

VibControl

VibUtil/Test Sequencing

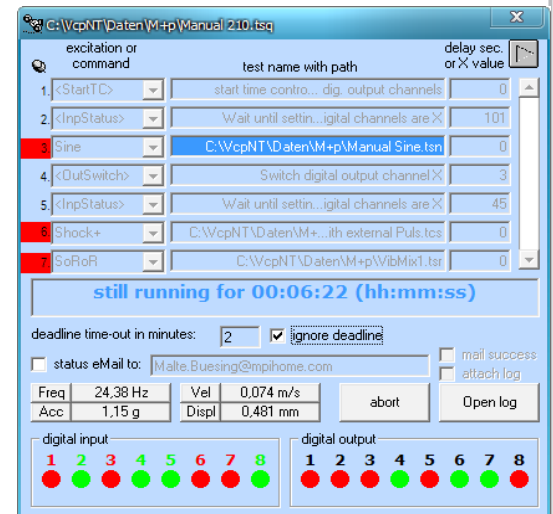
With the VibUtil add-on module, VibControl offers a versatile tool for automating vibration tests. VibUtil easily combines individual vibration tests of identical or different test modes in any complexity of nested loops. The program can be paused and resumed at any time during the test to ensure a long test can be completed in sequence even if interrupted mid-stream. Whilst the operator is present, comments can be added in addition to the freedom to view signals online as the test progresses.

When the system is left unattended, e.g. for an overnight or weekend run, you can still be in control. The VibUtil communication interface can be set to send an email upon test completion or abort to a user-defined, unlimited number of addressees. This email can easily be forwarded via an SMS text message to the mobile phone, enabling that important decision to return to work to be made within minutes of the test stopping.

VibUtil can be flexibly extended to include eight digital input channels and eight 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 or by other test equipment after reaching a defined state, VibUtil is able to start a new test or execute other commands according to the current test schedule.

Key Features

- Powerful tool for automated vibration testing
- Combining individual tests of identical or different modes into a single command string
- Unattended testing
- Full test control anywhere via email and mobile phone (SMS text message)
- Repetition of all sequences by means of loops
- Test sequencing program can be paused or resumed at any time
- Chronological test sequence protocol
- Digital input and output channels for status request from external equipment
- Automatic shutdown of power amplifier



Applications

- Long-term durability testing
- Unattended, safe vibration testing
- Combined environmental testing (e.g. in a climatic chamber)

VibUtil (Standard)

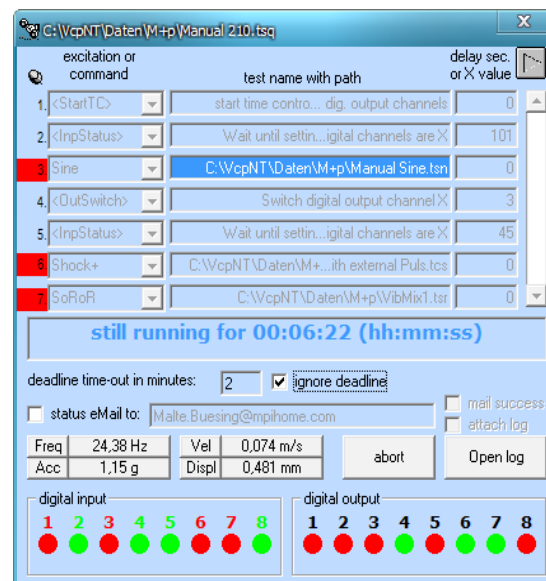
The standard VibUtil package contains all functions required for comfortable test sequencing, unattended vibration testing with full control via email and mobile phone as well as error handling. VibUtil supports all test modes that do not require user interaction: sine, sine dwell, random, shock, shock response spectrum, mixed mode and time domain replication (roadload simulation).

All measurements defined in a single test can be added to the test sequence schedule. VibUtil will carry out the commands entered by the user line by line. The stored test sequence set-up file can then 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, VibUtil can send an email or SMS message to the user-defined addressees upon test abort or completion. A protocol file documenting the most important test events is attached to the email.

In addition, VibUtil is able to start external programs such as Microsoft Word or Excel. If defined, VibUtil can only continue with its test schedule upon completion of the external program in question: For instance, the external program automatically processes the result file of a vibration test before VibUtil can start the next test run.

- Supported test modes: sine, sine dwell, random, shock+, shock-, SRS+, SRS-, SoR, RoR, SoRoR, roadload
- Up to 999 commands for test sequence set-up
- Loop function for automatically repeating sequences of commands
- Status email and SMS text message on mobile phone: Upon test abort or completion, unlimited number of receivers, protocol attached
- Automatic repetition of unsuccessful selfchecks every user-defined number of minutes, function can be disabled
- Start of external programs (Microsoft Word, Excel, etc.)
- Sine and sine dwell tests: Defining the number of decimal places (max. 4) displayed for frequency, acceleration, velocity and displacement and the engineering unit displayed for acceleration, velocity and displacement
- Starting the test sequence immediately or at a defined time
- Error routine: test sequence stops, next command will be executed, interrupted test restarts at the same point x times, test restarts at the beginning



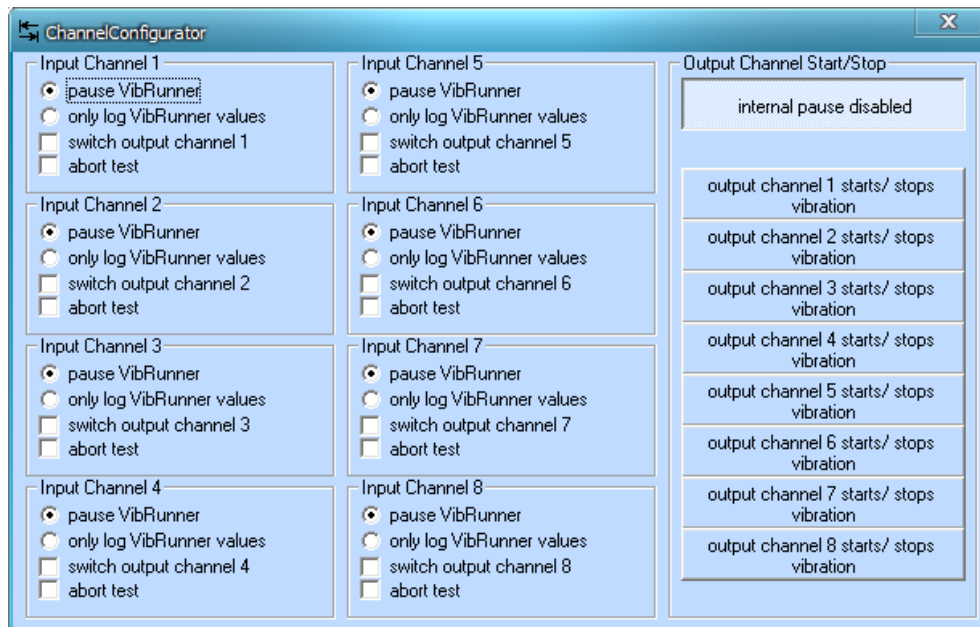
Advanced VibUtil

The Advanced VibUtil* communication interface has the complete functionality of the standard VibUtil software and, additionally, supports eight digital input channels and eight 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, Advanced VibUtil starts a new test or executes other commands according to the current test schedule.

The comfortable time control function allows the user to define time values for individual digital output channels. The definitions are stored and added as command to the test schedule. In this way, even complex environmental tests having a multitude of variables can be combined into a single test sequence which can then be run unattended. For example, 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, for example, to simulate a truck ride: 8 h sine sweep, 1 h pause, 8 h sine sweep, 1 h pause, ...

With 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 only if a user-defined number of components of the test specimen is defective.

- All functions of the standard VibUtil software
- Support of 8 input channels and 8 output channels
- Time control function: Offset/on/off in sec. for each output channel
- Automatic switching on/off of the power amplifier
- User-defined inverse display of the digital channels



* requires a National Instruments digital I/O card

General Information

Operating System

- Microsoft Windows XP/Vista

Ordering Information

- VC-SVU VibUtil
- VC-AVU Advanced VibUtil
- VC-VBM Visual Basic Module

Optional VibControl Software Modules

- VC-RAN Random
- VC-RNO Random Notching
- VC-SIN Sine
- VC-SNO Sine Notching
- VC-SRD Sine Resonance Search & Dwell
- VC-SRE Sine Reduction
- VC-SRT Sine Reduction - Throughput
- VC-RRE Random Reduction
- VC-RRT Random Reduction - Throughput
- VC-DCO Displacement Control

- VC-CLS Shock Classical
- VC-SRS Shock SRS
- VC-EXP External Pulse
- VC-SOR Sine-on-Random
- VC-ROR Random-on-Random
- VC-TRC Transient Capture
- VC-TRT Transient Capture - Throughput
- VC-RLD Time Domain Replication (e.g. Road Load)
- VC-CRT Crash Test
- VC-ACO Acoustic Control
- VC-MOC Momentum Control
- VC-HFS High-Frequency Sine
- VC-APP Advanced Post-Processing
- VC-RSC Multi-Monitor
- VC-NOF VibCo Pilot (No Frontend Licence)
- VC-CAL VibCalibrate

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