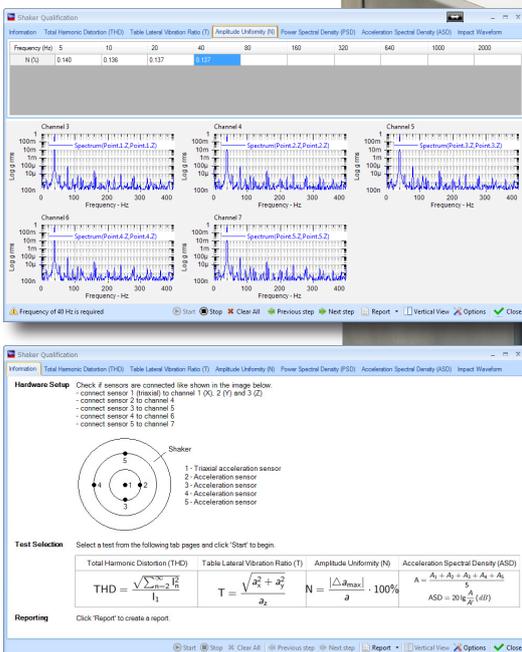


m+p Analyzer Revision 5.1



- New Multi-Channel m+p VibMobile Front-End
- Next-Generation m+p VibPilot Front-End with Ethernet
- Strain Measurements with m+p Hardware
- Server License with Dongle and System Service Available
- 2-Point Calibration
- Start Recording on Digital Input
- Advanced Impact Mode for More Flexibility
- Shaker Qualification Tool

New Multi-Channel m+p VibMobile Front-End



m+p VibMobile front-end

m+p Analyzer 5.1 supports our new multi-channel m+p VibMobile measurement front-end for mobile noise and vibration measurements and dynamic signal analysis. m+p VibMobile will open up many new applications in vehicle dynamics and other applications requiring a high channel density and portable or standalone operation.

With its compact form factor, robust design, embedded CPU and storage media together with optional battery power, m+p VibMobile is ideal for portable use in the field or mounted in vehicles as well as for use in the lab. The silent temperature-controlled fans make it ideally suited for acoustic measurements. A wide choice of m+p proprietary

analog I/O boards for high-speed data acquisition, simultaneous sampling, IEPE sensor supply, TEDS support and bridge measurements enables all kinds of measurement and signal analysis tasks. Up to four industry-standard CompactPCI® Serial Boards can be used additionally in the mainframe allowing for the free selection of industry standard I/O, interface and storage solutions.

64 channels can be connected to one m+p VibMobile. For NVH test and measurement applications, we offer two sigma-delta A/D converters, 102.4 or 204.8 kHz sampling rate, each with 8 channels, configurable input architecture and gain as well as multiple clocking and trigger options. The switchable input voltage ranges provide improved sensitivity for very low level vibration signals and microphone measurements as well as higher voltage sources such as tacho sensors. 24-bit resolution, full anti-aliasing protection and more than 120 dB spurious-free dynamic range make these digitizers high-precision instruments for measurements in frequency ranges up to 40 or 80 kHz.

For higher channel counts and distributed measurements, multiple m+p VibMobile front-ends are precisely synchronized by a daisy-chained master-slave configuration.

With its robust housing and an optional shock-isolated steel box with vapour-tight front and rear covers, you can also operate the m+p VibMobile under tough environmental conditions.

Next-Generation m+p VibPilot Front-End with Ethernet

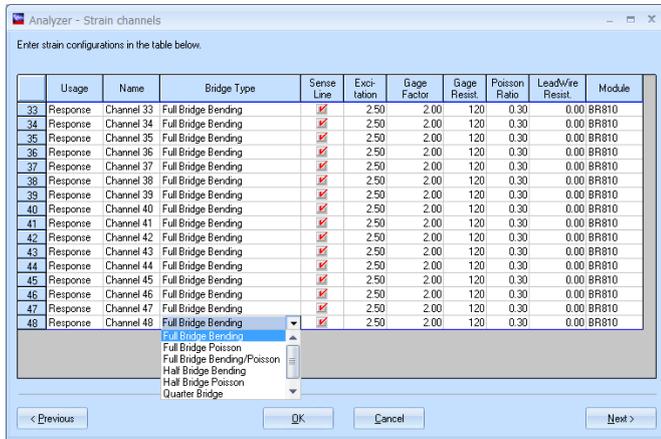


m+p VibPilot front-ends

Our 4/8-channel m+p VibPilot front-end has proven its excellent, yet affordable performance in numerous vibration testing and dynamic signal analysis applications. Now we have further enhanced these performance characteristics: Equipped with 24-bit sigma-delta A/D converters and an increased sampling rate up to 204.8 kHz, the new m+p VibPilot allows for alias-protected measurements in a frequency range up to 80 kHz and with more than 120 dB spurious-free dynamic range. Importantly, Ethernet connectivity to a host PC or laptop was added as an alternative to the existing USB host interface. Switchable input voltage ranges of ± 1 V and ± 10 V provide improved sensitivity for microphone measurements.

m+p Analyzer 5.1 supports this latest generation of m+p VibPilot front-ends for NVH measurements indoors and outdoors. For channel expansion, up to six m+p VibPilot devices can be linked to provide a total of 48 input channels without influencing their excellent measurement performance.

Strain Measurements with m+p Hardware



Strain channels page

The standard bridge module of our m+p VibMobile front-end is equipped with robust, reliable LEMO connectors, whereas m+p VibRunner comes with proven RJ-45 connectors. Special connectors are available on demand. All channels support TEDS for fast and secure system setup.

Server License with Dongle and System Service Available

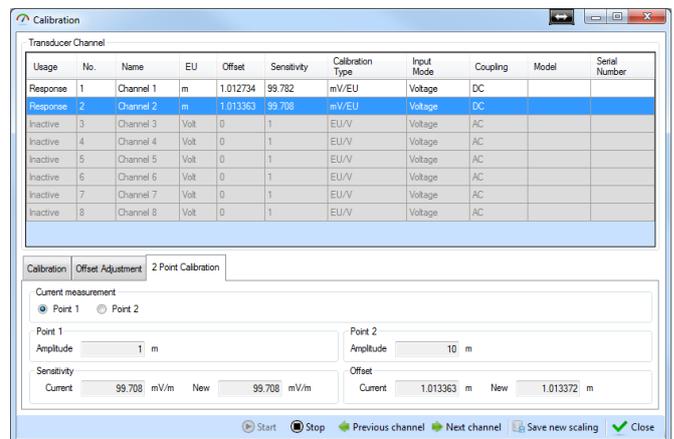
For more license flexibility, m+p Analyzer can now be licensed on a server together with a server dongle inserted into a USB port. Several users can share a license without the need to pass dongles from one computer to the other. All software licenses managed by the server are then available on all PCs which are connected to the server and each available license can be active at one PC at a time. Following the requirements of our customers, the server can be optionally installed and run in service-mode.

2-Point Calibration

The 2-point calibration is typically needed for DC-coupled transducers which are showing a signal offset when measuring a 0 EU value or have a defined linear operating range. These transducers require a “ $y = mx+c$ ” calibration using two static calibration points to automatically calculate slope (sensitivity) and offset calibration values. The definition is done in the 2-Point Calibration tab of the calibration tool.

Strain measurements are a vital part of the development stage in high-tech industries, such as the aerospace industry where spacecraft and aircraft wings are exposed to high strain. Thus, material and design testing is essential to ensure the development of high quality products. For many years m+p international has worked closely with aerospace engineering companies throughout the world to meet this target.

m+p Analyzer Rev. 5.1 offers full strain support for our m+p VibMobile and m+p VibRunner hardware. Both front-ends can be equipped with the new 102.4 kSa/s per channel bridge module which is perfect for dynamic strain measurements, experimental stress analysis and fatigue testing of mechanical structures. Each module supports eight strain gauges in full-, half-, or quarter-bridge configurations.



2-Point Calibration tab

Start Recording on Digital Input

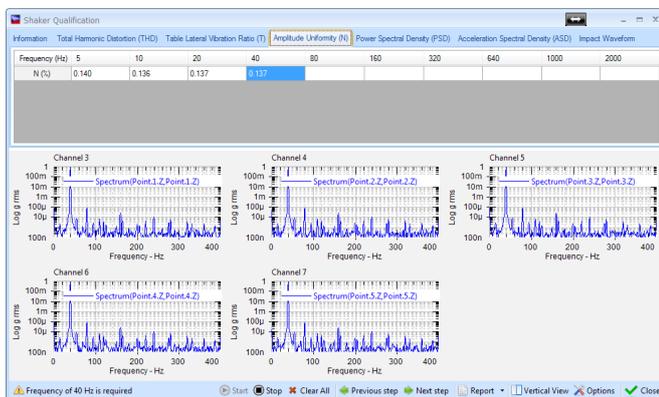
This new feature is essential whenever you want to start a measurement remotely – in the field or in the lab. The setup is done very quickly and easily. Just connect an external start mechanism e.g. a push button to one of the digital inputs (1, 2 or 3) of your m+p front-end. Then enable the “Start recording on digital input” option in the m+p Analyzer software and set the acquisition to scope mode. Finally, apply ”TTL high“ by pushing the button to start the measurement recording.

Advanced Impact Mode for More Flexibility

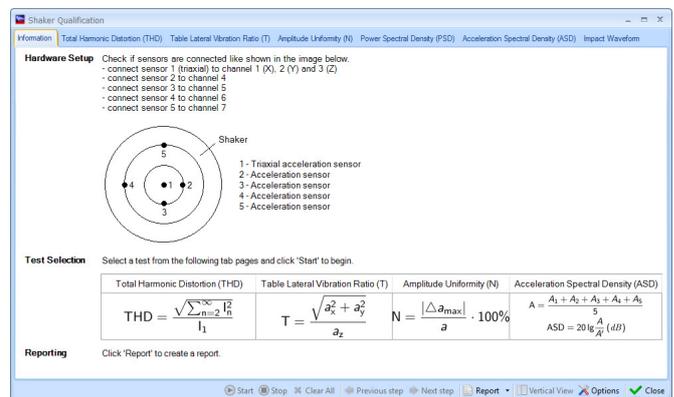
The standard impact mode is designed to help inexperienced users easily set up an impact test and hence has some restrictions. Advanced users, however, need more flexibility to meet their testing requirements. For example, the user wants to be free to take any signal instead of being restricted to force and acceleration. Therefore, we created the advanced impact mode which can be activated with only a few mouse clicks from the options panel.

Shaker Qualification Tool

m+p Analyzer Rev. 5.1 provides an advanced software tool for acceptance tests and regular qualification tests of shakers. Total Harmonic Distortion, Amplitude Uniformity, Table Lateral Vibration Ratio and other relevant measures are evaluated to verify functionality and performance data and to minimize the risks of downtime and associated costs.



Shaker Qualification tool – Information tab



Shaker Qualification tool – Amplitude Uniformity tab

Many Other New Features

A number of other enhancements include features such as:

- Asian languages are now allowed for path and file names when storing data to throughput files and hence full compatibility with the latest m+p VibControl software features.
- Online Shock Capture with all features from previous versions now available.
- User programming now supports all functionality from Revision 4.4. Many functions like access to charts, starting and stopping acquisition or switching digital outputs are now available in user programming as well as access from external programs.
- When importing m+p VibControl data, m+p Analyzer now uses the UserID to store m+p VibControl’s measurement sequence number. Then the browser’s Group By UserID feature creates a measurement list similar to VibPostTest for ease of access.

This Update Note provides you with an overview of the most significant product modifications and enhancements in m+p Analyzer Revision 5.1. These together with many other smaller improvements make the m+p Analyzer even more powerful and user-friendly.

This new software revision has primarily resulted from the close and valuable cooperation with you, our customers. We optimize the m+p Analyzer continuously.

Therefore, if you have any suggestions that could further improve our product offering for your application then please let us know.

m+p Analyzer 5.1 is available now providing you with even greater efficiency and ease of use.

Please do not hesitate to contact us for further information.

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