

# // light // story 01



## SPEED MAX THE FASTEST COMPACT FLASH! //

photo // eric condette // [www.fotosight.de](http://www.fotosight.de)



### // THE FASTEST COMPACT FLASH WORLDWIDE

This has never existed before! A compact flash unit with a flash duration time of less than  $1/66.660$  s and this up to 31 times per second, 2,678,400 times per day if you like. Created for industrial applications, this unit has now found its new calling in photography. It offers uncompromising technology with performance data on the absolute edge of today's current technology.

The first choice for any dynamic photo-shooting in fashion, people, or sports photography:

**Fast flash sequence up to 31 flashes per second. Ultra-short flash duration from  $1/66600$  second.**



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## Question from lola66 in

[www.gutefrage.net/frage/kaminhoelzer-und-ihre-abbrennzeit](http://www.gutefrage.net/frage/kaminhoelzer-und-ihre-abbrennzeit)

**„We have a fireplace that we throw a lot of wood into, and we are wondering why some wood burns down faster and other wood lasts a lot longer ...“**



### Why is this relevant?

Well, wood that burns down faster means you will ‘freeze’ sooner!



photo// frank sengebusch

### And this pertains to photography?

Certainly. Short flash duration allows you to freeze fast moving objects!

### Where do I get such a fast flash?

From Hensel-Visit. The Speed Max is 100% made in Germany. We develop, produce, and sell all over the world from our factory in Wurzburg, Germany. In Germany you can purchase or rent our equipment for a reasonable price. For other countries, you can contact our worldwide agents that are listed on our website under representations for their contact information.

### This makes much more sense than wood rental.

Hence, the Speed Max can be lit up more than once – up to 40 million times.

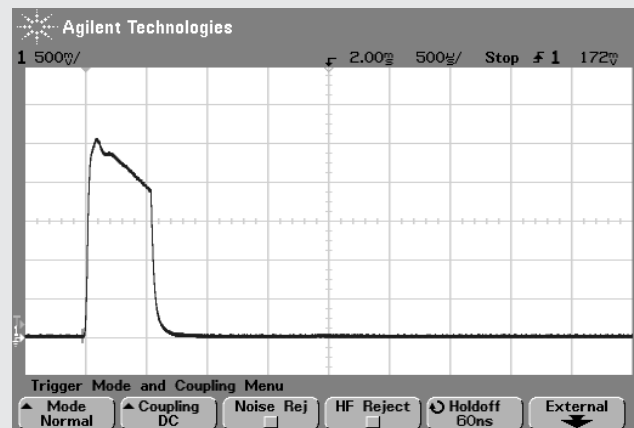
### How can you light the Speed Max’ fire?

- Via cable or radio remote-
- As often as you like
- As fast as you like
- As short as you like

Originally, our Speed Max was designed for industrial purposes and is now available for photographic use.

### How long is the flash duration of Speed Max?

Incredibly short – only measurable with an oscilloscope:



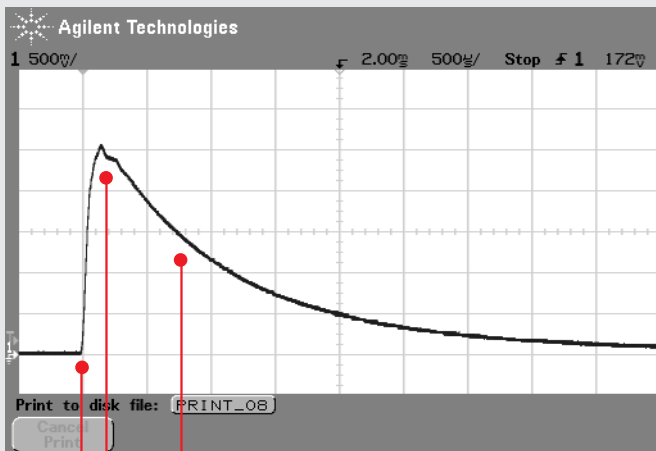
Measurement Speed Max, at 400 J (100%)

### What does this chart tell me?

This requires a short excursion to the following page where the flash duration chart of a normal studio flash is explained:

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Measurement Integra 500 Plus, at 500 J (100%)

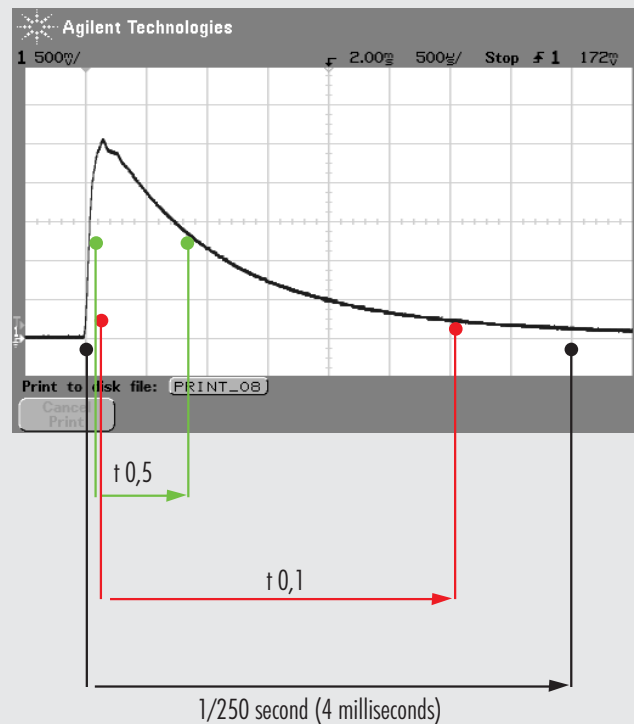


This is when the flash is triggered  
 Lights up after a very short time until maximum flash intensity  
 And slowly drops off (afterglow)

Now, we only have to define how short the flash duration time is. The problem is to establish a common standard which allows me to derive a time length from.

The same question arises when you are trying to measure how long a piece of beech wood burns in a fireplace. Until it barely burns? Until it is only smoldering? Or until it is completely burned down?

Talking about flashes, you need to know what's relevant and the length of time that is useful to know. Since we use light for photography, it would make sense to define at what intensity light ceases to be useful for photographic results.



The full flash duration is 1/250 s (until glow is no longer visible)  
 The data sheets of different flash manufacturers basically list the two values  $t 0.1$  and  $t 0.5$ .  
 The flash duration  $t 0.5$  indicates the time from first reaching a flash intensity of 50 % of the maximum until flash intensity drops down to 50 % again. The flash duration  $t 0.1$  indicates the time from first reaching 10 % of the maximum until flash intensity drops down to 10 % again.

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## So, what is really relevant?

### The full flash duration? $t 0.5$ or $t 0.1$ ?

The full flash duration length is already interesting because now I know that I am utilizing the full light amount with the shortest possible sync time of  $1/250s$  (depending on the camera type used, please note technical data.) Phew – I bought the right flash system – that’s for sure. However, what’s relevant when I want to ‘freeze’ fast moving objects?  $t 0.5$  or  $t 0.1$ ?

$t 0.5$  is often not explicit enough because the light intensity after the measuring point significantly adds to the exposure. The exposure time for very fast moving objects may end up being too long thus causing motion blur.

The value  $t 0.1$  is the most useful in “high speed photography” because the amount of light applicable to the full exposure is included in the measuring.

### But why do all manufacturers of flash units almost exclusively list values with $t 0.5$ on their data sheets?

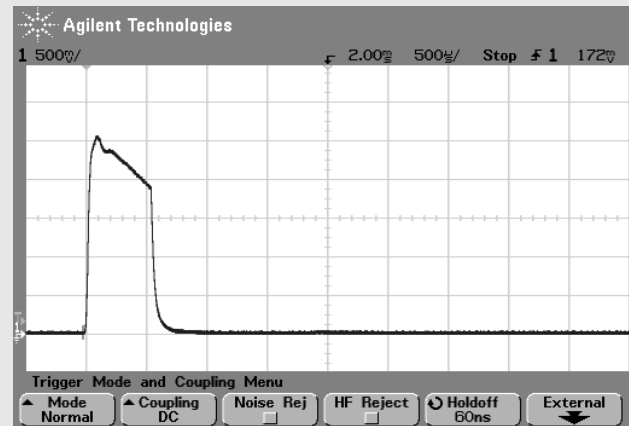
Simply because the majority does it, and otherwise it is difficult to compare values. If you want to derive something relevant from these values and how they pertain to freezing the fastest motion - triplicate the  $t 0,5$  value. For example:  $1/300 s (t 0,5)$  means  $1/100 s (t 0,1)$ . This corresponds approximately to the usual effect of exposure length on moving objects. However, this only works well if the characteristics of the flash duration chart correspond to the above shown chart of the Integra 500 Plus . Actually, this is the case for most flash units.

**Speed Max, however, lets us dive into a completely new world.**

**It flashes faster than one can see!**

**And this even at full performance output.**

Speed Max, at 400 J (100 %)



### See for yourself:

**Do the time values  $t 0.5$  or  $t 0.1$  really matter in this case – isn't this already almost  $t 0.0$  ?**

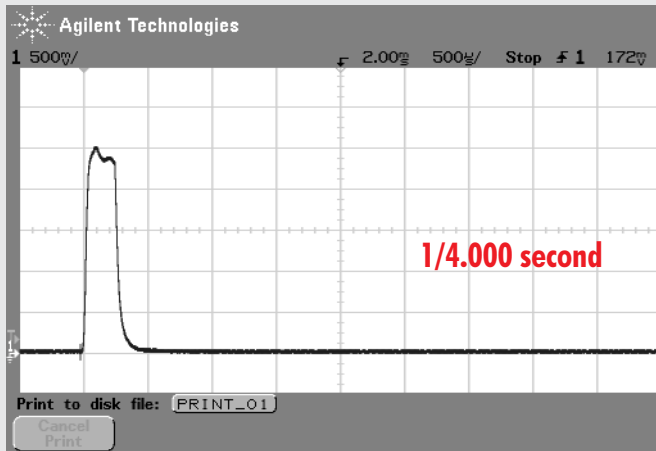
The flash lasts  $1/2000$  seconds – period.



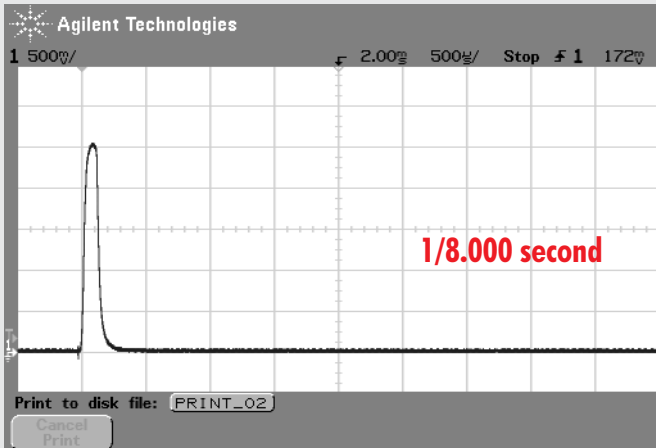
photo// jozef kubica // www.jozefkubica.com

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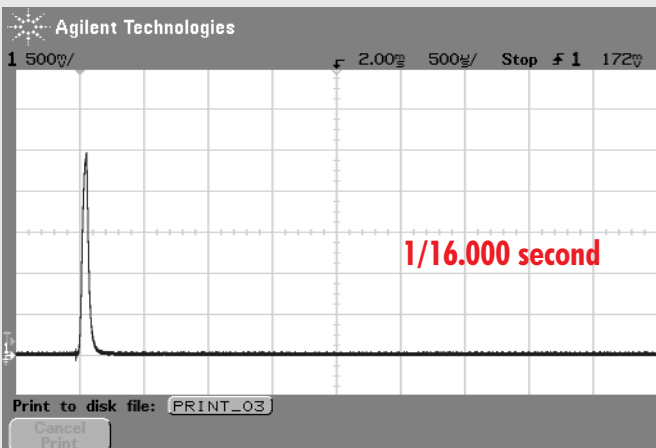
Speed Max, at 200 J (50%)



Speed Max, at 100 J (25%)

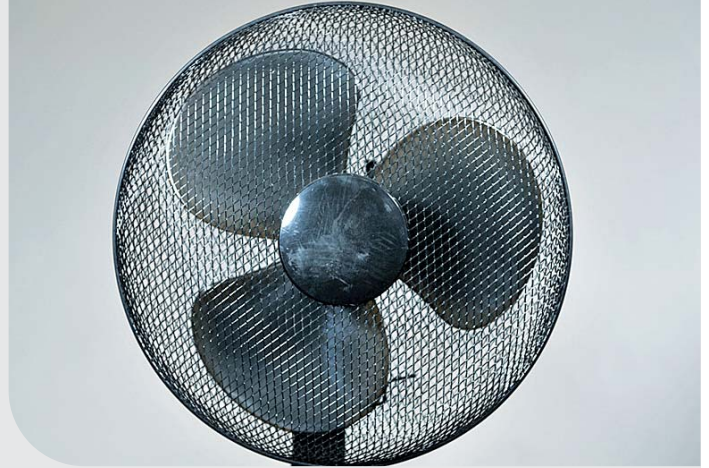


Speed Max, at 48 J (12%)



...and on up to 1/66600 second  
(sixtysixthousandandsixhundredth)

Picture was taken while operating  
with 2500 rpm – honestly!



„Not only the ideal piece of equipment  
for ventilator photographers“

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photo // tobias schult // www.tobiasschult.com  
// nike advertorial for jpeople magazine



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