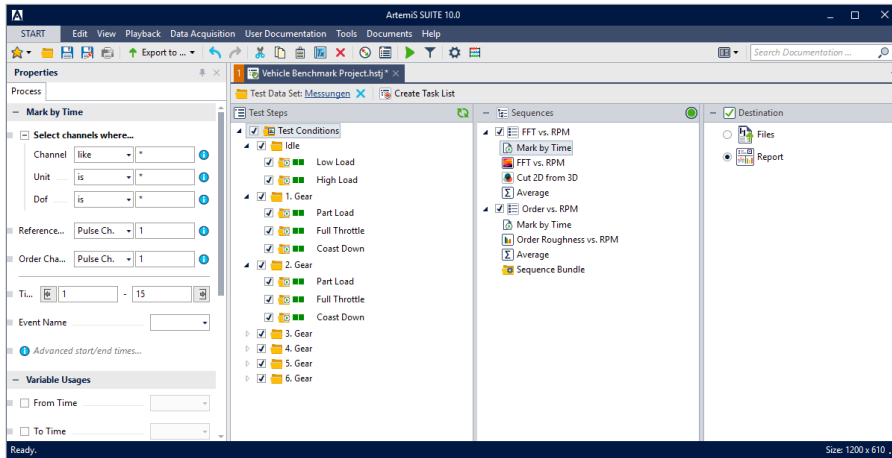


ArtemiS SUITE Standardized Testing Module (Code 5022)

Module for creating and automated processing of standardized test series



Overview

The Standardized Testing Module is used to execute standardized test series: starting with the data acquisition to data analysis up to the final report.

In order to detect the acoustic characteristics of a product, often many test conditions of a test object have to be measured and examined in different ways.

Using ASM 22, frequently repeated test procedures can be presented in various standardized test projects. In doing so, different test conditions can be considered and analyzed individually.

When a test series is defined, the Standardized Test Project converts it into a Task List for the HEAD Recorder. After all measurements are acquired with the HEAD Recorder, users can load the test data set in the Standardized Test Project to execute all sequences (analyses, filters etc.) automatically.

On request, the results can be presented in a report.

Report

- Creating reports by using a standardized, comparable report template for all tests of a test series
- Export to PowerPoint or in the PDF format

Automated processing and presenting

- Loading a test data set acquired with the HEAD Recorder in a Standardized Test Project
- Analyzing the measurements, according to the sequences, which are specified for the various test conditions, by pressing a button
- Presenting the calculated results of a test data set in a report

Features

- Comfortable and time-saving measuring and evaluating of standardized test series according to defined test conditions
- Data acquisition based on an automatically generated Task List
- Automated processing of each measurement
- Comparative representation of several test data sets
- Presenting the results in a report
- Export of a report to PowerPoint or in the PDF format
- Extensive processing options:
 - Cutting marks
 - Filters
 - Analyses
 - Single values
 - Statistics
 - Post-processing operations (tolerance check, smoothing etc.)
 - Export
- Variables for a simplified parametrization of sequences
- Automatic compatibility check of sequences

Standardized Test Project

- Defining of standardized test procedures for tests with
 - different test objects
 - test objects with construction conditions
- Specifying test conditions which have to be measured by means of variations in a tree structure (e.g. 1st gear, 2nd gear, etc.)
- Easy adding and positioning of variations via copy & paste and the mouse

Sequences

- Configuring sequences with a specific processing for each test condition
- On request, creating user documentation for each measurement

Data acquisition

- Automatic generation of a structured Task List from a Standardized Test Project for the HEAD Recorder
- Clearly, visual control of all required recordings in the HEAD Recorder by means of the Task list
- Specifying the measurement conditions with
 - Start / stop trigger
 - Loops

Standardized Testing

Defining the test conditions in a Standardized Test Project

The Standardized Test Project displays the test procedure and is divided into three pools.

In the first pool, the test conditions to be measured can be defined and visualized in a tree structure.

A test condition consists of variations of a criterion or several criteria.

⇒ Example (see picture on the right):
For a vehicle test the criterion “gear” has to be measured in three variations (1st, 2nd and 3rd gear). For each gear, the criterion “load” has to be measured in three variations: full load (FL), partial load (PL) and coasting.

The visualization of each test condition in a tree helps the user to keep track of the largest projects, too. The variations can be duplicated as often as desired and restructured via copy & paste or with your mouse.

Configuring the sequences

The second pool is used to configure the further processing by the use of sequences.

Each sequence may include an unlimited number of processing operations, for example cutting marks, analyses, filters, etc.

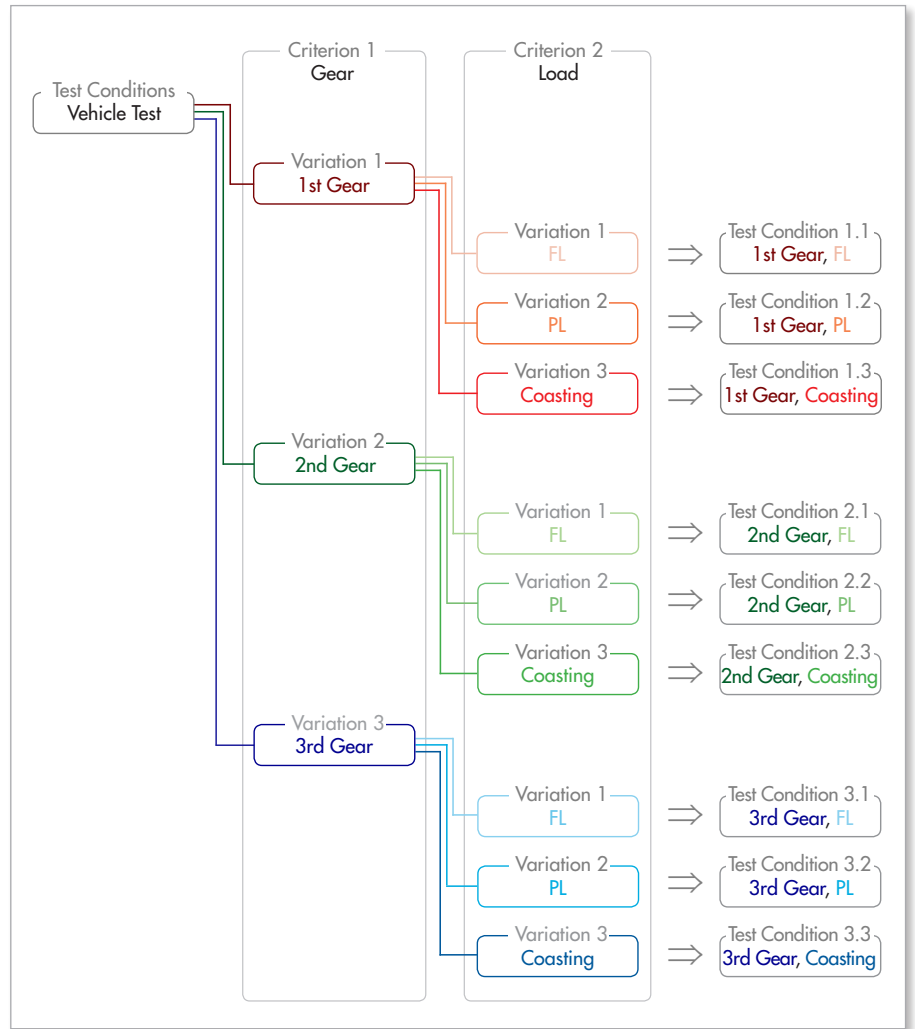
A sequence, defined for an individual variation, is handed down to all sequences under it. For example, analyses, which have to be performed for several measurements, must be defined only once on a superordinate variation.

Regardless of this, the lower variations can be equipped additionally with individual sequences, which will be applied in addition to the inherited sequences.

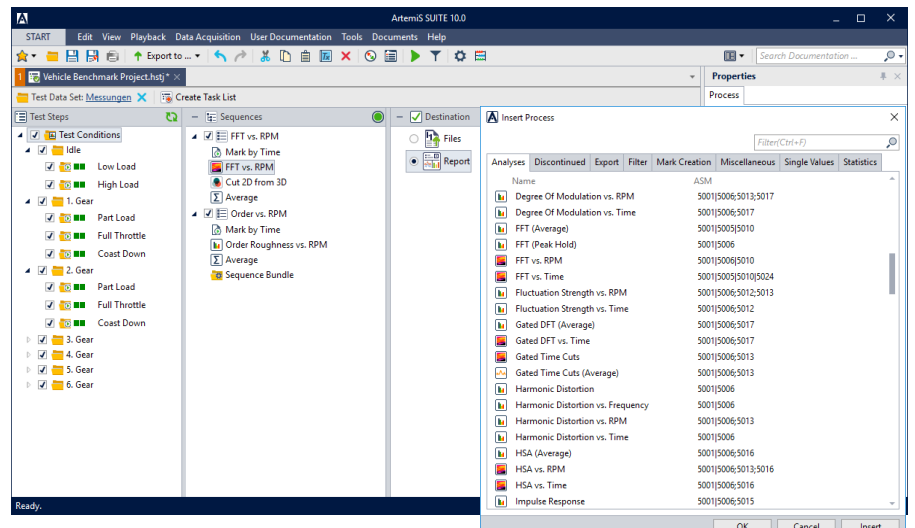
A compatibility check is performed for each element, so that users are immediately informed about incompatibilities by means of status displays.

The use of variables enables a uniform parametrization of sequences via central locations, as well as to access the documentation of the input data and to calculate variables automatically with each other.

This allows users to modify the sequences dependent on the variations quickly and safely to simplify their project maintenance considerably.



Example of a Standardized Test Project visualized in a tree. A total of 9 different test conditions are measured.



For the sequences, over 120 different analyzes, statistic functions and many other processing tools are available, according to the existing ArtemiS SUITE licenses.

Sequence Bundles can be used for calculating several paths or sequences in parallel. This enables, for example, to calculate an analysis only once, but to then apply different statistical functions to them.

Furthermore, users can collect the results of multiple paths thereby and then have these be allocated with each other, for example, using Channel Calculation.

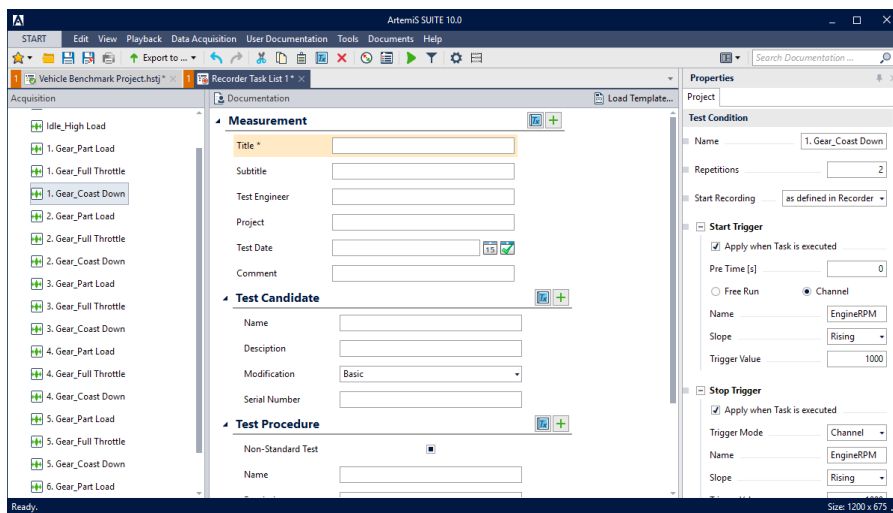
Configuring the data acquisition in the HEAD Recorder

After the test procedure is designed, the Standardized Test Project extracts all test conditions which have to be measured and creates a Task List for the HEAD Recorder.

This Task List contains the measurement conditions for the required measurements in the HEAD Recorder. All list entries can be configured individually and be supplemented with triggers and repeat measurements (loops).

With this the HEAD Recorder receives the requested information to perform the required measurements.

In addition, a documentation template can be established to create documentation for each measurement individually.



The conveniently created Task List allows individual configurations of the HEAD Recorder, e.g. with triggers and loops.

Performing the measurements

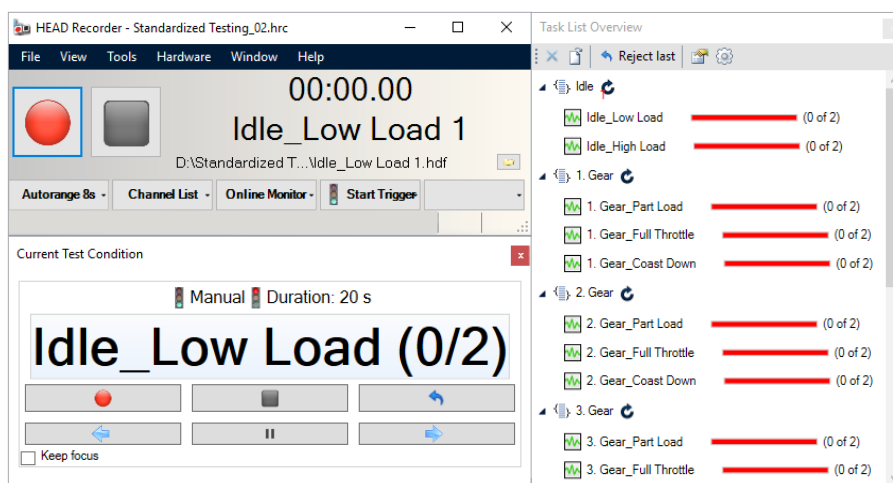
The custom Task List is displayed in a separate window of the HEAD Recorder. All recordings can be executed in a user defined order.

To start a measurement, another window with a clearly structured interface is available. This supports a simple and safe data acquisition with the HEAD Recorder.

By marking the measurements which are already finished or still to be carried out, the data acquisition can be performed quickly and completely.

For acquiring the measurements, users can take advantage of their individual flow control in the HEAD Recorder, too.

After the measurements are checked off the list, the test data set is complete. All the measurements necessary for the test procedure are acquired.



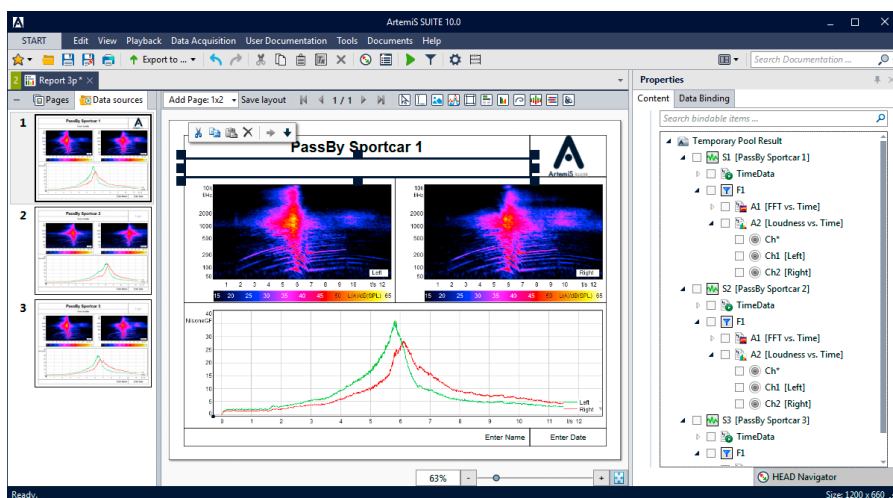
The clearly arranged window of the HEAD Recorder allows to navigate very easy through the Task List. In addition, users get a visual feedback of upcoming and already completed measurements.

Presenting the results

In the third pool, users can bind the measurements of a test and the results calculated from the analyses to a report template.

An individually configured report can be used as a template for all other tests of the test series. After replacing the test data set, the user receives consistent and comparable reports only by pressing a button.

Completed reports can be exported to PowerPoint or in the PDF format.



The report templates can be configured individually. Even with larger amounts of data a report can be created with a single click.

Overview

Advantages of Standardized Testing

The Standardized Testing Module of ArtemiS SUITE is optimized to support the user in performing already fixed, standardized test series. However, for frequently changing test procedures, this module, is less suitable. For this, HEAD acoustics recommends the interactive working in a Pool Project or the automated working in an Automation Project.

For using standardized testing, it is advantageous to have experience with an Automation Project.

Benefits

The Standardized Testing Module is suitable,

- if the user has standardized test procedures, which are already created and tested.
- if a test procedure should be repeated very often (many tests with always the same test procedures).
- if a test includes many measurements (e.g. for different test conditions).
- if the measurements of a test should be analyzed differently.
- if the final report is very extensive.
- especially for users who have to perform their tasks in a standardized manner and who have to invest a lot of manual labour to get a final report by using conventional methods.

Potentials

The Standardized Testing Module offers

- support in constructing extensive test procedures.
- a safe procedure for structured data acquisition.
- a maximum overview in tests with many measurements.
- individually configurable sequences for the various test conditions (automatic data routing).
- an automated processing of the measurements.
- an easy way to get a report and to present the results.
- PPTX and PDF export.

⇒ If you have any questions regarding possible applications of standardized testing, please do not hesitate to contact your HEAD acoustics support team.

Scope of Supply

- License file:
ArtemiS SUITE Standardized Testing Module (Code 5022)

Requirements

- ArtemiS SUITE Basic Framework (Code 5000)

Recommended

- ArtemiS SUITE Basic Analysis Module (Code 5001)
⇒ for configuring sequences with fundamental analyses and statistical operations, filters, single values, cutting marks, etc.
⇒ for Channel Calculation
- ArtemiS SUITE Basic Report Module (Code 5002)
⇒ for creating reports; to export reports to PowerPoint or in the PDF format
- HEAD Recorder
ArtemiS SUITE Data Acquisition Module (Code 5004)
⇒ for data acquisition
- If functions from other modules of the ArtemiS SUITE are needed for the sequences, the corresponding licenses must be available.

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