CALISTRA
Empowerment Through Technology

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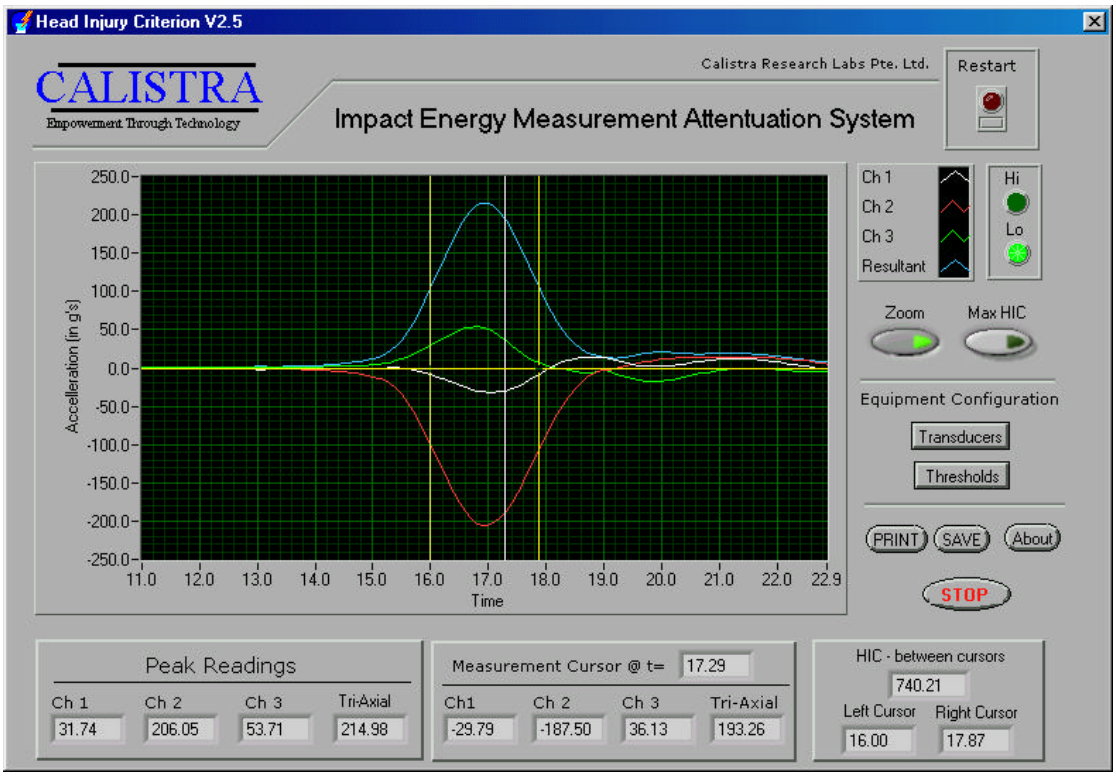
The Calistra Impact Energy Attenuation Measurement System is an integrated test solution for crash helmets testing according to European and US specifications.



The Calistra Impact Energy Measurement Attenuation System reads a tri-axial sensor mounted in an aluminium headform inside the helmet under test.

When the helmet is dropped onto the steel anvil (3.0 M) the three axis readings are acquired and the tri-axial resultant is calculated.

The HIC reading can be calculated interactively by moving the two cursors, but the optimisation routine can home in on the maximum HIC reading automatically.

The Calistra Impact Energy Measurement Attenuation System is available as a fully configured system from comprising the software (above), Kistler Accelerometers and the Dewetron DEWE 3010 Data Acquisition Unit.

Specifications :

Computer Operating Platform :

- Noise Shielded PC Platform
- Microsoft Windows 98

Hardware Requirements :

- National Instruments Data Acquisition Card AT-MIO-16E-10
- calibrated tri-axial piezo-electric accelerometer
- ultra low noise signal conditioners

Software Specifications : Data Capture

- Sampling Rate : 10 KHz per channel
- Sensitivity Settings : two sets - master and substitute (3 values per set)
- Trigger Values : individual high / low settings per channel
- Acquired Data : 40 ms
- Recapture function.

Software Specifications : Analysis

- Display : channel and tri-axial results with Zoom function
- bi-cursor analysis range
- per channel and tri-axial peak readings
- HIC Max in analysis range
- Absolute HIC Max detection
- Measurement Cursor displaying channel and tri-axial readings

Software Specifications : Data Storage

- Print function - display, channel peaks and tri-axial peaks
- Save Function - scaled data in format suitable for export to analysis and documentation packages.