

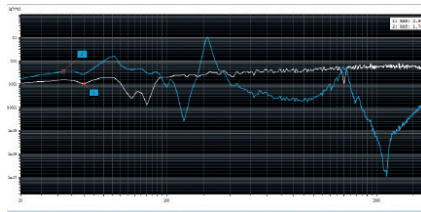
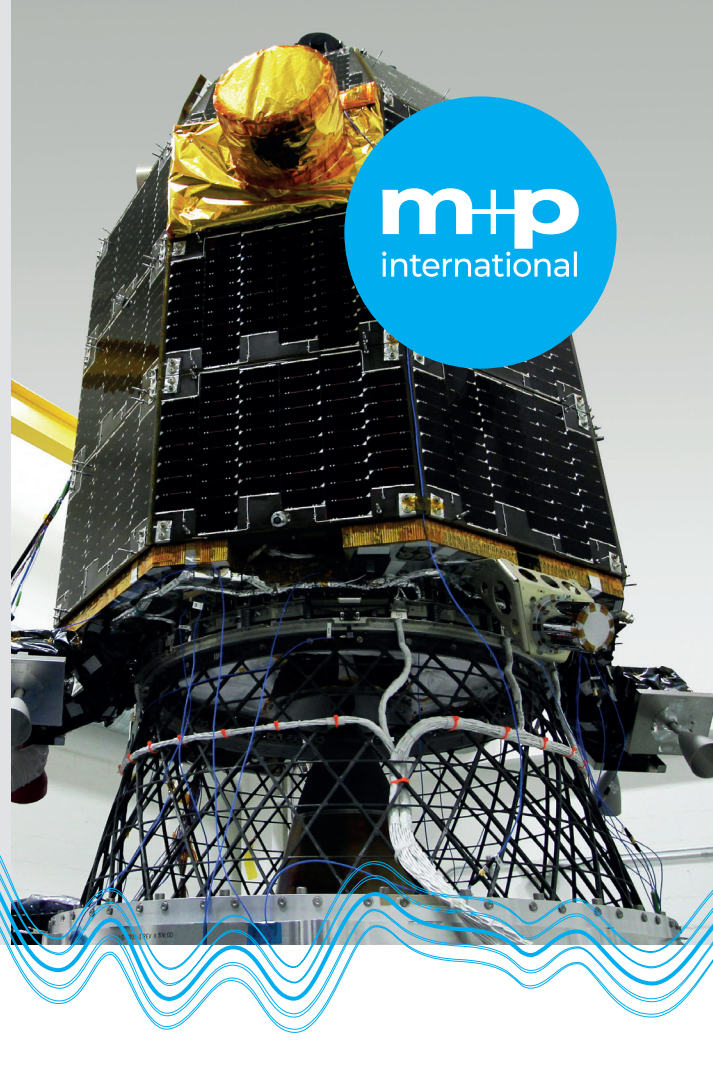
m+p VibControl

Shaker Vibration Testing for Launch Qualification

m+p VibControl's comprehensive vibration control features enable you to successfully launch and safely deploy your satellite to space. Prior vibration testing in lab meeting handbook specifications qualifies your satellites for their ride on top of the launch vehicle.

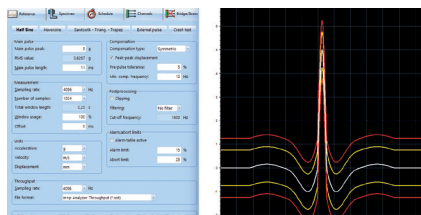
The easy-to-use **m+p VibControl** user interface allows you to test reliably. Test definitions can be created in parallel to a running test for efficient lab operation with maximum uptime. Freely configurable limits and notching for each satellite ensure safety during testing. Advanced force limited vibration testing with 3D notching offers protection even for the most valuable spacecraft.

m+p international's application experts provide you with a solution fitting your needs.



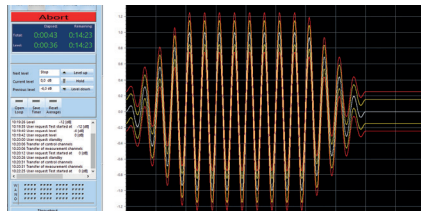
Qualifying Satellites by Vibration Testing

m+p VibControl supports all sine and random test modes required for commercial launch vehicle qualification tests. Gain confidence in the workmanship of the satellite's assembly: Dedicated postprocessing tools help detecting possible loosening of parts by resonance shifts between pre- and post-test or changing vibration behavior during the test, allowing you to react before sending the satellite to launch pad.



Shock Testing for Successful Satellite Deployment

Shock testing with **m+p VibControl's** industry benchmark control algorithms proves your satellite for deployment in space. Reliable control quality ensures amplitude and tolerances of shock profiles are always compliant with launcher specifications. Validate satellites for each individual payload adapter and separation system by choosing from a comprehensive selection of shock profiles and SRS.



Static Load Testing on Shakers

m+p VibControl simulates the static G-forces during the launcher's ascend on a shaker by sine burst testing without needing a specialized test rig. Testing on the same shaker as for qualification testing saves time by minimizing mounting efforts, test rig usage and training needs. A uniform file format allows you to monitor frequency shifts with m+p Analyzer, detecting upcoming failures early.



Global Service Support – Help is always around the Corner

m+p international's network of service experts and partners provides fast remote and on-site support. Our comprehensive service offering allows you to keep your software up to date, achieve regulatory compliance, maintain high performance, and maximize uptime throughout the life cycle of your equipment.

m+p VibControl for Vibration Testing on Shakers

- Industry-leading closed-loop shaker vibration control
- Full-range selection of basic and advanced spectrum types compliant with relevant industry standards and launch vehicles
- Built-in safety mechanisms which minimize the risks of damaging valuable test items
- True multi-tasking for maximum test efficiency and safety including test scheduling
- Multilingual and clear user interface supporting multi-monitor use
- Calibration service to always achieve highest data quality and compliance, optionally ISO 17025 certified
- Postprocessing multiple datasets simultaneously and customizable report generator

Features

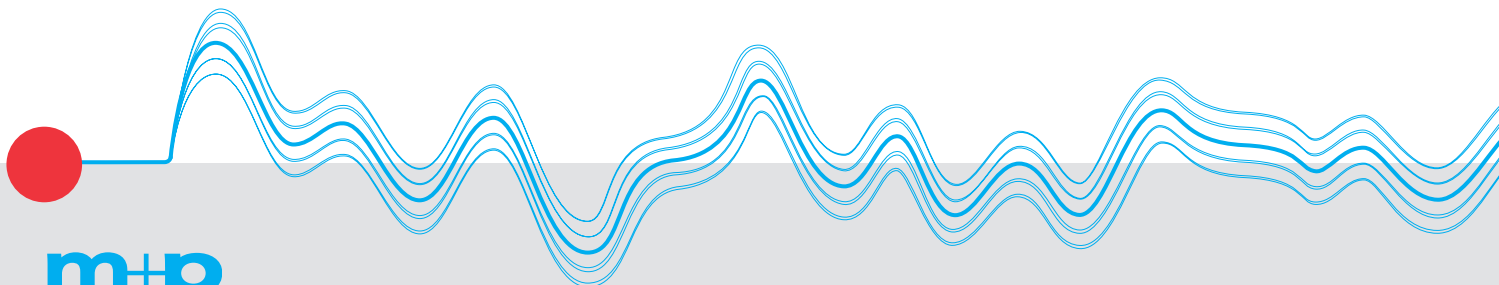
Channel count	4 to 256, expandable by additional DAQ system
Control frequency range	0,1 Hz to 40 kHz
Test modes	Sine, Random, Shock, Resonance Search and Dwell, Mixed Mode, SRS, Time Domain Replication, and more
Safety features	Warning and abort limits, notching (including vector notching) and force limiting; additional watchdog systems available for maximum safety
DAQ hardware	m+p VibRunner, m+p VibPilot up to 200 kHz sample rate
DAQ modes	Parallel to test, throughput and sine/random reduction modes for large DAQ systems

Complete Test Setup

Your ready-to-use satellite vibration testing system for launch qualification testing consists of m+p VibControl, m+p VibPilot or m+p VibRunner data acquisition hardware, shaker, accelerometers and a workstation PC. m+p VibControl delivers reliable vibration control for all shaker and sensor manufacturers. Configure the system fitting your needs or upgrade your existing controller to the industry benchmark m+p VibControl.



m+p VibControl, m+p Analyzer, m+p VibPilot and m+p VibRunner are products of m+p international. All trademarks and registered trademarks are the property of their respective holders. Specifications subject to change without notice.



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