

Model 6100 Fracture Wave Detector

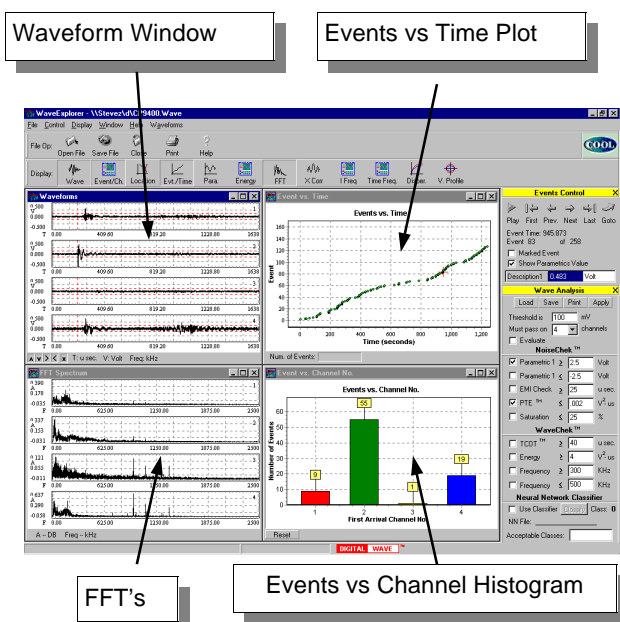
The Model 6100 Fracture Wave Detector (FWD) is Digital Wave's most powerful Modal AE instrument. With full waveform capture and advanced signal processing, source location and identification has reached a new level in acoustic emission. Automatic classification of signals is also now possible with DWC's WaveClass neural network classification software.

6100 Hardware Features:

- ◆ Configurable from 2 - 128 channels
- ◆ High Speed A/D (25 MHz)
- ◆ Digitization of Parametric Signals (Load, Temperature, Pressure, etc.), up to 8 channels
- ◆ Selectable Bandpass Filtering
- ◆ 0 - 42 dB User Selectable Gain
- ◆ Low Noise Preamplifiers
- ◆ Broadband High-Fidelity Transducers



6100 Fracture Wave Detector
with FTM



6100 Software Features:

- ◆ Real Time Analysis including Extraneous Noise Rejection and Source Location
- ◆ NoiseChek™ WaveChek™, and WaveChek Direct™ Automated Analysis Tools
- ◆ Built in Theory for Predicting Wave Velocities for Plate and Bulk Modes
- ◆ Accurate 1-D, 2-D and 3-D Source Location Using Advanced DSP Techniques
- ◆ All software developed for Microsoft Windows™ for easy use

Model 6100 Fracture Wave Detectors come complete with wide band high fidelity sensors, line drivers or preamplifiers, low noise analog signal conditioning, high speed A/D conversion, and a powerful Intel Pentium™ computer running the Microsoft Windows™ operating system. Fracture Wave Detector systems also come with a one year limited warranty.

Model 6100 Fracture Wave Detector cont'd

System Specifications

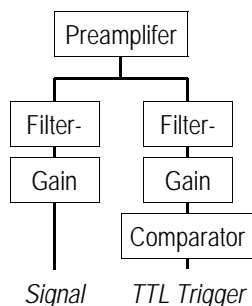
The Model 6100 Fracture Wave Detector (FWD) transient capture and analysis system comes complete with sensors, preamplifiers or line drivers, analog signal conditioning, analog to digital conversion, rack-mountable computer, waveform acquisition and analysis software, cables, and documentation.

Sensors & Preamplifiers

The Model 6100 FWD system can be configured with any of Digital Wave's sensors. See the detailed sensor and preamplifier specifications for more information.

Analog Signal Conditioning

Signal conditioning for the 6100 FWD consists of preamplifiers near the sensor, bandpass filtering and additional gain. All of Digital Wave's signal conditioning components exhibit extremely low noise and high bandwidth. Linear phase shift Bessel filters provide more accurate signals. Digital Wave's innovative method of splitting the signal and trigger generation offers superior extraneous noise rejection. All analog components are housed in separate shielded enclosures and supplied with linear power supplies that produce less noise than switching power supplies found in PC's. The 6100 Fracture Wave Detector system is expandable from two channels to 128 channels using multiple 16 channel, rack mountable FM1 signal conditioning units.



Analog to Digital Conversion

The WaveExplorer™ can be configured with eight bit A/D boards sampling up to 25 MHz or twelve bit A/D boards that can sample up to 30 MHz.

A/D Specifications

Vertical Resolution: 8 bits
Sampling Rates: 1.5, 12.5 or 25 MHz
Voltage Range: ±1.0 V
Memory Length: up to 32k Pts/waveform
Signal to Noise: 45dB @ 25 MHz, ±1V

Vertical Resolution: 12 bits
Sampling Rates: 1, 2, 5, 10 or 30 MHz
Voltage Range: ±1.0 V
Memory Length: up to 128k Pts/waveform
Signal to Noise: 61dB @ 30 MHz, ±1V

Acquisition Rates

Pentium 200 MHz, 32 Mb RAM, Windows 95
12 bit, 1024 points/channel
Waveform Capture Only

Continuous Throughput Rate:
1-channel - 388 waveforms/sec
2-channels - 466 waveforms/sec
4-channels - 448 waveforms/sec

Industrial Computer

A rack-mountable industrial computer houses the high speed A/D boards and the system CPU.

Standard Configuration

Microprocessor: Pentium 450 MHz
Memory & Storage: 64Mb RAM, 8.6 Gb HDD
Monitor: 17" SVGA, .26 pitch
Keyboard, Mouse & 48X CD-ROM: Included

Software

All 6100 FWD's come standard with WaveExplorer software. WaveClass™, WavePredictor™, and TubeChek™ are optional software packages. Please see the detailed software information.

Documentation

The 6100 FWD system documentation includes complete hardware and software User's manuals.

Warranty

The 6100 FWD system comes with a limited one year warranty from Digital Wave.

Optional Upgrades

The system computer can be upgraded to a faster CPU, increased RAM, larger hard drive, or larger monitor. Multiple CPU's can be added for custom Client/Server configurations.

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