

Sound Level Meters

Nor13x series and Nor140





Norsonic's Nor13x and Nor140 series of sound level meters are all based on the same technology and user interface concept packed in a rugged, yet small and lightweight unit. Whatever measurement application you have requiring a sound level meter, Norsonic has the right tool. Not only the sound level meter, but a range of controlling, post processing and reporting programs help you to evaluate, compute and create reports, - easy and intuitive.

Our sound level meters are easy to use - just push the START key and measure. There are only three buttons the user needs to operate to complete a measurement, clearly indicated by the orange colour: Power on, Calibration and Start measurement.

Nor131

Class 1 Sound Level meter designed for occupational hygiene, general sound level measurements and noise assessments applications. It can be extended with 1/1 and 1/3 octave real time filter bands, STIPA and reverberation calculation based on impulse excitation. Supplied with detachable IEPE preamplifier allowing use of extension cable.

Nor132

Class 2 Sound Level meter designed for occupational hygiene, general sound level measurements and noise assessments applications. It can be extended with 1/1 and 1/3 octave real time filter bands, STIPA and reverberation calculation based on impulse excitation. Supplied with fixed IEPE preamplifier.

Applications

- Noise hazards in the workplace
- Prescription of hearing protection
- Environmental noise investigations
- Product noise testing
- Speech intelligibility - STIPA
- Reverberation time measurement
- General purpose sound level meter



Nor135

The Nor135 SoundBox is a front end featuring the same hardware and analysing software as in the Nor131.

It is mainly designed to be used as a frontend for the NorConcertControl software. This program is designed for reporting the sound level in discotheques, concerts and at outdoor events.

The NorConcertControl system confirms to the relevant parts of the EU regulative 2003/10/EC - Noise at work, DIN 15905-5 and the Swiss SLV 2007.

The SoundBox may also be used as a general frontend controlled via the USB port.

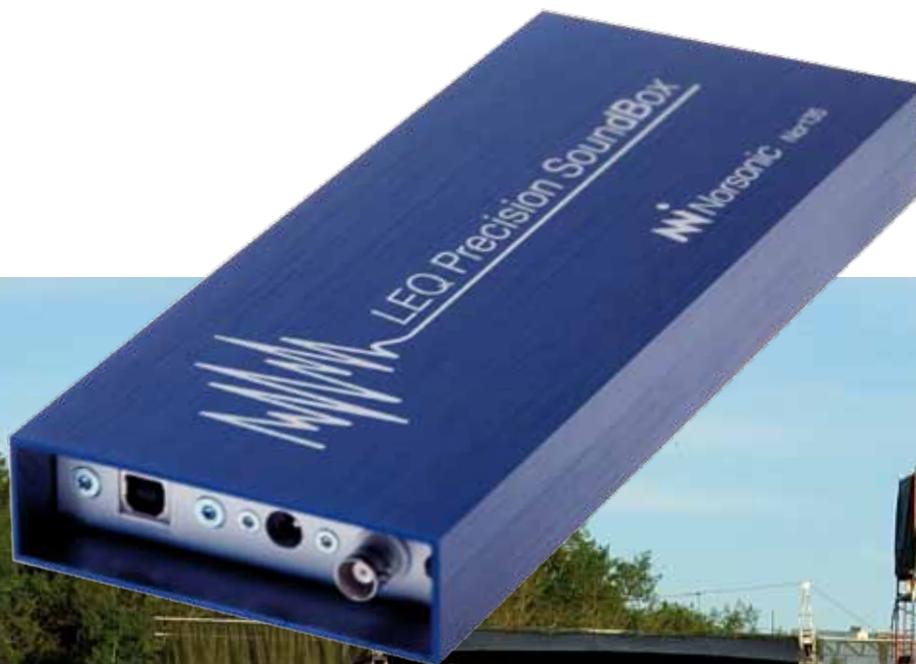
The unit has a built in IEPE power for microphone and preamplifier assembly. Both type 1 and type 2 pre-polarised microphones can be used.

Nor1522

Nor1522 is a complete measurement system for monitoring and reporting the noise level in discotheques, concerts and outdoor events.

It is simple to use, just switch on the mains, calibrate, and the system is automatically measuring and reporting the needed noise parameters. The system is based on the Nor135, the NorConcert control program, a tiny PC and a bright colour screen.

All hosted in a rugged case for easy storing and transport. No hassle with cables and loose items.





Nor139

Class 1 Sound Level meter mainly designed for advanced noise assessments and noise logging, featuring event triggered sound recording and markers. May optionally be fitted with 1/1- and 1/3-octave filters with multispectra down to 100ms time resolution.

The SD-card makes it easy to store and import measurement data to a PC.

Applications

- Environmental noise assessments with sound recording and markers
- Noise logger
- Noise hazards in the workplace
- Noise labelling
- Noise nuisance recorder
- General purpose sound level meter



Nor140

Class 1 Sound Analyser covering all the features of the Nor13x series of sound level meters plus building acoustics and a large vast of other applications. This is the perfect tool for acoustic consultants, R/D engineers and other highly professional users that need a Sound Level meter covering literally all applications a single channel sound level meter can measure.



Applications

- Environmental noise assessments with markers and sound recording
- Environmental monitoring
- Building acoustics
- Noise hazards in the workplace
- Product development
- Quality control
- Noise mapping
- Sound power
- Speech intelligibility - STIPA
- Vibration measurements
- Noise nuisance recorder

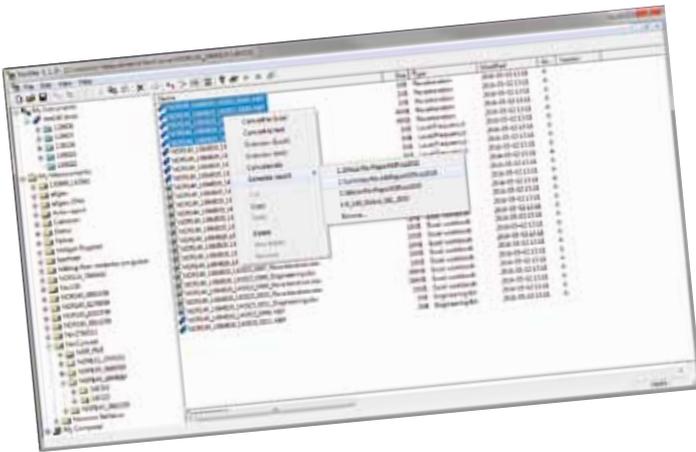
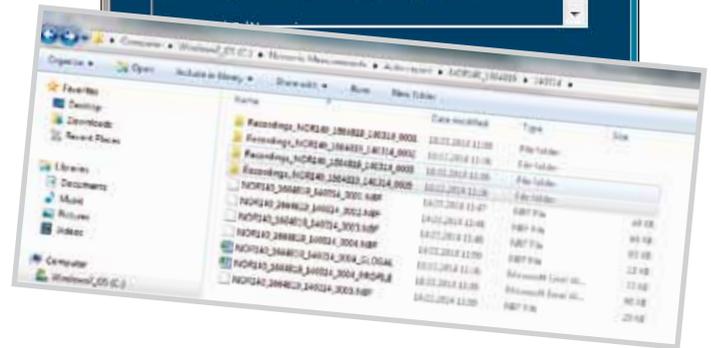
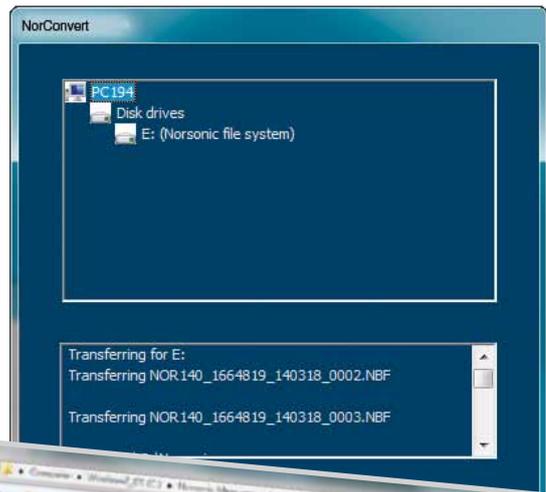


Generating reports

Measuring sound is often more than just reporting a dBA value. Most measurements are made in accordance to a measurement standard, requiring a report sometimes generated on a standard format. Norsonic offers a range of post processing programs that helps the user to evaluate the measured data and generate a proper measurement report.

NorConvert

A program for automatic downloading and convert to Excel of Norsonic measurements from Nor13x-series and Nor140 instruments. The program transfers all files on the sound level meter not yet transferred before. Freeware included with the sound level meter.



NorXfer

A program for downloading and converting to Excel of Norsonic measurements from Nor13x-series and Nor140 instruments. Unlike the NorConvert you have a browser feature for full freedom of selecting the measurement files to transfer. Optionally a controlling and remote downloading via GPRS modem is possible. The basic version is freeware and is included when purchasing a sound level meter.

NorVirtual

A program for emulating the sound level meter on a PC. Whatever view the soundlevel meter has (graphs, menus, tables etc.), the same view is visible on the PC screen. The mouse can be used to operate the virtual keyboard. Freeware.

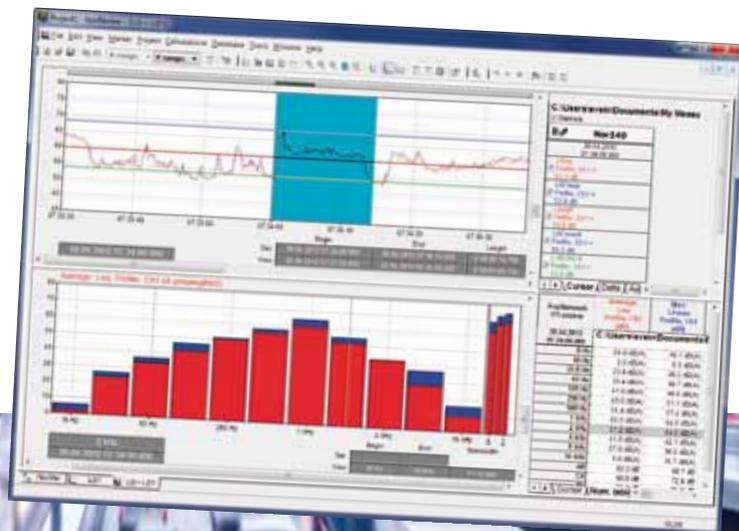
NorReport

A program for generating customized Excel reports based on templates. The program communicates seamlessly with NorXfer and NorConvert. Several templates are available for various applications adapted to local national standards.



NorReview

Evaluate, calculate and create reports. NorReview is the tool for environmental noise assessments. It features a powerful calculation module, marker and event handling, replay of audio recording with moving cursor and more. NorReview is the right tool for all acousticians dealing with environmental noise or all tasks where a time profile of the acoustical signal is measured.



NorRemote – a new generation of remote control and data acquisition from a sound level meter

The Nor140 via a small web server opens up a new world of remote communication and acquisition of data from a sound level meter. Simply connect to your instrument via LAN, GPRS or WiFi using a web browser to control, download or view the measurement in real time. The program covers all applications from downloading files to full control of your analyser to add markers, start a recording or just check the battery status.



Sound Power measurements

Norsonic offers various solutions for sound power measurements. The Nor140 has a built in option for measuring sound power in accordance to ISO 3746. Two PC programs for more sophisticated reporting and measurement control are available; NorPower for single channel measurements and the Nor850 for multi-channel control and use. Both programs require the use of the Nor140.

Building Acoustics

Similar to the sound power, Norsonic is offering various solutions and products for building acoustic applications. The Nor140 has a built in option for survey measurements. Two PC programs for more sophisticated reporting and measurement control are available; NorBuild for single or dual channel measurements and Nor850 for single, dual and multi-channel control and use. Both programs require the use of the Nor140.

Norsonic offers a complete range for Building Acoustics; Nor276 and Nor275 Loudspeakers, Nor277 Tapping Machine and Nor280 Power Amplifier.

NorProtector

Calculates all the required results for the noise deafness risk assessments. With a quick drag & drop operation measurements from the SLM are imported. The user only needs to specify the duration of work at each position, and the values exceeding the action level are highlighted in colour. Individual data for each person may be entered. The software includes a database for selection of the most effective personal hearing protector.



Outdoor microphones

The Outdoor Microphone Nor1216, Nor1217 and Nor1218 are the new generation of outdoor microphones. The Nor1216 is a measurement microphone for all-weather conditions designed for use with the Nor140. It features SysCheck verification and a heated preamplifier. It is intended for permanent outdoor applications. A semi-permanent version of the Nor1216 is the Nor1217 which features the same weather protection and SysCheck, but is designed for use with the standard preamplifier and microphone supplied with the Sound Analyser Nor140, making the Nor1217 in combination with the Nor140 a very cost-effective solution.

Nor1218 is similar to the Nor1217, but is adapted to use the Nor1207, IEPE preamplifier supplied with the Nor131/Nor139 sound level meters. All microphones fulfil the rain and dust environmental protection Class IP55.



Nor1216, Nor1217 and Nor1218 outdoor microphones and Nor1251 calibrator.

Enclosures

Several types of weather proof enclosures are available, both for permanent and portable applications.

The Nor1506B is a waterproof portable case with space for the sound level meter, two 22Ah Li-Pol batteries for powering the sound level meter and GPRS modem. Several options may be added such as the detachable microphone rod.

The Nor1530 is a weather protected enclosure for permanent installations. It features a 12Ah backup battery and mains power with space for the sound level meter and optionally 3G modem and power for weather station.

Calibrators

The Nor1251 is a self-compensated class 1 calibrator generating an ultra-stable sinusoidal tone of 114.0dB @ 1000Hz. The patented acoustical feedback system minimizes the sensitivity to variation in the microphone load volume. Each unit is supplied with individual accredited calibration certificate. Nor1253 is similar to the 1251, but intended for laboratory calibration, generating 124.0dB @ 250Hz.



Nor1506B waterproof portable case and Nor1530 weather protected enclosure.

Sound Level Meter selection chart	Nor131/132	Nor139	Nor140
General Sound Level Meter	✓	✓	✓
1/1 & 1/3 octave band	6,3Hz - 20k	6,3Hz - 20k	0,4Hz - 20k
+10 dB extended measurement range			✓
Reference spectrum			✓
Statistical calculations	✓	✓	✓
Parallel Time constants		✓	✓
A, C, Z weighting networks	✓	✓	✓
One measurement range - no gain setting	✓	✓	✓
Dynamic range (dBA)	17/25 - 137	17 - 137	17 - 137
Max. peak 140 dB	✓	✓	✓
Occupational & Industrial hygiene	✓	✓	✓
Compatible with NorProtector	✓	✓	✓
Reverberation table based on impulse excitation	✓		✓
Environmental Noise Assessments	✓	✓	✓
Level vs time resolution	≥ 1 sec	≥ 100ms	≥ 25ms
Graphical L/t curve		✓	✓
1/1 & 1/3 octave band multispectrum		✓	✓
Audio recording		✓	✓
Support for SYSCHECK of microphones			✓
Support for heating of Nor1216 microphone			✓
Compatible with NorReview	✓	✓	✓
Compatible with NorMonit		✓	✓
Building Acoustics			✓
Noise and impulse based RT with graphical curve			✓
Noise generator			✓
Swept sine			✓
Audiometer calibration			✓
FFT			✓
STIPA	✓		✓
Survey Sound Power measurements according to ISO 3746			✓
Compatible with Nor850 software			✓
Noise Nuisance Recorder with remote trigger		✓	✓
USB interface	✓	✓	✓
High speed RS 232 interface		✓	✓
SD-card for storage of measurement and audio recordings		✓	✓
Huge internal memory storing up to 10 000 measurements	✓	✓	✓

About Norsonic

Norsonic is a leading manufacturer of measurement solutions for sound and vibration. Our vision is to supply our customers with the most innovative sound instrumentation of the highest quality.

At Norsonic, we are proud to serve our customers and listen to their needs. All our products are developed in close cooperation with customers by listening to their needs and wishes.

During more than 45 years of operation, Norsonic has focused on delivering high quality instrumentation. Our products have for decades been pattern evaluated by international laboratories such as the PTB in Germany in order to secure that the produced measurement results are accurate and within the given specifications.

All our subcontractors are carefully selected and frequent quality audits assure that they keep a high quality standard.

Norsonic Calibration Laboratory is an international accredited laboratory. This ensures that the quality of the measured values is at the highest possible level.

Full test and calibration in accordance with relevant international standards, such as IEC61672, are carried out before the products leave the factory.

Norsonic is active in the standardisation work, both on international and national levels. We believe it is important, as a high quality manufacturer that our product design is made in accordance with the upcoming versions of relevant standards, combined with the latest available technology.

Norsonic uses minimum 15% of its turnover in research and development. A great portion of this amount is used in designing new features in existing products. All our sound level meters are designed to be expanded and upgradeable to give you a complete measurement tool for years to come. Norsonic's retrofit policy ensures regular software updates with new features and new options followed by a 3 years warranty. As a customer of Norsonic products you can be sure your instrumentation will be up to date as requirements and standards change over the years to come.