Update Note

# m+p Analyzer

## Release 5.6

We're pleased to present the new revision 5.6 of our m+p Analyzer for advanced test and measurement applications. The latest features deliver even greater precision in acoustic analysis, optimized data handling, and seamless automation. With enhanced usability and efficiency, we aim to make your daily work easier and more productive than ever.


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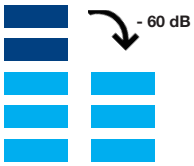
# New application highlights




### Optimized acoustics with precise RT60 calculation

The Rev. 5.6 allows the exact calculation of the RT60 reverberation time according to ISO 3382-2. RT60 indicates how long it takes for the sound level to drop by 60 dB after a source is switched off – a crucial parameter for evaluating room acoustics. This function helps optimize acoustic conditions, whether it's reducing reverberation, improving speech intelligibility, or enhancing sound insulation. It is especially valuable in fields like aerospace, civil engineering, and vehicle acoustics.

### DTS Slice compatibility for enhanced data analysis

DTS slice data can now be imported directly and analyzed precisely. The mobile data recorder, frequently employed in aerospace and defense, provides valuable time data that can now be easily converted into SOT format. This data can be efficiently subjected to frequency analysis and benefit from extended post-processing functions.

### Simplified analysis of long-term measurements with UTC time stamps

The x-axis of time-domain signals can now display absolute UTC time instead of relative time. This is especially useful for long-term measurements or analyzing time-dependent phenomena, such as bridge vibrations during rush hour traffic. Assigning real-world time events directly enhances precision, making data evaluation and interpretation clearer and more professional.

# Testing & automation enhancements

### Advanced automation and API interface for maximum flexibility

The revision 5.6 offers deeper integration into automated test and measurement workflows. In addition to standard .Net applications, the API interface is now accessible from Python or Excel VBA, enabling the implementation of customized control and analysis processes. A new example, included in the tools collection, demonstrates targeted control of acquisition, including starting and stopping based on the status of a digital input. With full source code provided, this tool simplifies the integration of custom solutions and workflows with external devices. Customers can now create automated test sequences and implement efficient remote control, ensuring maximum control and reproducibility in complex measurement environments.

### Extended signal generation options for standardized tests

m+p Analyzer 5.6 introduces new measurement generator functions for precise test alignment based on standards. Imported curves or signals can now be adjusted by a selectable dB level, ensuring compliance with standard-defined tolerance limits, often specified in dB relative to a reference—ideal for environmental simulation. Additionally, frequency breakpoints can be set for signals with logarithmic slopes, which are critical for environmental simulation spectra. These enhancements enable more accurate, efficient, and compliant testing, improving the relevance and precision of tests in areas like environmental simulation and product testing.

# Usability Improvements

### Enhanced product evaluation through sound level values over time

The Analyzer now enables the detailed display of sound level values over time. In addition to the Overall Sound Pressure Level (OASPL), A-/Z-weighted sound power and sound pressure can be precisely analyzed according to ISO 3744, ISO 3745 and ISO 3746. This feature improves the traceability of long-term measurements and helps optimize acoustic comfort – ideal for product development, quality assurance, and acoustic fine-tuning.

## Efficient data handling for seamless processing and fast export

The new version streamlines data export, making it faster and more flexible. You can now export data in MATLAB V7 format with your preferred unit, such as g or m/s², directly selected. The TXT file export has also been enhanced, enabling the export of complete workspaces—both frequency and time data—at the click of a button. This results in two separate TXT files: one for frequency measurements and one for time measurements. These improvements optimize your workflow and save valuable time during data processing and analysis.

## Improved modal analysis of complex tests through automatic drive point detection

The new add-in allows for automatic filtering of drive-point measurements directly within the workspace. This feature is especially beneficial for MIMO tests or roving sensor analyses with multiple excitation points, aiding in the detection of typical drive-point characteristics. Users can quickly verify if measurements align with expected FRF characteristics, minimizing errors, accelerating evaluation, and ensuring more reliable modal analysis.

## Easy SOT data import into MATLAB for in-depth analysis

With its new pre-written script, m+p Analyzer 5.6 simplifies importing data from an SOT file into MATLAB. This ensures a smooth transition from high-sampled data recording to further processing, particularly benefiting universities and engineers. It streamlines the transfer of throughput data from m+p's SOT file format to MATLAB without the need for intermediate conversion.

## Improved overview and greater flexibility in chart display

Displaying signals in m+p Analyzer 5.6 is now even more user-friendly. Chart containers can be individually named, making it easy to quickly identify and assign measurement data. The Multichart feature, which displays multiple signal views in a matrix format, can now be copied as a complete graphic, preserving its original arrangement. Additionally, offline data is clearly marked when dragged and dropped, making it easy to distinguish from online data. These enhancements ensure a more efficient and intuitive signal visualization experience.

## Enhanced filter and grouping functions for improved organization and efficiency

Managing large measurement data sets is now more straightforward. The transducer database can be filtered by serial number or model, making it ideal for users with multiple identical sensors. Measurements in the workspace are now grouped by function type (e.g., Time Record, Spectrum, PSD), improving organization. These enhancements simplify navigation, save time, and ensure more structured data management.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