

What is a match?

By Hunter Allen

A "match" is an elusive term used by riders, and coaches within the bike racing world. When you burn a *match*, you have done a hard effort. It's an effort that in which you had to dig deep, or you had to really push yourself. Any bike racer knows what it feels like to have burned a match, but until now, no one has really tried to quantify a *match*.

Why do you need to know what a *match* is? Well, you as a rider, start out the day with a full set of matches in your matchbook, but every time you go hard, do an attack, have to hammer over a hill, you burn one of your matches. All of us have different size matchbooks, but nobody has an infinite number, so it's important to burn your -matches- at the right time during a race or in training. Otherwise you are left with an empty matchbook and then your chances of performing well have been drastically reduced. Burn all your matches before the end of the race and it's doubtful you will win. Indeed, I propose that not only is it doubtful that you will win, but it's certain that you won't win.

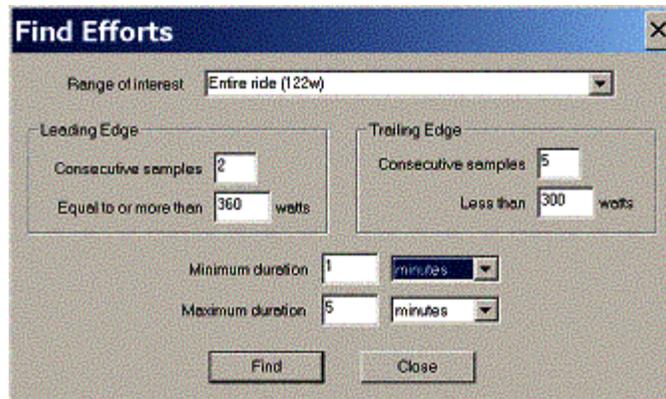
So, your goals are fourfold: figure out what exactly is a *match* to you, figure out the size of your matchbook, try to increase the number of matches you have, and then burn your matches at the right time in the race in order to optimize your chances for success.

As a starting point, I propose that for most riders and racers, a match can be defined as an effort in which you go over threshold power by at least 20% and hold it there for at least one minute. Of course, burning the proverbial *match* could involve an effort longer than 1 minute, but as the time period gets longer that you are burning a match, the % above your threshold power would be lower. The chart below begins to take a stab at defining a "match" for different time periods. Before you read this, remember that there is no exact definition of match, I am just introducing this concept quantitatively so that riders can refine it for themselves, and illustrating how CyclingPeaks software can really help with that.

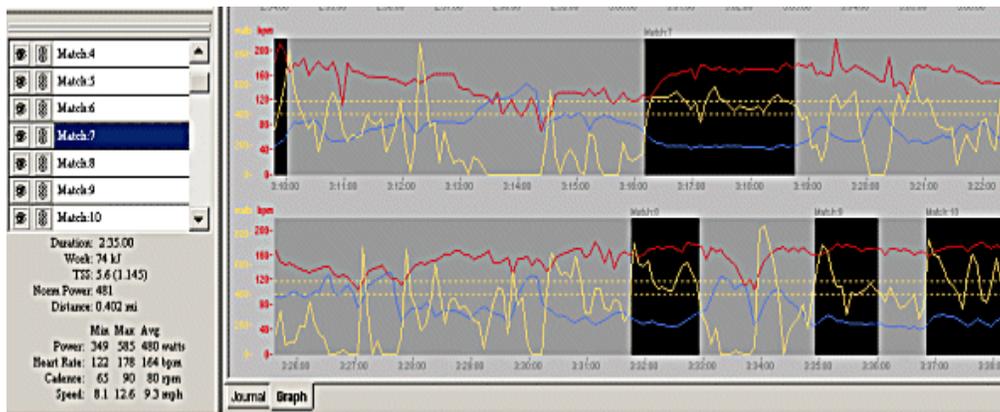
Time	Percentage over Threshold Power	Power needed to burn a 'match' assuming 300 Threshold Power.
1 Minute	20+	360 watts
5 Minutes	15-20%	360-345 watts
10 Minutes	8-12%	324-336 watts
20 Minutes	0-8%	300-324 watts

Now, that you have a general idea of what a match is, you need to figure out how many matches you have at your disposal. The only way that I know to do this is to do a super hard training ride in which you have pre-planned matches that you are going to burn, or to do a really tough race with lots of -match burning- ! The great thing is that you know based on your rating of perceived exertion and also your rate of exhaustion, when you burned a match and when you are out of matches! So, listen to your body here and then go back through your downloaded data to "find" all of your matches.

This is where CyclingPeaks Software can help you. By using the "Fast Find" feature, under the Edit button, you are able to enter some parameters in order to find those matches. Let's assume that your threshold power is 300 watts. So, take 120% of 300 watts, which is 360watts and enter that into the >leading edge<. Then take 300watts and enter that in as your trailing edge, since you are still going hard at that point. Then select 1 minute as the minimum duration and then 5 minutes as the maximum duration. Here's what it looks like:



Now, once this is done, all of your -matches- will be highlighted. You can then review the graph of your ride to put significance to each match by typing in the ranges text area, some description about that match. For example: Hard attack on hill, or prime sprint, etc. Or you could just simply label each "Find" as a *match* and then use the >linking< button to link them all together. It might look like this:



If you notice in the above screenshot, I have also used another way of viewing a -- *match*. I placed a gridline at 400watts (this riders' threshold power), and then I placed another gridline at 480watts (120% of his threshold power). So you can visually scan through the graph and look at any area that is above the 480 gridline. These are definite *matches*. The space under the yellow line (watts), but above the 400watts line is the time spent burning a match. Any significant time spent above 480watts is like sending up a "flare"!

Now that you know what your matches are, and how many you have before you are "cooked", then you can go about changing your training in order to increase the size of your matchbook and also increase the intensity of the flame from each match. At the same time, by using a power meter in a race, you can review the data post mortem and determine if you spent too many *matches* in the beginning of the race or if you spent them at the correct time to optimize your chances for success. This is one of the great benefits of racing with a power meter. It allows us to see objectively, if you raced tactically correct. At the same time, you can now begin to develop a better training plan based around your weaknesses (amount of -matches- and intensity of the flame), in order to better "toast" your competition.