



# Fine Finnish



Quietly and steadily, an invasion from northern quarters has been migrating southwards to Switzerland, with watchmakers from Finland conquering pole positions within the Swiss watchmaking industry. Nearly every major watch company in Switzerland has at least one Finnish watchmaker employed in their ateliers - often working on the most complicated pieces. The common factor behind this bevy of talent? The renowned school of watchmaking at Tapiola. Kari Voutilainen is a former student, and for the past three years, he has been creating exceptional timepieces from his independent atelier located in the picturesque village of Môtiers, just next door to Fleurier, the home of Chopard, Bovet and Parmigiani Fleurier, his former employer.

Theodore Diehl

Like many strong-minded watchmakers before him, Kari Voutilainen found more than 10 years' restoration work on exquisite horological antiques at Parmigiani extremely fruitful, but in the end he could not deny himself the urge to go solo. So said, so done, and the result was the Masterpiece 6 - a decimal minute-repeater wristwatch, which was presented at the AHCI stand at Baselworld in 2005. Kari's new concept used 10-minute intervals instead of the repeater's standard 15, hence the term 'decimal'. For minute times such as 0:29, this means the minute chimes only need to strike 11 times, ("ding-dong, ding-dong" for 20 minutes, plus nine single "dings"), whereas a normal repeater would be required to strike 14 times ("ding-dong" for 15 minutes, plus 14 single "dings"). Although minute repeaters are charming to listen to, counting out the quarters and minutes can become a rather tedious form of luxury, so it was not surprising that the top-echelon collectors were soon enchanted by the Masterpiece 6, placing orders eagerly.

For 2006, Kari will be presenting another minute repeater, the Masterpiece 7. Specially built to the requests of a private client, its hand-made, 18-carat white-gold half-hunter case is engraved with a modern interpretation of the seven daughters of Atlas. However, this marvellous piece is just the beginning. This year's other project sees Voutilainen tackling his first series of hand-made chronographs, entirely designed and manufactured in his atelier. Not to put it lightly, they should mark the start of a small revolution for the watchmaking industry and collector alike.

## Hi-tech heart

To be produced in a limited edition of 10 pieces in 18-carat white gold, and boasting Voutilainen's characteristically contemporary visual touch, the classically built chronograph has been selected to premiere a very special bit of advanced materials technology: the new 'Carbontime' oscillator. This patented balance spring and balance wheel - under intensely secret development for the past five years by a British consortium - utilises carbon and ceramic materials.

Importantly, one feature of the new oscillator is its anti-magnetic properties. With all our gadgets and laptops, we (and our watches) are subjected to varying doses of magnetism on a daily level. What many watch enthusiasts do not realise however is that once magnetised, industry-standard Invar balance springs (which contain some iron) cannot be de-magnetised; the dipole activity of the alloy is permanently altered.

(Below) Kari Voutilainen in his workshop. After studying at Tapiola, Finland in 1989, Voutilainen completed a post-grad complicated watch course at WOSTEP before being snapped-up by Parmigiani Mesure et Art du Temps to restore rare antique watches. After 10 years there, he went back to head-up the complicated watchmaking department at WOSTEP for three years, before setting-up business independently in 2002, at Môtiers.



(Opposite page, left) Last year's Masterpiece 6, presented on the AHCI stand at Baselworld. It was the world's first 'decimal' repeater; a ten-minute repeater that chimes units of 10 minutes plus the remaining single minutes, rather than the quarters plus remaining minutes.

(Opposite page, centre) Opening the half-hunter case reveals the beautiful finish of Masterpiece 6. The bridge and steelwork bevelling, the polishing of the recesses and the drawn-grain finish on the bridge rims are all done by hand. The bridge surfaces are adorned with Côtes de Genève stripes and the mainplate with circular and snail graining.

(Opposite page, right) Kari Voutilainen's new decimal repeater, Masterpiece 7, made specially in white-gold for a client.



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Perhaps even more importantly, Carbondime gives remarkable chronometric results without succumbing to irregularities induced by thermal change - the bane of all hairsprings. Normally, cold makes them stiffer, heat makes them more relaxed. The trick behind the thermal insensitivity of Carbondime is that carbon's relatively high fusion temperature of 3,650°C means the typical 0°C-40°C range of everyday use has only a negligible effect.

Lastly, Carbondime is easier to work with in daily watchmaking. The diamond balance springs developed by Ulysse Nardin a few years back gave excellent results too (diamond is, after all, carbon), but diamond's brittleness made it impractical for widespread industrial use. The Carbondime system can be used and serviced in the same fashion as existing systems in mechanical watches.

### Hand made

Voutilainen's watches are not signed 'Swiss Made' as one might expect, but 'Hand Made' - part of an integral philosophy underpinning Voutilainen's atelier. "You know, I am proud of the fact that all my timepieces are made here, in a small atelier. I am only able to produce about 10 watches per year. The exclusiveness of my watches is limited by what I can do with just my two hands... If a client has a question, a repair, or just needs oiling and regulation, I am the one who will have to answer for it. The clients coming to me understand and appreciate what these words 'hand made' really mean."

Which brings us neatly to the next unique aspect of Voutilainen's chronograph: the case. Today, the manufacture of watch cases is a highly automated process with handwork stretching to final polishing at the most. But this won't do for Kari: "I was very lucky to have met Gideon Levingston in France, and was amazed to discover that he was able to produce watch cases entirely by hand, starting from simple sheets and wires of gold. It takes him a whole month just to make a case. It's an 18th century art form, and almost never used for watches today. Again, his philosophy fits in perfectly with my concept of what a hand-made watch should

(Above left) As specified by his client, the caseback of Voutilainen's Masterpiece 7 features an engraving of the seven daughters of Atlas.

(Left) Dial-side view of Masterpiece 7's movement, showing the central, 6-pronged snail cam that controls the number of minutes to be chimed. Each arm of the minute snail has nine steps for the 'decimal minutes'. For normal quarter repeaters, four arms are needed, each with 14 steps (see 'How the striking mechanism works', p.49).



really be, and working together on these watches is very stimulating for both of us."

With a similar nod to the past, Kari's movement for the chronograph is inspired by many of the antique and classical pieces that he worked with during his years as a teacher and restorer. "Antique watches are like little horological laboratories; in them you can see exactly what happens to a movement after more than a hundred years have passed. I took inspiration from the finest examples in order to design a chronograph movement that I am sure will stand the test of time."

Such philosophy plays a big part in Voutilainen's other project, which debuted in January this year. The 'Time aeon' alliance, formed with fellow members Philippe Dufour, Stephen Forsey, Robert Gruebel and Vianney Halter aims to foster the education of talented watchmakers and promote the use of traditional techniques in watchmaking.

Small and successful independent makers such as these are living proof that the 'little guys' working with their hands can still be at the forefront of 21st century technical development, whilst simultaneously keeping traditions alive and well for the next century. ○

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(Above) Briton Gideon Levingston will manufacture Voutilainen's chronograph cases in his workshop in the South of France, using 18th century techniques.

(Below) A diagram of Voutilainen's forthcoming chronograph, which will feature the closely guarded 'Carbondime' oscillator.

