Blastware® Advanced Module
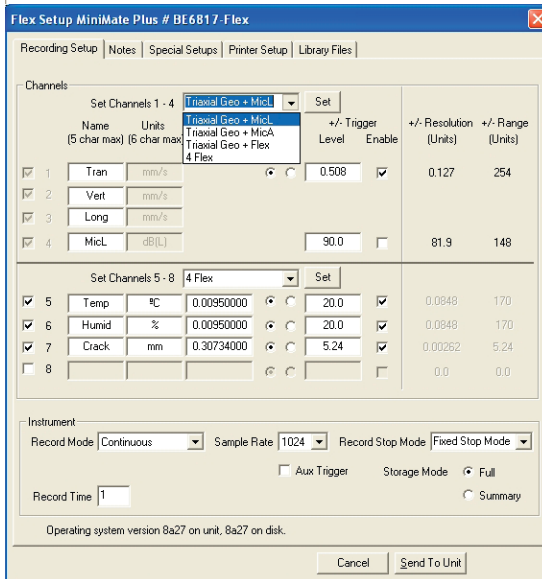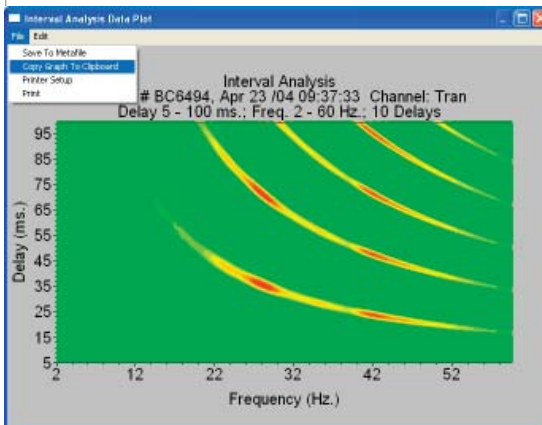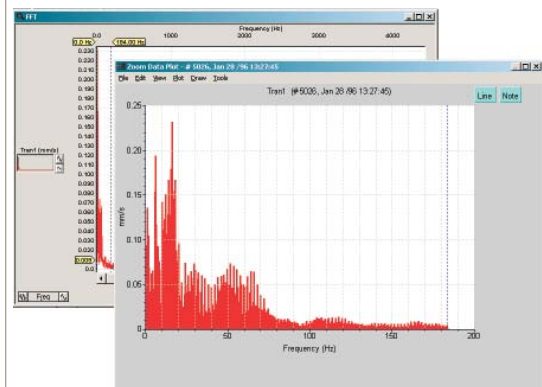
Advanced Module Flex™ Setup

Synthetic Waveform – Interval Analysis Data Plot

FFT analysis with detailed Zoom Data Plot window

The Advanced Module, provides you with powerful analysis tools, "what if" functions, customization, and additional monitoring setups.

Powerful Analysis Tools:

- Detailed Wave Display – zoom in and make direct measurements quickly and easily.

- Display Control – select any of 4 channels, grid, color, values, and scale.

- Histogram Display – look at the whole picture or focus in on a particular time interval.

- Automatic Calculations – frequency, time, delta Y, RMS, slope, and linear regression calculated between the cursor points.

- Detailed FFT Analysis – view energy frequency content for all or select only part of a waveform.

- Timeline Analysis – compare designed time delays with actual measured values.

- **Flex™** Setup is a feature for Series III monitors (for monitors with a serial number of 6000 or greater) providing pre-defined setups for channels to operate with a combination of standard and alternative sensors such as accelerometers, crack extensometers, temperature sensors, or humidity sensors.

Advanced Signal Processing:

- Process Tools – Analysis functions including add, subtract, shift, truncate, and test wave.

- Vector Sum – waveform display of the resultant of two or three axis values.

- Integrate & Differentiate – displays displacement or acceleration from velocity waves.

- Filter Function – high, low, or bandpass filters to eliminate unwanted frequencies

- Scale Function – converts waveform to any unit of measurement and/or magnitude.

- Linear Superposition – shifts and adds waves using timelines for blast simulation analysis.

- Interval Analysis – evaluate interference of patterns by varying the delay interval.

Fully Customizable:

- Individual Channels – edit sensor name, units, sensitivity, sample rate, and trigger levels.

- Compliance Graph Editor – lets you create your own custom frequency standard.

- Language Editor – customize labels and text for different languages or applications.

M7S007 Rev 01 - Product Specifications are Subject to Change

Blastware® Compliance Module
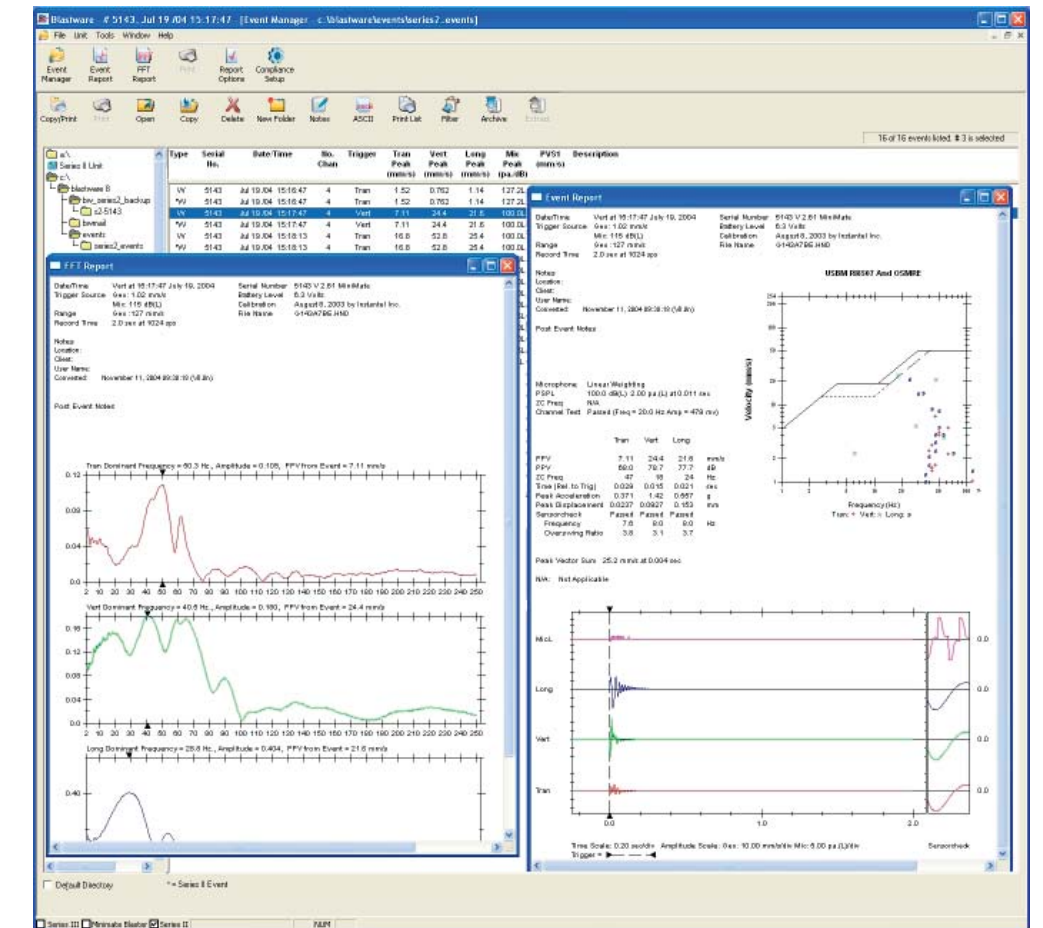
The tools to:

- Download events
- Manage event files
- Produce Compliance reports
- Produce FFT reports
- Upload monitor settings
- Configure remote monitoring systems

Blastware®, the Windows® software companion to your Instantel® vibration monitor offers powerful, easy to use features, for event management, compliance reporting and advanced data analysis. The program consists of two modules. The Compliance Module comes standard with each monitor. The optional Advanced Module, includes data analysis features and extended monitor setup options.

Overview

The **Blastware** software is designed to perform several tasks to assist with your monitoring operations. The software can be used to program any Series II or Series III monitor, manage recorded events, remotely control monitors, customize report content, selectable Frequency Standards, and more.
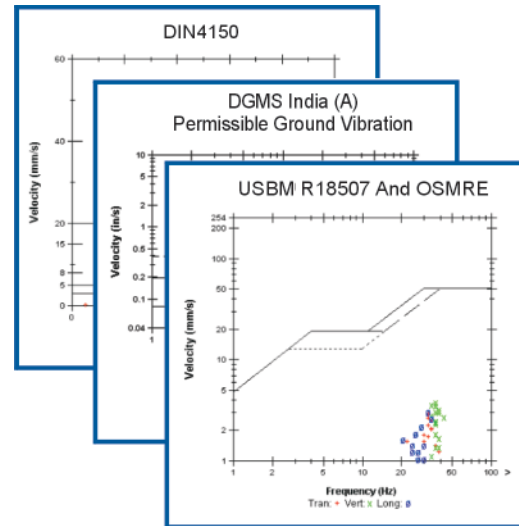

The Blastware Event Manager, FFT Report, and Event Report

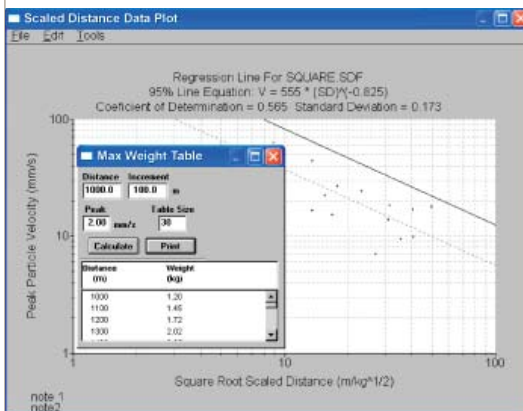## Key Features – Compliance Module:

- Powerful Event Manager simplifies file transfer from monitor and file management on the computer.

- Operator interface is intuitive and easy-to-use.

- Customized Event Reports with over 20 selectable National Frequency Standards.

- Easy-to-use Frequency (FFT) Analysis and reporting.

- Scaled Distance tools to estimate PPV based on explosives charge weight and distance to structure for specific sites.

- Monitoring setup utilities to configure systems for remote modem communication.

- **Blastware Mail** automatically distributes event data to e-mail and text messaging devices.
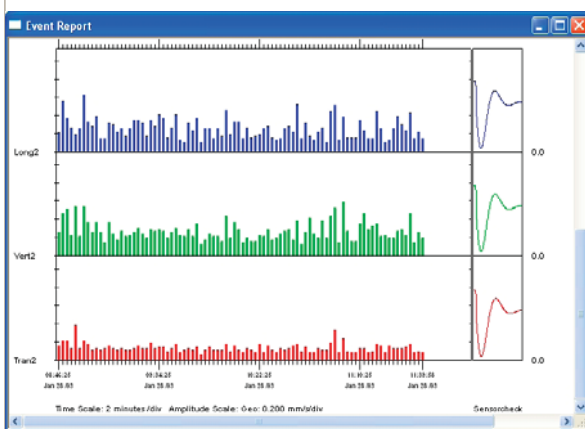
- ASCII conversion of Events.

Instantel

Blastware®

Compliance Module

Blastware®

Advanced Module

National Frequency Standards – Select from over twenty standards, or create your own with the Advanced Module.

Scaled Distance Data Plot

Histogram Reports

Standard with all Instantel monitors, the Compliance Module gives you all the tools you need to produce professional compliance reports.

Simplified Event File Management:
- Automatic Download, Store and Print – download and print all events directly from the monitor with a single command.

- Enhanced Event Lists – customize columns in the Event Manager to display any summary information from the Event File – e.g. Date/Time, Notes, PPV.

- Sort or Filter Event files based on selectable information in event data.

- Copy, Move, or Delete Event Files and Create Event Directories from within **Blastware** software.

- Archive Event Files – convenient bundling of events and compact storage.

Comprehensive Reporting:
- Customized Event Reports – high-resolution, full color, one-page reports are complete and easy to read. Customize reports to include the information you need including Post Event Notes and your company logo.

- Waveform Scaling allows you to change the amplitude and time scaling on event prior to printing report – apply to one event, a group of events, or set as a default.

- Post Event Notes can be applied to one event or a group of events, and saved with the original Event File.

- FFT reports allow you to analyze the frequency content of waveforms – the dominant frequency for each waveform is automatically calculated and shown (refer to the image on the front page of the Compliance Module overview).

- Download, view, and report Monitor Logs and Daily Self Checks to obtain a complete record of all monitor activity.

Full Communication Support:
- Communication with an **Instantel Blastmate®** or **Minimate®** monitor is easy to setup, allowing complete control of all monitor functions directly from your computer.

- Full Remote Monitoring setup and control including **Instantel® Auto Call Home™** and **Blastware Mail** (for monitors with a serial number of 6000 or greater). Automatically transfer Event files from the monitor using modem communications and distribute event data to e-mail, Internet, or any text messaging device.

Additional Features:
- Customize channel names, headings for notes, and select either imperial or metric measurement units.

- Transfer waveform and histogram data in ASCII format to third-party software for analysis.
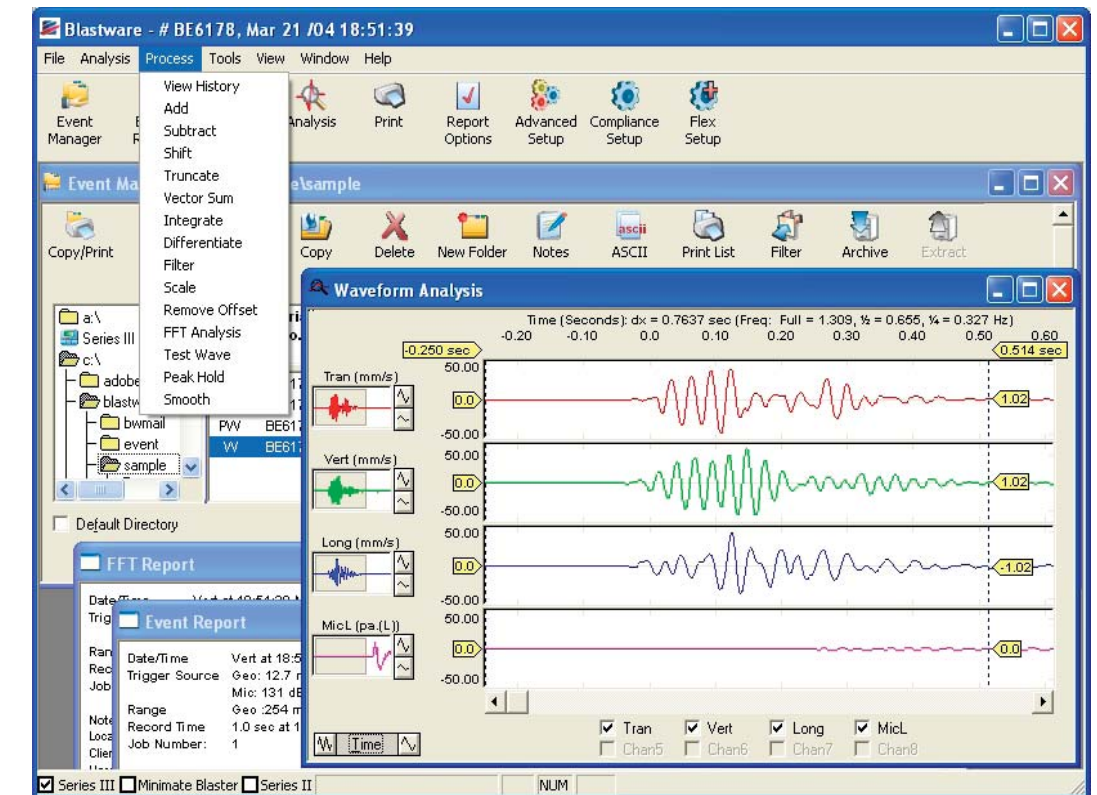
The tools to perform all the functions of the Compliance Module plus:

- Set up the monitor to use custom sensors
- Set up the monitor to use multiple sensor types
- Set up the monitor for extended sample rates
- Perform post-event signal processing
- Analyze waveform data
- Analyze histogram data
- Conduct timeline analysis
- Conduct Signature-hole analysis
- Create custom Frequency Standards
- Customize monitor commands and prompts for any language

Blastware®, the Windows® software companion to your Instantel monitor, offering powerful, easy to use features, for event management, compliance reporting and advanced data analysis. The program consists of two modules. The Compliance Module comes standard with each monitor. The optional Advanced Module, includes data analysis features and extended monitor setup options.

Overview

The **Blastware** Advanced Module includes all the functions of the Compliance Module with additional features for advanced processing, analysis of waveforms, and vibration modelling. Also, upgrade your vibration monitor for a broad selection of vibration and overpressure sensors, as well as sensors for related structural and environmental measurements.

*The **Blastware** Advanced Module Event Manager and Sample Waveform*

Key Features – Advanced Module:

- Simple setup window for custom sensors allows you to setup and save individual monitor channels, and access extended sample rates for advanced monitoring jobs.

- **Flex** monitoring allows you to capture vibration and overpressure, as well as related structural or environmental measurements at the same time, using a standard Instantel Series III monitor (for monitors with a serial number of 6000 or greater).

- Extended FFT tools allow detailed analysis of frequency content from user-defined portions of the waveform.

- Extensive Signal Processing allow you to filter, scale, and apply processes and functions to generate useful information from complex waveform data.

- The Edit Timeline Analysis tool allow you to overlay times for detonations or other causal events and evaluate impact on measured data.

- The Linear Superposition tool allows you to generate synthetic waveforms, based on signature-hole data.

- Customizing tools allow you to generate custom Frequency Standards (PPV limit vs. Frequency).

- A Language Editor allows you to customize the user interface of the monitor for the specific requirements of your operators.

- The Human Exposure tool enables you to calculate frequency-weighted Vibration Dosage Value (VDV) and Root Mean Square (RMS) of acceleration on an entire or partially selected waveform. This data can also be exported for use in a database program.