FR-D55|D45

Sansui Computerized Fully Automatic Direct-Drive Turntables with D-O-B Tonearms—

- Computerized Track Sequence Selection (FR-D55)
- Optical Disc Size-Sensor (FR-D45)

Sansui

FR-D45

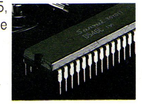
FR-D55

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

FR-D55/D45 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.



FR-D55/D45 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-D55/D45 "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 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.

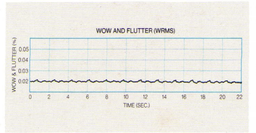
FR-D55/D45 Separate "Cue" Motor: Sansui's thought of everything

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-D55/D45 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.



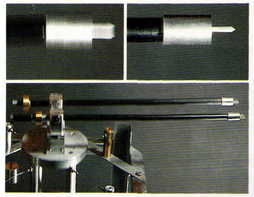
FR-D45

It has 20 poles and 30 slots for higher efficiency, higher torque, smoother rotation and better speed accuracy. The specifications are indeed spectacular: less than 0.025% wow and flutter and better than 72dB signal-to-noise ratio.

FR-D55/D45 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 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.



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.

FR-D55

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

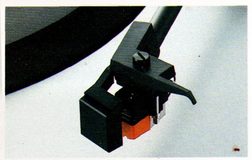
FR-D55 Computerized Track Sequence Selection: How it works

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.

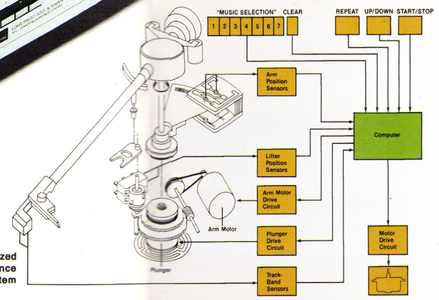
FR-D45 Optical Disc Size-Sensor on the FR-D45: Automatic detection

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.

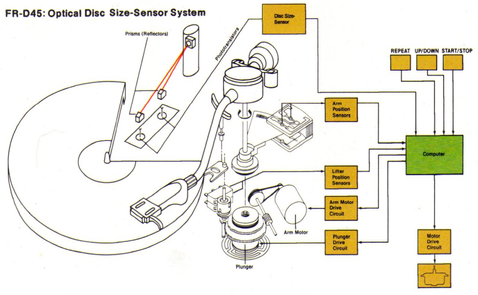
FR-D55/D45 Both the FR-D55 and D45 Feature:

- 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-D55: Computerized Track Sequence Selection System

FR-D45: Optical Disc Size-Sensor System



Computers Make the Difference

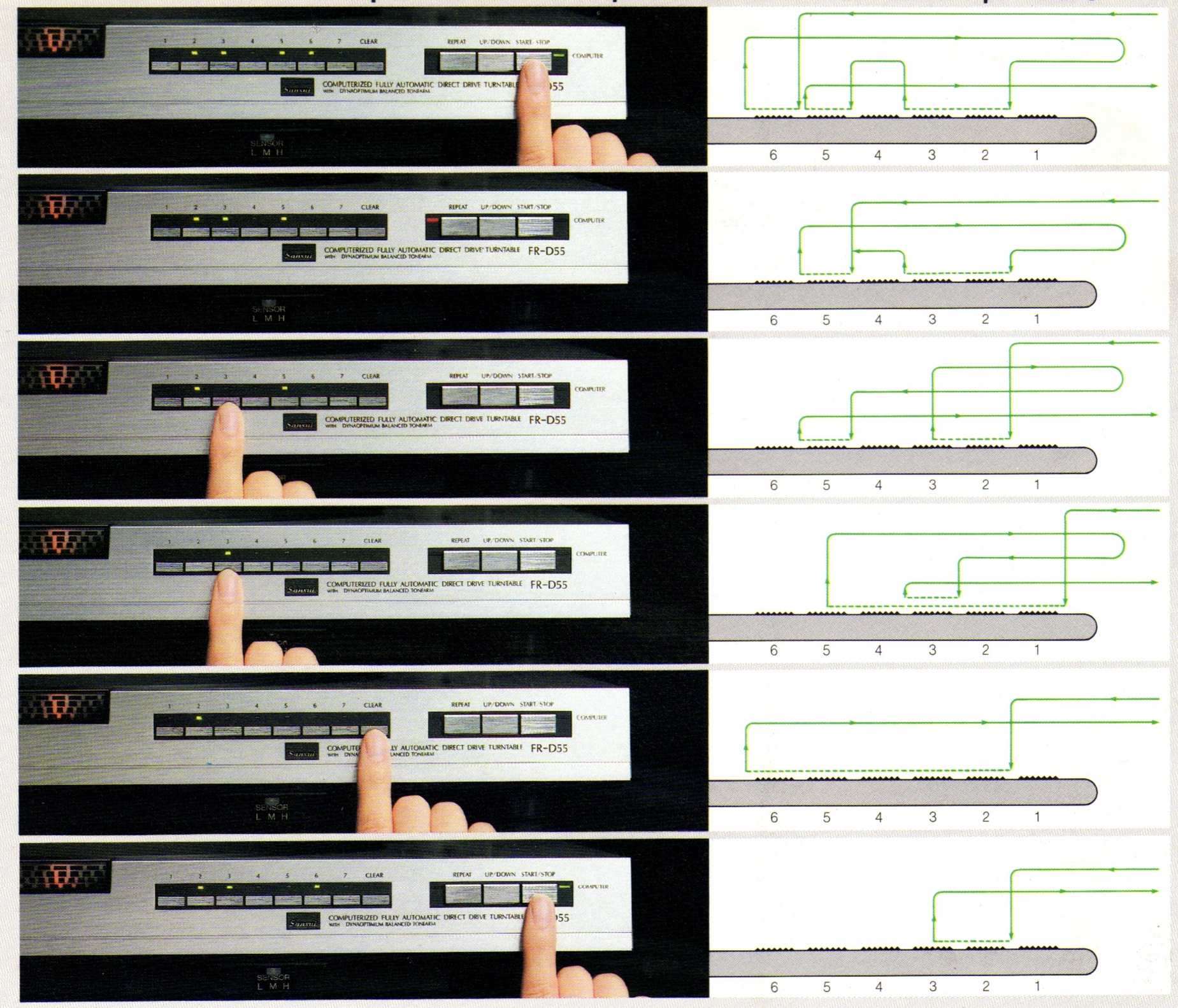
"Fully automatic" used to spell the last word in turntable convenience. No more. Sansui is taking turntables beyond fully *automatic* to a level of responsiveness and precision that deserves to be called fully *computerized.*

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 lastest in hi-fi technology been priced so temptingly low.

Computerized Track Sequence Selection: Six Basic Operations



Random Cue

You can program the Computerized Track Sequence Selection (CTSS) system to play up to seven record tracks once in any order (Tracks 6, 2 3, 5, for example).

Repeat Cue

In this mode, CTSS provides infinite repeat play of the sequence you've selected.

Skip Play

This mode allows you to skip the selection in play and continue with the next programmed selection.

Switch Play #1

At any time during *non-programmed* play, you can switch to any track on the record by pushing the appropriate Music Selection Button (Track 3, for example).

Switch Play #2

At any time during *programmed* play, you can "deprogram" the CTSS system and hear the remaining record tracks in their standard order.

All Clear

You can use this mode to "deprogram" the CTSS and shut turntable operation off.

Specifications

FR-D55	
TYPE	Two-speed computerized automatic music selection/DC servo direct drive turntable
MOTOR	20-pole, 30-slot DC brushless
DRIVE SYSTEM	Direct spindle drive
PLATTER	315mm (12 13/32") die-cast aluminum alloy
SPEEDS	33⅓, 45 rpm
PERFORMANCE	
WOW & FLUTTER	less than 0.025% (WRMS)
SIGNAL TO NOISE RATIO	better than 72dB (DIN-B)
FINE SPEED ADJUSTMENT	±3%
TONEARM	Statically-balanced straight D-O-B tonearm with two point pivot support
LENGTH	220mm (8 1/16") pivot to stylus
OVERHANG	17.5mm (¾")
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 9g
CABINETRY	Slim-line cabinet with anti-howling insulators and hinged dust cover
POWER REQUIREMENTS	110—120/220—240V 50/60Hz
POWER CONSUMPTION	less than 38 watts
DIMENSIONS	440mm (17 5/16")W 127mm (5")H 374mm (14 11/16")D
WEIGHT	6.0kg (13.2 lbs.) Net 7.4kg (16.3 lbs.) Packed
CARTRIDGE	SC-50
TYPE	IM Type
FREQUENCY RESPONSE	10—20,000Hz
OUTPUT VOLTAGE	3mV per channel (1,000Hz, 35.4mm/sec.)
OPTIMUM LOAD	47k ohms
TRACKING FORCE	2.5 ±0.4g
STYLUS	0.6 mil diamond spherical (SN-50)

FR-D45	
TYPE	Two-speed computerized automatic with disc size selection DC-servo direct drive turntable
MOTOR	20-pole, 30-slot DC brushless
DRIVE SYSTEM	Direct spindle drive
PLATTER	315mm (12 13/32") die-cast aluminum alloy
SPEEDS	33⅓, 45 rpm
PERFORMANCE	
WOW & FLUTTER	less than 0.025%
SIGNAL TO NOISE RATIO	better than 72dB (DIN-B)
FINE SPEED ADJUSTMENT	±3%
TONEARM	Statically-balanced S-shaped D-O-B tonearm with two point pivot support
LENGTH	220mm (8 1/16") pivot to stylus
OVERHANG	17.5mm (¾")
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 dust cover
POWER REQUIREMENTS	110—120/220—240V 50/60Hz
POWER CONSUMPTION	less than 28 watts
DIMENSIONS	440mm (17 5/16")W 127mm (5")H 374mm (14 11/16")D
WEIGHT	5.6kg (12.3 lbs.) Net 7.0kg (15.4 lbs.) Packed
CARTRIDGE	SC-50

No Sansui cartridge is provided on FR-D45 sold in the U.S.A., Canada and Europe.
Cartridge supplied along with the turntable varies depending on sales area.
Design and specifications subject to change without notice for improvements.

Sansui

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