

SpeedTube™ - High-Definition Ballistics Chronograph

Speed measurement of small-medium caliber ballistic projectiles and fragments



- Measures the speed of bullets (up to .50 caliber) and fragment simulating projectiles (2 gr – 64 gr)
- Typically meets redundancy and accuracy requirements of NIJ 0101.06/07, ASTM 3062 with precision of ± 0.3 m/s (1 ft/s) and gate consistency of ± 3 m/s (10 ft/s). Results vary with projectile type.
- SpeedTube™ is traceable to national standards for complying with quality management systems.
- Dual HD IR light screens provide confidence with consistency and error checking. Auto thresholding and external trigger port provided.
- Various drag methods used for estimating strike velocity (AEP 2920).
- Displays sensor and strike speed, fair shots with visual indicators, hardware checks, time stamp and shot count. Selected results can be pasted into worksheets or documents. On-screen help provided.
- Sensor tube diameter of 75 mm (3 in). Floor mounted support stand allows for quick vertical, lateral and pitch adjustments for accurate setup. Optional extension tubes are provided to reduce muzzle flash or ambient light interference.

Specifications

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| Speed Range: | 150 - 1800 m/s (dependent on projectile size) (500 - 6000 ft/s) | Measurement Location: | Mid-point of system, approximately 310 mm (12 in) from end plate. |
| Speed Uncertainty*: | $\pm 0.12\%$ of measured speed. *Expanded uncertainty with coverage factor of 2 (normally distributed with 95% coverage probability). | Compatible Projectiles: | Fragments: FSP and RCC from 2 gr to 64 gr. Bullets: up to .50 caliber. (Metallic and non-metallic compatible) |
| Light Gate Sensors: | High density array of IR-LED emitters and receptors, auto threshold, output 5V TTL. | Gate Sensing Details: | Sampling rate: 0.0125 μ s (80 MHz) per gate. Separation: 433 mm (17 in) average. |
| Software: | SpeedTube™ software outputs sensor and strike velocity, gate timing, error-consistency checks, visual indicators of fair strike, system checks. | Computer and Interface: | PC Computer with Windows 11, USB 2 or USB 3 port required. |
| | | Part Numbers: | SpeedTube™: BST-001 SpeedTube™ support stand: BSTS-001 |

Physical and Electrical

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| Dimensions: | SpeedTube™: W264 x D616 x H264 mm, 15 kg Support Stand: W286 x D584 x H1067 mm, 19 kg Extension Tubes: 200 mm (8"). | Placement and Targeting: | To be placed >310 mm (12 in) from target. Spall protection required. 75 mm (3 in) diameter entry/exit opening. |
| Alignment: | Uses end caps with pinholes (requires in-bore laser, not provided). | Electrical: | 120 VAC @ 60 Hz / 240 VAC @ 50 Hz 100 W max. |

Warranty

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| All components: | 1 year limited |
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(All specifications are subject to change)