

# THORENS

## INSTRUCTION MANUAL



**TD 170**  
**TD 170-1**

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**Dear THORENS customer,**

Thank you very much for your confidence in our product, the record player **TD 170**. 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 set-up, placement and handling in order to achieve a flawless operation. The **TD 170** has been designed and assembled completely in Germany which 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.

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 and motor including power supply and mains transformer. The tone arm and pick-up cartridge are 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**

## Technical Data

Measured values = typical values

<b>Belt drive</b>	electronic-controlled DC motor
<b>Mains voltage</b> (Mains set)	100 – 240 V (AC)
<b>Line frequency</b>	50 / 60 Hz
<b>Power requirement</b>	1,5 W
<b>Platter speeds</b>	33 $\frac{1}{3}$ , 45 , 78 U / min
<b>Wow and flutter</b> (DIN/WRMS)	± 0,12 %
<b>Platter</b>	Ø 304 mm
<b>Signal-to-noise ratio</b> (DIN 45 500) Rumble unweighted signal-to-noise ratio Rumble weightes signal-to noise ratio	46 dB 68 dB
<b>Effective tonearm length</b>	211 mm
<b>Offset angle</b>	26°
<b>Overhang</b>	19,5 mm
<b>Tangential tracking error</b>	0,15° / cm Rad.
<b>Cartridge</b> HiFi DIN 45 500 rot R right channel grün RG right channel ground blau GL left channel ground weiß L left channel	Ortofon OMB 10
<b>Diamant stylus</b> elliptical	Nadel 10 18 x 8 µm
<b>Diamant stylus for</b> 78 U / min conical	Nadel 78 65 µm
<b>Tracking force</b>	15 mN
<b>Frequency range</b>	10 Hz – 22000 Hz
<b>Output</b>	4 mV / 5 cms <sup>-1</sup> / 1 kHz
<b>Tracking capability (315 Hz)</b>	80 µm
<b>Cartridge weight</b>	2,5 g
<b>Total capacitance</b> Tonearm leads and audio-cables	ca. 160 pF
<b>Dimensions (W x H x D)</b> (mm)	440 x 119 x 360

## Unpacking and set - up

Take the record player and all accessories out of the carton. Insert each hinge into the respective recess (Fig. 3). Hold the dust cover parallel to the hinges (opening angle approximately 60°), insert and push as far as it will go. Being in this position the dust cover may be removed at any time.

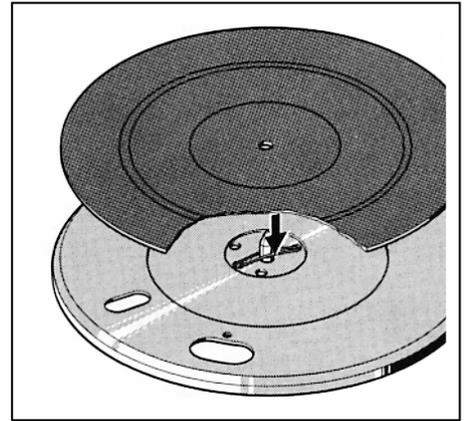


Fig2

## Electrical connections

By choosing the appropriate THORENS mains transformer this record player can be operated from nearly all existing public mains supplies. The low-voltage plug on the cable that is coming from the mains transformer unit is to be inserted into jack 17 (Fig. 4) at the rear side of the record player.

The stereo signal leads have two phono plugs which are also known as "Cinch" or RCA-plugs. They are marked with either the letter "L" for the left channel or "R" for the right channel. If these letters are missing then most likely the right channel is marked red, perhaps by featuring a red plug at both ends, and the left channel is marked white or black accordingly. The RCA-plugs are inserted into the phono input jacks of an amplifier or receiver. The separate single litz-wire is making a connection to ground and is to be fastened underneath the ground screw of the amplifier or receiver.

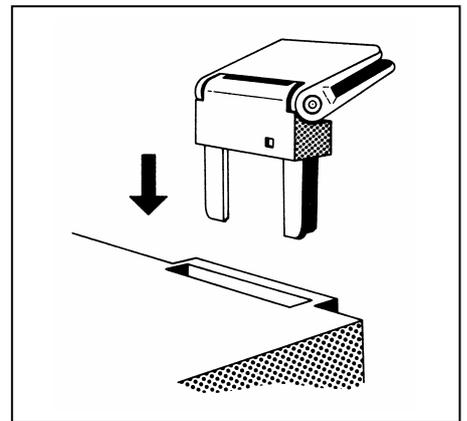


Fig.3

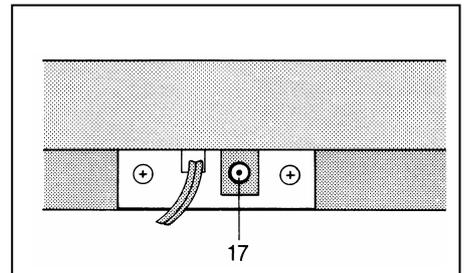


Fig. 4

## IMPORTANT!

**ALWAYS KEEP THE SHIPPING CARTON IN A DRY PLACE FOR THE EVENT THAT THE RECORD PLAYER HAS TO BE PACKED AGAIN FOR TRANSPORTATION. IN THIS CASE IT IS IMPORTANT TO DETACH THE PLATTER AND PUT IT ON THE BOTTOM OF THE SHIPPINGBOX, JUST AS IT WAS ORIGINALLY DELIVERED TO YOU.**

## Adjusting tone arm and pick-up cartridge

Remove stylus guard carefully. Turn the anti-skating knob (2) counter-clockwise until it stops (Fig. 6). Screw the tonearm counter weight (3) onto the rear tonearm tube (Fig. 5).

Unlock the tone arm (4) a bit towards the centre of the platter. Bring the lift-lever (5) into position ▼ while holding back the tone arm (Fig. 6).

By turning the counter weight (3) the tone arm can be precisely balanced in order to make it hover freely above the platter. Move the tone arm back to its rest.

You can now adjust the tracking force (1) and the anti-skating force (2).

Hold tone arm counterweight and adjust tracking force indicator until "0" is in line with the marking on the tone arm tube.

Slowly rotate the counterweight towards the tone arm's bearing assembly until the required tracking force is set.

Adjust to 15 mN (Milli-Newton) for the factory-installed pick-up cartridge OMB 10.

As for the required anti-skating force refer to the table below:

Scale	Tracking force (1)	Anti-skating force (2)
1	= 10,0 mN	1
1,25 =	12,5 mN	1,25
1,5	= 15,0 mN	1,5
2	= 20,0 mN	2
2,5	= 25,0 mN	2,5



Fig. 5

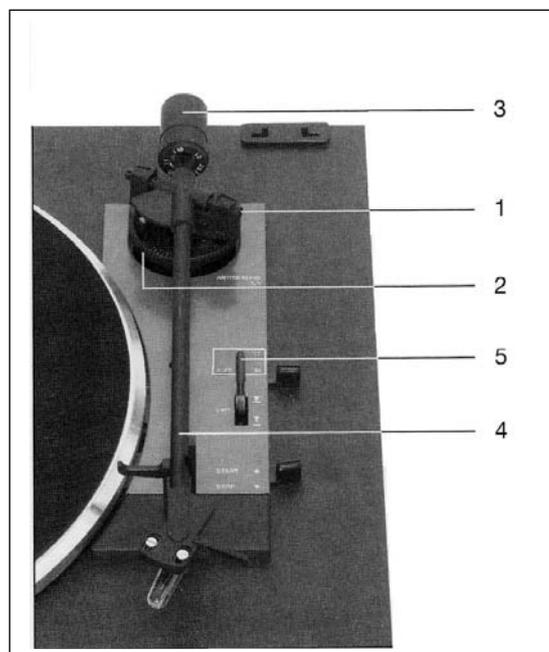


Fig. 6

## Mounting or exchanging a pick-up cartridge

Instead of the factory-supplied pick-up cartridge any other cartridge with standard half-inch mounting holes and a weight between 3 and 10 grams can be installed.

Unscrew the cartridge and carefully remove the coloured signal leads from the cartridge pins with a pair of tweezers. Screw the new cartridge onto the headshell but do not tighten. Attach the leads to the pins while observing the correct coding.

Please note: The example shown in Fig. 8 is applicable only for the pick-up cartridge Ortofon OMB 10!

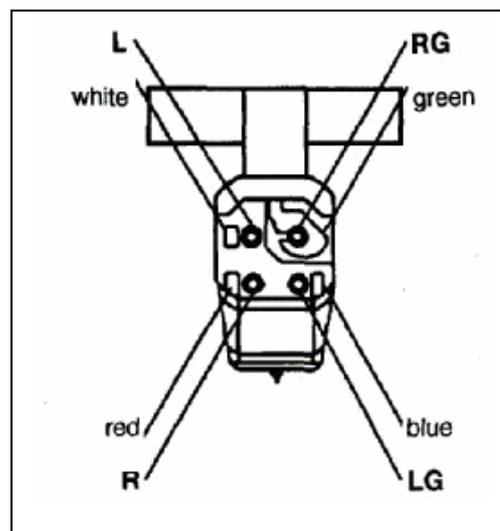


Fig. 8

Put the supplied mounting gauge onto the platter and align the cartridge in a way that the stylus tip is exactly above the crossover point of the auxiliary lines and the cartridge body parallel to the auxiliary lines. After the cartridge has been properly adjusted tighten the screws carefully.

R	=	red	right channel
RG	=	green	right channel ground
L	=	white	left channel
LG	=	blue	left channel ground

## Adjusting the start position of the tone arm

The start position of the tone arm has been adjusted in the factory. However if there is a deviation it may be readjusted by turning screw (9, Fig 11) to either left or right until the stylus can be lowered exactly at the lead-in groove of the record.

## Electrical Safety

This device is in conformity with international safety regulations (IEC 65) and EC regulations 76/499/EWG.

## ATTENTION!

During these mounting and adjustment procedures you must be very careful not to damage the delicate stylus and cantilever by uncontrolled and brisk movements.

## Replacing the stylus

Any stylus is subject to wear even under normal playing conditions. Therefore, it is highly recommended to have the cartridge, respectively its stylus, inspected after about 500 hours of playing. This is because a worn or damaged stylus will eventually damage your precious vinyl records! In order to playback vintage shellac records (78's) with optimal results the original stylus should be exchanged with a suitable special stylus for shellacs. Please consult your THORENS dealer for further information and details.

## Selecting Speed

With the knob on the left the speed can be set at 33, 45 und 78rpm (Fig. 10)

## Selecting record diameter

With the button (6) on the right near the tone arm, the diameter of the records can be pre-set, whereby 17 cm is used for "Single" and 30 cm for "Long Play (LP)" vinyl records. This function is necessary only when the record player is operated in its automatic mode.



Fig. 10

## Automatic start

Remove the transparent stylus guard by carefully pulling it towards you  
The lift lever (5) must be in position UP.  
Move the knob (7) into position **Start** and the tone arm will be automatically lowered onto the record (Fig. 11)

## Manual start and tone arm lift

Bring the lift-lever (5) into position UP.  
Unlock the tone arm from its rest and move it above the lead-in groove of the record. The motor and platter will now start turning. By lowering the lift-lever (5) the tone arm gently declines, thus being very kind to your precious records. With the help of the lift-lever the tone arm may be moved up and down again anywhere across the record while the platter keeps turning (Fig. 11)

## Stop

After reaching the lead-out groove the tone arm will be automatically lifted up and returned to its rest. The motor is switched off. You can also switch off the record player by either moving knob (7) into position **Stop**, or by raising lift-lever (5) into position UP ▽ and returning the tone arm manually to its rest Fig. 11)

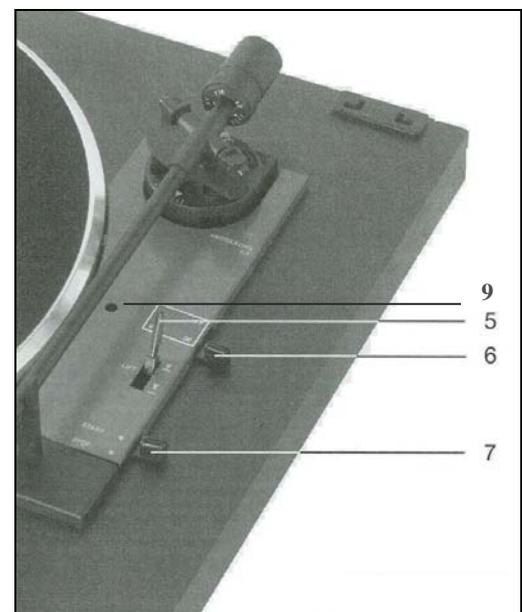
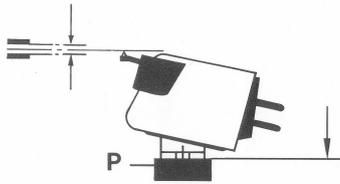
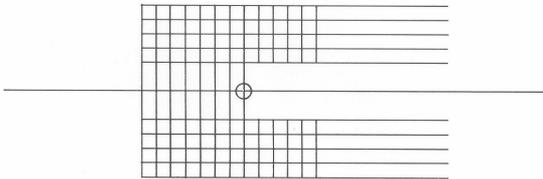
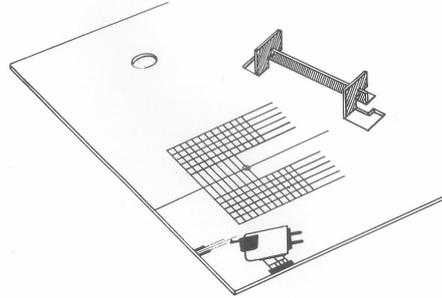


Fig.11



**THORENS** ALIGNMENT TEMPLATE

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