

## HIGH SPEED VOD/DATA RECORDERS



**HANDITRAP II™**



**MICROTRAP™**



**DATATRAP II™**



**DAS™**

## HIGH SPEED VIDEO CAMERAS



**BLASTER'S RANGER II™**



**BLASTER'S RANGER II™ LT**



**BLASTER'S PWT™**



**PROANALYST®**

## VELOCITY & DELAY TIME RECORDERS



**SPEEDTRAP™**



**TIMETRAPH™**

## BOREHOLE CAMERAS



**STRATACAM™ MINI**



**STRATACAM™**



## MEASURING THE INVISIBLE

MREL's Blasting Instrumentation Division manufactures the world's most popular and proficient family of continuous explosives velocity of detonation (VOD) recorders. These reliable, rugged instruments are in use throughout the world by blasters and explosives experts to verify the performance of explosives and delay times between holes and explosives decks. Two of the recorders can also be used as portable high-speed data loggers to record vibrations, pressures, temperatures etc.

MREL's Blasting Instrumentation Division provides affordable, portable high-speed digital video camera systems for blasters and explosives experts. Each camera is supplied with ProAnalyst® Motion Analysis Software to allow determination of blasthole delay times and face velocities, and is also available with the Blaster's PWT™ Portable Wireless Trigger System to operate the cameras from a safe distance.

MREL's Blasting Instrumentation Division manufactures the StrataCam™ Borehole Camera which is used to clearly view and accurately record the physical location of weak/strong geological strata boundaries, ore/waste boundaries, coal seams, top of coal, top of water, water ingress, borehole cracks, cavities, and irregularities.



## HANDITRAP II™

The HandiTrap II™ VOD Recorder is a 1 channel explosives velocity of detonation (VOD) recorder that is capable of profiling the VOD continuously along one explosives sample or continuously along the explosives column in one blasthole per test. With unparalleled ease-of-use the HandiTrap II™ is a favourite of mines and quarries performing spot checks of explosives performance.



## MICROTRAP™

The MicroTrap™ VOD/Data Recorder has 1 channel for recording explosives velocity of detonation (VOD) and optionally 4 channels more for recording any sensor that outputs DC voltage. If you need to profile the VOD continuously along one explosives sample or continuously along the explosives columns in multiple blastholes per test, then the MicroTrap™ is your affordable choice.



## DATATRAP II™

The DataTrap II™ Data/VOD Recorder has 8 channels that can be set to record explosives velocity of detonation (VOD) or any sensor that outputs DC voltage (vibration, pressure, temperature, strain). If you need a rugged universal recorder that can record a variety of sensors and can also record the VODs in many explosives samples and/or blastholes per test, then consider the DataTrap II™.



## DAS™

DAS™ Data Acquisition Suite allows Customers to program their MREL recorders, download recorded data, display graphs of the data, analyze, annotate and filter the data on the graphs easily in an iterative and intuitive manner. Graphical results can be copied and pasted into other Windows programs for inclusion in presentations and reports.



## SPEEDTRAP™

MREL's SpeedTrap™ Velocity Recorder is the world's most modern discontinuous (point-to-point) velocity recorder. It is used by explosives manufacturers and explosive consumers to instantly display and save the velocity of all types of industrial and military explosives, propellants, pyrotechnics, detonating cords, boosters and shock tubes.



## TIMETRAP™

The TimeTrap™ Delay Time Recorder is a high precision, portable digital chronometric device, primarily used for determining the delay accuracy of electric and non-electric detonators, fuse-heads, impact fuses, detonating relays and trunk-line delay connectors. It is ideal for laboratory testing of detonators and delays.



## BLASTER'S RANGER II™

The Blaster's Ranger II™ is a High Speed Digital Video Camera with an ultra bright 178mm (7 inch) LCD touch-screen and internal battery for full functionality without the use of an external controller or battery. The Blaster's Ranger II™ is the successor to the world's most popular camera for recording blasting events in the mining and quarrying environments. Simply point and shoot to capture excellent quality video.



## BLASTER'S RANGER II™ LT

The Blaster's Ranger II™ LT High Speed Digital Video Camera is a more affordable version of MREL's popular Blaster's Ranger II™ High Speed Digital Video Camera. It is operated with an external battery and set-up with the Operator's notebook PC running a browser. Prior to blasting, the notebook is disconnected and the camera records high resolution slow motion video of blasting events in the mining and quarrying environments.



## BLASTER'S PWT™

The Blaster's PWT™ Portable Wireless Trigger allows operators to send a trigger signal to their cameras or other instrumentation from a remote distance without needing to utilize long trigger wires. This allows blasters to position one or more cameras closer to the blast than might be considered safe for a person and then trigger the cameras wirelessly from up to 500 m (1640 ft.) away.



## PROANALYST®

ProAnalyst® Motion Analysis Software for Windows provides quantitative information from high speed digital videos taken of events that occur too quickly for the eye to see. Some of the quantitative data includes the actual hole and deck delay times, the time of first rock face movement, the rock face velocities, and the stemming ejection velocities.



## STRATACAM™ MINI

The StrataCam™ Mini Borehole Camera is a smaller, more affordable, manual reel version of MREL's full-size StrataCam™ Borehole Camera. It is used to clearly view and accurately record borehole structure and irregularities.



## STRATACAM™

The StrataCam™ Borehole Camera performs high resolution video surveys of dry or water filled boreholes with diameters as small as 63.5 mm (2.5 in.) to a maximum depth of 300 m (1000 ft.). You can easily toggle the powered cable reel to raise or lower the camera's position in the borehole and adjust the speed while viewing and recording the live colour video and depth on the LCD monitor.

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