

Entry to the **analysis system** is via data bank management (DBM) software. This software runs on networked PCs under the WINDOWS environment. At the data acquisition stage, the DBM ensures that all relevant information on a particular trial is archived with the analysis results, including the trial date, venue, vehicle type, recording media and the name of the instrumentation engineer.

The DBM assists in post acquisition analysis in providing the means to select, collate, manipulate and present data. This is central to data validation and assists in trend identification and the generation of test specifications. The DBM is a key element of our facility and helps keep control of data from hundreds of trials, including tens of thousands of vibration spectra alone.

For **time domain analysis**, data can be max/min values, mean, standard deviation and root mean square. These data formats are available as standard time histories or as time histograms. A full range of amplitude probability functions is available including density and distribution plots with skewness and kurtosis parameters.

Frequency domain formats include both mean and peak hold power spectral density, computed simultaneously and available as line graphs or 'Waterfall' plots. Cross-spectral functions, including gain, phase and coherence are also available. Shock analysis can be implemented using Shock Response Spectra. A comprehensive suite of shock analysis tools are available to validate data and for use in generating shock test specifications.

For **structural fatigue analysis**, we utilise a Rainflow cycle counting algorithm. Formats or results include the basic Rainflow (2-D) matrices, reduced (1-D) matrices, damage ratings and overall structural life estimates.

Raw data output can be provided as hard copy of graphs (or PDF files). Also the digital processed data can be supplied in standard

formats such as CSV or Excel from the existing suite of applications.

Customer requirements for specifically formatted files can easily be accommodated with custom software written by our in-house staff, working to the ISO TICKIT standards.

For more information, please contact:

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Registration to ISO9001:2000; AS/EN ISO 9100B; plus TickIT, assessed in accordance with the requirements of AS 9104 MoD (UK) Design Approval under DAOS

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