

ISSUE 04
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PRODUCTS

Diversified Technical Systems designs and manufactures data acquisition systems and sensors for the experienced test professional.

SERVICES

24/7 Worldwide Tech Support
ISO 17025 (A2LA) Calibration
Calibration & Repair Services
Application Support
Software Integration
OEM/Embedded Applications

TECH CENTERS

Seal Beach, California USA
Novi, Michigan USA
Sydney, Australia
Shanghai, China
Zorge, Germany
Tokyo, Japan



DAS + SENSORS = DTS

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SOLDIER & VEHICLE BLACK BOX RECORDERS

For DTS, manufacturing vehicle black box and combat helmet recorders fits right into the company mission of the last 21 years: designing data recorders and sensors that push the technological boundaries. "At the end of the day, it all comes down to measuring human injury and survivability," says Stephen Pruitt, president, co-founder and crash test engineer. "Whether it is cars, tanks, helmets or helicopters—companies want to know how to prevent injuries and save lives. The bottom line is that they trust DTS equipment to collect that data."

Decisions for risk assessment and product development have always been based on analyzing available data. But when the data is from a 5,000 g IED explosion or a 50,000 g missile launch with only milliseconds before the test article is destroyed, it's more than a data acquisition mission, it's a "must collect" test. The same "no second chance" applies to collecting long-term field data from personnel and vehicles deployed for active duty.

DTS systems have been at the forefront of collecting "critical mission" data through customers like the U.S. Army, BAE Systems, National Highway Traffic Safety Administration (NHTSA), the Federal Aviation Administration (FAA) and NASA. Over the years, this data has led to new government regulations, as well as manufacturers' self-imposed safety improvements affecting everything from seat belts to space capsules.

Soldier Black Box

Today, black box recorders have moved from the cockpit to helmet-mounted systems capable of monitoring a soldier for up to twelve months on a single lithium battery. Over 5,000 helmets with "smart sensors" designed by DTS have been fielded by the U.S. Army and U.S. Marine Corps. The smart sensor is a BAE Systems contract titled the Headborne Energy Analysis and Diagnostic Systems (HEADS). Small and lightweight, the HEADS sensor fits inside virtually any combat helmet and is designed to continuously collect critical data including impact location, *(cont'd on next page)*

Helmet Smart Sensor/Soldier Black Box:
Combat helmet recorder with 7 internal sensors
3 accelerometers, 3 angular rate sensors, 1 pressure sensor
a.k.a.: BAE HEADS (Headborne Energy Analysis and Diagnostic Systems)



TSR PRO:
Shock recorder with
3 internal accelerometers
a.k.a.: vehicle incident data recorder (IDR),
vehicle black box
Range Options:
±50, 250, 500 g triaxial
Shock: 500 g



TECH NOTE

Q: How do I determine which products fit my application?

A: Visit the new DTS website www.dtsweb.com to see the latest offerings by product category or application.

The website is the best place to get the most current:

- Datasheets
- Manuals
- Mechanical drawings
- Application diagrams
- Tech resources



An experienced sales engineer can also help confirm which DAS and/or sensors meet your specific test requirements.
sales@dtsweb.com

DTS USER'S MEETING OCT. 26, 2011



Mark your calendar for Wednesday, October 26. In conjunction with the Testing Expo North America in Novi, Michigan, DTS will host a special training, luncheon and will also demo new products including the TSR PRO, ARS PRO 18K and SLICE IEPE.

Topics to include:

- ISO 17025 (A2LA)
- Noise reduction
- Sensor selection
- Anti-alias filters
- Application updates
- SLICE wire-free head form testing

To be on the guest list, email shelly.horvath@dtsweb.com

DTS BLACK BOXES (cont'd.)

magnitude, duration, blast pressure, angular rate and linear acceleration, as well as a time stamp. Data is securely stored until it can be quickly downloaded and analyzed by medical personnel.

Vehicle Black Box

DTS's reputation for being responsive and innovative resulted in the largest single order in crash-test history from General Motors. It also created lasting relationships with top automakers including Honda and Toyota. At the start of the 2011 race season, NASCAR fitted each car in the National Touring Series with a DTS vehicle "black box" recorder. With an eye on safety and performance, the system records the acceleration profile, as well as any crash data that each car experiences during the race.

When the Army saw the NASCAR units it sparked interest to put them into military vehicles. Currently, the U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC) is field-testing the newest generation vehicle black box recorder. The system is able to record up to one year on a single battery, fits in the palm of a hand and can survive an impact up to 10,000 g.

The DTS team continues to explore new configurations for data recorders and sensors that will keep DTS at the forefront of innovation and new applications.

For more information contact sales@dtsweb.com

TSR 6DXP:

High impact shock recorder with 7 internal sensors
3 accelerometers (± 6000 g), 3 angular rate sensors ($\pm 20,000$ deg/sec), 1 pressure sensor (100 psia)
a.k.a.: vehicle black box
Shock: 10,000 g survivable



DTS JOINS AUSA & ANNUAL MEETING IN WASHINGTON, D.C.



Visit DTS at the AUSA Annual Meeting
October 10-12, 2011
Walter E. Washington Convention Center
Washington, D.C.
DTS Booth #7708

DTS is proud to announce it is a sustaining member of AUSA (Association of the United States Army) and will be exhibiting at the 2011 AUSA Annual Meeting held in Washington, D.C. this fall.

This event is considered one of the premier professional defense forums and expositions in the world, and each year has an exhibitor waiting list. DTS will display the latest data acquisition systems and sensors, many of which are currently being used by several branches of the military for a wide range of applications including soldier survivability, blast testing and underwater munitions testing.

Over 35,000 attendees, including senior leaders from the Army, DoD and Congress, as well as foreign dignitaries will be joining DTS this year. For more information or to register, please visit www.ausa.org.

Quote of the Month:

"The SLICE MICRO system has worked very well in a wide variety of underwater munitions testing. The flexibility of the system has allowed us to meet ever changing recording needs as test environments evolve. Simply put, we are sold on the DTS line of data recording solutions, and the quality and professionalism of those who are working to support the product is second to none."

~J. Alex Cox
Naval Surface Warfare Center
Indian Head Division



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