

# Blastmate® III

## Full-Featured, Advanced Vibration and Overpressure Monitor

### Range of Applications:

- Blast-monitoring for compliance
- Near-field blast analysis
- Pile driving
- Construction activity
- Demolition activity
- Train monitoring
- Bridge monitoring
- Structural analysis
- Underwater blast monitoring
- 4 or 8 channel data acquisition
- Remote monitoring - Autocall Home™

Consultants, Engineers and Contractors the world over recognize the **Blastmate III** as the most versatile and most reliable full featured vibration monitor available. It provides all of the industry-leading features of InstanTel's **Minimate Plus™**, conveniently packaged with a full keyboard and a high-resolution printer. This allows you to setup, add notes and print complete event reports in the field, without a computer.

### Versatile

With standard features like Histogram Combo™ monitoring mode, zero dead-time between events, and flexible sample rates up to 65 KHz, the **Blastmate III** provides you with control and confidence to monitor reliably in any situation. For added versatility, you have the option to add 4 more channels and extra memory, providing two complete standard seismographs in a single package.

For even more flexibility, use **Blastware®** Advanced Software to configure the velocity and microphone channels as independent data acquisition channels for a variety of sensors including hydrophones, accelerometers and crack monitors.

### Easy to use

The features and versatility of the **Blastmate III** set it apart, but the fact that it is also easy to use makes it truly revolutionary. The **Blastmate III's** dedicated single use function keys, backlit LCD and simple menu-driven operation make setup and operation quick and easy, even for inexperienced personnel.

### Tough

Like its **Blastmate II** predecessor, the **Blastmate III** has been built to survive, with a fully sealed top panel, non-corrosive industrial grade connectors and sealed electronics, all packed in a rugged, water-resistant case.

**Blastmate III** - Reliability and versatility for any monitoring application.



### Key Features

- Fast high-resolution thermal printer for event reports in the field without the need for a computer.
- Full keyboard simplifies entry of job-specific notes and information.
- Dedicated function keys and intuitive menu-driven operation enable quick and easy setup.
- Histogram Combo mode allows capture of full waveform records while recording in histogram mode.
- Sample rates from 1024 to 16K samples per second per channel - up to 65K available on a single channel.
- Available 8-channel option allows for 2 standard triaxial geophones and 2 microphones to be used on a single **Blastmate III**.
- Zero dead-time between events means you never miss an event.
- Any channel can be matched to a wide variety of sensors - geophones, accelerometers, or hydrophones.



# Blastmate® III

## General Specifications

## Blastmate III

Channels	Microphone and Triaxial Geophone or 4 independent user-configurable channels (two Microphones and two Triaxial Geophones or 8 independent channels with optional 8-channel upgrade)
Vibration Monitoring (with Standard Triaxial Geophone)	
Range	Up to 254 mm/s (10 in/s)
Resolution	0.127 mm/s (0.005 in/s) or 0.0159 mm/s (0.000625 in/s) with built-in preamp
Accuracy	+/- 3% @ 15Hz
Transducer Density	2.13 g/cc (133 lbs/ft <sup>3</sup> )
Frequency Range	2 to 250 Hz
Air Overpressure Monitoring	
Weighting Scales	Linear or A-weight
Linear Range	88 to 148 dB (500 Pa (0.072 PSI) Peak)
Linear Resolution	0.25 Pa (0.0000363 PSI)
Linear Accuracy	0.3 dB at 30 Hz and 127 dB
Linear Frequency Response	2 to 250 Hz
A-weight Range	50 to 110 dBA
A-weight Resolution	0.1 dBA

## Waveform Recording

Record Modes	Manual, Single-shot, Continuous, Programmed start/stop
Seismic Trigger	0.125 mm/s to 254 mm/s (0.005 to 10 in/s)
Acoustic Triggers	
Linear	100 to 148 dB
A-weight	55 to 110 dBA
Sample Rate	1024 Hz to 16 kHz per channel (independent of record time), up to 65 kHz in single-channel mode with advanced software (maximum 8 kHz per channel for 8 channels)
Record Time	1 to 100 seconds (programmable in one-second steps) or 500 seconds plus 0.25 seconds pre-trigger
AutoRecord Time	1 to 100 seconds (programmable in one-second steps) or 500 seconds plus 0.25 seconds pre-trigger
Cycle Time	Recording uninterrupted by event processing - No dead time
Storage Capacity	
Full Waveform Events	300 one-second events at 1024 Hz sample rate (1500 event capacity with optional memory upgrade)
Event Summaries	1750 (8750 event capacity with optional memory upgrade)

## Histogram Recording

Record Modes	Histogram and Histogram Combo (monitor captures triggered waveforms while recording in Histogram mode)
Recording Interval	2, 5 or 15 seconds; 1, 5 or 15 minutes
Storage Capacity	46,656 intervals - 3 days at 5-second intervals or 102 days at 15 minute intervals (with memory upgrade - 15 days at 5-second intervals or 540 days at 15 minute intervals)

## Physical Specifications

Dimensions	269 x 355 x 165 mm (10.6 x 14.0 x 6.5 in)
Weight	6.4 kg (14 lbs)
Battery	Rechargeable 6V sealed gel cell - capacity for 30 days of continuous monitoring
User Interface	63 domed tactile keys including full keyboard and dedicated keys for common functions
Display	4-line x 20 character, high contrast, backlit LCD
Printer	High resolution thermal plotter
PC Interface	RS-232
Auxiliary Inputs and Outputs	External Trigger, Remote Alarm
Environmental	
Printer/LCD Operating Temperature	-10 to 50°C (14 to 122°F)
Electronics Operating Temperature	-20 to 60°C (-4 to 140°F)
Remote Communications	Compatible with Telephone, GSM, Cellular, RF, Satellite and Short-haul modems. Automatically transfers events when they occur through Autocall Home feature.



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