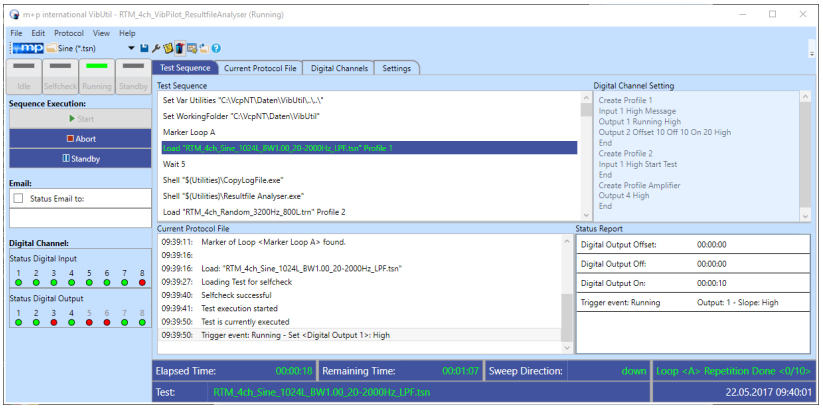
m+p VibControl

m+p VibUtil/Test Sequencing

With the m+p VibUtil add-on module, m+p VibControl offers a versatile tool for automating vibration tests such as combining vibration tests of identical or different test modes in any complexity of nested loops. The program can be paused and resumed at any time during the test to ensure a long test can be completed in sequence, even if interrupted mid-stream. During the test, online signals are displayed as the test progresses and evaluation can be carried out on completed measurements.

You can leave the system unattended and start an overnight or weekend run. During this time, m+p VibUtil can be configured to send email updates upon test completion or abort to a user-defined unlimited number of addressees.

m+p VibUtil can readily be extended to include up to eight digital input channels and four digital output channels which provide links to external equipment such as environmental chambers, for combined environmental testing. For example, if a digital channel is set by the climatic chamber after reaching a defined temperature, m+p VibUtil will start a new test or execute other commands corresponding to the current test schedule.



Automated vibration testing

Key Features

- Powerful tool for automated vibration testing
- Combining tests of identical or different modes into one test sequence
- Automated vibration test progress monitoring
- Test sequence event feedback via email to PC or mobile phone
- Repetition of sequence parts by means of loops
- Test sequencing program can be paused or resumed at any time and can be started with any line
- Test sequence protocol available
- Digital input and output channels for interaction with external equipment (m+p Advanced VibUtil)
- Start and shutdown of power amplifier via digital channel setting (m+p Advanced VibUtil)

Applications

- Long-term durability testing
- Unattended vibration test progress monitoring
- Combined environmental testing (e.g. in a climatic chamber)

m+p VibUtil (Standard)

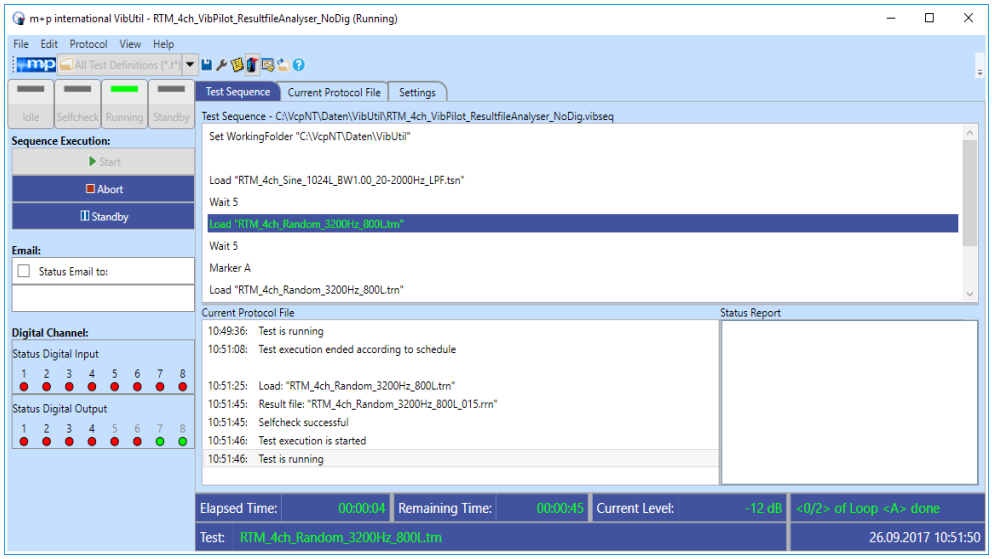
The standard m+p VibUtil package contains all functions required for easy-to-use test sequencing, unattended vibration testing with feedback via email, as well as error handling. The program supports all test modes that do not require user interaction: sine, sine dwell, random, shock, shock response spectrum, mixed mode, time domain replication (road load simulation), sine reduction, random reduction and transient capture.

m+p VibUtil will carry out the commands entered by the user line by line. The stored test sequence set-up file can be loaded and run whenever desired. The loop function enables the user to repeat complete tests or certain parts of the sequence.

When the system is left unattended, m+p VibUtil can be set to send an email to the user-defined addressees upon test abort or completion. A protocol file documenting key test events is attached to the email.

In addition, m+p VibUtil is able to start external programs such as Microsoft Word or Excel among others.

Test sequences from previous m+p VibUtil versions can be imported.



m+p VibUtil test sequence schedule

- Supported test modes: sine, sine dwell, random, shock+, shock-, SRS+, SRS-, SoR, RoR, SoRoR, time domain replication (road load), sine reduction, random reduction, transient capture
- Loop function for automatically repeating parts of the test sequence
- Status email can be sent upon test abort or completion to an unlimited number of recipients with protocol file attached
- Automatic repetition of unsuccessful selfchecks every user-defined number of seconds, function can be disabled
- Working folder definition for faster test loading procedures
- Start of external programs (Microsoft Word, Excel, etc.)
- Utility folder definition for quick access to external programs
- Flexible start of the test sequence by defining a delay
- Error routine: test sequence stops, next command will be executed, interrupted test restarts at the same point x times, test restarts at the beginning
- Inactive test definitions can be viewed and modified during the active test sequence
- Test results can be analysed in VibPostTest during the test sequence run
- Import of test sequences from previous m+p VibUtil versions

m+p Advanced VibUtil

The m+p Advanced VibUtil package provides the complete functionality of the standard m+p VibUtil software and, additionally, supports up to eight digital input channels and four digital output channels which provide links to external equipment. For example, if a digital channel is set by the climatic chamber after reaching a defined temperature, m+p Advanced VibUtil starts a new test or executes other commands corresponding to the current test schedule.

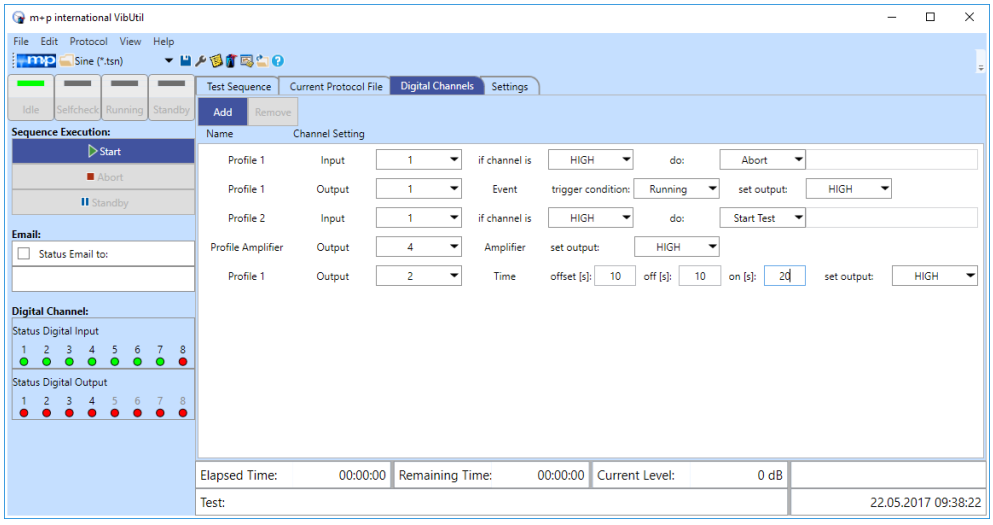
For the digital channel configuration m+p Advanced VibUtil provides time driven profiles and event driven profiles. Time driven profiles set a channel state after a certain time interval has elapsed. Event driven profiles allow the user to define channel states which are set as soon as the defined event takes place. The definitions are stored and added to the test schedule. During the test sequence the user can still modify the test modes and the sequence profiles as long as they are not active. Current data can be viewed in VibRunner and result file data analysed in VibPostTest. Using these profiles, even complex environmental tests having a multitude of variables can be combined into a single test sequence.

For example, m+p Advanced VibUtil is used for automatic vibration testing of a car‘s headlamp in a climatic chamber where different temperatures and different switching states of the specimen (driving beam, dipped beam, parking light and indicator) have to be simulated at the same time.

A test can also be defined such that it will pause if the output channel is switched off. This function is used, to simulate a truck ride: 8 h sine sweep, 1 h pause, 8 h sine sweep, 1 h pause, ...

With m+p Advanced VibUtil, the user can automatically control the power amplifier, i.e. shut it down at the test end and switch it on when a new vibration test is to be started. It is also possible to interrupt the test and shut down the power amplifier.

- All functions of the standard m+p VibUtil software
- Support of 8 digital input channels and 4 digital output channels
- Event driven digital output:
  - channel setting depending on certain input channel state
  - channel setting upon trigger condition which has been met
- Time driven digital output: offset/on/off in seconds for each output channel
- Power amplifier profile: automatic switching on/off
- User-defined inverse setting of the digital input channels



Digital channel configuration

Operating System

- Microsoft Windows 7 Pro and Windows 10 Pro 32 or 64 bit

m+p VibControl is a product of m+p international.

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