# ***TACHYMETER SCALE***

Some Chase-Durer wristwatches include a ring or scale labeled TACHYMETER. Its use and operation is described herewith.

## ***What It Does***

The TACHYMETER scale can be used to compute many things but its primary purpose is to compute a speed after noting how long it takes to travel a fixed distance (e.g., one mile or one kilometer). The dial is a logarithmic scale which computes the function:

TACHYMETER DIAL = 3600 / Elapsed Time in Seconds

The scale is valid for all elapsed times from 7.2 seconds to 60 seconds. If the duration of the event is outside its range, then the answer on the dial is invalid.

## ***How to Use It***

For example, suppose you wanted to measure the average Speed a racecar was travelling. After starting the chronometer function when the car passes the starting line, and stopping it after the car travels exactly one mile, you note that the chronometer hand is pointing at the 4 o'clock position (i.e., 20 seconds have elapsed).

Looking beyond the 4 to the Tachymeter dial reveals the chronometer hand pointing to 180. This means the average speed of the car would be 180 MPH.

Let's say, instead of the race car speed, you are measuring something much slower like sailboat speed. In this case, you need to use a shorter distance because the elapsed time must fall within the 7.2-60 second range. For this example, let's say it took 36 seconds for your sailboat to travel 1/10 of a nautical mile. Reading the Tachymeter dial gives a speed of 100 knots. But, since we only traveled 1/10 of a nautical mile, the actual answer is 1/10 of that or 10 knots.

Now let's say you wanted to measure the speed of a very, very fast airplane: after traveling 10 kilometers, you noted that 10 seconds had elapsed. The Tachymeter dial gives an answer of 360 but we traveled 10 kilometers. Therefore, the answer is 10 x 360, or 3600 km/hour.

There is really nothing magic about using the Tachymeter dial to measure speed. You can also use it to measure other things like gas consumption. Suppose it took 50 seconds to burn up a gallon of gasoline. Reading the Tachymeter dial shows that you are burning 72 gallons of gasoline per hour.