

Creators in sync



Jean-Philippe Arm

Armin Strom caused a stir last autumn with the presentation – first in London and then in Dubai – of his resonance watch, the Mirrored Force Résonance. A magical word that brings to mind clockmakers such as Janvier and Breguet, followed by Journe, who drew inspiration from his masters, miniaturised the mechanism and took it from the pocket to the wrist (WA013). The phenomenon remains mysterious. What happens when two movements brought together begin to interact and to beat in sync with each other? Does transmission involve vibration of the air mass? To clarify this, Breguet had placed his model in a vacuum and observed the persistence of the resonance. The conclusion was that the vibration occurred through the mainplate. Two centuries later, there clearly needs to be a physical connection.

In 2007, Rudis Sylva was in line for the Grand Prix d'Horlogerie de Genève with a resonance timepiece, which led to a stalemate subsequently resolved thanks to Mika Rissanen. The latter succeeded in bringing the project to fruition by inventing the harmonic oscillator. Initially regarded as heresy, connecting two serrated balance wheels became an obvious choice. Those in the know in the Jura no longer speak of resonance, but instead of another result generated by this device: immediate and constant compensation of the influence of gravity in a vertical position. **Better than a tourbillon.**

Claude Greisler, Rissanen's counterpart at Armin Strom, also explored various avenues before innovating. This time it was the balance wheels of two movements positioned so as to mirror each other and to oscillate in an opposed phase relationship, connected by a spring attached to a mobile stud. When they begin to resonate, they help each other by mutually compensating for their rate variations. The aim is to stabilise the frequency, which as a rule varies incessantly throughout the day.

This unusual connection can be seen on the dial side, whereas the seconds are displayed symmetrically. They are not necessarily synchronised, because when winding, the barrels always start in a random manner within 10 or 20 seconds. While the reality of the resonance phenomenon has nothing to do with the time displayed, a pushbutton nonetheless enables zero-resetting, merely to enhance the wearer's visual comfort.

We arranged a friendly meeting between these two watchmakers so they could exchange their experiences, their doubts and their discoveries. An open, fascinating and naturally enriching discussion. At one point, we were left completely lost by the complexity and level of the exchange. We discreetly disappeared and left them to continue between specialists. ●

The need to establish a mechanical link became a natural choice both for Rudis Sylva, by connecting two serrated balance wheels, and for Armin Strom, by means of a spring joining the two oscillators.

