Mk3 Turntable Manual

for Aurora, Calypso, Resolution & Sovereign

*** NOTE : Speed must be reset accurately after 2 days of continuous running at 33rpm ***

Platter must be lowered VERY GENTLY over the taper spindle taking great care not "scrape" the edges

It cannot be overstated that it is VERY important to read these instructions to really get the best out of your deck and avoid making incorrect assuptions -some things about the deck are counter intuitive.

Only set motor final speed after it has been plugged in for over an hour. You can of course start listening straight away.

ORIGIN LIVE

INTRODUCTION

Read Carefully - Congratulations and thankyour for choosing an Origin Live turntable. You now have one of the finest sounding turntables available – not only will it provide an extraordinary level of performance but also reliability and low maintenance. These instructions cover all decks listed on the front cover, so photos and diagrams are for illustration only. Specific instructions for a particular deck are always included.

Critical performance factors should be noted as follows:

Adjustable feet to be clear of plinth underside

Belt tension affects speed slightly so do not move pod once speed is set

The portions of the instructions printed in *italics* are optional reading that provide additional information. It is critical that the remainder of the instructions are read fully to achieve full potential performance. Underlined text is especially important.

Although the instructions are written for owners with no previous experience of turntables, there are aspects of the deck that run contrary to expections, so experts should note that before altering anything it is important to have fully read the "italics" instructions or degradation will result.

An Origin Live turntable is very simple to set up. These instructions appear lengthy because they cover trouble shooting and give proper explantion of factors that are different to conventional set ups. If you have a problem, please refer to the instructions - failing this, you should speak to your dealer or refer to technical support on the Origin Live web site www.originlive.com - See top navigation bar " support".

Your pre-assembled deck is illustrated below and you should not dismantle it. We wish you an enjoyable time with your Origin Live turntable.

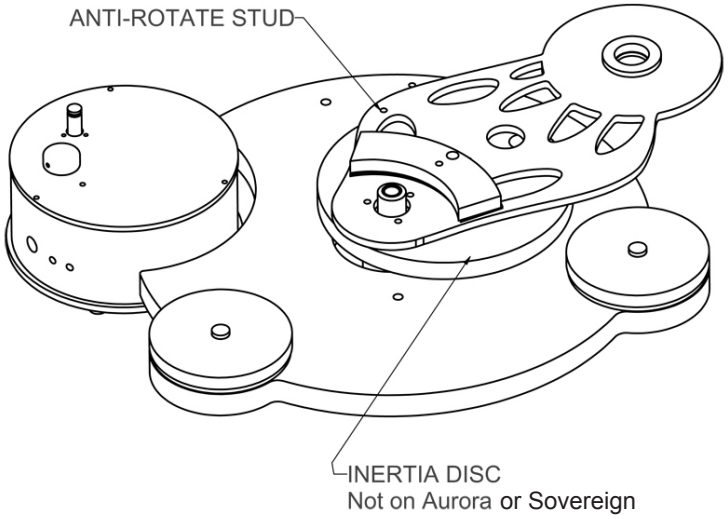
PARTS LIST

Check that all parts are present.

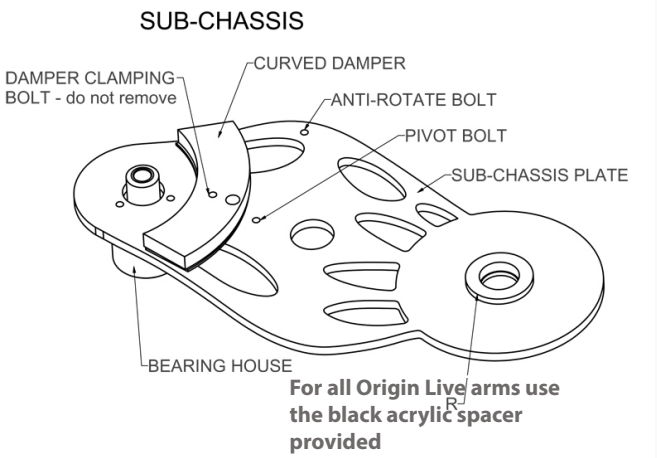
- ❑ **Plinth & Sub-chassis - including 1 cable clip with nut & bolt.**
- ❑ **Turntable bags**
  - **Cork washer for arm & acrylic disc**
  - **Oil bottle**
  - **screwdriver**
  - **2.5mm allen key for arm clip**
  - **4mm Allen key & 8mm A/F spanner (All 12" armboard versions, Resolution & Sovereign only for sub-chassis attachment)**
  - **2 plastic + 1 steel foot (Sovereign only)**
- ❑ **Platter**
- ❑ **Upgrade platter mat**
- ❑ **(Sovereign only) Sub-platter**
- ❑ **1 Belt + Spindle for platter + Strobe card**
- ❑ **Motor pod**
- ❑ **Standard or ❑ upgrade transformer for 230 volt or 110 volt mains supply**
- ❑ **Turntable instructions**

AVOID SCRATCHING THE HIGH GRADE FINISH

To clean the surface use a soft lint free cloth such as a duster – do not use tissue paper or kitchen towel as these are mildly abrasive.



DECK PRIOR TO INSERTING PLATTER



FIT THE TONEARM

Mounting Origin Live arms

All newer Origin Live arms have integral VTA adjustment and for these arms you should fit the black acrylic spacing washer on the top of the armboard if the arm needs raising slightly (usually Encounter arms and upwards in the OL range).

If your tonearm has a threaded base and no integral vta adjustment, then thread on the threaded VTA adjuster. The adjuster must be oriented such that the largest diameter is uppermost.

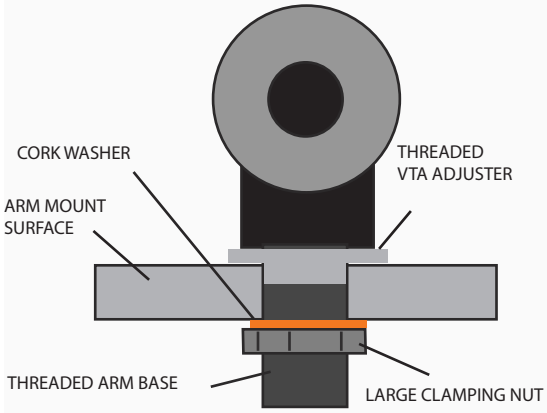
Insert your tonearm into the armboard hole.

Next fit the cork washer as shown in the diagram below and then fit the large clamping nut.

You can set the arm to exactly the correct height later, but for now just clamp it in position using the large nut. To adjust the height of the arm, screw the vta adjuster up or down and reclamp the arm using the large base clamping nut. Avoid overtightening this nut as high tension is detrimental to performance - tune tension by ear if you have a Rega manufactured arm.

NOTE - For Origin Live arms which often have an integral vta adjuster refer to instructions that come with the arm.

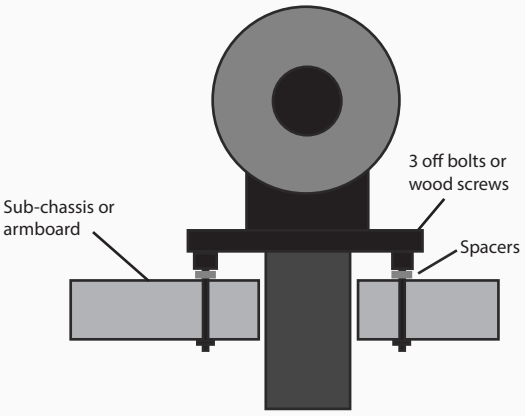
REAR VIEW OF ARM ON ORIGIN LIVE DECK WITH THREADED VTA AND CORK WASHER



If you have the OL1 or Rega arm with 3 hole mounting

The arm is bolted or screwed to the deck using the 3 mounting holes in the base of the arm. To raise the arm for VTA adjustment you will need to fit 3 or more spacing washers under the arm base holes. One peice spacers are available from Rega if you want a neater looking solution and we also include a 4mm acrylic spacer ring.

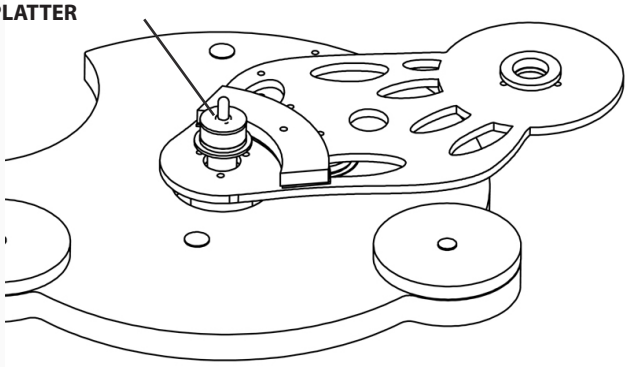
3 POINT ARM MOUNTING



FIT THE PLATTER

Oil the bearing - with the small oil bottle supplied, run 6 drops of oil into the top of the bearing house. The spindle will appear a loose fit in the bearing house untill the oil is added

TAPER SPINDLE FOR PLATTER

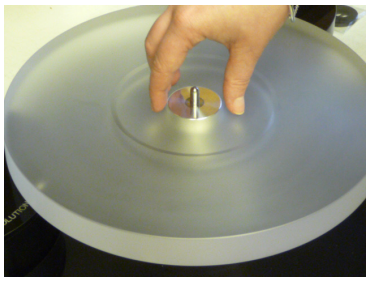


Insert the spindle - Wipe the platter spindle surface first to ensure that it is absolutely clean and very gently insert it into the bearing house (If the oil does not overflow when the spindle touches the bottom then try 2 drops more repeatedly **till you achieve overflow** - wipe away excess oil without withdrawing the spindle - a peice of tissue held across it's edges is ideal . You should spin the spindle slowly after it has settled into the bearing to ensure even distribution of oil.

When you oil the bearing you can get a false impression of overflow if the spindle has oil on it - the oil simply scrapes off as the bearing slides in and ends up on the top of the bearing house. You can "feel" overflow when inserting the spindle, it meets resistance at the bottom which 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.

Carefully lower the platter vey slowly and gently over the taper spindle (ensure mating surfaces are clean). If there are 2 marks on the spindle and platter line them up as shown below.

Bed the platter on by pressing firmly on the CENTRE portion of the clear Acrylic (not the spindle) as shown below.

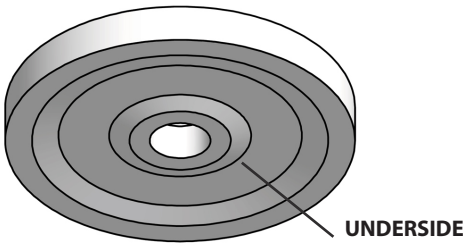


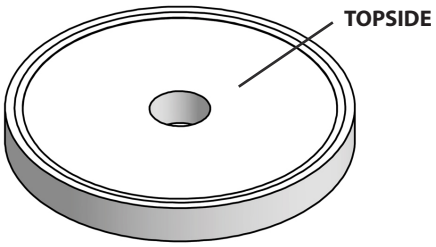
Fitting the platter needs attention as careless handling can damage the mating surfaces and the platter may not then run quite true. All platters are rigerously checked for level spinning up to 45rpm - if you notice significant platter flutter once the belt is fitted, then remove the platter and refit it till it sits true. Do not spin the platter faster than 45rpm as the bearing relys on a highly specified oil film for optimal sound quality. This film does not operate as effectively at higher than normal running speeds resulting in slight platter flutter. Please note the platter needs to be in place for the spindle to run true.

You can now add the upgrade platter mat.

In the case of the Sovereign deck only - first fit the sub-platter by carefully lowering it slowly and gently over the taper spindle (ensure mating surfaces are clean). If you see a black line mark on the top of the sub-platter by the hole then make sure you line it up close to the mark on the plinth - see photo above. We emphasise care for this operation as scrapes that occure through careless handling will damage the mating surfaces and the platter may not then spin true.

Follow the sub-platter with the platter and then the platter mat.





.

Thread on the 2 plastic feet into the 2 front pods and the steel foot into the rear pod.

If you have the Sovereign heavyweight platter then raise the plinth more than normal by winding out the adjustable feet, till the platter no longer fouls on the motor pod. The belt must NOT run in the groove of the platter. Do not tighten up the allen bolts in the underside of the platter - these sound best with minimum tension.

MAINTENANCE NOTES:

The bearing fit is carefully toleranced to run fully loaded with the specific oil we supply. It needs at least 10 minutes to distribute the oil evenly over the running surfaces and approx 24 hours to properly "run in". It needs this because of the exact tolerances (0.0001")which "float" the bearing off the side walls to avoid metal to metal contact and also minimize viscous drag. Eventually it should run virtually silent when truly vertical and full of oil - if it doesn't do so, there has probably been contamination with dust and you will need to clean it out with a lint free paper towel or similar wrapped around a thin rod. If you do this, be sure to also wipe the oil off the spindle as this also may contain microscopic contamination that is not visible.

Very slight bearing noise sometimes occurs - the oil must overflow to eliminate noise - If this does not do the trick then there may be a nick on the shaft perhaps caused by poor handling by a previous owner - Feel the spindle carefully for a rough patch. This can be rectified by using some 1000 grit wet and dry paper on the shaft.

Marks inside the bearing house can be caused by inserting a spindle at a slight angle but they are very slight and usually bed in with the bearing.

People invariably get far too focussed on audible noise but producing a silent bearing or motor is EASY. However the sound quality can be absolutely appalling in comparison to a low vibration or high rigidity "noisy" design. Origin Live take the hard path and choose best sound over political correctness so please don't expect an inaudible bearing if you put your ear close.

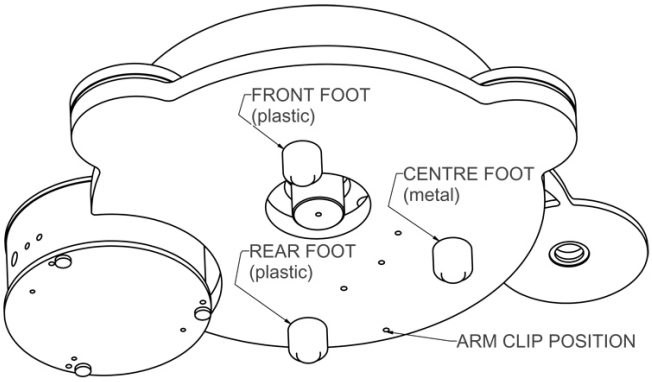
Do not use any other oil than Origin Live oil.

Do not 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.

Many of the mats on the market have been tried on our platters and

do not work so we recommend saving yourself the expense of trying them.

LEVEL THE DECK



LEVEL DECK BY ROTATING FEET
- always ensure tops of feet are not in contact with underside of plinth

Level the deck by rotating the 3 feet under the plinth which are all height adjustable. Ensure that the top of each foot does **not** touch the plinth and only sits on the thread alone - this is for best performance.

Note that when you level the deck, the only thing that matters is that the platter (not the plinth) is level. Sometimes there may be a slight discrepancy between the level of the plinth and platter but this does not matter and is usually imperceptible visually. To achieve accuracy in levelling it is best to use a bubble gauge

POSITION MOTOR POD & FIT BELT

Position the motor pod roughly as shown in previous diagram with the switch at the front. The pod must not touch the plinth so rotate it if necessary. Fit the belt over the platter first and then pull it over the motor pulley taking care not to twist it.

To get the pod positioned without touching the underside of the platter you may need to unscrew the feet a few turns in order to raise the deck height.

To set the belt tension simply move the pod to achieve the following.

FLAT BELTS ONLY - Lift the belt off the pulley and let it lose it's tension almost completely whilst still holding it gently - With no tension whatsoever in the belt, you should stretch it a distance of approx 10 to 15mm to fit over the pulley. An alternative way to describe this, is that when slack the belt should be able to nearly touch the near side of the pulley.

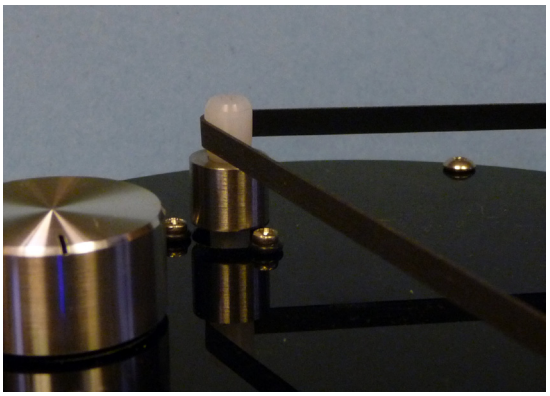
Some people have commented that the special plastic pulley looks cheap - However it is used for sonic reasons and is actually much more costly to machine than metal!

Alternative method of belt fitting.
Refer to photos showing belt being fitted - Fit the belt over the motor pulley and outer rim of platter. This is most easily carried out by placing the belt over the pulley and then holding it there loosely with one finger of your left hand.

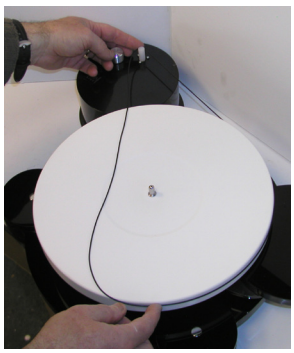
Whilst retaining the belt on the pulley, hold the belt onto the rear rim of the platter with the index finger of your right hand. Now rotate the platter slowly clockwise with your right hand index, all the time pressing the belt on the rim, till the belt is completely on. Allow the motor pulley to rotate under your finger whilst retaining the belt on the pulley and maintaining slight tension on the belt between the pulley and rear of platter.

If the belt falls off the platter on start up you may need to lower the turntable if the feet are adjusted too far down. Also you can try increasing belt tension by moving the pod away from the platter.

Insert the power supply jack plug into the pod's largest side hole.



BELT ON PULLEY



Do not plug the power supply into mains conditioners, filters or anything with surge protection - this can be disastrous to performance. The aforementioned items will not harm the pod, but they almost always result in performance degradation.

The location of the motor pod should preferably be kept away from strong electromagnetic fields typically generated by transformers, amplifiers, power supplies etc.

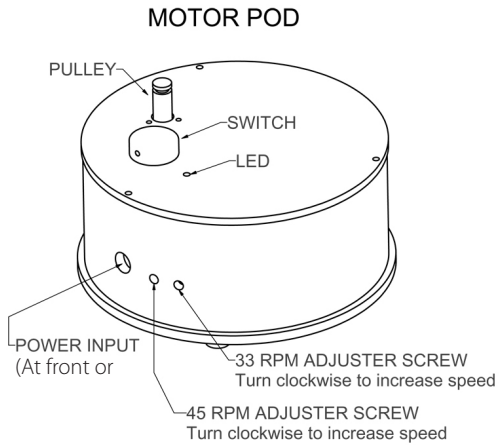
SETTING THE MOTOR SPEED

Please note that the belt grips differently on one side to the other. This is important because it means the deck will run at a slightly different speed if you refit the belt inside out from previously. Therefore when removing and refitting the belt take care you replace it with the same side in contact with the running surfaces or you will need to reset the speed.

You will need to set the motor speed yourself. In the first 72 hours of continuous running the motor, the speed tends to drift but then settles down permanently. You can listen to the deck from the outset but remember to reset the speed after the 72 hour run in period and then check again after a month.

Motor "running in" should be carried out with platter turning (no faster than 45rpm).

The thin output wires from the transformer only carry a very low voltage and are therefore safe to handle. Voltages inside the transformer are dangerous so the transformer case must not be unscrewed or opened.



When the rotary switch on the pod is turned fully anti-clockwise and the line on the knob aligns to the LED, the motor is off.

One click of the switch clockwise is 33.3 rpm - The second click clockwise is 45rpm

NOTES: The speed should only be finally set with the pod in it's FINAL position and at normal room temperature as speed varies slightly with belt tension and temperature.

Only set motor speed after it has been plugged in for over 1 hour as it takes a while to warm up.

If you move the pod, you will need to re check the speed and if necessary correct it, by repositioning the pod till the speed is correct. This is a quick operation, just leave the motor and platter spinning, as you slide the pod to adjust tension. Always set the speed with the cartridge dragging on a centre track of a record. The drag can affect speed setting to a small degree. Do not move the pod beyond the ideal distances mentioned in "fitting the belt".

If you change transformer to the upgrade transformer may need to reset the speed.

If the speed drifts significantly then correct it using the speed adjuster screws.

Instructions for reading the strobe

Place the strobe disc on the record to be played. Play the record and watch the relevant ring on the disc. Adjust the speed until marks on the ring appear stationary while the record is rotating. It sometimes helps to stare at infinity whilst doing this as the marks become easier to see. You can see the strobe effect in fluorescent light, although an ordinary bulb held about 2 feet from the strobe disc will also work fine. The bulb flickers at 50 Hz 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 setting. Also be aware that energy saving lighting with switch mode high frequency power supplies or certain energy saving bulbs will not work with the strobe disc. Either use an old fashioned lamp or invest in a KAB strobe which can be found on our web site under vinyl measurement accessories.

Set the speed

Set the switch on the pod to the first click i.e. 33 rpm setting. Adjust the motor speed as follows: using the small screwdriver, turn the speed adjuster screw shown in the photo for 33 rpm. This is accessible through the hole (furthest to the right hand side) in the side of the pod and the slots in the screw heads are visible if you look into the holes (See diagram at start of this section).

To increase speed, turn the screw clockwise until the speed changes. If the screw reaches the end of it's travel you can usually hear a faint clicking. You will not damage the speed trimmer by over turning, as slippage occurs. The trimmer screw will not fall out. The trimmer screw is adjusted at factory so should only need fractional adjustment of less than a turn. However the capacity is 25 turns and in some cases more turns may be required to set the correct speed.

Setting the 33.3rpm. When setting the speed, place the arm on the centre track of a record, so that the cartridge is tracking the grooves. This ensures that the drag of the cartridge is taken into account. Speed variations of up to plus or minus 1% are quite common on decks and the dc motor is capable of plus or minus 0.1% accuracy. Use the strobe disc provided to set the speed (full instructions are on the card).

Click the rotary switch to the 2nd click clockwise and set 45rpm speed (or 78 rpm if you wish) using the same procedure as for 33rpm.

The dc motors can be slightly noisy initially and are never completely silent in comparison to a/c motors. This may be due to the precious metal brushes. However it is the much lower levels of vibration that is important not the audible noise and this is why they are great deal better in performance terms.

Like most turntable manufacturers we recommend that you leave the turntable running between changing records as this reduces the belt wear that occurs with constant stopping and starting.

NOTES ON MOTOR & SPEED SETTING

-Do not use the power supply for anything other than the dc motor or the power supply is highly likely to be irreparably damaged and you could also damage the equipment you are plugging it into.

-The motor and main bearing will take at least 4 days to fully run in and sound it's best. For this reason it is best to do a final speed check at the end of this period.

The speed stability of your deck will be excellent once everything has settled down in a listening session.

When checking speed - Be aware that the speed is subject to temperature variation. This is due to oil thickening as the temperture drops. 1 degree centigrade drop in temperature results in a 0.1% drop in speed (a 5 degree drop will be 0.5% slow). 0.5% speed drift is barely noticable to the average listner so this is not significant. Rega decks used to run 1% fast all the time to put things in perspective.

The ear is less tolerant to music running slow than it is to fast. For this reason it is worth setting the deck to run very slightly fast at your average room temperature. Most houses are centraly heated and maintain the temperature such that significant variations simply do not occure.

Note that the main bearing and oil can take 2 hours to reach operating temperature if the deck is left in a cold room. The air in the room may warm up quickly but the metal in the turntable will take a lot longer. For this reason it is not worth constantly changing speed settings for absolute accuracy.

It is worth explaining that absolute speed accuracy is 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. This, sadly is never measured in technical reviews or people would be a lot wiser. The subjective effect of vibration is highly detrimental to sound quality when compared to fractional speed drift. For this reason we prefer to offer superior sound quality rather than the flawed illusion of technical perfection.

Further to this it is worth adding that we have experimented with the latest highly sophisticated dc speed controls (£1000 plus trade cost) and found that although they hold speed with unerring accuracy, the sound and dynamics of the music are degraded to such a degree that a little speed drift is far more preferable.

FINAL SETUP OF TONEARM

Refer to your tonearm instructions. Use the following, only as a rough guide on aspects relevent to the turntable.

VTA (vertical tracking adjustment)

To allow the cartridge needle to track at the correct angle it is important that the base of the arm is at the correct height in relation to the platter - this can be set by rotating the chrome threaded VTA adjuster supplied with the deck for Origin Live and Rega derived arms. One complete turn of the adjuster clockwise raises the arm 1mm. For Origin Live arms that have an integral vta adjuster the threaded vta adjuster is best ommitted.

Fit the arm cable clip

Pass the arm cable through the cable clip and fasten in position with the nut & bolt supplied. Leave a slight droop on the cable so that it isn't "tight". The clip fastens to the underside of the plinth using the hole near the rear foot. This is helpful to "earth" vibration in the cable. The earth lead should be connected to the earth of your pre-amplifier or amplifier. This earth lead is best separated slightly from the arm signal leads so do not wind it around them for best performance.

Note - The linear flow 2 cable is thicker than most, use the larger cable clip to cope with this - if the cable is problamatic to bend round the confines of your particular set up, then you will not lose a great deal of performance by simply not using the arm clip.

UPGRADES

It is possible to upgrade the turntable

Further upgrades would be

- Origin Live upgrade platter mat for Aurora only
- Upgrade Transformer - (Sovereign includes this as standard)

MAINTENANCE OF DECK

It aids performance to clean all the running surfaces every 3 months or so with mentholated or surgical spirit but do not use this on a flat belt.

Flat belts benefit from a 6 monthly application of any rubber care product - typicaly found in car accessory stores.

To clean the deck, use a damp soft lint free cloth and wipe gently – if you have grease marks etc then you can use a general-purpose anti-smear, car window cleaner such as Autoglym Fast glass, but only if necessary – wax furniture polish is to be avoided . Do not spray directly on the turntable as it may clog up the cartridge etc but rather spray onto a soft polishing cloth and then use it on the turntable. Do not use tissue paper or kitchen cleaning paper towels as paper is abrasive and can put faint scratches in the polished surface.

If you do get minor abrasions on the surface then you can remove them using a fine car paint abrasive polish such T-cut or Autoglym paint renovator - this is especially usefull to remove stubborn grease marks on the platter.

Keep the turntable packing box for secure future transport.

The deck is not prone to going out of tune - Check that the sub-chassis damper is tensioned lightly onto the plate every 2 years or so as the damping can compress a little over time.

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

If you withdraw the main spindle you should put in a drop of oil in the bearing, to compensate for any possible loss.

TROUBLESHOOTING

Omit reading this greyed out section unless you have a problem

SPEED VARIATION

If there is significant speed variation then possible causes are as follows.

- *Significant changes in room temperature - this affects the viscosity of the oil in the bearing.*
- *Lack of oil in the bearing so check by adding oil.*
- *Changed belt tension or an oily belt or platter - clean running surfaces.*
- *Turntable out of level – this affects the main bearing friction.*
- *After adjusting the tension of the 3 small Philips screws which hold the motor on, you may need to re-adjust the speed as they affect motor bearing friction very slightly.*
- *Check the platter is not fouling on anything.*
- *A dirty bearing that exhibits too much friction - The platter should drift round effortlessly with the slightest of nudges (the lighter the touch the better) and go on spinning very slowly before gradualy coming to a stop. If you suspect the bearing friction to be a little high return the bearing to us for checking.*
- *A worn thrust bearing - this may occur after many years of continuous use in common with all turntables.*
- *Transistors that have developed temperature instability.*
- *Most of the pulleys are a push fit on the motor shaft - however they can sometimes work loose in transit or in use. If this is the case then you can easily rectify it by lightly tapping the pulley back onto the spindle with your fingers - Do not use a hard object or excessive force as this can damage the spindle.*

EXCESSIVE MOTOR NOISE

The motor needs a run in time of around 4 days continuous running. They are sometimes a little noisy to start with so it is best to run in the motor by continuously running it for 4 days on 33rpm. Do not run at over 78rpm as this can harm the brushes over prolonged periods.

Most importantly you can "tune in" the motor to give minimum noise by adjusting the tightness of the screws next to the motor pulley. The best way to set their tension is to tighten the screws until they just nip

REPACKING METHOD - Please read carefully and pack exactly as instructions show.

Wrap motor pod in polythene bag then tape (or rubber band) round the cardboard tube which has a slit in it's side - the tube sits on top of the base plate, not round it. This is to provide protection against anything that might knock the end of the motor shaft as this can cause damage. Note that the motor pod must be positioned in this corner of the box where there is the greatest depth i.e not over the plinth armboard

Place the strobe card and belt in the top of the motor pod card tube.

ELASTIC BANDS round split cardboard tube which must sit on top of motor pod base flange.

PLACE RUBBER BUNG IN TOP OF BEARING HOUSE

WRAP PLINTH IN POLYTHENE BAG BEFORE LOWERING INTO BOX

BELT & STROBE CARD PLACED IN MOTOR POD PACKING
The belt needs to be rolled into a spiral and placed in a small polythene bag - if loose packed the belt can get crushed on bends and permentantly deformed.

WRAP SPINDLE HUB IN POLYTHENE AND PLACE IN FOAM HOLE SHOWN

VERY IMPORTANT - This card and foam peice must be placed here as shown to protect platter and ensure no damage to sub-chasses

AVOID LOADING THIS AREA as it can stress the armboard of the sub-chassis underneath. The only exception to this is if an arm is included or empty box - larger arms will not fit - i.e Encounter and above

Wrap platter and platter mat in polythene bag before placing in foam cut out

Instruction manual

Place the wall wart transformer here and then place the bubble bag containing the following items on top of the transformer

Bag contains - Cork washer for arm, Oil bottle, screw driver, 3mm & 2.5mm allen key