



# Technical Information

**What is PPS rising/falling, and what happens if I set it wrong?**

## **Solution**

"Falling edge" systems hold the PPS line at about 5V most of the time, and it drops to 0V when the PPS signal is active. So the sonar must synchronise when the voltage goes down, from 5V to 0V.

"Rising edge" systems hold the PPS line at 0V, and send it up to 5V when the PPS signal is sent. So, if you use the wrong edge, the sonar will detect the PPS signal late, by the width of the PPS pulse.

A quick google search suggests that a lot of systems allow the pulse width to be set by the user, but the default is around 1ms.

So, you might get a timing error of 1ms. You won't see any problems with that size of timing error; the Windows PC clock only has a resolution of about 16ms, and even with extreme roll motion, you won't see any effects on the depth profiles for timing errors less than about 5ms.

So, in summary, it is worth getting the edge level right, but don't worry if it is wrong: you won't see any difference to performance in most cases.

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310 Impasse de la Tuilerie  
74410 Saint-Jorioz, France  
Phone : + 33 972 457 330  
info@iter-systems.com  
www.iter-systems.com

