



Do It Yourself

Build a clock to set your watch by

Timothy Treffry

🕒 *QP* readers need not be reminded of the special appeal of mechanical watches, but, compared to quartz, they are not great time-keepers. Now you can buy a mechanical clock that keeps time better than most quartz watches and have the added pleasure of putting it all together yourself.



Step one: figure out which bit's missing...

Sattler – a German company famous for its precision mechanical clocks, usually selling for over £15,000 – has launched a 'self-assembly' version with components made to a similar standard. It is available online (www.uhrenbausatz.de) and comes in kit form, ready to be assembled for €3,200 (£2,190). Known as the 'Mechanica', the clock is no 'flat-pack' compromise. It carries all the hallmarks of its Sattler origin but with the added advantage of the creative glow it inspires within the person who assembles it.

First, drill your wall

The Mechanica is shipped in a very sturdy box with the components safely housed in polyurethane trays. All the necessary tools are provided, together with a comprehensive 104-page hardback instruction book. There are even gloves to prevent your leaving finger marks on the gold-plated brass gears! The book is well illustrated and not only gives a

step-by-step guide, but also has excellent information on how a pendulum clock works. This will give the novice a better appreciation of the principles involved, many of which will improve one's appreciation of the mechanical watch. Sufficient detail is given to satisfy even the most knowledgeable.

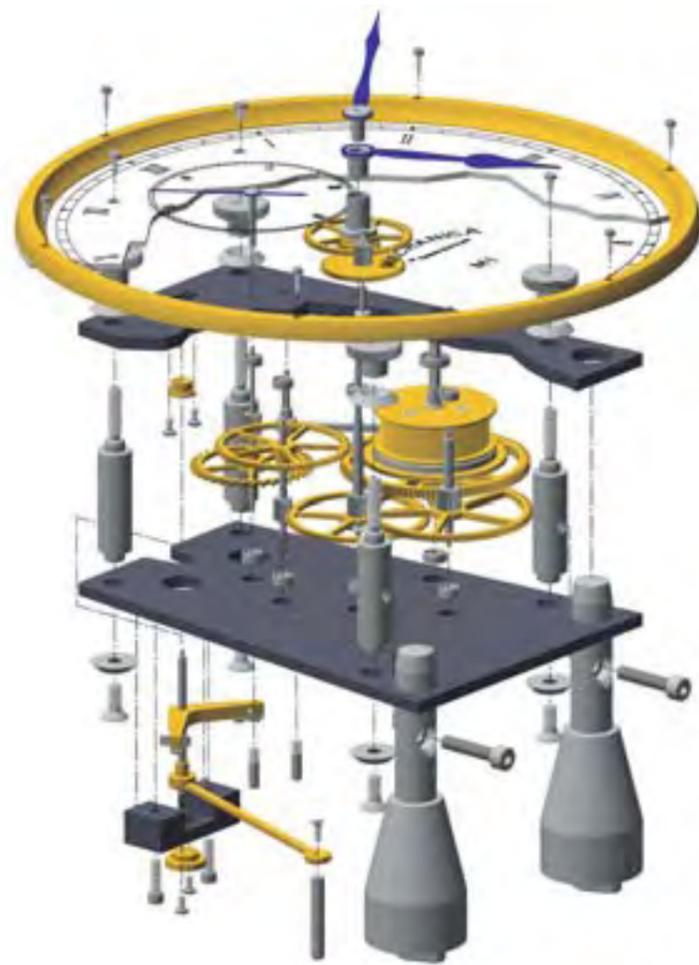
Four different types of case are available. With the oak, walnut or cherry versions, the first task is to apply the special finishing oil to the raw wood. The components of the black lacquer case are already finished and one can get straight on with assembling the clock.

It is possible to complete the assembly in a day...but why rush? The case and movement components are both so beautifully made that you will probably want to stretch the process out to maximise your enjoyment. The instructions are crystal clear and include checks at key stages to ensure that

everything is running OK. One thing to bear in mind is that each component is a perfect fit. If you are having difficulty, it is a sign that you are attempting to do something incorrectly.

Sattler are guided by tradition but are not slaves to it; the axles (or more correctly, 'arbors') in the gear train do not have delicate pivots for their bearings but are set in ball races. The escapement has been perfectly adjusted at the factory but, unless you are very impatient, it is worth following the section in the instruction book that takes you step-by-step through its action. This lets you see just how well-engineered the clock is and confirms your judgement in deciding to buy it – always a nice feeling. After that, it is simply a matter of attaching the dial and hands and selecting a solid wall to attach the clock to. The drills to make the holes in the wall are the only things that are not provided.

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An exploded view of the Mechanica's movement.



Four variants in Erwin Sattler's Uhrenbausatz Mechanica range.



Precise process

Setting the clock proceeds in two stages. Firstly, the pendulum should be set at the length suggested by the book. The time is then checked against an accurate source and rechecked after a few hours. In this way, the clock can soon be brought to time using the rating nut below the pendulum. The aim is to adjust the clock to lose slightly – about a second per day. Then it is time for fine adjustment. This is achieved by adding small weights to the platform fixed part way up the pendulum rod. Adding weight has the effect of raising the pendulum's centre of gravity slightly, making the clock run a little faster. As the clock becomes more accurate, it will need to be checked over longer periods. In theory, we soon get to a situation where, with luck, the clock will be exactly right for a few days.

But why involve luck at all? Simple: when the time-keeping is almost perfect, a factor other than pendulum length becomes important. Contrary to initial speculation, the special pendulum is not affected by changes in

Assembling the case requires as much care as the movement itself.

temperature. However, the basic version of the Mechanica is not immune to changes in barometric pressure. When the pressure drops, the clock will go a little faster, gaining perhaps half a second per day over a big drop. A similar loss will occur if the pressure rises. Changes in atmospheric pressure will average-out over the seasons and, having been left untouched for almost a year, my clock seems to be getting back to where it started, without ever being more than about 12 seconds 'off the pips'. This is certainly good enough to set your watch by each week but, if you want to do better, a device to compensate for pressure changes can be added for an extra €320. A range of other options is available but most will simply alter the clock's appearance rather than modify its performance. I rather like my clock's slight vulnerability to the weather – in sympathy with its environment. ○

Lower your chair or raise your table to get that authentic watchmaker experience.

Further information: Uhrenbausatz Mechanica clock by Erwin Sattler: www.uhrenbausatz.de

