

Features

Recording

- Data acquisition with all front ends supported by HEAD acoustics
- Intuitive front-end configuration via a graphical representation (Frontend View)
- Uncomplicated acquisition of RPM, temperature, CAN, OBD-2 (29 bits / WWH), FlexRay, GPS, or other parameters
- Recording of triggered video signals and the corresponding audio signals
- Configuration of offline front ends for future transfer to real front ends
- Automatic level control

Trigger

- Trigger functions, including additional triggers based on analysis results (hysteresis adjustable)

Online Generated Channels

- Generation of new channels (e.g. pulse channels), calculated individually from existing channels

Programmable Flow Control

- Automated executing of simple or complex measurement processes
- Inclusion of Automation Projects in the Flow Control functionality (with the Basic Analysis Module ASM 01 or Automation API Module ASM 05)
- Automated insertion of recordings into the Source Pool of a Pool Project (with ASM 01) or an Automation Project (with ASM 01 or the ASM 05) and automated calculation of the project
- Display of tolerance check results
- Recording of voice memos

Standardized Test Project

- Easy and safe executing of measurements required for standardized test series (with the Standardized Testing Module ASM 22)

Online Monitoring

- Direct visual online monitoring of incoming signals (up to 16 diagrams with various analysis types)
- Acoustic monitoring

DATA SHEET

HEAD Recorder

ArtemiS SUITE Data Acquisition Module (Code 5004)

Recorder software module of ArtemiS SUITE

Requirements: ArtemiS SUITE Basic Framework ASM 00 (Code 5000)

Overview

HEAD Recorder, the recording software of ArtemiS SUITE, excels with its extensive functionality, and its easy handling.

This becomes obvious already in the main window with its large, clearly arranged buttons, which can be operated conveniently even in mobile use. Additional buttons in the main window can be assigned to frequently used functions by the user in order to automate various tasks.

Other functionalities and windows can be individually configured and arranged on the screen independently of each other. For different tasks, the respective working environment can be saved and restored again when needed.

- Using a tolerance spectrum as an analysis trigger in real-time monitoring

Playback

- Aurally accurate playback via front ends supported by HEAD acoustics

User Documentation

- Saving of user documentation for use with ArtemiS SUITE

Remote Control

- Start and Stop of a recording as well as checking the configured parameters (corresponding user rights are required) via:
 - TCP/IP (network)
 - WLAN Access Point (e.g. using a smartphone)

Main Window

The concept of the HEAD Recorder allows customizing the software for a wide variety of tasks.

The software can be controlled with the mouse as well as with the keyboard.

Programmable Buttons

The five programmable buttons (below the Start/Stop buttons in the main window) can be configured very easily and can be assigned to frequently needed functions by the user.

Sensor Connection / Frontend View

The Frontend View displays the connected front end and the sensors. The current sensor setup and the configuration of the front end are detected automatically.

The sensor symbols can be intuitively dragged with the mouse onto the corresponding front-end connectors or modules, thus connecting them. It is also possible to copy sensor symbols via drag & drop.

Alternatively, the HEAD Recorder also provides a channel list, where sensors can be connected „conventionally“.

Sensor Library

A sensor library created in ArtemiS SUITE can be imported into the HEAD Recorder in order to use sensor-specific information when creating channel lists.

Sensor Calibration

For the quick calibration of the used sensors, the HEAD Recorder offers various methods depending on the sensor type.

(Virtual) Offline Front End

Even without a connected front end, a (pre)configuration is possible. By using an offline front end, a channel list can be created, saved and used, for example, at a different workstation. After connecting a real front end, the entire configuration of the offline front end can be transferred to it.

Online Generated Channels

From existing channels, the HEAD Recorder can generate the sum, the average etc. or user-defined quantities. For example, the slip (RPM 1 - RPM 2) can be determined online, or various CAN bus data can be combined in a new channel. This is facilitated by the easy-to-use Calculation Term Editor.

If a front end has no (or not enough) pulse inputs, pulse channels can be generated by analog signals.

All generated channels can be saved and used, for example, for triggering, just like other channels.

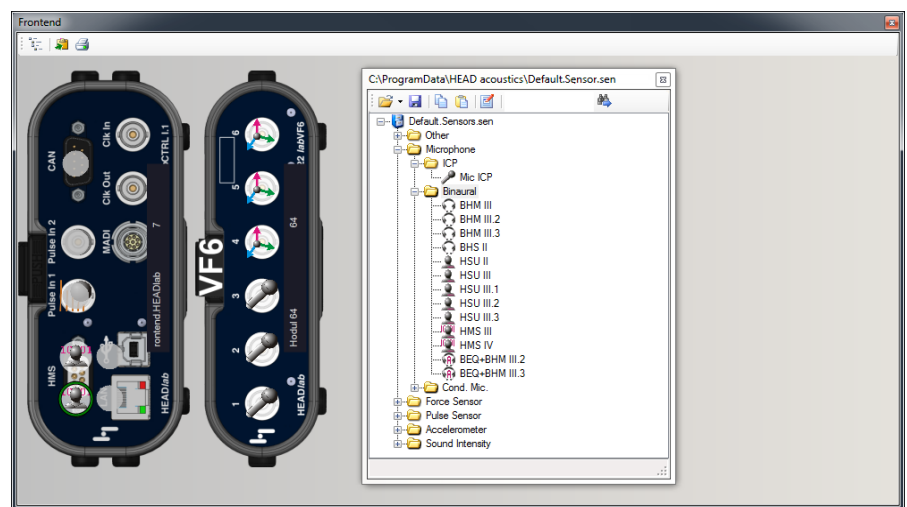
Trigger

Various trigger options offer broad possibilities for individual settings.

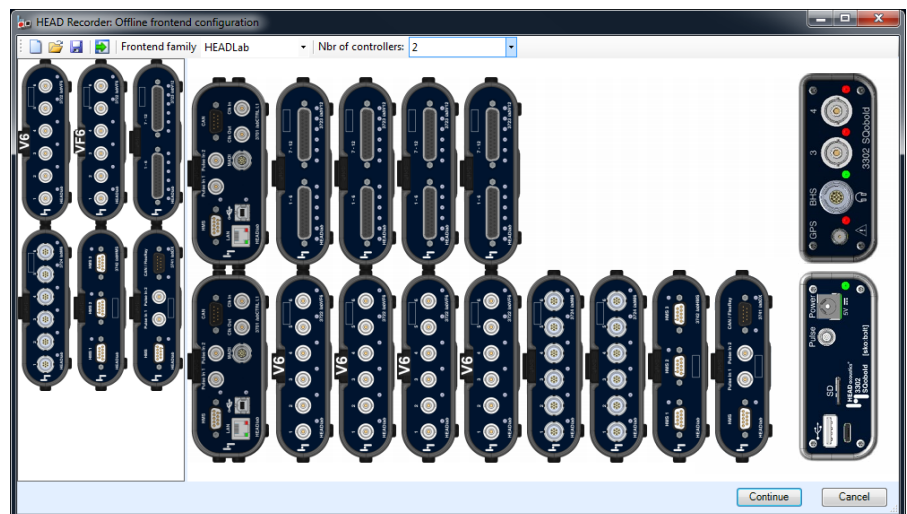
A special feature is offered with the additional analysis triggers, which allow, for example, a certain A-weighted level value or, when using the FFT spectrum, a user-defined frequency to be used as the trigger criterion.

Automatic Recording Level Adjustment (Autorange)

The modulation of each channel can be adjusted automatically or manually.



The Frontend View shows a photo of the connected front ends and allows an intuitive connection of the sensors. The sensor lists provide several types of sensors, which can be assigned to each channel.



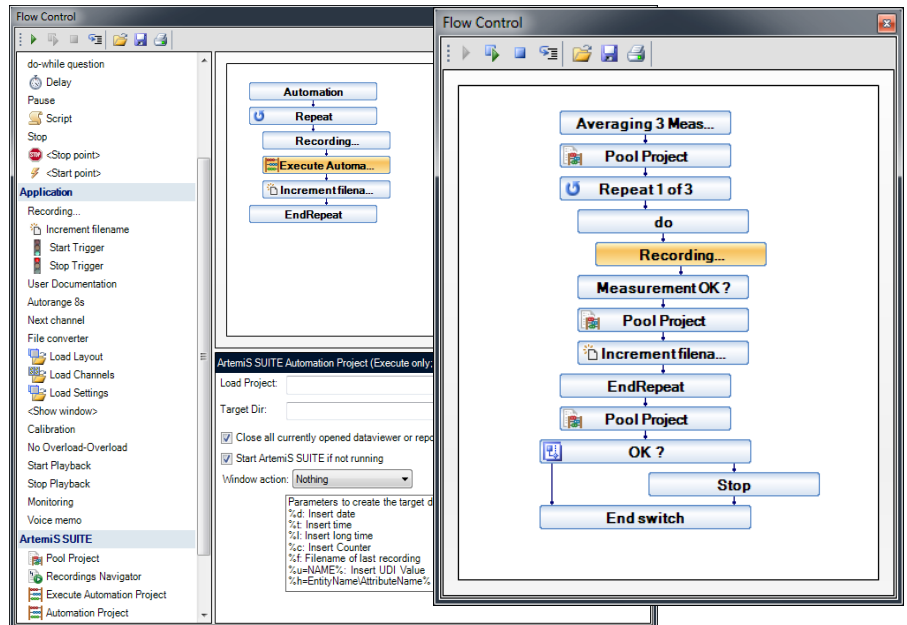
The use of offline front ends allows the configuration of channel lists for front ends that are not physically connected.

Flow Control

A Flow Control editor allows you to define simple or complex program sequences - with no programming knowledge required - which are then executed automatically, at the click of a button or triggered. A fully automated measurement process is possible as well as user interaction via dialogs and buttons.

With ASM 01, a new or existing Automation Project is opened in ArtemiS SUITE, and the current recording is automatically added to the Source Pool of this project for further processing.

ASM 05 allows recordings to be processed by an existing Automation Project without opening this project. This has the advantage that the entire process – recording, processing, and output of the results – can be performed without any additional interaction at a single mouse click.



Examples of Flow Control including an Automation Project (left image) and a Pool Project (right image).

Data acquisition for a Standardized Test Project

The HEAD Recorder allows easy and safe data acquisition with the Standardized Testing Module (ASM 22).

A task list, extracted from a Standardized Test Project, is displayed in a separate window of the HEAD Recorder and can be executed in a user defined order.

In doing so, users can also take advantage of their individual flow control.

Online Monitoring

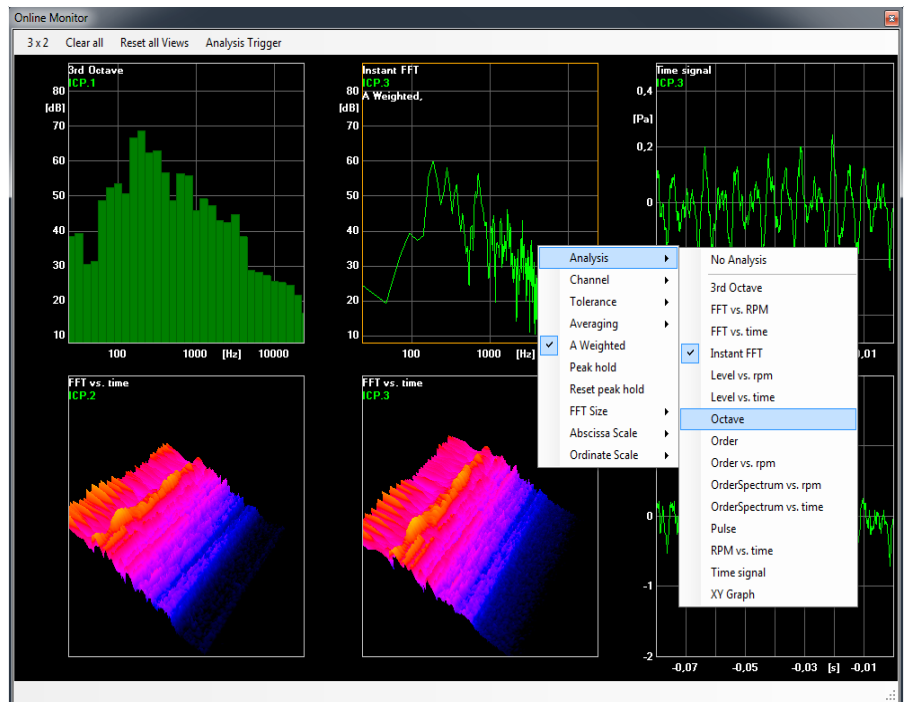
The online monitoring function allows a direct visual control of the incoming signals. For up to 16 diagrams, the analysis type and the display parameters can be configured. In one window, up to 6 channels with the same unit can be displayed.

In addition, the HEAD Recorder offers further possibilities of visual controling:

- Time Signal View
- Level View
- Tachometer

Playback

The HEAD Recorder allows the playback of HDF or DAT files via a playback front end.



The following analysis types are available for online monitoring: FFT spectrum, FFT vs. time, octave, audio signal, A-weighted level vs. time, RPM analyses, third octave band spectrum, FFT vs. RPM, level vs. time, level vs. RPM, order, order vs. RPM, order spectrum vs. time, order spectrum vs. RPM, RPM vs. time. Selectable display parameters are spectrogram, waterfall and pulse channels. The waterfall diagram can be dragged into any desired position with the mouse.

User Documentation

The HEAD Recorder supports generating of the user documentation for recordings.

E.g. with help of ArtemiS SUITE the user takes advantage of the user documentation for an effective reporting or the comfortable search.

Archive

In the archive of the HEAD Recorder, complete recorder environments including their individual settings can be saved for future use.

CAN / OBD-2 / FlexRay

The HEAD Recorder allows entire CAN and FlexRay data streams as well as OBD-2 data to be recorded. The extraction of individual quantities requires ArtemiS SUITE Data Preparation Module (ASM 24) and (for CAN and FlexRay) manufacturer-specific DBC or XML databases (not included).

GPS Data

GPS data, too, can be recorded with the HEAD Recorder, extracted with the Data Preparation Module, and subsequently used in ArtemiS SUITE.

Recording of Video Files

video signals to be recorded along with the corresponding audio signals. The synchronization of the data is achieved by means of stored time stamp information, which is retained even after the HDF file has been processed.

Videos (AVI) can be played back in ArtemiS Classic (with ATP 01). Single frame display, zoom etc. are possible.

Scope of Supply

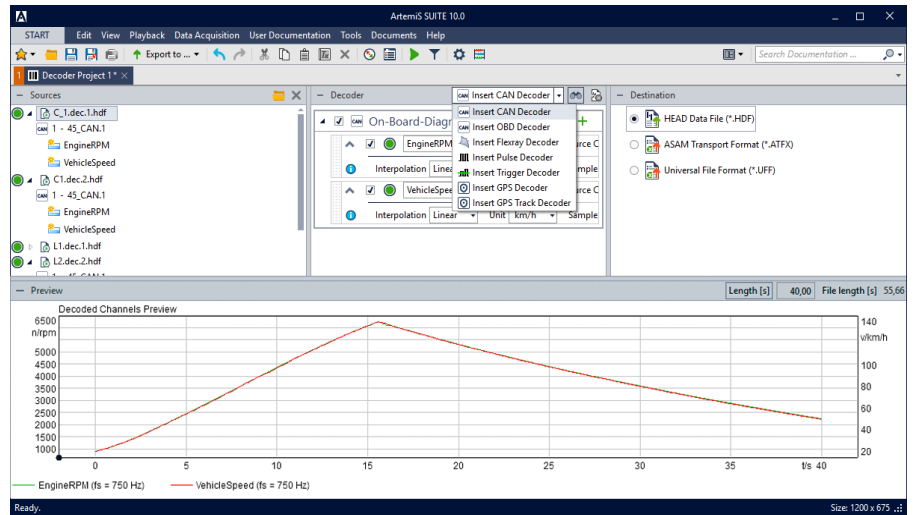
- Setup DVD (ArtemiS SUITE)
- License file
 - HEAD Recorder
 - ArtemiS SUITE Data Acquisition Module (Code 5004)

Requirements

- ArtemiS SUITE Basic Framework (Code 5000)

Optional

- ArtemiS SUITE Data Preparation Module (Code 5024)
 - Manufacturer-specific DBC or XML databases (CAN/FlexRay)
- ArtemiS SUITE Basic Analysis Module (Code 5001)
- Additional ArtemiS SUITE modules
- For measurements with the DATaRec 4 system, the Data Acquisition Support for DATaRec 4 Module ASM 28 (Code 5028) is required



ArtemiS SUITE Data Preparation Module ASM 24 (Code 5024) can be used to extract individual CAN, OBD-2, or FlexRay quantities as well as GPS and pulse signals from a previously recorded data stream. The extracted signals are saved as additional channels. ASM 24 is not included with the HEAD Recorder.

Supported Front Ends

- HEADlab
 - Multi-channel front-end system
- SQadriga II
 - Mobile recording and playback system
- SQobold
 - Mobile, 4-channel recording and playback system
- HMS III / HMS IV
 - Artificial head measurement system
- labCOMPACT12 / labCOMPACT24
 - Compact HEADlab module
- DATaRec 4 series
- BEQ II
 - Two-channel front ends
- SQadriga
 - four-channel front end
- Digital sound cards
- PEAK CAN adapter
- ASIO sound card (e.g. RME HSDP series)
- GPS receiver

System Requirements

- Windows 10 (x64):
 - Pro, Enterprise, Education;
 - languages: US/Western European or:
- Windows 8.1 (x64):
 - Pro, Enterprise;
 - languages: US/Western European or:
- Windows 7 (x64):
 - Professional, Enterprise, Ultimate;
 - languages: US / Western European, Service Pack 1
- Core2Duo Prozessor 2 GHz or better
- 4 GB RAM or better
- DirectX 9.0c-compliant graphics card with 256 MB or better
- .NET Framework 4.5.1
- DirectX 9.0c
- HASP dongle driver
- Display resolution: Min. 800 x 600

⇒ In order to install software and drivers from HEAD acoustics, administrator rights are required. To operate the software, only standard user rights are needed.

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