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Isaac HD



Test Timers

The clock signal for which the test timers are based upon, is created by a crystal oscillator embedded in the CPU board. The oscillators accuracy is ± 1 second in 1 month. This accuracy results in a ± 0.0000003 per second specification. This provides a stable time platform for the Isaac HD firmware to use as a time base.

The Isaac HD has overhead processing that takes place before the start of a test cycle (Fast Fill, Fill, Settle, and Test) and after the conclusion of the test step. The actual test timer with system latency will be ± 0.03 seconds.

Due to the nature of electronic design and the small possible variation in electronic signals, the timers in all Isaac models are only tested at system start up phase and it is not necessary to test each unit for individual accuracy.

Calibration (adjustments) of timers is not possible since they are integrated circuits.

However, to verify timers, the NIST has outlined non invasive ways to compare timers for calibration varification. NIST Special publication 960-12 describes a Photo Totalize Method (page 45) in which the master timer is photographed with the device under test.

National Institute of Standards and Technology
Special Publication 960-12 Natl. Inst. Stand. Technol.
Spec. Publ. 960-12
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Zaxis can provide an inspection report to verify that the system meets internal quality standards.