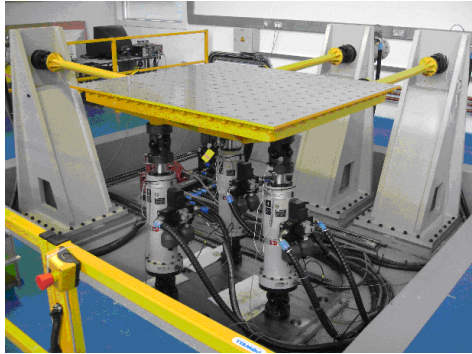


Vibration Test Facility

MULTI-AXIS SIMULATION TABLE

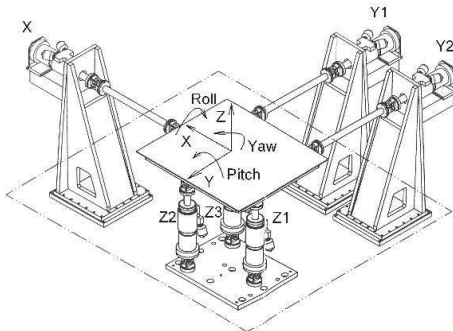


MAST

The Centre for PTMC's Multi-Axis Simulation Table (MAST) is a 6 degree-of-freedom vibration test facility, specified for payloads up to 450kg, and test frequencies up to 50Hz. The £500k MAST was supplied by Instron Structural Testing Systems (IST) in 2004, and is controlled by the latest Instron 8800 electronics.

Control and Data Acquisition

The MAST can be controlled in Cartesian co-ordinates (X, Y, Z, Roll, Pitch, Yaw), and any combination of linear or rotary motions can be commanded simultaneously. Cyclic position command signals (e.g. sinewaves) or random inputs can be specified, or user defined 'playback' signals from a demand file.



The following signals can be acquired simultaneously at 2.5kHz:

- six position signals (either actuator or Cartesian)
- six acceleration signals (accelerometers located on table or test specimen).

TWR iterative software is available for accurately matching rig acceleration signals to target acceleration signals.

Performance Specification

Direction	Stroke (mm)	Velocity (m/s)	Acceleration (m/s ²)
X (longitudinal)	±75	±1.2	±60
Y (lateral)	±75	±1.7	±90
Z (vertical)	±75	±1.7	±200



The acceleration limits are for small payloads (<50kg); with the maximum payload of 450kg the acceleration limits are approximately half. Values are approximate.

Contract Hire

Guide price for facility plus operator: £1000 per day, depending on requirements.