

# Watch Journal

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# Perfect Timing



The TAG Heuer Formula 1 McLaren Special Edition watch

By Keith W. Strandberg

Aside from the hands displaying the hours and minutes, there are often a number of other things happening on a watch dial. Here's a handy guide to the functions you might see.

### CHRONOGRAPH SUBDIALS

The chronograph is a timepiece that has an elapsed timer built in, allowing the user to time an individual event. Chronographs are one of the most popular complications, and one of the most useful to daily life.

The complication dates back to Louis Moinet in 1815 (completed in 1816), and the chronograph function itself was patented in 1862. There are many different kinds of chronographs on the market (monopusher, column wheel, flyback, split-second), but no matter the type, it will always display the elapsed time in seconds, minutes and hours.

In most watches, the elapsed time is displayed in subdials: small circles on the watch dial that show the seconds, minutes or hours elapsed. The typical chronograph has three of these "eyes," though others have two and some have only one.

There are some linear chronographs on the market, and others that use the existing hands to display the seconds, minutes and hours, but the majority of chronographs use subdials.

With subdials, the result is a sporty look that is very popular. In fact, many people buy a chronograph for the look and never learn to operate it, which is a real shame because it's a lot of fun to time your drive to work, your run at lunch or cooking your pasta for dinner.

### SCALES

As chronographs are already timing devices, it makes sense to include scales that help to measure speed (over land, of sound).

### TACHYMETER

The tachymeter scale is a handy one to measure land speed over a fixed distance. All you have to do is start your chronograph at a mile or kilometer mark, then stop it at the next mark, and you'll know how fast you were going.

I use the tachymeter scale when my sons are driving and I can't see the speedometer, but I want to know how fast they are going. I just look out the window, start my chronograph at the first mile marker and stop it at the next one. Voilà! My watch displays our speed over that distance. (Then I tell my son to slow down.)

Magically, the tachymeter scale works over miles or kilometers without any conversion. In fact, it works over any fixed distance, as long as you know where the unit begins and ends.



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### TELEMETER

The telemeter scale measures sound over distance. Developed to aid in determining how far cannons were away from a fixed position during World War I, it is quite handy today for seeing how far away a storm is. When you can see the lightning, start your chronograph. When you hear the thunder, stop it. However many seconds elapsed is how many miles or kilometers the storm is away. Unlike the tachymeter scale, the telemeter scale has to be calibrated for miles or kilometers.

### OTHER SCALES AND GAUGES

There are a number of other scales and gauges that can be on a watch dial to measure or record. There is the pulsometer scale, which tells you how fast your heart is beating; the depth gauge, which records how far underwater you went; the altimeter scale, which shows how high above sea level you are; the barometric scale, which shows atmospheric changes; and temperature gauges.

Astronomical watches often have a sidereal scale on the dial, which shows the difference between our standard 24 hour day and the true time it takes the sun to circumvent the earth: 23 hours, 56 minutes and four seconds.

A slide rule bezel allows the user to do standard calculations. Often, pilot watches will have slide rule bezels to help them calculate fuel consumption, air speed and distance calculations. Slide rule bezels can also help convert metric to standard measurements (e.g., kilometers to miles), convert currency, convert temperature degrees and more.

Sometimes, chronographs will have decimal scales on them, which divide a minute into 100 equal portions. This scale is particularly helpful to scientists and engineers.

A watch can be a font of information if the one you are wearing knows how to measure, use and display it. There is definitely more than meets the eye.

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