

ENVIRONMENTAL NOISE MONITORING

QUALITY THROUGH INNOVATION AND DESIGN

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Energy, Water, Environment.
Global Sustainable Solutions.

19 Environmental Noise Monitoring – Noise Mapper System

Noise pollution adversely affects the lives of millions of people. Studies have shown that there are direct links between noise and health. Problems related to noise include stress related illnesses, high blood pressure, speech interference, hearing loss, sleep disruption, and lost productivity. Noise Induced Hearing Loss (NIHL) is the most common and often discussed health effect, but research has shown that exposure to constant or high levels of noise can cause countless adverse health affections.



Consequently Noise Abatement is a fundamental task to be taken into account by the various health and municipal authorities, today reflected in a variety of regulations and directives adopted by almost all countries.

The source of most outdoor noise worldwide is transportation systems, including motor vehicle noise, aircraft noise and rail noise, but there are also other sources as car alarms, emergency service sirens, machinery, construction work, and even noisy people that have to be taken into account.

For Environmental Noise Monitoring we offer our Noise Mapper System which has been designed to monitor in realtime the environmental noise or acoustic contamination produced by road traffic in cities and roads, airplanes and railway traffic, or noise produced in construction sites. It applies to the monitoring of any other source of noise disrupting the welfare of the inhabitants.

Noise Mapper System is a versatile network solution for continuous permanent or semi-permanent monitoring of environmental noise in urban areas, from airports, industries, roads, etc. and in high noise sites (hot spot points), or in very quiet areas where noise may be a major concern.

Our Environmental Noise Monitoring System (ENMS) consists of the following parts:

- Remote Stations or Noise Mapper Remote Terminals (NMrt)
- Central Receiving Station or Environmental Noise Management Center (ENMC)

Remote Stations or Noise Mapper Remote Terminals (NMrt)



Our Environmental Noise Mapper System includes any number of autonomous Noise Mapper Remote Terminals (NMrt), deployed in such a way to cover the area of interest, as part of a noise monitoring network. Each NMrt includes its own weatherproof microphone (noise sensor), a very powerful Noise Processor, a Data Logger with very high capacity internal memory for data recording, as well as

several optional data transmission capabilities via GPRS/3G networks, radio-link, Ethernet, Wi-Fi, etc.

The NMrt, also allows the connection of other optional meteorological sensors for the measurement of wind, precipitation, air temperature, relative humidity, etc., and even sensors for air quality monitoring or vehicle traffic count and classification. Weather, air quality and traffic data are stored by the NMrt in the same manner as the noise measurements, but using a lower sampling rate, according to the different variability of the meteorological, air quality and traffic parameters. The Remote Terminals are offered with an optional built-in GPS receiver for automatic positioning.

Central Receiving Station or Environmental Noise Management Center (ENMC)



The Central Receiving Station or Environmental Noise Management Center (ENMC) would receive and store in a database all data transmitted by the Noise Mapper remote terminals in near real-time. Network Management is carried out by our Software Package to be installed at the Central Server or Central Computer.

The Central Server also allows the installation of our WEBTRANS Ubiquitas Internet Platform (an advanced WEB Posting solution), which allows direct access to all numerical data and graphical information via Internet to all authorized users.