

nVision 4™

Acquisition and Analysis System for Noise and Vibration

nVision is a proven acquisition and analysis system that has been optimised for the rapid handling of large multichannel datasets produced by high capacity data acquisition systems.

nVision provides the fastest, easiest way to get answers from data regardless of source.

nVision has an intuitive user-interface that provides multiple levels of access; so a novice is never confused, and an experienced user never runs out of horsepower.

nVision takes full advantage of the power and flexibility of the Windows environment providing workstation features at PC prices!

Integrated
Durability
 Solutions

Increased Productivity

Easy to learn and straightforward to use, nVision delivers results in a form that can be understood and used immediately.

The DiVA in-vehicle data acquisition, display and analysis systems are used to solve NVH problems by OEM's, Tier 1 & 2 suppliers and consulting companies.

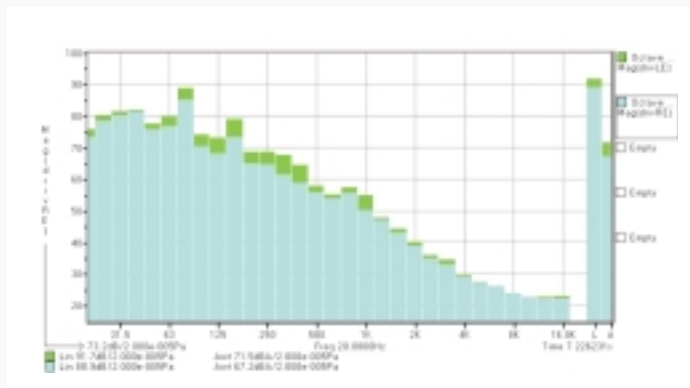
Greater Precision

Accurate and repeatable measurements are a fundamental requirement if rational decisions based upon test results are to be made. nVision systems provide optimum resolution with up to 24 bit ADCs.



Improved Performance

Setting up, acquiring, analysing and reporting are streamlined to enable projects to be completed in the minimum time.



◀ Noise at drivers ear. Articulation Index automatically calculated by the DiVA module.

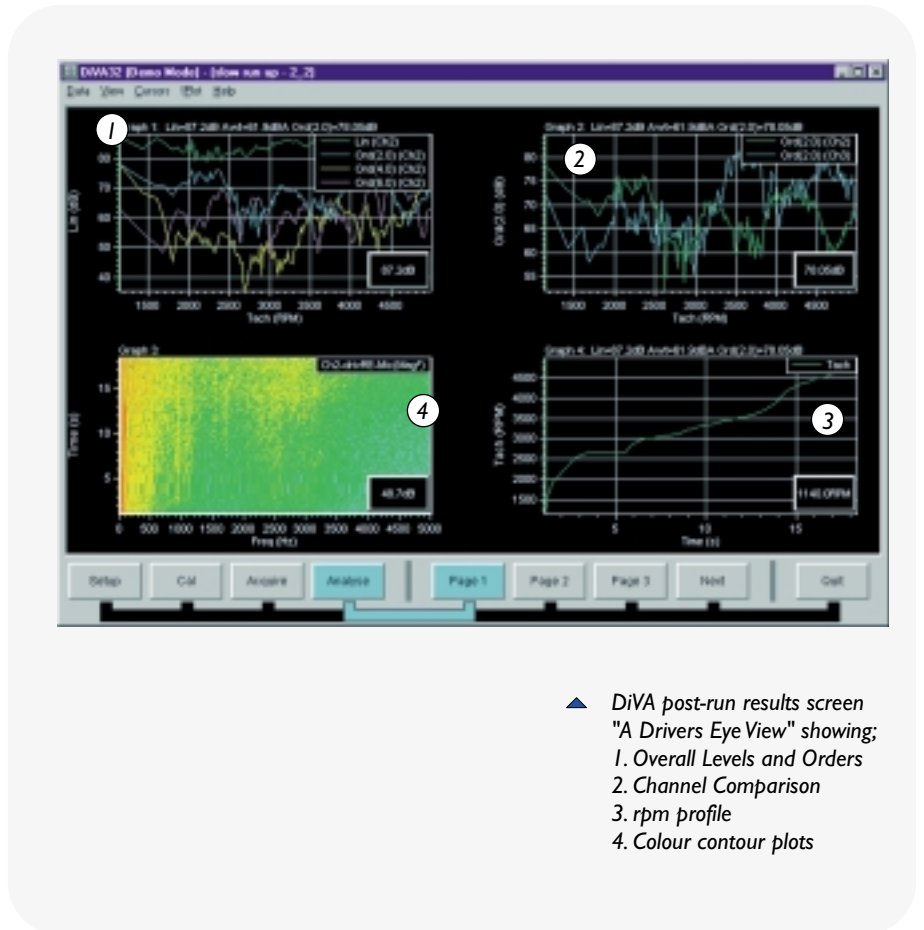


Key Features

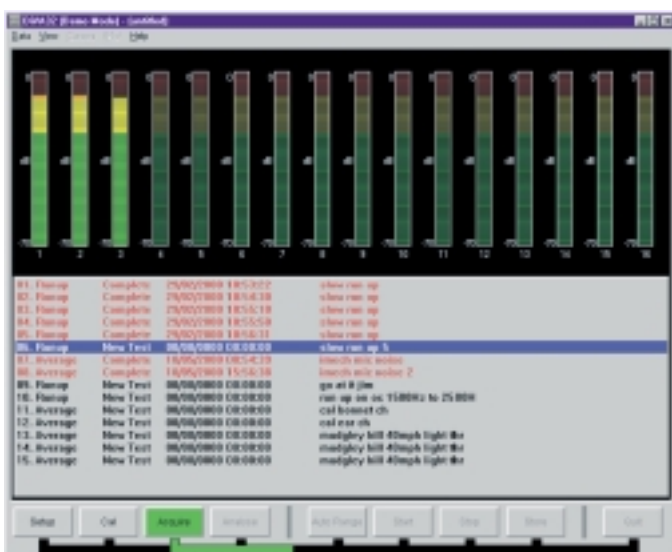
Capabilities

nVision is the productive solution for companies, both large and small, wanting a scaleable affordable system. The data importation and flexible graphics modules make nVision a good solution for all types of data presentation and analysis. Data collection is supported from a wide range of front ends; with channel counts and conditioning modules to suit all applications and budgets.

Data needs to be freely exchanged with clients and suppliers. Openness and data translation capabilities have always been nVision strengths. Basic Ascii ,Wave and binary file transfers are supported as well as specialist transfers in SDF, MATLAB, nCode DAC and many other formats.



▲ DiVA post-run results screen "A Drivers Eye View" showing:
 1. Overall Levels and Orders
 2. Channel Comparison
 3. rpm profile
 4. Colour contour plots



Channel level indicators

Run Schedule

DiVA - Dynamic In-Vehicle Analyser

A series of modules that allow test set-up and data acquisition to be partitioned. Run schedules can be defined and entered in the office. Calibration and acquisition of the data, in any order, is completed reliably by a lone driver.

Vibrations & Acoustics-

- Rotating machinery analysis (power train)
- Angle Domain Tacho repair
- Engine Noise Power
- Digital order tracking
- Kalman filtering for order ranking
- Wavelets for impact analysis
- Torsional Vibrometry
- Sound Quality
- Weighting A, B, C, Hand arm, etc.
- Articulation index, loudness, SQ Metrics.
- Digital 1/n Octave analysis
- Filter design
- Vehicle Passby
- DiVA In Vehicle systems
- Wind/Road Noise
- Power train / orders
- Structural integrity monitoring

Signal/Data Block Editing

- Add channels to data blocks
- Align and add waveform signals
- Angle domain editing of run ups
- DSP with block sizes to 256K points

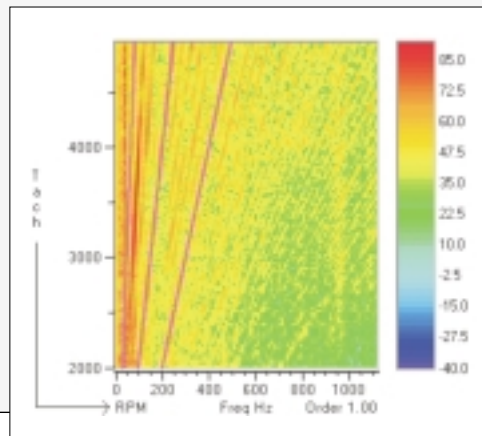
File import / exports

- SDF
- nSoft
- MATLAB
- UFF
- Larson Davis
- PCScan
- QuickVu
- OnoSokki
- B&K
- Famos
- MEGADAC
- MEScope
- Racal Heim DA
- DDE link to Excel
- Clipboard

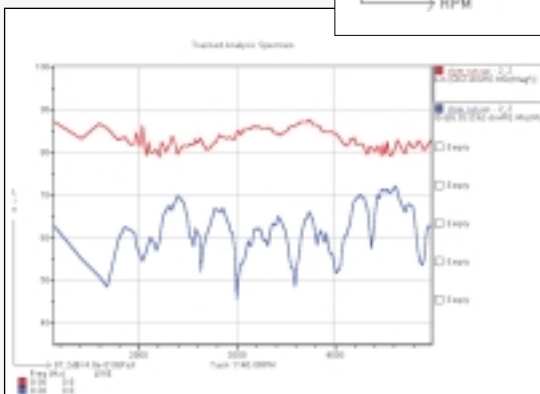
Displays

- 2D 8 levels of overlay
- Colour contour plots
- Waterfalls
- Order Cuts
- 3D maps
- Octave

► Colour contour order plot showing a number of significant orders. Up to 8 order cursors can be defined and displayed (magenta lines)



▼ Overall level and third order plotted against RPM



► Angle domain editor display



NVH Standard System- Does everything needed to import and analyse data in time & frequency domains!

About nCode

nCode provides a comprehensive suite of engineering solutions that address fatigue life and durability management. These solutions enable our clients to effectively manage durability in their engineering process. In addition, nCode also offers nVision, a powerful and easy to use tool to assess noise, vibration, and harshness (NVH). nVision, combined with our leading local support teams, provide an effective solution to help you manage NVH in your design process.

Organisations that have selected nCode as a strategic supplier include Daimler Chrysler, John Deere, Ford, General Motors, GKN, Dyson, MIRA and Volvo. nCode is a member of the AEA Technology plc group of companies, a technologically focused group of companies committed to delivering advanced and effective products and services on a worldwide basis employing 4000 staff.

For more information

For information on other nCode products visit our web site at www.ncode.com

nCode 
Managing Durability

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Base module

- File translators :
Binary import, ASCII import, Larson Davis LD2800, LD2900 and LD3200, Windows sound card driver with calibration, Ono Sokki CF-4200, CF-5200 CF-6400 and DS-9100, NCSA HDF, SDF,UFF, Hi-Techniques, Nicolet, TEAC QuickVu, Sony PCScan, 01 dB WAV, Bruel & Kjaer 2123/2133 and 214n Intensity, Famos, nCode, Optim MEGADAC and LMS Cada-X
- Data presentation and data processing :
File, Term, Editor, Segment, Matrix (frequency domain) Graph, Log/Lin Graph, Note, Data Sequencer, Signal (time domain) Graph, Polar, Plot, Map, Contour, View, Waterfall, Table, Waveform generation and basic DSP functions
- Complete set of modules as described above

Tools module

- Data processing, analysis and reporting :
Tools, Undo, Synchro, Ravel, Stats, Convolve, Report, Text, Grid, Script, Weight, Pick, Database, Laminate
- Record and replay of animation sequences :
Splice, Animate, Frame
- Additional Data presentation methods and interfaces :
Campbell Diagrams, Octave Graph, Mask, Microsoft Excel (bi-directional live driver)
- Complete set of modules as described above

Signal processing module

- Advanced time domain data processing:
Advanced DSP, FiltDes, Gfilt, FirFilt, Trace, Octave, ChirpZ, Wavelet, Resample, Align, DSPTools, OctFFT

Automotive applications

- Automotive general application tool bar
- AUTOMOTIVE – Sound Quality metrics, articulation index, RPM tools, Tacho processing
- WAVELET TOOLBOX - comprehensive wavelet analysis
- HEAD DECODE – full decoder for Head Acoustics tapes
- Angle domain tacho processing

Rotating machinery applications

- KALMAN FILTERING - adaptive filtering
- ORDER TRACKING – digital re-sampling method
- ANGLE DOMAIN – cut and paste synthesis in the angle domain

Passby display

- Comprehensive display of pass by test data

Driver in vehicle analyser

- Complete solution for in car recording and analysis.
- Modules for Wind/Road Noise and Engine order analysis. Oros hardware and PC needed!

Acoustic intensity system

- Acoustic intensity mapping includes Quality Factors
- Industrial grade, low cost probe for diagnostic measurements inc calibrator

Drivers for external hardware

- Data Translation Open Layers – support for a wide range of DT boards
- Oros OR25 driver
- Racal Heim A Series – live data transfer via SCSI interface

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