



HELIX ONE

Mk2 Phonograph

Installation & Operation Guide



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A Message from Döhmänn Audio

Thank you for investing in a Döhmänn Audio Helix One 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 One 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 One

The Helix One Mk2 incorporates all of the Döhmänn technologies into a single chassis with an independent power supply located in a separate PowerBase. It has the facility for two tonearms 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 One has a new custom designed Swiss-manufactured motor which incorporates the very latest technology around constant torque performance and quietness of operation. It 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 One is considered to be outstanding value.

As a result of this attention to detail, the Helix One's sound is immediately recognised for its purity and realism. It has become the turntable of choice of many discerning audiophiles around the world and has been critically acclaimed to be in the top echelon of players available at any price.



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 105kg (232 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 50kg (110 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.

Packing List

The Helix One is shipped in two professional road cases.

The larger case contains the following items:

- Döhmänn Audio Helix One Turntable
- Helix One Flight Case
- Tonearm if ordered
- Helix One User Manual
- 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
- 5-Pin Din cable to connect the Helix One Chassis to the PowerBase

The smaller case contains the following items:

- Döhmänn Audio Helix One PowerBase
- PowerBase Flight Case

Unpacking and Assembling the Helix One

STEP 1

Open the case containing the PowerBase. 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.



Case containing the PowerBase



PowerBase case opened

Located in the top centre & towards the front of the PowerBase is the Helix One name plate in a 'tomb stone' design which is attached to the PowerBase. Once the case has been opened, be careful not to place any pressure on the top of the PowerBase and not touch the name plate so that it is not damaged.

The PowerBase has two handles, one on the right side and one on the left side. Using the handles, lift the PowerBase out of the case and gently place it on a table to remove the plastic wrapping. Once the packaging is removed, place the PowerBase on the rack or stand. Ensure that it is positioned exactly where it's final position will be.



CAUTION: The PowerBase is heavy. A two person lift is recommended for safety.

STEP 2

Now it is time to open the case containing the turntable chassis. The turntable is located at the bottom compartment. Undo the four piano hinges that disconnect the bottom compartment.



Case containing the Turntable



Twist the piano hinges - bottom compartment

With the assistance of another person, grab the lift handles on either side of the top section of the flight case and lift the top section straight up and off the bottom section. Place the top section on the floor away from the bottom section.



CAUTION: The top section of the compartment is large and heavy. A two person lift is recommended for safety.



Bottom compartment opened, showing the turntable

Ensure that the black/felt isolation pads are inserted into the four foot-holes on the top surface of the PowerBase. They are inserted at the factory and should not have moved out. The four feet of the turntable will rest on these pads.

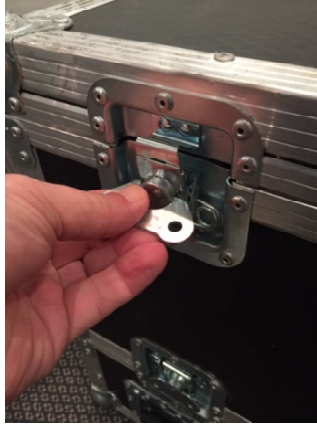
With the assistance of another person, grab the turntable from each side and lift out of the flight case and place on a table to remove the wrapping. Once the packaging is removed, place the turntable on the PowerBase. Ensure that it is positioned exactly where its final operational position will be.



CAUTION: The turntable assembly in the bottom compartment weighs approximately 42kg (93 lbs). A two-person lift is required for safety. Check your local occupational safety regulations when in doubt.

STEP 3

Now it is time to open the top of the flight case to access the rest of the turntable parts. Undo the four piano hinges that disconnect the top compartment and gently lift the top off the case.



Twist the piano hinges – top compartment



Contents of the top compartment

The top compartment contains the platter, clamp, accessories, and the optional tonearm (if a tonearm was ordered with the turntable). 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. 😊

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 6.35mm (1/4 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 has not dropped out in shipping. If the ball bearing is missing, replacement ball bearings are available from your dealer.

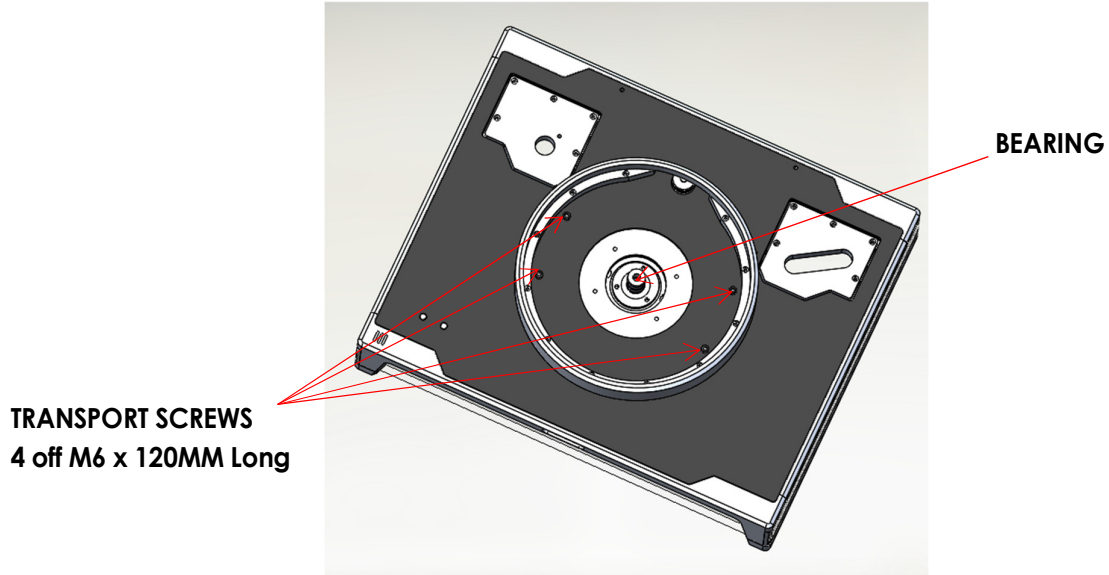
The twin belts are also pre-installed on the platter from the factory for easy transport.

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 string is located under the record clamp with the bubble spirit level.



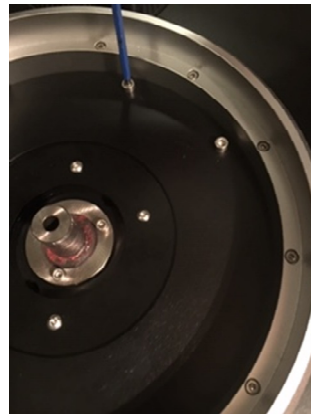
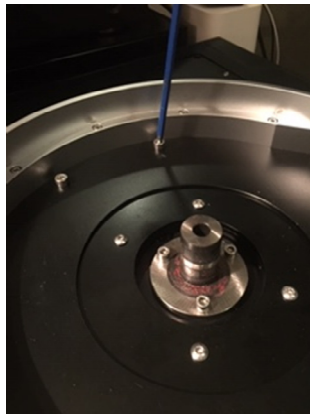
STEP 4

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 One 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

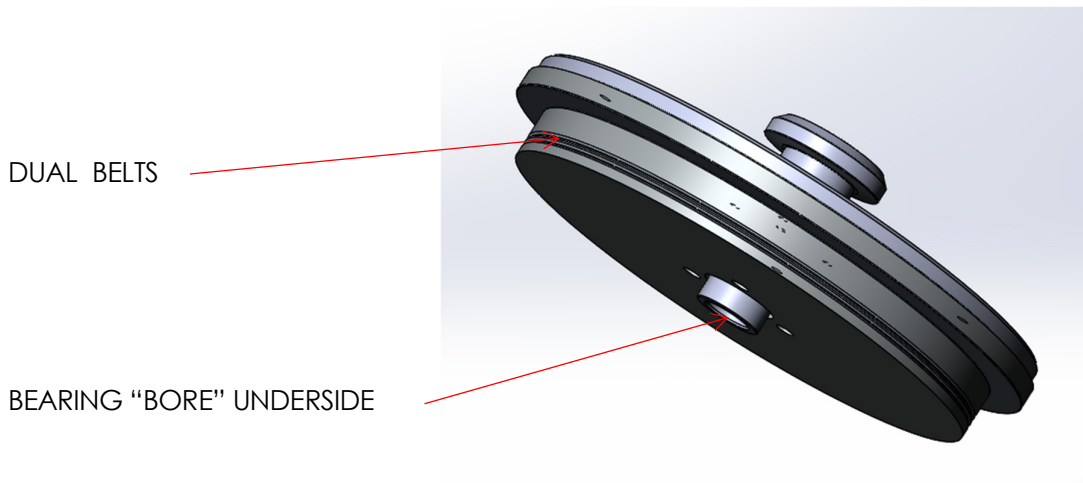
Place a soft blanket or cloth on a flat surface to place the platter on. Remove the platter from the top compartment solid foam and place it on the blanket with the bearing side up. Remove the soft plastic bearing protector on the underside of the bearing to reveal the bearing assembly on the bottom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

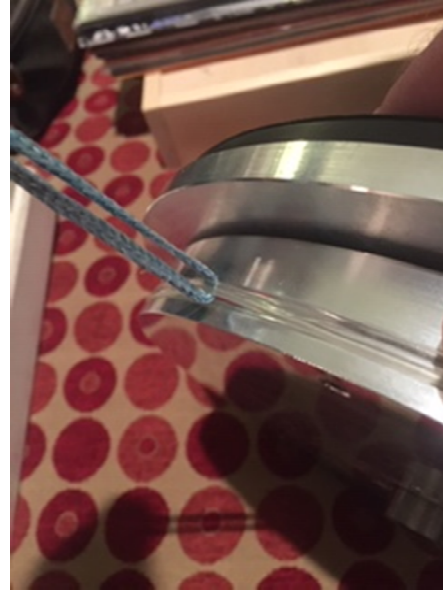
STEP 6

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

Install the tonearm as specified by the manufacturer.

STEP 10

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.

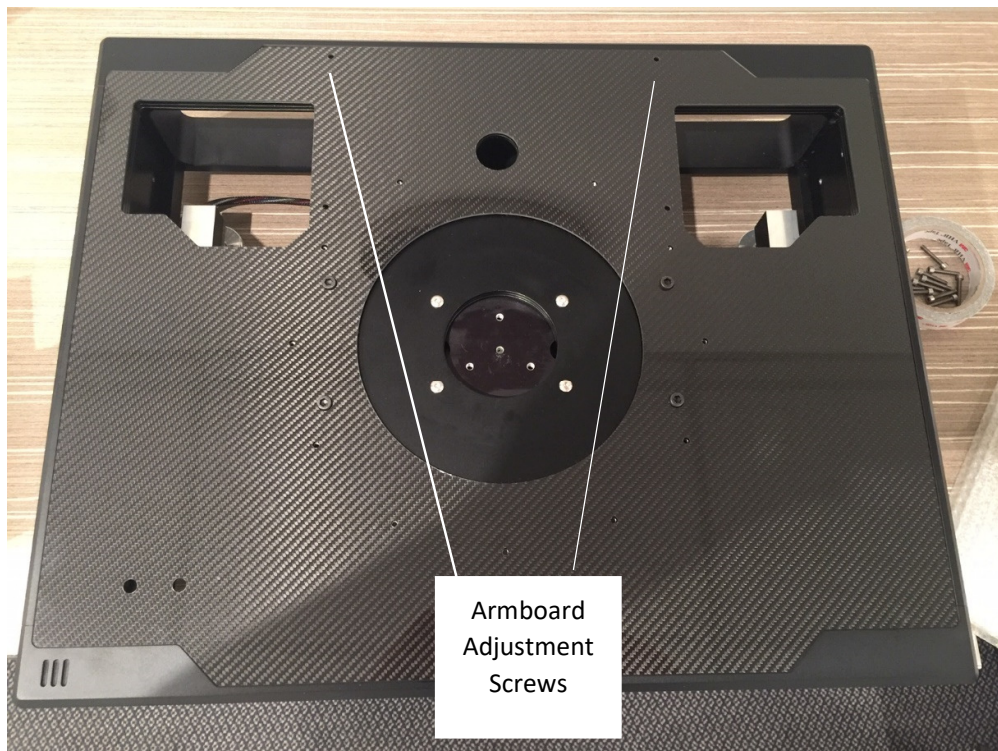
Adjust the position accordingly by using the four small access holes on top of the turntable. These holes accept a 4mm Allen wrench (Hex key). Below these holes are four levelling screws. Typically, only small ¼ turn adjustments are required to level the armboard.

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 13

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 14

Adjust the tonearm and cartridge as specified by the manufacturer.


Adjusting the Internal Suspended Chassis Height

The Helix One turntable contains a MinusK Negative Stiffness Mechanism (NSM) which is integrated 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.

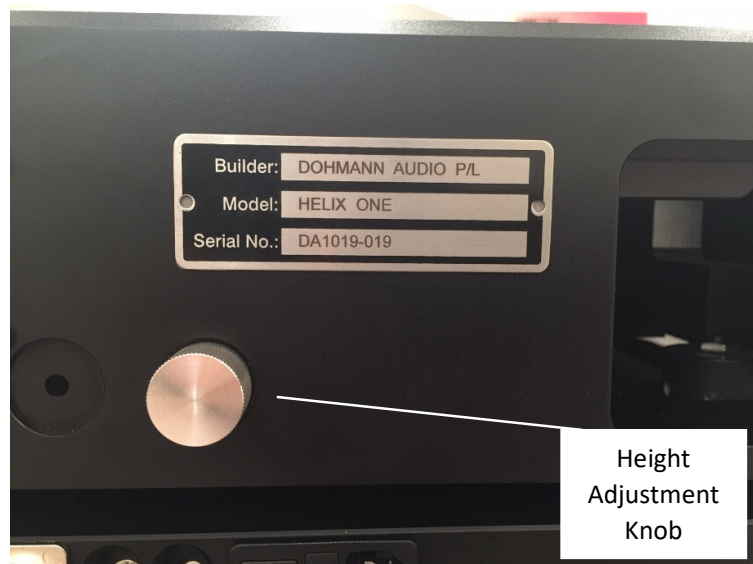
Gently push down on the table till the suspension "bottoms" out. Then let go and observe if the suspension rises. If it pops up and stays at the top of the vertical range then you have to lower the suspension by adjusting the height adjustment knob on the rear of the table anti-clockwise  (when you look from rear of table).

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.

Gently lift the up the table till the suspension "tops" out. Then let go and observe if the suspension falls. If it stays bottomed out then you have to raise the suspension by adjusting the height adjustment knob on the rear of the table  clockwise (when you look from rear of table).

The suspension is working best when it floats halfway between the upper limit of travel and the lower limit of travel. It will become easy to do this with a little practice.

Please note: Heavy tonearms, different weight clamps, wide ambient temperature fluctuations can sometimes affect the "float". Simple adjustment will correct the float to work at optimum. When new the suspension will settle over a period of a few days to weeks. Minor adjustments are all that should be needed to re-float the suspension. It is normal to check this periodically over the first few months of operation.



The Rear Panel of the Helix One and the PowerBase

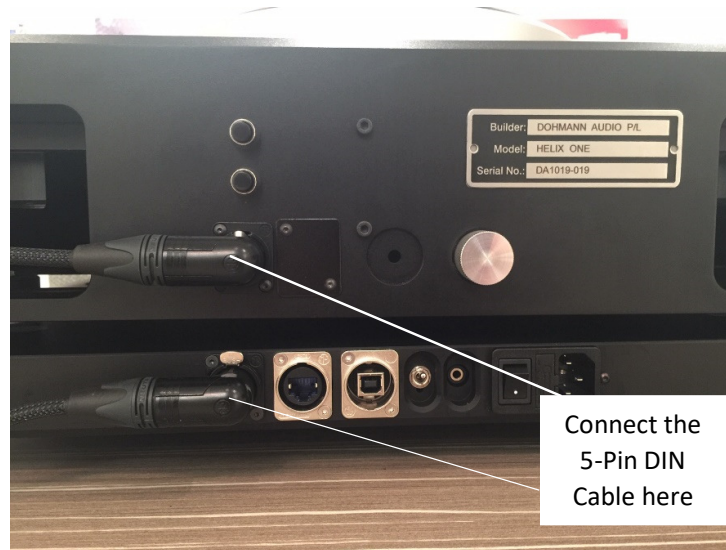
The various sockets, switches and buttons that appear on the rear of the Helix One and the PowerBase are explained below.



- 1: The 5-Pin DIN cable
- 2: Receptacles used to program the motor during servicing. Not used in normal operation. (Note: These connections are blanked on most units)
- 3: Toggle switch to operate LED lighting system
- 4: Receptacle used for future vacuum upgrade. Not used in normal operation.
- 5: Power Switch
- 6: IEC mains socket
- 7: Height Adjustment Knob
- 8: Receptacle used for future vacuum upgrade. Not used in normal operation.
- 9: Speed Adjust buttons

Connect the 5-Pin Din Cable

Connect one of the ends of the 5-Pin DIN cable to the socket on the rear of the turntable under the speed control buttons and the other end to the relevant socket on the PowerBase as shown below.



Connect Power

*** WARNING: The power switch located at the rear of the turntable chassis MUST be in the OFF position prior to connecting any IEC power cables to the turntable.**

*** WARNING: NEVER insert into the turntable or pull out from the turntable 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 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.**

Ensuring that you are complying with the warnings and instructions stated above, connect a suitable 10 Amp IEC power cable to match your country's standard to the rear of the IEC Power Entry Module on the rear of the turntable chassis.

Set the power switch on the rear of the unit 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.

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

Operating the Helix One

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 several 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 One 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.



Speed Control buttons on the rear of the Helix One

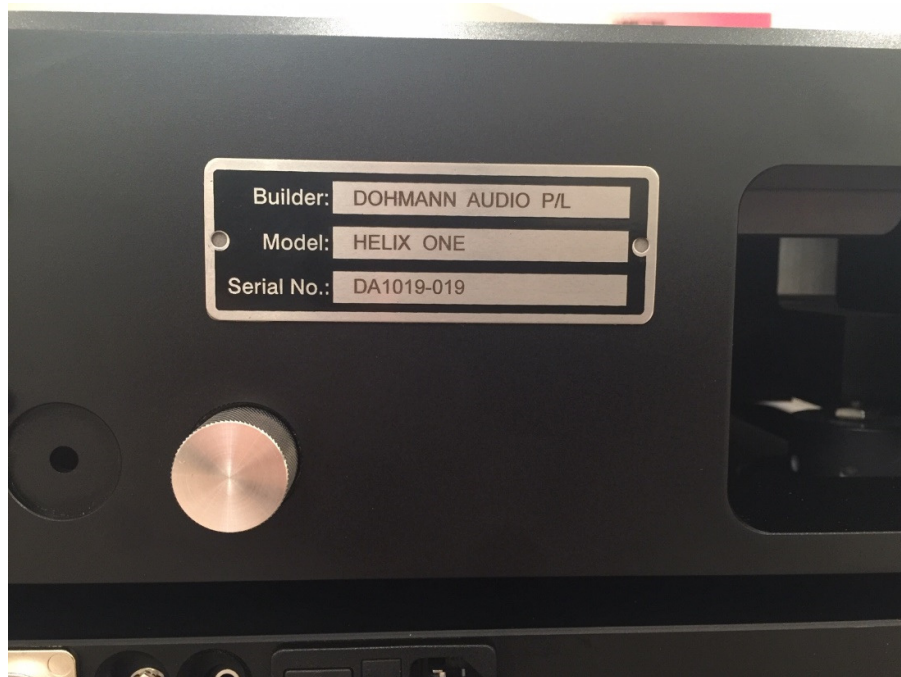
Please note that to make super-fine adjustments, press either the top speed increase button or the bottom speed decrease button once. Each click adjusts the speed 0.1RPM at the spindle. Given that the spindle to platter ratio is approx. 1/10, each click is adjusting the speed by 1/100th of an RPM. This 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 One 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 One Mk2 turntable has a unique Serial Number that is recorded in the manufacturer's database along with all 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 rear panel as shown in the image below.



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, 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.

Helix One Features

- State-of-the-art custom designed Swiss-manufactured motor
- PowerBase with new power supply
- 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)
- High frequency and RF absorption features
- A suspension stabiliser for ease of operation during record changeover
- Lighting control system and power filtration functions
- Facilities for two tonearms
- 0.5 Hz (Fz) Vertical
- 1.5 Hz (Fz) Horizontal
- Push button Speed Adjust

Specifications

Top Plate

- All Helix One Mk2 turntables come with a carbon fibre top plate as standard.

Finish

Helix One Mk2 turntables are available with the following metallic finishes:

- Black
- Titanium

Armboards

- All Helix One Mk2 turntables come with one Advanced Composite Armboard with a carbon fibre top for the main tonearm on the right hand side and one standard solid aluminium armboard for the second tonearm facility on the left hand side.
- The armboards are removable and allow simple interchange and calibration.

Tonearm Mounting

- The Helix One Mk2 turntable is capable of mounting two tonearms up to 12" (305mm) simultaneously.

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: Width 600mm x Depth 480mm x Height 250mm
- Dimensions in inches: Width 23.6" x Depth 18.9" x Height 9.8"

Weight

- Combined shipping weight is 105Kg (232 pounds) in a custom road case.
- Recommended installation requires a surface capable of supporting up to 95Kg (210 pounds) and be a minimum of 620mm Wide x 500mm Deep (24.4" Deep x 19.7" Deep) for the isolation platform to move freely.

Customer Support

Full customer support of Döhmänn 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 Döhmänn Audio dealer with any enquiries.

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Please Note: Döhmänn Audio products are manufactured in Australia.

