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Established in 1967, Sinclair Harding honours the historical tradition of fine English clockmaking. With its range of beautiful hand crafted clocks, this unique company embraces the horological industry's ideals for precision, quality and perfection.

Sinclair Harding's craftsmen work hard to study and preserve orginal production techniques. The exquisite detail of each clock is a testament to this skill and dedication, with every delicate stage of production carried out in their Yorkshire based workshop.

Sinclair Harding's valued clients range from private collectors to high class jewellers worldwide and includes prestigious, bespoke commissions. Every clock Sinclair Harding makes is lovingly crafted to suit your individual needs and your involvement is encouraged at all stages of production of what will become a treasured heirloom. Clients are welcome to visit our workshop to appreciate first hand the trademark skill and dedication of Robert Bray FBHI and his fellow craftsmen

Robert Bray is a founding member of the Alliance of British Watch and Clock makers founded in 2020. He is also a fellow member of the British Horological Institute and a member of the AHCI Académie Horlogère des Créateurs Indépendants. In 2010 Robert was awarded the BHI Silver medal for outstanding development in the field of Horology.


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## SINCLAIR HARDING H1

In May of 1714, representations from Her Majesty's Fleet, Merchants and Merchant-Men demanded the Government to encourage the solution of the Longitude problem and in July of that year the Longitude Act was passed offering up to $£ 20,000$ for a method of determining Longitude at Sea. In the mid 1720's Yorkshire born John Harrison started work on what would be the first of his clocks, the H1, that would work on board ships and so solve the Longitude problem. In 1772 after a lifetime's work, culminating in the watch H4, John Harrison was paid the final balance of the $£ \mathbf{2 0 , 0 0 0}$ reward.

In 1999 Sinclair Harding started to work on a clock in homage of John Harrison. Nearly 5 years in development, the Sinclair Harding H1 is a wonderful combination of art and fascinating mechanics, all finished to an exquisite standard. To demonstrate the H1's capability to work at sea the movement is mounted onto a granite base, which in turn is suspended on pivots. The whole piece sits on a table designed to the customer's specification and is counter balanced by a weight. A tiny hidden DC motor rotates a small weight which puts the whole assembly out of balance, and a gentle rocking motion ensues, creating a fascinating spectacle inside the elegantly engineered glass case. John Harrison used wooden wheels and pinions throughout, using the Lignum Vitii, a wood which exudes its own oils. On the Sinclair Harding model, the wheels and pinions were purposely made in brass and polished steel.



## JOHN HARRISON SEA CLOCK

Our range of Sea Clocks are inspired by the great John Harrison. In each clock we have embodied at least three of the basic principles from Harrison's first Sea Clocks.

Perhaps his most well known invention is the unique escapement, which gives the clock its popular name, 'The Grasshopper'. The subtle and almost silent 'lock and release' action of the pallets permits them to work without oil (and consequently be free of the effects of changes in viscosity) and at the same time make it so enduringly fascinating to watch.

The Invar pendulums are linked at the back, which allow the clock to function 'out of level'. Their gentle action gives each clock that restful quality which is typical of an earlier more tranquil age.

Two styles of clock are available they are named "His" and "Hers". As with all Sinclair Harding clocks a selection of finish and base materials can be specified to make your clock a very personal piece.

The engraved dials are hand silvered as they were in Harrison's day. The unusual seconds hand special study, it sweeps through 240 degrees going from $0-60$ seconds before vanishing, only to reappear instantly at zero again.

## JOHN HARRISON MOONPHASE SEA CLOCK

The Astronomer Royal, Edmund Halley (c1656-1742) was a proponent of the Lunar distance method for determining longitude. The observations and calculations required for this method took many hours and were prone to error. The hand painted Moonphase dial (each signed and numbered by the artist) on the Moonphase model symbolises this alternative method.

Our Moophase Sea Clock provides in the Moonphase dial a representation of the competition (Lunar distance method) he faced for the solution to the Longitude problem back in the 18th Century. Each Moonphase dial is hand painted by our artist Keith Warrington, each with a hidden initial and date on each dial. Having a hand painted dial enables us to offer a bespoke and unique dial to individual customer taste.

Almost every piece is made in the workshops of Sinclair Harding using a combination of modern technology, materials and traditional finishing techniques. Every care is taken at each stage in the making and build to ensure that the final clock performs to a standard, which justifies the association with John Harrison.



## THREE TRAIN SKELETON CLOCK

This magnificent chiming Skeleton Clock is the result of months of painstaking hand work. Each plate is individually cut out of solid brass, edge filed, papered smooth, burnished and gilded before finally being built into a finished clock. Every wheel and arbor, detent and lever has been finished by hand to give the whole mechanism the glittering aspect of a true work of art.

The motive power for the 8 day movement is provided by three mainsprings each operating through its respective fusee and chain to give virtually constant torque to the train of wheels. The going train is controlled by a $1 / 2$ second deadbeat escapement and an Invar pendulum rod assembly, the bob of which is visible beneath the plates. This gives the piece a high standard of timekeeping, which with the seconds dial produces additional movement to add to the already fascinating spectacle.

The escape pallet is made from high carbon steel, with through hardened faces diamond polished to a mirror finish assuring a long life. The chime train operates a pinned drum and hammer assembly which can be set to play Westminster or a choice of Whittington and St Michael chimes on an octave of hand tuned bells, whilst the striking train sounds the hours on a ninth tenor bell. The levers and racks controlling this activity are finished to the same meticulous standard.

Probably the most classic of all the clocks made by Sinclair Harding is the Table Regulator. The case is made from aluminium, polished and hard anodised and finally finished with renaissance wax. The front and back opening bevelled glass doors are $\mathbf{6 m m}$ thick. Similarly finished are the side panels, which give an interesting view of the movement.

The dial is a 'Breguet' style with its large diameter seconds and slim chapter ring. Engraved and silvered by hand it represents the high point of elegance in dial design, and provides a contrast with the diamond pattern backing plate. The clock has a very substantial 8 day movement controlled by an unusual 'high Q' spherical pendulum beating half seconds.

The escapement is a Sinclair Harding modification of the fascinating double three-legged gravity escapement - the original design by Lord Grimethorpe controls the great Westminster Clock in London, more commonly known as Big Ben.

At Sinclair Harding we like to use different combinations, we are able to use a traditional brass case as well as different coloured anodising with either Gold or Rhodium finished movements.


## LA COLONNE DU TEMPS

In Baselworld 2017 was where the collaboration between Jörg Hysek and Sinclair Harding began. Along this challenging journey in the development of the 'La Colonne du Temps', the whole team at Sinclair Harding had to learn new techniques and skills in design, manufacture, finish and in the assembly to create this timepiece. This was all completed under the watchful eye of Jörg Hysek. It was key for Jörg, that this creation was true to his vision and we both feel this was achieved.
'La Colonne du Temps' is the first mechanical sculpture to use an innovative digital display of the time in column form, is comprised of five separate cylindrical segments anchored on a vertical central axis.

To produce this fascinating display of the passing hours and minutes, a complex arrangement has been developed of independently rotating carriages, each guided by a unique cam. Each segment of the column moves separately, at its own pace, according to the unit of time it represents, thus creating a visually arresting spectacle of time-and-motion. Conversely, a retrograde hand indicates the seconds, which are engraved on a smaller and static cylinder positioned between the hour and minute segments.

At the base of the column, an elegant case houses the timepiece's movement and the entire structure is supported by feet and leather encased rollers.

## TWO TRAIN CONDLIFF CLOCK

## This is the latest addition to the range of skeleton clocks made by Sinclair Harding, based on the series 2 style manufactured by the famous Liverpool clockmaker James

 Condliff circa 1860In the Victorian era, less than 100 skeleton clocks of various styles by this company were made and very few of the original skeleton clocks ever appear at auction. This latest Two Train Skeleton clock is possibly the most elegant of the Condliff clocks with extremely delicate frames. Sinclair Harding use the latest technology with CNC machines producing components of great accuracy, however all clocks are individually polished by hand to a high degree of finish.

A number of Condliff's clocks had normal wheel trains with pendulums, this clock has a large balance wheel with a helical balance spring surmounted at the top of the clock frame, this gives a most attractive and balanced look. The clock beats seconds and this is shown by the centre sweep seconds hand against the hand silvered chapter ring, all the hands and striking work are polished and blued.


## SINGLE TRAIN CONDLIFF CLOCK

 WITH PASSING STRIKEIn homage to James Condliff of Liverpool, circa 1860 this single train skeleton clock features exquisite crossings of the wheelwork and plates which highlight Sinclair Harding's attention to detail and finishing at its very best.

The frames, pierced out of solid brass, are gracefully faceted, polished and burnished to provide a gleaming support for the four-wheel train. The Great Wheel has 288 teeth and makes only one revolution daily. This drives the centre wheel, which is framed by the pierced chapter ring and bezel.

A passing strike produces a single clear strike every half hour on a hand tuned bell. The mechanism is unique to Sinclair Harding and has been created to maintain the symmetry of the design. Two hammers act on one bell and strike the alternate hours. A simple lever hidden under the base can be used to silence the strike at night. The movement is mounted on two ornate pillars and appears to be floating over the base made from a sandwich of decorative brass plates and a choice of a selected wood or marble.

## SUN AND MOON CLOCK

The movement is visually light and graceful with the three hand painted dials, one signifying the sun rise and sun set and the second dial showing the Moonphase cycle.

Most Moonphase dials take twenty-nine and a half days to complete a cycle. On this clock the panorama of the sky changes daily as in real life, sunshine and clouds during daylight hours and the moon rising and setting every night.

The unique feature being that over twenty-nine and a half days the moon goes through its phases, waxing and waning, in the most realistic manner. Between the seconds bezel there is a cluster of stars, which elegantly move with the pendulum swing.

The movement has an 8-day reserve, with a stop work mechanism to ensure the movement cannot be over wound.


CONGREVE CLOCK



William Congreve, the son of a British General and more famous for his invention of the first rocket in 1795, patented in 1808 a new Principle for the Measurement of Time using a rolling ball escapement. His original piece was powered by a cannon ball although later models were driven by springs.

His resulting clock was far from accurate, however the mechanism provides a fascinating and hypnotic spectacle for the viewer. The Sinclair Harding Congreve uniquely has the track mounted on top of the clock. The track is made from brass and can be finished in either Platinum or Gold with a white or black ceramic ball. The ball meanders along the track, triggering the mechanism every 15 seconds to gently reverse the ball. The skeletonised track also makes it easy to clean and provides a reasonable degree of timekeeping.

The clock is powered by a spring through a hand made chain, which drives the movement through a Fusee to ensure the clock mechanism sees a constant torque. The movement is 8 days and is wound from the front cleverly lifting the bezel using the winding key to expose the winding arbor. At the other end of the train, a fly absorbs any shock loads at each index and prevents the tray indexing mechanism vibrating. The single hand shows the hour with a mother of pearl disc detail indecating the hour on the engraved plated chapter ring.

## GREAT WHEEL SKELETON CLOCK

The superb artistry which typifies the French Horologists of the late 18th Century seems to culminate in this beautiful clock. Deceptively simple, the restrained elegance serves to enhance the obvious craftsmanship inherent in such fine wheelwork with its delicate crossings and very high tooth counts.

The frames, pierced out of solid brass, are gracefully faceted, polished and burnished to provide a gleaming support for the four-wheel train. The Great Wheel has 288 teeth and makes only one revolution daily. This drives the centre wheel with a diameter slightly larger than the bezel, thus, when viewed from the front, frames the silvered dial.

The escapement is a 'Graham Deadbeat' controlled by a 'silk' suspension pendulum and the movement requires winding once weekly. The movement is mounted on a slim, granite or wood base to the customer's choice and is protected by a bevelled glass shade.

Sinclair Harding offers two designs, a variation of the classic ' $Y$ ' frame French Skeleton Clock and the 'Arch' frame where the graceful curves of the frame legs are engraved with a simple yet elegant pattern



CARRIAGE CLOCK

The newest creation designed and manufactured in late 2021. The Platinum Jubilee carriage clock has been created to commemorate the 70th anniversary of our Queen's reign.

The dial is subtly engraved with the Union Jack flag blowing in the wind wrapping around the official Jubilee emblem representing the nations affection for Her Majesty Queen Elizabeth II.

The design of the emblem is a faithful copy to the winning entry of The Queen's Platinum Jubilee Emblem Competition, won by 19 year old graphic design student Edward Roberts, from Nottinghamshire. The design is engraved into a machined brass disc which is then wax filled, hand grained and silvered it is also lacquered to prevent tarnishing.

The second carriage clock design features a diamond pattern dial with a small plaque which can be personalised. This model can be finished in Platinum, Gold or a combination of both.

The heart of the movement is a heavily modified Gold-plated constant force Swiss lever escapement, fluttering at 14,400 beats per hour. The movement has an 8 -day power reserve, with a unique hidden stop work mechanism to ensure the movement cannot be over wound.

## ROSEMARY CLOCK

Rosemary, which first came into being in 2009, is a miniaturised version of the Great Wheel Skeleton Clock and was designed to include an integral bevelled glass case and base.

The pendulum is hung from a silk type suspension, which can be lowered and temporarily secured, making it ideal for presentation ceremonies. A presentation case is also available. The plates can be made any shape within the confines of the wheel train and personal engraving can be added to the plinth.

Every part, with the exception of the pallet, is made from either Gold plated Brass or Stainless Steel, which will eliminate any tarnishing problems caused by high humidity. The main wheel has 288 teeth cut using a cycloidal tooth form, like the Great Wheel this makes just one revolution daily. The Escapement is a 'Graham Deadbeat' controlled by a 'silk' suspension and Invar pendulum

The movement is fitted with Maltese Cross stop work to achieve the most accurate timekeeping and the clock will run for a full 8 days.



## LONGCASE CLOCK

The heyday of the traditional London Longcase Clock was undoubtedly the mid 1700's when elegance and space were the hallmarks of an era which is still regarded as the highpoint of English design.

The cases are made from the finest selected timbers - usually English Walnut or Honduras Mahogany with curl or burr panels. The stringing line is inlaid brass. As a variation, a bevelled glass door can be fitted to the trunk to show the descending weights and the gently swinging pendulum. As each of our clocks is hand crafted, customers may specify any suitable wood or case style. The opposite page shows a contemporary style case made in a combination of English and Brown Oak.

The movements are 8 day, key wound weight driven and can be hour striking or a similar but much more complex quarter chiming on eight bells (with a ninth and larger bell for the hour) playing Westminster or Whittington chimes every 15 minutes.

Each Moonphase dial is handpainted making the dial unique to individual Longcase Clocks. We particularly recommend our Moonphase version with a handpainted dial depicting your own land and sea scene.

## FINISHES AND BASES

All the parts on each clock are hand finished (even the ones you cannot see!). The Brass parts are protected with a thin layer of 23.5 carat Gold or Platinum. The finishes we offer are Gold, combination of Gold and Platinum or Platinum plated.

Our bases are French polished, this technique produces a high gloss surface. We also offer a range of granite bases. Each of our bases can be personalised with an engraved plaque.

Each clock is provided with a flightcase to protect during delivery and moving of the clock.
Our clocks are guaranteed against faulty workmanship and materials for the lifetime of the original owner. We recommend our clocks are serviced every 10 years.



Birds-eye Maple


Walnut Burr


Black Granite


Olive Ash


Rosewood


Star Galaxy


Tiger Oak Burr


Black


Engraved Plaque


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