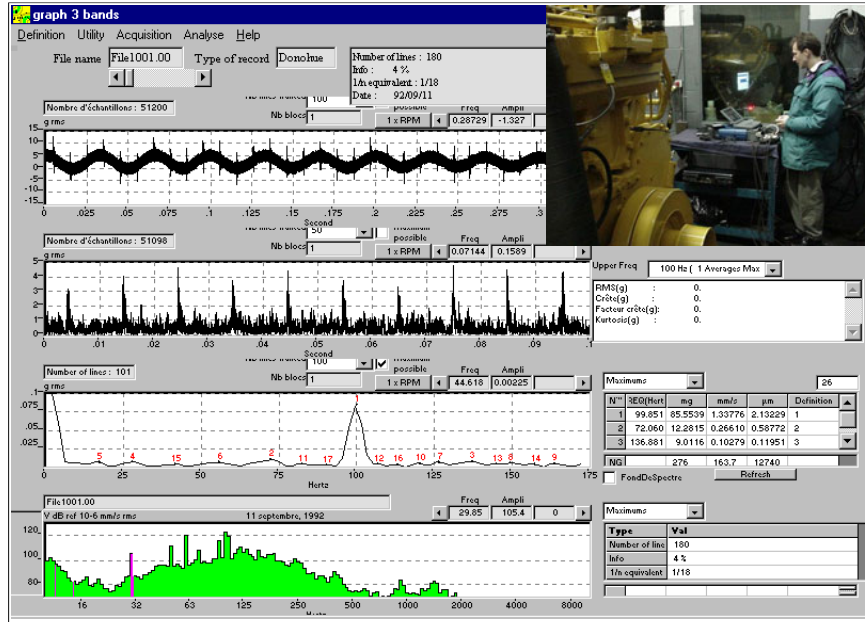


## USES

- Built-in driver to assist in collecting, storing and managing a large number of multi-channel time waveforms acquired during field measurements
- Post-processing of stationary vibration signals (time editing, decimation, digital filtering, demodulation, FFT and Cepstrum analysis, Constant Percentage Bandwidth synthesis, comparison, and trending)
- Special analysis and visualising techniques (gear and roll profiles, Max-Peak spectrum)
- Built-in signal generator for tutorial purpose



## FEATURES

Runs in the WINDOWS\* 95, 98, and NT environment, uses MICROSOFT ACCESS\* data base format (network version available)

Accepts time data from many sources including OROS PC cards, Diagnostic Instruments analysers equipped with the LTR option, or any WAV file

Many types of analyses available: time data editing, decimation, digital filtering, enveloping, FFT, Cepstrum analysis, CPB spectrum synthesis

Batch mode processing, advanced visualisation features such as roll and gear profiles, automatic identification of all major peaks in the spectrum, all vibration units supported

Export of results to other formats or software programs including ASCII, VIBREXPART and ME'SCOPE

## ADVANTAGES

■ Very simple to use and compatible with most PC's.

■ Includes a special driver to facilitate field recording of a large number of multi-channel time waveforms using a PC card

■ Very comprehensive signal analyses can be generated from the recorded time signals

■ Simplifies and accelerates diagnosis. Batch mode allows to speed-up the processing of a large number of time waveforms including a user-defined report

■ Possibility to exchange data with other applications

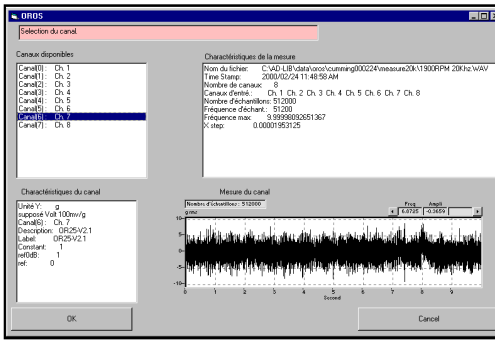
AD-LIB is a WINDOWS\* program written to perform post-processing of vibration time waveforms recorded on rotating machinery. It will handle single as well as multi-channel data (up to 16 channels with OROS hardware). Once the data is transferred to the PC, it is possible to re-create almost any type of analysis, including data trending. No special hardware is required to perform the analysis on the PC. The screen above shows a raw time signal, its amplitude demodulated filtered time waveform and corresponding spectrum, as well as its 4% CPB spectrum.

Aside from periodic vibration measurements carried out using data collectors, many vibration analysts like to record the raw vibration signals using tape recorders or other type of recording devices in order to perform a more in-depth analysis back at their office. This is often advantageous since it minimizes the time spent on the machinery and adds more flexibility to the type of analysis that can be performed later. AD-LIB is a WINDOWS\* program written especially to assist the vibration analyst in recording and processing rotating machinery vibration time waveforms. From the recorded data, it will generate many different kinds of analyses including FFT's, Constant Percentage Bandwidth spectrum synthesis, demodulated spectrum of high-pass or band-pass filtered data, Cepstrum, RMS-Max-Peak, Kurtosis analysis and many more.

## INTERNATIONAL MEASUREMENT SOLUTIONS

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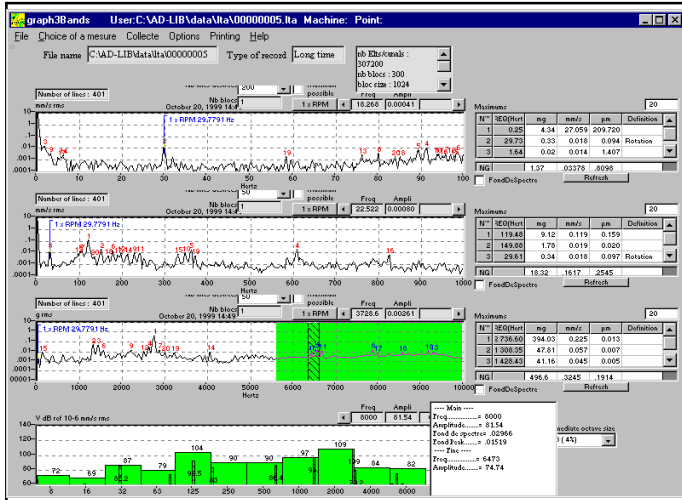
\* WINDOWS and ACCESS are trademarks of MICROSOFT CORPORATION



## TIME DATA RECORDING

Time data can be acquired from OROS hardware (using a simple driver allowing to define the project, machine, measurement points, and operating condition at the time of recording), or other selected data acquisition devices and stored in a data base for later use. Very long time blocks can be processed (several seconds of data at 20kHz). Data can also be imported from VIBREXPART or any WAV file. Several discriminants (Peak, RMS, Kurtosis values) are calculated. The signal can then be edited, decimated or digitally filtered in order to cover a different frequency range, enveloped or simply re-sampled using various algorithms. The processed time signals can be played-back on the PC sound system or used for further post-processing. A built-in signal generator is included for tutorial purpose.

## CONSTANT PERCENTAGE BANDWIDTH SYNTHESIS, COMPARISON AND TRENDING



AD-LIB can perform a three-pass FFT analysis (for example, 0-20k, 0-2k and 0-200 Hz) on a time waveform to generate a Constant Percentage Bandwidth analysis (4%, 6%, 8%, 12%, 1/3<sup>rd</sup> octave and Octave). For each FFT analysis, it is possible to specify the number of lines (only limited by the amount of time samples), the full scale frequency, and some pre-conditioning like a high-pass or band-pass enveloping filter. The highest peaks in each spectrum are automatically identified and a table containing the acceleration, velocity and displacement levels together with the frequency (interpolation between the lines is used for maximum accuracy) is generated. Many different analysis set-ups can be pre-defined and used later for batch processing on a large number of signals. Once a CPB spectrum is generated, it can be stored and used later for comparison and trending. A 3-D diagram showing the evolution of the CPB data (or its difference with a comparison spectrum) can also be displayed.

## SPECIAL FUNCTIONS: CEPSTRUM ANALYSIS AND ROLL AND GEAR PROFILES

Many other operations can be performed on the data. This includes integration and differentiation of time and spectral data, Cepstrum analysis, roll and gear profiles using synchronous time averaging with soft-trigger. Various export and import facilities are provided for integration to other software programs (ASCII, ME-SCOPE from VIBRANT TECHNOLOGIES and VIBREXPART from IMS).

New innovative functions will be added in the future to further enhance the diagnosis capabilities of the software.

For more information, please contact:

or visit our World Wide Web site at:

<http://www.intlmeas.com/>

