

Safe, Reliable

# BLASTPED

Centralized Blast Initiation



Don't have people in  
harm's way – use BlastPED

BlastPED provides a cost effective and safe remote blast initiation system for mines. This is achieved by eliminating the high cost of installing and maintaining large firing cable networks, and by reducing the safety risks associated with these cable based systems.

## UNDERGROUND MINES

### **BlastPED PED® Version**

This system uses the PED® Transmission System to communicate with remotely installed receiver/exploders to initiate electric detonators (blasting caps).

### **BlastPED Leaky Feeder Version**

Uses a mine's leaky feeder radio system to communicate with remotely installed receiver/exploders to initiate electric detonators (blasting caps).

## OPEN CUT SURFACE MINES AND QUARRIES

### **BlastPED ST Version**

Also known as BlastPED EXEL this version was developed for use in surface applications and uses spread spectrum radio systems to communicate between a Master Control Unit and a Remote Receiver/Exploder. A key difference to the other two types of BlastPED is this version initiates signal tube (shock tube) directly, rather than initiating an electric detonator.

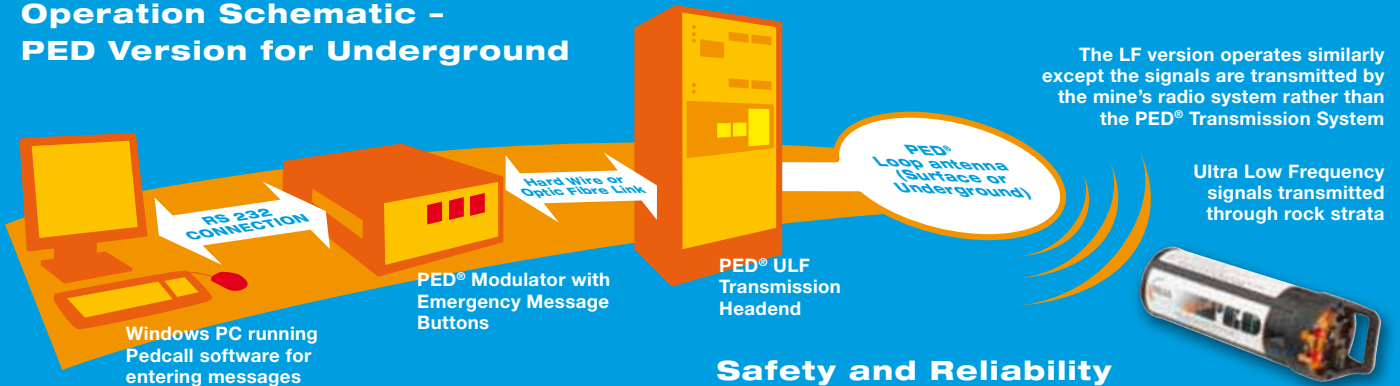
# HOW BLASTPED WORKS

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## Operation Schematic - PED Version for Underground



## Cost Benefits Underground

- Experience at mines using BlastPED has shown eliminating extensive cabling or signal tube runs can increase production time per shift by an average of 45 minutes as clearing the mine of all people is simplified.
- Reducing the number of misfires by eliminating extensive cabling networks.
- With no personnel underground during blasting, drill holes do not need to be grouted to prevent fumes from spreading outside blast areas via these drill holes.
- Shotfirers are not required to prolong shifts to initiate blasts.

## Surface

- By reducing signal tube consumption (currently approx. 300m per shot at an average of 3 shots/week) the system payback can be very short.
- Manpower and time costs are significantly reduced for shot setup and clearance, therefore productivity is increased through better utilisation of your truck/shovel fleet.

## Operation Schematic - ST Version for Surface Mines



## Safety and Reliability

- Proven in daily use at over 100 mines since the first installation in 1995.
- Compliance with appropriate blasting device standards.
- Based on this compliance, its security of operation, and the results of rigorous Risk Assessments, BlastPED has received approval or recognition for use by various mining authorities around the world, including Australia, Canada, United States, South Africa, Chile and Tanzania.

The system security is based on the unique operating frequency and coding techniques of the PED® system. Key features in relation to PED® which contribute to the levels of security include:

- Sophisticated encoding and decoding techniques in the PED® signalling system which ensures absolute integrity of the signal.
- Security is further increased by the requirement for two separate messages to be transmitted before a blast can be initiated. That is, a valid "ARM" command must be received and then (within ten minutes or the system resets) a valid "BLAST" command must be received for power to be applied to the detonator circuit.
- Additionally, the valid ARM and BLAST commands are not contained on the PC's hard disk. Valid commands are read off specially coded external disks, which are kept in a secure location and are only accessed by an authorised person.

The safe use of BlastPED requires operational procedures to be put in place by the mine. These are not dissimilar to those used for mains firing systems. Key procedures include:

- Only authorised & trained personnel use the system.
- All aspects of the system's use is understood by those involved in its operation, from installing the BlastPED at a face, typing in the commands at the PC, to the recovery of the BlastPED receiver.
- A system to confirm that all personnel have withdrawn to a safe area before blasting is in place.

## MINE SITE TECHNOLOGIES PTY LIMITED

ABN 93 002 961 953

### SYDNEY

25-27 Whiting Street  
Artarmon NSW 2064 Australia  
PO Box 156, Artarmon 1570  
Tel: +61 2 9437 4399  
Fax: +61 2 9437 5688  
mst@minesite.com.au

### KALGOORLIE

17 Darcy Lane  
West Kalgoorlie WA 6430 Australia  
PO Box 4200, Kalgoorlie 6430  
Tel: +61 8 9022 2300  
Fax: +61 8 9022 2311  
mstwa@minesite.com.au

### MOUNT ISA

15 Duke Street  
Mt Isa QLD 4825 Australia  
PO Box 2436, Mt Isa 4825  
Tel: +61 7 4749 4922  
Fax: +61 7 4749 4933  
mstisa@minesite.com.au

### MACKAY

Tel: +61 408 656 860  
Fax: +61 7 4954 3999  
mst@minesite.com.au

MST Offices also located in Sudbury, Canada and St Louis, USA.

[WWW.MINESITE.COM.AU](http://WWW.MINESITE.COM.AU)

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