THORENS

TD 124

Where music and silence alone reign...
every mechanical link must be forgotten.

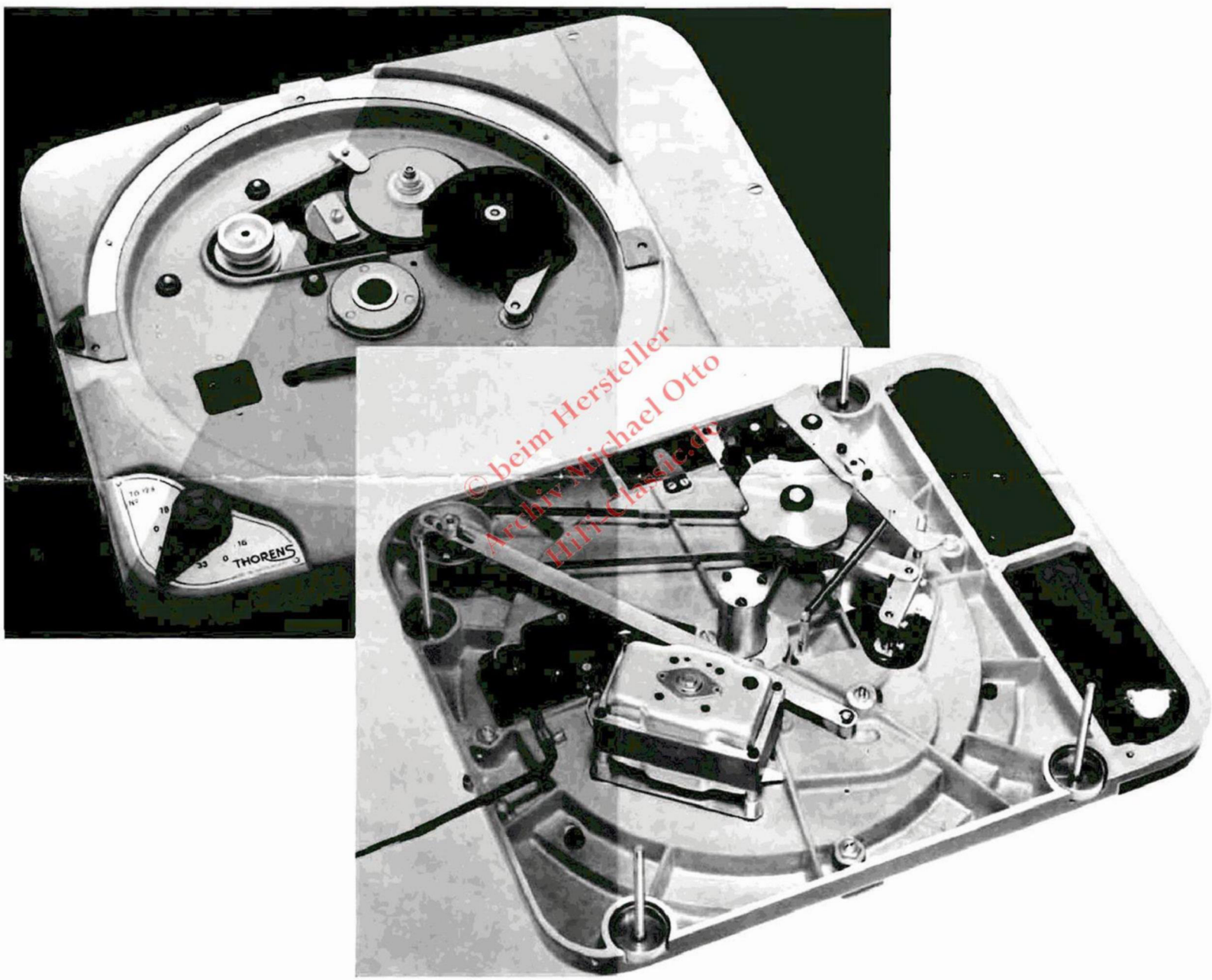
Where art and nature unite for sheer living beauty...
each significant element must become a focal point in the decorative scheme.

Where utmost technical performance is a constant aim...
the perfection of each mechanical element is a must.

THORENS TD 124 TRANSCRIPTION TURNTABLE opens new ways to discriminating music lovers, architects and professional users.

Highest achievement in turntable design does not mainly result from spectacular new mechanical or electrical elements, but much more from an integration of known, ordinarily conflicting elements, into a new design where their best features are magnified and their individual weaknesses eliminated.

As many as **11 important features found on Model TD 124 Turntable,** including Inertia Controlled Drive and Two Part Turntable with Clutch Action, are listed on pages 3 and 4 of the present leaflet with **41 resulting advantages.**



Professional users and discriminating music lovers will find for the first time so many desirable features harmoniously blended into a new turntable whose basic performance is better than NARTB specifications for broadcasting studio equipment.

Wooden board for tone arm mounting made integral with the cast aluminium frame.

1. No relative vibrations between base plate and tone arm mounting board; the rumble level is independent of the type of installation.
2. Easy installation of any type of tone arm; the two dimensions of tone arm mounting board available allow the use of tone arms for 12" or 16" records.
3. Easy replacement of tone arm mounting board on installed unit when changing the tone arm.

Spring suspension of the whole unit on the mounting board.

4. Easy installation without the need for additional parts on any base or cabinet; the mounting board does not need to be spring mounted.

Special inbuilt leveling device.

5. The mounting board or cabinet does not need to be leveled.
6. The precision inbuilt water level allows a permanent control of the leveling.

Inertia-controlled drive system; relatively light, precision built 4 pole motor, associated to a very heavy turntable (11 ½ lbs)

7. Minimizes the influence of instantaneous voltage fluctuations on the turntable speed; the flywheel, not the motor, is controlling the speed.
8. Keeps motor vibrations very low.
9. Allows a most compliant suspension of the motor on the base plate for maximum damping of any vibration.
10. Keeps the stray flux very low.

Two steps speed reduction

between motor and turntable, associating the best features of the belt-driven flywheel and of the stepped pulley-idler wheel speed shift, and eliminating the drawbacks of these two systems taken alone.

11. The long rubber belt prevents any vibration to be transmitted from the motor to the idler wheel and to the turntable.
12. Extra large diameter aluminium pulley for the belt (1 ¼" and 2 ¾") preventing slipping and deformation of the belt.
13. The rubber belt is easily interchanged from the top of the unit.
14. The stepped pulley for four speeds revolves at half the speed of that of conventional systems, thus the steps are of a much larger diameter. Better contact with idler wheel, no slipping and no local deformation of the soft tread of the idler wheel.
15. The stepped pulley is not on the rotor shaft, but has extra long, precision bearing rigidly fixed to the base plate. The vibrations and possible misalignment of the rotor shaft of a spring mounted motor has no effect on the stepped pulley and idler wheel. This latter cannot work as " wow multiplier ".
16. Large idler wheel (3 ¼") with permanently bond special tread; no rumble filter action required.
17. Precision control system of the idler wheel for true parallel action with the steady spindles of stepped pulley and turntable.

THORENS TD 124

Single control knob for the " On-Off " switch and for the 78, 45, 33 1/3, 16 2/3 rpm. speed shift. " Off " positions between each two speeds.

18. Automatic disengagement of the idler wheel in each " Off " position.
19. Large condenser on " On-Off " switch for silent operation.

Variable speed control (± 3 %) acting on the four speeds.

20. Control knob coaxial to the speed change knob.
21. Eddy current brake of new design (patent applied for). Exclusive aluminium brake drum with fixed permanent magnet and coaxially rotating vane for varying the braking action. The brake is not on the motor shaft but runs in an independent bearing fixed to the base plate. Precision control system without spring links. This system allows a more effective, precise and stable speed adjustment without influencing the rumble level and the flutter content.
22. Extended average speed adjustment through magnet displacement.

Precision inbuilt stroboscope for four speeds, 60 and 50 cycles.

23. Printed on an extra large diameter underside of the turntable.
24. Illuminated by a neon bulb acting as pilot light.
25. Visible through a lucite covered aperture on front of unit.

Easy conversion from 50 to 60 cycles operation.

Voltage commutator for 100-120, 125-150 and 200-250 volts.

Two parts turntable with clutch action (Patent applied for).

26. Cast iron flywheel and aluminium turntable may be instantly coupled or decoupled for fast starting and stopping.
27. Motor and flywheel may be permanently maintained in operation for the whole time of use of the unit, the aluminium turntable alone being stopped for the change of records. Thus the temperature and lubrication conditions may be maintained stable for maximum speed stability.
28. Clutch operation for starting the turntable eliminates the possibility of starting in a wrong speed by mistake.
29. The clutch operated " Start & Stop " of the turntable eliminates the major cause of wear and deterioration of the drive system of conventional turntables.

The precision machined cast iron flywheel has :

30. Increased mass for the same volume, as compared to aluminium.
31. Greater mechanical stability and strength.
32. Excellent shielding properties against stray flux.
33. Strictly homogeneous design without ribs, holes or bolts on the pickup playing surface.
34. Heavy main spindle of hardened steel ground and polished to mirror finish running in deep cast iron well with nylon bearing surfaces. Thrust ball revolving with main spindle on nylon seat.
35. Precision machined aluminium turntable with heavy rubber mat and inbuilt retractable hub for 45 rpm. records.
36. The record spindle is part of main spindle and not of aluminium turntable for perfect record centering.
37. Distance between top surface of the aluminium turntable and the cast iron flywheel great enough for the practical elimination of interaction on any pickup cartridge.
38. Clutch control knob on left side of unit.

Cast aluminium base plate strongly ribbed.

39. New styling corresponding to the present day trend in precision mechanical and electronic equipment.
40. Extremely reduced depth of the mechanism underside the base plate opening new installation possibilities.
41. Logical layout of the complete foolproof mechanism for easy access to every part.

Dimensions :	length	15 1/2" (394 mm.)	depth	3"	(74 mm.)	below mounting board
	width	12 3/4" (324 mm.)	height	2 1/2"	(60 mm.)	above mounting board

Weight :	unpacked	22 lbs	(10 kg.)
	Shipping	33 lbs	(15 kg.)

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THORENS FOUR-SPEED TURNTABLE MODEL TD-124

The Thorens Model TD-124 is a four-speed turntable which incorporates an accurate stroboscopic method for checking all speeds, a unique fine-speed adjustment, a spirit level plus means for adjusting level, and a removable (and replaceable) wooden arm-mounting board. In addition, by means of a rather simple device, it is possible to hold the record stationary while the massive turntable continues to rotate. Because of this it is possible to place the stylus at a specific location on the stationary record and, by releasing a lever, have it instantly at proper operating speed. All of these fine features are mounted on an unusually heavy, cast mounting plate. It only takes a brief glance at the underside of this turntable to be convinced of its ruggedness.

In reality, the TD-124 is not a new turntable—in fact it has been widely available for some years. Nevertheless, its features and performance are just as impressive today as they were when it was first introduced. *Fig.* 3 provides an over-all view of the TD-124 with an Ortofon phono arm and cartridge installed on the mounting board. More about them later.

Fig. 3. Thorens TD-124 four-speed turntable with Ortofon SMG-212 arm and Ortofon SPU/GT stereo cartridge.

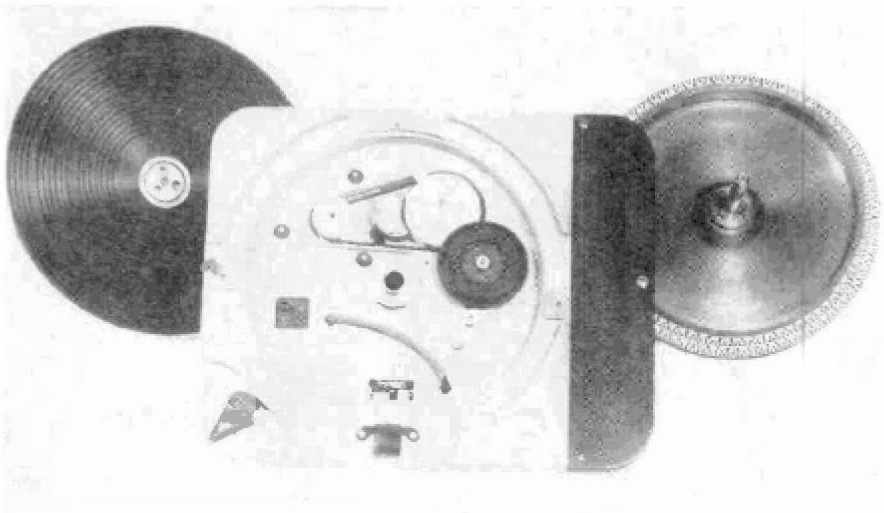

Fig. 4. Thorens TD-124 turntable with platters removed.

The Mechanism

The heavy-duty induction motor is isolated from the mounting structure by means of rubber shock mounts. In addition, it drives the speed-selecting idler by means of a flexible belt. This arrangement prevents the motor from imparting any unwanted rotational or vibrational motions, which means lower wow, flutter, and rumble.

The speed-selector idler, which is driven by the motor, is four-stepped to provide the required four speeds. The appropriate speed is transmitted to the turntable by means of a rubber idler. Speed change is effected by raising and lowering the speed-change idler. When the speed selector knob is rotated, several simultaneous actions occur: (1) A cam is rotated which turns power on, (2) Another cam surface raises or lowers the speed-change idler to the appropriate height, (3) A lever is moved which pushes the rubber drive idler into position against the proper shoulder of the speed-selector idler and the drive surface of the turntable.

Once in motion, fine-speed adjustment is effected by rotating the inner portion of the speed-selector knob so that the stroboscopic pattern remains stationary, as viewed through the window at the front of the turntable. Rotating this inner knob rotates a metal bar within the speed-change idler. This bar, in conjunction with the small magnet just to the left of the speed-change idler (as can be observed in *Fig.* 4), acts as an eddy brake.

The turntable comes in two sections—an eleven-and-a-half pound cast-iron main unit and an aluminum platter on top of it. The aluminum platter is covered with a rubber mat and contains a pop-up 45-rpm spindle. It is because of this light-weight aluminum platter that the previously described cueing function is accomplished; it is lifted up and away from the cast-iron platter and thus remains stationary while the massive platter continues to rotate. In *Fig.* 4 we can observe the shaft, and the ball bearing at the end of the shaft, on which the turntable platter rides. Note also the stroboscopic patterns on the underside of the platter. There are two sets of patterns—one for 50 cps and the other for 60 cps. All that is required to change the set of patterns viewed is to flop over the little black piece of metal screwed over the viewing window shown in *Fig.* 4. In addition, all that is required to change the voltage accommodation of the unit is to unscrew a small screw from one hole and screw it into another hole. It is as simple as that.

The Thorens Model TD-124 is a very fine platform for a record, which after all is what a turntable is supposed to be. Because of the accurate stroboscopic patterns, all speeds are quite accurate. Wow and flutter are less than 0.1 per cent, and rumble was better than – 64 db. All this adds up to an unusually fine turntable for less than $100.00. M-28