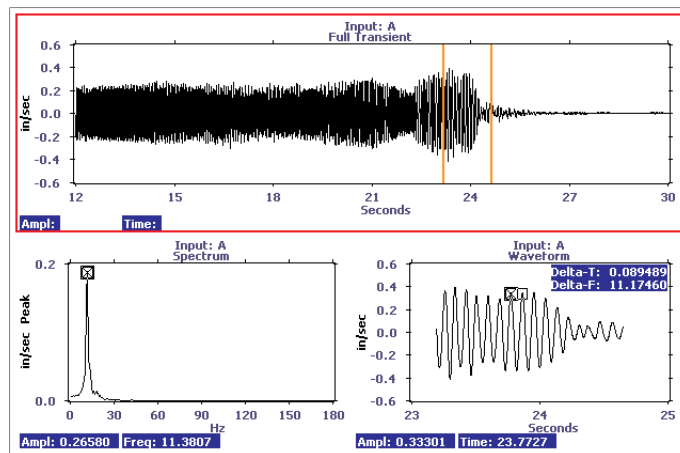


# Model 2130S4 Advanced Transient Analysis Application

- Captures continuous, long, or short duration time waveform data on 1 or 2 channels
- Calculates FFT spectrum from any part of the stored waveform data to determine exact frequency, amplitude, & cause of transient events
- Records continuous data as a machine goes through varying operating conditions, such as startups, coastdowns, or process-induced vibration changes
- Investigates motor current in-rush or vibration from valves opening and closing
- Compatible with CSI's PeakVue® technology



Transient data (top) showing detail plots for spectrum (bottom left) and waveform (bottom right)

## Introduction

The Advanced Transient Analysis downloadable program extends the advanced diagnostic capabilities of the Model 2130 RBMCONSULTANT® Pro . With transient analysis, a time waveform is collected over the period of time when an event of interest is likely to occur. Examples include one complete cycle of a machining operation, during a process change on a compressor, or during the coastdown of a machine rotor.

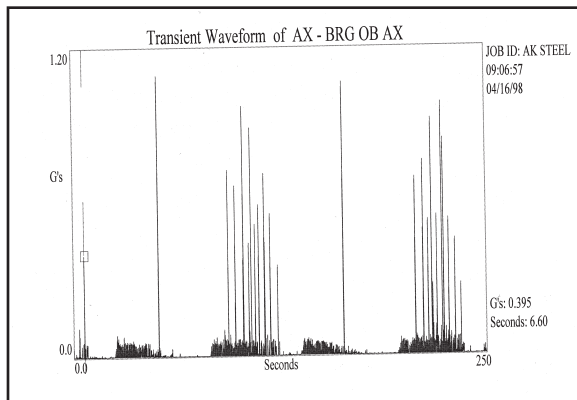
The program enables the Model 2130 RBMCONSULTANT® Pro to simultaneously collect a continuous time waveform from up to two input channels. The waveform is written to memory with no gaps. FFT spectra with up to 6,400 lines of resolution can then be analyzed across any section of the waveform to determine the frequency, amplitude, and cause of transient events.

After data is collected, it can be examined for any changes in pattern, frequency, or amplitude. The 2130 can then process the data and expand the display on a specific segment of the waveform for a more detailed examination.

For a new level of diagnostic power, the transient program can be combined with CSI's patented PeakVue technology to collect a PeakVue transient signal. While this technique has broad applications across industry, it is especially useful for diagnostics of very slow speed equipment (fractional RPM) for bearing, gearing, and other faults.

### **VibPro® Advanced Analysis Software**

Data collected with the Advanced Transient or Advanced Cross-Channel Analysis downloadable programs for the 2130 can be uploaded to the CSI VibPro



*Transient waveform with PeakVue shows clear indications of bearing impacts that are not detectable using traditional FFT analysis.*

Advanced Analysis Software for post-processing, in-depth analysis, and long-term storage. When used with the transient program, this new 32-bit software enables the analyst to display a dual channel transient waveform with synchronized cursors. Any portion of the waveform may be expanded, and FFT analysis can be performed using a variety of selectable parameters, such as resolution, window type, and average mode.

When used in conjunction with the Advanced Cross-Channel Analysis program (part # A2130S3), VibPro provides powerful cross-channel analysis capabilities including:

- waveform and spectrum for both the impact and force
  - full spectrum cross-channel phase
  - full spectrum coherence
  - transfer functions with separate display of both real and imaginary components
- Multiple plots can be displayed simultaneously with a synchronized cursor to facilitate identification of resonant frequencies. VibPro also includes a standard data export format to transfer measurements to CSI's Windows®-based ODS and Modal Analysis software for advanced structural analysis.

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