

TEAC

Belt-drive turntable

TN-5BB

An Authentic Belt Drive Analog Turntable with XLR Balanced Output



This analog turntable, which supports MC balanced output, features a hybrid chassis that combines synthetic marble, washi paper and MDF materials along with a 9-inch S-shaped universal arm that utilizes a knife-edge bearing.

Turntables are the stages for drawing out the passion of the artists and the magic of their engineers that have been infused into records. With jet black synthetic marble and MDF finished in piano black, the TN-5BB is a truly worthy stage that achieves both functional suppression of unwanted vibrations as well a stately and modern design.

Using the built-in XLR jacks to team up with a phono amplifier that supports balanced connection, the slightest signals transmitted by the cartridge can be re-created with even greater intensity.

The knife-edge tone arm, which is an SAEC×TEAC collaboration, is another component that further enhances this musical stage. The 20mm thick acrylic platter is driven by our original Platter Rotation Sensing Servo System (PRS3).

Are you ready to experience the sound the artists and engineers really wanted you to hear?

Hybrid chassis with multi-material makeup suppresses unwanted vibrations



The chassis has a multilayer structure combining a heavy 36mm MDF baseplate with high internal loss and a 12mm synthetic marble with outstanding rigidity. (The weight of the cabinet is 8.8kg.) Great feedback resistance has been realized with this excellent rigidity and vibration suppression. The tone arm and platter are mounted on the synthetic marble top plate while the motor, which causes vibration, is mounted to the MDF base plate. These separate structures using these materials as dampers isolate the tone arm and motor from each other. An overall structure with outstanding stillness has been realized that reduces the transmission of vibrations from the motor to the tone arm.

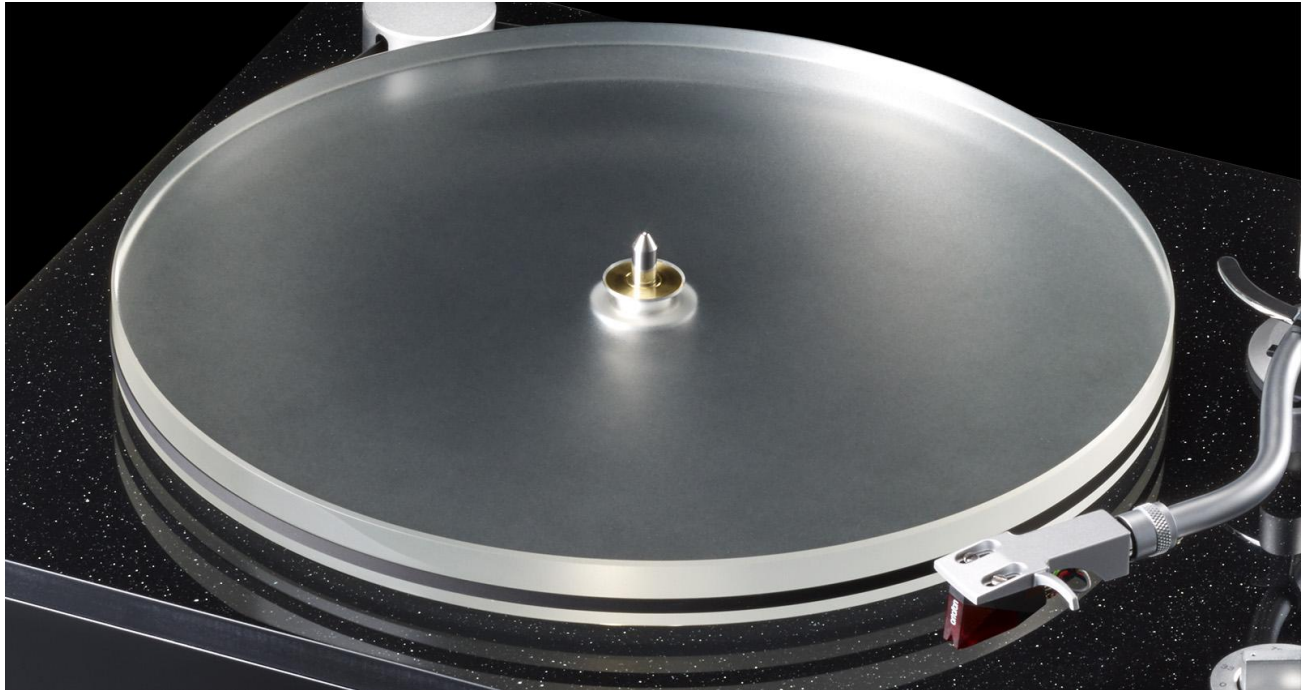
Based on our experience using Japanese washi paper turntable sheets and after repeated listening tests; we determined that the appropriate thickness, washi paper is the best material to use as a washer between the synthetic marble and the MDF for achieving optimal sound balance. By using washi rather than rubber or metal, the original vitality of the sound can be drawn out when records are played back.

PRS3 belt drive structure supports accurate and stable platter rotation



Ideally, once started, platter rotation would continue by its own weight and inertia, but this is impossible, of course. The TN-5BB uses the belt drive method with a flat belt that transmits the power of the DC motor to the outer circumference of the platter. An optical sensor in the bottom of the platter detects the platter rotation speed, and an automatic rotation adjustment mechanism applies a servo to the motor in response. This Platter Rotation Sensing Servo System (PRS3) realizes high rotation precision that would be difficult to achieve with just inertia and a motor. Supporting three speeds, 33- $\frac{1}{3}$, 45 and 78 rpm, this turntable can play back old records as well as 78rpm records with high audio quality.

20mm thick acrylic platter



Acrylic with excellent levelness and internal loss is used for the platter. The 20mm-thick acrylic has 1.7kg weight and realizes high inertial momentum. The polyvinyl material used in records easily takes on negative electrical charges. Acrylic has this same property, but these materials are relatively close in triboelectric series*. This provides the advantage of making electrification difficult even if they directly rub against each other. Records can be placed directly on the platter without using a turntable sheet, allowing enjoyment of their clear sound.

*A triboelectric series is a list of materials ordered according to the ease that they develop positive and negative charges. Materials that are close in a triboelectric series do not easily develop electric charges even when directly rubbing together. In contrast, they develop charges more easily the farther they are from each other.

Reliable tracking realized with knife-edge tone arm that is an SAEC × TEAC collaboration

This knife-edge tone arm was created in collaboration with SAEC, a Japanese brand with 40 years of tonearm design experience. Using a stainless-steel knife-edge bearing for the vertical movable part, we have realized record groove tracking that is highly sensitive and reliable. Furthermore, for the lateral movable part, a conventional structure that has a ball bearing at one point for support has been replaced with a structure that uses Japanese-made high-precision ball bearings at two points for support. The height of the tone arm



base can be adjusted. The Vertical Tracking Angle (VTA) can be adjusted in a 6mm range and optimized for cartridges of various heights. The tone arm geometry adheres to the Baerwald alignment recommended by the IEC.

Automatic arm lifting when playback ends

Using a powered arm lifter enables raising and lowering the arm with a single button and also employs a function that automatically lifts the arm by a contact-less optical sensor after playback ends. The automatic arm lifting function can be canceled when playing records that do not conform to standards.

Ortofon 2M RED included as standard MM cartridge



Ortofon 2M RED MM cartridges included with this model have an established reputation. Since it is already installed and aligned with the head-shell, records can be enjoyed soon after getting the turntable out and setting it up.

Arm lead wire uses PC-Triple C material made by SAEC

Lead wire that uses PC-Triple C conductor made by SAEC is employed for the wiring inside the tone arm. With outstanding conductive performance, this conductor transmits even weak signals from analog records.

PC-Triple C

PC-Triple C realizes outstanding conductor performance using unique continuous forge extrusion technologies developed by FCM Co., Ltd. (an affiliate of Furukawa Electric Co., Ltd.). Crystal grain boundaries that obstruct signal transmission are reduced as much as possible, and crystals are linked in the lengthwise direction.

XLR balanced output connectors are optimal for balanced MC transmission



In addition to ordinary RCA connectors, XLR connectors are also available for analog output. A variety of commercially available cables can be used to connect with a PE-505 or other external phono equalizer that supports balanced XLR input.

Attractive design contrasts the combination of pearl black and piano black with silver parts



The fundamental theme of this design is the contrast between black and silver. The MDF used in the cabinet has a piano black finish with a beautiful luster. In addition, the synthetic marble that comprises the top panel appears to be jet black when viewed from a distance, but it sparkles at points in pearl black when seen closer up. This appearance also changes depending on the viewing angle. Although simple, this design inspires aesthetic joy to the eye. Moreover, we incorporated extruded aluminum components with a luxurious feel for the operation knobs and the arm lift switch, as well as the feet.

Features at a glance

- Rotation speeds of 33- $\frac{1}{3}$, 45 and 78 RPM supported
- Platter Rotation Sensing Servo System (PRS3)
- Static-balanced knife-edge-bearing tone arm
- VTA adjustment (tone arm height adjustment) function (+6 mm)
- Cabinet weight of 10.6 kg
- Platter weight of 1.7 kg (20mm-thick acrylic)
- Anti-skating function
- Powered arm lifter
- Non-contact detection automatic arm lift function (can be turned on/off)
- XLR balanced output connectors
- Unbalanced RCA output connectors
- GND connector
- Height-adjustable machined aluminum feet at four points
- Acrylic dust cover
- Cast aluminum head shell (lead wire) included
- Supports cartridge weights of 15–23 g (including head-shell)
- RCA and ground cables included
- L wrench for arm lifter height adjustment
- L wrench for VTA adjustment
- Cartridge alignment gauge