



# TD 1600 / TD 1601 - TP 160

BEDIENUNGSANLEITUNG  
USER GUIDE  
MANUEL D'UTILISATION

**Thorens GmbH**

Lustheide 85 · 51427 Bergisch Gladbach · Deutschland  
[www.thorens.com](http://www.thorens.com) · [info@thorens.com](mailto:info@thorens.com)

**THORENS**<sup>®</sup>  
[www.thorens.com](http://www.thorens.com)

## Contents

	<b>Page</b>
Contents	25
Dear Customer	26
WARRANTY	27
Sicherheitsanweisungen	28
Thorens series 1600	29
Unpacking and set-up	30
Tonearm and Cartridge	32
Setting and adjustment of the tone arm	34
Height adjustment of the tonearm (VTA)	36
Setting the azimuth	39
Placement of the turntable	40
Electrical connections	41
Operation	42
Thorens TD 1600 / TD 1601	43
Technical specifications	45

**Dear THORENS customer,**

Thank you very much for your confidence in our product, the record player TD 1600 or TD 1601. With the purchase of this device you have acquired a precision instrument for the purpose of playing back analogue records. This appliance however requires your attention with respect to setup, placement and handling in order to achieve a flawless operation.

The TD 1600 series will guarantee you the highest quality to be maintained for years to come. Understandably, you want to listen to your beloved records right away but we strongly advise that you read these instructions attentively before proceeding with the setup, simply to ensure long-lasting listening pleasure. We have spared no efforts to pack all necessary information and comprehensive guidance into this manual, yet in the event that you have any further queries regarding your new record player please do not hesitate to ask your THORENS dealer for further assistance.

Sincerely yours,

THORENS TEAM

## WARRANTY

Legal warranty directives and regulations are to be applied here. In case a failure or malfunction occurs in your record player during the warranty period please inform your THORENS dealer or general representative and describe the malfunction that has occurred. If the malfunction cannot be remedied on site by sending you the respective user-serviceable spare part, you are kindly requested to send the unit in its original shipping box to the THORENS representative in your country.

If the original shipping box is no longer in your possession your THORENS representative will be in the position to supply a new one for a small charge.

Shipping costs to THORENS or to an authorized service centre must be prepaid because otherwise the parcel will be rejected upon arrival. After repair or service the unit will be returned to you free of charge. Whenever you ship this turntable kindly use the screws for the security during transportation.

### THORENS FACTORY WARRANTY 5

Any damage or malfunction caused by failure to observe the instructions contained in this manual as well as damages occurred in transport or shipping are not covered by this warranty. This warranty only covers the turntable, tonearm and motor including power supply and mains transformer. The cartridge is covered by the warranty of the respective manufacturer thereof.

In the event that you have further queries or need assistance please do not hesitate to contact your authorised THORENS service.

### WARNING!

**To prevent fire or shock hazard, do not expose this product rain or moisture.**

**Please make sure before switching on the unit that all electrical connections are set correctly and the power supply is set to the correct currency of your country (115V / 230V).**

## Safety instructions

**PLEASE READ THIS PAGE CAREFULLY BEFORE OPERATING YOUR UNIT!**

### CAUTION

To reduce risk of electric shock, do not remove the cover (or back).  
No user-serviceable parts inside.

### WARNING

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



#### EXPLANATION OF GRAPHICAL SYMBOLS

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of uninsulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute an electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



This product was tested and complies with all the requirements for the CE Mark.

2011/65/EU & (EU)2015/863



#### **IMPORTANT: DISPOSAL OF WASTE EQUIPMENT BY USERS IN PRIVATE HOUSEHOLDS IN THE EUROPEAN UNION**

This symbol on the product or on its packaging indicates that this product must not be disposed off with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

## Thorens series 1600

Both turntables TD 1600 and TD 1601 are high precision record players that combine 21st century technology with the brands tradition of famous TD 160 models with their high reputation in former times.

The suspended and almost wobble free sub chassis that stands on three cone springs, completely new developed tonearm Thorens TP 160, a precise controlled AC motor and the classical Thorens belt drive mechanism transfer the fascination of the old Thorens turntables into our century.

Both models come with real balanced and unbalanced outputs in XLR and RCA.

The difference between TD 1600 and TD 1601 lies in ease of use. TD 1600 is a puristic manual turntable while TD 1601 adds an electrical lift and a contactless auto shut off function that raises the tonearm at the end of the record.

## Unpacking and set-up

Carefully take the record player and all accessories out of the carton.

Warning: The external power supply is placed in a separate compartment inside the Styro-foam packaging.

Remove the two transport locking screws next to the inner plate (Fig. 1). you are located in front of and behind the inner plate and fix the sub chassis for transport.

Remove the drive belt of the packaging and place it around the inner platter and then around the drive pulley of the motor to the left of the inner platter (Fig. 2). When the belt is placed, turn the platter a few turns with your hand so that the belt lays evenly around the plate.



Fig. 1, seen from above



Fig. 2

Carefully place the outer platter on the inner platter without jamming. The sub chassis lowers a bit due to the additional weight. Then place the rubber mat on the platter (Fig. 3).

This completes the drive installation.

In the next step, you now put on the dust cover. If you want to operate the device without a dust cover, skip this step.

To do this, remove the dust cover and hinges of the packaging and install it as described in the following steps:

First, put the two hinges ready to use (Fig. 4) and push with the open side over the recesses prepared in the rear wall of the hood (Fig. 5). Conveniently, the dust cover lies flat on the top, for example on a table.

Now take the thus prepared dust cover and carefully push the lower part of the hinges into the corresponding guides on the frame (Fig. 6).



Fig. 3 TD 1601 with installed platter and prepared tonearm with headshell



Fig. 4



Fig. 5



Fig. 6



## Tonearm and Cartridge

Your new Thorens TD 1600 or TD 1601 comes with the newly developed Thorens TP 160 tonearm. This arm has a high-precision cutting bearing, a mount for interchangeable headshells according to SME standard and a new, very precise anti-skating adjustment by means of a spring mechanism. The adjustment of the arm height (VTA), as well as the azimuth are possible.

A pickup is not included; however, your Thorens dealer offers a rich selection of pickups and will be happy to install the chosen one if required.



Fig. 8 Bearing block, installed counterweight with scale for the bearing force and anti-skating adjustment.



Fig. 7 Thorens tonearm TP 160

The tonearm counterweight has been removed for transport and packed separately.

The counterweight of the TP 160 tonearm is in two parts in order to be able to safely balance cartridges with different weights. The two parts are connected by two screws that can be easily loosened (Fig. 10). However, it is advisable to adjust the weight so that it is as close as possible to the tonearm bearing in order to minimize the leverage effect on the arm. Therefore, always check first to see if the arm can be balanced with the two weights connected. If this is not possible, then unscrew the rear part of the weight off.



Fig. 9 Bearing block with combined counterweight



Fig. 10 two-piece counterweight unscrewed.

## Setting and adjustment of the tone arm

To adjust the arm correctly, proceed as follows:

01. If not already done by your dealer, for example, mount the selected cartridge in the headshell of the TP 160 according to the manufacturer's instructions, but leave the needle guard still on. The headshell of the TP 160 offers a mounting with two slotted holes for cartridges with standard half-inch mounting ( $\frac{1}{2}$  „, approx. 12.5 mm).
02. Screw the counterweight onto the back of the end of the tonearm (Fig. 9).
03. Turn the anti-skating dial on the right rear of the tonearm bearing to 0 (zero).
04. Lock the arm and fold the lift lever forward (TD 1600) or lower the motorized lift (TD 1601) so that the tonearm no longer rests on the lift bench.
05. Release the tonearm lock and carefully guide the arm at the finger lever out of the rest position with your hand so that it can swing freely up and down. Depending on the position of the counterweight, the arm will either pull down at the front or pull up. Roughly correct the position by turning the counterweight.
06. If there is no danger of the pickup touching the platter or chassis, remove the needle guard.
07. Now turn the counterweight until the tonearm floats freely and swings back to straight by itself. If the arm is up, turn the counterweight slightly counterclockwise, if it is down, turn it in the opposite direction until it is balanced and is neither up nor down. The zero position is now reached.
08. Place the arm back in the rest position on the support and lock it.
09. On the counterweight there is a ring with a scale for the bearing force in Pond (Fig. 8), which can be moved independently of the weight. Now turn this ring alone, without turning the whole weight, until the 0 at the top is opposite the mark on the bearing block of the tone arm.
10. The desired tracking force is then set by twisting the counterweight as a whole until the corresponding number is at the top. The supplier of your cartridge will provide you with the appropriate values. For the Thorens TAS 1600 pickup system, for example, the recommended tracking force is 2p, i.e. you turn the weight until the 2 is at the top.

11. Now adjust the antiskating according to the recommendation of the supplier of your cartridge. As a rule of thumb you can say that with elliptical needles the values for tracking force and antiskating should match, while with more modern grinds it is often deviated from. To be on the safe side, consult your dealer or the manufacturer of the cartridge.

To connect the pickup system, push the four color-coded connection leads onto the corresponding connection pins of the pickup.

Connect according to the following scheme if the pickup does not have a color code:

R right channel (signal +) → red

G right channel (ground/signal -) → green

L left channel (signal +) → white

G left channel (ground/signal -) → blue

**Please be extremely careful with all these settings to avoid damaging the needle of the pickup!**

## Height adjustment of the tonearm (VTA)

Replacing a pickup may require a correction of the arm height. As a rule of thumb, the arm should be parallel to the surface of the record when playing a record from the side. If this is not the case because the new cartridge is either higher or lower, then the arm height must be adjusted accordingly.

For the Thorens TP 160 tonearm, this requires two Allen wrenches (1.5mm and 2.5mm) and a metal pin. All these tools are included in the delivery. To check the parallelism, a set square or a transparent template with parallel lines printed on it are suitable, for example.

The height adjustment of the TP 160 is described here. After loosening three screws, the arm can be adjusted in height without tools.

### 1. Release base lock

Loosen, but do not remove, the marked screw with the 2.5mm Allen supplied.



Fig. 11 Base lock at tonearm

## 2. Loose tonearm fixing

To do this, the two screws on the right and left of the arm base must be loosened with the included 1.5mm Allen key. Again, these screws must not be removed under any circumstances.

The two screws are located under the silver perforated ring on the base of the arm. One on the outside and the other towards the plate.

**Important: Please make sure to loosen only the screws under the silver perforated ring!**

## 3. Adjusting tonearm height

Now the arm can be raised (left-hand rotation) or lowered (right-hand rotation) by turning the silver perforated ring. It is best to use the metal pin included for this purpose. However, the ring can also be turned by hand.

When the height fits, hand-tighten all screws again.



Fig. 12 outer locking screw



Fig. 13 inner locking screw



Fig. 14 Adjust the arm height using the tool.

In some cases, the lift may also need to be adjusted afterwards because the arm rests on the lift bench even when lowered or cannot be raised far enough. After loosening the screw (Fig 15) with the 1.5mm Allen key, the lift height can be adjusted.



Fig. 15 Height adjustment of lift

## Setting the azimuth

The azimuth designates the correct vertical plunge angle of the scanning diamond into the grooves of the record, i.e. seen from the front, the diamond must be exactly perpendicular to the record. The easiest way to check this is to use a mirror onto which the pickup head is lowered. The pickup system with needle and the image must form a line without any kinks.

Alternatively, it is advisable to use a transparent stencil with a line grid, through which a skewed position of headshell and pickup is directly visible. Under certain circumstances, you can also use a commercially available set square for this purpose.

The easiest way to adjust the azimuth is to use the adjustment screw on the headshell (Fig. 16). It is located on the underside of the headshell, directly at the connection for the tone arm. To do this, first remove the headshell from the arm. After carefully loosening the screw with an Allen key, the entire headshell can be rotated around the connector to correct any misalignment. Do not forget to tighten the screw again after the correction.



Fig. 16 Headshell with azimuth adjustment screw



## Placement of the turntable

### The suspended Sub chassis

The Thorens TD 1600 and TD 1601 are equipped with a spring-mounted sub chassis that neutralises mechanical disturbances from the ground and resonances of the drive motor.

This sub chassis consists of a specially shaped MDF board, which stands on three damped cone springs, which are bolted to the bottom plate of the turntable. This principle of spring and damper is best compared with a suspension in the car, here is a spring combined with a shock absorber to prevent an uncontrolled swinging. Platter bearing and tone arm board are mounted on the sub chassis, while the motor and cover plate are connected to the bottom or the frame. Thus, the moving parts are isolated from the solid.

The sub chassis itself must be tuned to the particular turntable, the spring tension is regulated so that it vibrates evenly and as if piston-like with a stimulation without breaking laterally and the height must be adjusted so that when the device is aligned horizontally, turntable and tone arm board are parallel to the fixed top board and the platter. Platter must not touch top board in operation.

The correct settings are already made in the factory and normally must not be changed by the user of the turntable. If something has to be readjusted, the necessary adjustment screws are accessible from the underside of the turntable. A qualified retailer or our service specialist will be happy to help if a readjustment is required later.

### Placement

Turntables with sub chassis require a different kind of installation than record players with a fixed chassis or so-called mass drives, which prefer a stable base with high mass. However, sub chassis drives like Thorens TD 1600 and TD 1601 can be placed on a light but stable surface. A light, stable table, with the plate and legs firmly connected, fits very well, for example.

It is important that the turntable is in the balance. For this it is possible to screw the feet up or down.

## Electrical connections

To power the turntable, connect the 16V output of the power supply (Figure 17) to the input on the right side of the terminal on the back of the TD 1600 / TD1601 using the enclosed cable (Figure 18). The plugs should be locked in place for safe operation with the knurled nuts.

The mains voltage can be switched depending on the country at the bottom of the power supply by a switch between 115V / 60 Hz and 230V / 50 Hz (Fig. 19).

**Warning: before starting operation make sure that the mains frequency and voltage are set correctly. Otherwise there is a risk of damage to the device.**

Only then do connect the power supply to the mains power socket with the included power cable.

Below the connector on the back of the power supply is the main electrical switch which turns the power to the unit on and off. When the switch is in position 0, the unit is completely disconnected from the mains.



Fig. 17



Fig. 18



Fig. 19

## Operation

On the back of the power supply (Figure 17) is located below the jack for the power cord, the main electrical switch. If this is in position “1”, the turntable can be put into operation. In position „0“, however, the turntable is completely disconnected from the mains. Set the power switch to “1” and put a record on the platter.

To play a record, the motor is started by pressing the desired speed button 33 or 45 (Figure 20).

The platter starts to turn. Due to the electronic control system used, it is possible to switch between the two speeds without first stopping. Pressing the key „0“ stops the motor and the platter stops.

In the operation of the tonearm, the two models Thorens TD 1600 and TD 1601 differ.



Fig. 20

## Thorens TD 1600

The TD 1600 is a purely manual turntable. When a record is to be played, the motor is started by selecting the speed (Fig. 20), the tonearm lift is up, the tonearm is manually guided out of its rest via the inlet groove and lowered with the lift. When the record side has been played or at any other place, the arm must be manually raised with the lift and returned to the rest.

Pressing the button 0 switches off motor and the platter stops turning.

### Thorens TD 1601

The Thorens TD 1601 is a semi-automatic turntable with a built-in electric lift and contactless auto stop function. Therefore, the tonearm of the TD 1601 does not have a manual lift lever but is controlled by a touch-tone button.

The platter is started just like the TD 1600 by selecting the speed.

#### The electrical lift

Basically, the lift is controlled by a button on the front right of the cover plate (Fig. 21). The color of the encircling ring indicates whether it is above (green) or below (red).

Once the main power switch on the power supply (Fig. 17) is switched on, the lift is operational. By pressing the button (Fig. 21) it will move up or down independent of the motor.

In default position, after switching on TD 1601, the lift is in position “up”, coloured by a green ring around the switch button marked (Fig. 21).

The tonearm is manually guided over the record and lowered by pressing the button again. The color of the ring around the button changes to red (Fig. 22).

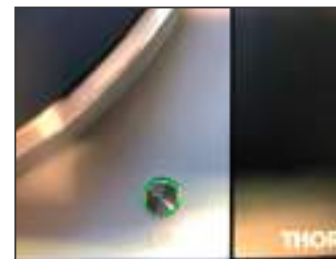


Fig. 21

At the end of the record side or if it is stopped by another pressure on the lift button, the tonearm is lifted and the indicator lights green again.

### **Auto shut off**

When the electronics detects the end of the record side, the lift is released, the arm raised and the motor shuts off. The platter stops. The shut off function works completely contact-free via optical detection. An intervention of the user is not required, he only has to move the tonearm by hand back to its rest.

### **Adjusting the switching point of the auto stop function**

In a few cases it can happen that the limit stop is switched off too early, e.g. with records that are cut very far inwards. Therefore it is possible to readjust the switching point with a screw on the tone arm board.

Turning the screw to the right ensures a later switch-off, to the left an earlier one.

**Important: the setting is very sensitive, please turn the screw only in very small steps and test in between.**

### **Adjusting speed**

The playback speed can be fine tuned for both rotational speeds (33.3 / 45 rpm) within a range of +/- 6%. For this purpose, openings with underlying slot screws are provided on the rear side in the connection terminal (Fig. 13) underneath the inscription ADJUST.



Fig. 22



Fig. 23

## Technical specifications (typical values)

<b>Drive type</b>	Belt, electronically controlled AC motor
<b>Mains</b>	115 V / 230 V (AC)
<b>Mains frequency</b>	50 / 60 Hz
<b>Power consumption</b>	18 W
<b>RPM</b>	33,3 , 45 RPM
<b>Wow &amp; Flutter</b> nach IEC/WRMS	<=0,05 %
<b>Platter</b>	Two parts, Aluminium, 3,2 kg
<b>Effective length TP 160</b>	232,8 mm
<b>Offset angle</b>	23,66°
<b>Overhang</b>	17,8 mm
<b>Effective mass</b>	15 g
<b>Capacitance</b>	<=110pF
<b>Dimensions (W x H x D) (mm)</b>	440 x 180 x 370

**Thorens GmbH**

Lustheide 85 · 51427 Bergisch Gladbach · Deutschland  
[www.thorens.com](http://www.thorens.com) · [info@thorens.com](mailto:info@thorens.com)

**THORENS**<sup>®</sup>  
[www.thorens.com](http://www.thorens.com)