TECHNICAL SPECIFICATIONS

Saves Lives
PED
Saves Costs

TRANSMISSION SYSTEM

Transmission Headend

Frequency	ULF
Output Power	1.2kVA
Operating temp range	10°C - 40°C (50° F - 104°F)
Power requirements	110/240V AC
Includes	Earth leakage/ground fault detection and lockout
Dimensions	Housed in 19 inch rack cabinet (H=1200mm/48in; W=600mm/24in; D=600mm/24in)

Software

PEDCALL®	Windows based main system software Individual, groups & general broadcast Name search Custom text messages Priority Access Message log 15 second Emergency Message Facility Preprogrammed messages generated at specific times can be networked on mine's LAN
MINE MONITORING	Custom interface to monitoring system for Automatic message generation, Monitors an unlimited number of inputs, Programmable messages to predefined personnel and devices

Smart External Modulator

Power	110/240 VAC
Input	RS-232 9 Pin to 9 Pin from PC Output 0-20mA to PED Headend
Features	Emergency message buttons (3)

PED® is a well proven technology with over 15 years of refinement.

RECEIVING DEVICES

Personal Receiver

Alert	Cap lamp 10 second flash, buzzer
Display	32 character liquid crystal dot matrix LED back light, Time display Message Storage (2), scroll facility
Voltage	Cap lamp battery nominal 4 or 7.5 volts
Power	40 mA
Weight	200 to 450 grams (1lb) depending on version.
Operating temperature	-20°C - 50°C (-4°F - 120°F)
Rating	IP67, Intrinsically Safe

AutoPED® Vehicle Mounted Receiver

Alert	Flashing light – 10 seconds Horn optional
Display	32 character liquid crystal dot matrix LED back light
Message storage	2 messages Scroll and delete functions
Power	10/28 VDC vehicle supply Automatic power shut down facility
Rating	IP65
Display dimensions	H=70mm W=220mm D=80mm H=3in W=9in H=3in
Antenna dimensions	L=170mm W=30mm D=30mm L=6.5in W=1.2in D=1.2in

ControlPED® For Fixed Equipment

Power	110V AC 50 / 60Hz 24V AC 50 / 60Hz
Indicator LEDs	Power ON / OFF Transmission Status
Switching relays	110V AC / 5amp
Receiver dimensions	H=70mm W=220mm D=80mm H=3in W=9in D=3in
Antenna dimensions	L=170mm W=30mm D=30mm L=6.5in W=1.2in D=1.2in

BlastPED® Remote Blasting System

Capacity	Capable of firing 160 ohm series circuit
Security	Individually coded receivers System access only via floppy drive disk Key-Switch to Receiver Independent supervisory circuit Sequenced command firing
Indicator LEDs	Battery Status, Receiver ready, Arm, Blasted
Rating	IP66
Dimensions	H=480mm Diam=140mm H=19in Diam=5.5in

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MINE SITE TECHNOLOGIES

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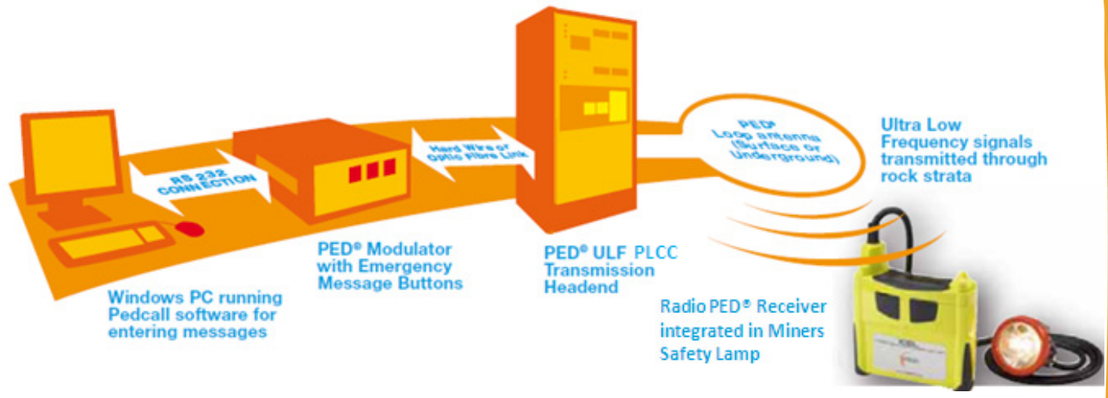
Saves Costs



PED® CALL SOFTWARE AND EXTERNAL MODULATOR

For Reliable Mine Wide Communication

- Emergency Evacuation Warning
- Personal Paging

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PED® SYSTEM BENEFITS

- MINE WIDE PAGING
- EMERGENCY EVACUATION WARNING
- OVERALL COMMUNICATIONS
- NO COMMUNICATION INFRASTRUCTURE IN THE UNDERGROUND
- SIGNALS PASS THROUGH THE EARTH OR ROCK STRATA
- NOT SUSCEPTIBLE TO DAMAGE DUE TO UNDERGROUND FLOODING, EXPLOSION, FIRE OR CAVE-INS.

PED® SYSTEM ELEMENTS

PEDCALL COMPUTER – THE OPERATOR INTERFACE AND EXTERNAL MODULATOR

The computer, a Windows PC running PEDCall, controls the PED transmission system. The PEDCall software provides the interface from the operator to the PED system in a simple and efficient manner.
The operator inputs information, such as the destination and the message content, then PEDCall will encode this information. Encoding of the destination and message utilizes advanced encryption methods to eliminate any chance of invalid information being transmitted. These encryption methods also ensure the receivers can decode the information in adverse signal conditions.

flexible solutions for underground mines

PED® MODULATOR

The PED External Modulator is connected to the PEDCall Computer via the serial port. This provides the interface to the Transmitter. The External Modulator communicates with the PC using RS232 at 9600 baud, 8 data bits, 1 stop bit and no parity.
The External Modulator, as its name suggests, modulates the encoded information and produces a frequency shifted output signal. The output signal is a 0-20mA Current Loop.
The output is connected to the Transmitter by a twisted pair. Other alternatives to a hardwired connection can also be utilized, where necessary, such as fibre or radio links.
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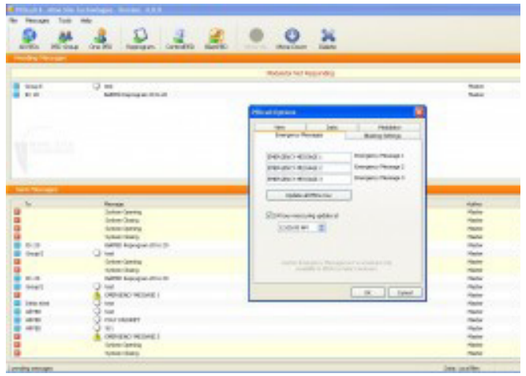

CONTACT KEY PEOPLE WHEREVERE THEY ARE

CONTACT EVERYONE IN AN EMERGENCY

PED® can send a private text message to any individual, wherever they are underground. This simple, one-way text message can save time and money, for example:
• Groups of miners can receive information, such as the reason for a power failure or that the conveyor system is going to be stopped outbye, etc.
• A beltman can be quickly advised of a problem that requires investigation (e.g. belt slip re-set).
• A transport driver can be advised of an urgently needed part.

HOW PED® OPERATES

PED® uses ultra low frequency (ULF) signals to send signals directly through rock, so called “through-the-earth” transmissions. The main difference between PED® and other so called through-the-earth systems is that PED® is proven and is operating in many mines, 24 hours a day, 7 days a week. PED® has been installed in over 150 mines since 1990. The system has been refined and enhanced over this time, but the basic working principles remain the same. The ULF transmission system transmits to a number of receiver types to allow a range of applications.

Modulator to PC connection