



C O R P O R A T I O N

Technical Data Sheet

Mousetrap Shock Amplifier

TDS-7

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Shock amplifiers produce high acceleration shocks on a spring loaded table. The mousetrap amplifier consists of:

- a. base plate mounted on the top surface of shock machine carriage
- b. specimen mounting carriage which is supported by soft Springs
- c. a resilient decelerating pad between the shock machine and its carriage

As the main carriage accelerates down, impacts upon its resilient pad and decelerates up - the specimen mounting carriage continues to travel downward (or in the opposite direction of the main carriage) as they collide. The resultant acceleration at impact is much greater than would be achievable if only the main carriage impacted against a stationary base.

The Mousetrap Shock Amplifier is used for two primary purposes. First, as an amplifier to produce increased velocities. Second, because the Mousetrap Amplifier is supported on springs, the springs act as a "mechanical filter" which serve to reduce the ringing associated with short time duration pulses. We define short time duration as any pulse less than 3 ms.

Specifications:

0909-MTA

Mounting Surface	9 in x 9 in
Hole Pattern:	As Required
Pulse Duration:	3.0 - 0.5 ms
Max load:	15 lbs
Peak Acceleration:	2,500 g

0404-MTA

Mounting Surface	4 in x 4 in
Hole Pattern:	As Required
Pulse Duration:	0.3 - 0.12 ms
Max load:	10 lbs
Peak Acceleration:	30,000 g