

Are you running Psychology, Neuroscience or Vision experiments using a computer?

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1. WHAT – If you are a psychologist, neuroscientist or vision researcher who reports timing accuracy in units of a millisecond, then it's likely your timings are wrong! This can lead to replication failure, spurious results and questionable conclusions. The Black Box ToolKit lets you quickly and easily check your own timing accuracy in terms of stimulus presentation; synchronization with other equipment; and RT accuracy.

2. WHY – Modern hardware may be faster but millisecond timing accuracy is becoming harder to achieve: 'millisecond precision' does not equal 'millisecond accuracy'. Precision simply means timings are reported in units of a millisecond, not that they are accurate! Whatever experiment generator you use, it only knows when it requested a stimulus be shown and not the time when it physically appeared.

3. HOW – Currently self-validation of timing accuracy can only be done quickly and easily with a Black Box ToolKit. This acts as a programmable virtual human that can detect and respond to stimulus events with sub-millisecond accuracy. It enables you to check the accuracy of your own paradigm whilst running in-situ on your own equipment by using external sensors, TTL I/O and your own response devices.

To improve replication and enhance credibility all researchers should self-validate, or self-certify, their own studies in terms of millisecond presentation, synchronization and response timing accuracy.

Not ready for a Black Box ToolKit just yet. Our range of standalone USB response pads, voice keys and USB TTL event marking modules can all help improve your timing in any experiment generator!

To find out more about how we could help you improve your research please visit our website, www.blackboxtoolkit.com.



Serious about science: Serious about timing

The Black Box ToolKit

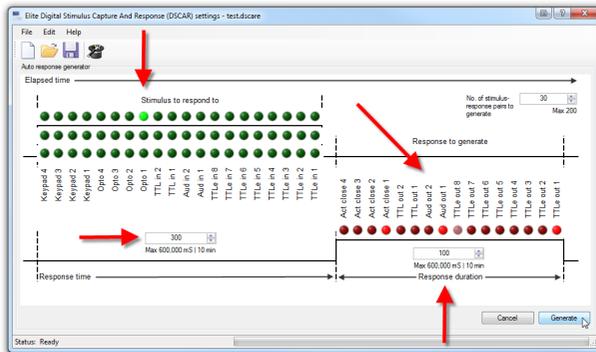
Measurement & Calibration Tools for Professionals

Guarantee REPLICATION

- 1 Set-up** – Works like a virtual human. Hook up external stimulus sensors (opto-detectors, mics, TTL) and a response device (response pad, robotic key actuator, sounder, TTL):



- 2 Test** – Use a wizard to select a stimulus pattern to automatically respond to/event mark. Then choose the exact response time, response device and duration:



- 3 Analyze** – Check your stimulus, response and synchronization timings across up to 36 channels. Compare what your experiment recorded with what the BBTk saw:

