

Thales Tonarm

Dear Client,

This manual is about helping you installing and adjusting your tonearm correctly. The THALES TONARM is differently designed then all other tonearms, and if you follow this manual carefully the most precise analogue playback is possible.

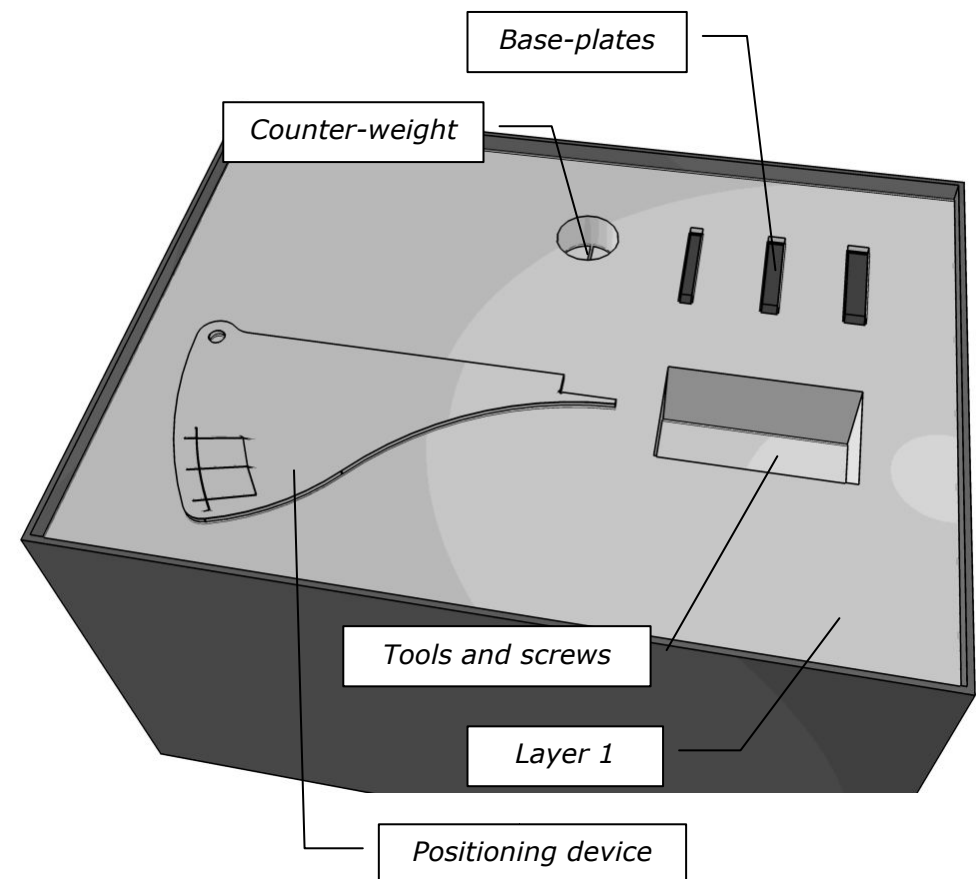
Please remember to work carefully and take time for doing any work with THALES TONARM. You do not need to be a watchmaker, but it for handling the small and fine parts, good concentration is important.

1) Unpacking THALES TONARM

Open the box and take out the following things carefully:

1. Positioning device
2. Counter-weight
3. Base-plates
4. Tools and screws

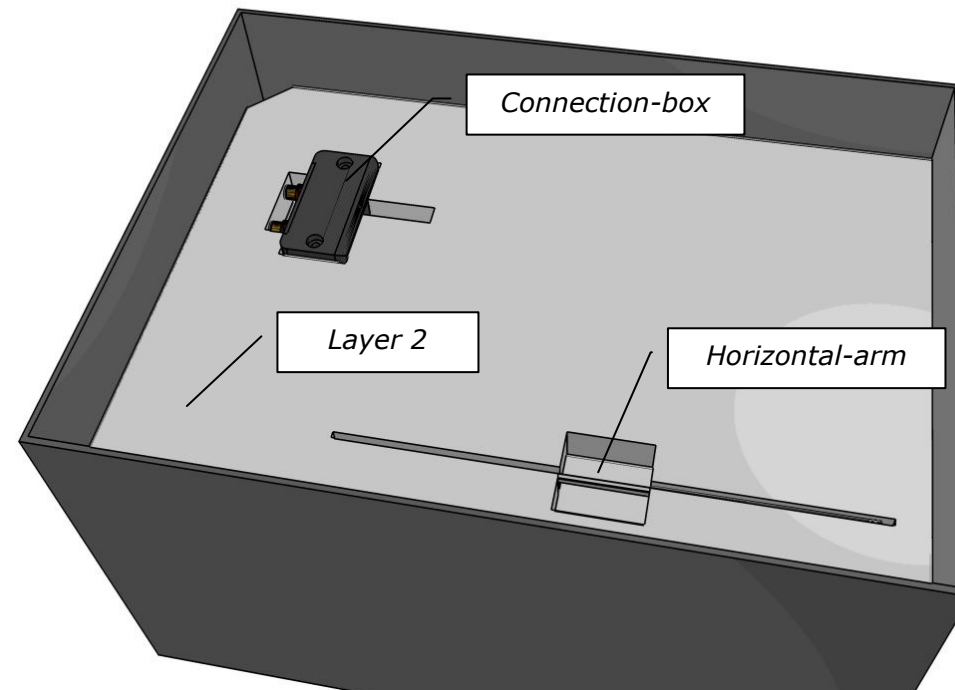
Place this equipment carefully and well ordered on a piece of paper. Then take away the first layer (*Layer 1*) of the packaging material. Please prepare the turntable for being ready to get the tonearm-mounted. Make sure, the tonearm-base and the base-plate fit together. Details about the different possibilities of mounting THALES TONARM can be found in next chapter.



After taking away the first layer, the second layer is visible. It contains the RCA-connection-box and the horizontal-arm. Please take out carefully the horizontal arm and place it on a soft pad.

Do not take out the connection box.

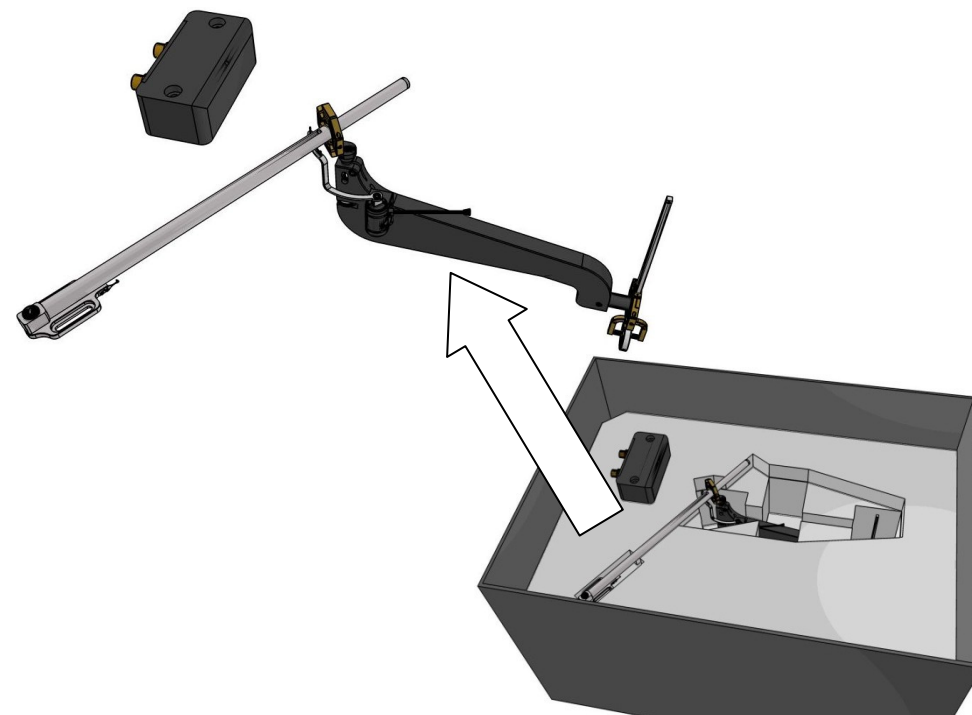
Carefully keep down the connection-box and take away the second layer (*Layer 2*). The connection box is wired to the tonearm.



After taking away the second layer, the last layer is visible.

Make sure, the turntable is fully prepared for mounting the tonearm (Refer to next chapter).

Carefully take out THALES TONARM, holding it with your right hand while holding the connection-box with your left hand. Be careful not to destroy any wiring.



2) Mounting THALES TONARM on the turntable

There are three different possibilities how THALES TONARM can be mounted on the turntable:

1. Standard (f. e. Audiostone Pythagoras, Brinkmann, Platine-Verdier)
2. Top (f. e. Thorens TD-124, Montegino Lusso)
3. Bottom (f. e. Oracle)

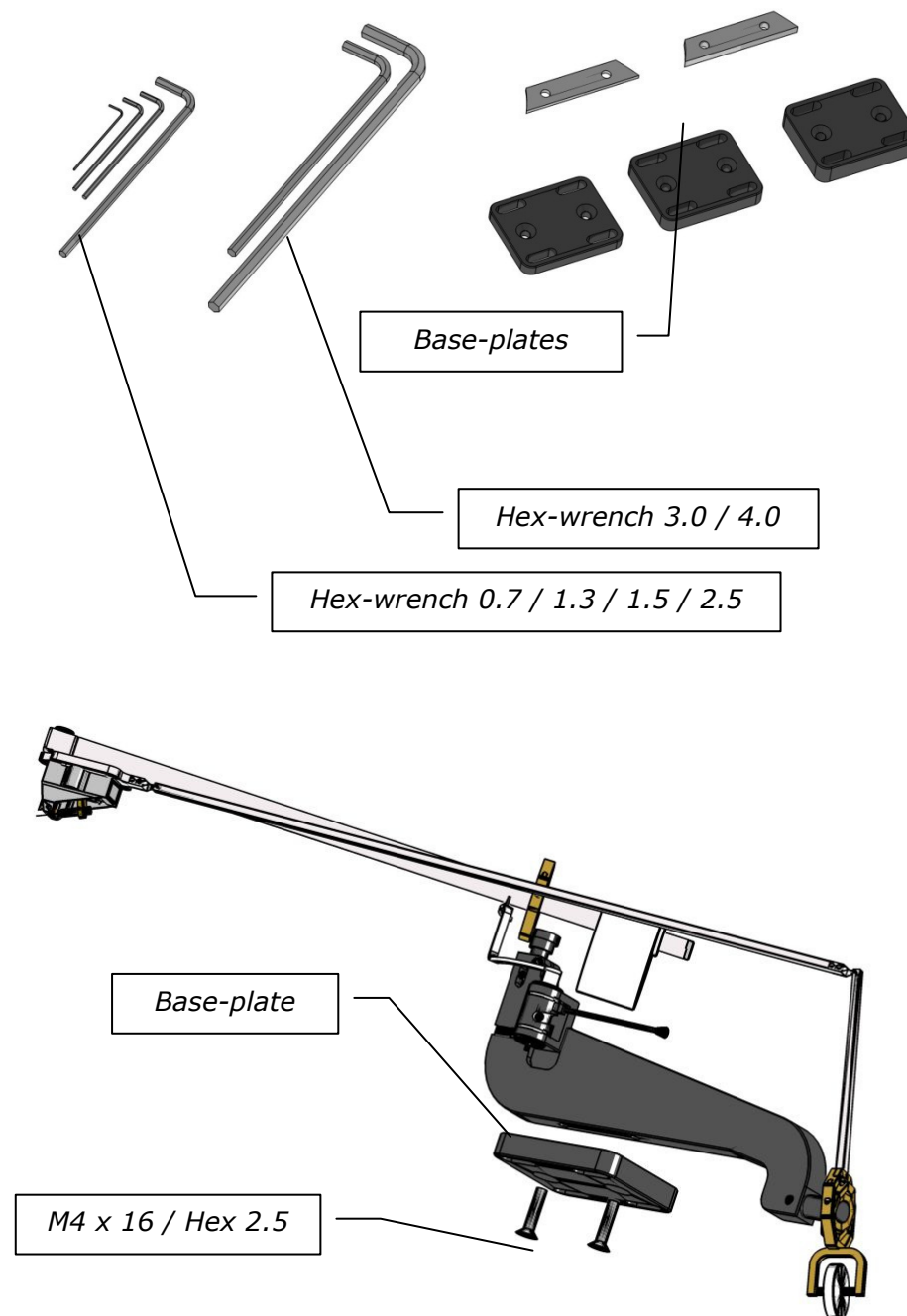
Normally a fitting tonearm-base is delivered by THALES TONARM or your turntable manufacturer. Base plates in different thickness are delivered for compensating different height of the cartridge. All hex-wrenches needed are delivered as well. The smaller sizes (0.7 & 1.3 & 1.5 & 2.5) are needed to assemble the THALES TONARM itself, while the larger size (3.0 or 4.0) is needed for mounting the tonearm on the turntable.

Standard

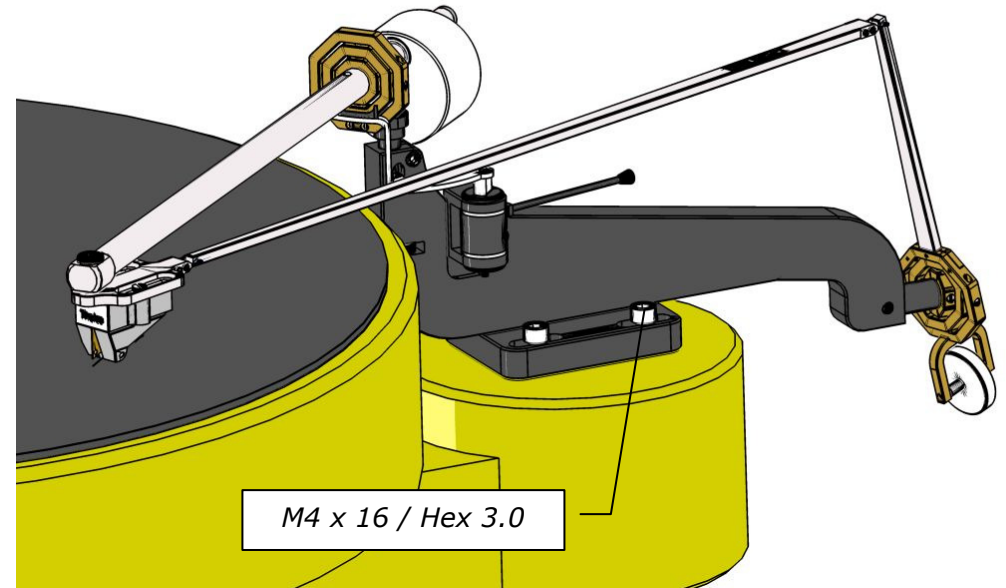
Carefully hold the tonearm and mount the base-plate from underneath. Medium thickness is made for cartridges about 18mm high. To compensate different cartridge height or different pads on the platter, you can use thicker or thinner base-plates.

CAUTION: The base-plate is not designed for adjusting the Vertical Tracking Angle (VTA). There is a separate unit to adjust the VTA precisely.

The THALES TONARM is now ready to be mounted on the tonearm-base.



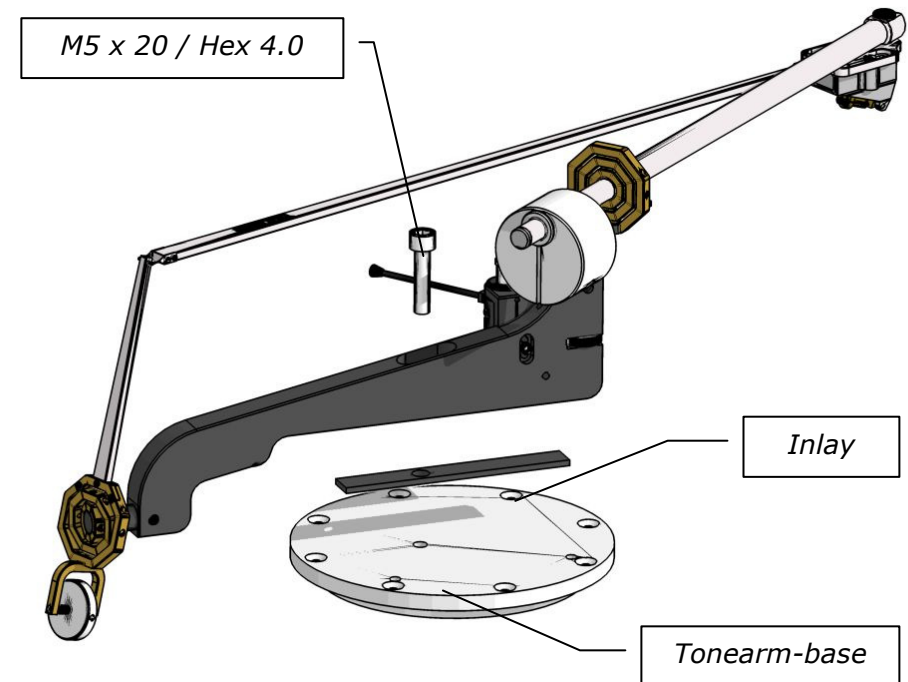
Place the tonearm on the tonearm-base, using four screws. Do not tighten the screws, as you need to adjust the tonearm later on. Place the RCA-connection-box on the threads or holes prepared on your tonearm-base. Some turntables (f. e. Brinkmann, Platine-Verdier) use integrated RCA-connectors, so there is no connection-box needed.



Top

Carefully hold the tonearm and mount the tonearm from top directly to the tonearm-base. Use an inlay to compensate different cartridge height or different pads on the platter.

CAUTION: The inlay is not designed for adjusting the Vertical Tracking Angle (VTA). There is a separate unit to adjust the VTA precisely.



Bottom

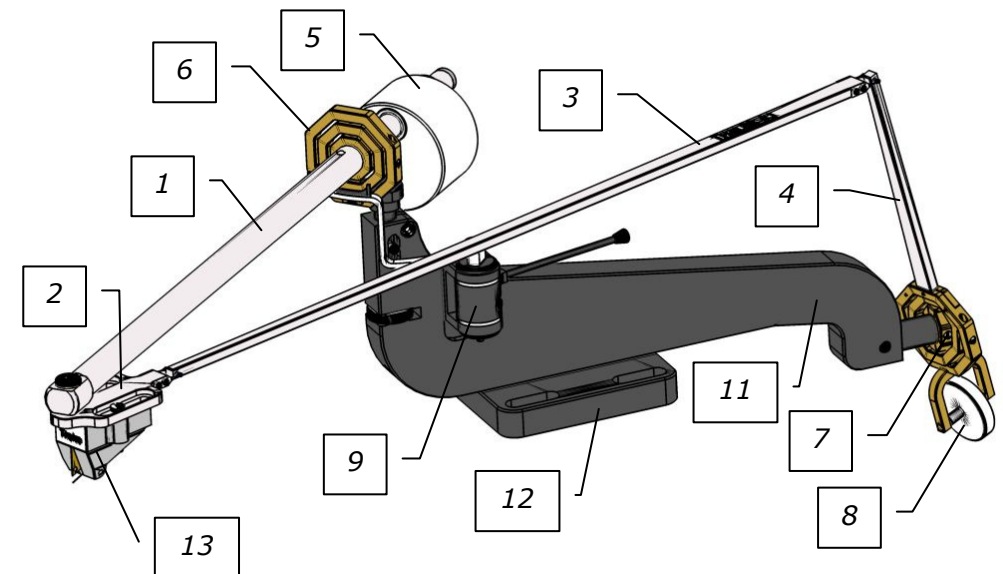
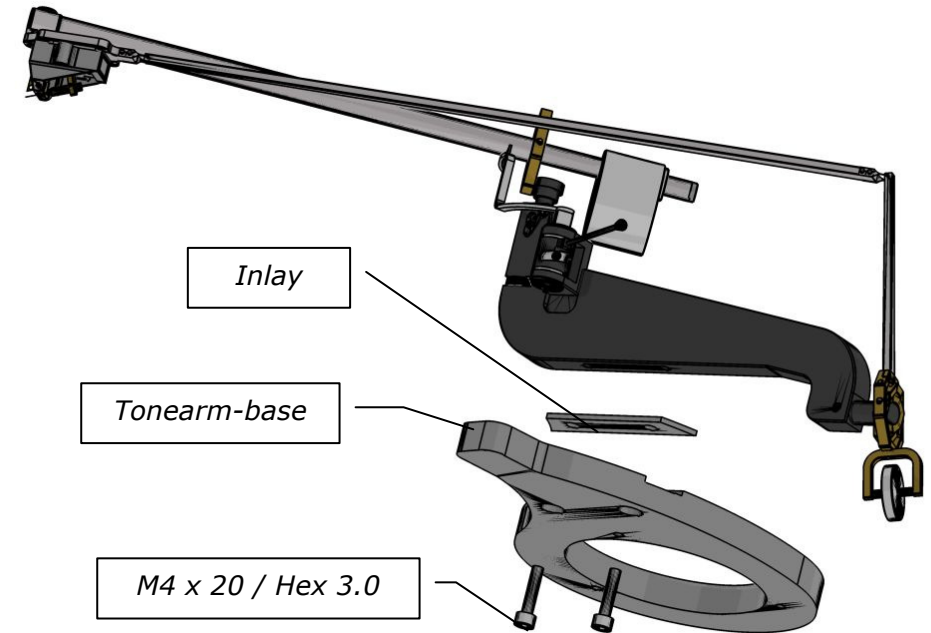
Carefully hold the tonearm and mount the tonearm from top directly to the tonearm-base, using two screws from underneath. Use an inlay to compensate different cartridge height or different pads on the platter.

CAUTION: The inlay is not designed for adjusting the Vertical Tracking Angle (VTA). There is a separate unit to adjust the VTA precisely.

3) Description

This sketch shows the main parts of the THALES TONARM:

1. Tonearm
2. Headshell
3. Horizontal-arm
4. Vertical-arm
5. Counter-weight
6. Upper cardanic bearing
7. Lower cardanic bearing
8. Balance
9. Tonearm-lift
10. VTA-unit
11. Bar
12. Base-plate
13. Cartridge



4) Clicking in the horizontal-arm

The horizontal-arm is delivered separately. To click it in, please carefully study the pictures showing step1 to step6. Always one of the little spring loaded pins is flexible, so you can move it with little force.

Hold the horizontal-arm carefully and click it into the headshell. (1-3)

CAUTION: never use any tools, fast movements or high forces.

If the horizontal-arm and the headshell is connected, connect the vertical-arm to the horizontal-arm by guiding the vertical-arm carefully. (4-6)

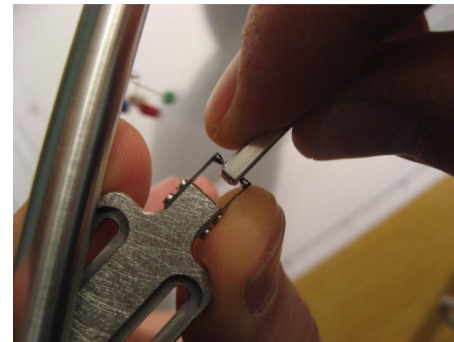
5) Clicking out the horizontal-arm

For transport-reasons or to mount a new cartridge, please take away the horizontal-arm. Follow the steps backwards: 6-4 and 3-1

Horizontal-arm / Headshell



Step1

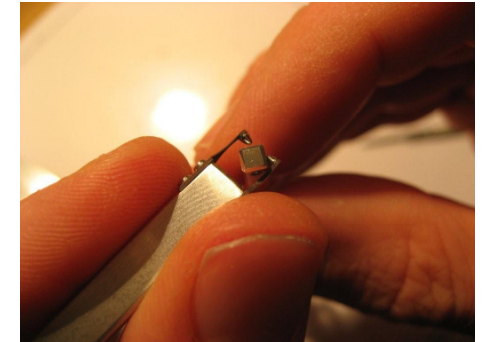


Step2

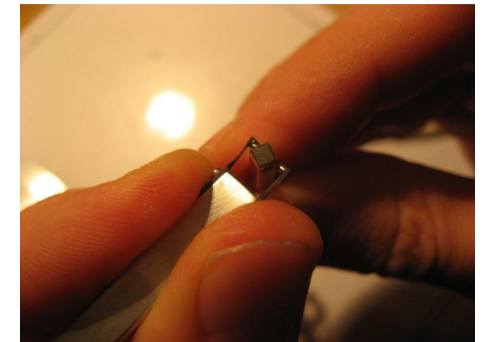


Step3

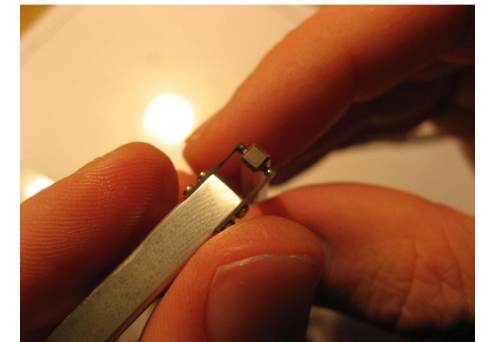
Horizontal- / Vertical-arm



Step4



Step5



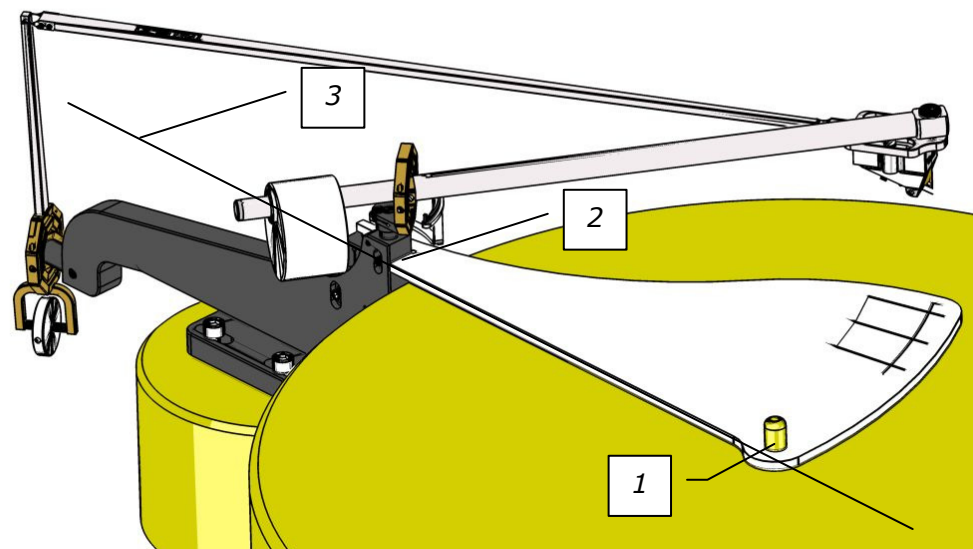
Step6

6) Positioning-device

Together with the THALES TONARM, a positioning-device is delivered. It is used for the following reasons:

1. Define the position and the alignment of the tonearm in relation to the turntable.
2. Define the position and the alignment of the cartridge.

Place the hole (1) of the positioning-device on the bolt of the platter. Move the tonearm until it fits precisely into the shape (2). Make sure the tonearm is aligned on one line (3).



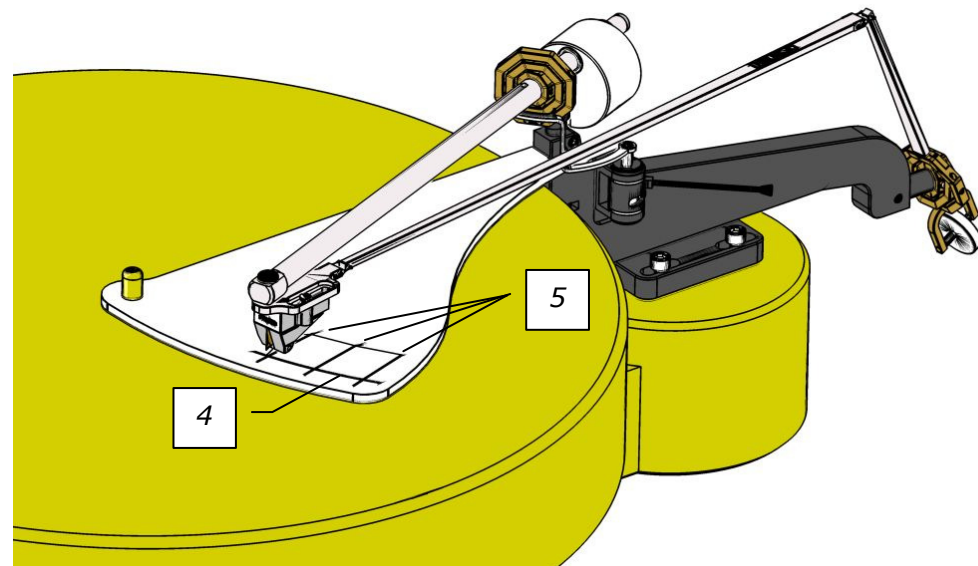
7) Mounting the cartridge

You are now ready to mount the cartridge. Please make sure to use M2.5 screws with flat head. If you need any description of handling the tonearm-lift, please refer to chapter 9.

Please take away the horizontal-arm first (refer to chapter 5). Then mount the cartridge, but do not tighten the screws, as you need to align the cartridge first. Re-click the horizontal-arm in for the alignment.

Use the bow-line (4) on the positioning device to define the position of the cartridge.

Use one of the direct-lines (5) to define the alignment of the cartridge. If the position and alignment are correct at one point, they should be correct at any place on the device. If not, correct the position of the THALES TONARM in relation to the turntable (refer to chapter 10).



8) Tracking-force

Basics

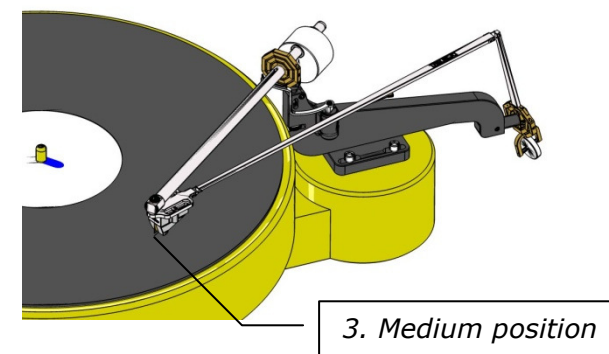
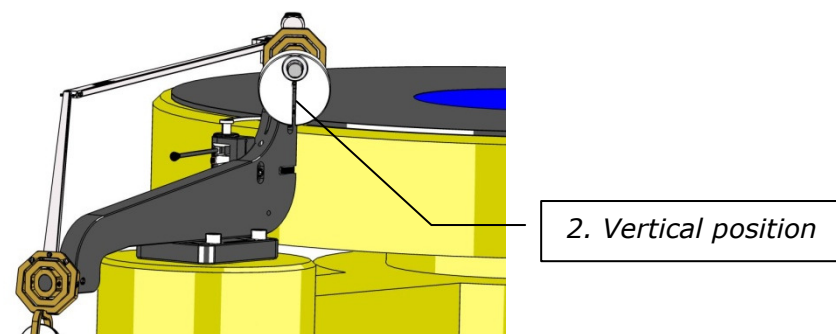
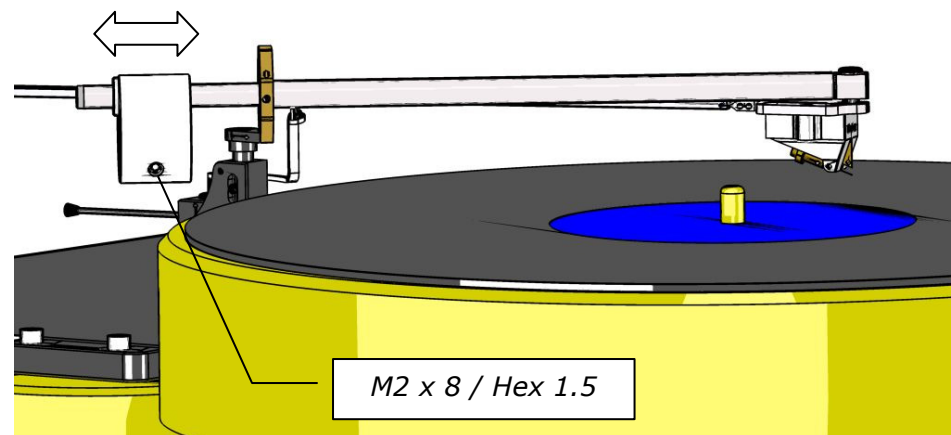
To adjust the tracking force, please use a stylus pressure gauge. Make sure the gauge measures the force on the level of the record-surface.

Unlock the screw using the hex-wrench 1.5. Move the counter-weight to set the tracking force. If you move it towards the upper cardanic-bearing, the tracking force will rise.

Please tighten the screw very lightly, so it is possible to move the counterweight slowly, but it will not be moved accidentally.

For adjusting the tracking-force make sure to consider the following points:

1. The cartridge is correctly adjusted (refer to chapter 7)
2. The counter-weight is in vertical position
3. The tonearm is in the medium position, so all three parts of the upper cardanic-bearing are on one single plane.



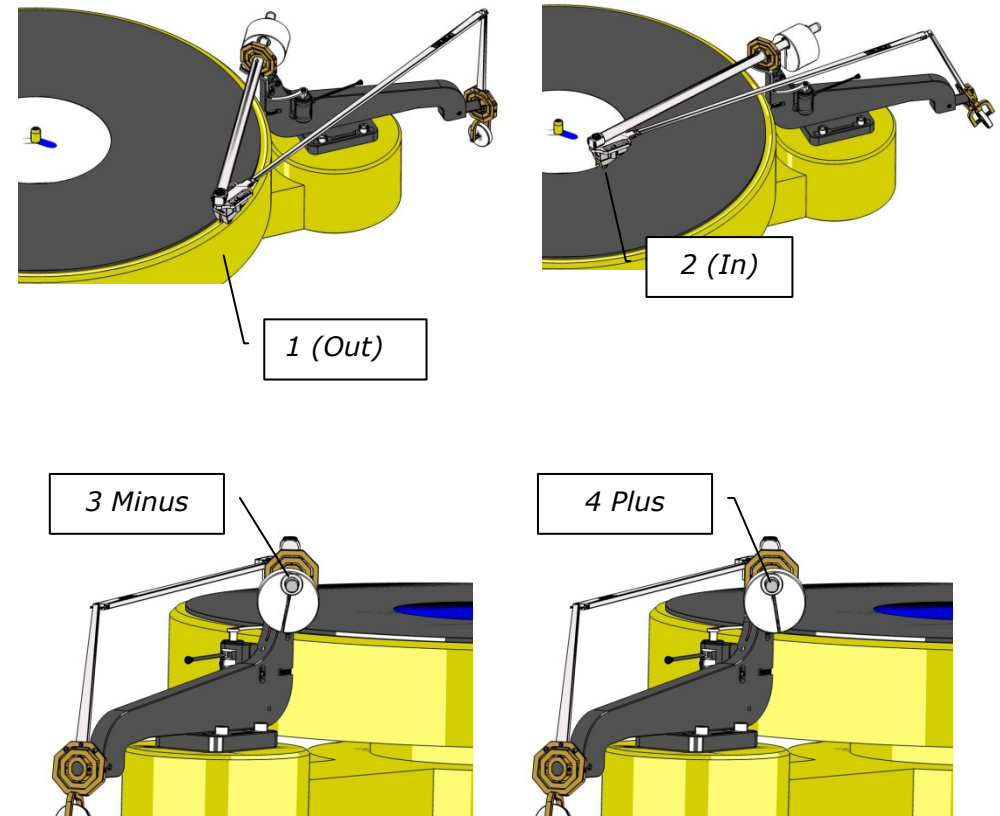
Advanced

The THALES TONARM offers the possibility to correct the tracking-force all over the record surface. Normally, the tracking-force should be constant. But it can make sense to raise it a little bit while the tonearm moves inwards. For achieving this or for keeping the tracking-force absolutely constant, please adjust the alignment of the counter-weight.

Please measure the stylus pressure while the arm is at the outer (1) and inner position (2).

If the tracking-force rises while moving the arm inwards, turn the counter-weight minus (3).

If the tracking force rises while moving the arm outwards, turn the counter-weight plus (4).



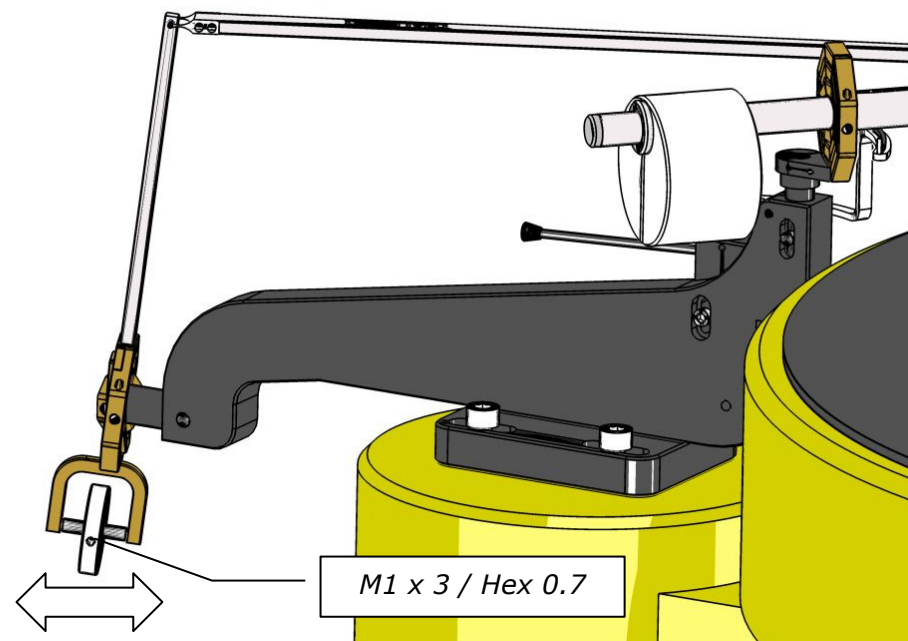
9) Horizontal balance

The THALES TONARM is adjusted to compensate the friction between stylus and groove for most of the cartridges. If you use any special sharp or soft diamond-cut, it might be needed to adjust the horizontal balance.

1. Loose the screw using the hex wrench 0.7.
2. Move the balance-weight inwards or outwards.
3. Tighten the screw again.

If you need higher pressure on the inner face of the groove, move the balance-weight towards the cartridge.

If you need higher pressure on the outer face of the groove, move the balance-weight away from the cartridge.

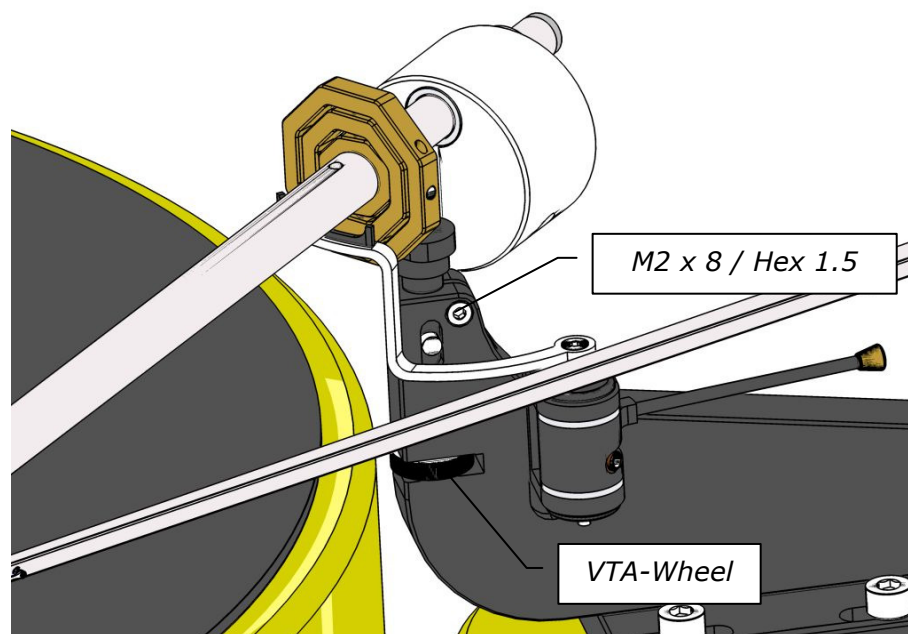


10) Vertical Tracking Angle (VTA)

To adjust the VTA, please loose the screw using the hex wrench 1.5. Now you can turn the VTA-Wheel. Turning it clockwise will move the cardanic-bearing up, turning it anticlockwise will move it down. One round will move the cardanic-bearing 0.7mm.

If you adjust the VTA while playing, please make sure not to touch any agile parts of the tonearm.

If the VTA is adjusted, tighten the screw again.

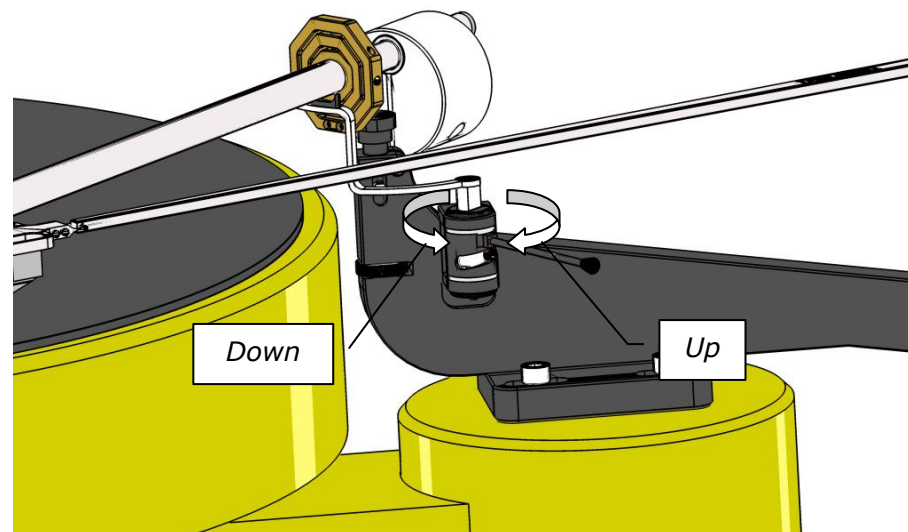


11) Tonearm-lift

To move the cartridge down, please move the lever of the tonearm-lift to the right, until it clicks in.

To move the cartridge up, please move the lever of the tonearm-lift to the left until it stops.

If you use the tonearm-lift, please make sure not to touch any agile parts of the tonearm.

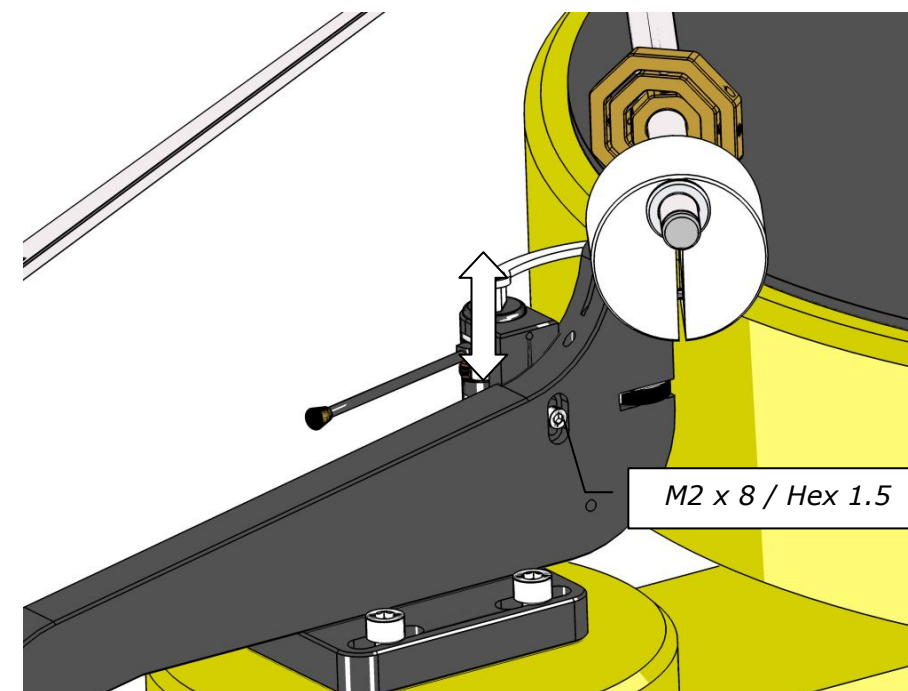


After new installation and after adjusting the VTA, the general height of the tonearm-lift needs to be adjusted. Please loose the screw using the hex-wrench 1.5.

Do not take away the screw, untighten it only.

Move the hole lift-assembly up or down.

Tighten the screw again.



12) Azimuth

Normally the azimuth is correctly adjusted. If you want to change it, please loose the two screws using a small screwdriver.

Do not take away the screws, untighten it only.

The upper cardanic-bearing is now a little movable around a pin. Please adjust the Azimuth carefully and tighten the screw again.

For any questions, please contact your dealer or distributor.

