



# Environmental Noise Compass



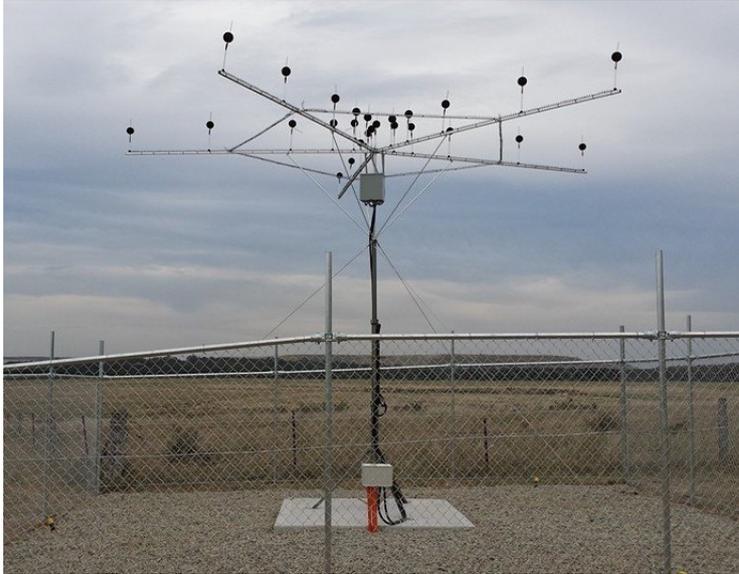
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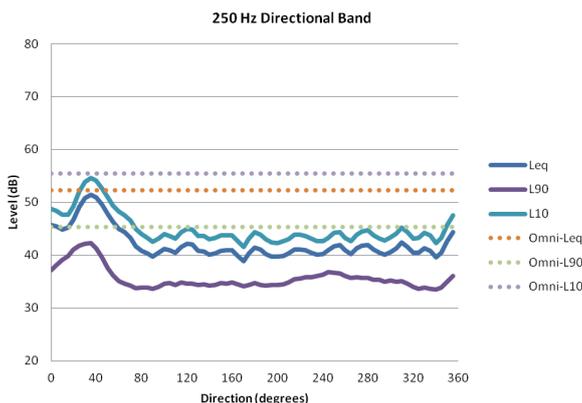
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## DIRECTIONAL ENVIRONMENTAL NOISE MONITORING



### FEATURES:

- Collects directional noise data for 3 octave bands of interest (125, 250 and 500 Hz) in 5 degree compass bearings
- Ability to simultaneously recognise noise sources arriving from multiple bearings, even when noise sources demonstrate the same noise characteristics (same frequencies)
- Omni-directional channel processed to 1/3 octaves from 31.5 Hz to 16 kHz
- Interval-based percentile statistics, e.g.  $L_{eq}$ ,  $L_{10}$ ,  $L_{90}$ , calculated for all data streams
- Statistical data stored to SQL compatible database
- Local storage can hold up to 3 months of statistical data along with 7 days of compressed audio and short term  $L_{eq}$  data
- Storage can be extended over LAN to allow multiple units to store data to a central location
- Ability to listen to any beam direction or omni microphone in real time



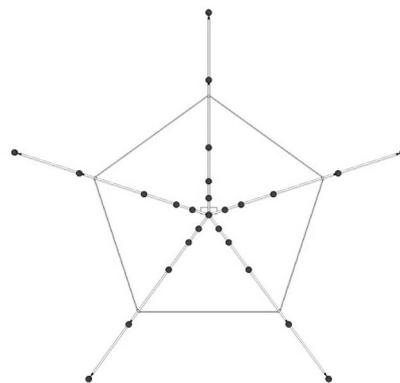
*Accurate. Informative. User Friendly.*  
ARL's Environmental Noise Compass (ENC) provides accurate acoustic statistical analysis to identify and measure sound sources.

## Operation

The ENC combines sound level meter functionality with advanced beam forming techniques to provide directional environmental noise monitoring. The design was developed based on the noise monitoring requirements for the mining industry.

Microphones are mounted to a five arm array allowing the direction of noise to be derived as it travels through the device. The ENC processes 3 full octave bands simultaneously, in 72 different compass bearings.

Statistics are processed and continuously stored to a SQL database. The ENC can be set up to record different statistical intervals and allows for 5 different percentiles. The on board data storage capacity can hold up to 3 months of statistical data, and up to 7 days of recorded audio and short term  $L_{eq}$  data.



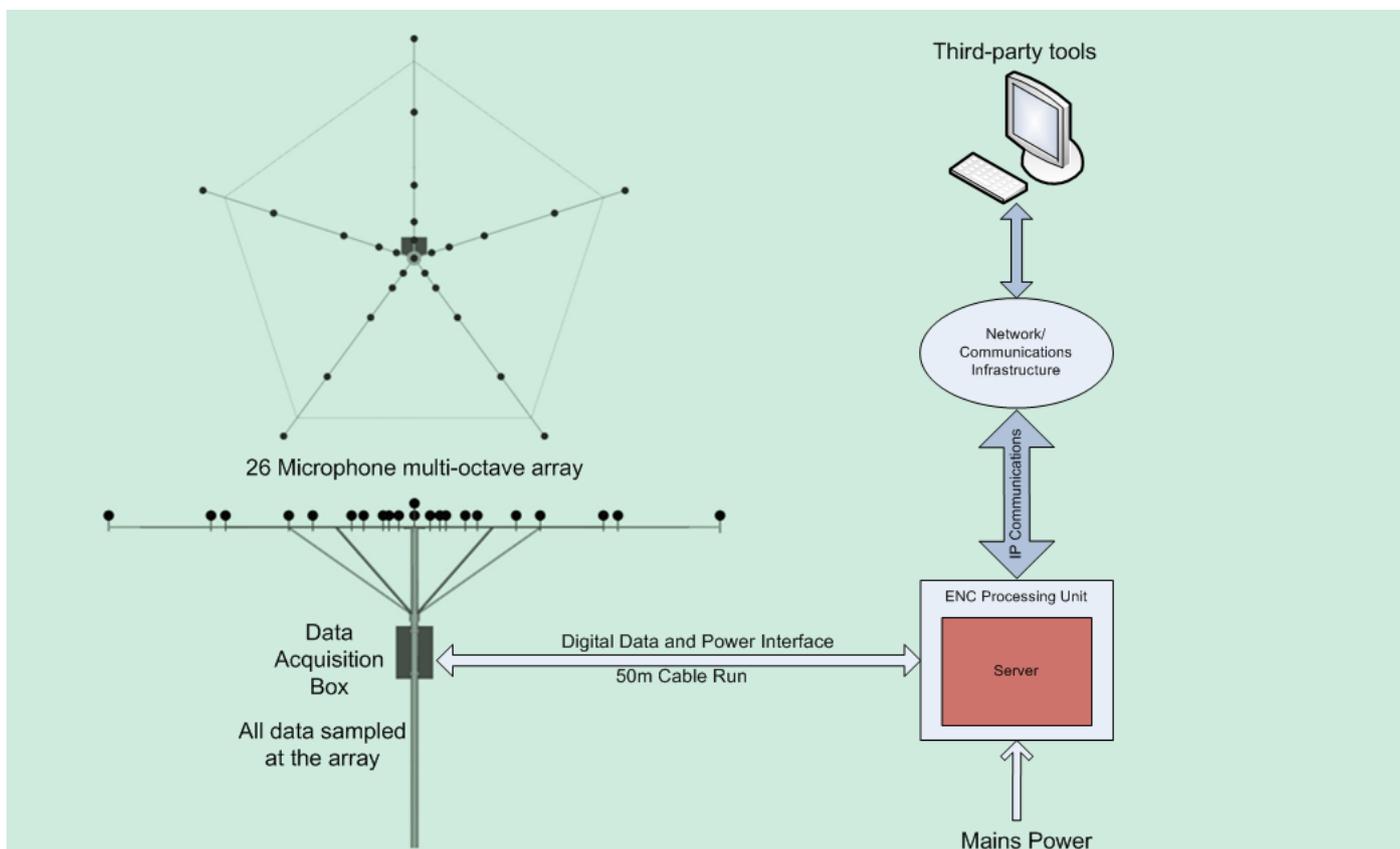
## Setup

The ENC comprises of a microphone array which feeds into a data acquisition box. Data is fed through to a local processing unit using a high speed digital link where data is interpreted, processed and stored to the SQL database.

The SQL database can be accessed remotely to view the stored data. The SQL output can be manipulated to the users needs, making the navigation and collection of the stored data a straight forward process.

## Data Analysis (Optional Custom Extensions)

*Recalling audio* — The ENC makes it possible to listen to any beam direction or microphone whilst viewing a graphical representation of the associated directional  $L_{eq}$  streams.



*Reporting* — Automated summary report generation functions, emailed daily or on events.

The ENC software can provide easy to use interfaces to simplify both analysis and system control.

Proudly Australian designed and manufactured



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