

# CLOCK1 ORBITS24

OWNER'S GUIDE

Sun, Moon and Shooting Stars...

“A unique combination of technology,  
kinetic art and style that uses traditional  
and modern fabrication techniques”

Limited edition  
Hand built in the UK

A handwritten signature in white ink that reads "Pete". The signature is stylized with a cursive, flowing script. The letter 'P' is large and prominent, followed by 'e', 't', and 'e' in a connected, fluid manner. There are some small marks and flourishes at the end of the signature.

# Clock1 Orbits24

Please read this guide to help you set up your new clock

**Clock1 Orbits24** doesn't work like a normal clock

It displays 24 hours on one dial with an AM/PM Sun/Moon motif, and drives its hands with 3 Shooting Star *Orbits*

***First, we'll get the clock unpacked and checked***

***Then we'll describe how to set the time***

***Lastly some words on how to care for, and maintain it***

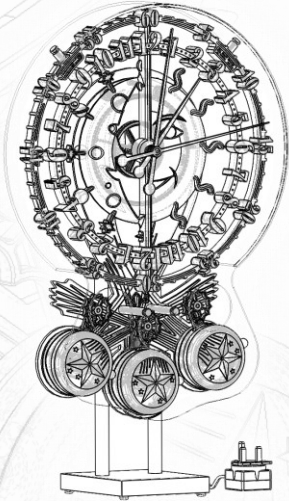


There are small parts that could be a choking hazard; keep them out of reach of children



## What's in the Box\*?

- The clock
- A display stand
- A pre-mounted dust cover
- A multi-region 6v power supply
- 3x Orbit balls (plus a few spares)
- This guide



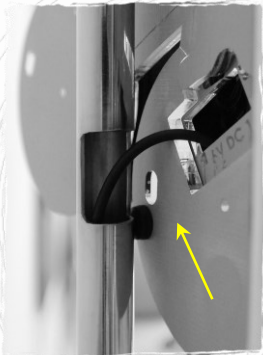
**Carefully check the condition of the various parts  
ready for the next steps**

\* It's worth keeping the packaging in case you ever need to transport the clock

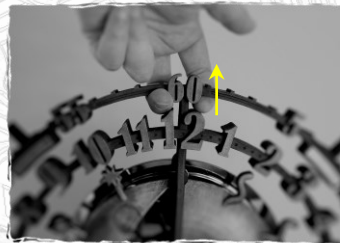
## Unpack

The stand comes pre-attached to the clock via the two **HANG** mounting holes in the main clock backplate. Leave the stand attached (as shipped)

Supporting the stand and lifting the clock at its upper edge (avoid lifting it by the dust cover\*) ***pick the clock and stand up as one***, and sit it on its feet on a level surface



The power cord exits through one of the stand legs and passes under the stand base where it can be discretely routed to the power supply / mains outlet



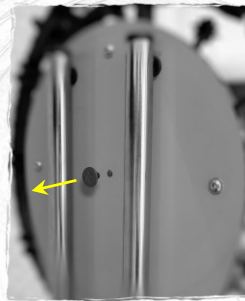
\* There is a risk of damage to the cover

## Initial Checks

Check that the clock is hanging securely on the two small arms at the top of the stand



Check that the chains are free and they are properly engaged on their drive wheels for each of the 3 Orbits. Remove the transport peg at the middle-rear of the backplate and keep it in case of future transport\*. Also remove any other packaging or restraints that may have been fitted for transport



\* The peg helps to prevent the hands from dislodging if the clock suffers an impact during shipping



## Setting the Time

**Clock1 Orbits24** doesn't use gears to drive its hands. Instead it uses 3 Orbits, one driving each hand via a chain. Unlike a normal clock, there is no direct coupling between the hands\*



**This makes setting the time more involved than normal...**

\* A normal clock uses gears which connect all three hands to a single drive

# Setting the Time

**Before connecting power to the clock you need to pre-align the hands**

**Clock1 Orbits24 must be set to “on-the-hour” when powered on\***

Once it's running it can be adjusted to the exact time using the adjustment buttons under the Seconds Orbits (min+/- and hour+/-)

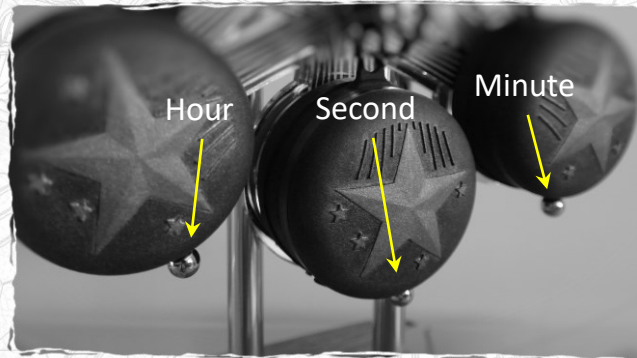
Please follow these steps...

\* If you start the clock from a minute-correct hand setting, the hands will not be correctly synchronised



## Setting the Time

1. Take 3 Orbit balls and attach one to each Orbit (you may need to experiment to find out where the internal magnets are as they can move during transit, but normally they're near the bottom)

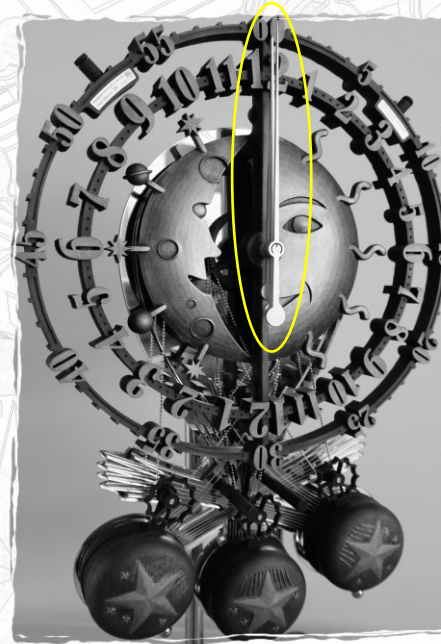
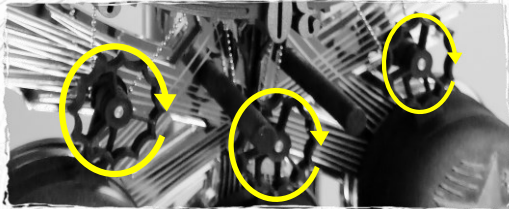


2. Make sure each ball is hanging near the bottom of its Orbit (push them around with a finger if needed)

## Setting the Time

3. Now, use a finger to carefully turn the Hour, Second and Minute Orbit wheels to align their hands to the straight up 60 position

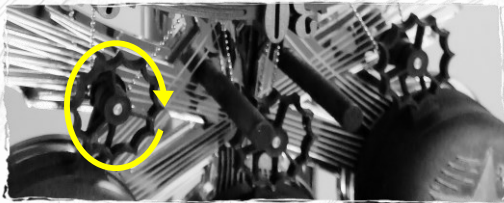
It's best to turn the wheels clockwise



## Setting the Time

4. Now turn only the Hour Orbit\* wheel to choose the current hour (remember to use the **Moon** side for **PM** and the **Sun** side for **AM**, midnight is straight up). Align the hand accurately to the middle of the correct hour numeral

This example shows 9AM



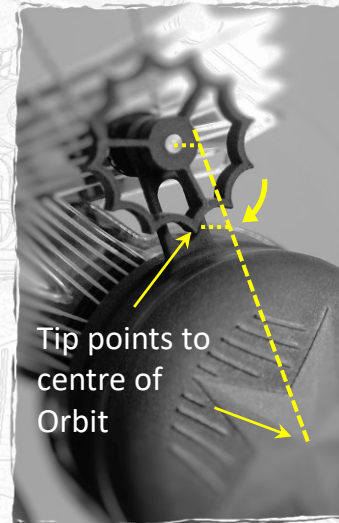
\* The left hand Orbit



## Setting the Time

5. Next, nudge the Hour and Minute Orbit wheels forward a small fraction **clockwise** until the **next** wheel tip is exactly pointing to the middle of its Orbit\*

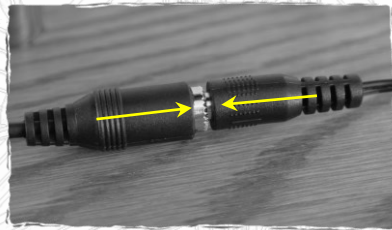
The Seconds Orbit will already be aligned like this by design



\* This ensures that the Orbit ball can engage with the wheel during the adjustment phase

## Setting the Time

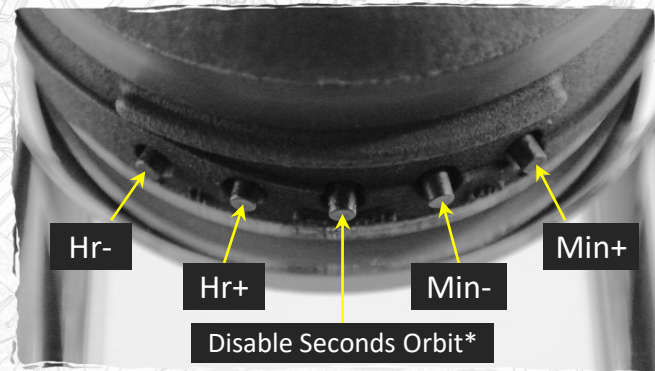
7. Connect the power from the supplied adapter, making sure you push the two halves of the power lead fully home



8. The clock will now initialize automatically. You'll see the Orbits find their home positions, then sweep a couple of times backwards, then once forward. This adjustment takes around 15 seconds

## Setting the Time

9. Now you can adjust to the exact time using the buttons located on the lower side of the Seconds Orbit



10. Care is needed to reach the buttons with your finger...there is a chance you'll knock the sweeping Seconds ball off. Don't worry if that happens, just power down, replace the ball and start over

\* The Disable Seconds Orbit acts immediately to stop the Seconds Sweep...for silent running if so desired



# Daylight Savings

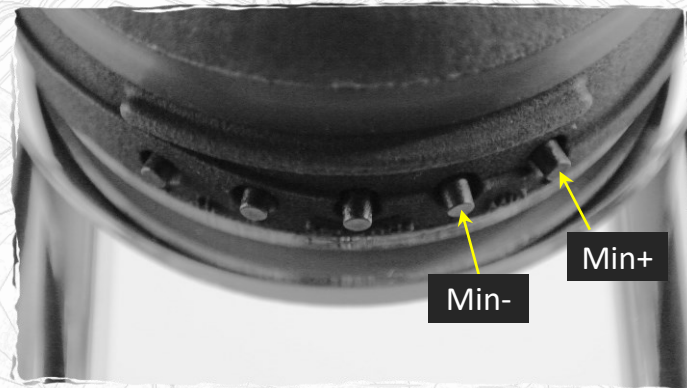
If you need to add or subtract 1 hour due to the change between Summer and Winter operation, simply press the **Hr+** or **Hr-** button **once**. The Hour Orbit will make **5\*** sweeps forwards (or backwards) to move to the next hour



\* The hour hand moves 5 times per hour (i.e. every 12 minutes)

# Adjusting Minutes

If you need to adjust the Minutes, simply press the **Min+** or **Min-** button once, or hold your finger pressed for continuous adjustment\*



\* The Orbit will sweep once every-other second to make it easier to stop at the correct time

## Power Failure

If the mains power fails, you'll have to re-set the time from scratch. Please remove power first and then refer to Page 7

Note that the clock **will** start to run again once power is reapplied, but the hands will **not** be in correct synchronism. If you notice this to be the case, please power the clock off and start the time setting procedure from Page 7



# Silent Running

If you want to site the clock in a place where even the gentle “swoosh-tock” noise of the Seconds Orbit is obtrusive, you can disable it, leaving the clock to otherwise run as normal

*Press the middle button once\* to stop the Seconds Orbit*



Disable Seconds Orbit\*

\* Each press toggles between enabled and disabled. If re-enabling, the Seconds Orbit will **not** be in sync

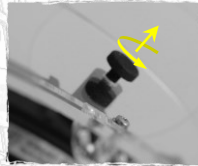
# Cleaning

- **Only use mild soap and water on a soft cloth to clean parts of the clock and note that some parts are small and could be damaged if twisted or snagged**
- **Never use solvents such as IPA, Acetone, Methylated Spirits etc as they will damage some materials used in the clock\***
- **Never scrub or rub hard during cleaning as you may damage coatings or break small parts**
- The dust cover will keep most dust and dirt away but you may need to carefully use a vacuum with a soft brush head if any has accumulated
- The dust cover can be removed as noted in the following pages

\* These solvents are sometimes found in products like Wonder Wipes etc, use caution!

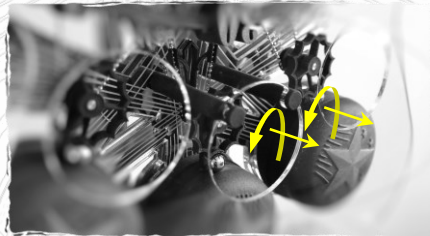
# Removing the Dust Cover

Most of the weight of the cover is taken by the two bottom mounting pillars, so first unscrew and remove the two plastic screws from the **top** mounting pillars



⚠ Do not let the cover tip forward, hold it upright with your hand

Taking the weight of the cover at its top edge, unscrew the two screws from the **bottom** pillars



Carefully withdraw the cover forwards past the face. Refit the screws back into the mounting pillars, taking care not to cross thread them

⚠ Handle the cover with care, particularly avoid twisting the curved outer edge\*


\* The cover edge is not designed to take the weight of the clock, or the cover itself when held away from upright



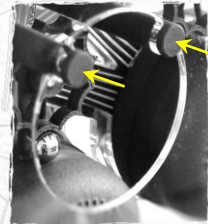
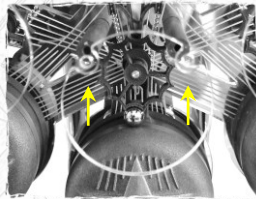
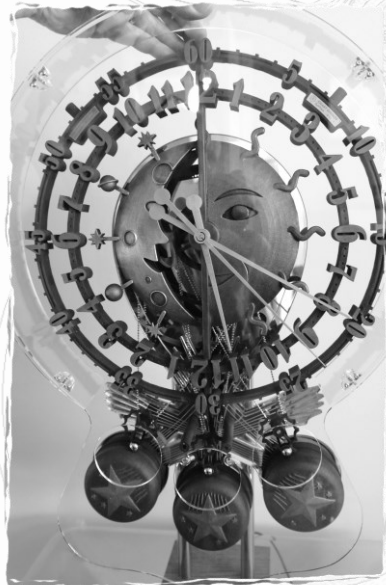
# Fitting the Dust Cover

First, remove the four plastic screws from the top and bottom mounting pillars. Hold the cover at its upper edge. Slide it carefully into position, past the face, so that it is sitting on the two upper mounting pillars. Hold the weight of the cover with your hand

Screw in one of the **bottom** screws using your other hand. Then screw in the second **bottom** screw. This may need a little manipulation of the cover to align the second hole

 Try not to twist the cover too much while aligning the holes and remember to still take its weight

Now release the weight, letting the cover sit down onto the two **top** pillars. Fit the screws into both



## Wall Mounting

It is possible to wall hang the clock. Use 2x No.4 x 1 ¼ / 3 x 30mm wood screws (or longer)\* held **securely** by wall plugs. Leave around 12-14mm of screw projecting from the wall, making sure that they are strong enough to support the clock's weight. The horizontal centre spacing between the screws needs to be 75mm

Remove the clock from its stand by passing the power cord back up through the stand leg. Remove the dust cover. Then, supporting the weight of the clock via the upper face edge, *slowly* but firmly pry the backplate off its two mounting prongs, pulling the prong heads back through their rubber mounting **HANG** bushes, taking care not to dislodge them

Mount the clock onto the wall screws through these same bushes making sure that the heads are fully through. The power cable can be hidden in a wall cavity if so desired. Refit the dust cover

\* Max head diameter around 6.2mm. Larger heads may force the rubber bushings out

## About Clock1 Orbits24

Operating environment: 10°C to 30°C, 80% RH

Accuracy at 25°C: typ. +/- 1sec per 24Hr

Power: Around 3W supplied from 6V 1A wall brick adaptor

Connector: female in-line jack 5.5mm, 2.1mm centre +pin

Power adaptor cable length: typ. 1.8m

Clock cable length: from clock to jack, typ. 2m

Clock dimensions without dust cover or stand: 51x38x6cm<sub>HxWxD</sub>)

Height on stand with dust cover: 63cm

Clock weight without dust cover or stand: 1.8Kg

Clock weight with dust cover and stand: 3.3Kg



# Questions You Might Ask

**Q: Is the clock noisy?**

A: No. It does make some noise when the balls sweep on their Orbit and when the ball turns the wheel but overall it's very quiet thanks to the noise damping in the design

**Q: Does the clock vibrate?**

A: A little bit, as the balls sweep. Overall, the vibration is very low

**Q: Can I wall mount the clock?**

A: Yes, see Page 22

**Q: Can I run the clock without the dust cover?**

A: Yes, but you may have to clean it more often

**Q: Does any part need regular maintenance (oiling for example)?**

A: No, in fact don't try apply any lubricants or adjust any parts

**Q: Will the moving parts wear out?**

A: The clock is designed to have minimal wear as it runs (like any other clock)

**Q: If the clock is switched off for a long time do I need to do anything special?**

A: It's best to remove the orbit balls and store them somewhere safe

# Questions You Might Ask

**Q: Can I run the clock from batteries?**

A: No. The clock was not designed to run on batteries due to the power it needs

**Q: I've noticed the chains are quite slack, is that OK?**

A: Yes. It's normal and also important for correct operation

**Q: The Orbit balls sometimes seem to shudder a bit as they slow down, is that normal?**

A: Yes. The balls are held on by strong magnets but they can shudder a bit as they slow down

**Q: How should I pack the clock for transport?**

A: Use the original box and insert. Fit the dust cover securely to the clock. Lay the clock down, still on its stand, into the cavity of the packing insert. Lay the packing spacer on top. Make sure the ancillary parts are securely stowed

**Q: Can I use the clock outdoors?**

A: No. The clock is designed for indoor use only

**Q: Can I mount the clock at an angle?**

A: No. The clock is designed for vertical operation only

# How to Get Support

Email: [support@techtock.co.uk](mailto:support@techtock.co.uk)

Web: [www.techtock.co.uk](http://www.techtock.co.uk)

## EU DECLARATION OF CONFORMITY

Product: Clock1 Orbits24

Manufacturer: TechTock

This declaration of conformity is issued under the sole responsibility of TechTock

Object of the declaration: See picture to right

The object of the declaration described above is in conformity with the Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of certain hazardous substances in electrical and electronic equipment

Signed for and on behalf of TechTock, September 2020, England UK, Peter Sleeman







