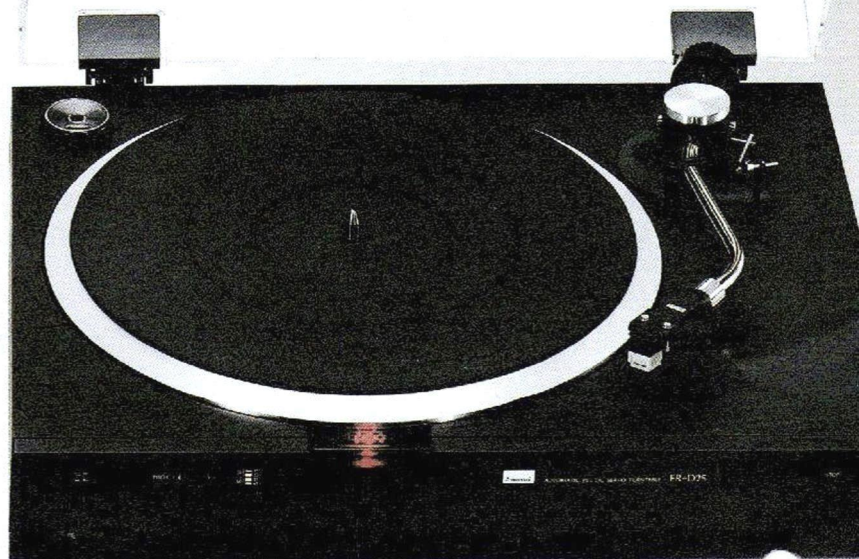
Cabinet made of popular resin

**all up front—
ate even if you don't put
n an audio rack.**





FR-D35B



FR-D25

Specifications

FR-D35

TYPE	Two-speed, automatic return/shutoff DC servo direct drive turntable
MOTOR	20-pole, 30-slot DC brushless
DRIVE SYSTEM	Direct spindle drive
PLATTER	315mm (12 $\frac{1}{2}$ ") die cast aluminum alloy
SPEEDS	33 $\frac{1}{3}$, 45 rpm
PERFORMANCE	
WOW & FLUTTER	less than 0.025% (WRMS)
SIGNAL TO NOISE RATIO	better than 72dB (DIN-B)
FINE SPEED ADJUSTMENT	
	$\pm 3\%$
TO NEARM	Statically-balanced S-shaped tonearm with two point pivot support
LENGTH	220mm (8 $\frac{1}{2}$ ") pivot to stylus
OVERHANG	17.5mm ($\frac{3}{4}$ ")
OFFSET ANGLE	24.5°
MINIMUM TRACKING FORCE SETTING	1.0g (when using cartridge guaranteed to operate at 1.0g stylus pressure)
ACCEPTABLE CARTRIDGE WEIGHT	4 to 9g
CABINETRY	Slim-line cabinet with anti-howling insulators and hinged dust cover
POWER REQUIREMENTS	100-120/220-240V 50/60Hz U.S.A. and Canada models: 120V 60Hz European and UK models: 220, 240V 50Hz
POWER CONSUMPTION	less than 9 watts
DIMENSIONS	440mm (17 $\frac{3}{8}$ ")W 119mm (4 $\frac{1}{8}$ ")H 370mm (14 $\frac{5}{8}$ ")D
WEIGHT	4.8kg (10.6 lbs.) Net 5.8kg (12.8 lbs.) Packed
CARTRIDGE	SC-50
TYPE	IM Type
FREQUENCY RESPONSE	10 to 20,000Hz
OUTPUT VOLTAGE	3mV per channel (1,000Hz, 35.4mm/sec.)
OPTIMUM LOAD	47k ohms
TRACKING FORCE	2.5 $\pm$ 0.4g
STYLUS	0.6 mil diamond spherical (SN-50)

No Sansui cartridge is provided on FR-D35 model sold in U.S. and Canada.
Cartridge supplied along with the turntable varies depending on sales area

FR-D25

TYPE	Two-speed, automatic return/shutoff belt drive turntable
MOTOR	PLL servo controlled DC motor
DRIVE SYSTEM	PLL servo controlled belt drive
PLATTER	315mm (12 $\frac{1}{2}$ ") die-cast aluminum alloy
SPEEDS	33 $\frac{1}{3}$, 45 rpm
PERFORMANCE	
WOW & FLUTTER	less than 0.03% (WRMS)
SIGNAL TO NOISE RATIO	better than 65dB (DIN-B)
FINE SPEED ADJUSTMENT	
	$\pm 3\%$
TO NEARM	Statically-balanced S-shaped tonearm with two-point pivot support
LENGTH	220mm (8 $\frac{1}{2}$ ")
OVERHANG	17.5mm ($\frac{3}{4}$ ")
OFFSET ANGLE	24.5°
MINIMUM TRACKING FORCE SETTING	1.0g (when using cartridge guaranteed to operate at 1.0g stylus pressure)
ACCEPTABLE CARTRIDGE WEIGHT	4 to 9g
CABINETRY	Slim-line cabinet with anti howling insulators and hinged dust cover
POWER REQUIREMENTS	100-120/220-240V 50/60Hz U.S.A. and Canada models: 120V 60Hz European and UK models: 220, 240V 50Hz
POWER CONSUMPTION	less than 7 watts
DIMENSIONS	440mm (17 $\frac{3}{8}$ ")W 119mm (4 $\frac{1}{8}$ ")H 370mm (14 $\frac{5}{8}$ ")D
WEIGHT	4.3kg (9.5 lbs.) Net 5.3kg (11.7 lbs.) Packed
CARTRIDGE	SC-37
TYPE	IM Type
FREQUENCY RESPONSE	20 to 20,000Hz
OUTPUT VOLTAGE	3.5mV per channel (1,000Hz 35.4mm/sec.)
OPTIMUM LOAD	47k ohms
TRACKING FORCE	2.5 $\pm$ 0.4g
STYLUS	0.5 mil diamond spherical (SN-37)

No Sansui cartridge is provided on FR-D25 model sold in U.S. and Canada.
Cartridge supplied along with the turntable varies depending on sales area

Design and specifications subject to change without notice for improvements.



SANSUI ELECTRIC CO., LTD.
14-1 IZUMI 2-CHOME, SUGINAMI-KU, TOKYO 168 JAPAN/TELEPHONE: 323-1111/TELEX: 232 2076

SANSUI ELECTRONICS CORPORATION
1250 VALLEY BROOK AVENUE, LYNDHURST, NEW JERSEY 07071, U.S.A./TELEX: NEW JERSEY 422633 SEC UI

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Computers Make the Difference

"Fully automatic" used to spell the last word in turntable convenience. No more. Sansui is taking turntables beyond fully *automatic* to a level of responsiveness and precision that deserves to be called fully *computerized*.

The new FR-D55 turntable is so advanced, in fact, that it allows you to program the *order* in which you want to hear selections on a record—and even listen to the program you select as many times as you want.

The new FR-D45 does not have this convenience, but—with automatic detection of record size, computer-supervised automatic operation, and rotation speed accuracy actually more accurate than Mother Earth's—it is in every other way as superb a piece of workmanship as the FR-D55.

Sansui challenges you to find two other turntables in these price ranges that offer as much as the new FR-D55 and D45. Never has operation been more impressively accurate. Never have turntables responded so completely to your commands. And never has the very latest in hi-fi technology been priced so temptingly low.

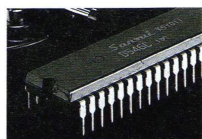
The "Brainy" Turntables with Computerized Tonearm Control for Gentle, Error-Free Operation

FR-D55D45

Computer-Controlled Tonearm: Error-free and ultra-capable

The FR-D55 and D45 have an electronic brain so accurate and advanced you're unlikely to experience a malfunction over the entire life of either turntable.

The brain—an advanced microcomputer—is contained in a CPU (Central Processing Unit) manufactured and programmed to Sansui's specifications. It works in tandem with a team of optical sensors to command and guide the fully automatic tonearm through all possible operations with unprecedented accuracy. It monitors the moment-to-moment position of the arm, supervises the independent arm motor and, on the FR-D55, even lets you decide beforehand what order you want to play the selections on a record.



them for the desired function. Two, all controls (even the Cue button) are positioned on the front panel for maximum access. This allows you to mount your turntable almost anywhere, in an audio rack for example, since you need only enough overhead clearance to lift the cover and remove records.

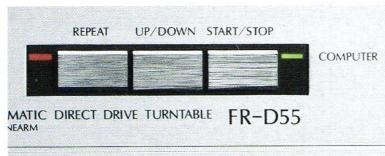


FR-D45

FR-D55D45

Self-Correcting Capability: Full protection for the motors, arm and your records

The computer used in these turntables is so advanced that it is able to stay one step ahead and prevent errors before they occur. The motors, the tonearm and your valuable records are fully protected against almost every conceivable mishap. Try activating the START/STOP button *without* putting a record on the platter; the tonearm will sweep across the platter, then return to its rest, shutting the motor off—*without* coming into contact with the platter at any point.



FR-D55D45

"Touch"-Activated Pushbuttons Up Front: The easiest operation ever

Two features make both the FR-D55 and D45 exceptionally easy to control. One, the pushbuttons are all "touch-sensitive"; the slightest fingertip pressure activates

FR-D55D45

Separate "Cue" Motor: Sansui's thought of everything

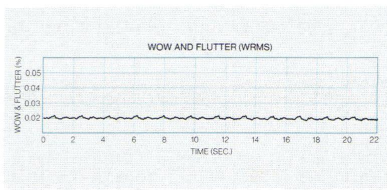
A second motor, completely independent of the direct-drive platter motor (discussed later), handles tonearm lift, cue and return. The computer is at work here, too, to ensure complete accuracy. It's programmed to set the tonearm down in the groove *before* the first recorded note; you'll never miss a downbeat.

You can also use the "cue" button to interrupt play at any point. The computer ensures that it will resume play at exactly the point it was interrupted. A mechanical braking device lowers the stylus to the record surface at a smooth, safe, jerk-free speed.

FR-D55D45

High-Torque Saturable-Core Motor: Spectacular specs

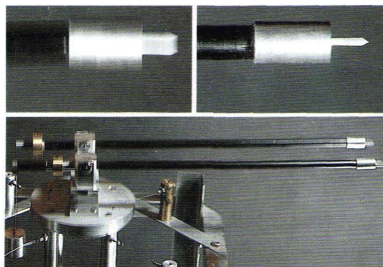
Both the FR-D55 and D45 feature the Sansui-exclusive patent-pending Saturable-Core Motor. It uses a brushless design to eliminate physical switching and ensure virtually noiseless operation at all times.



FR-D55D45

D-O-B Tonearm: The novel design that ends arm jitters

Sansui engineers spent years theorizing and experimenting until they came up with one of the most impressively accurate tonearm designs ever developed. The patent pending "Dynaoptimum Balanced" (D-O-B) tonearm was the result of their efforts. It features a dynamic fulcrum placed precisely on the node of vibration—the point where no vibration can be measured. This design brings dramatic improvement in tonearm dynamic performance, with the tube, counterweight, headshell and support components all almost completely free of the microscopic vibrations ("jitters") that afflict conventional tonearms. All the mutual vibrations that often result in other designs are prevented, so that the tonearm stylus can track even grooves with the highest amplitude with impeccable precision. This eliminates one



Apply vibrations to the base of a conventional design tonearm; the arm will then vibrate together with the base. But the D-O-B tonearm, subjected to the same test, does not vibrate at all.

common source of frequency modulation besides making musical reproduction clearer and more immediate.

In the FR-D55, a lightweight, straight version of the D-O-B tonearm is employed that is low in mass and laterally well balanced for clear-cut definition and transparent reproduction.

FR-D55



The "Seeing-Eye" Turntable of the Future: the FR-D55 with Fully Computerized Track Sequence Selection Capability

FR-D55

Computerized Track Sequence Selection:

How it works

At the heart of the FR-D55 is a CPU microcomputer that awaits your commands—single play, multiple play in any order, arm return, repeat or cue—and that even anticipates its next move and the move after next. It works in conjunction with touch-control buttons up front and a total of six sensors—four at the base and two at the tip of the

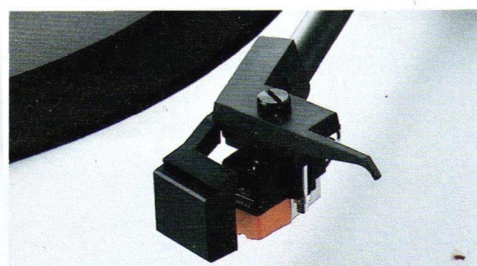
tonearm—which allow the computer to "see" whether a record is on the platter or not, what size it is, where on the record the arm is positioned at a given moment, and how many blanks there are between the recorded tracks on the record.

All you do is push any of the seven "Music Selection" and START/STOP buttons, plus the REPEAT and UP/DOWN buttons as occasion demands. Your command is transmitted to the computer which programs the orders setting the tonearm and motors into the desired operation. Since all arm movements are monitored and controlled by the computer, operation is always accurate, and completely free of jerks and jolts.

FR-D55

Dual Sensors at the Arm Head: Use any cartridge you like.

Automatic track sequence selection requires some kind of sensor at the tip of the tonearm head to detect the shiny bands that separate the bands of music: the densely-grooved music tracks scatter the



light from the sensor, while the smooth inter-bands reflect the light back to the sensor.

To be accurate, the automatic track sequence selection demands that the sensor and the stylus be in the same casing.

That's why the other computerized automatics on the market use special integrated cartridges which accommodate the sensor. With the FR-D55, the sensor is built into the tip of the headshell, not integrated into the cartridge itself; this means that you can use any cartridge you like, not only, as with some similar designs, one force-fed by the manufacturer.

FR-D55

But sometimes even the computer is fooled.

The Dual Sensors in the headshell work with the computer to trigger fully automatic arm operation with unfailing accuracy. We've still bettered this accuracy by providing a sensitivity switch for the sensors to compensate for variations in record groove density.

But despite the lengths we've gone to assure fail-free operation, even the computer may be fooled, and the Automatic Track Sequence Selection may not accurately activate if the record is a color other than black, illustrated, too densely grooved, dust-ridden, soiled or badly warped.

FR-D45

Optical Disc Size- Sensor on the FR-D45: Automatic detection

The FR-D45 has no record size select switch. Unlike most other fully automatic turntables, the FR-D45 is able to detect—automatically—the size of the record and to order accurate, automatic lead-in.

It works like this: An LED (Light-Emitting Diode) contained in a column to the left of the tonearm base shines an invisible infrared

beam onto the platter.

The beam passes through tiny openings in the mat/platter until it strikes a phototransistor inside the turntable. If the record is long-playing, however, the openings will all be covered and none of the beam will reach the phototransistor; singles will allow a certain amount of the beam to hit the phototransistor, allowing the exact size of the record to be gauged. The arm is then ready to be lowered precisely onto the first groove of the record. All you have to do is: put the record on the platter, choose the correct speed and touch the START/STOP button. Then sit back and enjoy.

FR-D55D45

Both the FR-D55 and D45 Feature:

● DAMPED TONEARM TUBE—

Special "fishbone" acoustic absorbent (patent pending) inside the tonearm ends resonance to assure clearer reproduction.

● LEVEL/WEIGHT ANTI-SKATE—prevents uneven record wear and channel imbalance.

● BALANCE WEIGHT—A special rubber decoupler damps spurious vibration, preventing it from reaching the stylus.

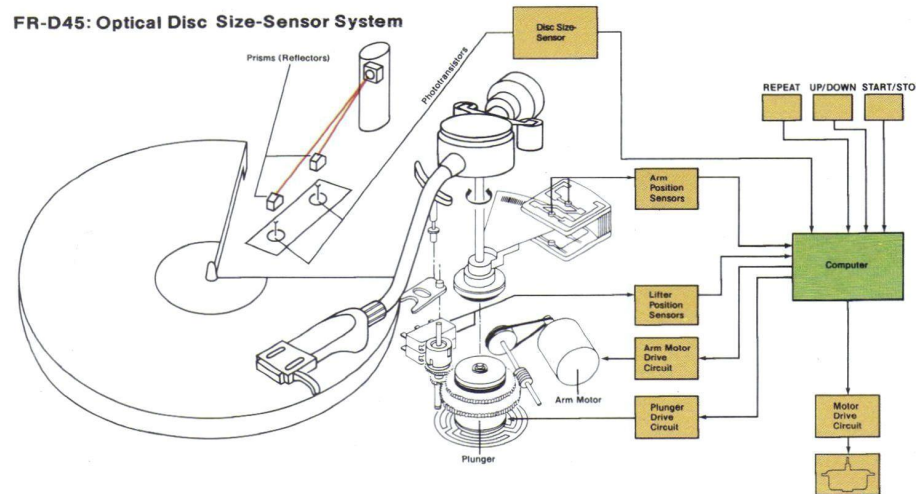
● DIRECT-READOUT TRACKING FORCE DIAL—As easy to use as it is accurate.

● DIRECT READOUT STROBE—Allows you to read the strobe pattern directly off the illuminated platter rim.

● DIECAST PLATTER—Large and tapered for quick but secure record placement.

● REMOTE CONTROL—With an optional wireless transmit/receive system, you can control the turntable for play, cut, return, music selection (FR-D55 only), etc. from a chair across the room.

FR-D45: Optical Disc Size-Sensor System



FR-D55: Computerized
Track Sequence
Selection System

