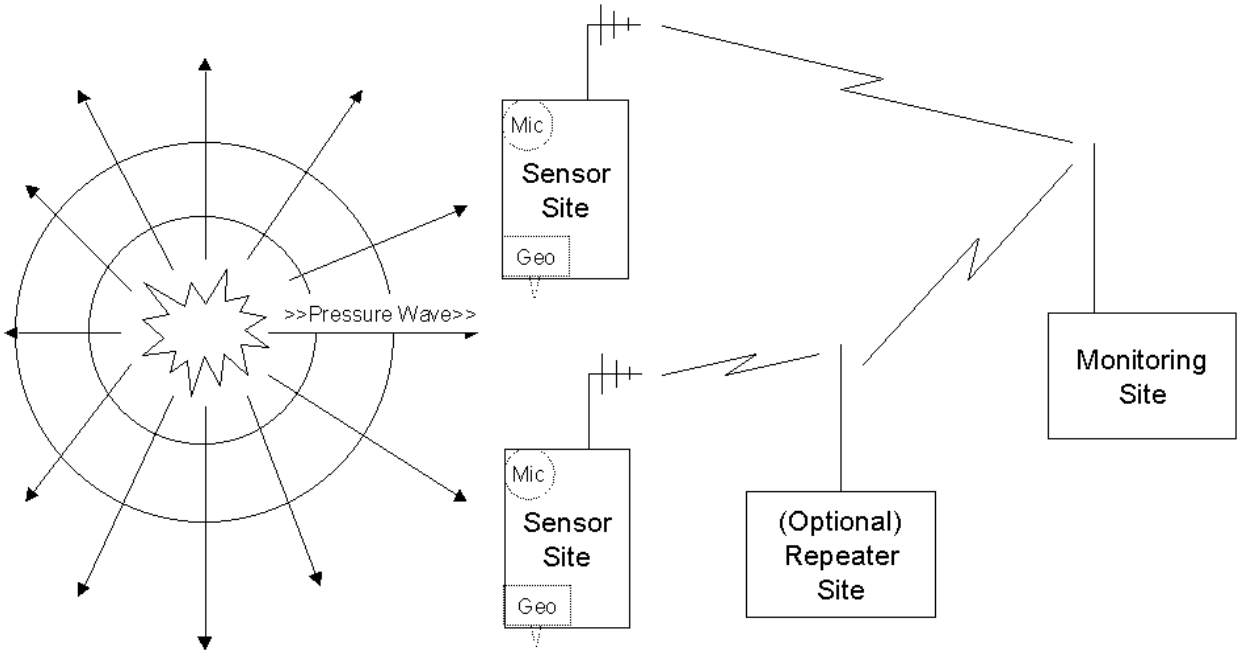
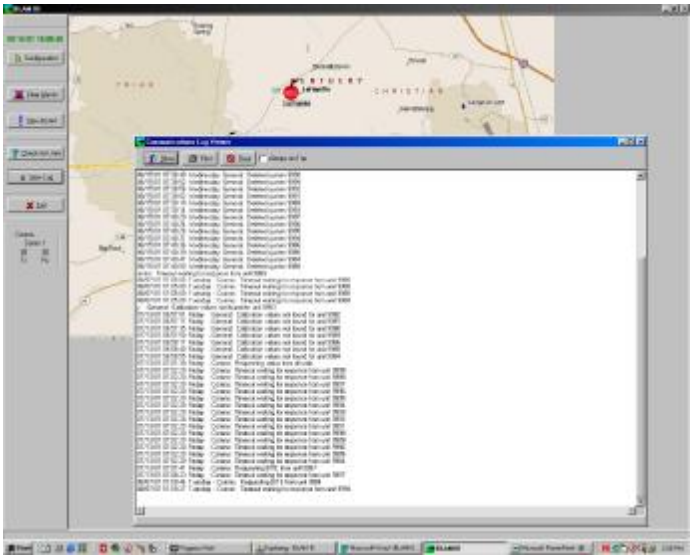
NoiseWatch®

Blast Analysis Monitor (BLAM)

Sensor sites are designed to automatically detect and store short duration (impulsive) noise events and run continuously without operator intervention. They also automatically report alerts, which are impulsive events that exceed a programmed level by the operator. On command, or request from the monitoring site, a sensor site will send stored data, report communications link status, run a BITE check, change an alert threshold, or allow the operator to enable or disable the alert feature. It uses a micro-controller to digitize and discriminate events of interest. When an event occurs, the site identifies the peak sound pressure level and duration of the acoustic event along with the peak energy value collected by the geophone during the same interval that is used for communications between the two sites.





The monitoring site is typically the user's base of operations. Information from all the sensor sites is transmitted to this location via the spread spectrum data links. The data is stored for display, analysis and producing reports at the user's discretion. The equipment installed at a monitoring site includes RF hardware (antenna, cables, etc.) a Processing Unit (PU), a personal computer (PC), interconnecting cables, and mounting hardware, as required. The PC uses a Windows® operating system to execute the BLAM software. The operator display shows a map of the area and a tabular listing of the blasts detected by the system. The current BLAM system is being upgraded to provide the capability to locate the blast. An acoustic array at each BLAM Monitoring Site will provide a line of bearing to the blast.

Specifications

Sound Pressure Level: 100 to 140 dB Unweighted
Acoustic Frequency Response: 1 to 400 Hz
Seismic Frequency Range: 10 to 100 Hz
Timing Resolution: 100 milliseconds
Environmental: Temperature -40 to +60 Degrees C, Rugged for Outdoor Survivability in All Weather Conditions
Power: Battery Powered with Solar Recharging, 10 to 18 Volts DC
Communications: 902 to 928 MHz or 2.4 GHz Two Way Unlicensed RF Modems. RF Relays for Long Range Connectivity from the Sensor Site to the Monitoring Site

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