

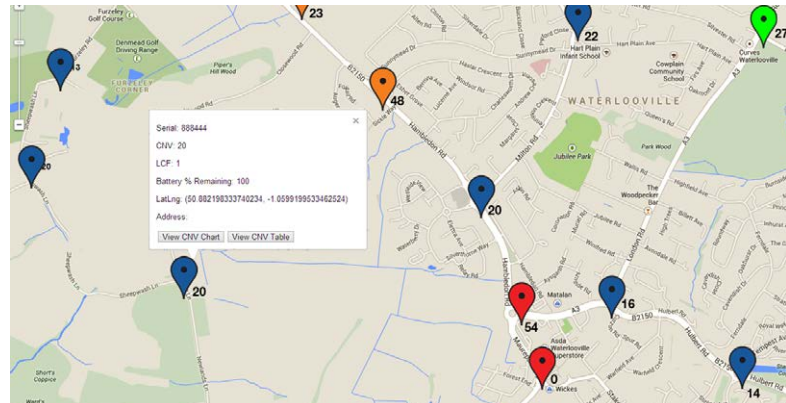


Wireless noise logger for leak detection

Phocus3 is an advanced leak noise logger designed for detecting and localising water leakage. Wireless communications allows both 'lift and shift' or permanent distribution network operation. On site leakage results may be obtained via the Communications Module with detailed analysis carried out on the host software.

Features

- One, two, three and nine channel models
- Rapid overnight identification of leaks
- Two models available;
 - local IR contact (lift + shift operation)
 - radio contact (greater range for permanent installation)
- Small size
- Histogram display of noise data
- Phocus noise algorithm to reduce incidence of undetected leaks
- GPS coordinates stored in logger
- Leak listening
 - real time (whilst on site)
 - recorded to aid remote leak identification



Leakage status displayed on Google map (courtesy of Google Maps).

Three sample epochs to separate consumer use from leakage

Phocus3 is an intelligent acoustic logger which detects the noise generated by a water leak. The logger samples pipeline noise at one second intervals during each of three sample epochs during the night when background acoustic noise is lowest. It carries out statistical analysis on each of the three epochs to determine the *Leakage Confidence Factor*. The lowest leak noise amplitude is also measured, termed the *Critical Noise Value*. This value is important as a measure of how close to the leak the logger is situated.





Wireless noise logger for leak detections

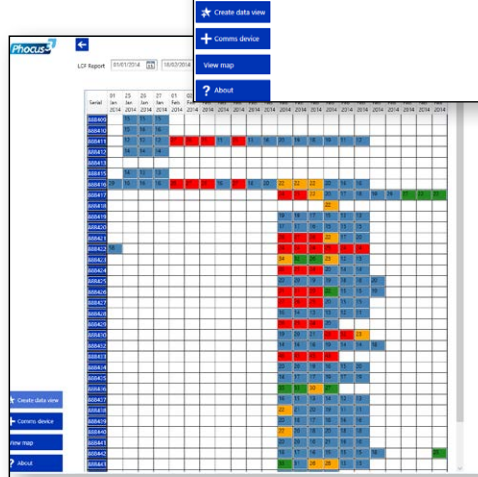
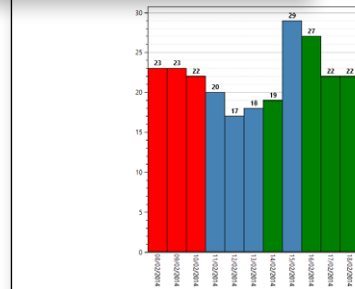
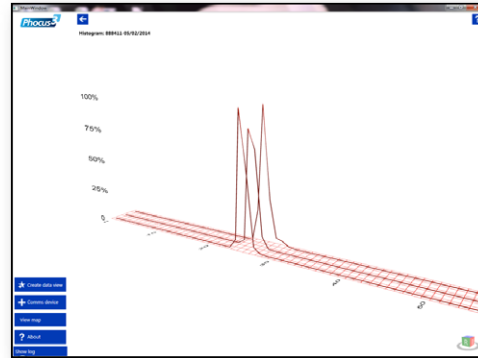
Logger characteristics

- Smallest size - local IR contact model is 40mm x 113mm (including handle)
- Intelligence in logger to determine presence and level of leak noise
- Epoch data memory approximately one year in most situations
- Powered for >5 years (dependent upon operational use)
- Submersible to IP68

Communications Module

The Communications Module enables local programming/readback of the *Phocus3* logger via infra-red communications. It gives on-site display of the *Critical Noise Value* and *Leakage Confidence Factor* for the most recent night. Data may be collected for the most recent 12 months and transferred to the host software for processing. The Communications Module also allows the user to listening via headphones, to confirm the presence of leak noise.

Histogram display for each epoch.



Data view show status of all deployed loggers.



Communications Module provides local display of Leakage Confidence Factor (LCF) and Critical Noise Value (CNV), plus facility to listen to leak noise.

Data acquisition

Data collected by the Communications Module is transferred to the PC software via USB. Data may be displayed as a table of all logger *Critical Noise* dB values and *Leakage Confidence Factors* for easy comparison of results. Histogram displays in 3D give further logger data analysis. Loggers are shown on a Google Map*, colour coded by *Leak Confidence Factor* and thus relative position to leak(s). Clicking on an individual logger allows access a logger data report.

*Courtesy of Google Maps.

Products

36 loggers (IR comms) + comms module + transport case	BXG 020
36 loggers (radio comms) + comms module + transport case	BXG 010
36 logger (radio comms) + drive-by comms module + transport case	BXG 011
18 loggers (IR comms) + comms module + transport case	BXG 030
18 loggers (radio comms) + comms module + transport case	BXG 040
18 loggers (radio comms) + drive by comms module + transport case	BXG 041



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