NEW!

Nor848 Acoustic Camera

Norsonic is proud to present the acoustic camera Nor848 with outstanding performance. The camera frontend contains 225 microphones – more than most competitors – and enable the user to perform noise analysis with a clear view of the spatial distribution of the sound.

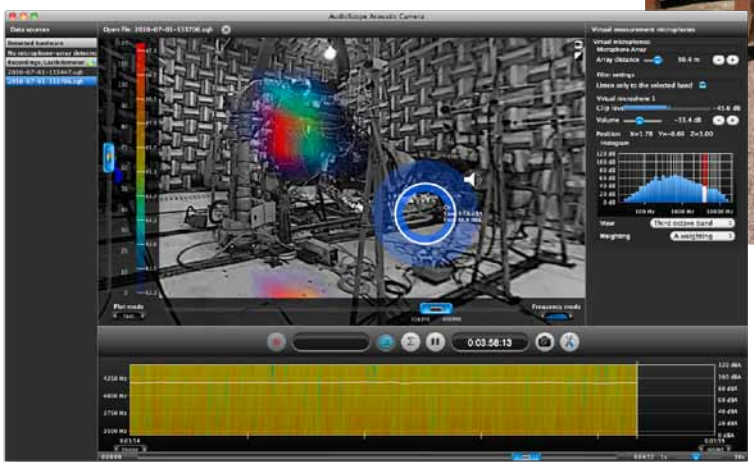
The system is easy to set up in the field. Just power the self-contained unit from mains or battery and connect the LAN-cable to the computer.

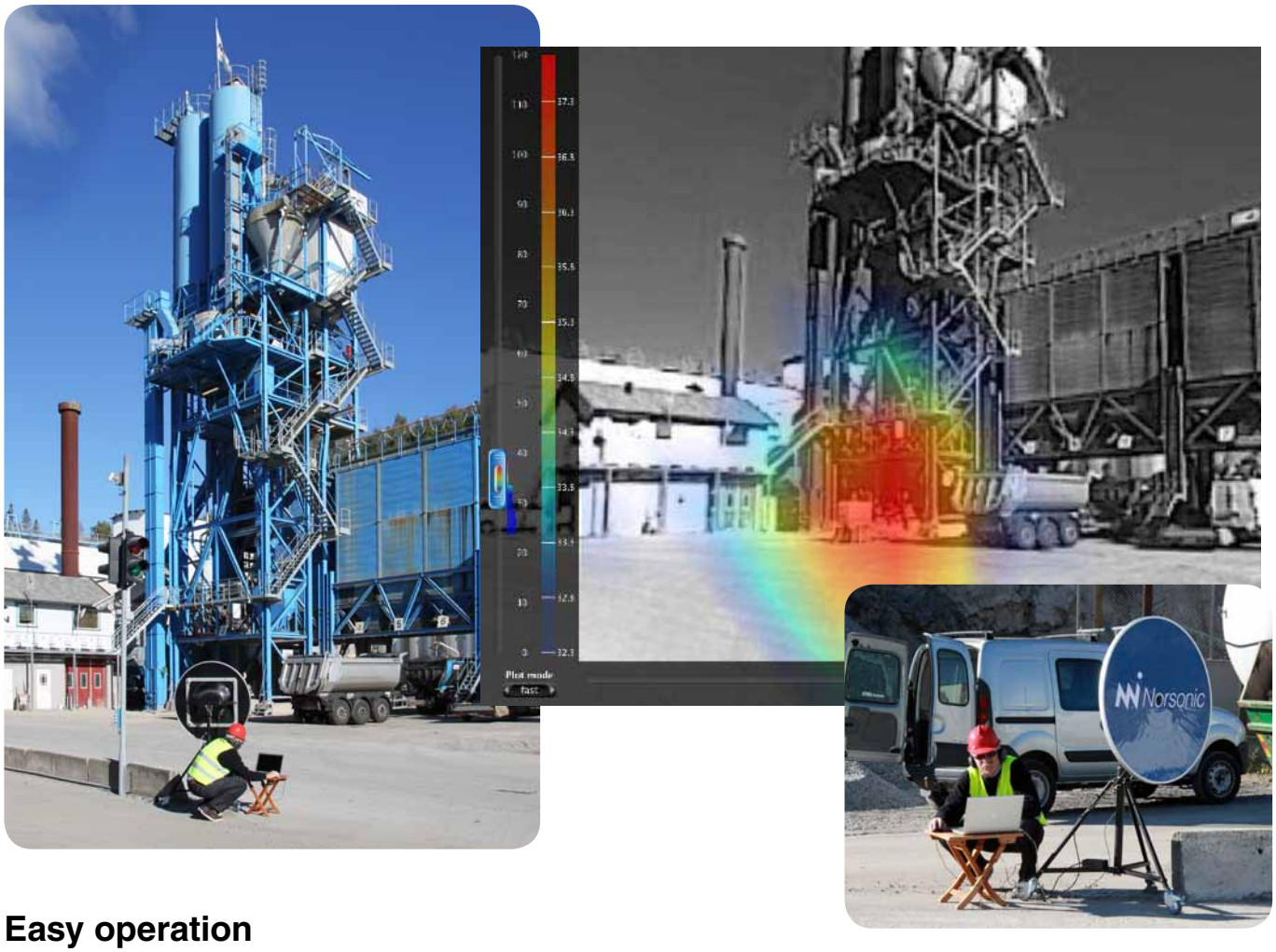
The sound signal from every microphone as well as the video from the integrated optical camera are recorded and stored in the computer. Both live level plots as well as post-processed analysis are available with the user friendly software package that runs on the included state-of-the-art MacBook Pro computer.

By moving the cursor in the picture you may analyse and listen to the sound in the selected directions – even in real time!

Unique features

- 225 microphones
- No interface box between array and laptop, direct connection with LAN cable
- More than 25 dB spatial mapping range without ghost-spots
- Listen to and analyze real time audio from virtual microphone position
- Microphones on a disc prevent sound and echo from behind
- Low self-noise and large measurement range
- Light weight, the disc is only 15 kg
- Highly competitive price





Easy operation

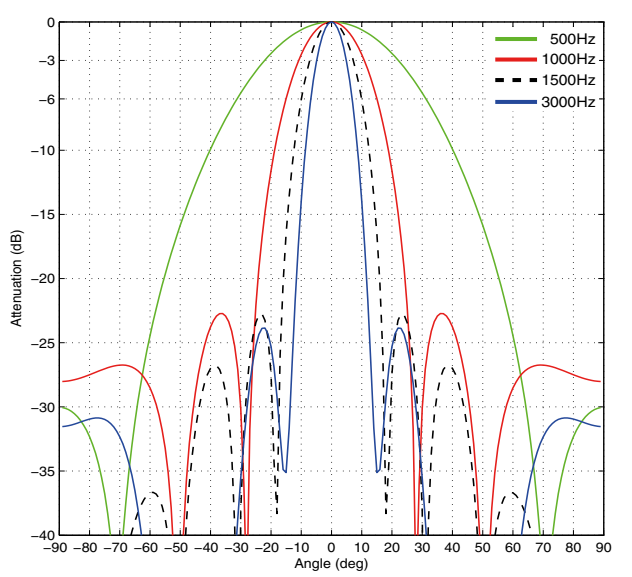
The acoustic camera Nor848 has been designed with the operator in mind and is very simple to operate.

- Set up the front-end in the desired direction
- Connect the LAN cable between frontend and computer
- Power the frontend and computer – mains or battery
- View the noise sources in real-time
- Press the start record button to save a measurement recording on disc for further analysis

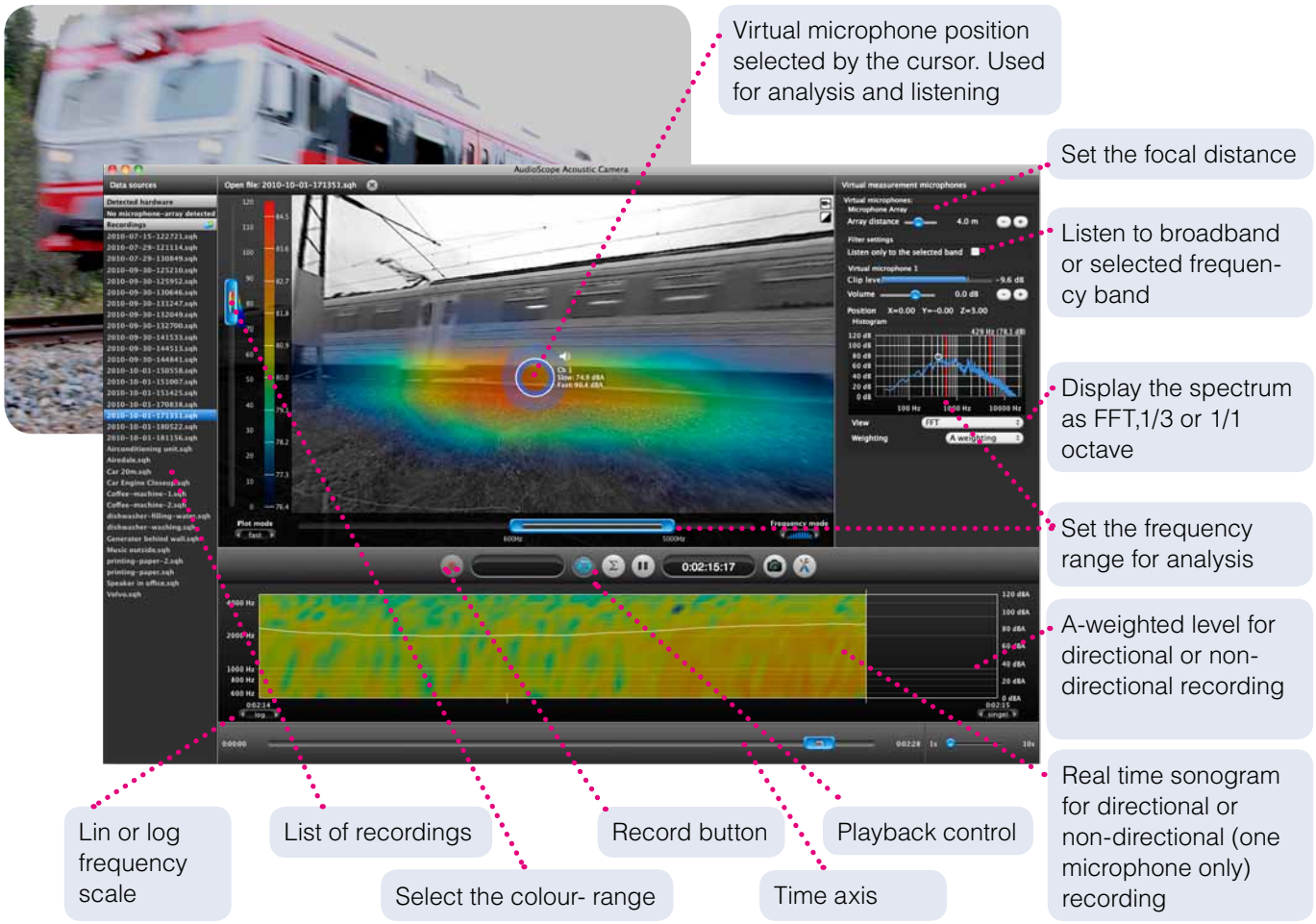
The video from the vide-angle optical camera and all microphones are recorded on the hard-disk of the computer. The filename is automatically picked from the time of the day and may eventually be given a more descriptive name.

Select a virtual microphone position by the cursor position and the focus distance and listen to the signal and perform a frequency analysis – in real time or after the measurement. Many operators have found that listening by the ears and looking at the level picture is very useful in finding noise sources.

Essentially, only the placement of the frontend is important for a good recording since all parameters like focal distance and level- and frequency-range may be selected at any later time. There is no initial setting to be made wrong.

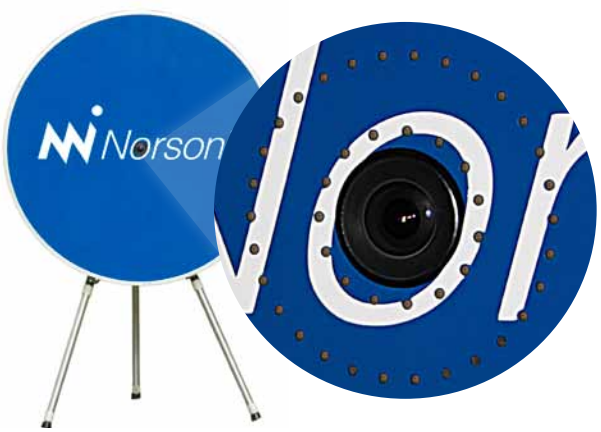


The large number of microphone elements applied in Nor848 is the basis for high angular resolving power and the low side-lobes – typically more than 25 dB below the main lobe. This reduce the amount of ghost-spots and makes the pictures easier to analyse.



Features:

- Robust camera front-end based on a circular disc with 1,05 meter diameter weighting only 15 kg due to carbon fiber materials
- A total of 225 microphones as well as a wide-angle high-performance optical video camera are included in the camera front-end unit
- The distribution of the high number of microphones ensures high resolving power and reduces the problems due to side lobe effects compared to most other acoustic cameras
- Digital microphones ensures large dynamic range and high stability.
- Simple connection to the enclosed MacBook Pro computer through a single LAN-cable
- Except the computer, all parts are integrated in the camera frontend – no need for a signal processing interface box
- Operated on mains or DC input
- Records the signal from every microphone
- User friendly software with all required functions for overall and detailed analysis of complex noise situations based on beam forming formulas giving a spatial mapping range of typically more than 25 dB
- Overall, 1/1-octave, 1/3-octave and FFT analysis included in the basic software
- Color intensity plots based on level and frequency
- Selectable upper and lower frequency limits
- Live sonogram
- Zoom feature allows selection of the area for analysis
- Direct output of analyzing views to PDF report



The digital microphone elements are protected behind the disc-shaped carbon fibre enclosure. The robust and sturdy construction also ensures that all microphones are kept in the correct position – important for field applications. The small distance between the microphones in the inner circle is important for low spatial aliasing at higher frequencies.

The large number of microphones also contribute to the wide measurement range and the low self-noise. The signal in the selected direction is based on the weighted average of all microphones and is therefore far below the self-noise from a single microphone. Allows measurements of levels below what is achievable with a normal sound level meter.

The backside of front-end contains the connectors for AC and DC power – select the most appropriate for your application. The computer runs on the internal battery for about two hours. Alternatively, use the enclosed mains adapter/charger.

LAN-cable Mains Fuses DC

Specifications

Number of microphones	225
Max sound level (re. 20 µPa)	110 dB
Noise level, A-weighted	10 dB
Microphone frequency range	20 Hz – 20 kHz
Mapping frequency range	100 Hz – 7 kHz
Sampling frequency	44.1 kHz
Focal distance	0,5 m to infinity
Optical camera resolution	640 x 480
Optical/acoustic covering angle	± 70° horizontal ± 52° vertical
Temperature range	-10°C to +40 °C
Humidity range	up to 90 % RH
Mains supply	100 - 230 V (50-60 Hz)
DC supply	11–36 V
Power consumption frontend	20 W
Disc diameter	105 cm
Disc depth	12 cm
Weight (excl. tripod)	15 kg
Ingress protection code	IP 40

Included in the delivery

- Acoustic camera frontend
  with 225 microphones, optical video camera and electronic interface.
- Laptop computer MacBook pro
- Mains cables
- LAN-cable 5 m
- Transport casing for Acoustic camera front-end
- Tripod for Acoustic camera frontend

Accessories

- Soft-case for Acoustic camera frontend
- Battery pack with cable and charger (2 hour operation)
- Cable for DC input, length 5 m

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