

## m+p international Newsletter 1/2010

13 January 2010

Welcome to our latest Newsletter about the Vibration & Environmental test world in addition to the latest information from m+p international.

The m+p international Newsletter is circulated exclusively to test engineers and managers involved in vibration test, data acquisition and signal analysis and hopes to bring you some useful technical snippets gleaned from around the world and from around the test and measurement industry. We always look forward to your inputs, send us your views to [newsletter@mpihome.com](mailto:newsletter@mpihome.com).

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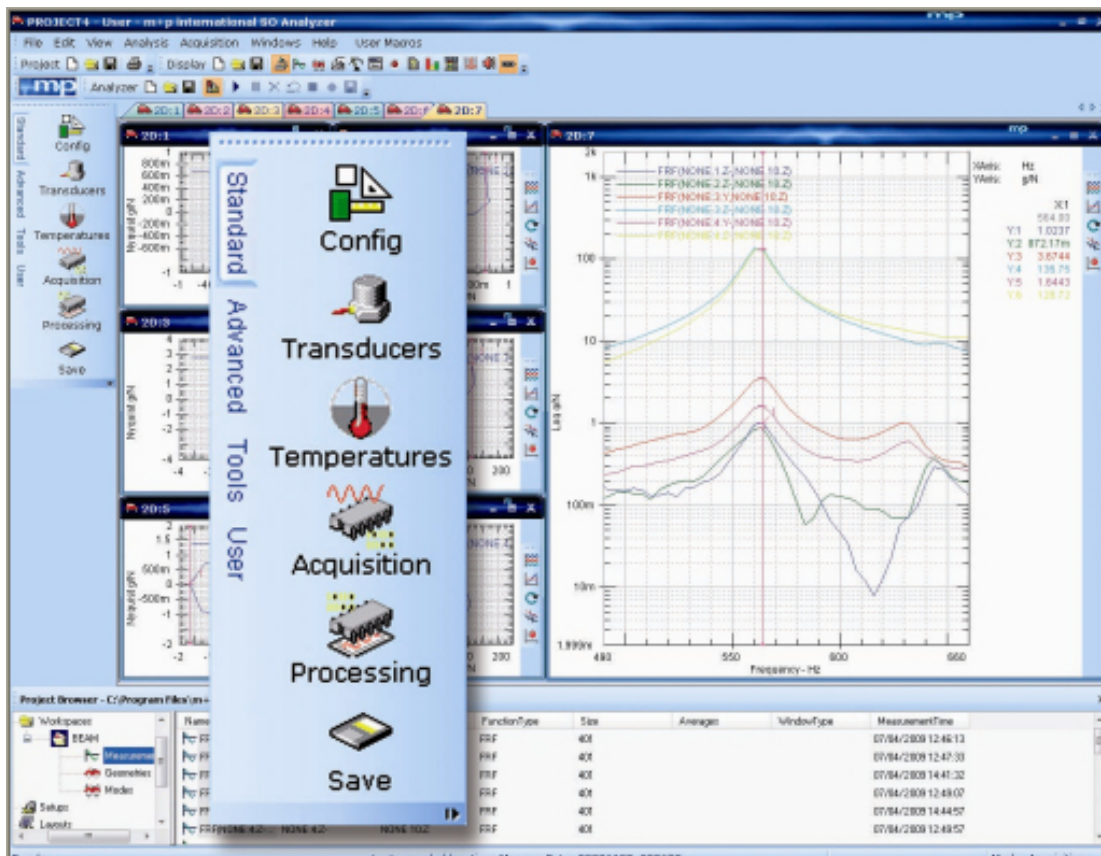
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#### 1. Noise & Vibration Analysis: Release of SO Analyzer Rev. 4.0

m+p international's SO Analyzer is the perfect choice for accurate and efficient noise and vibration measurements, third-party data import/export, data analysis and reporting of your results in a single package. It covers the widest range of applications in today's dynamic signal analysis and is designed for use in the field and in the lab.

SO Analyzer Rev. 4.0 introduces a lot of new useful capabilities and enhancements to our software, a few of them are:

- The user interface has been completely revised and adapted to the latest window themes and styles. This includes all major components of the SO Analyzer. Besides the user can customize the selection steps according to his specific application.



- SO Analyzer now supports up to four [VibPilot](#) devices with a total of 32 input channels, 8 sources and high-speed tacho counters. VibPilot is m+p international's portable, fan-less 4- or 8-channel front-end with 24-bit resolution and USB 2.0 interfacing. Devices are synchronized via a master clock with no loss of their excellent measurement performance across multiple units.
- Temperature logging alongside dynamic measurements: It is often useful to record thermal conditions while gathering dynamic data. This is now possible using either the National Instruments 9211 4-channel or the 9213 16-channel thermocouple input modules in conjunction with any of the other SO Analyzer supported dynamic acquisition hardware.
- New user defaults can be defined for Project New, Analyzer Setup New and Display Layout New again assisting the user to personalise his functionality to best suit the common applications being performed.
- SO Analyzer provides unlimited throughput to disc recording of time sample data including the option of multiple scheduled recording. To better manage these files a "Recorder" section has been added to the browser: This stores the path to the throughput (recorder) files and displays these in the browser.
- Licensing options include softcode, hardware dongle and now an advanced network based capability. This network-based option provides concurrent user access anywhere on the user network with the added option of detachable licensing for portable PCs or measurement systems etc.
- Ground vibration testing (GVT): Advanced modal test additions include multiple force level controlled sources with user-defined phase that are available for both swept sine and stepped sine measurements providing normal mode excitation for accurate mode identification and analysis. Swept sine can now be synchronised directly with the internal source giving more accurate COLA tracking and freeing up an extra input channel. Using the normal mode MIF function enables quick validation of FRF results and the linked FRF-Nyquist chart function allows for rapid review of many FRF results prior to full modal analysis.

This update is of course free to all our customers with current maintenance contracts.

For more information please read our 4-page [SO Analyzer 4.0 Update Note](#) or contact [sales.na@mpihome.com](mailto:sales.na@mpihome.com).

## 2. GE Aviation Systems Selects VibPilot for Maximum Flexibility in Vibration Testing

GE Aviation Systems in Clearwater, Florida has purchased 24 channels of [VibPilot control systems](#) to allow for engineering and production testing utilizing a single user interface. By using the m+p international VibPilot solution they will be able to reconfigure their three systems into two 4-channel and one 16-channel or one 8-channel and one 16-channel or two 12-channel systems. This flexibility keeps them prepared for unforeseen engineering requirements while everyday production testing can proceed with minimal impact. Of course, they benefit from the advanced functionalities of the [VibControl shaker control software](#) while taking advantage of the low cost and flexibility of the VibPilot systems.



## 3. Investigating Fan Housing Vibration

Our full-featured SO Analyzer Rotate software package is used for rotating machinery diagnostics, analysis of noise and vibration problems related to rotational forces (e.g. in automotive and aircraft engines, transmissions, gearboxes, compressors, pumps, turbines, electric motors) as well as for order analysis.

Please learn in the present [Application Note](#) how the SO Analyzer was used to investigate the dynamic response of a fan system which exhibited high levels of vibration as it swept up to its normal operating speed. Resampling order tracking technique was coupled with the Operating Deflection Shape Analysis Wizard to produce animations. An additional technique, orbit plotting, is also described.

## 4. m+p international at IMAC Conference and Exposition

Please visit m+p international at the [IMAC XXVIII](#) Conference and Exposition from February 1 to 4, 2010 in Jacksonville, Florida to see the latest revision 4.0 of our SO Analyzer for **dynamic signal analysis with channel counts from 4 channels to thousands:**

- New support of up to four VibPilot devices with a total of 32 input channels, 8 sources and high-speed tacho counters. VibPilot is m+p international's portable, fan-less 4- or 8-channel front-end with 24-bit resolution and USB 2.0 interfacing.
- Also supports National Instruments (PXI, PCI, and USB), Bustec VXI-based ProDAQ and VXI Technology VT143X.

Application support independent of hardware front-end allows upgrading while preserving your investment.

**m+p international Booth # 300**

We would be pleased to see you there.

For more information please contact: [sales.na@mpihome.com](mailto:sales.na@mpihome.com)

Well, that brings to a close this edition of the m+p international Newsletter. If there are items of info you would like to see here or if you have useful tips for the rest of the environmental test world, then please [send us your pointers](#) and we'll include them in the next edition.

Please forward this Newsletter to your colleagues if you have found it of interest, spread the word...

With regards,  
m+p international Marketing Team

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