



STATE-OF-THE-ART TECHNOLOGY IN
PROVEN HOUSING

**MINIDAU® Advanced and
MINIDAU® Classic**

Kayser-Threde spent more than one year of engineering in the development of a totally new amplifier for the MINIDAU®. The most modern technology and components were utilized to design and manufacture the latest amplifier inside the MINIDAU®.

Compatibility was one of the most important requirements for this design. We feel that it is crucial to provide an easy upgrade path to utilize the latest technology, and maintain a reliable product which will be

continuously available for many years. The result is the new amplifier for the MINIDAU® Advanced and the MINIDAU® Classic.

The new *Classic* amplifier provides the current MINIDAU® specifications plus an even higher accuracy and four bridge excitations voltage modes (2.0V, 2.5V, 5V and 10V).

The new *Advanced* amplifier improves on the *Classic's* specifications with up to 100kHz sampling rate, a 42kHz signal bandwidth, bridge excitations voltage up to 20V, a constant current source mode, and support for ICP sensors. ■

**MINIDAU® ADVANCED
Supports latest designs
in passive safety**

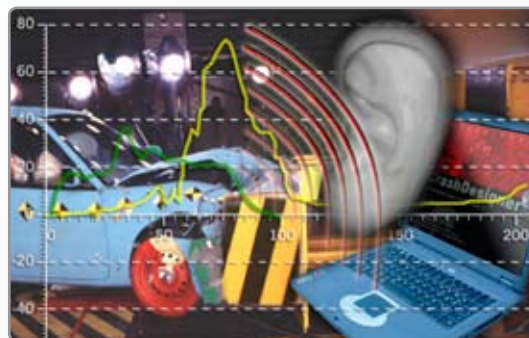
One of the big successes of the MINIDAU® Advanced is related to new applications required in the field of crash testing:

Sensor manufacturers have designed new sensors to measure vibrations on thin walled structures or crash impact sound to control, for example, airbag deployment. These measurements are becoming more and more important for new safety features in cars.

The new high sampling frequency and bandwidth allows measurements up to resonance frequencies of some accelerometers.

New sensors require a high signal bandwidth. With a 42 kHz signal bandwidth the *Advanced* amplifier is unique in the market.

For this and other applications Kayser-Threde has sold over 500 MINIDAU® Advanced channels within the first six months since the start of production. ■



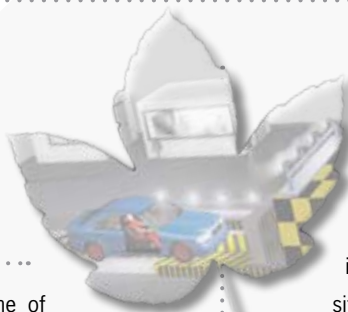
Crash Impact Sound Sensor



AUTOMOTIVE NEWSLETTER

NEWS & FACTS FROM THE KAYSER-THREDE – WORLD

WELCOME TO THE
**Fall
edition
of our
newsletter**



2007 has been one of the most significant years in Kayser-Threde's history. We are celebrating the 40th anniversary of the company and the 30th anniversary as a crash test system manufacturer. We have launched a large number of new products and continued to look for additional opportunities to provide best service and support for our customers. The big success of the MINIDAU[®] Advanced and the request for new applications have shown that we have made the right decisions to support our customers' future plans. At this point we would like to thank you very much for supporting us with your requirements and suggestions. We are looking forward to 2008 and expect to bring you even more exciting news.

One of our plans this year was the merger with MSC GmbH in Schwieberdingen. Unfortunately, the owner of MSC cancelled the agreement during the final negotiation. We feel sorry about this decision but we accept it.

We are committed to continuous improvement and growth in providing our customers with extended service in both dummy integration and transducer calibration.

Over the last years software has become more and more important to meet the requirements in the crash laboratories. CrashDesigner is now in use at many customer sites and has been established as a reliable product for crash tests. It replaces our Wincarar with many additional functionality and features. The flexibility of CrashDesigner allows interfaces to third party software to keep up with the increasing demand of data acquisition and analysis in the passive safety testing market. Over the last years Kayser-Threde's software team has continued to grow: in October we were pleased to welcome our newest member Andrea Hummel, specialist in application development.

The success of new products like the MINIDAU[®] Advanced has assured that we are on the right path to support all of your future applications. As you will find in the articles of this newsletter, the number of requirements placed on safety test engineers and labs continues to grow.

We have also expanded our search outside to the automotive market to look at possible synergies in other markets, like military. This broader scope will help us to leverage knowledge from both fields and improve our product range.

Please continue sending us your requirements and ideas for future applications.

automotive
testing expo 2007
north america

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Kayser-Threde will continuously work on solutions which will support you in solving technical challenges, with the ultimate goal to improve occupant safety in all types of vehicles. ■





SOFTWARE FEATURES

New CrashDesigner

An increasing number of Kayser-Threde customers is going to replace *Wincarat* by the new *CrashDesigner* software in their facilities. Customers have suggested new features which have improved their daily work. These new features become available for current and new customers who are going to use *CrashDesigner* in their crash lab.

In the following, a short summary of new features available in Version 2.2.1 is given:

The Offline Viewer provides immediately after reading out the data from the MINIDAU® or MICRODAU® a first visual check of the data. It offers zoom views or adjustments like cropping of data or T-zero shift. The ATI – Advanced Transducer Information offers to read sensor specific data (sensitivity, calibration data, etc.) out of a Dallas ID chip in the sensors connected to a MINIDAU® or out of the 32MB memory available in the MICRODAU®. This information will be transferred either to the test

MORE NEW FEATURES

Linux version of Testprepservers

Support of MySQL Database

Measurement channels can be read out with different durations (time settings)

Measurement channels can be sampled with different sampling frequencies in one test setup (asynchronous channels)

Sensor re-arrangement in test setup avoids a channel-sensor check during the installation (with the usage of sensor ID's)

Support of IR-TRACC sensors

Test condition report

New report structure



preparation part or to the test execution part (*CrashDesigner plus*). Also, if dummies are transported between different crash laboratories, the data are stored 'in' the dummy (no paper work or different formats).

New interfaces are realized for software solutions from companies like IAT, ORME or A-Solutions. IAT offers the EVALuation software for crash test data analysis including result value tables and brief protocols of all relevant crash specific criteria and options like video overlays and synchronous playback with signal traces. The support of the new product VTP is planned. It allows time schedule and resource management in safety tests. The analysis software 'Track Report' from ORME (France) can be run together with *CrashDesigner*. ORME also realizes a dummy calibration software for all Frontal and Side Impact Dummies (including WorldSID). A-Solution provides a successful product for visualization and analysis of load cell barrier signals which is interesting in combination with a Kistler load cell barrier equipped with MICRODAU® technology. The new TDM-format of DIAdem is supported by *CrashDesigner*.

New solutions like CAN-Bus-logging are also integrated in the new *CrashDesigner*. A T-zero synchronized read-out of CAN-Data is possible with the option of filtered or unfiltered data. The support of TILT-Sensors from IES has been realized already in an earlier version. A current project foresees the remote control of the *CrashDesigner plus* (test execution) by a third party software. This is mainly used in the area of automation of test rigs.

The design for an interface to a sensor calibration system has been started. It allows the direct import of sensor calibration data in *CrashDesigner*. Companies like Audi, PSA, Hyundai, and BMW have already updated their software with *CrashDesigner*.

CrashDesigner is available in three languages: German, English, and now also in French. Please contact Kayser-Threde to get a free full version of *CrashDesigner* for a three months usage. ■

Links:

www.iatmbh.dewww.a-solution.dewww.trackreport.fr



NXT 32

In-dummy controller with 32 analog channels

Kayser-Threde is proud to announce the new **nxt** 32 in-dummy controller. In addition to the USB Link for the **nxt** system it provides 32 analog channels available via a miniaturized connector assembly for in-dummy instrumentation.

The design is based on the requirements that are defined by the WorldSID dummy. It offers a high signal bandwidth and sampling rates, adaptive filtering, and an improved connector concept. The software support is available via **CrashDesigner**. ■

NEWS

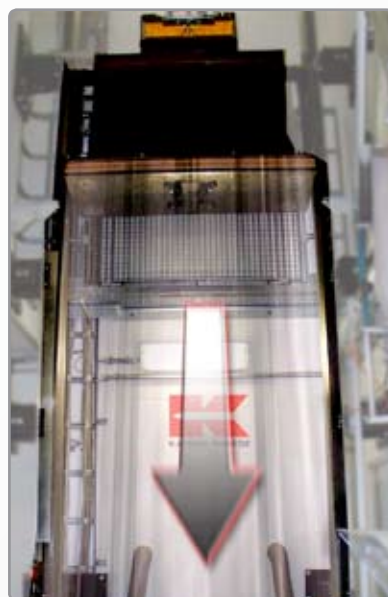
Messring cancels cooperation

The cooperation contract between Messring and Kayser-Threde was cancelled by Messring on the 31st of July 2007. This contract described the support of Messring Data Acquisition Units by **CrashDesigner** software and Kayser-Threde Data Acquisition Units by **Crashsoft 3**. This means a new request for this support cannot be fulfilled anymore. The support of existing installations will be continued. ■

COMPONENT TESTING WITH Wireless MICRODAU® applications

In the spring edition of our newsletter we wrote about our wireless **MICRODAU®** solutions, for pedestrian tests for FMH, all pedestrian heads and leg forms. This technology now also shows significant advantages when used in drop tower testing of components. The **MICRODAU®** is mounted together with a power supply on the drop-mass.

After releasing, the **MICRODAU®** records the impact data of an acceleration sensor, for example. The small power supply is based on a maintenance free ultra capacitor technology. It powers the **MICRODAU®** for up to 20 seconds after the system has started recording. A second **MICRODAU®** is connected to the impact event (T-zero) and is used to synchronize the test data to external devices such as a camera or other laboratory devices. This occurs even if the **MICRODAU®** on the drop-mass is separated when the T-zero event occurs. ■



NXT USED IN Military applications



Since the launch of **MICRODAU®**, many military companies and institutes have shown great interest in the **nxt** in-dummy data acquisition systems. The simplicity of the system has helped them to solve many of the challenges found in the field. The **nxt** in-dummy solution has been very well accepted by the US military and has continued to ease the process of collecting data in these very challenging situations.

THE CURRENT ALLOCATIONS INCLUDE:

Wind Blast Facility: A simulated high velocity wind is seen during ejection. This test is used to develop helmet visors and restraints.

Ejection Seat Tower: A guided ejection event evaluates occupant injury during a simulated ejection.

Horizontal Accelerator: For development of restraint systems in air craft.

Dynamic Ejection Event: Testing of close to production elements.

Land Mine Testing: Development of armored vehicles protection devices.

Our current customers are:

- TACOM (Warren, MI) – USA
- Naval Air Warfare Center (Patuxent River, MD) – USA
- Wright Patterson Airforce Base (Dayton, OH) – USA
- Holloman Airforce Base (Holloman, NM) – USA