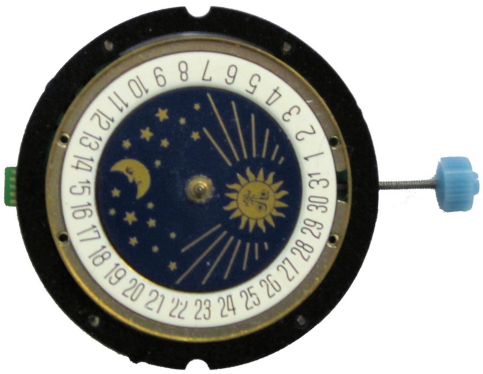
The Cardinal

For traditional timepieces with a twist

The Cardinal electronic integrated circuit enhances traditional single-stepper time-and-date movements with 21st century silicon technology. By pulsing the motor in innovative ways, a host of new features can be subtly added while maintaining the classic timepiece appearance.

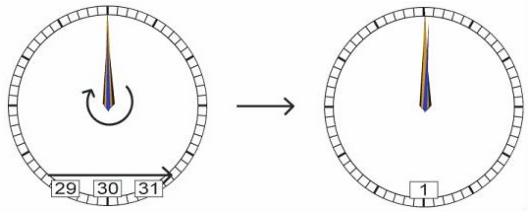
As with all Hoptroff designs, The Cardinal is crafted with customization and creative flexibility in mind. The watch movement maker can offer his customers a wide range of complications; features such as anniversaries and locations can even be tailored to each individual user.

The Cardinal is named after the Cardinal's Hat, a notorious house of ill repute in Shakespeare's time. Cardinal Cap Alley, which inherits its name, can still be seen today not far from Hoptroff's workshops in Southwark's Bankside district in London.

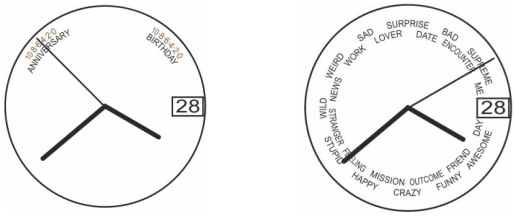


Design Examples

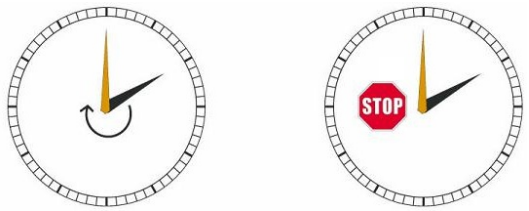
The following examples illustrate some of the features that can be integrated into timepieces that use The Cardinal electronics.



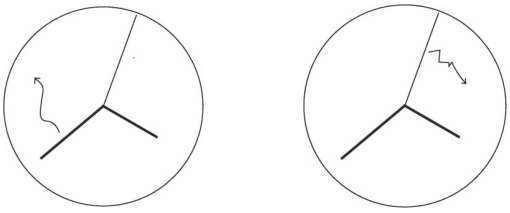
Short Month Adjust corrects the date five times a year to ensure it is always correct.



Stopping Seconds can integrate indications such as reminders or random number novelties.



Daylight Saving Adjust corrects the time *(i)* entering and *(ii)* leaving summer time.

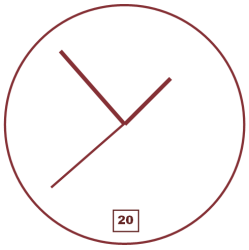


Erratic Seconds can integrate animations into into the motion to reflect user lifestyle

Movement Specification

The Cardinal works with standard single-motor unidirectional watch movement that can facilitate replacement of their electronic modules and fitting of a 3V battery. The movement pictured overleaf is a 7227 from France Ébauches.

Some features require a date plate. Unlike most Hoptroff movements, the crown is retained for its hand setting function.



Firmware & Software

Hoptroff standard core firmware is used, with modular configuration for display functions. Functions can be selected from over 100 options in the *Carte des Complications.* The 8-bit CPU is complete with 128K flash memory and 3K RAM. Firmware for standard functions and core modules (external communications, daylight saving adjust, perpetual calendar, temperature sensing and oscillator compensation, etc) is included in pricing. Custom firmware development lead times and costs depend on complexity.

Timepieces are compatible with the Hoptroff GreenLight application software (patents pending).

Movement Production

Customization & Lead Times

All production is make-to-order, with 8-week lead times typical for chip supply. Contact us for pricing, payment terms and further details

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