



# DUO

## Smart Noise Monitor

Sound level meter & monitoring station



REDUCE YOUR ENVIRONMENTAL IMPACT





## DECADES OF INNOVATION

**DUO** Smart Noise Monitor is part of a best generation of ACOEM instruments – a breakthrough in environmental noise assessment.

**DUO** is completely modular with a comprehensive range of options that lets you use it either as a sound level meter or a fully-fledged noise monitoring station.

**DUO** can be customised and configured according to individual project specifications, avoiding additional costs. As requirements change, new options can be added to the same unit.

If you have a one-off requirement, **ACOEM** offers a variety of solutions, including monthly rental plans and **WebMonitoring** services for medium term monitoring.

**DUO** provides customers with innovation, versatility and an unrivalled scope of support services.

# DUO Smart Noise Monitor

## Your projects, our solution

## INNOVATION AT YOUR FINGERTIPS

**ACOEM's DUO** incorporates the latest technology to create an innovative solution to meet every customer's needs.

**DUO** has a high-quality finish; easy fastening profile for mounting securely on a tripod; soft touch rubber grip; and sunlight-proof colour display legibility. Stand-out features include **DUO's** one-of-a-kind, weather and waterproof microphone for use in all conditions, and fully integrated GPS and WiFi / 3G connectivity for remote operation.

## A SMART SYSTEM

**DUO** software system is the result of **ACOEM's** decades of expertise in environmental monitoring. The system offers the highest metrological quality and an unparalleled range of functions including:

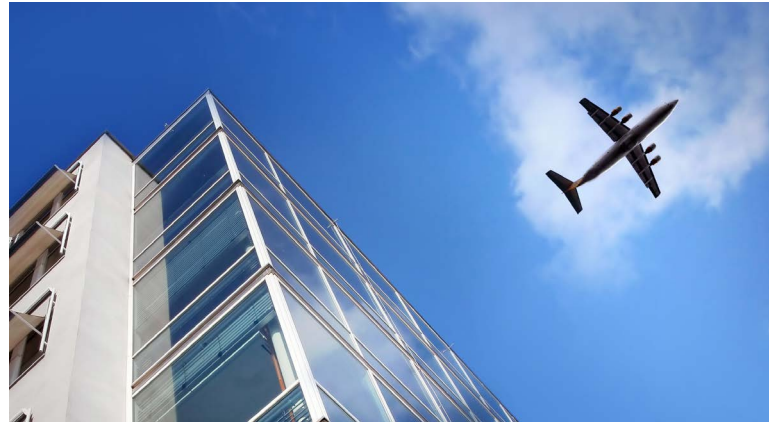
- Accurate & relevant noise indicators
- A smart system of event detection filters
- Continuous metrological audio recording
- Remote listening capability
- Automatic calibrator detection
- Electronic checks to ensure flawless metrology
- IEC 61672 Class 1 certification (for 0° and 90° reference directions) by LNE, PTB and METAS laboratories.



# Smart solutions for every project

## EVENT DETECTION

When an aircraft flies overhead, **DUO** automatically detects the event, encodes data and triggers an audio recording. This is made possible by customisable detection filters with user-defined actions (markers, audio, TTL triggers, SMS notification etc.). This exclusive **ACOEM** solution, allows any kind of noise event to be detected and monitored.



## LOCAL WEATHER STATION

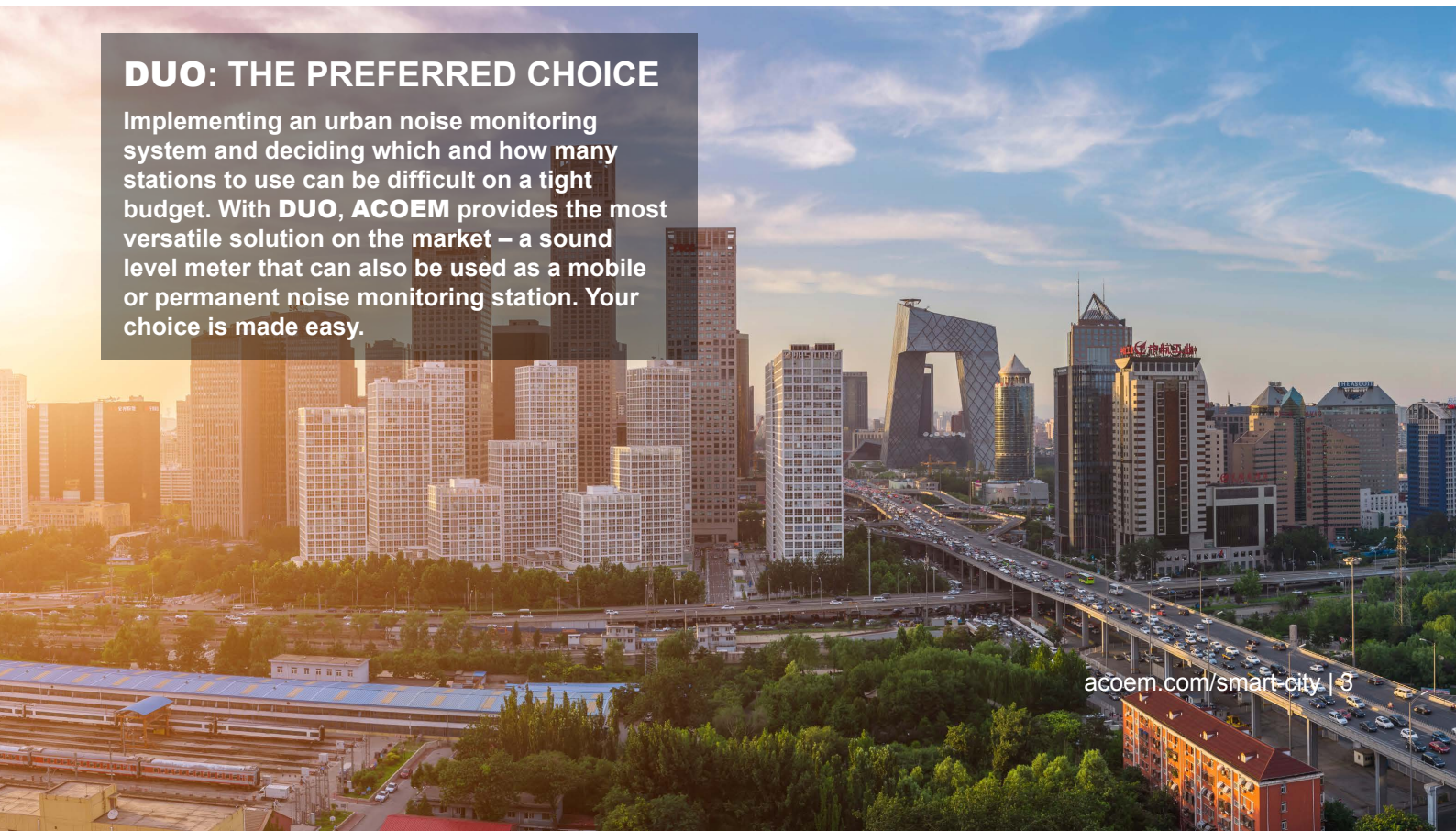
Looking for answers as to why noise levels exceeded the annual average at a race circuit on any particular day? Connect **DUO** to the weather station via a single cable to get the answer - the wind speed was greater than 5 m/s that day.

With **DUO**, **ACOEM** provides an integrated solution for more accurate monitoring and measurement of noise phenomena in sport and leisure activities.

*"ACOEM offers the most versatile solution on the market"*

## DUO: THE PREFERRED CHOICE

Implementing an urban noise monitoring system and deciding which and how many stations to use can be difficult on a tight budget. With **DUO**, **ACOEM** provides the most versatile solution on the market – a sound level meter that can also be used as a mobile or permanent noise monitoring station. Your choice is made easy.





## ALWAYS ON ALERT

Noise levels at construction sites require regular monitoring and complaints must be dealt with quickly and effectively. **DUO** features a high-performance alert system. If predefined limits are exceeded or the battery is low, you will receive an SMS notification, centrally managed by the **ACOEM WebMonitoring service**. As an added security measure, an SMS message will also be sent if the unit moves by more than 10 metres.



## ALWAYS UP TO DATE

Capturing noise level measurements at industrial sites is a complex task, due to factors such as multiple noise sources, variable operations on site, and the effect of weather conditions. With integrated GPS, **DUO** can perform localised and synchronised measurements to identify the influence of different noise sources at various times of the day.

*“IEC 61672 Class 1 certification  
(for both 0° and 90° reference directions)  
demonstrates the level of care taken by ACOEM  
to ensure DUO’s metrological quality”*

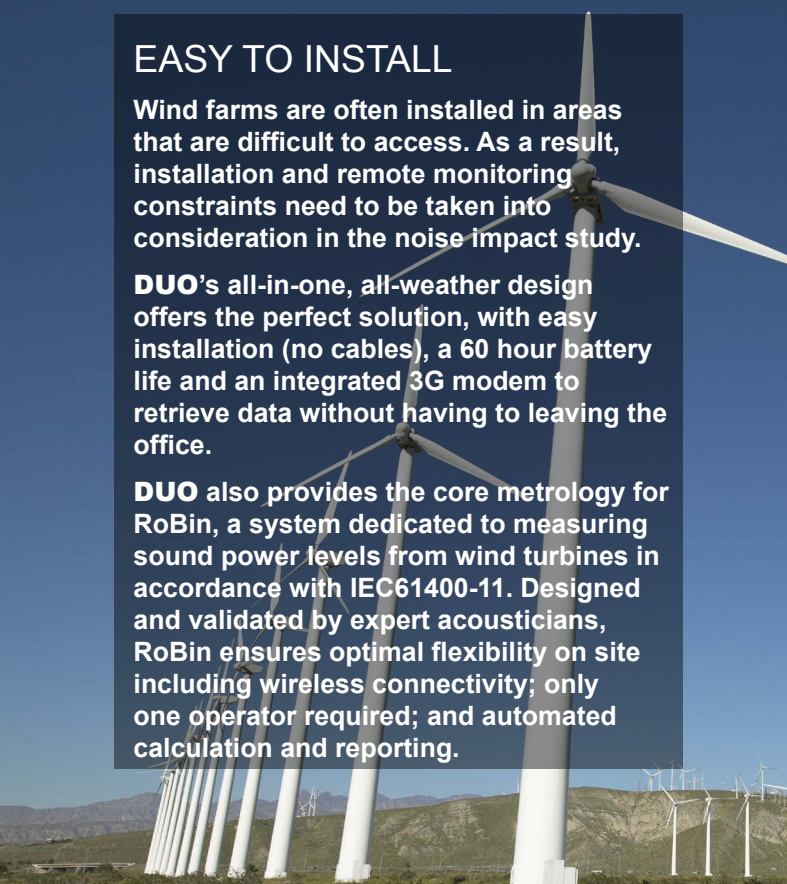


## EASY TO INSTALL

Wind farms are often installed in areas that are difficult to access. As a result, installation and remote monitoring constraints need to be taken into consideration in the noise impact study.

**DUO**’s all-in-one, all-weather design offers the perfect solution, with easy installation (no cables), a 60 hour battery life and an integrated 3G modem to retrieve data without having to leaving the office.

**DUO** also provides the core metrology for RoBin, a system dedicated to measuring sound power levels from wind turbines in accordance with IEC61400-11. Designed and validated by expert acousticians, RoBin ensures optimal flexibility on site including wireless connectivity; only one operator required; and automated calculation and reporting.



## “À la carte” services

### ACOEM WebMonitoring

Based on a fixed monthly subscription, **ACOEM** offers a range of **WebMonitoring** services, from stations rental including 3G subscription to cloud storage and a dedicated, customised website. These services are available to all customers who purchase **DUO** to support noise monitoring projects.



# All-in-one

## An innovative sound level meter

### A smart monitoring station

#### ACOUSTIC NOSE CONE 0°/90°

- ✓ Two reference directions 0° and 90° (configurable)
- ✓ IEC-61672 Class 1 certified by LNE, PTB and METAS

#### WEATHERPROOF MICROPHONE

- ✓ G.R.A.S. exclusivity
- ✓ Calibrator automatic detection
- ✓ Self-check system based on charge injection

#### INTEGRATED WIFI/3G MODEM

- ✓ Remote control
- ✓ Automatic downloading of data
- ✓ Noise event SMS notification
- ✓ Operational problem SMS notification

#### RUBBER SIDE GRIPS

- ✓ Improved grip

#### WATERPROOF METAL CASING

- ✓ Easy outdoor installation
- ✓ Treated against corrosion

#### INTEGRATED GPS ANTENNA

- ✓ Time synchronisation
- ✓ Multi-point synchronised markers
- ✓ Localisation

#### COLOUR DISPLAY

- ✓ High definition
- ✓ Legible in sunlight

#### 3-KEY KEYBOARD

- ✓ Simple to use
- ✓ Noiseless operation

#### 60 HOUR BATTERY LIFE

- ✓ Flexibility of use

#### 2-128 GB MEMORY CARD

- ✓ Unlimited storage
- ✓ Appropriate noise indicators
- ✓ Metrological audio recording

#### ACCESSORIES



DSC01 all weather case



DMK01 outdoor microphone



Weather station



## **About ACOEM**

### **Reduce your environmental impact**

In today's fast-moving world, the environment is increasingly impacted. The ACOEM Group is committed to sustainable development and help companies and public authorities limit their environmental impact by offering products and services that:

- Prevent and control air, noise and vibration pollution
- Increase the productivity and reliability of industrial machinery
- Contribute to the development of effective, robust & noiseless products
- Protect soldiers, sites and vehicles in military theaters of operation

The ACOEM Group is based in Limonest, France, and has 17 subsidiaries and offices around the world. The Group generates an annual turnover over €100 million and currently employs 750+ people globally.

**For more information, please visit our website at [acoem.com](https://www.acoem.com)**