Eureka Digital

Flexible correlation system for accurate leak location

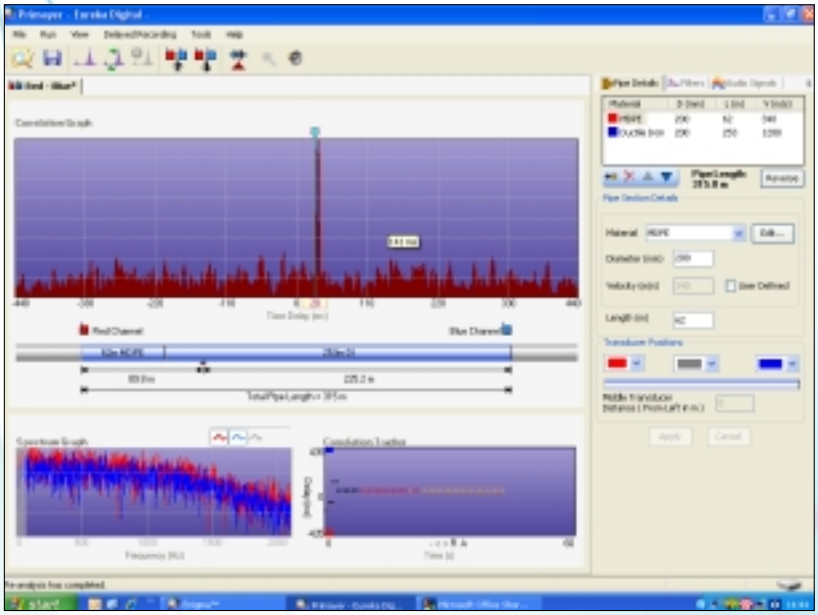
Eureka Digital **provides a powerful solution for locating leaks, even where there is substantial background noise or only the quietest of leak noise is present. Users can have confidence on metallic, plastic and cement pipes.**

Benefits

- **Optimum performance in difficult leak detection situations**
- **Operation not limited by radio range**
- **Re-analysis of digitally recorded sound**
- **Optional direct transmitter connection to pipe (street-work friendly)**
- **Three sensor input for automatic velocity measurement**
- **Flexible operation**

Proven performance

Eureka Digital uses the same technology as developed for the successful Enigma multi-point correlation system – a system proven to deliver the ultimate in leak location performance.



Use of separate accelerometer

Internal accelerometer connects direct to pipe

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Unique transmitters

The transmitters offer the choice of real-time (radio) operation or delayed recording (logging) operation - this eliminates radio range problems associated with conventional correlators. Furthermore, the transmitter has an integral sensor which can connect directly to the pipe - meaning that the chamber cover can often be closed resulting in much less disruption to traffic.

Automatic velocity measurement

Every *Eureka Digital* can operate with three sensors - without the need for the purchase of a third transmitter. The third sensor connects directly to the receiver module. Three sensors provide the facility to measure velocity - improving leak location accuracy and greatly reducing the chances of 'dry holes.'

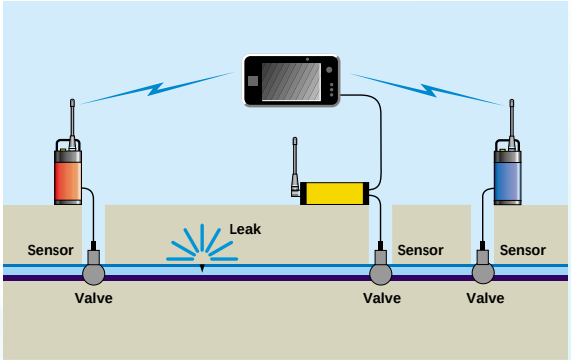
In-case battery charging

The transmitter and receiver module batteries are charged whilst in the transportation case, from either a vehicle 12Vdc or mains voltage supply. This adds considerably to the flexibility of use - battery charging can be undertaken whilst driving between sites!

Advanced analysis software

- Spectral analysis of leak sound
- Advanced correlation, coherence and filtering
- Optional manual filter control
- Audible + visual inspection of leak noise
- Ability to change pipe material and velocities after result computation
- User-defined pipe materials and velocity tables
- Tracker function – select best portion of recorded sound to retrieve correlation peak

Principle



Two sensors (red and blue) are positioned either side of the suspected leak position. The time taken for the leak sound to reach respective sensors is measured. Knowing the velocity of sound and distance between sensors the leak position is determined. Optionally, a third (yellow) sensor facilitates velocity measurement to improve leak position accuracy.

System components

- Accelerometers (x2)
- Digital transmitters (x2)
- Receiver module (incorporating third signal input)
- Choice of - Small tablet computer, or
  - Ruggedised tablet computer, or
  - Software for user's existing laptop
- Vehicle antenna
- Headphones
- Rugged carry case (incorporating battery charging)

Optional equipment and software

- Third accelerometer
- Hydrophones
- Correlator reference unit
- Measuring wheel

Complementary technology for the optimum leakage strategy

Harness the ultra-high performance of *Eureka Digital* with the more routine application of the *Eureka2* correlator. A formidable combination.

Part Numbers

Eureka Digital System including software (no computer)	KXG 741
Eureka Digital System including Small Tablet Computer	KXG 742
Eureka Digital System including Ruggedised Tablet Computer	KXG 473
Third Accelerometer	CXG 352

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