

User Manual – English



TURNTABLE • PHONO STAGE • POWER SUPPLY



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Introduction

Note: Full safety warnings can be found in the Statutory Safety Manual.

Naim Audio products are conceived with performance as the top priority. Careful installation will help ensure that their full potential is achieved. This manual covers the Solstice Special Edition vinyl replay system. It begins with some general installation notes. Product specific information begins in Section 4.

1. Connections

It is important for both safety and performance that the standard cables supplied are not modified.

1.1 Interconnect Cables

Naim interconnect cables that share the same connector on each end are marked with a band to establish correct orientation. The band denotes the end that connects to the signal source. Naim Super Lumina interconnect cable will provide the best results.

Interconnect plugs and sockets should be kept clean and free from corrosion. The easiest way to clean them is to switch off the equipment, pull the plugs out of their sockets, and push them back in again. Contact cleaners and “enhancers” should not be used as the film they deposit may degrade the sound.

2. Mains Power

Use only the mains leads and plugs supplied or the Naim PowerLine mains cable.

Where fused plugs are used, 13 amp fuses should be fitted. Fuses of a lower rating will fail after a period of use. Do not wire voltage dependent resistors or noise suppressors into mains plugs. They degrade the mains supply and the sound.

2.1 Mains Plug Wiring

In some territories a mains plug may need to be fitted to the supplied mains lead. As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in the plug proceed as follows:

The wire coloured GREEN-AND-YELLOW must be connected to the terminal in the plug marked by the letter E or by the safety earth symbol or coloured GREEN or GREEN and YELLOW.

The wire coloured BLUE must be connected to the terminal in the plug marked with the letter N or coloured BLACK.

The wire coloured BROWN must be connected to the terminal in the plug marked with the letter L or coloured RED.

2.2 Equipment Fuses

Mains powered Naim Audio equipment is fitted with a mains fuse on the rear panel adjacent to the mains input socket. Replace it if necessary only with the spare fuse supplied or with an identical fuse. Repeated failure of the fuse points to a fault that should be investigated by your retailer or Naim itself.

2.3 Non-rewirable Mains Plugs

If a non-rewirable plug is cut from a mains lead (for whatever purpose) the plug **MUST** be disposed of in a way to render it totally useless. Considerable shock hazard exists if the cut-off plug is inserted into a mains outlet.

2.4 Mains Circuits and Cables

A hi-fi system usually shares a mains circuit with other household equipment some of which can cause distortion of the mains waveform. This distortion can in turn lead to mechanical hum from mains transformers. Some Naim transformers are large in size, making them relatively sensitive to such distortion, and it may be necessary to take account of transformer hum when siting your equipment.

Transformer hum is not transmitted through the speakers and has no effect on the performance of the system; however, a separate mains circuit may reduce it. Such a circuit (ideally with a 30 or 45 Amp rating) will also generally improve system performance. Advice on the installation of a separate mains circuit should be sought from a qualified electrician.

3. General Installation

Naim equipment is designed to offer the finest performance possible avoiding compromise wherever practical. This can lead to circumstances that may be unfamiliar. The notes that follow contain advice specifically related to Naim equipment as well as more general warnings about the use of domestic audio products. Please read them carefully.

3.1 Siting The Equipment

In order to reduce the risk of hum audible from the loudspeakers, power supplies and power amplifiers should be located a reasonable distance away from other equipment. The maximum separation distance for connected equipment is that allowed by the standard interconnect lead.

Some Naim equipment is extremely heavy. Check the weight of the equipment prior to lifting and if necessary use more than one person so that it can be moved safely. Ensure that your equipment rack or table can easily support the weight and is stable.

3.2 Switching On

Source components and power supplies should be switched on before the power amplifiers. Always switch amplifiers off and wait a minute before connecting or disconnecting any leads. Always use the power switch on the product rather than a mains outlet switch.

A “thump” may be heard from the loudspeakers as power amplifiers are switched on. This is normal, will not cause any loudspeaker damage and does not point to any fault or problem. A mild “pop” may also be heard shortly after equipment is switched off.

3.3 Running In

Naim equipment takes a considerable time to run in before it performs at its best. The duration varies, but under some conditions the sound may continue to improve for over a month. Better and more consistent performance will be achieved if the system is left switched on for long periods. It is worth remembering however that equipment left connected to the mains can be damaged by lightning.

3.4 Radio Interference

In some circumstances, depending on where you live and the earthing arrangements in your home, you may experience radio frequency interference. Controls on broadcasting in some territories allow very high levels of radio frequency radiation and both the choice and exact siting of equipment may be critical. Susceptibility to radio frequency interference is related to the wide internal bandwidth necessary for high sound quality. A radio frequency filter kit is available for some Naim equipment but sound quality will be progressively compromised as more elements of the kit are fitted.

3.5 Lightning Precautions

Your Naim hi-fi system can be damaged by lightning and should be turned off and disconnected from the mains when there is risk of lightning strike. For complete protection all mains plugs and any aerial cables should be disconnected when not in use.

3.6 Problems?

Consumer protection varies from country to country. In most territories a retailer must be prepared to take back any equipment he has sold if it cannot be made to work satisfactorily. A problem may be due to a fault in the system or its installation so it is essential to make full use of your dealer’s diagnostic skills. Please contact your local distributor, or Naim Audio directly, if any difficulties cannot be resolved.

Some Naim equipment is made in special versions for different territories and this makes it impracticable to arrange international guarantees. Please establish the local guarantee arrangements with your retailer. Contact Naim Audio directly for help and advice if necessary.

3.7 Service and Updates

It is essential that repairs and updates are only carried out by an authorised Naim retailer or at the factory by Naim itself. Many components are custom made, tested or matched and appropriate replacements are often unobtainable from other sources.

Direct contact to Naim for service or update information should be made initially through Customer Services:

Tel: +44 (0)1722 426600
Email: info@naimaudio.com

Please quote the product serial number (found on its rear panel) in all correspondence.

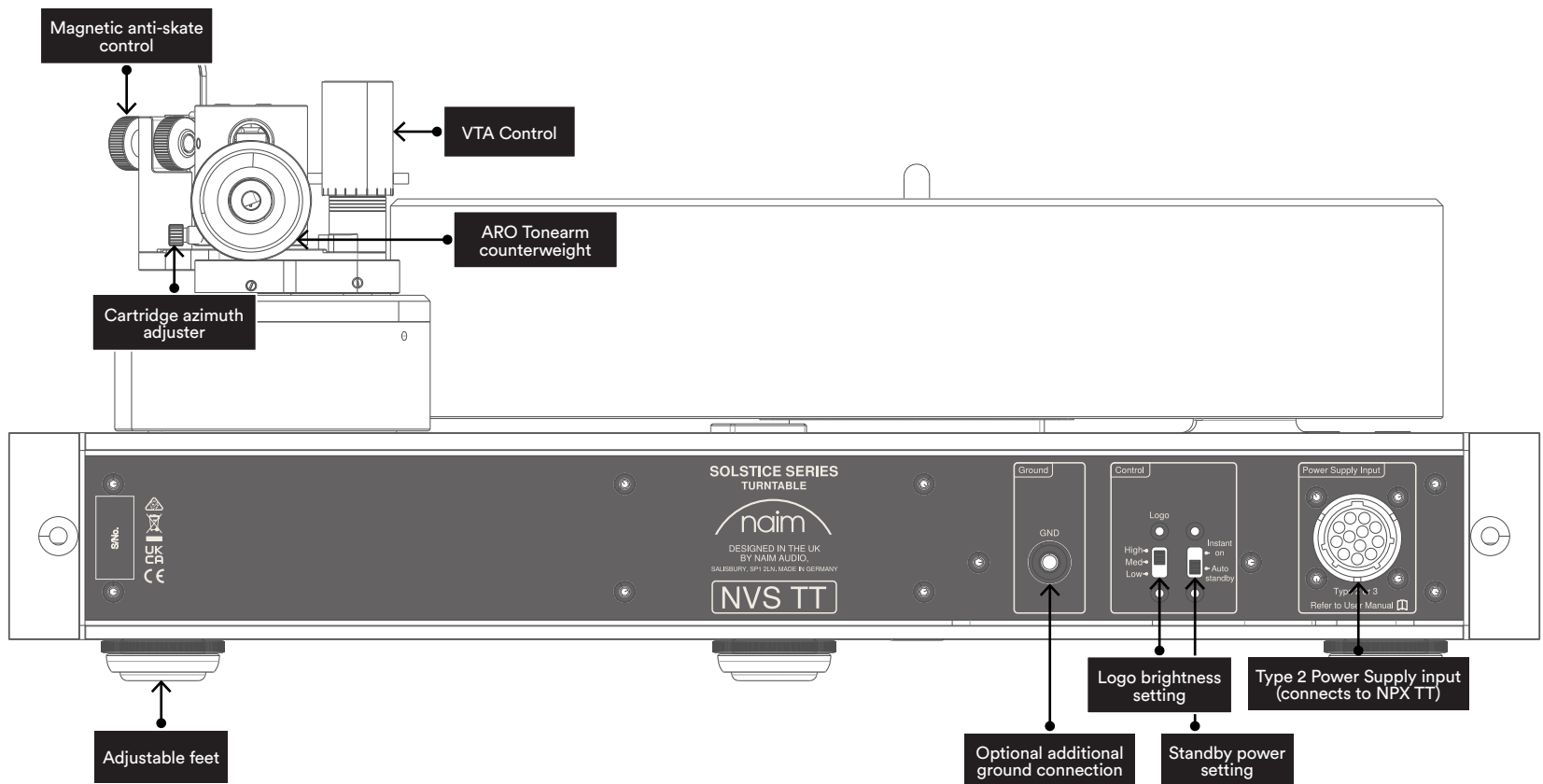
4. Solstice Special Edition System Components

Solstice Special Edition is the first ever all Naim vinyl replay system. The Solstice turntable itself features an all new version of our legendary ARO tonearm paired with our Equinox MC cartridge. Included in the system is the Solstice series phono stage and power supply to provide a complete, exceptionally high performance vinyl replay system. Solstice Special Edition has been designed for best performance when connected via DIN to Naim amplification, but can be used with any amplifier with a standard RCA line level input.

Solstice Special Edition is a complete vinyl replay system comprising of all the components needed for connection to an amplifier. Diagrams illustrating the connection of Solstice Special Edition are shown in Section 7.

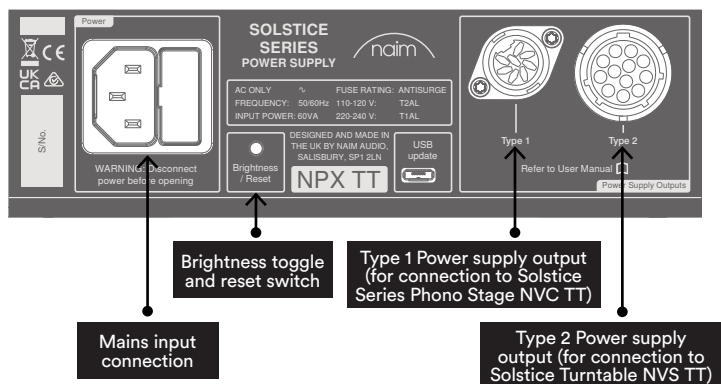
Your Solstice Special Edition vinyl replay system should be installed on a dedicated equipment stand intended for the purpose. Do not stand it directly on top of another item of equipment. Care should be taken to ensure that all elements of the turntable itself – plinth, platter and arm are level. The turntable, phono stage and power supply should be installed in its final location before connecting cables or switching on. Ensure that the volume on the connected amplifier is turned down before switching on.

4.1 Solstice Turntable NVS TT - Features and Connections



4.2 Solstice Series Power Supply NPX TT Features and Connections

Note: Solstice Special Edition features both DIN and RCA outputs for connection to an external amplifier. Naim recommend DIN connections.



4.4 Mains Connection

Connect the Solstice series Power Supply NPX TT to a mains power socket using either the mains cable supplied or a Naim Power-Line.

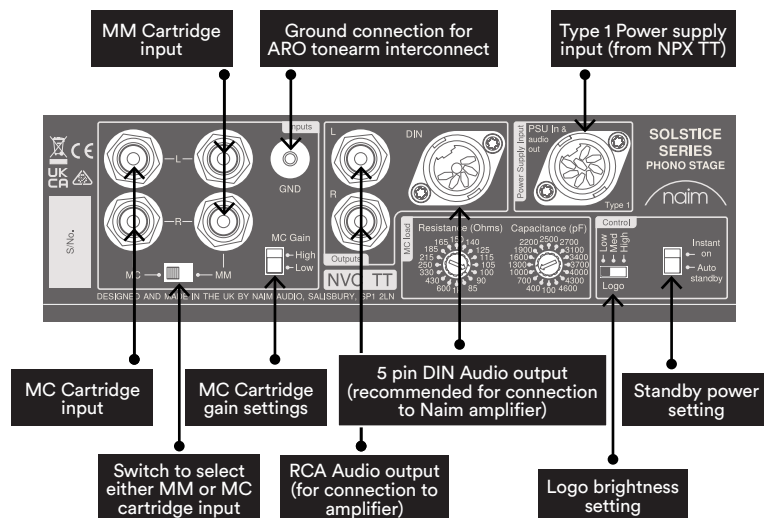
4.5 Standby Power Settings

Both the NVS TT and NPX TT are set by default to power down into a sleep mode after 20 minutes. In this sleep mode the vinyl replay system consumes less than 0.5W of power. The 'Instant On' feature sets your vinyl replay system to a mode that leaves the sensitive audio circuitry permanently powered for the best sound quality. In the Solstice Special Edition vinyl replay system, set the standby power setting switches to 'Instant On' on the NVS TT turntable to enable this feature. The standby power setting on the NVC TT phono stage is only applicable when the turntable and phono stage are powered by independent power supplies.

4.6 Brightness Settings

The brightness of the product logos on the Solstice Special Edition vinyl replay system can be adjusted per device using the switches on both NVS TT and NVC TT and the push button on the NPX TT.

4.3 Solstice Series Phono Stage NVC TT Features and Connections



4.7 Signal Outputs

The Solstice Turntable arm interconnect cable is specific to the ARO tonearm and features a unique 5 pin decoupled connection to reduce microphonic effects. The Solstice Series Phono Stage features audio outputs on 5 pin DIN, 8 pin DIN and RCA outputs, making it easy to connect to a variety of Naim and other manufacturers' equipment. Always use high quality interconnect cables to connect the phono stage to the amplifier inputs. The Naim Super Lumina will produce the best results. If connecting to a Naim amplifier, a DIN connection is recommended to give the best results.

4.8 Cartridge Selection

The Solstice Series Phono Stage NVC TT features adjustable settings to enable the best performance of a connected cartridge. It is possible to adjust both gain, capacitive and resistive load for Moving Coil cartridges. The adjustment switches do not apply for MM (Moving Magnet) cartridges as they typically have a much higher output.

The NVC TT is preset with suggested settings for the Equinox moving coil cartridge, we recommend 100 ohms for resistance and 1000pF for capacitance with 'high' gain setting however gain, load, and impedance can be adjusted to suit individual preferences or improve system matching. For instance, adding more capacitance may reduce any perceived system forwardness. Adding more resistance can help counteract any perceived excessive liveliness. Switching between high and low gain may help match input levels across a system. In this way the Solstice Special Edition vinyl replay system can be set up to perform to its best in your system and listening environment. For other cartridges, check with the cartridge manufacturer for the values required.

4.9 System Components

Solstice Special Edition has been considered and designed as a fully featured system, comprising all the components required for vinyl replay. However, it is possible to use alternative cartridges and phono stages if desired, such as the Naim SuperLine. The Solstice Turntable NVS TT is only designed for use with the Solstice Series NPX TT power supply. The Solstice Series Phono Stage NVC TT is not required for correct operation.

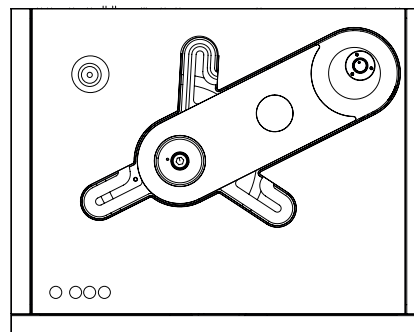
5. Solstice Special Edition Box Contents

5.1 Unpacking the turntable

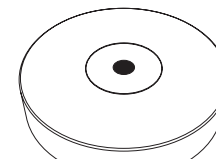
The Solstice Special Edition turntable is supplied in 4 boxes. The large main box houses the turntable only. The smaller boxes contain the power supply, phono stage and limited edition accessories. Unpack all the items before starting, as the cables needed are supplied with the relevant electronics.

After unpacking you should have the following items:

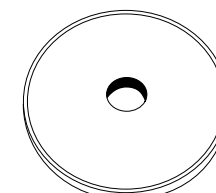
5.2 Solstice Turntable



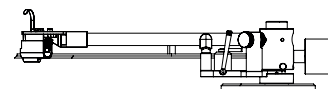
Chassis NVS TT



Platter



Sub Platter



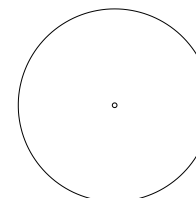
ARO Tonearm, fitted with Equinox MC cartridge and finger lift



Bearing Housing



Drive Belt



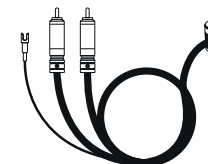
Felt Mat



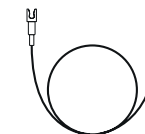
Counterweight



Bearing Oil

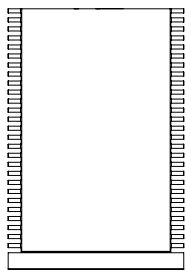


Interconnect – tonearm to phono stage

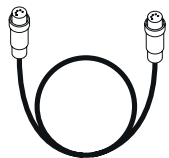


Ground Cable

5.3 Solstice Series Phono Stage



Phono stage NVC TT

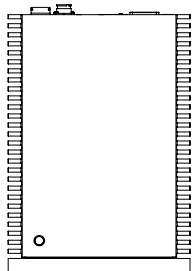


5 pin DIN to 5 Pin DIN
Audio Interconnect

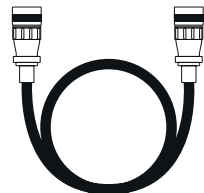


Type 1 Power Supply
Cable

5.4 Solstice Series Power Supply



Power Supply NPX TT



Type 2 Power Supply Cable

5.5 Solstice Special Edition Accessory Pack



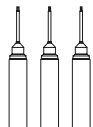
Dust Protector



Digital Stylus Gauge



Cleaning Cloth



1.5mm, 2mm, 2.5mm
Hex Drivers



Vinyl Adjustment Tool



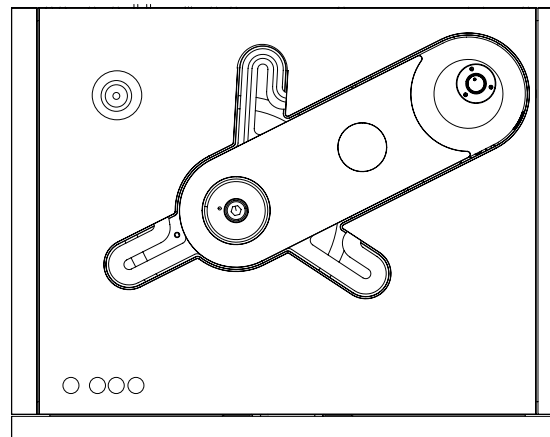
Small and Large
Bubble Levels

6. Solstice Special Edition Assembly and Set Up

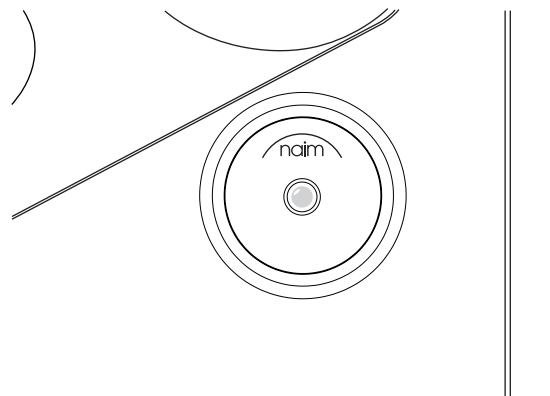
6.1 Chassis installation

Remove the turntable parts completely from the box. All tools required for the build can be found in the accessories box.

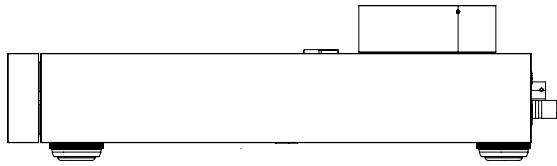
Site the turntable plinth on a suitable level surface. Naim recommends the Fraim equipment support for best performance.



Using the large bubble level, adjust the three feet on the turntable to ensure the chassis is perfectly level. Place the level near the arm housing for best results.

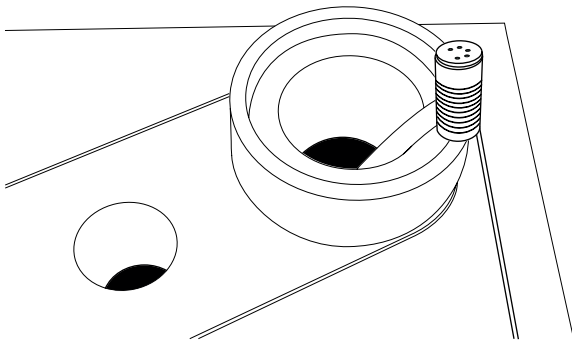


Ensure both turntable chassis and equipment support are both level and secure.

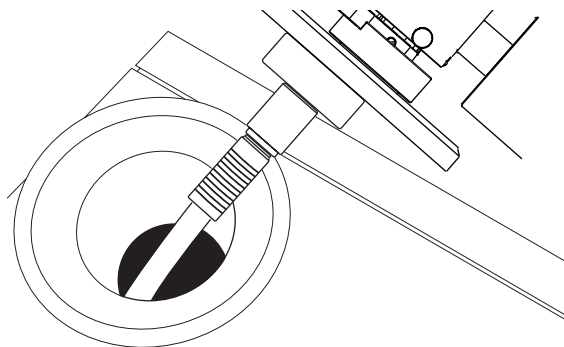


6.2 Arm installation

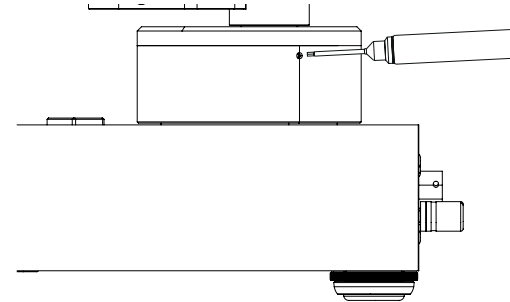
Bring the 5 pin end of the tonearm interconnect up through the arm housing.



Connect the tonearm interconnect to the connector on the bottom of the tonearm. Note the connector is loose – this is intentional to reduce microphonic effects.



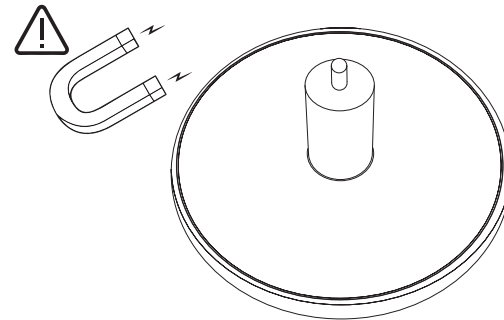
Place the tonearm in the collar and line up the arrows on the tape.



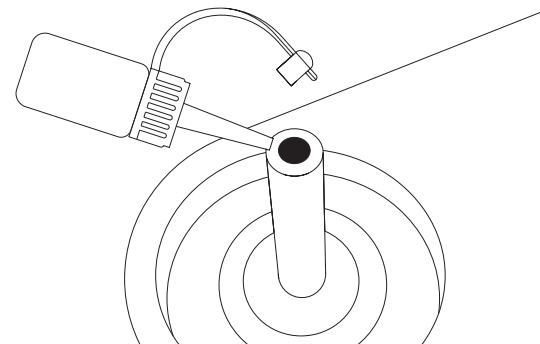
Gently tighten up the three screws using the 1.5mm hex driver just enough to stop the arm pillar rotating in the pedestal top plate in use.

6.3 Platter installation

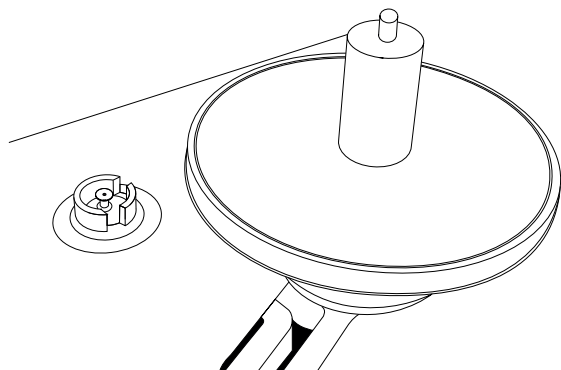
Take the sub platter and bearing housing and push together.



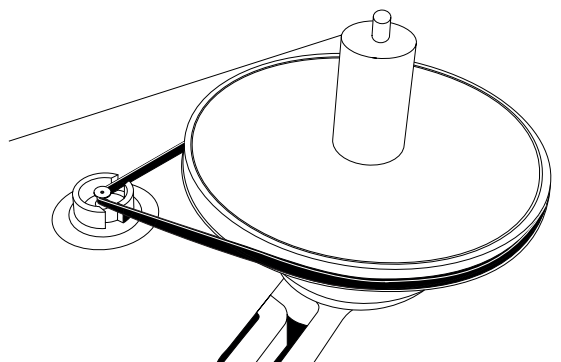
Add a few drops of bearing oil to the ceramic collar.



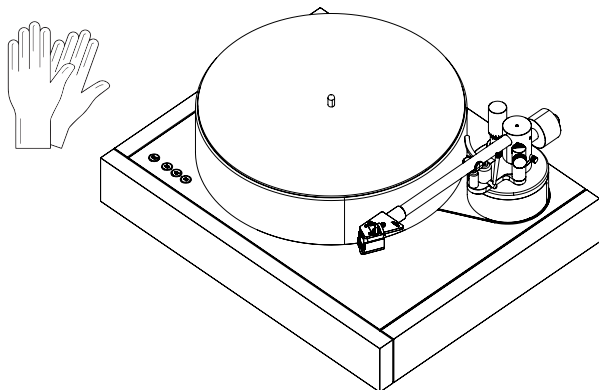
Slide the bearing housing and sub platter over the bearing. Note the sub platter floats due to the magnetic force required to oppose the weight of the platter.



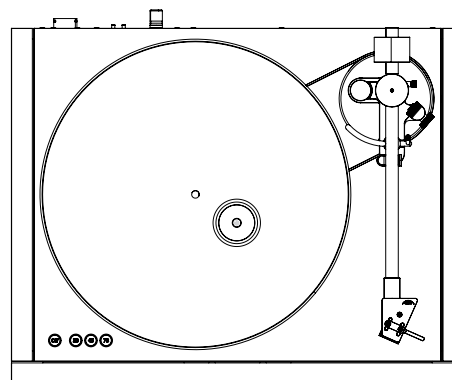
Slide the belt over the sub platter edge and around the motor. Note the belt will not sit flush on the edge of the sub platter at this stage. Take care not to dislodge the belt during fitting of the platter.



Finally slide the platter on to the sub platter, taking care not to dislodge the belt. Gently run the platter around a few times to seat the belt. Do not fit the felt mat at this stage.



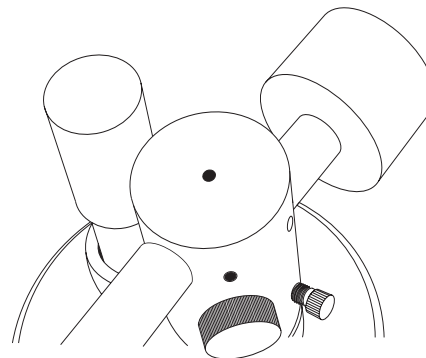
6.4 Verify level once platter is fitted



Using the large bubble level placed near the centre of the platter, re-adjust the three feet on the turntable to ensure the platter is perfectly level if required.

6.5 Tracking force setup

Slide the counterweight on to the end of the ARO tonearm.



Place the digital stylus gauge on the aluminium platter, removing the felt mat if it has already been fitted.

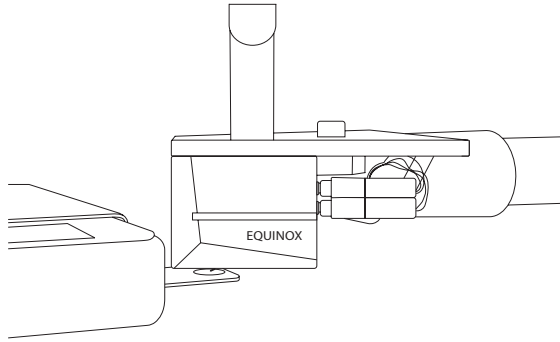
Turn the digital stylus gauge on.

The display should read in grams (g). If not, tap the unit button on the screen until the display shows (g).

Remove the stylus guard.

Raise the tonearm using the lift lever on the side.

Align the stylus gauge measuring area (the red dot) with the arm so the stylus will drop on to the centre of the measuring area.



Using the lift lever, lower the arm so the stylus contacts the measuring area.

Read the measured force. Note the value. If adjustment of the tracking force is required please lift the arm using the lever before making any counterweight adjustments and then reset the stylus back onto the digital stylus gauge.

When playing a record, use the VTA adjustment and the mini level to ensure the arm is perfectly flat whilst playing. VTA adjustment can be performed whilst listening to a record, allowing adjustment for various weights of record pressing.

There are great benefits in optimising the playing weight of the cartridge by listening. Small changes in playing weight can make a big difference. Naim suggest a playing weight between 2.2g and 2.4g as the optimal range. Always check with the stylus gauge that the playing weight is within the suggested range after listening optimisation.

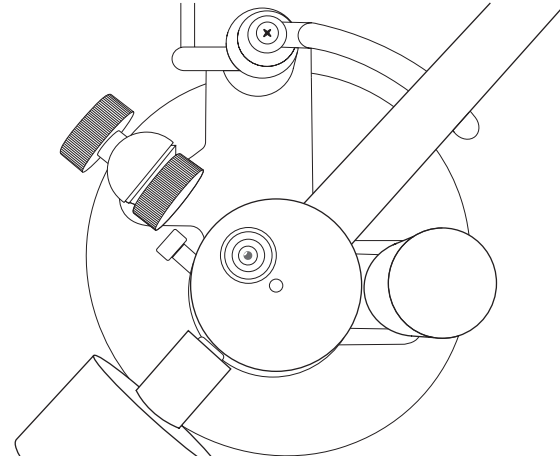
Notes on disassembling NVS TT:

If removing the platter, the sub platter and bearing housing will be pushed up by the magnetic force. When removing the platter, reach underneath the platter and hold the sub platter down to avoid the risk of any damage to the sub platter or chassis.

6.6 ARO tonearm alignment

Alignment of the ARO tonearm is performed using the small bubble level to ensure the arm is perfectly flat whilst playing.

Adjust the Vertical Tracking Angle (VTA) by rotating the VTA adjuster horizontally to raise, or lower the arm whilst the arm is in the rest.

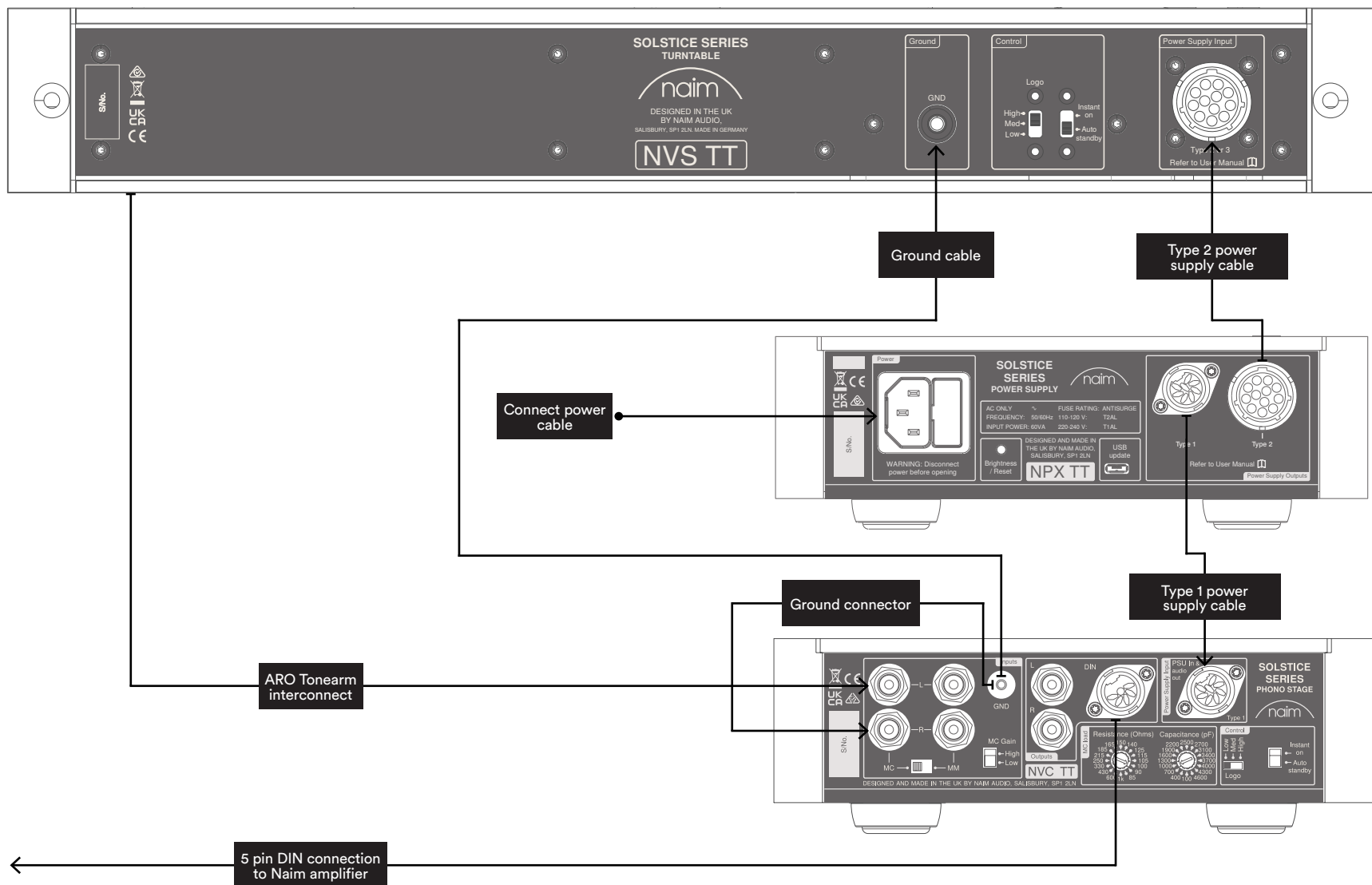


VTA can be adjusted for personal preference according to record pressing in this manner using the micro spirit level.

Adjust the cartridge azimuth by rotating the cartridge adjuster. Allow the arm to settle after adjustment. Make small adjustments to both azimuth and VTA in the rest as required, until the small bubble level indicates the arm remains level in all directions whilst playing.

7. System Connections

The diagram below illustrates how to wire up the Solstice Special Edition vinyl replay system.



8. Specifications

Parameter	Solstice Turntable High performance turntable with carbon ARO unipivot tonearm
Model Code	NVS TT
Power Supply input connector	Type 2
Speeds	33 1/3 rpm, 45rpm
Motor Type	High torque 24V DC brushless
Motor Control	Optical feedback
Tonearm Audio Output	5 pin Mini DIN
Front Panel	Clear Acrylic
Naim Logo	White illuminated
Logo Brightness setting	3 position switch - High, Medium, Low
Dimensions (H x W x D)	182mm x 420mm x 358mm
Weight	25.4kg

Parameter	Equinox MC Cartridge Moving Coil cartridge
Model Code	EQUINOX
Audio output	Individual 4 pin
Frequency Response	20Hz - 40kHz
Output voltage	0.4mV
Cartridge impedance	11 Ω
Recommended tracking force	2.2g - 2.4g
Recommended MC input resistance value	100Ω
Recommended MC input capacitance	1000pF (= 1nF)
Recommended MC Gain setting	High
Weight	8.0g

Parameter	Solstice Series Power Supply DR regulated linear power supply
Model Code	NPX TT
Standby Power Consumption	<0.5W
Other Connectors	Mini USB (update only)
Front Panel	Clear Acrylic
Naim Logo	White illuminated
Logo Brightness setting	Button - High, Medium, Low
Mains Supply	110 to 120V and 220 to 240Vac
Dimensions (H x W x D)	70mm x 214mm x 330mm
Weight	5.6kg

Parameter	Solstice Series Phono Stage Switchable MM/MC phono stage with MC load adjustment	
	MM	MC (low & high gain)
Model Code	NVC TT	
Gain	42dB	61dB low gain and 67dB high gain (switchable)
Signal to noise ratio	83dB ref 5mV A-wtd	84dB ref 0.5mV A-wtd (both gain settings)
RIAA accuracy	+/-0.1dB	
IEC cut	(Partial) – 2dB at 20Hz and -3dB at 14Hz	
Cross talk	>75dB	
Max output signal	8Vrms	
THD+N	<0.005% ref 50mV input	<0.005% ref 1.5mV input
Loading	47kΩ and 100pF	1000Ω, 600Ω, 430Ω, 330Ω, 250Ω, 215Ω, 185Ω, 165Ω, 150Ω, 140Ω, 125Ω, 115Ω, 105Ω, 100Ω, 90Ω, 85Ω 100pF, 400pF, 700pF, 1000pF, 1300pF, 1600pF, 1900pF, 2200pF, 2500pF, 2700pF, 3100pF, 3400pF, 3700pF, 4000pF, 4300pF, 4600pF
Headroom	22dB ref 5mV input	23dB ref 0.5mV input low gain setting, 17dB ref 0.5mV high gain setting
Power Supply input connector	Type 1	
Audio input	Stereo RCA	Stereo RCA
Audio output	Stereo RCA, 5 pin DIN, 8 pin DIN	
Front Panel	Clear Acrylic	
Naim Logo	White illuminated	
Logo Brightness setting	3 position switch - High, Medium, Low	
Power input	+/-18V DC @300mA	
Dimensions (H x W x D)	70mm x 214mm x 329mm	
Weight	3.4kg	

9. Digital Stylus Gauge

Before using the Digital Stylus gauge for the first time, remove the battery seal from the battery compartment on the back of the device.

9.1 Unit Selection

To adjust the tracking force we recommend using the default setting: 'g'. If you want to use another unit of measurement, tap the [MODE] button to cycle through the options.

The measuring area of the Digital Stylus Gauge (marked 'Measuring area') is at the same height as a 200g vinyl pressing, so for the most accurate measurement, the felt mat should be removed and a standard pressing vinyl used to add additional height.

Now you can switch on the Digital Stylus Gauge by tapping on the [ON / OFF] area. After switching it on, all the elements of the display are displayed for approximately 3 seconds before returning to '0.0'.

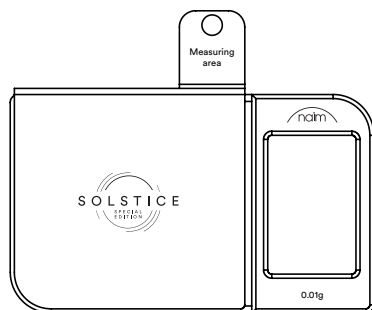
Place the tonearm with the cartridge on the red-marked measuring area, then slowly lower the tonearm so that the stylus is centred on the red dot.

To avoid false measurements, the body of the cartridge should never contact the Digital Stylus Gauge. The display now shows you the weight in grams.

For the Equinox cartridge, this should be between 2.2g and 2.4g depending on listener preference. Lift the tonearm and correct the tracking force.

Check your final adjustments of the tracking force again with the Digital Stylus Gauge.

Note that horizontal placement of your Digital Stylus Gauge is required for accurate measurement of tracking force. Do not touch the surface (calibration area, showing the Solstice logo) during the measurement process to ensure an accurate measurement.



9.2 Changing the batteries

If the Digital Stylus Gauge cannot be switched on, the batteries should be replaced. To change the batteries, open the battery compartment by pressing the lock and remove the cover. Make sure the polarity is correct when inserting the batteries. Replace the cover and be careful not to apply any pressure to the calibration or measurement surfaces.

9.3 Calibration

If the measurements shown seem inconsistent then the supplied calibration weight can be used to recalibrate the Digital Stylus Gauge.

1. Place the Digital Stylus Gauge on a flat, stable surface.
2. Hold down the [MODE] button for approximately 3 seconds: the display will show 'CAL' and then the required calibration weight.
3. Place the 100g weight from the accessories box on the centre of the calibration area (where the naim logo is shown) and wait 3 seconds.
4. Press [ON / OFF]. The calibration is completed.

9.4 Additional functions

Auto-Off

If the device is not used for more than 3 minutes, it automatically switches off to save the battery.

Overload indicator

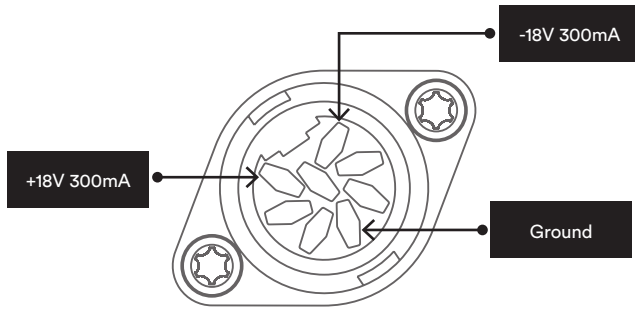
If the capacity is exceeded, the display shows 'O-LD'. Immediately remove the load and check the functionality of the Digital Stylus Gauge with the enclosed calibration weight. Please be aware that weights in excess of the measuring range can permanently damage the Digital Stylus Gauge and invalidate the warranty.

9.5 Technical data

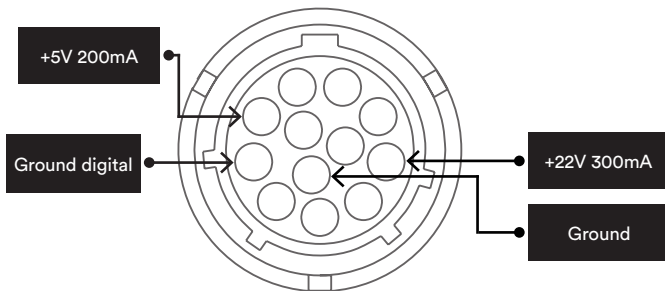
Measuring accuracy: +/- 0.01g
Measuring range: 0 - 100g
Units: g, oz, ct, gn
Power source: 2x CR2032 Batteries
Auto-Off: after 3 minutes
Weight: approx. 64g
Dimensions (HxWxD): 13.5mm x 89mm x 75.5mm
Warranty: 2 years (except batteries)

10. Power Supply Connection Details

10.1 Type 1: 8 pin DIN



10.2 Type 2: 12 way connector



Note: Power Supplies with Type 3 outputs can be connected to Type 2 inputs

11. Product Recycling



Products that display the crossed-out wheeled bin logo cannot be disposed of as domestic waste. These products must be disposed of at facilities capable of re-cycling them and appropriately handling any waste by-products.

Contact your local authority for details of the nearest such facility. Appropriate recycling and waste disposal helps conserve resources and protects the environment from contamination.

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by Naim Audio