



# HELIX TWO

Mk2 Phonograph

Installation & Operation Guide



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### A Message from Döhmänn Audio

Thank you for investing in a Döhmänn Audio Helix Two Mk2 turntable.

We believe that to unlock the potential of the information contained in the grooves of a vinyl record and to experience absolute emotional engagement with an artist's work, it takes an audio system where attention has been placed on the smallest details and time has been taken to perfect the design.

Inspired by the unique vision of audio designer Mark Döhmänn, Döhmänn Audio leads a no-holds-barred assault on what is possible in contemporary audio turntable & tonearm design. Acknowledging the legendary pioneers that have come before us, we look forward and strive to create the most advanced analogue audio systems available today.

Your Helix Two turntable incorporates state-of-the-art technologies that have previously never been applied to audio applications. It is an heirloom quality industrial work of art that has been designed to give you the ultimate enjoyment of your record collection.

Döhmänn Audio continues to innovate and manufacture class leading products to support our vision for excellence in engineering and musical playback performance. All innovations are based on reproducible engineering principles, not marketing hype.

Music is one of the greatest expressions of the human soul. We have meticulously crafted this turntable to faithfully deliver the essence of every performance. Enjoy!



*Mark Döhmänn – Director of Design and Systems Architecture*

## The Helix Two

The Helix Two Mk2 incorporates the Döhmänn technologies into a smaller footprint with a single tonearm facility and is engineered to deliver unparalleled performance in analogue playback.

It is the result of many years of research, development, collaboration and listening by internationally acclaimed analogue designer Mark Döhmänn.

Mark identified the specific challenges of designing a new benchmark turntable and then explored what technologies exist in the world that address these challenges. After investigating solutions used in aerospace, spectrometry, medical imaging and electron microscopy, Mark incorporated these technologies into a new turntable design.

Due to its fully integrated MinusK vibration isolation system utilizing NSM and mechanical crossover technology, its ability to deal with vibration and resonance is unsurpassed and allows the music to be enjoyed with an outstanding level of realism.

The Helix Two has a new custom designed Swiss-manufactured motor which incorporates the very latest technology around constant torque performance and quietness of operation.

The Helix Two is designed to operate flawlessly in non-ideal environments such as older houses with wooden floors, upper floors, attics where external vibrations are carried through buildings – even those made from concrete, steel, and brick. Due to its revolutionary vibration isolation system, it is also not dependent on a high-quality audiophile stand.

The design has made it possible to incorporate a level of engineering previously not possible at this price point and as a result, the Helix Two is considered to be outstanding value. The more compact dimensions and one box design allow it to be used in smaller spaces and standard sized stands.

Often chosen by discerning audiophiles around the world as their reference analogue system, as well as being the turntable of choice for many high-end brands exhibiting in major international hi-fi shows, the Helix Two simply allows the music to flow and the full potential of the system to be achieved.



**Important Messages to be Read Before Unpacking the Turntable**

Please read and ensure that you understand the following information before proceeding to unpack, assemble and operate the turntable.



**CAUTION:** The fully packed shipping crate can weigh in the order of 65-80kg (143-177 lbs). Please use a suitable trolley or transportation device to move it to the installation location.



**CAUTION:** The turntable assembly in the bottom compartment weighs approximately 30kg (60 lbs). A two-person lift is required for safety. Check your local occupational safety regulations when in doubt.



**WARNING:** Never move the table from a flat surface without the transportation screws in place. If the turntable is moved without the transportation screws in place, the internal isolation mechanism can be damaged and such damage is not covered under warranty.



**RECOMMENDED:** Please retain the transport screws in the event the table must be moved at a later date.



**WARNING:** Please read the instructions carefully before installing the turntable.

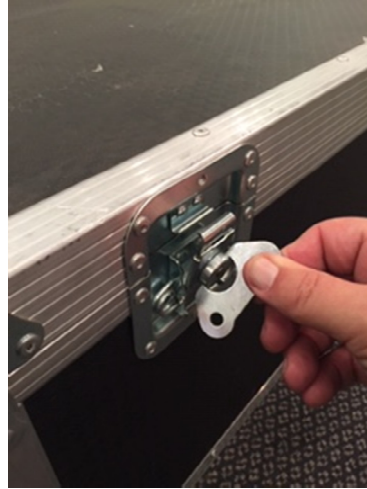
Never open the turntable chassis!

Electrical Shock hazard.

When in doubt, please contact your dealer.

### Opening the Shipping Case

The Helix Two is shipped in a single professional road case. The lid has two piano hinges on one side and two conventional hinges on the other side.



To open the lid, twist the two piano keys and lift the lid open via the two rear hinges. There are 3 main compartments. The top compartment contains the platter, clamp and accessories. The bottom compartment contains the turntable and the compartment on the right contains the optional tonearm. If a tonearm has not been shipped with the turntable, the right compartment will be empty.

The bearing assembly is transported pre-lubricated, attached to the turntable chassis. The platter assembly comes complete with the upper bearing assembly which is precision matched to the inverted bearing post found on the chassis.

A 5mm (3/16 inch) ball bearing is contained within the bearing housing. When mounting the platter to the chassis platform please ensure the ball bearing is inside the inverted bearing post and hasn't dropped out in shipping. If the ball bearing is missing, replacement ball bearings are available from your dealer.

The twin belts are also pre-installed on the platter from the factory for easy transport.

For ease of installation, a brightly coloured string is supplied to facilitate the quick and easy installation of the belts over the pulley. Please note that any twine or cord approx. 30cm (12 inches) in length is suitable for this purpose. The turntable is located in the bottom compartment.

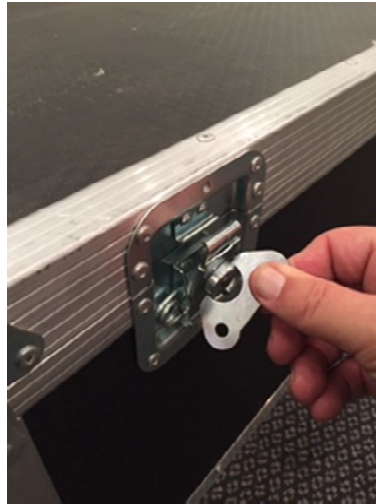
### Packing List

- 200ml bottle of Sullivans Cove Award Winning Single Malt Whisky (a gift from us to you)
- A gift card
- A pair of white gloves
- A bubble level
- Coloured string to facilitate the fitting of the belts around the motor spindle
- Döhmänn Audio Helix Two Turntable
- Helix Two Flight Case
- Tonearm if ordered
- Helix Two User Manual

## Unpacking and Assembling the Helix Two

### STEP 1

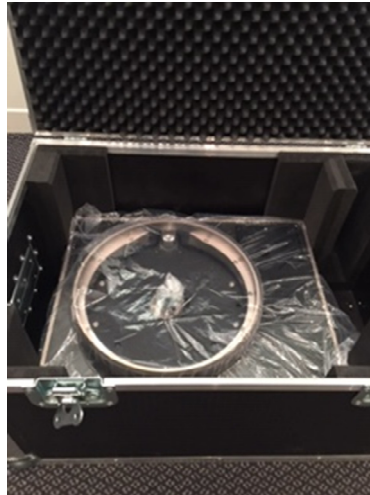
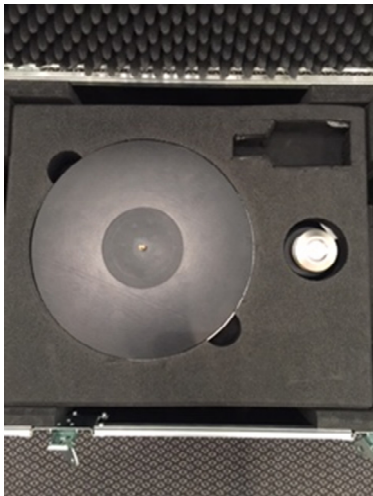
Bring the Helix Two road case into position for unpacking and installation. Remember to use a trolley or transportation device due to the weight of the road case. To open the lid, twist the two piano keys and lift the lid open via the two rear hinges.



### STEP 2

The platter, clamp and accessories are embedded within a block of solid black foam which we refer to as the 'top compartment'. Place your hands down either side of the top compartment, grip the bottom edges of the block of foam and lift the top compartment vertically up and out of the road case. Place the top compartment on the floor or somewhere where you can access it later. You will now be able to see the turntable wrapped in plastic located in the bottom compartment.

We hope that you enjoy our gift to you, the award winning Sullivans Cove single malt whisky. We advise that for the sake of completing the turntable installation accurately, that you consume it after, not prior to installation. 😊



**STEP 3**

Remove the turntable from the bottom road case and place in final operational position. Recommended installation requires a surface capable of supporting up to 60Kg (120 lbs) and a 480mm (19”) wide x 480mm (19”) deep surface which allows space for the power cable to exit neatly.



**CAUTION:** The turntable assembly in the bottom compartment weighs approximately 30kg (66 lbs). A two-person lift is required for safety. Check your local occupational safety regulations when in doubt.

**STEP 4**

Please note the 4 x LONG M6 transport securing screws used to lock the table chassis to the suspension system (vibration isolation platform) during shipping. They are located near the inner edge of the Platter Ring shown below.

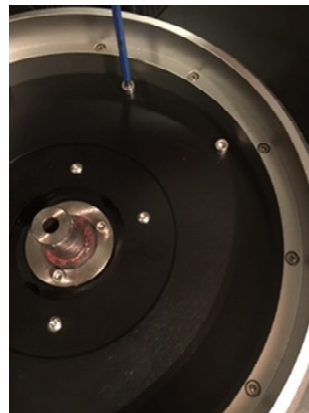
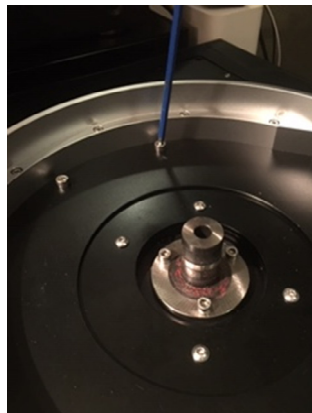
Once the turntable is in its final operating position, remove the 4 x LONG M6 transport securing screws with an Allen wrench (Hex key).

**\* VERY IMPORTANT – The transport screws must be unscrewed evenly. Start with one screw and unscrew it for a few rotations, then move to the next screw and unscrew it for the same amount of rotations, then the same for the third screw and then the same for the fourth screw. Return to the first screw and then repeat this process so that the top of the turntable rises evenly and is not lopsided. To make this easier, it is recommended that you place one hand on the surface and gently push down while unscrewing each of the screws so that you avoid the mechanism pushing up unevenly as the screws are unscrewed and eventually removed. If the two screws on one side are unscrewed and removed prior to the other screws on the other side being unscrewed and removed, the internal mechanism may ‘snap up’ unevenly and this can damage the internal mechanism. PLEASE AVOID THIS POSSIBILITY BY FOLLOWING THE ABOVE INSTRUCTIONS CAREFULLY.**

**\* In the event that the Helix Two is moved at a later date, the transport screws must be screwed in evenly in the exact opposite process to the one described above. THIS MUST HAPPEN PRIOR TO ATTEMPTING TO MOVE THE TURNTABLE.**

**\* WARNING: If the turntable sustains damage due to a failure to comply with these instructions, the cost of repairs will not be covered by the Döhmänn Audio Warranty policy.**

**\* Please retain the transport screws in the event the table must be moved at a later date.**





**STEP 5**

Place a soft blanket or cloth on a flat surface to place the platter on. Remove the platter from the top compartment solid foam and place it on the blanket with the bearing side up. Remove the soft plastic bearing protector on the underside of the bearing to reveal the bearing assembly on the bottom of the platter. Remove the soft plastic bearing protector from the inverted bearing post on the chassis.

**STEP 6**

Perform an initial levelling of the chassis by winding each of the four feet up or down. Use a bubble level on the top plate of the chassis as a starting point. Visually check each foot to ensure that all four are firmly connecting with the surface of the shelf that the turntable is placed on.

**STEP 7**

Fasten the record clamp to the spindle. The record clamp is designed to also be the most secure handle to move the platter into placement position. Check that the twin belts are sitting in the matching grooves on the platter.

Loop the supplied brightly coloured string (or any suitable string/cord) behind both belts to enable the belts to be pulled over the motor spindle with ease.



**STEP 8**

Gently lower the platter to the bearing & feed the string through the rear portal on the side of the motor spindle. Finish lowering the platter onto the bearing & pull the string with the two belts attached up and over the motor spindle. Once the belts are in the motor spindle grooves, gently remove the string.

**STEP 9**

Unpack the external power supply and place the unit on the floor or on another shelf away from the turntable.



**STEP 10**

**\* WARNING: The power switch located at the front of the external power supply MUST be in the OFF position prior to connecting the umbilical cable and IEC power cables.**

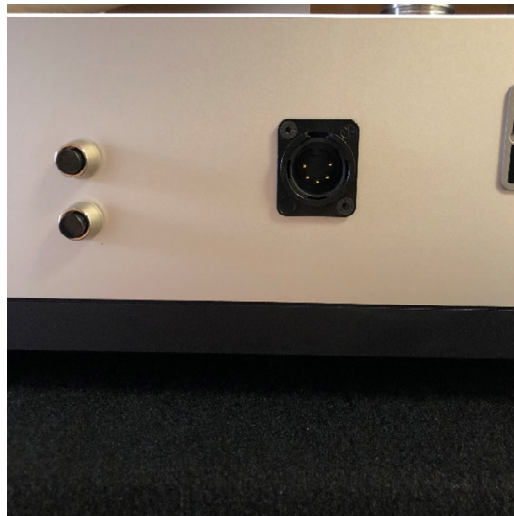
**\* WARNING: NEVER insert into the external power supply or pull out any power cords that are live (energised). The power must be switched off at the socket when power cords are inserted or removed from the external power supply.**

**\* WARNING: If the turntable sustains damage due to a failure to comply with these instructions, the cost of repairs will not be covered by the Döhmänn Audio Warranty policy.**

Ensuring that you are complying with the warnings and instructions stated above, connect a suitable IEC power cable to match your country's standard to the IEC Power entry socket on the rear of the external power supply box.

**STEP 11**

Connect the external power supply using the umbilical cord to the 5-pin socket at the rear of the Helix Two turntable. Refer to the image below to identify the 5-pin socket:



Set the power switch on the front of the power supply to 'ON'. The buttons on the front left-hand side of the turntable top plate will glow red. Press the button on the left to activate the turntable to spin. Press the same button again to stop the rotation. Once the rotation has stopped, press the button on the right and check that the table rotates. Press again to stop.

**STEP 12**

Install the tonearm as specified by the manufacturer.

**STEP 13**

Please Note: Before performing this step, please check the level of the platter and adjust the four chassis feet accordingly to achieve as horizontal level as possible. Adjust the armboard - proper adjustment is achieved when the armboard is level with the top surface of the platter.

Place a small bubble level on the armboard for verification. Adjust one side at a time in small increments.

Adjust the position accordingly by using the four small access holes on top of the turntable. These holes accept a 4mm Allen wrench (Hex key). Below these holes are four levelling screws. Typically, only small  $\frac{1}{4}$  turn adjustments are required to level the armboard.

A key aspect of the Helix technology is the floating armboard. Adjusting these four screws raises the armboard to a floating position which is magnetically damped. This allows the armboard to be additionally isolated from the chassis.

**STEP 14**

Gently feel the armboard to confirm that it is free to move horizontally side to side and forward and aft. The purpose of this step is to check that the armboard undercarriage adjustment has been successful. Repeat Steps 12 and 13 if required until the armboard is level and the undercarriage clearance criteria are met.

**STEP 15**

Adjust the tonearm and cartridge as specified by the manufacturer.

### Adjusting the Internal Suspended Chassis Height

The Helix Two turntable contains a MinusK Negative Stiffness Mechanism (NSM) which is hidden inside the table chassis. This is a state-of-the-art mechanical resonance isolation device that is integral to the turntable's performance.

With the tonearm and cartridge mounted on the table, place a record on the platter and the clamp to achieve play back weight. Adjust the large thumbwheel on the left-hand side of the top of the table by scrolling the wheel toward you to raise, or by scrolling the wheel away from you to lower until the platter is floating between the upper most and lower most travel limits of the suspension (approx.  $\pm 5\text{mm}$ ). This is the required 'floating' position for record playback.

A small LED Height Indicator light is displayed in the front panel. The light should sit near the middle of the slot when viewed from the front of the table. The light will move up and down as the suspension travel operates.

Adjust the thumbwheel only if the travel of the suspension is at the top or bottom of the travel limit when table is at rest. The total suspension travel available is approximately 10mm in total (approx.  $\pm 5\text{mm}$ ).

If you depress the platter to the lowest limit of the suspension travel, you may hear a gentle 'clunk' sound. This is nothing to be concerned about and is simply an indication that the suspension has reached the limit of its downward travel range.



***Please Note: Set-up assistance and complete service is available worldwide through authorized dealer and representative network.***

## Operating the Helix Two

There are two buttons on the left-hand side of the turntable's top plate.

For the purposes of these instructions, we will refer to them as 'Left Button' (LB) and 'Right Button' (RB)

- To play a record at 33½ RPM, press the LB once.
- To stop platter rotation, press the LB once again.
  
- To play a record at 45 RPM, press the RB once.
- To stop platter rotation, press the RB once again.
  
- If you are already playing at 33½ RPM and you wish to play at 45 RPM, press the RB once.
- To stop platter rotation, press the RB once again.
  
- If you are already playing at 45 RPM and you wish to play at 33½ RPM, press the LB once.
- To stop platter rotation, press the LB once again.

## Speed Control

The turntable is calibrated at the factory to provide accurate speed performance. However, there are a number of factors that can affect the accuracy of a turntable's speed performance and all turntables should be checked for speed accuracy when serviced. The Helix Two Mk2 has speed control functionality, allowing the user to make fine adjustments to achieve a highly accurate speed.

To access the speed control functionality, refer to the two speed control buttons located on the turntable's rear panel. The top button increases the speed and the bottom button reduces the speed.



Please note that to make super-fine adjustments, press either the top speed increase button or the bottom speed decrease button once. Each click adjusts the speed 0.1RPM at the spindle. Given that the spindle to platter ratio is approx. 1/10, each click is adjusting the speed by 1/100<sup>th</sup> of an RPM. This is only practical for very fine adjustment.

For adjustments of a greater magnitude, press and hold either the top speed increase button or the bottom speed decrease button for 5 seconds. The speed will either increase or decrease, depending on which button you are pressing. When you are satisfied with the speed, do not press any buttons for 60 seconds. At this point, the new calibrated speed will be stored in the turntable's memory (ROM) and will be the new setting from that moment onwards, even if the power is turned off.

Please note that the Helix Two is a 'set and forget' design, meaning it has been designed to hold its performance parameters and not need adjusting, so it is very rare that a turntable will require any speed adjustment but the functionality is there in the event that it's needed.

### Each Turntable has a Serial Number

Each Döhmänn Audio Helix Mk2 turntable has a unique Serial Number that is recorded in the manufacturer's database along with all of the information pertaining to that specific unit. The Serial Number starts with a "DA" and can be found on the turntable's identification tag on the right side of the rear panel as shown in the image above.



### Register your Turntable

If you have purchased a new Döhmänn Audio Helix turntable as the first owner, please register your turntable on-line by visiting [www.dohmannaudio.com](http://www.dohmannaudio.com), selecting 'Support' or 'Customer Care' from the top menu, and selecting 'Warranty Registration'. Please take a moment to fill out the online form to ensure that your turntable is registered in the Döhmänn Audio Warranty Program.

### The Data & External Power Port

Each Döhmänn Helix Two Mk2 has a Data and external power port on the rear panel. This port is used to connect the external power supply however can also be used by an approved technician to facilitate the transfer of data to the turntable's electronics (software upgrades, etc).



### Helix Two Features

- State-of-the-art custom designed Swiss-manufactured motor
- Micro Signal Architecture© (MSA)
- Negative Stiffness Mechanism Vibration Isolation (NSM)
- Mechanical Crossover Technology (MCT)
- Tri-Modal Platter system (TMP)
- Edge Damping Ring (EDR)
- Tone arm Damping System (TDS)
- Resonance Tuned Suspension (RTS)
- Diamond Like Coating Amorphous Material Bearing Friction Modifier (DLC)
- High Torque Adjustable Drive (HTAD)
- Facility for one tonearm



## Specifications

### Top Plate

- All Helix Two turntables come with a black anodized aluminium top plate as standard.
- A carbon fibre top plate is available as an upgrade.

### Armboard

- All Helix Two turntables come with a black anodized aluminium armboard as standard.
- Armboards are removable and allow simple interchange and calibration.
- An Advanced Composite Armboard is available as an upgrade.

### Tonearm Mounting

- The Helix Two turntable is capable of mounting one tonearm up to 12" (305mm).

### Speed Control

- Speed is constantly calibrated over 130,000 times per second to deliver precise 33.33 or 45.15 rpm (factory default).
- Default factory set speeds are: 33 RPM & 45 RPM
- 78 and other RPM's are available by request
- Speed can be adjusted via the use of the speed control adjustment buttons located on the rear panel of the turntable.

### Drive System

- Fully integrated Swiss-manufactured high torque motor
- Dual belt platter drive designed to reduce static electricity and vibrations.

### Power Options

- 110-120 VAC, 50/60Hz 2A
- 220/240 VAC, 50/60 Hz 1A

### Dimensions

- Dimensions in millimetres: 480mm x Depth 400mm x Height 200mm
- Dimensions in inches: 18.9" x Depth 15.8" x Height 7.9"

### Weight

- Combined shipping weight is 70Kg (155 pounds) in a custom road case.
- Recommended installation requires a surface capable of supporting up to 60Kg (133 pounds).

### Customer Support

Full customer support of Döhmann Audio products is available worldwide through authorized dealer and representative network. This includes set-up and performance optimization assistance, service and warranty support.

Please refer to your local Döhmann Audio dealer with any enquiries.

Contact:

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+421 905 612 447 (English, German, Russian, Slovak, Czech)

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***Please Note: Döhmann Audio products are manufactured in Australia.***