

## Learning to Use the Pace Clock

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As we discussed in the article "[Understanding Interval-based Training](#)" most of your swim training should be interval-based. Therefore, it is essential for you understand how to use the pace clock [You can also use the stopwatch function on a wristwatch if your pool does not have a pace clock].

The pace clock performs two important roles:

1. It allows you to perform interval sets during your swim workout (and on your own if need be)
2. It is necessary in assessing your swimming improvement.

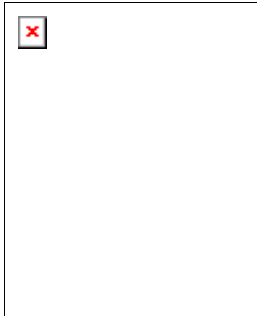
The typical pace clock (as seen in the photograph to the right) is really a very simple instrument to use. It has a minute hand and a second hand and is divided into 5 second increments from 5 - 60 seconds.

### Understanding Patterns on the Pace Clock

As mentioned in the introduction, the pace clock is actually a very easy instrument to understand, and once you become familiar with interval based training, you will notice patterns develop on the clock for a given interval. Below are a few examples of swim intervals and the patterns that result on the pace clock.

**Example 1:** The simplest interval sets to understand are those given on *even minute counts* such as a set of 50 yard freestyles on the one minute or a set of 100 yard freestyles on the two minutes. For example, let's say you are given the swim set: 10 x 50's freestyle (yards) on "the minute"( or :60 seconds). This would mean you would be swimming 10 x 50's freestyle (yards) every minute. Regardless of the point on the clock from which you begin the set, you will leave at that same point for each swim in that set. If you are attending a masters workout and the coach instructs the swimmers to "leave on top" would begin the set when the second hand reaches the 60. And because one turn of the second hand represents one minute, you would leave on the **60** for each 50 yard freestyle in that set (if you are training alone, and the set calls for 10 x 50's on the minute, the most common place to leave is the 60 as well). Note, the total set will take 10 minutes. This type of interval set is excellent when trying to maintain a particular pace during that set. In keeping with our example above, if you are swimming 10 x 50's on the one minute – leaving on the 60 - and you want to hold 35 seconds on each swim. This would allow you 25 seconds rest before leaving to swim the next 50.

**Example 2:** It's comfortable and convenient to have an interval that leaves at the same time and at the same position on the clock each time. However, as your swimming improves, so should the challenge. And this means a faster, and perhaps more difficult interval. For example, let us say the particular set in your workout calls for 10 x 50's freestyle (yards) on :55 seconds. Now, things begin to get a little confusing...or do they? You may think that this would be a difficult interval to follow, because it is not a nice round number on which to leave as mentioned in the example above. However, this type of interval (although challenging physically) will actually prove easy to follow on the pace clock. Furthermore, it will help you keep count of the 50's you have completed in your

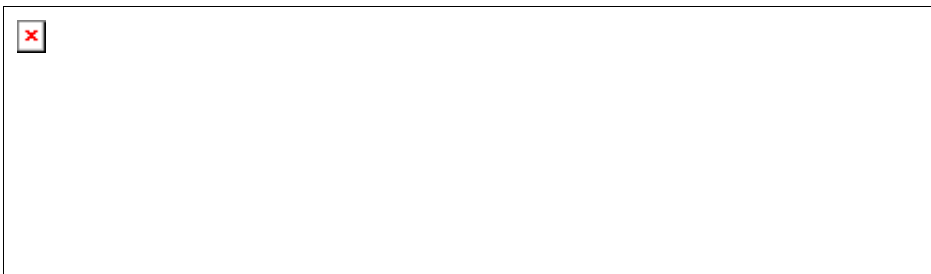


set. In keeping with the example above, let us say the set calls for you to leave or begin "on the top" or "on the 60." Remember, one entire loop around the clock from any point on the clock represents :60 seconds. For a set of swims on the :55 seconds, you would leave 5 seconds sooner for each swim. Refer to the example below.



The set called for the swimmers to leave on the "60" which represents your first swim of that set. Because the set is on the 55 seconds, you would leave on the on "55" for number two. For number three, you would leave on the "50." For number 4, you would leave on the "45" and so on. Do you see the pattern developing? If for example, you are half way through the set and loose count of the 50's you have completed...in just a matter of seconds you can find the answer. Simply begin counting from the point at which you began the set (in this case on the 60) and count backwards 5 seconds for each 50 freestyle you have completed up to the time you are supposed to leave. This is especially helpful for larger sets like 20 x 50's or 30 x 100's.

**Example 3:** *50's freestyle (yards) on the :45 seconds. Leaving at the top.*



For the first 50 freestyle, you would leave on the 60; for #2 you would leave on the 45; #3 on the 30; #4 on the 15 and so on. Do you see the pattern? You are simply leaving 15 seconds earlier each time. And to keep count of your set, you would count back 15 seconds starting at the 60 for each 50 completed.

**Example 4:** *100's on the 1:50 leaving at the top.*



Although this set represents a set of 100's (100 yards or meters), nothing changes with regards to reading the clock. For the first 100 freestyle you would leave on the 60; for

#2 you would leave on the 50; #3 you would leave on the 40; #4 you would leave on the #30 and so on. Do you see the pattern? You are simply leaving 10 seconds earlier on the clock for each 100. To keep count of your set, you would count backwards 10 seconds starting at the 60 for each 100 completed.

**Example 5:** *50's on the 1:05 leaving on the top*



For the first 50, you would leave on the 60; for #2 you would leave on the 5; for #3 you would leave on the 10; for #4 you would leave on the 15 and so on. Do you see the pattern? You simply leave 5 seconds later on each swim.

As stated earlier, the pace clock is actually a very easy instrument to understand and necessary for your swimming. Besides being a crucial tool for assessing your improvement, it also provides a means of keeping track of your swim times and swims. If your pool does not have a pace clock, you can use the stopwatch function on a watch.

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