

Watch Knowledge

Some basics to help you decide what you want from a watch – Part 2



The most useful extra that a watch can provide is the date. You usually know what day it is but are not always sure of the date; neither, unfortunately, is the ordinary calendar watch. Timothy Treffry casts an eye over the most common variations around today.



Fancy a Date?

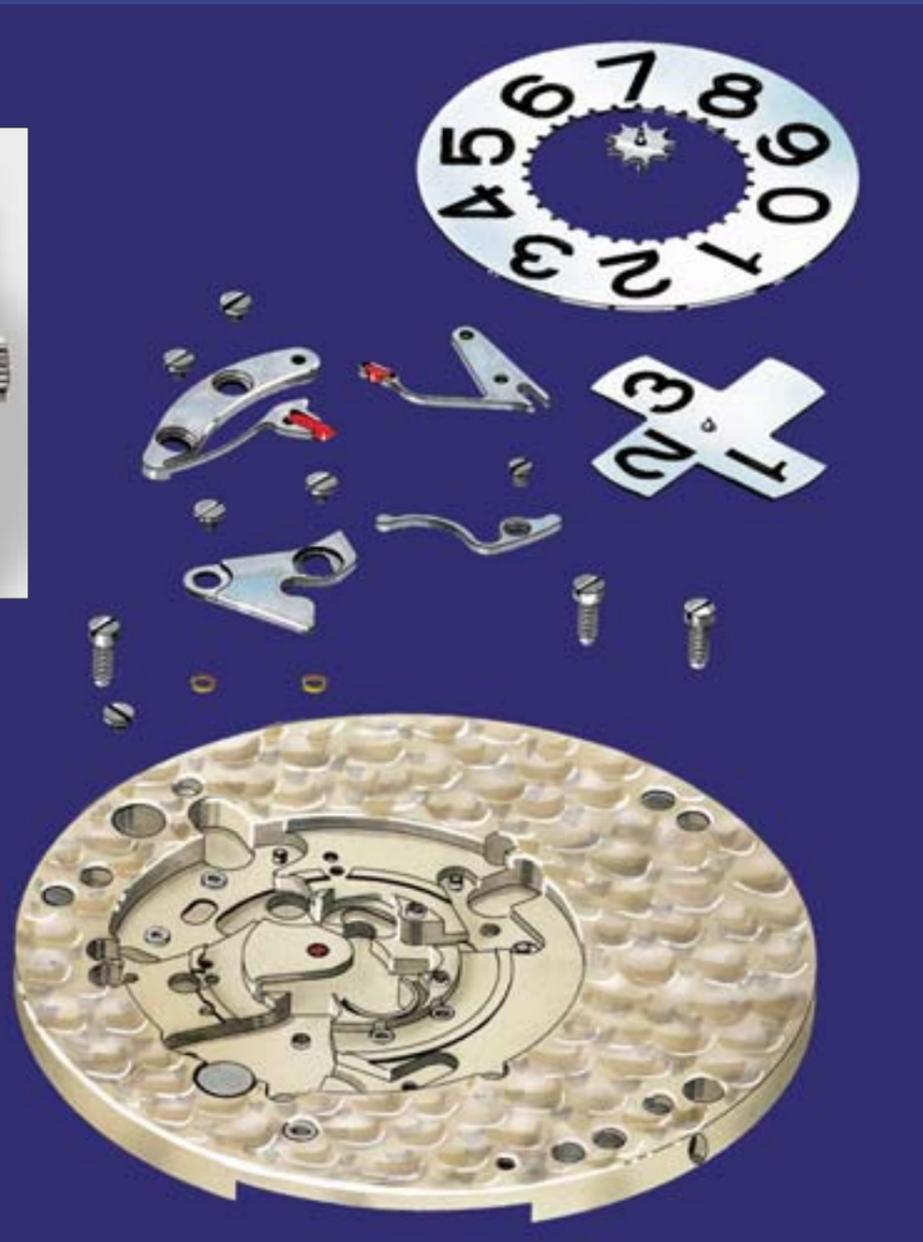
Basic calendars

The most common system assumes that every month has 31 days, and therefore the date needs to be corrected at the end of the shorter months. The 31 numbers are usually written around the edge of a disc under the dial and are viewed through a small window in the 3 o'clock position, or thereabouts. To fit 31 numbers onto the disc means that they have to be small, which can make them difficult to see. In the 1950s, Rolex addressed this dilemma by moulding the "cyclops-eye" magnifying lens into the watch crystal. More recently, this problem has been solved by having a separate disc for each digit.

You will want to know whether or not the calendar has 'instant change'; ie, will the date flick over at midnight or will there be a terrible period of doubt for half an hour or so when you can't read the date? Changing the date requires energy, and the only source of this energy is the mainspring. Using a jumper spring – in which energy is built up gradually and then released at midnight – can be sufficient. Watches that must also perform other similar tasks may not be as good at



Lange & Söhne of Glashütte have been one of the pioneers of the large date mechanism – a feature derived from the digital theatre clock in Dresden.



If knowing the year is the uppermost of your needs, IWC's perpetual calendars uniquely display the year (with correct leap day indications) for the next 500 years.

keeping the time. When less energy is going to the balance, the amplitude will drop and this may cause a change in rate.

Another feature of the calendar mechanism is a moon-phase display; this pretty anachronism was important in the days before streetlights to make travel easier on moonlit nights. Except for two extremely expensive examples, moon-phase displays assume a 29-day lunar month. This is a little short and these watches will be nearly 9 hours out after a year – oh dear! If this worries you, the Lange 1 moon-phase watch is out by 12 minutes a year, and the Patek Philippe Sky Moon watch by just over 1 minute a year.

Perpetual calendars

If a mechanical watch is always to show the correct date, ie, to have a “perpetual calendar” (the *quantième perpétuel* from which this magazine derives its inspiration), it is a much more complicated and costly business. As if it isn't bad enough that the month length varies in an irregular fashion from 30 to 31 days, February has 28 days 3 years in a row and 29 in a leap year. To deal with this problem mechanically, the months may be represented on the rim of a special disc in the watch, which goes around once every 4 years. The edge of the disc is a series of steps, one for each month. When measuring the height of each step from the centre of the wheel, the



Owners who do not wish to wear their expensive perpetual calendar watch all the time often have an automatic winding machine to keep it running.

Flyback date hands are becoming popular with watchmakers at the very highest level, as these examples from FP Journe and Vacheron Constantin show.

31-day months have the longest radii and the three “short Februarys” have the shortest radii. A lever “feels” the edge of the wheel and, according to its depth of engagement, continues to advance the date by a day at a time, or after 30 days to jump 1 day, or, after 28 (or 29) days in February, to jump 3 (or 2) days to get to the 1st March. The watch of course needs to know where it is in the 4-year cycle, and the setting must be corrected if the watch is ever allowed to stop. If stopped for a long period, the adjustment must not only put the program wheel in the correct month, but also make sure that that the month is in the correct year of the 4-year cycle.



Perpetual calendar watches have special push buttons to allow these adjustments to be made. Owners who do not wish to wear their expensive perpetual calendar watches all the time often have an automatic winding machine to keep it running. This spares them the nuisance of correcting the calendar.

As Patek Philippe perpetual calendar watches are rather pricey, the company also offers an affordable introduction to complicated watches in models with an “annual calendar”, which needs to be corrected on 1st March each year. At £12,000 less, it has been a popular move. ●