



Instruction Manual

Sovereign
and
Sovereign-S

Notes for the User

Before use:

- make sure the package is complete, and that you check for any damage caused in transit.
- Read this instruction manual

If you have any questions after reading this instruction manual, please get in touch with us either by email:

originlive@originlive.com

or by phone:

+44 (2380) 578 877

All diagrams in this instruction manual are illustrations only. Illustrations may differ from the real product and appear without obligation from Origin Live. In order to meet rapidly changing customer demands, we reserve the right to make technical modifications without prior notice.

SAFETY WARNINGS:

HIGH VOLTAGE INSIDE
MOTOR POD:
DO NOT OPEN POD

SMALL PARTS:
**KEEP AWAY FROM
CHILDREN**

HEAVY PARTS:
LIFT CAREFULLY

Contents

One. To Begin

- 4 Introduction
Geometry
- 5 Pack Contains

Two. Intial Assembly

- 6 Fit Sub Chassis to Plinth
- 7 Oil Bearing & Fit Spindle
- 8 Fit Multi-Layer Platter

Three. Set up

- 8 Set Plinth Height & Level
- 10 Position Motor Pod & Fit Belt
- 11 Speed Setting & Adjustment
- 12 Fit the Tonearm
- 13 Checklist

Four. Maintaining your Deck

- 14 Cleaning
Belt Tension & Replacement
Oil Replacement
Troubleshooting

Five. Optimising Performance

- 15 Mounting Platform
Record Weights
Alternative Mats

Six: Appendix

- 16 Notes on Speed Setting
- 17 Notes on Motor
Packing for Transit
- 18 Warranty

One. To Begin

Introduction

Thank you for choosing an Origin Live Sovereign Turntable, a truly unique high-performance turntable.

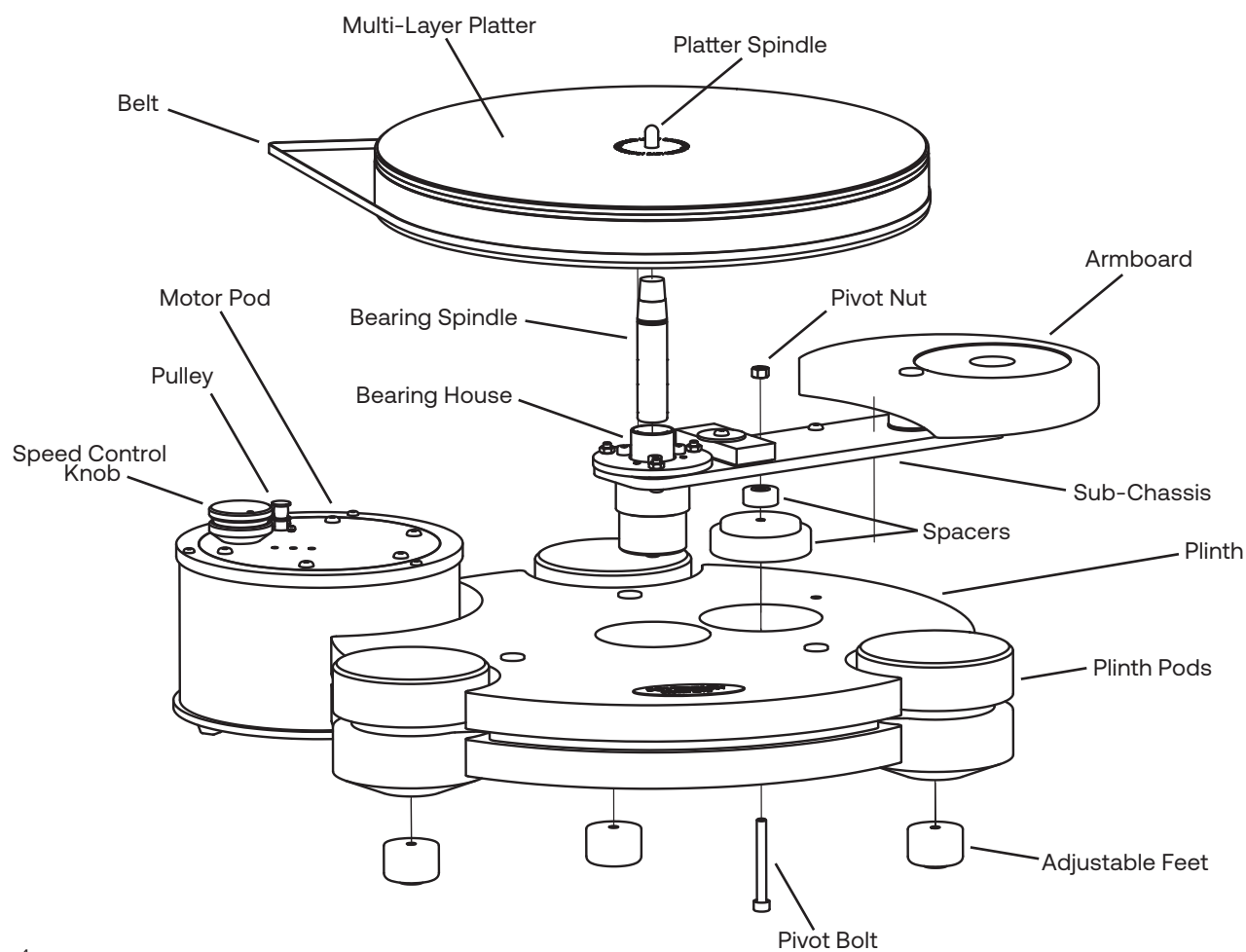
The Sovereign features an *ultra low friction bearing, sandwich plinth, multi layer platter*, and our unique *one-point cantilevered Sub-Chassis*. As well as an *outboard motor/power supply*. All of which contribute to the blackest of backgrounds, excellent musical flow and mesmerising performance. Careful set up of the Sovereign will achieve the best it has to offer. It is important to read these instructions to get the most out of this turntable.

We trust you will enjoy getting closer to the original sound and appreciating your music in a new way.

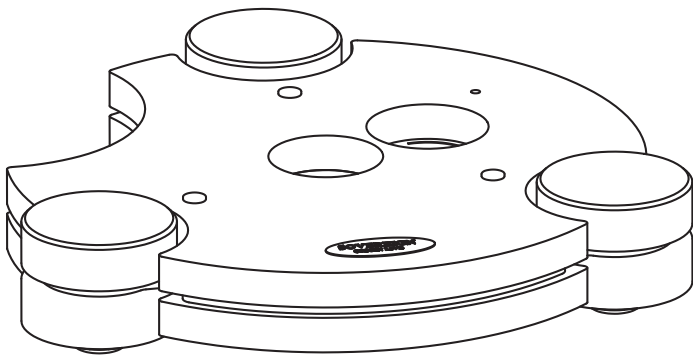
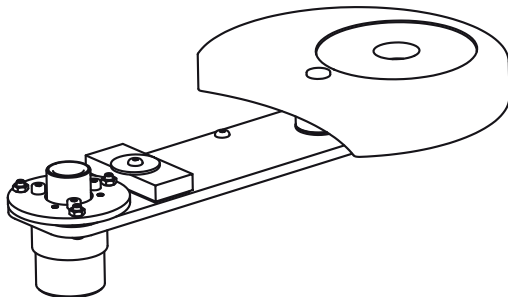
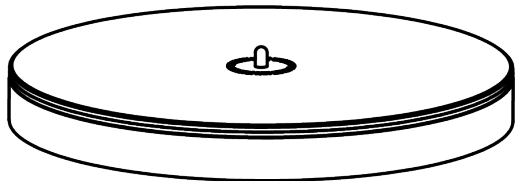
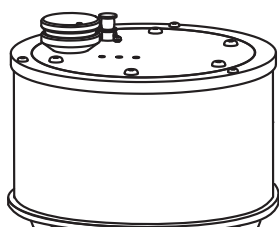
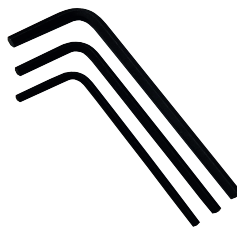
Geometries:

Pivot to spindle distance	9.5" : 222mm 12" : 295.6mm
Height of platter from armboard	Sov : 23-25mm Sov-S : 24-26mm
Footprint of Turntable	400 x 200mm

Sovereign Parts and names:



Pack Contains

1	Plinth								
2	Sub-Chassis		3	Platter					
5	Motor/Power Supply			7	Spindle		8	Bearing Oil	
9	Allen Keys 1/16", 2mm & 3mm	6	Screw Driver	10	Box Spanner	5	Arm Washer		
									

Two. Initial Assembly

Fit Sub-Chassis to Plinth

Place plinth on its side as shown in *Figure .1*. Undo the **Pivot Nut** using the provided **Box Spanner**. Use the **5mm Allen Key** on the pivot bolt. Hold bolt and attached washers in place and only remove the **Pivot Nut**.

Keeping the Plinth on it's side, ensure both the large and small spacers are in place as shown, and position the Sub-Chassis so its hole is inserted on to the pivot bolt, and the protruding Anti-Rotate Bolt underneath the Sub Chassis is going in to the Anti-Rotate Hole on the Plinth's surface. This will ensure proper alignment

Fit the Pivot Nut on to the Pivot Bolt and tension as tightly as possible using the box spanner **4mm Allen Key** provided.

Ensure the Anti Rotate Bolt is located in its hole in the Plinth. This is critical, otherwise the sub The chassis will not be level and performance will be severely affected. If all is finished the Sub-Chassis should be free to rotate almost imperceptibly in the horizontal plane when pushed hard.

Notes:

You may find our assembly video is helpful to follow for this step. This can be found on our website-see **Support** in the top navigation bar, then **Technical Support > Turntables > Instruction -Manuals > Scroll down to Fitting Guidance > Video on Fitting the Sub-Chassis to a Sovereign**

or here: youtube.com/watch?v=Uoc1JSik2Q4

Sub-Chassis of the Sovereign Turntable is not mounted to the plinth prior to transit to ensure the safest delivery to you.

The Sub-Chassis is carefully tensioned so the platter runs true to the armboard. Please do not tamper with the bolts around the bearing. When you level the deck use the chromed inner disc on the armboard as a reference, not the black acrylic.

For fitting the Dual Armboard Sub-Chassis see Pg.18 Appendix

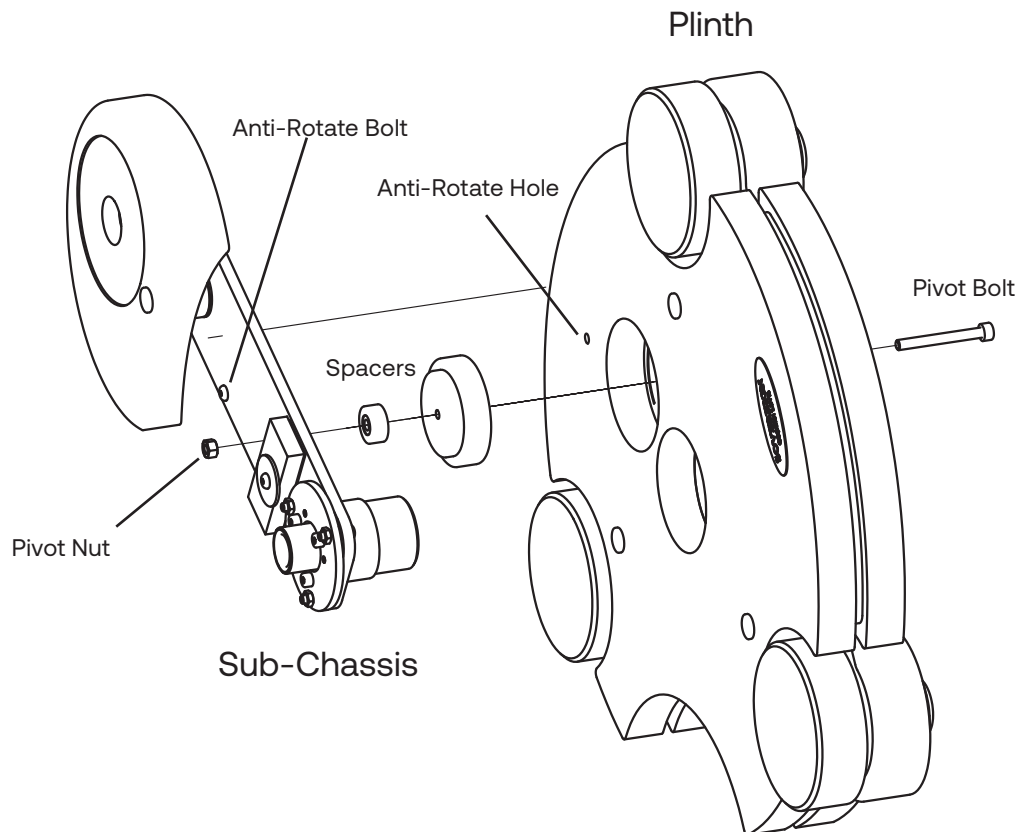


Figure 1: Assembly of Sub-Chassis to Plinth

Oil Bearing and Fit Spindle

Remove yellow bearing cap and squeeze approximately 15 drops of the oil supplied into the top of the bearing house.

Ensure the Spindle is absolutely clean, wipe the surface with a lint free cloth/wipe if necessary. Gently insert the spindle in to the bearing house.

If the oil does not overflow in the manner of figure. 3 when the spindle touches the bottom of the bearing house then try 2 more drops repeatedly until you achieve an overflow.

Wipe away excess overflow oil, but be careful to leave a ridge of oil between the spindle and bearing house, as the top of the bearing must be lubricated by oil, and some times wipes like tissue paper can suck oil out of the bearing by capillary action.

Spin the spindle slowly by hand after it has settled into the bearing to ensure even distribution of oil.

Notes:

When you oil the bearing, you can get a false impression of overflow if the spindle has oil on it, as oil can scrape off as the bearing slides in, sitting on top of the bearing house.

You can “feel” overflow when the spindle meets resistance at the bottom. This is not a “thud” of the spindle hitting the bottom but rather a build up of pressure as the bearing lands on a bed of oil. By further pressing, you can then see the oil being squeezed out at the top.

The bearing has significant play which may run counter to expectations. However, this feature helps achieve very low friction levels. Once rotating at speed the oil pressure suspends the bearing in a thick film of oil without contacting the bearing sides.

This means that there is an almost imperceptible platter movement in rotation. Low frequency deviations of this nature are insignificant to sonic performance.

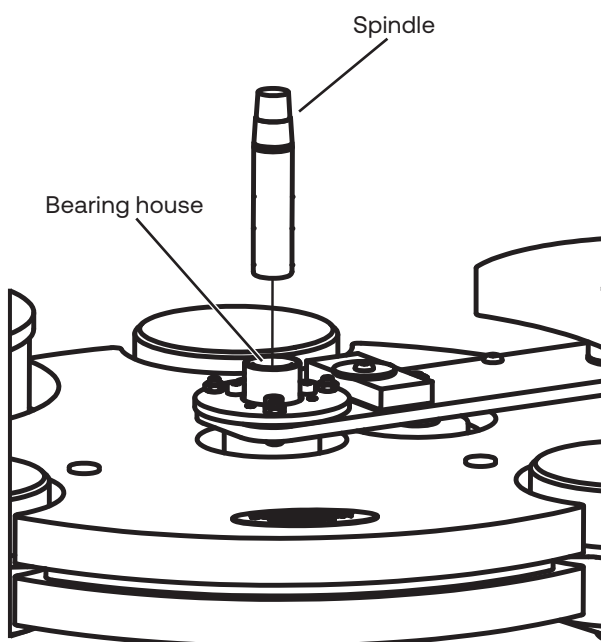


Figure 2: Spindle above Bearing House

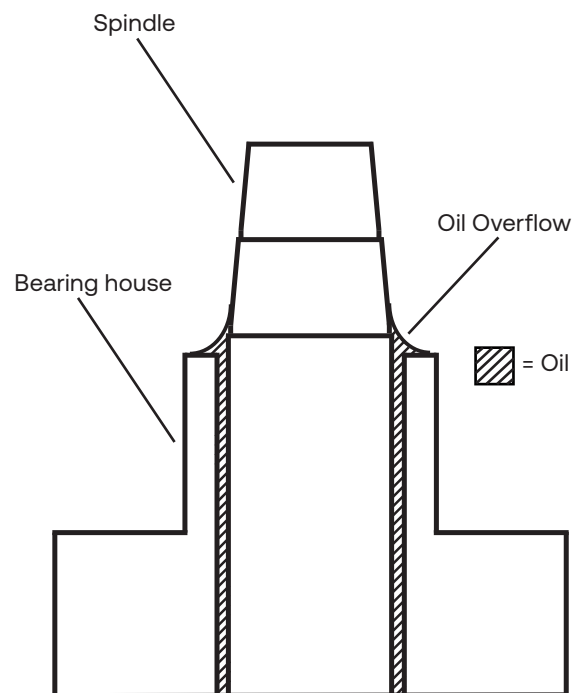


Figure 3: Oil lip on bearing

Two. Initial Assembly

Fit Multi-Layer Platter

Ensure the tapered mating surfaces of the spindle, and the hole on the underside of the platter are clean before assembly by wiping them with tissue paper. Do not hold the weight of the platter by its top layers as these are fragile.

Position the platter over the spindle as shown in Figure 4. positioning can be aided by following the curvature of the armboard on 9.5" models. Fit the platter gently on to the spindle and press down firmly at the centre using your fingers to provide equal force on either side of the spindle. This ensures accurate seating of the platter on the tapered spindle.

Notes:

The upper layers of the platter work best as a loose fit. This means that there can be very slight movement of the layers when pushed.

All platters are checked for level spinning up to 45rpm. If you notice significant platter flutter once the belt is fitted, then remove the platter and clean taper surfaces. Refit it til it sits true.

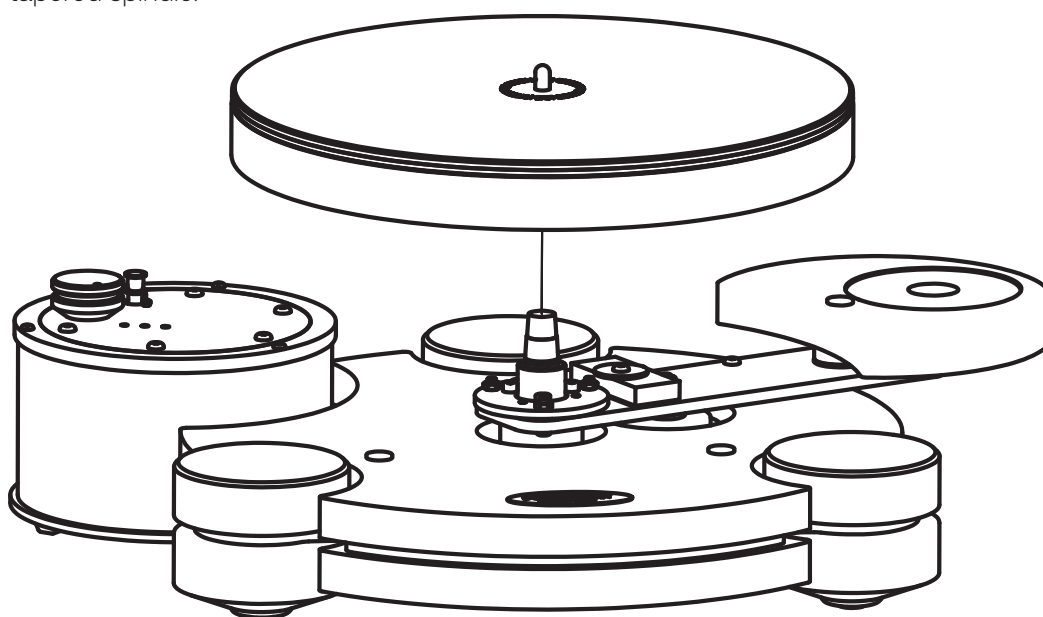


Figure 4: Fitting Multi-Layer PLatter to Plinth

Three. Set Up

Set Plinth Height & Level

Adjusting the Feet

Your turntable has two black polymer feet at the front, and a stainless steel foot at the rear as shown in Figure. 5.

No foot should be fully tightened on to its pod, because performance is best when the foot stands on the thread alone. Adjust one foot at a time by lifting the pod up so the turntables weight is on the other two feet. Spin the foot on its thread clockwise and anti clockwise.

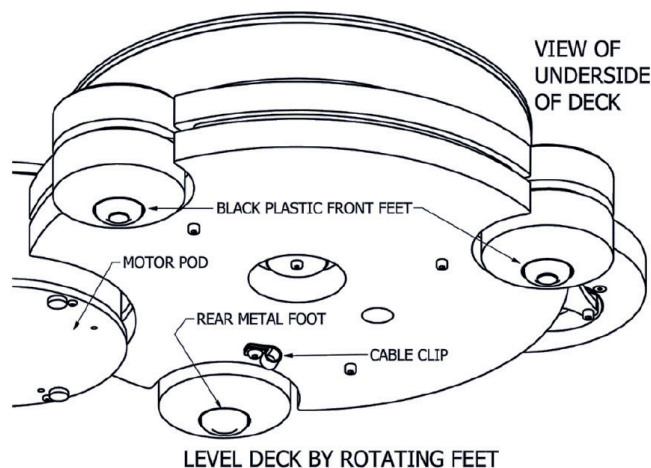


Figure 5: Underside of Deck & Feet.

Set Plinth Height

To set the plinth height correctly, position the motor pod just clear of the platter as shown in Fig. 6

Set plinth height by rotating the 3 adjustable feet to give the platter 3 to 7mm clearance between the top of the screws on the motor pod, and the underside of the platter as shown in Fig. 7.

Before positioning the motor pod further in for final setting, level the deck, and check plinth height against the motor pod again. readjust height if necessary.

Level Turntable

First, ensure your hi-fi rack or support surface is level using a bubble gauge. It is important to get this as level as possible so that the motor pod is level with the platter.

Level the turntable by placing a bubble gauge on the arm boards central metallic portion. Do not level the deck based on the acrylic part of the arm board as this will not be accurate. Checking the bubble gauge regularly, adjust the turntable feet until the armboard is level.

Alternate Levelling Method

If your tonearm is already fitted, the above method of levelling is impossible. But you can use an alternative method.

The design of the Multi-layer platter is unconventional, and the top surface is slightly uneven until compressed by a record. Use the following procedure to achieve level: Take bubble gauge readings from at least 4 different positions (a spot at the same radius, along 4 quadrants of the platter is recommended). Level the deck so that you achieve the best average readings for the bubble gauge at all points.

Note:

The most important area for the platter to be level is where your cartridge contacts the platter. This area is indicated in Fig. 8 by the number 3. Prioritise levelling in this quadrant across the tonearms curve.

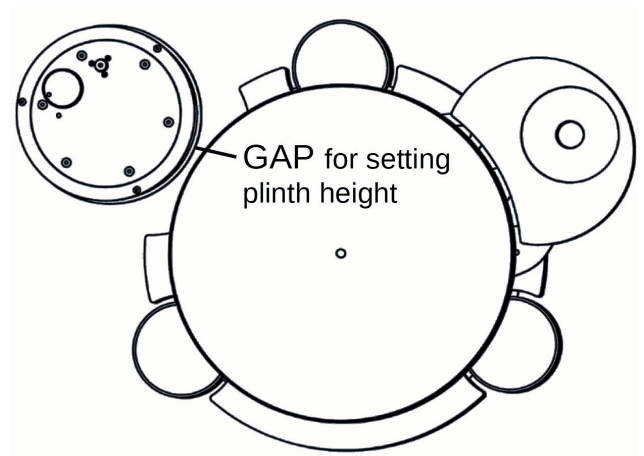


Figure 6: Initial Motor Pod Position

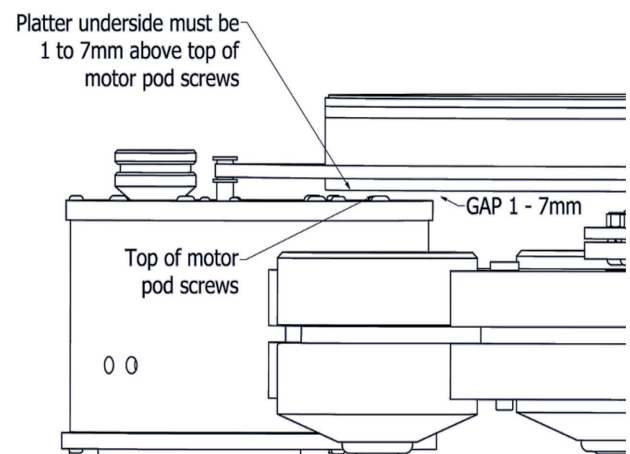


Figure 7: Height of Platter from Motor Pod

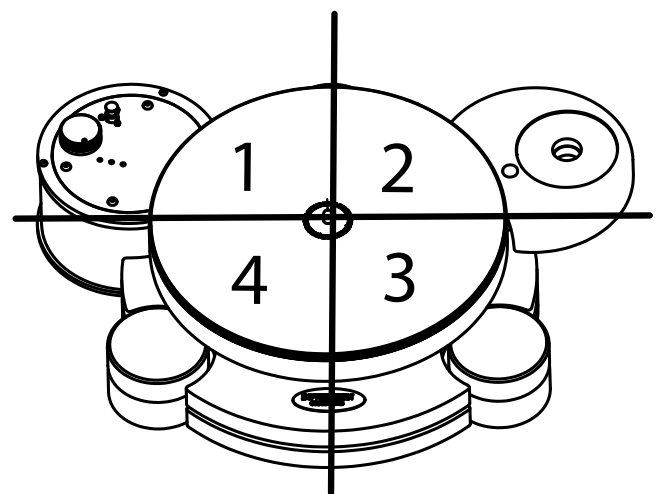


Figure 8: Level Across Platter Quadrants.

Three. Set Up

Position Motor Pod & Fit Belt

Power Up

Connect the supplied SMPS Mains Adaptor to a mains socket, and connect to the motor pod. When powered, a blue LED on the motor pod will illuminate.

Motor Pod Position

Move the pod in to position as shown in Fig. 9. **The pod and its cable should not touch the plinth.** Rotate the pod if necessary and check the pulley to platter distance is initially 217mm or slightly more.

Run the belt around the platter and keep the slack gently taut. Pull this over the pulley on the motor pod.

To set the belt tension simply move the motor pod.

The only time you should stretch the belt is for pulling it over the pulley. If you stretch the belt too much, you may damage it resulting in future breakage. The belt stretches slightly during the first hours of use so check tension after 48 hours of run in have passed.

Final positioning of Motor Pod

To set correct belt tension finally, lift the belt off the pulley and let it lose it's tension almost completely whilst still holding it gently taut. With no tension in the belt it should be approx' 5-7mm off the nearside of the motor pulley (flange edge) as per Fig. 10. Move the pod till the pulley is this distance from the belt, then pull the belt over the pulley.

Speed will vary with belt tension so avoid moving the pod once you have positioned it and set the speed.

Check Belt Rotation

Rotate the platter by hand a couple of turns and check that the belt still sits between the two flanges of the pulley. If this is not the case and the belt has ridden onto a flange, push the belt back on to the crown (curved portion between flanges) with a finger in front of the pulley. and turn the platter. Check the belt remains on the crown.

Notes:

We suggest omitting mains conditioners, filters or anything with surge protection as these can be at the cost of performance, however, these items inflict no damage so you can experiment with their inclusion if you wish.

Ensure items such as power amps or power supplies with strong electromagnetic fields are kept away from the location of the pod (i.e not directly underneath or alongside).

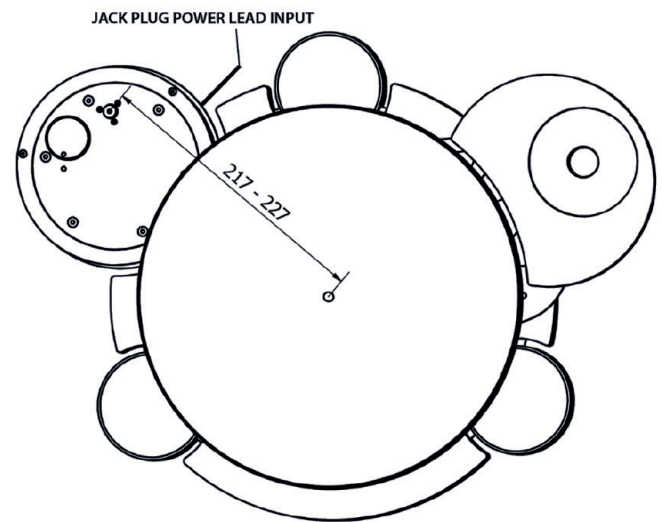


Figure 9: Distance of Pulley to Spindle.

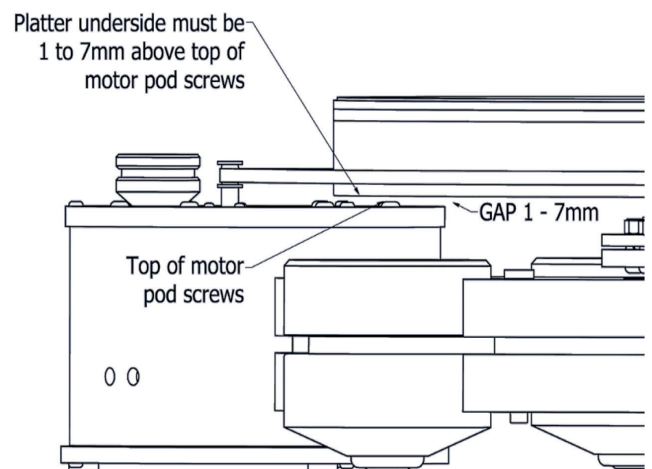


Figure 10: Clearance of Platter above Motor Pod.

Set Motor Speed

Operating the Drive Speed Control

The motor is “off” when the speed control knob on the pod is turned fully anti-clockwise and the indent on the knob aligns with the blue LED.

Turn the knob one click clockwise to turn the motor on at 33.3 rpm – The second click clockwise is for 45rpm.

Adjust the speed via the two potentiometers on the top of the motor pod. These are located in the 2 holes next to the blue LED. Inside each hole is a slotted screw which increases speed when turned clockwise (anti-clockwise reduces the speed). The potentiometer in the hole closest to the blue LED adjusts 33.3 rpm, the next along adjusts 45rpm.

Speed is measured in revolutions per minute. There are 3 methods we recommend you can measure speed.

- a) Mobile phone app
- b) Strobe
- c) Counting revolutions per minute

Please see Appendix 1 at end of this manual for details.

Speed Setting and Adjustment

Turn the speed control knob 1 click clockwise for and adjust the speed of the 33.3rpm speed screw till speed is correct. Refer to Fig. 11 to adjust the correct screw. Then turn the knob a further click anti-clockwise and adjust the 45rpm screw till speed is correct.

Tension of Motor Mounting Screws

You can fine tune the motor mounting screws for minimum noise by adjusting the tightness of the 3 screws next to the motor pulley for minimal tension. Tension until the black rubber O rings just compress. The motor pulley should be vertical and the belt clear of the bottom flange as per Fig. 10. You can try reducing the tension on the motor screw nearest the platter to allow the motor to tilt.

If you overtighten the motor screws you will hear a “knocking” noise from the motor.

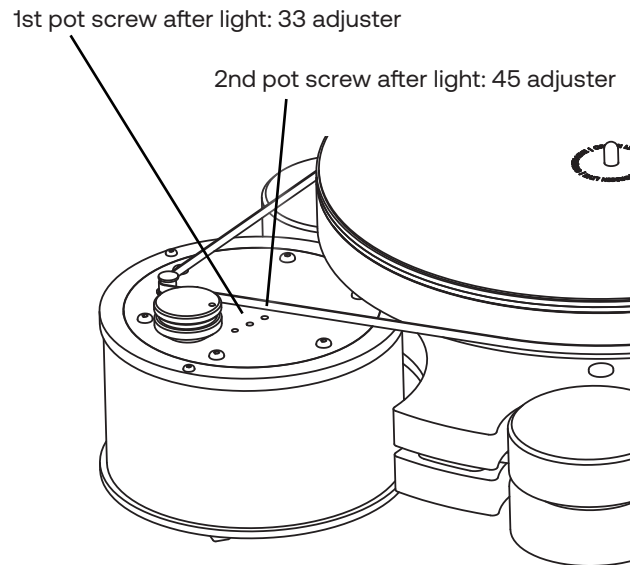


Figure 11: Speed adjustment on pod top.

Notes

Speed will vary if you move the motor pod position.

Performance is most consistent when the motor is constantly powered, and has been powered continuously for 24 hours.

Within the 1st week of use the motor circuit runs in and the turntable bearings bed down. We recommend you check the speed after a week and re-adjust if needed.

The motor gets up to speed during the first 10-20 seconds it is switched on. We recommend you take speed measurements after the motor has been running for at least 30 seconds.

If you notice the belt vibrating significantly then try moving the pod and rotating it slightly. This can adjust the tension and pulley angle enough to reduce vibration.

Find more notes on speed measurements and the motor in the appendix page 16

Three. Set Up

Fit the Tonearm

You should refer to your tonearm instructions for detailed set up of the arm and cartridge alignment.

All recent Origin Live arms have built in VTA adjustment, and can be fitted directly to the arm board as shown in Fig. 12.

Insert your arm through the hole in the arm board. Next, fit the cork washer on to the tonearm pillar protruding from the underside of the arm board, as shown in Fig. 12. Then clamp the tonearm to the armboard firmly by screwing on the clamping nut. We recommend tensioning this to finger tight or just over. Essentially: as much tension is needed to keep the arm in place, and ensure it does not rotate, but no more.

Lastly fit the tonearm cables through the cable clip on the underside of the deck. This improves performance slightly and safeguards the cables from stressing their joint at the arm base in the event of being pulled suddenly. The cables should not be tight but form a gentle loop.

If you have a tonearm which has a threaded base but no VTA adjustment, you can fit a threaded VTA adjuster. The adjuster must be threaded on to the base first before being inserted in to the armboard, and locked from underneath with a clamping nut.

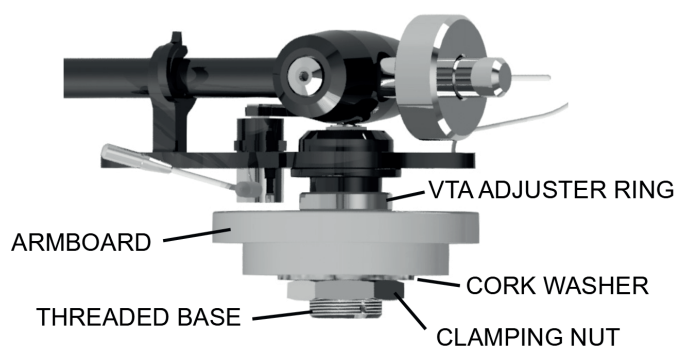


Figure 12: Fitting of Tonearm to Armboard

Checklist:

Initial Assembly:

- Fit sub-chassis to plinth
- Oil bearing and fit spindle
- Fit platter

Height and Level:

- Set plinth height
- Level turntable via armboard

Motor Pod and Belt:

- Power up motor pod
- Roughly position motor pod
- Attach belt
- Check belt is 5-7mm from motor just taut
- Check belt position on the pulley

Set Speed:

- Set 33.3 rpm
- Set 45 rpm
- Allow 48 hours run in then reset

Fit Tonearm

- Fit tonearm pillar to armboard
- Fit cork washer & nut,
- Tension firmly finger tight
(arm not moving)

Four. Maintaining Your Deck

Maintaining Your Deck

Cleaning

To avoid belt vibration, or potential rises in wow and flutter, it helps performance to clean all running surfaces every 3 months. Running surfaces are the side of the platter, and the motor pulley. cleaning with metholated or white spirit is most effective. Do not use acetone based product as this will permanantly damage polymer surfaces.

Belts can be cleaned with soap and water and then rinsed and dried thoroughly. Rubber care products are best avoided as they can leave behind a slippery residue.

Clean the turntable using a soft lint free cloth and wipe gently (we use microfibre).

If you have grease marks etc then use a general purpose anti-smear, car window cleaner such as Autoglym "Fast glass", but only if necessary. Do not spray directly on the turntable as it may clog up the cartridge internals. Rather spray onto a soft polishing cloth and then use it on the turntable. Do not use tissue paper or kitchen paper towels as they are abrasive and can faintly scratch the polished surface.

Scratch Removal

If minor abrasions occur on the surface, you can removethem using a proper plastic scratch remover polish such as "Xerapol" by E.V.I of Germany or "Plastic Clean & Shine by Novus inc of USA. Avoid Car and other polishes as they leave light scratching or bloom.

Every 2 Years:

Every few years, it is worth checking a few components to ensure best performance.

Sub Chassis Damper

Check that the sub-chassis curved damper is tensioned lightly onto the sub-chassis bar as the damper can compress a little over time.

Belt Tension

Check belt tension is correct using the method described on page 10. All belts stretch over the years so the motor pod may need to be moved out further than the initially specified 227mm maximum.

Depending on your use of the deck, the belt should ideally be replaced every 2 to 4 years.

Every 3-4 Years:

Replace Bearing Oil

Only replace oil supplied by Origin Live. This is a highly specified oil with a specific viscosity for our bearings which ensures best performance.

Oil should be replaced every 3 to 4 years. You will need to clean out the old oil with a lint free paper towel or similar wrapped around a thin rod and inserted in to the bearing house. Be sure to wipe oil off the spindle as this may contain microscopic contamination that's not visible.

Never tamper with the bolt in the bottom of the bearing or oil leaks will occur and you will probably not succeed in re-tightening it.

Troubleshooting

If you are having any problems with your turntables operation, we have a large amount of resources to help you on our website.

To navigate to the turntable troubleshooting page of our website please follow: originlive.com > Support > Technical Support > Turntables

Optimising Performance

Mounting Platform

From our experience in designing award winning isolation platforms, we won't offer specific advice on mounting platforms because the right choice of platform depends a great deal on your floor.

Some designs favour concrete floors while others favour suspended wooden floors. Some platforms are good all rounders but slightly compromised as a result. Look for a platform best suited for isolating equipment from your specific type of flooring.

Having said this, the most reliable platform we've found is a slab of 40mm thick finger laminated Oak as supplied by "Hi Fi Racks". A platform of this nature can either be purchased directly from Hi-Fi Racks or a kitchen worktop supplier. This can then be mounted on whatever rack you are currently using. Isolation pads or rubber feet are ideal for decoupling this slab from the supporting surface.

Record Weights

During our R&D on our Gravity One record weight, we found a few interesting observations regarding record weights.

Heavy Weights

When using a heavy weight or clamp on the record, it can appear there is an improvement in the bass, however this compromises the upper mid-band significantly. The top-end can be entirely dulled, and dynamics softened (even in the bass), the speed can lose its edge, and note decay suffers.

A Light Weight?

Using our own Gravity One record weight at 70grams, many users have found it improves bass definition, weight and depth, but also enhances detail in the mid band, and allows freedom in the top end. The sound difference might not be as immediate as a heavy weight, but in this case, the changes enhance the sound, whereas heavy weights are a detriment.

Alternative Mats

The platter mat on the Sovereign Turntable is bonded to the surface of the platter, preventing slippage.

In addition, this deck uses a Multi Layer Platter (MLP). The MLP has been exhaustively researched to find the best combination of layers that will deal with resonances in different frequencies. Using an additional mat will interfere with the tuned effect of the combined MLP layers.

Many of the mats on the market have been tried on our platters and do not work better than our own, so we recommend saving yourself the expense of any additional mat.

Appendix

Notes on Speed Setting

Operating a Strobe

You can check the speed of your turntable using the strobe disc supplied with your deck on the record to be played. The strobe rings are labelled on the centre of the disc for speed and mains frequency.

Using the Correct Lighting

The strobe effect works best in fluorescent light. Although an ordinary bulb held about 2 feet from the strobe disc should also work. Ordinary bulbs flicker at 50Hz in the EEC and 60 Hz in the USA.

You can purchase bayonet fitting fluorescent or halogen bulbs to fit normal lamps. Try to shut out daylight when carrying out speed reading. Also be aware that energy saving lighting with switch mode high frequency power supplies or LED energy saving bulbs will not work with the strobe disc.

You can download apps on to your phone that produce a strobe through the cameras flash/light. You will need to set the app for the correct Hz and shine the light on to the strobe. This can be sometimes be unreliable due to the strength of light.

Reading the Strobe

As you play the record watch the relevant ring on the strobe disc according to the Hz. Adjust the speed via the potentiometer on the Motor Pod as described on page 11. Adjust the speed until the lines on the strobe disc appear stationary. If the lines aren't changing at all, you may need to check that the light you are using is flickering at the correct frequency.

Alternative Strobes

There are other strobes which are much easier to read such as the KAB strobe which can be purchased on our web site under *vinyl measurement accessories*.

Phone Apps

There are phone apps that you can download for Android or Apple such as *RPM Pro* or *Turntable Speed and Wow*. You simply place the phone on the platter and it seems to read the speed fairly accurately. Best results are achieved with the phone placed close

to the centre of the platter and ideally it should be supported over the centre spindle of the platter – a tape reel or record weight is an ideal support.

Mobile phone apps for measuring rotation speed are incredibly convenient and usually cost nothing. However they should be checked for accuracy against a strobe and calibrated if possible. If you know what your phone reads when a player is running at 33.33rpm (checked with a strobe), then you know that using your phone app is accurate.

For example, say you have set the speed of your deck to 33.33rpm using a strobe. When you place your mobile phone on the platter it reads 33.45 – you now know that when your mobile shows the speed as 33.45 then the speed is really 33.33.

For iphones we recommend the *RPM Pro* app as you can calibrate it to the correct speed using a strobe.

Counting Platter Revolutions

If you have problems using the strobe card, then you can count the rpm using the following method. Counting the 33.3 revs per minute is best accomplished by placing a small piece of sticky tape on the perimeter of the platter and then counting 100 revolutions. 33.3 rpm is exactly 100 revolutions completed in 3 minutes. To save time in the early stages it is easiest to count 50 revs in 1 minute 30 seconds (or 25 revs in 45 seconds) and save the 100 count for the final check.

Notes on Speed Measurements

Absolute speed accuracy is fairly easy to achieve at the expense of sound quality. The AC motors, common to most decks are not prone to speed drift – however they do inject a great deal of vibration. The effect of vibration is highly detrimental to sound quality when compared to fractional speed drift and wow. For this reason we prefer to offer superior sound quality rather than the flawed illusion of technical perfection. Further to this it's worth adding that we've experimented with highly sophisticated encoder speed controls (£2000 trade cost) and found that although they hold speed with unerring accuracy, the sound and dynamics of a more subtle approach is far superior.

Notes on Motor

Our DC motors can be slightly noisy initially and never completely silent in comparison to many a/c motors.

This is due to the high grade precious metal brushes in the DC motor. Metal brushes improve conduction in the motor due to direct contact and pressure on the moving surface. The result is much lower levels of vibration but higher levels of audible noise in comparison to low grade carbon brushes.

Severe vibration is far more detrimental to performance than low energy audible noise. Brushless motors are often silent but have very high levels of vibration due to “Hall effect” sensors which create intermittent drag as the spindle rotates. Like most turntable manufacturers we recommend you leave the turntable running between changing records as this reduces belt wear due to constant stopping and starting.

Packing for Transit

If you need to send the turntable anywhere, please follow this procedure to avoid damage to the turntable.

First power down the deck and remove the SMPS from the mains. Pack in Box 1.

Remove the belt, winding it in a coil. Avoid folding the belt as this can cause damage. Store in a bag in Box 2

Remove the platter, pack in bag and store in Box 2.
Remove the motor pod and pack in Box 2.

Revert the steps on page 6 to remove the sub-chassis from the plinth. Keep the pivot nut and pivot bolt attached to the plinth with the large washer and small washer held between them. Pack both in the large bags provided. Pack Sub Chassis in Box 1.
Pack Plinth in Box 2.

Fitting The Dual Armboard Sub-Chassis

Overhang Rear Armboard

Fitting of a dual armboard is the same regardless of the length. Please read basic fitting instructions on Pg.6 first, and then the following guidance. The following will simply outline how to position the plinth in order to fit the Dual armboard. from there, you will want to refer back to Pg.6 and follow instructions on tensioning the Pivot Nut.

Because the rear armboard extends beyond the motor space on the plinth, it cannot be fitted in the middle of a desk or surface. In order to fit the dual armboard, you must position the rear corner of the plinth close to the edge of your working surface. This allows the rear armboard to hang below your working surface, and therefore fitting can continue without precarious balancing or stress to the plinth.

This exact fitting of a dual armboard to a Sovereign is shown in the video referred to in the Notes on Pg.6.

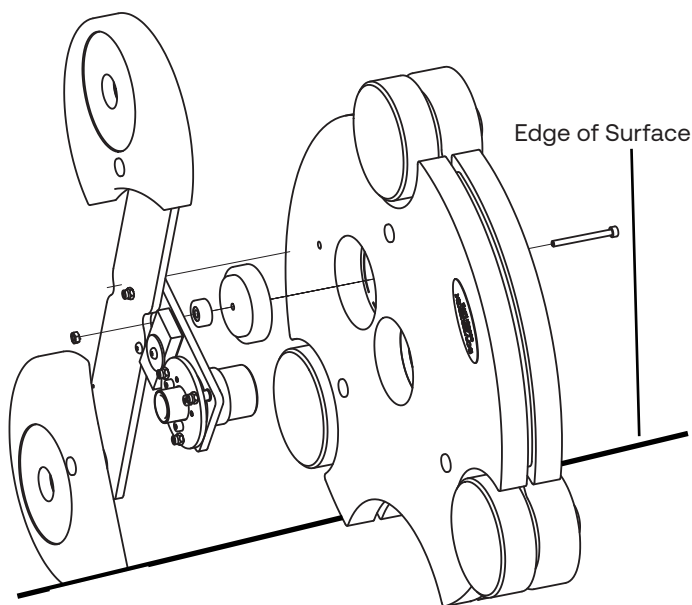


Figure 14: Fitting of Dual Armboard to Plinth

Seven. Warranty

We guarantee turntables to be free from fault for 5 years and will undertake remedial work, providing the turntable has not been modified by any party other than ourselves and has not received maltreatment of any kind.